

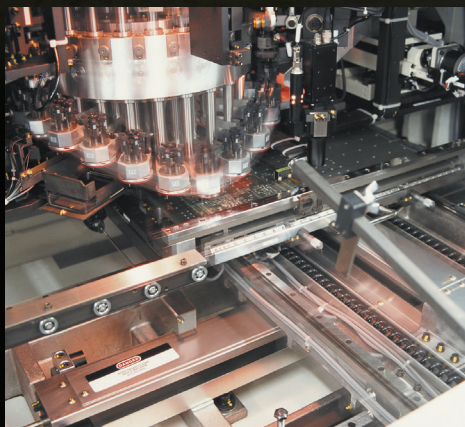
# WILKERSON®

the total systems approach to air preparation

## Compressed Air Treatment

Filters, Regulators, Lubricators and Accessories

Catalog 9EM-TK-190-5



# WILKERSON®

First incorporated in August of 1948, Wilkerson manufactures a complete line of compressed air treatment and control products to meet a wide variety of industrial, process, consumer and health care applications. Today, Wilkerson serves over 500 different industries throughout the world.

Over the years, Wilkerson facilities, manufacturing and engineering technology have kept pace with increased sales volume, the growing need to satisfy customers' specific requirements and the demands placed on production.

Wilkerson's growing leadership in the industry is due to our

determined commitment to quality; quality of products, services and people. Our dedication to the total quality management process assures our customers that we can consistently provide the highest levels of product quality and customer service required to meet their needs.

From the very beginning, Wilkerson has sold its products through a world-wide, independent distributor network. We currently have 200 distributors throughout North America, plus an expanding network of international distributors in over 40 countries. Our distributors, who have many years of experience

in compressed air treatment and control, offer excellent product knowledge, technical assistance and local inventory. As a result of representing other complimentary products, they are able to satisfy their customers' total requirements.

Today's broad line of Wilkerson products is the result of continuing product innovations and technology advancements which frequently become industry standards. Wilkerson is dedicated to designing and manufacturing innovative products with features and operating characteristics that meet customer requirements for quality, performance, reliability, serviceability, safety and value.

## **WARNING**

Suggested Lubricant - Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

## **WARNING**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

## **Offer of Sale**

The items described in this document are hereby offered for sale by The Company, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document "Offer of Sale".

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# WILKERSON®

## DISTRIBUTION NETWORK

Wilkerson manufactures and markets a complete line of compressed air treatment components and control products. We have a distribution network of over 100 distributors to serve you.

To find the one nearest you, please  
visit our DISTRIBUTOR LOCATOR on  
[www.wilkersoncorp.com](http://www.wilkersoncorp.com)



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# Product Selection Chart

Basic Unit	Series	Port Size										Flange Size		Bowls			Elements (Micron)			Page		
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	3	4	6	Poly	Metal	Metal SG	5	20	40		Adsorber	
F I L T E R S	F01		X												Aluminum Body			Std.	—	—	—	B4
	F03	X	X											X	X	—	Std.	—	—	—	B6	
	F08	X	X											X	X	—	Std.	—	—	—	B8	
	SF1		X												316 Stainless Steel			Opt.	Std.	—	—	E4
	F18		X	X	X									X	X	—	Opt.	—	Std.	—	B10	
	F16		X	X	X									X	X	—	Std.	—	—	—	B12	
	SF2				X										316 Stainless Steel			Opt.	—	Std.	—	E6
	F28			X	X	X								X	X	—	Std.	—	—	—	B14	
	F26		X	X	X									X	X	—	Std.	—	—	—	B16	
	F90					X	X							—	—	X	Opt.	—	Std.	—	B18	
	F30					X	X							X	X	—	Std.	—	—	—	B20	
	F34				X	X	X							X	X	—	Std.	—	—	—	B22	
	F35							X	X	X				—	Metal w/ DPI			Std.	—	—	—	B24
F43								X	X				—	Metal w/ DPI			Std.	—	—	—	B26	
C O A L E S C I N G  F I L T E R S	M03	X	X											X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B30		
	M08	X	X											X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B32		
	SM1		X											316 Stainless Steel			Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	E10		
	M18		X	X	X									X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B34		
	M16		X	X	X									X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B36		
	SM2				X									316 Stainless Steel			Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	E12		
	M28			X	X	X								X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B38		
	M26		X	X	X									X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B40		
	M21			X										X	—	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B42		
	M90					X	X							—	—	X	Type "B" 1.0	Type "C" 0.01	—	B44		
	M30				X	X	X							X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B46		
	M31					X	X							X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B48		
	M32						X	X						—	—	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B50		
	M35								X	X				X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B52		
	M43										X			—	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B54		
M45										X			—	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003	B56			
M55											X	X	—	X	—	1.0 Micron	0.01 Micron	—	B58			



Basic Unit	Series	Port Size				Bowls			Desiccant	Page
		1/4	3/8	1/2	3/4	Poly	Metal	Metal SG		
AFTERFILTERS	A18	X	X	X		X	X	X	Type "B" 5 Micron Element	B61
	A28		X	X	X	X	X	X	Type "B" 5 Micron Element	B63

Basic Unit	Series	Port Size									Spring Range									Page	
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	15	25	30	40	60	125	160	180	200		250
STANDARD REGULATORS	R03	X	X								Opt.	—	Opt.	—	Std.	Std.	—	—	—	—	B80
	RB3		X								—	Std.	—	—	Std.	Std.	—	—	—	—	B82
	RA3		X								—	Std.	—	—	Std.	Std.	—	—	—	—	B82
	RA4	X	X								—	—	Std.	—	Std.	Std.	—	—	—	—	B84
	R24, R25	X	X								—	Std.	—	—	Std.	Std.	—	—	—	—	B86
	R45, R46		X	X							—	Std.	—	—	Std.	Std.	—	—	—	—	B88
	R08	X	X								—	—	Opt.	—	Opt.	Std.	—	—	—	—	B90
	R120		X	X	X	X	X				—	—	—	—	Opt.	Std.	—	—	—	Opt.	B92
	SR1		X								—	Opt.	—	—	Opt.	Std.	—	—	Opt.	—	E16
	R18		X	X	X						—	—	Opt.	—	Opt.	Std.	—	—	—	Opt.	B96
	R16		X	X	X						—	—	—	—	Opt.	Std.	—	—	—	Opt.	B98
	SR2				X						—	—	—	—	Opt.	Std.	—	—	—	Opt.	E18
	R28			X	X	X					—	—	—	—	Opt.	Std.	—	—	—	Opt.	B100
	R26			X	X	X					—	—	—	—	Opt.	Std.	—	—	—	Opt.	B102
	R90					X	X				—	—	—	—	Opt.	Std.	—	—	—	Opt.	B104
	R30					X	X	X			—	—	—	—	—	Std.	—	Opt.	—	—	B106
	R40								X	X	—	—	—	—	—	Std.	—	Opt.	—	—	B108
	R09	X	X								—	—	Opt.	—	Opt.	Std.	—	—	—	—	B114
R19			X							—	—	Opt.	—	Opt.	Std.	—	—	—	Opt.	B116	
DIAPHRAGM	R11		X							—	—	—	—	Opt.	—	Std.	—	—	—	B120	
	R21		X	X	X	X				—	—	—	Opt.	—	—	Std.	—	—	—	B122	
	R31					X	X	X		—	—	—	—	—	—	Std.	—	—	—	B124	
	R41								X	X	—	—	—	Opt.	—	—	Std.	—	—	B126	

Basic Unit	Series	Port Size				Spring Range										Page
		1/4	3/8	1/2	2	15	25	30	40	50	60	100	120	125	150	
PRECISION REGULATORS	P16	X	X	X	—	Opt.	—	Opt.	—	Opt.	—	—	—	Std.	—	B130
	P17	X			—	—	—	—	Opt.	—	—	—	Opt.	—	—	B132
	WRA302	X			—	—	—	X	—	—	X	X	—	—	—	B134
	WRA102	X			—	—	—	X	—	—	X	—	—	—	X	B136
	WRA102BP	X			—	—	—	X	—	—	X	—	—	—	X	B138
	WRA171	X			—	—	—	X	—	—	—	—	—	—	—	B140
	WEA632	X			—	—	—	—	—	—	X	—	X	—	—	B142
	WBA208	X			—	—	—	—	—	—	—	—	—	—	—	B144
	WBA45	X			—	—	—	—	—	—	—	—	—	—	—	B146

# Product Selection Chart

Basic Unit	Series	Type	Port Size									Bowls			Filling	Page		
			1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	Poly	Metal	Metal SG				
LUBRICATORS	L01	Miniature Standard		X	X									Aluminum Body			Cannot be filled under pressure	B150
	L03	Miniature EconOmist™	X	X									X	X	—	Cannot be filled under pressure	B152	
	L08	Miniature EconOmist™	X	X									X	X	—	Can be filled under pressure	B154	
	L18	Compact EconOmist™		X	X	X							X	X	X	Can be filled under pressure	B156	
	L16	Compact EconOmist™		X	X	X							X	X	X	Can be filled under pressure	B158	
	L17	Compact AtoMist		X	X	X							X	X	X	Cannot be filled under pressure	B158	
	L28	Standard EconOmist™			X	X	X						X	X	X	Can be filled under pressure	B160	
	L26	Standard EconOmist™		X	X	X							X	X	X	Can be filled under pressure	B162	
	L27	Standard AtoMist		X	X	X							X	X	X	Cannot be filled under pressure	B162	
	SL2	Standard AtoMist				X							316 Stainless Steel			Can be filled under pressure	E28	
	L90	Large EconOmist™					X	X					—	—	X	Can be filled under pressure	B164	
	L30	Large EconOmist™					X	X					X	X	X	Can be filled under pressure	B166	
	L31	Large EconOmist™						X					X	X	X	Can be filled under pressure	B168	
	L32	Large EconOmist™						X					X	X	X	Can be filled under pressure	B170	
	L40	Extra Large EconOmist™								X	X		X	X	X	Can be filled under pressure	B172	
	L41	Extra Large EconOmist™								X	X		X	X	X	Can be filled under pressure	B174	
L42	Extra Large EconOmist™								X	X		X	X	X	Can be filled under pressure	B176		
L50	Jumbo EconOmist™										X	X	X	X	Can be filled under pressure	B178		

Basic Unit	Series	Port Size						Bowls			Elements (Micron)			Spring Range							Page	
		1/8	1/4	3/8	1/2	3/4	1	Poly	Metal	Metal SG	5	20	40	15	25	30	50	60	125	200		250
FILTER / REGULATORS	B03	X	X					X	X	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B184
	BB3		X					X	—	—	Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	B186
	BA3		X					X	—	—	Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	B188
	B08	X	X					X	X	—	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B190
	SB1		X					316 Stainless Steel			Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	E22
	B18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B190
	SB2				X			316 Stainless Steel			Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	E24
	CB6		X	X	X			X	X	X	Std.	—	—	—	—	—	Opt.	—	Std.	—	—	B192
	PC6		X	X	X			X	X	X	Opt.	—	Std.	Opt.	—	Opt.	Opt.	—	Std.	Opt.	—	B194
	B28				X	X	X	X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B196
	B90					X	X	—	X	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B198

Basic Unit	Series	Port Size						Bowls			Elements (Micron)			Spring Range							Page	
		1/8	1/4	3/8	1/2	3/4	1	Poly	Metal	Metal SG	5	20	40	15	25	30	50	60	125	200		250
COMBINATION THREE UNIT	D03	X	X					X	X	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B202
	D08	X	X					X	X	—	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B204
	CB7		X	X	X			X	X	X	Std.	—	—	—	—	—	Opt.	—	Std.	—	—	B206
	D18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B208
	D28			X	X	X		X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B210
	D90						X	—	—	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B212
	C03	X	X					X	—	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B216
	C08	X	X					X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B218
	C18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B220
	C16		X	X	X			X	X	X	Std.	—	—	—	—	—	Opt.	—	Std.	—	—	B222
	C28			X	X	X		X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B224
	C26		X	X	X			X	X	—	Std.	—	—	—	—	—	—	Opt.	Std.	—	Opt.	B226
	C31					X	X	X	X	—	Std.	—	—	—	—	—	—	Opt.	Std.	—	—	B228
	C90						X	—	—	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B230

Basic Unit	Series	Port Size				Bowls			Desiccant			Page
		1/4	3/8	1/2	3/4	Poly	Metal	Metal SG				
DESICCANT	DD10	X				Disposable Polycarbonate			—	—	Non-Toxic	F12
	X06	X				X	—	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F14
	X03	X				X	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F16
	X04	X		X		X	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F16
	X25			X		—	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F18
	X08	X				X	—	—	Silica Gel	—	—	F19
	TW					—	—	—				F21

# Compressed Air Systems

## Air Treatment and Control Components

Compressed air is an essential power source for most industries today. It is a safe operation, relatively inexpensive to operate and very reliable. However, compressed air is susceptible to various types of contamination which not only reduces its value as a power source, but can seriously affect the performance of other pneumatic equipment and, therefore, productivity.

Air valves, air cylinders, logic control systems and air tools can malfunction due to air-borne contamination. Air intended for air-gauging, air conveyors, spray painting, instrumentation, automation and food processing can be rendered unusable. Poor product quality and system shutdown due to compressed air contamination can occur frequently. There are many other problem areas associated with compressed air contamination, as numerous companies in differing industries can attest to.

With today's technology, an efficient, cost-effective compressed air system can be designed to provide years of reliable service if the proper air treatment and control equipment is

installed. Operating and maintenance costs can be significantly lowered by removal of most contaminants (dirt, rust, pipe scale, oil aerosols, liquid water and water vapor, microscopic particles and oil vapor). With a well-designed air system and the use of quality air treatment and control products, you can realize extended service life of components, increased flow capacity with minimum pressure loss and improved production efficiencies in your manufacturing processes.

## Air Treatment and Control

To take the fullest advantage of the benefits that can be derived from using compressed air, it must be correctly and adequately prepared. Clean, dry, regulated air is the corner-stone of an efficient air system. Where necessary, lubricated air may be required to provide dependable operation and satisfactory service life of certain air tools and components.

## Dryers

All atmospheric air contains some water vapor. When the air is compressed, the water content for a given volume of air increases. Because of the effects of compression, most of this water


vapor turns into damaging liquid water in your air system. Additionally, as air flows through the compressed air line system, the water vapor condenses in the pipeline. This moisture in the pipeline results in rust, scale, clogged orifices, malfunctioning of pneumatic controls, and increased wear of moving parts as it washes away the lubricant.

Compressed air dryers reduce the water vapor concentration and can prevent further liquid water formation in air lines. Liquid water and water vapor removal increases the efficiency of air operated equipment, prevents corrosion and clogging, extends the service life of pneumatic components, prevents air line freeze-ups and reduces product rejects.

For more detailed information on Dryers, refer to Section F.

## Filters

Air-borne contamination from the atmosphere, such as dust, water vapor and hydrocarbons enter the air system through the compressor intake. The contaminants, usually 4 million particles per cubic foot, can easily pass through a typical compressor intake filter since over 80% of these particles are less than 2 microns in size. The compressor also contributes to the



problem with wear particles, oil vapor and fine aerosols that leak past glands and seals from the oil sump into the compression chamber.

Such contamination in the air system can effect the efficient operation of various pneumatic devices and, over time, damage them. Compressed air filters that are installed upstream of the air devices will remove most of these contaminants. In addition, by design these filters will also remove most liquid water from the air line.

The need for higher quality air is more evident today than in the past. To gain improved production efficiencies through automation, more sophisticated, technically advanced pneumatic equipment and instrumentation is being used throughout industry. Due to the critical nature of these applications, the need for extremely clean, virtually oil free air is required. Coalescing (oil removal) and oil vapor removal filters should be used for applications requiring high quality air.

## Regulators

All pneumatic devices are designed to provide optimum performance and service life at a specific air pressure. While it is feasible to operate these devices at pressures

in excess of the manufacturer's recommended operating conditions, it is not advisable to do so. Operating at higher pressures can cause excessive wear and damage to the device. Further, operating your compressed air system at a higher-than-required pressure wastes energy and is not cost-effective.

To obtain the best operation and service life of your pneumatic equipment use the proper pressure level recommended by the manufacturer. A regulator (pressure control valve) is normally used to reduce and maintain a downstream pressure while the amount of air required to the device may vary with the demand.

## Filter / Regulators

The integral Filter / Regulator units combine all the functions and features of a filter and a regulator, as discussed above, into one compact, high performance, space-saving unit.

## Lubricators

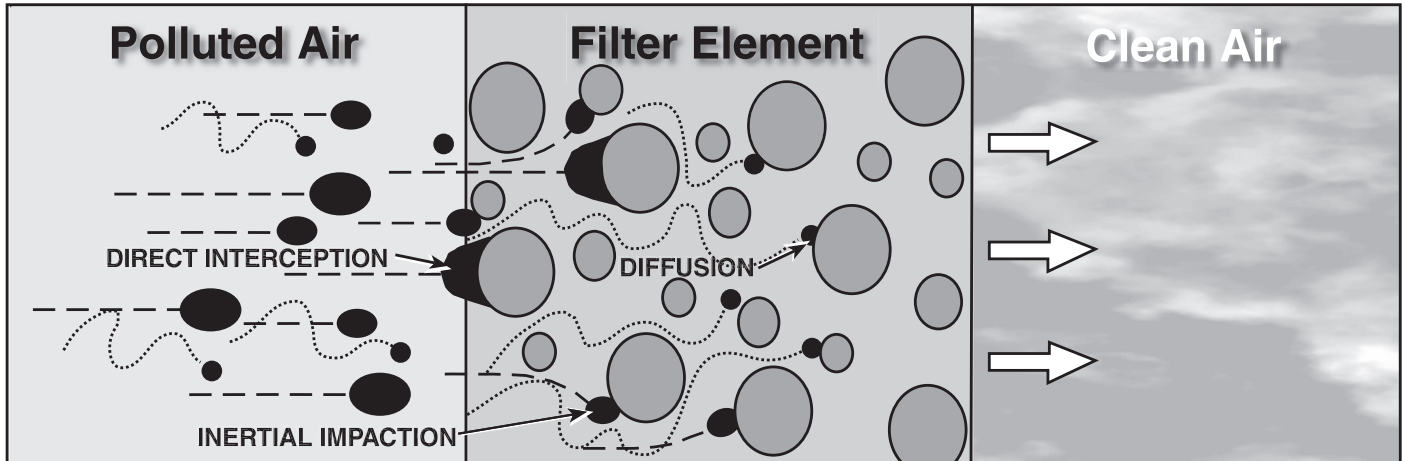
Getting the proper lubrication to the proper device at the proper time is fundamental to preventative maintenance, longer service life and increased productivity. The efficiency of air motors, control valves, cylinders and other air

actuators can be greatly enhanced when the proper amount of lubrication is supplied.

Air line lubricators are specifically designed to generate and introduce an oil aerosol (mist) into the compressed air flow. The air flow then carries the oil to the pneumatic devices where the lubricant mist coats the moving and sliding surfaces thus reducing friction and wear.

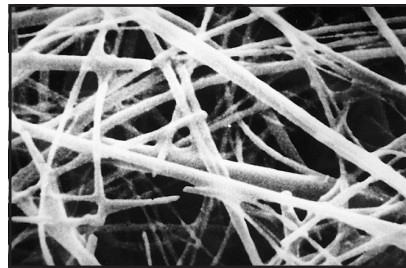
To provide satisfactory lubrication to your air devices most lubricators have a proportional delivery system. This feature automatically provides a nearly constant oil-to-air ratio over a wide range of air flows.

# Filter Technology – Mechanisms of Filtration



## Coalescing Filters

Essentially, coalescing filters (Type B, B1 and C) rely on what is known as mechanical filtration for their effectiveness. The main mechanisms of mechanical filtration are direct interception, inertial impaction and diffusion. Electrostatic attraction can have some bearing although the efficiency of Wilkerson coalescing filters is not dependent on this mechanism.



Above: Clean borosilicate microfiber seen at a magnification factor of 3900. Right: The same filter material in a contaminated state at the same degree of magnification.



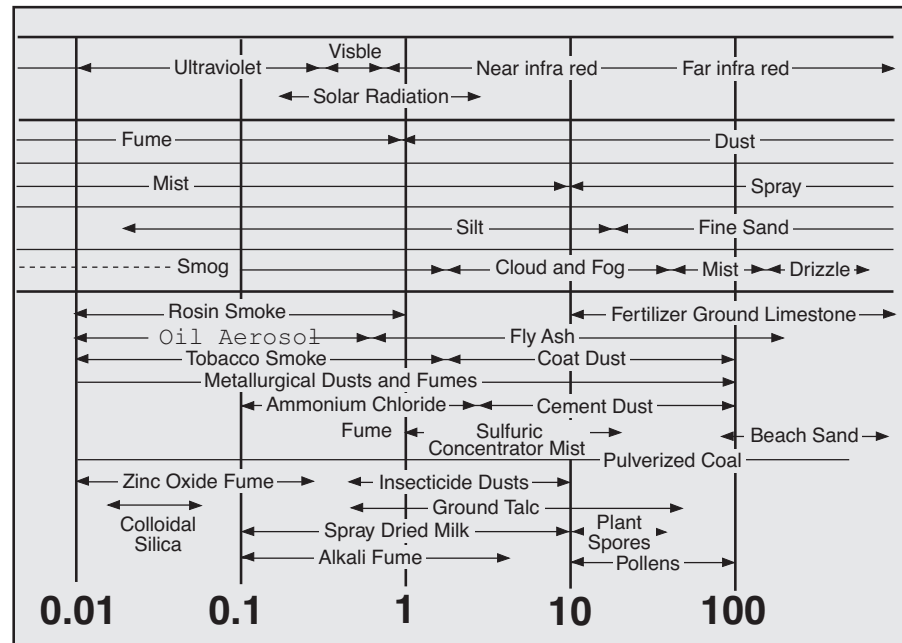
When all mechanisms are combined and utilized by a deep bed of the correct type of filter material, removal of virtually all particles whether liquid or solid, is achieved.

Direct Interception occurs when a particle collides with and adheres to a fiber of the filter material without deviating out of the streamline flow. This mechanism tends to take place on the surface of the filter material and affects mainly larger particles over 1 micron in size.

Inertial Impaction occurs when a particle is unable to follow the tortuous path around the filter fibers and eventually collides with and adheres to one of the fibers. Typically affecting particles in the 0.3 micron -1 micron size range.

Diffusion or Brownian Movement, as it is sometimes called, occurs with extremely small particles which tend to wander within the gas stream, increasing their chances of colliding with and adhering to a fiber. This usually affects particles below 0.3 micron in size. A degree of overlap takes place with the mechanisms, the extent varying on the conditions.

## Pollution Size Chart



To assist in understanding the parameters of filtration, refer to this pollution size comparison chart. Look at the size of a major contaminant, oil aerosol! It is in the region of 0.01 - 0.8 micron. Tobacco smoke is also

a liquid aerosol in a similar size band 0.01 -1.2 micron. Observe the smoke test yourself, appreciate the size of the problem! The smallest particle the human eye can see is in the order of 40 microns.

# Particulate Filters

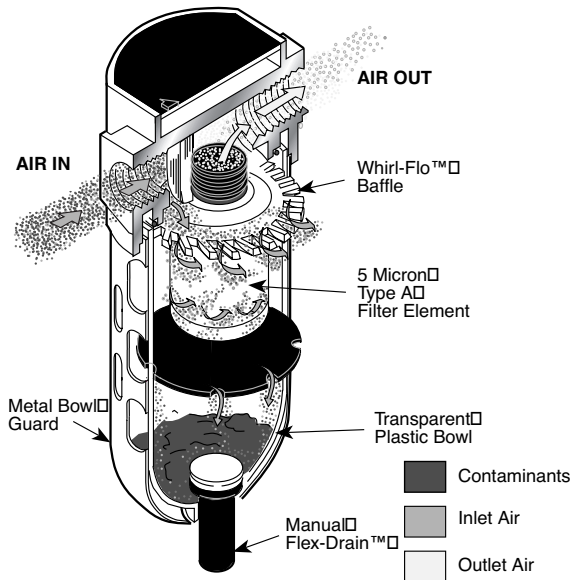
For the removal of solid particle contaminants down to 5 microns and the separation of bulk liquids.

This type of filter is generally used in industrial applications where liquid water and oil, and harmful dirt particles must be removed from the compressed air system. This type of filter should also be used as a prefilter for the Coalescing (oil removal) filter.

## Operation

Wet and dirty inlet air is directed downward and outward in a circular pattern by the turbine-shaped upper baffle. This action mechanically separates a large amount of the liquid and gross particles, which then flow down the inside of the bowl, past the lower baffle, into the quiet zone to be drained away. The quiet zone baffle prevents the contaminants from re-entering the air flow stream.

The partially cleansed air then passes through the filter element. By utilizing depth filtration, the 5 micron filter media provides superior filtration, exceptional service life and minimum pressure drop.



# Coalescing Filters (Oil Removal)

Specifically designed for the removal of solid particles, water and oil aerosols down to 0.01 micron. Maximum remaining oil content of air leaving the filter down to 0.01ppm at 70°F (21°C) at a pressure of 100 PSIG (6.9 bar g) using a typical compressor lubricant. Two filter element grades are offered to better meet your air quality requirements.

Grade B and B1 filter elements are used for most air coalescing applications where the removal of liquid aerosols and submicronic particles for general air quality is required.

Protection of components such as air valves, cylinders, as well as air conveyors, air gaging, air bearings, air control circuits and paint spraying equipment are examples of specific end-use applications. This grade of filter element should be used as a *prefilter* for the *Grade C* coalescing filter.

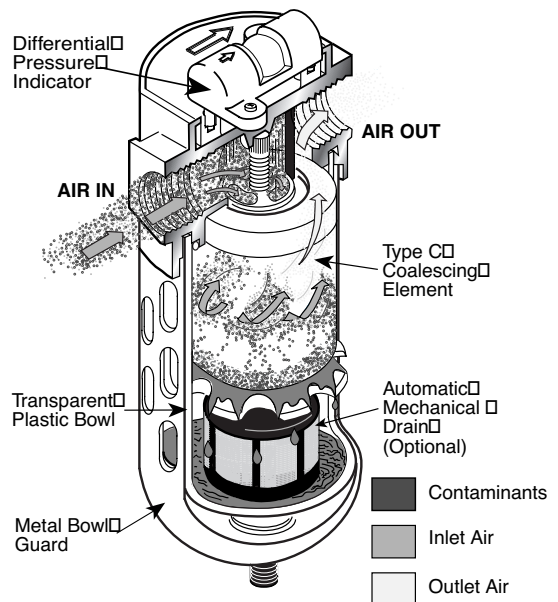
*Grade C* high-efficiency filter elements are used where the removal of extremely fine particulate and virtually “oil-free” or high quality air is necessary. Specific end-use applications are protection of critical air control circuits, air logic systems, flow and temperature controllers, food processing, electronics, health care and film processing. This grade of filter element should be used as a *prefilter* for the *Grade D* oil vapor removal filter.

## Operation

The filter element design utilizes a borosilicate micro fiber that provides superior filtration efficiency, quick draining and minimum pressure drop. Unlike standard particle filters, air flow is inside to out. The compressed air / gas passes through the inner layer of the filter element which acts as an integral pre-filter to remove large contaminants. This gives protection to the layer of high efficiency filter material which substantially removes submicronic aerosols and solids from the air flow stream. Solid particles are permanently trapped within the filter media.

The fine liquid particles, including aerosols, after initially being trapped by the fibers of the filter media, begin to collect or coalesce forming larger droplets. These droplets, along with other large droplets present, are pushed to the outer surface. Here, the anti-re-entrainment barrier collects the droplets as they break free from the micro fiber and allow them to gravitate within its cellular structure forming a “wet band” around the bottom of the element.

Clean filtered air / gas passes through the anti-re-entrainment barrier above the “wet-band” where the resistance to flow is less, leaving a quiet zone of no air / gas movement in the bottom of the filter housing. The separated liquid drops from the bottom of the filter element and falls through the, without being re-entrained, to the bottom of the filter housing where it collects to be removed by a drain.



# Oil Vapor Filters

Activated carbon element for the removal of oil vapor and oil associated odors. Maximum remaining oil content of air leaving the filter is 0.003 ppm at 70°F (21°C) at a pressure of 100 PSIG (6,9 bar g). For the *Grade D* filter element, two types of designs are used depending on the size and flow capacity of the filter housing.

An oil vapor filter is used, in conjunction with a *Grade C* filter element, where the application requires very high air quality. Typical applications are food processing and packaging, pharmaceutical, fermentation, electronics and semi-conductor, and critical air control.

## Operation

While the *Grade B, B1 and C* filter elements can remove extremely fine liquid and solid particles, they cannot remove gaseous contaminants such as oil vapor or odors. To do this you must employ the physical phenomena of adsorption. Activated carbon, having an affinity for oil vapor molecules and with an extremely high surface area, created by its capillary structure, is used.

Our activated carbon *Grade D* filter elements are designed to maximize the adsorption properties of the carbon. This is achieved by first passing the air through carbon granules located either in an annular space or tubular section. The granules provide a very high ratio of surface area to volume, and when arranged in a deep bed, increases the dwell time of the air flow. This type of design provides the benefit of both high efficiency and longer service life of the activated carbon.

## Differential Pressure Indicator (DP2, DP8)

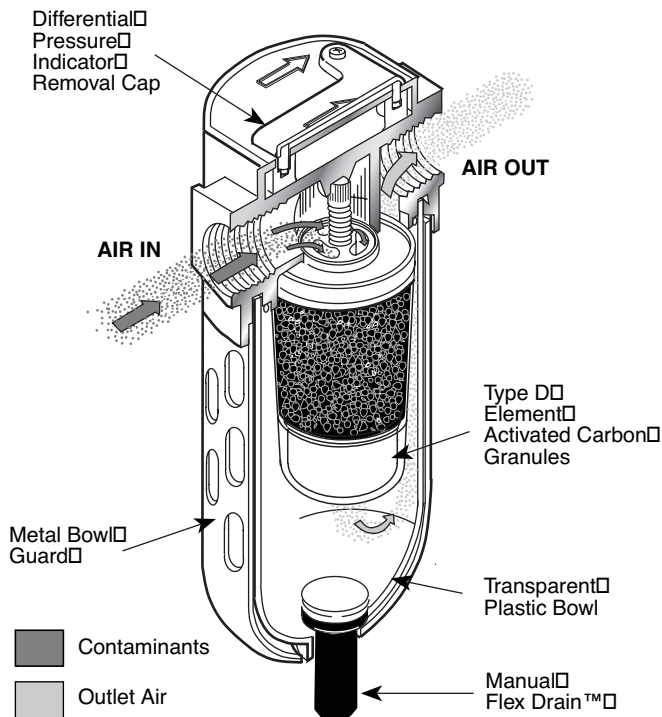
The Wilkerson direct mounting Differential Pressure Indicator is equipped standard on most Coalescing Filter models. It provides a maintenance free means of determining the service life of the filter element. With a new filter the indicator shows all green, and progresses to a full red indication a 7-8 PSID, indicating the element should be changed. The magnified indicator can be easily seen from the top or either side of the filter, and with only one moving part will provide reliability and long life.

The Differential Pressure Indicator cannot be retrofitted to Wilkerson filters ordered without it. It is available as a replacement accessory kit.

**Note: The maximum operating pressure for metal or plastic bowls with this Indicator is 150 PSIG. The maximum operating temperature is 150°F for metal bowls and 125°F for plastic bowls.**

## DP3 Differential Pressure Gauge

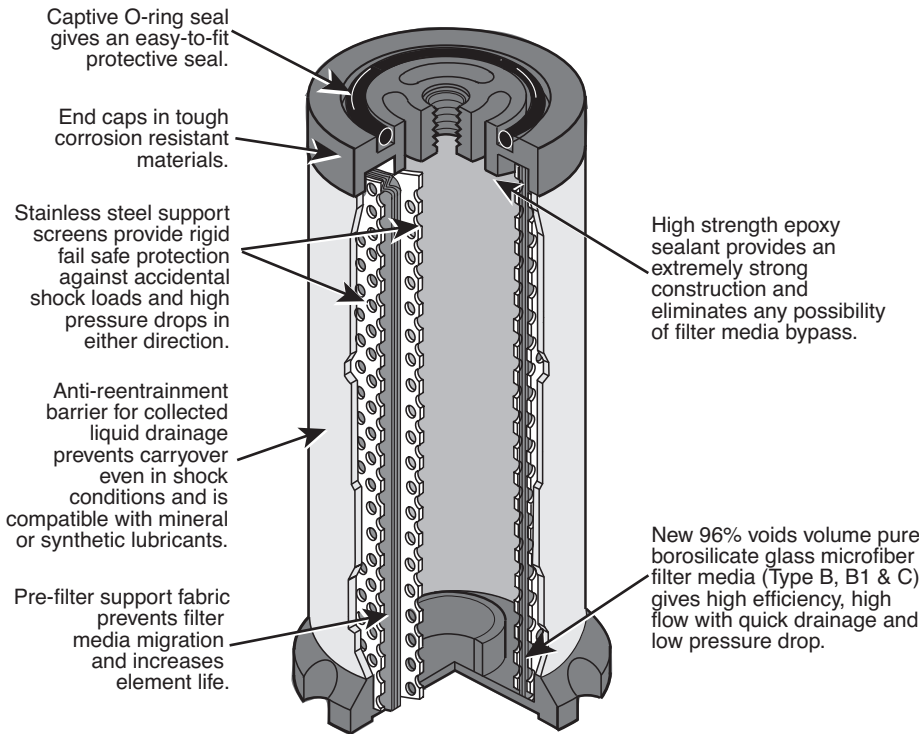
The Wilkerson direct mounting Differential Pressure Gauge (non-pressurized face) is standard on all mainline filters and it is available as an accessory in kit form. With a scale reading of 20 PSID (1370 m bar dp) the gauge gives a quick indication of the status of the filter element in the filter. The gauge provides a reliable method to help ensure that the filter element is changed at the most economical and convenient time.



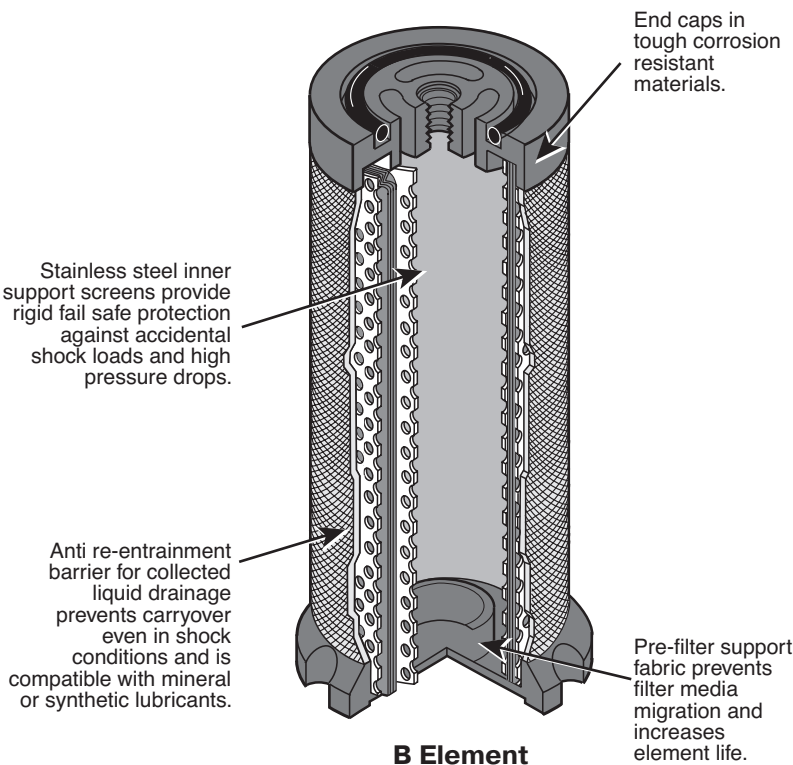


# Coalescing Elements Features and Benefits

## Type B, B1 & C



**B1 and C Element**

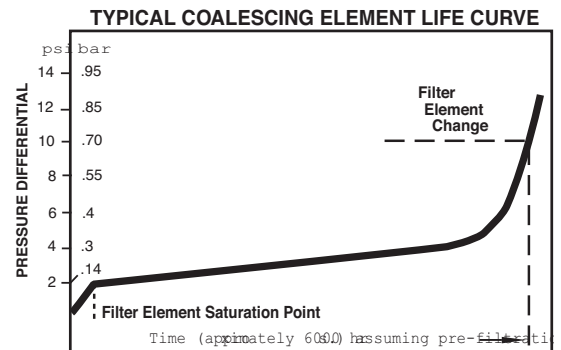


**B Element**

### How The Elements Work

Using the principles of mechanical filtration, the filter media removes the solid particles first in the pre-filter support layers and then in the actual filter media. These particles remain permanently trapped and gradually cause an increase in pressure drop. The liquid particles similarly collected coalesce together forming larger droplets and as the flow is inside to out, are pushed to the outer surface. Here, the anti-reentrainment barrier prevents them from being introduced back into the airstream and instead drains them through its cellular structure to the bottom of the element. The resultant "wet-band" on the bottom of the element, in presenting a high pressure drop area, ensures that the filtered air passes through the upper portion of the element. This creates a "quiet zone" in the bottom of the filter through which the liquid falls to the bottom of the filter bowl and is drained away via the automatic drain.

As mentioned earlier, solid particles cause the pressure drop to slowly increase throughout the working life. Initially, during the period to reach an equilibrium saturation, as determined by the upstream liquid contamination concentration, the pressure drop rises sharply as shown below. This is a typical pressure drop versus time characteristic for a coalescing filter. The end of useful and economic service life is indicated by an accelerating increase in pressure drop. The element should be replaced every 12 months or 6000 working hours under normal working conditions.



# Adsorption Elements Features and Benefits

## Type D

### How The Elements Work

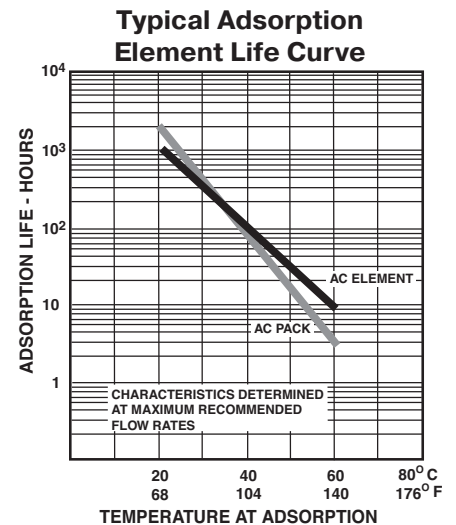
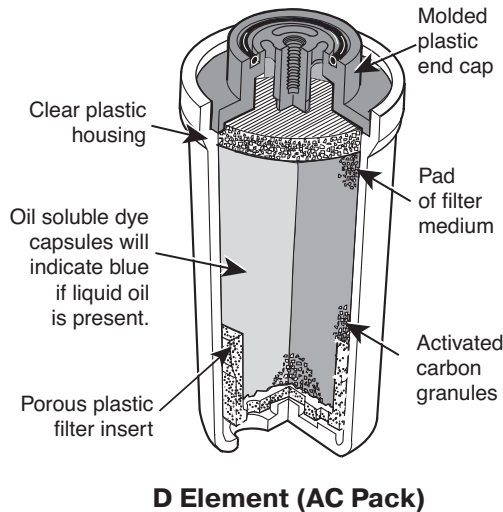
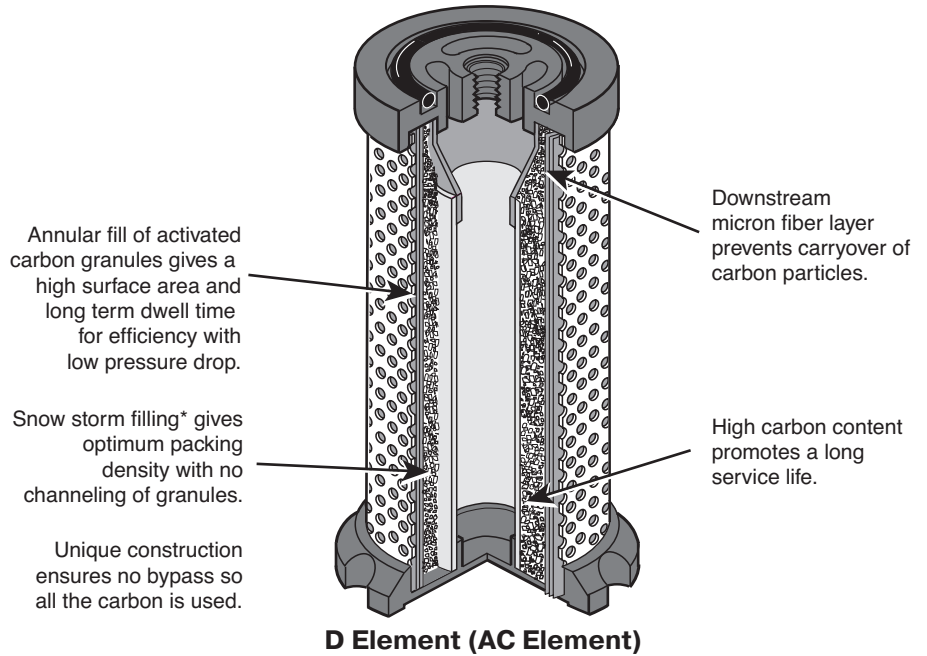
While mechanical filtration employing the Type C element is capable of removing extremely fine liquid or solid particles even as small as 0.01 micron it cannot remove gaseous contaminants such as oil vapor or odors. To do this we must employ the physical phenomena of adsorption. Activated carbon, having an affinity for oil vapor molecules and with an extremely high surface area, created by its capillary structure, is used for this.

Wilkerson activated carbon elements are designed to maximize the adsorption properties of the carbon. This is achieved by first passing the air through carbon granules, snow storm filled\* into either an annular space or tubular section. The granules provide an extremely high surface area to volume and when arranged in a deep bed that increases dwell time gives the benefit of both efficiency and service life. After being passed through the carbon, the air goes through a layer of microfiber to prevent migration of fine carbon particles downstream.

Adsorption elements have a limited life and this is affected by many factors but principally temperature. Obviously, the higher the inlet temperature, the more oil vapor there is present, for example at 104°F (40°C) there is more than ten times the oil vapor than at 70°F (21°C). For this reason, activated carbon filters are best installed at the lowest possible system temperature. The type C filter should always precede a Type D filter.

The typical life of an adsorption element is in the region of 1000-2000 hours at 70°F (21°C). Filtration temperature is based on tests carried out on a Chlorobenzene test rig, however, this is best determined in practice by a routine "odor" check.

Oil vapor has a distinct odor. The least expensive and very effective way to check for oil vapor getting through the filter is to install a small bleed valve downstream. Periodically crack this valve and smell the air. The human nose is extremely sensitive to oil vapor and at the first hint of this odor, change the element.



## Type B Filter Element Specifications

### Efficiency

99.97% when tested with 0.3 micron aerosol DOP test Federal Standard 209B. Compatible with mineral and synthetic oils.

### Residual Oil

0.5 ppm / wt (inlet temperature / pressure 70°F / 100 PSIG when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure.

### Air Quality Class \*

Conforms to ISO 8573 Class 3 or better

### Flow

Inside to outside

### Filter Media

Resin impregnated borosilicate glass microfiber

### Support Structure

Inner 304 Stainless Steel support cylinder with outer polymeric sleeve.

### End Caps

Glass filled polyamide material

#### Initial Differential

**Pressure Dry** — 1.5 PSID

#### Initial Differential

**Pressure Wet** — 2.5 PSID

**Flow Range** — 5 to 4800 SCFM  
@ 100 PSIG

### Application

Installations as a coalescing prefilter for general purpose protection or as a prefilter to a high efficiency coalescer.

### Appearance

White polymeric outer sleeve with black end caps.

\* **“M” Series Coalescing Filters, with Type “B” 0.5 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “B” 0.5 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and **exceed Class 3** on maximum oil content (ppm / wt).<sup>5</sup>

## Type C Filter Element Specifications

### Efficiency

99.99998% when testing with 0.3 micron aerosol on dioctyl phylate (DOP) test according to Federal Standard 209B. Compatible with mineral and synthetic oils.

### Residual Oil

0.01 ppm / wt (inlet temperature / pressure 70°F / 100 PSIG when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure.

### Air Quality Class \*

Conforms to ISO 8573, better than Class 1

### Flow

Inside to outside

### Filter Media

Pure borosilicate glass microfiber with a mean strand diameter of 0.5 micron and a voids volume of 96%. Contains no glues or resins.

### Support Structure

Inner and outer 304 Stainless Steel support cylinders.

### End Caps

Glass filled polyamide material

#### Initial Differential

**Pressure Dry** — 1.25 PSID

#### Initial Differential

**Pressure Wet** — 2.25 PSID

**Flow Range** — 5 to 4800 SCFM

### Application

Install where highest quality air is required; typically instrumentation, process air, pneumatic gauging, paint spraying, etc.

\* **“M” Series Coalescing Filters, with Type “C” 0.01 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “C” 0.01 micron elements **exceed ISO Class 1** for maximum particle size and concentration of solid contaminants, and **exceed Class 1** on maximum oil content (ppm / wt).<sup>5</sup>

## Type D Filter Element Specifications

### Efficiency

Less than 0.003 ppm / wt maximum remaining oil content (inlet temperature / pressure of 70°F / 100 PSIG) when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure; removal of hydrocarbon vapors and odors.

### Air Quality Class \*

Conforms to ISO 8573, better than Class 1

### Flow

Inside to outside

### Filter Media

Snow storm filled activated carbon for optimum packing density and life.

### Support Structure

**Model M03 - M28:** Clear plastic housing with molded plastic end cap. Integral outlet filter.

**Model M30 - M45:** Inner and outer 304 Stainless Steel support sleeve cylinders

### End Caps

Glass filled polyamide material

#### Initial Differential

**Pressure Dry** — M30 - M31: 3 PSID  
M32 - M45: 1 PSID

**Flow Range** — 5 to 4800 SCFM

### Application

Installation after high efficiency coalescer for process air purification, odor removal, removal of trace vapors and for critical applications.

\* **“M” Series Absorption Filters, with Type “D” activated carbon elements:** All Wilkerson Type “M” Absorption Filters with Type “D” activated carbon elements **exceed ISO Class 1** on maximum oil content (ppm / wt).<sup>5</sup>

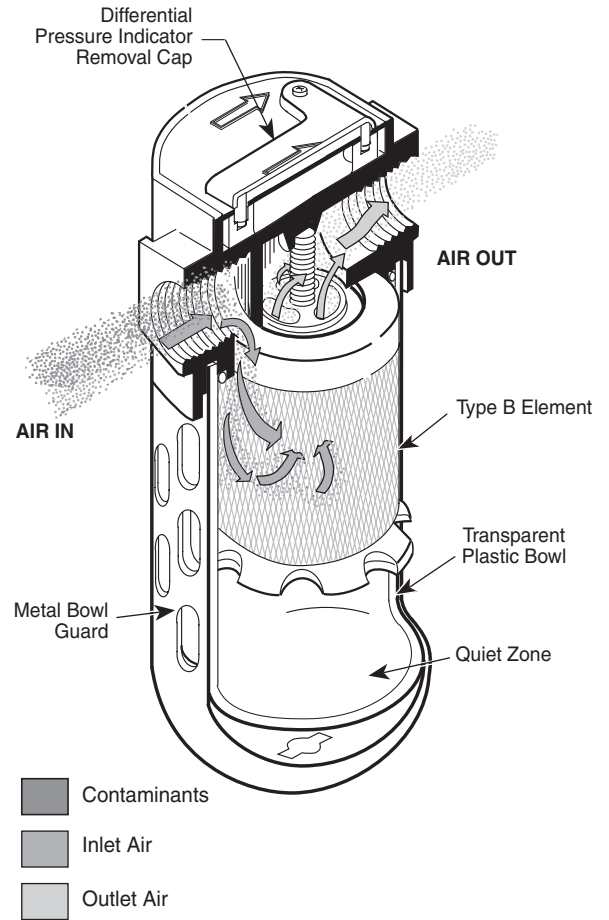
# Afterfilters

For the removal of solid particles down to 0.5 micron.

The Afterfilter is designed for use in “dry” systems where it provides efficient removal of desiccant dust and other solid contaminants downstream of various types of desiccant air dryers. These solid contaminants, if not removed, can damage sensitive downstream instruments and critical air controls.

## Operation

The inlet air is directed downward and outward in a circular pattern. This action mechanically separates a large amount of gross particles which fall to the bottom of the housing. The air then passes through the filter media bed where a significant number of smaller solid particles and other contaminants are trapped within the filter media.



**AF Series Afterfilters, with Type “B” 0.5 micron elements:** All Wilkerson Type “AF” Afterfilters with 0.5 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and **exceed Class 3** on maximum oil

**ISO 8573.1 System Ratings**

ISO 8573.1

System	Quality Class Rating	Applications
1.	3.7.4	Air Tools, Air Motors
2.	1.4.1	Automated Equipment, Robotics, Rough Paintings
3.	1.4.1	Injection Molding, CNC, Electronics
4.	1.2.1 or 1.1.1	Semi-Conductors, Instrumentation
5.	1.2.1 or 1.1.1	Food Processing, Hospital Grade, Breathing Air

*Applying condensate management systems, dry air storage and flow controllers.*

**ISO 8573.1 Quality Class**

Quality Class	Solid Contaminants (max. particle size in microns)	Max. Pressure Dew Point °F	Max. Oil Content (droplets, aerosols & vapor) ppm
1	0.1	-94	0.01
2	1	-40	0.1
3	5	-4	1
4	15	37.4	5
5	40	44.6	25
6	—	50	—
7	—	not specified	—

## Filter Types

All filters and filter elements are suitable for use in either compressed air or nitrogen applications.

Wilkerson Types B, B1, and C filters are made of materials acceptable in processing of compressed air as defined by regulations of both the United States and Canadian Departments of Agriculture.

### Type A General Purpose Filter

#### Specifications

Particle removal down to 5.0 microns. Separation of liquid water and aerosols > 95% at rated flows. Separation of bulk liquid only.

#### Purpose

For removal of solid contaminants and bulk liquids. The Type A can be used alone as a general purpose filter or as a pre-filter for Types B, B1 and C elements to extend their service life.

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed** ISO Class 3 for maximum particle size and concentration of solid contaminants.<sup>5</sup>

### Type AF Prime Efficiency Filter

#### Specifications

Solid particle removal down to 0.5 micron. Retention on DOP test > 9911.97%.<sup>\*2</sup> Designed for use in “dry” systems.

#### Purpose

For removal of desiccant dust and other solid contaminants downstream of Twin Tower or other desiccant air dryers.

**“AF” Series Afterfilters, with Type “B” 0.5 micron elements:** All Wilkerson Type “AF” Afterfilters with 0.5 micron elements **exceed** ISO Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm / wt).<sup>5</sup>

### Type B1 Prime Efficiency Coalescer

#### Specifications

Particle removal down to 1.0 micron. Maximum downstream remaining oil content 0.5 ppm / wt\*1. Retention on DOP test > 99.97%.<sup>\*2</sup> “B1” Prime Efficiency Coalescing Filters meet ISO Class 2 for maximum particle size and exceeds Class 3 for maximum oil content (ppm / wt).<sup>5</sup>

#### Purpose

For removal of aerosols and solid particles. Is used in coalescing filter models M32 through M55. Can be used alone as a coalescing filter or as a pre-filter to the Type C elements to extend their service life. Usage proves most economical when preceded by a Type A filter.

### Type B Prime Efficiency Coalescer

#### Specifications

Particle removal down to 0.5 micron. Maximum downstream remaining oil content 0.5 ppm / wt\*1. Retention on DOP test > 99.97%.<sup>2</sup>

#### Purpose

For removal of aerosols and solid particles. Can be used alone as a coalescing filter or as a pre-filter for the Type C elements to extend their service life. Usage proves most economical when preceded by a Type A filter.

**“M” Series Coalescing Filters, with Type “B” 0.5 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “B” 0.5 micron elements exceed ISO Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm / wt).<sup>5</sup>

### Type C Extremely High Efficiency Coalescer

#### Specifications

Particle removal down to 0.01 micron. Maximum downstream remaining oil content 0.01 ppm / wt\*1. Retention on DOP\*2 and Sodium Flame Test <sub>3</sub> > 99.9999% (limit of measurability).

#### Purpose

For removal of extremely fine oil mists, oil aerosols and microscopic particles. The Type C is extremely efficient in the coalescing of remaining oil mists and oil aerosols as well as the retention of solid particles. It is recommended the Type C filter be installed downstream of a Type A and / or Type B or B1. This is very cost effective as it prevents build up of solid contaminants on the Type C element and extends service life.

**“M” Series Coalescing Filters, with Type “C” 0.01 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “C” 0.01 micron elements exceed ISO Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm / wt).<sup>5</sup>

### Type D Critical Application Adsorption Filter

#### Specifications

Activated carbon element for removal of oil vapor and associated odors whether petroleum or synthetic base. Maximum downstream remaining oil content 0.003 ppm / wt.<sup>5</sup>

#### Purpose

For elimination of oil vapor, oil associated odors whether petroleum or synthetic base. Type D elements utilize selected grades of activated carbon and rely on adsorption to remove oil associated vapor and odors. The Type D Filter should be used as the final filter for critical applications. It should always have a Type C Filter element installed upstream to remove oil aerosols and solids particles.

**Note: The Type D element will not remove carbon dioxide, carbon monoxide, ethane, methane or other toxic gases.**

**“M” Series Adsorption Filters, with Type “D” activated carbon elements:** All Wilkerson Type “M” adsorption filters with Type “D” activated carbon elements exceed ISO Class 1 on maximum oil content (ppm / wt).<sup>5</sup>

### Applications Notes

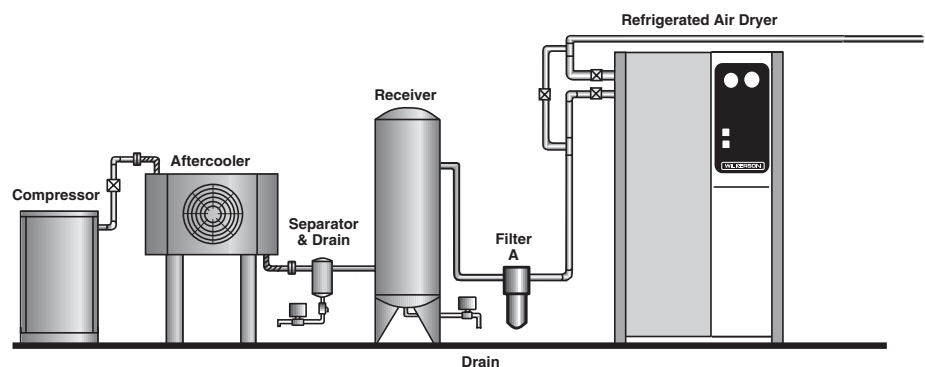
- 1) Based on a compressed air temperature of 7°F (21°C) at 100 PSIG (6,9 bar g) with a typical compressor lubricant using the Pneurop1 Recommended Test Method No. 6611 / 1984 PART 2. For further information contact Wilkerson. 1 mg/m<sup>3</sup> is approximately 0.83 ppm / wt. (parts per million by weight).
- 2) Dioctyl phthalate test generates particles with mean diameter of between 0.1 and 0.3 micron (most difficult size to remove) based on USA Federal Standard 209B.
- 3) Sodium Flame Test using particles with a mean diameter of 0.65 micron based on British Standards Institute BS3928.
- 4) Filtration at a high temperature, although possible, increases the risk of gaseous contaminants condensing downstream. At temperatures above 122°F (50°C), the amount of water and oil vapor increases significantly and is more difficult and costly to remove.
- 5) All classes above refer to international standards organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

## When Making Your Selection

- 1) Generally, install filters downstream of aftercoolers / separators and air receivers at the lowest temperature point and as close to the point of application as possible. This reduces the chance of additional water and oil vapor condensing after the filter.
- 2) Filters should not be installed downstream of quick opening valves and should be protected from possible reverse flow or other shock conditions.
- 3) It may be necessary to install a combination of mainline filtration near the compressor installation before entry to the main air distribution system as well as installing terminal filtration at the critical application points. Remember, especially in existing installations, the contamination already in the pipe system downstream of the filters will take a long time to disappear and probably never will completely.
- 4) Purge all lines leading from the filters to the final application to be protected.
- 5) Install filters in a vertical position ensuring that there is sufficient room below the filters to facilitate element change.
- 6) Provide a facility to drain away collected liquids from the filter drains via properly sized tubing, taking care there are no restrictions in the drain line.
- 7) Install Wilkerson differential pressure gauge or pop-up indicator to monitor the pressure drop across the filters. This will provide an easy way of visually monitoring the filter element condition, indicating when to replace the element. If you have a problem on filter selection or installation, please contact your local Wilkerson stocking distributor. Wilkerson and their representatives will be pleased to help you in selecting the proper installation for your application requirements.
- 8) For piping convenience and to minimize air system disruptions, we recommend piping the system with by-pass circuits and isolation valves.

## General Purpose Protection

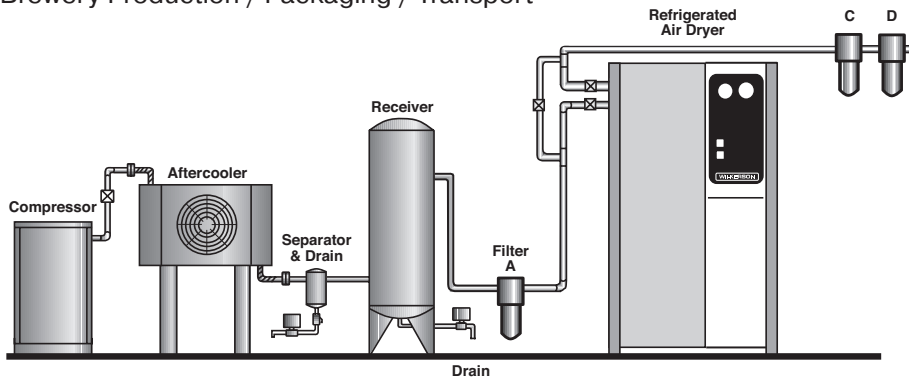
- General Compressed Air System Protection
- Liquid and Solid - Bulk Contamination Removal
- Particle Removal in “Dry” Systems
- Large Pneumatic Tools
- Shot-blasting Air
- Low Cost Automation—cylinders and valves
- Pre-Filtration for Refrigeration Air Dryers
- Pre-Filtration to High Efficiency Dryers
- Pre-Filtration to Adsorption Air Dryers in “Oil-Free” Systems
- Pre-Filtration to Air Sterilization Filters in “Oil-Free” Systems
- High Speed and / or Miniature Pneumatic Tools
- Air Gauging
- Air Conveying
- Air Motors
- Pipeline Purging
- Pre-Filtration to Adsorption Air Dryers in Oil Contaminated Systems
- Pre-Filtration to Air Sterilization Filters in Oil Contaminated Systems



## Critical Applications — Clean and “Oil-Free”

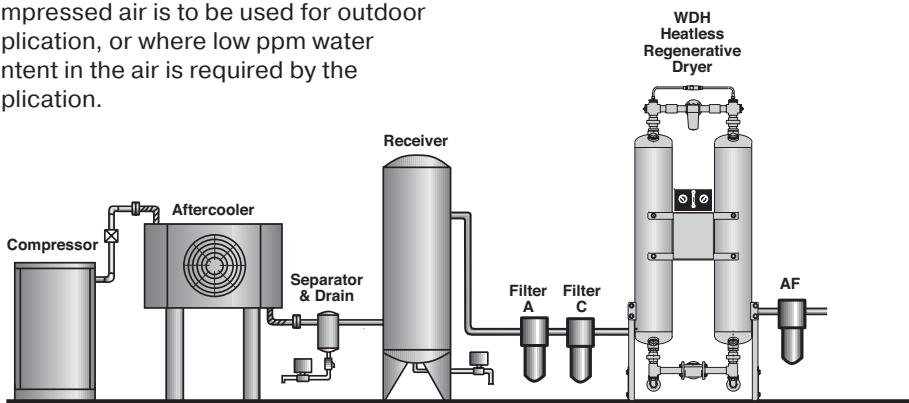
Where dew point is not required to be less than 36-40°F (2.2-4.4°C). Ambient temperature should not be below 45°F (7.2°C). For example, interior of factories.

- Highest Quality - Clean, Oil and Odor Free Air
- Blow Molding of Plastic e.g. P.E.T. Bottles
- Film Processing
- Critical Instrumentation
- Advanced Pneumatics
- Air-Blast Circuit Breakers
- Decompression Chambers
- Cosmetic Production
- Foodstuffs Production / Packaging
- Pharmaceutical Production
- Dairy Production / Packaging / Transport
- Brewery Production / Packaging / Transport
- Robotics
- Air Logic
- Instrumentation
- Air Bearings
- Spray Painting
- Temperature Control Systems



## Extremely Low Dew Point System

Where dew point must be below 32°F (0°C). For example, indoor factory installation of dryer, but where compressed air is to be used for outdoor application, or where low ppm water content in the air is required by the application.



## When Making Your Selection

Always try to obtain as much information as possible including flow rates, inlet pressure, temperature and pipe size.

Select filtration air quality required to the application to be protected. Remember, it is better to over-specify than not provide enough protection.

Select size of filters by flow rate and inlet pressure at the point of filtration. Also keep in mind pressure drop, if this is critical it may be advisable to oversize the filters. Generally, for operating costs, it is best never to undersize filters. The higher pressure drop caused by undersizing actually increases system operating cost.

Be careful to consider working pressure drops. Although all filters start dry, in time they become wetted with liquid (a normal condition) and this increases pressure drop. Select filters for the highest flow rate and lowest working pressure they will operate under.

Check the pipe size of the installation. If possible, match pipe sizes. This may involve increasing the size of the filter. Never reduce the pipe size of the installation to match the filter. The restriction caused by this is expensive in terms of pressure drop and operating costs and is ongoing. Increasing the size of the filter on the other hand reduces pressure drop and increases the time between element changes. This more than offsets the initial higher costs.

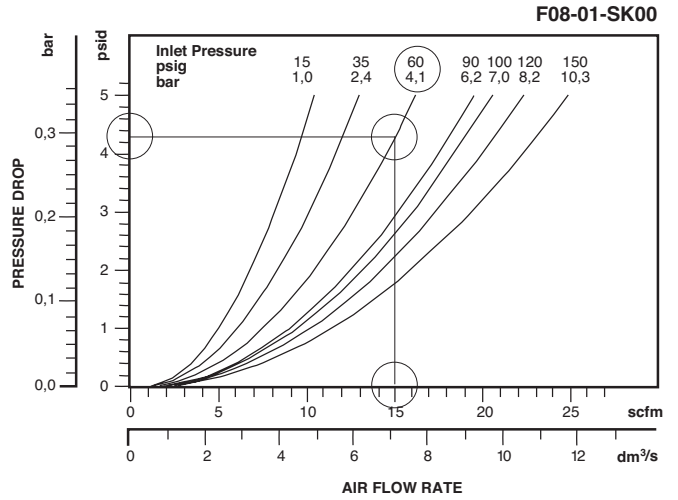
# How You Read Flow Charts

## Using Filter Graphs

- 1) From the graph select one of the inlet pressure curves to be used. 35 PSIG, 60 PSIG, etc.
- 2) Decide upon the air flow rate requirement for this application. (Refer to the horizontal air flow rate scale located at the bottom of the graph.)
- 3) To find the initial pressure drop draw a vertical line from the flow rate selected to a point where it crosses the inlet pressure curve. From this intersection draw a horizontal line to where it intersects the vertical pressure drop scale.

**EXAMPLE:**

At 15 SCFM flow rate and 60 PSIG inlet pressure, pressure drop is about 4.3 PSID.



## Using Regulator Graphs

**NOTE:** Regulator graphs are based upon an inlet pressure of 100 PSIG.

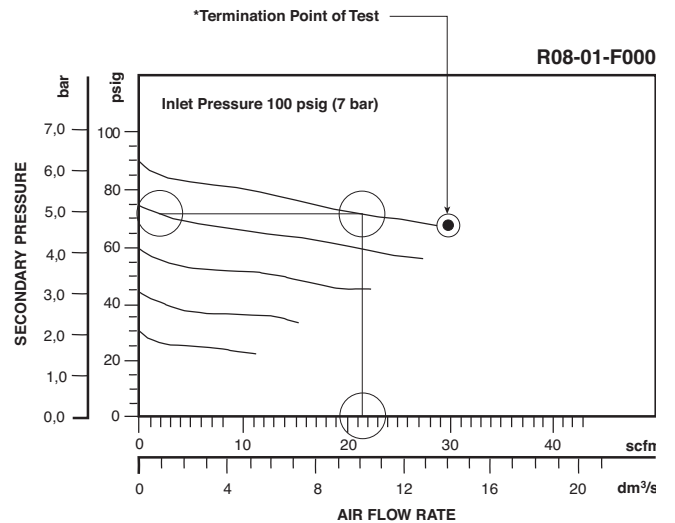
Maximum flow capacity is measured at a point that is 75% of the initial secondary pressure setting. \* (NFPA)

**EXAMPLE:**

Inlet Pressure = 100 PSIG,  
Secondary Pressure @ 0 SCFM = 90 PSIG,  
Secondary Pressure @ 21.5 SCFM = 75 PSIG,  
Pressure Drop @ 21.5 SCFM = 15 PSID.

- 1) Using a graph selected by product family and pipe size pick the secondary pressure curve that fits
- 2) Determine the air flow rate required from the air flow rate scale located at the bottom of the graph.
- 3) To find the pressure drop for this regulator draw a vertical line from the air flow rate selected to a point where it crosses the secondary pressure curve. From this intersection draw a horizontal line to where it intersects the vertical secondary pressure line. This is the secondary pressure at the flow rated selected to determine full pressure drop. Subtract this pressure from the original secondary pressure used.

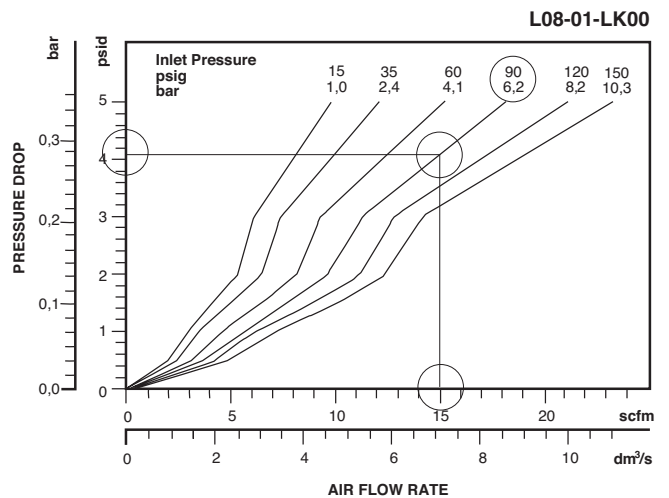
**The Difference = Pressure Drop**



## Using Lubricator Graphs

- 1) From the graph select one of the inlet pressure curves to be used. 35 PSIG, 60 PSIG, etc.
- 2) Decide the air flow rate requirement for this application. (Refer to horizontal air flow rate scale located at the bottom of the graph.)
- 3) To determine pressure drop draw a vertical line from the flow rate selected to the point where it crosses the inlet pressure curve used. From this intersection draw a horizontal line to where it intersects the vertical pressure drop scale.

**NOTE:** Pressure drop value should not be less than 0.8 PSID.





# Regulators

## General Purpose

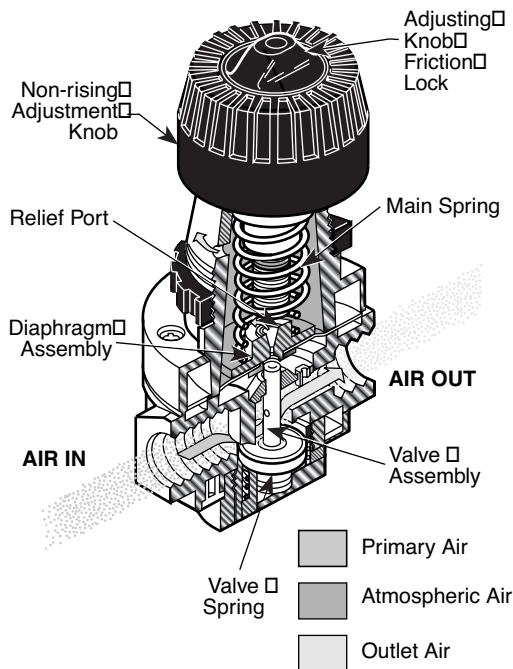
Used to provide a convenient and low cost method to reduce a supplied air pressure to a desired outlet pressure and transform a fluctuating air supply to a relatively constant reduced air pressure within the operating range of the regulator.

This type of regulator is generally used in a wide variety of applications where reduced pressure is highly desirable for energy conservation, safety requirements, air circuit control and air instrumentation.

## Operation

Turning the adjusting knob clockwise forces the main spring downward onto the flexible diaphragm which presses down onto the valve stem. The diaphragm and valve stem move downward forcing the balanced valve off its seat, which allows air to flow past the valve to the outlet side of the regulator and downstream to the air system. A precisely positioned aspirator tube communicates secondary pressure to the diaphragm resulting in instant compensation in order to maintain the desired secondary set pressure.

The diaphragm, valve stem and valve move upward, compressing the regulating main spring. Upward movement stops when the spring force acting on the diaphragm balances the pressure force acting below the diaphragm. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



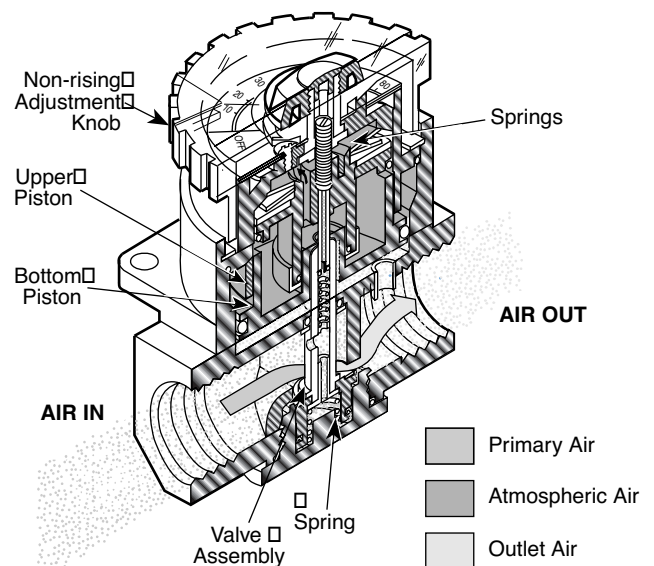
## Dial-Air™ Pilot

The Dial-Air™ Pilot is a constant bleed, piston operated regulator. The pilot controlled pressure reducing valve provides exceptionally high air flow with steady pressure control and minimal secondary pressure drop. The non-rising adjustment knob provides quick selection of the desired secondary pressure in less than one full turn. The adjustment knob also can serve as the pressure indicator thereby eliminating the need for a pressure gauge.

This regulator is specifically designed for applications requiring more accurate air circuit control, high air flow capacity with flat performance curves and quick regulator adjustment. The regulator can be used as a conventional regulator for standard air circuits or as a pilot regulator to provide pressure to the control chamber of a pilot operated (slave) regulator.

## Operation

To set the regulator, turn the large dial adjustment knob to the desired secondary set pressure. This opens the pilot valve seat allowing air flow into the control chamber which forces the lower piston downward against the relief seat and opens the main valve. At the same time, the air in the control chamber forces the upper piston upward against Belleville springs which closes the pilot valve seat when the set pressure is attained. Secondary pressure in the chamber is now balanced against the control pressure through the lower piston. If demand flow increases, the constant control pressure will force the lower piston and the main valve further downward, and allow more flow downstream. A higher than desired secondary pressure will force the lower piston upward, closing the main valve seat and opening the main relief valve seat thereby allowing air to relieve to the atmosphere. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



# Regulators

## Precision Regulator

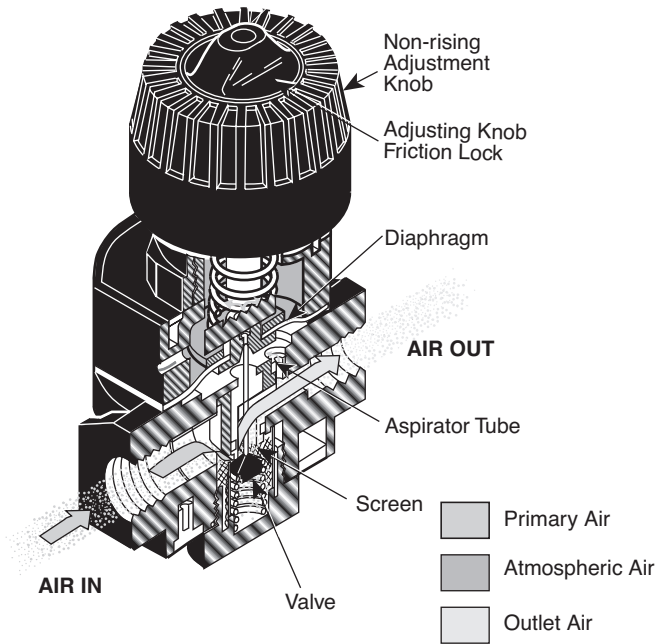
For use in applications that require reliable performance and accurate pressure control. This type of regulator is generally used for material handling systems, flow and temperature controllers, critical air control circuits, medical and scientific test equipment, and valve positioners.

### Operation

Set the desired secondary pressure by turning the adjustment knob clockwise. This action increases the regulating spring force against the top of the diaphragm disc. When the spring force above exceeds the air pressure beneath the diaphragm, it is transmitted by the valve stem and opens the valve. Airflow through the regulator now occurs.

A precisely designed and positioned aspirator tube constantly transmits the secondary pressure to the under side of the diaphragm so that during flow conditions any pressure loss can be quickly compensated for. When flow is no longer required, the outlet pressure increases slightly, allowing the diaphragm to rise, the valve to close, and set pressure to be maintained.

On self-relieving models, if outlet pressure should increase above the set pressure, the diaphragm will rise therefore opening the relief seal between the diaphragm and the valve. The excess outlet pressure is then vented through the diaphragm orifice into the bonnet and subsequently to the atmosphere through an orifice in the bonnet. For best performance, regulated pressure should always be set by increasing the pressure to the desired setting.



# Lubricators

## EconOmist™

The EconOmist™ lubricators inject an oil aerosol into the flowing air stream to automatically provide the proper amount of internal lubrication to air operated tools or other pneumatic devices.

### Operation

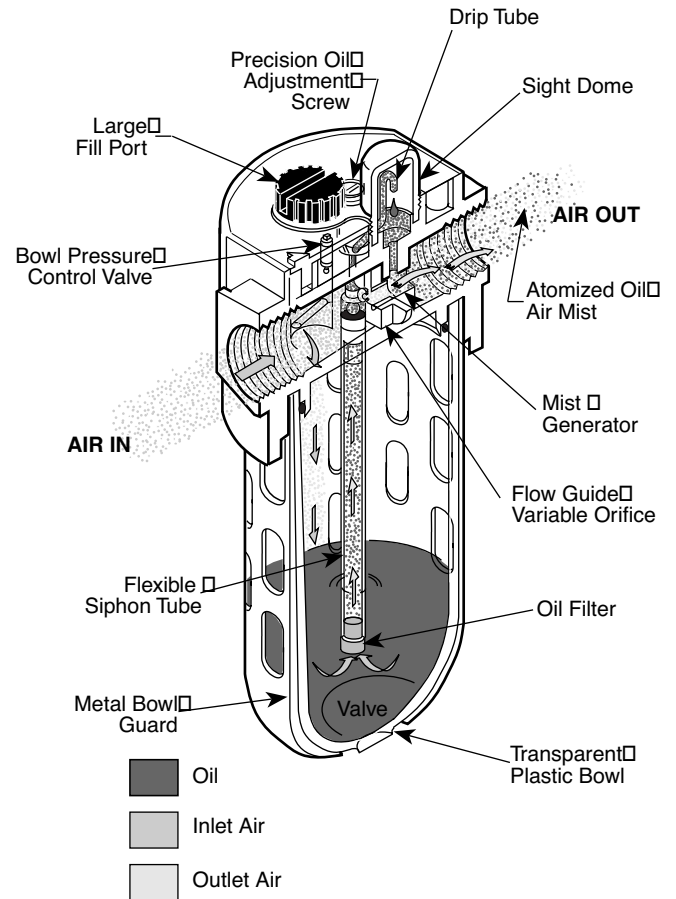
For proper operation there must be line pressure in the reservoir bowl. As the air flows through the lubricator, some of the incoming air passes through the bowl pressure control valve that then pressurizes the bowl pushing oil upward through the siphon tube. Most of the air flow passes through the self-adjusting Flow-Guide® flow sensor in the lubricator throat creating a slight pressure drop that is proportional to the rate of air flow. The pressure drop is sensed by the sight dome and across the adjustment needle valve allowing oil to flow upward through the siphon tube into the sight dome where it drips into a nozzle passage and then into the lubricator throat.

The precise amount of oil to be delivered to the air stream is determined by the oil adjusting needle valve that sets the exact drip rate.

The oil drops are atomized by the high velocity air flowing through the lubricator. All of the drops visible in the sight dome are delivered downstream to the air devices.

The self-adjusting flow sensor automatically maintains a constant oil-to-air ratio by opening and closing in response to a wide range of changing air flows. A check valve keeps the siphon tube full of oil during periods of no flow and prevents oil carry-over due to the possibility of reverse flow.

The pressurizing valve controls the rate of bowl pressurization and allows depressurization for refilling the unit without shutting off the supply air. When the oil fill plug is loosened, a spring loaded, normally closed 2-way valve closes, allowing the air pressure in the bowl to be gradually reduced. When the fill plug is replaced, the bowl repressurizes through the pressure control valve. Upon initial use, or if unit has been run dry, open oil adjustment wide open until no air bubbles are visible in sight dome. Then, reset oil feed adjustment to desired setting.



### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Lubricators

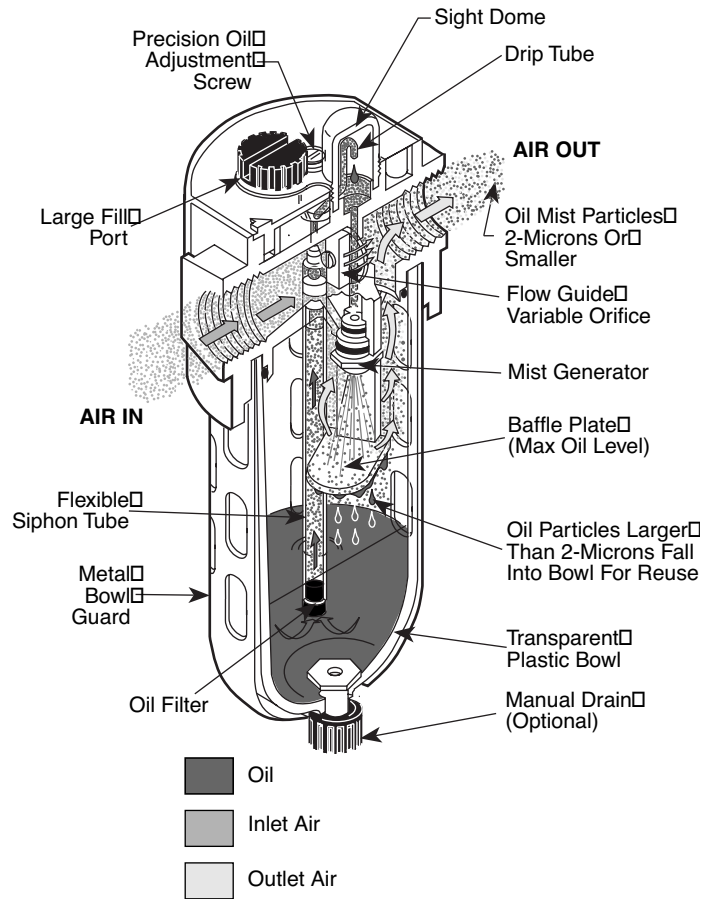
## AtoMist™

The AtoMist™ lubricators inject a micro-mist of oil into the flowing air stream to automatically provide the correct amount of internal lubrication for air tools and other pneumatic devices. This type of lubricator can be precisely adjusted to a very low oil flow rate because only a portion of the oil drops seen in the sight dome goes downstream. The lubricator should be used where only a very minute amount of lubricant is desirable or where it is necessary for the oil to remain in suspension in the air stream for long distances.

Lubricating oil is injected into the mist generator by allowing a portion of the incoming air to bypass the mist generator and enter the bowl, where it forces the oil up the siphon tube. The oil then passes the adjustment screw, which meters the amount of oil that can flow to the drip tube and down into the mist generator. The oil droplets and air are then sprayed onto the generator baffle where the oil drops are atomized. The larger oil particles are baffled out and fall into the bowl to be reused.

The very fine oil aerosol particles remain airborne and are swept into the lubricator outlet by the airflow, where they are carried downstream. Only a small amount of the oil drops visible in the sight dome are delivered downstream. Generally, micro-mist lubricators convert about 3% of the liquid oil “atomized” particles 2 microns or smaller in size.

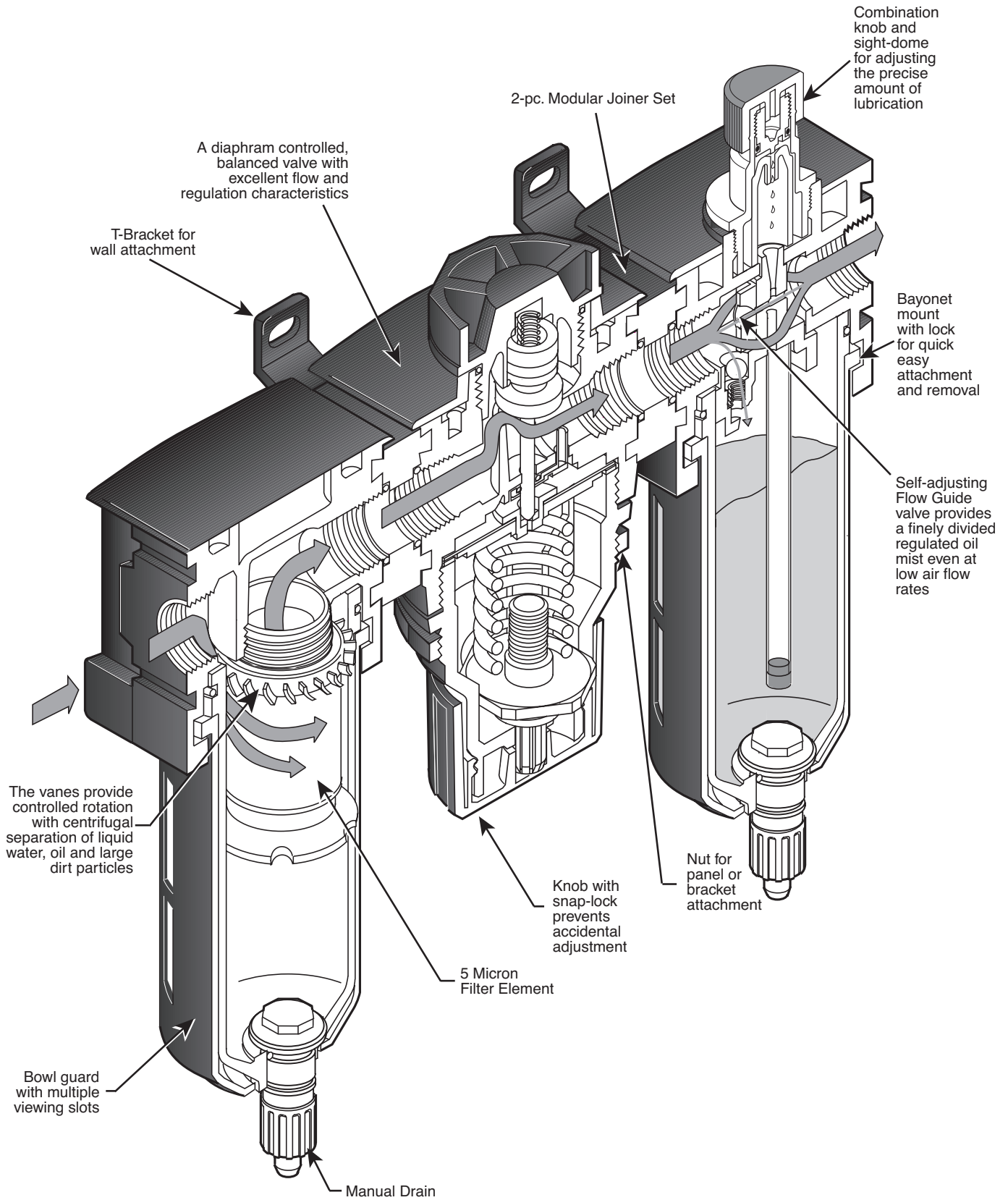
Once the oil-to-air density ratio has been established and the drip rate adjustment set, the proportional control of the patented Flow-Guide® variable orifice permits varying volumes of air to pass through the lubricator while maintaining the oil-to-air ratio balance. AtoMist™ lubricators cannot be filled manually without turning off and venting the air pressure from the bowl. The height of the oil level in the bowl is critical and cannot be allowed higher than the baffle plate.



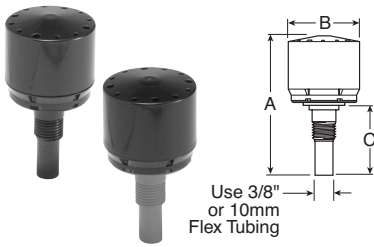
### Suggested Lubricant

Airline Oil F442001  
 Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

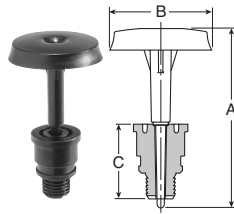
# 18 / 28 Series FRL Modular Combination



# Automatic Mechanical Drains



**Automatic Drain**  
(Nitrile and Fluorocarbon Versions)  
Operating Range  
15 to 250 PSIG (1 to 17 bar)



**Automatic Piston Drain**  
(08 Series as shown)  
Works with cyclical operation of air system.



Wilkerson automatic mechanical drains are designed to remove liquid oil and water contaminants from compressed air systems automatically. They eliminate the necessity of someone having to drain accumulated liquids from filters, separators, receivers, etc. on a daily basis. Instead, only regular, periodic maintenance and cleaning is needed. Typically, once a month the drain should be removed from the housing and cleaned in warm, soapy water (no solvents).

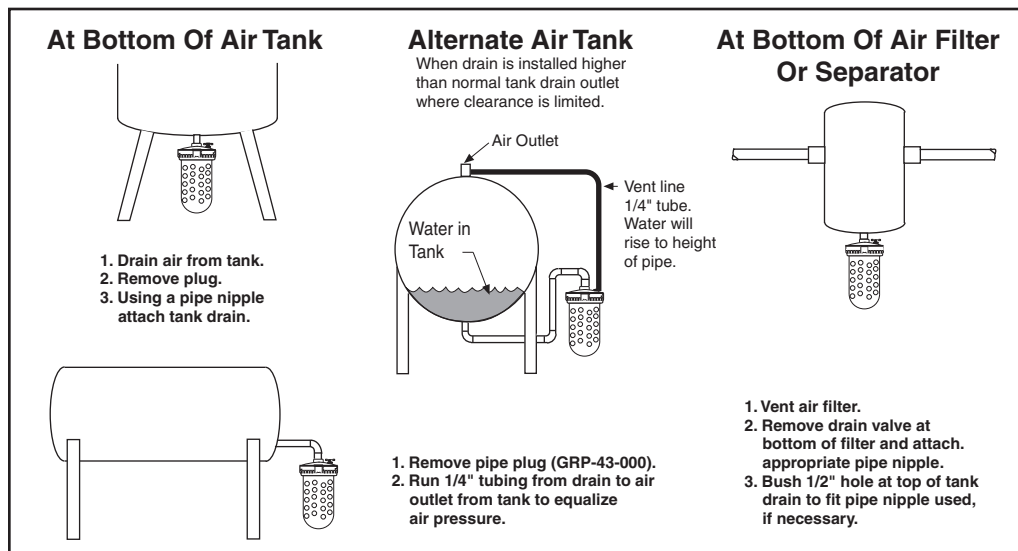
## Operation Automatic Mechanical Drains

Liquid contaminants collected in the bowl cause the float mechanism to rise. When the liquid reaches a specific level, the float triggers a mechanism which pilots system pressure against a large-area piston, driving the piston down. The piston opens the drain orifice, causing the system pressure to evacuate the liquid contaminants. As the liquid level falls, the pilot valve closes, system pressure against the piston exhausts to atmosphere, and the drain valve snaps closed, ready to repeat the cycle. At least once a month, the drain should be removed from service, and cleaned with warm, soapy water to ensure continued reliable operation.

## Automatic Piston Drains (used in F03, F08, M03, M08, B03 and B08 filter units)

Air enters bowl, and pressure equalizes above and below piston. The piston has differential areas above and below, with the top area being larger. This gives a slight downward force, holding the drain orifice closed, as long as air pressure is constant. System fluctuations, such as an increased demand for air downstream, causes the pressure above the piston to drop slightly. Now the trapped air below the piston is a higher pressure, and thus pushes the piston up, opening the orifice, and causing the system pressure to expel to atmosphere any accumulated liquids. The sudden drop of pressure below the piston now causes the system pressure to quickly push the piston down, closing the drain, and resetting the piston for the next cycle. It is important to note that this type of drain requires periodic fluctuations in system pressure in order to operate; in a system where the pressure is constant, the drain piston will never cycle.

## Typical Installations



**AIR PREPARATION UNITS**

Symbol	Description
	FILTER / SEPARATOR with manual drain
	FILTER / SEPARATOR with automatic drain
	OIL REMOVAL FILTER
	AUTOMATIC DRAIN
	LUBRICATOR less drain
	LUBRICATOR with manual drain
	LUBRICATOR with automatic filling
	AIR LINE PRESSURE REGULATOR adjustable, relieving
	AIR LINE PRESSURE REGULATOR pilot controlled, relieving
	FILTER / REGULATOR (piggyback) Manual Drain Relieving (With Gauge)
	FILTER / REGULATOR (piggyback) Auto Drain Relieving
	AIR LINE COMBO F-R-L simplified

**PNEUMATIC VALVES**

Symbol	Description
	CHECK
	FLOW CONTROL
	RELIEF VALVE

**PNEUMATIC VALVES (Cont'd)**

Symbol	Description
	2-POSITION 2-WAY
	2-POSITION 3-WAY
	2-POSITION 4-WAY
	2-POSITION, 4-WAY 5-PORTED
	3-POSITION, 4-WAY, APB ports closed, center pos.
	3-POSITION, 4-WAY, CE 5-PORTED cylinder ports open to exhaust in center position
	3-POSITION, 4-WAY, PC 5-PORTED pressure ports open to exhaust in center position
	QUICK EXHAUST
	SHUTTLE

**VALVE ACTUATORS**

Symbol	Description
	MANUAL general symbol
	PUSH BUTTON
	LEVER
	PEDAL OR TREADLE
	MECHANICAL cam, toggle, etc.
	SPRING
	DETENT line indicates which detent is in use
	PIEZO

**VALVE ACTUATORS (Cont'd)**

Symbol	Description
	SOLENOID
	INTERNAL PILOT SUPPLY
	REMOTE PILOT SUPPLY
	AND / OR COMPOSITE solenoid and pilot or manual override
	AND / OR COMPOSITE solenoid and manual override and pilot

**LINES AND FUNCTIONS**

Symbol	Description
	solid line – MAIN LINE
	dashed line – PILOT LINE
	dotted line – EXHAUST OR DRAIN LINE
	center line – ENCLOSURE OUTLINE
	LINES CROSSING (90° intersection not necessary)
	LINES JOINING (90° intersection not necessary)
	LINES JOINING
	FLOW DIRECTION hydraulic medium
	FLOW DIRECTION gaseous medium
	ENERGY SOURCE
	LINE WITH FIXED RESTRICTION
	LINE WITH ADJUSTABLE RESTRICTION
	FLEXIBLE LINE
	PLUGGED PORT, TEST STATION, POWER TAKE-OFF
	connected QUICK DISCONNECT WITHOUT CHECKS
	disconnected QUICK DISCONNECT WITHOUT CHECKS
	connected QUICK DISCONNECT WITH CHECKS
	disconnected QUICK DISCONNECT WITH CHECKS
	connected QUICK DISCONNECT WITH ONE CHECK
	disconnected QUICK DISCONNECT WITH ONE CHECK

**Saving Money and Space by Sizing Your Valves Properly**

You can “plug” your requirements into the following simple formula, and determine the Cv needed to do the job. By not oversizing, you’ll save space and money, and you’ll ensure the valve you select will do the job.

Converting the Job Requirements Into Cv (Capacity Co-efficient).

$$C_v = \frac{\text{Cylinder Area (Sq. In.)} \times \text{Stroke (In.)} \times \text{Compression Factor (Table 2)} \times \text{“A” (Table 2)}}{\text{Stroke Time (sec.)} \times 28.8}$$

Let’s work through an example:

We want to extend a 3-1/4” bore cylinder which has a 12” stroke in one second, and we have a supply pressure of 80 PSI to do the work. Here’s what we know:

- Cylinder Area for a 3-1/4” Bore, from Table 1 .....8.30 sq. in.
- Cylinder Stroke ..... 12 in.
- Stroke Time Required in Seconds..... 1 sec.
- Compression Factor at 80 PSI, from Table 2..... 6.4
- “A” Constant for 80 PSI, from Table 2 ..... .048

Substituting in the formula, we have:

$$C_v = \frac{8.30 \times 12 \times 6.4 \times .048}{1 \times 28.8} = 1.06$$

Any valve, therefore, which has a Cv of *at least* 1.06, will extend our cylinder the specified distance in the required time.

**Choosing the Valve “Series”**

Your next step is to choose a basic valve design to do the job. For a quick guide to valve designs, see Table 3.

Having selected the basic valve design, consult the Capacity Co-efficient (Cv) tables which describe the individual valve capacities.

**Selecting the Valve Model, Options and Accessories**

Having determined Cv, series, port size, flow-path configuration (pre-determined by circuit design), and actuation method, you’re ready to choose the *exact* valve model number.

**Table 1**

**Effective Square-Inch Areas for Standard-Bore-Size Cylinders**

Bore Size	Cylinder Area (Sq. In.)	Bore Size	Cylinder Area (Sq. In.)
3/4"	.44	4"	12.57
1"	.79	4-1/2"	15.90
1-1/8"	.99	5"	19.64
1-1/4"	1.23	6"	28.27
1-1/2"	1.77	7"	38.48
1-3/4"	2.41	8"	50.27
2"	3.14	10"	78.54
2-1/2"	4.91	12"	113.10
3-1/4"	8.30	14"	153.94
3-5/8"	10.32	—	—

**Table 2**

**Compression Factors and “A” Constants**

Inlet Pressure (PSIG)	Compression Factor	“A” Constants for Various Pressure Drop*		
		2 PSI ΔP	5 PSI ΔP	10 PSI ΔP
10	1.6	.152	.103	—
20	2.3	.126	.084	.065
30	3.0	.111	.073	.055
40	3.7	.100	.065	.048
50	4.4	.091	.059	.044
60	5.1	.085	.055	.040
70	5.7	.079	.051	.037
80	6.4	.075	.048	.035
90	7.1	.071	.046	.033
100	7.8	.068	.044	.032
110	8.5	.065	.042	.030
120	9.2	.063	.040	.029
130	9.9	.061	.039	.028
140	10.6	.058	.037	.027
150	11.2	.057	.036	.026
160	11.9	.055	.035	.025
170	12.6	.053	.034	.024
180	13.3	.052	.033	.024
190	14.0	.051	.032	.023
200	14.7	.050	.032	.023

**Note:** Use “A” constant at 5 PSI rP for most applications. On very critical applications, use “A” at 2 PSI rP. You will find in many cases, a 10 PSI rP is not detrimental, and can save money and mounting space.

\* Tabulated values are the solution of  $\frac{1}{22.48} \sqrt{\frac{GT}{(P_1 - P_2) P_2}}$  where T is for 68°F and G = 1 for Air.

**Table 3**

**Characteristics of the Major Valve Designs**

<p><b>A. Poppet</b> 3-Way and 4-Way</p>	<ol style="list-style-type: none"> <li>High flow capacities</li> <li>Minimum lubrication requirements</li> <li>Fast response</li> <li>Self-cleaning poppet seats</li> <li>Pressures of 15 to 150 PSIG (modifications for vacuum to 250 PSIG)</li> </ol>
<p><b>B. Spool Valves (WCS)</b> 3-Way and 4-Way</p>	<ol style="list-style-type: none"> <li>Low friction</li> <li>Lower operating pressures</li> <li>Fast response</li> <li>Less wear</li> <li>Long Cycle Life - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore</li> <li>Non-Lube Service - No lubrication required for continuous valve shifting</li> <li>Bi-Directional Spool Seals - Common spool used for any pressure, including vacuum</li> </ol>
<p><b>C. Packed Bore</b> 4-Way</p>	<ol style="list-style-type: none"> <li>Wide range of flow capacities</li> <li>Wide range of flow-path configurations</li> <li>Pilot-operated models available</li> <li>Pressures of vacuum to 150 PSIG</li> </ol>
<p><b>D. Rotary Or Reciprocating Disc</b> 4-Way, manually operated</p>	<ol style="list-style-type: none"> <li>Inexpensive</li> <li>Versatility in manual actuation</li> </ol>

**Cv – Capacity Co-efficients** (sometimes called Flow Factors). Each flow path through the valve has its own Cv value. All Cv ratings for each valve cataloged on this page are listed on the front side of this sheet.

$$C_v = \frac{Q}{22.48} \sqrt{\frac{GT}{(P_1 - P_2) P_2}}$$

Q = Flow in Standard Cubic Feet per minute (14.7 PSIA at 60°F)  
 P1 = Inlet Absolute Pressure (gauge pressure + 14.7)  
 P2 = Outlet Absolute Pressure (gauge pressure + 14.7)  
 Note: P2 must be greater than .53 x P1  
 G = Specific Gravity of flowing medium (Air, G = 1)  
 T = Absolute Temperature of Air (460 + °F)

**Cv** = Q x “A” (Table 2)





# Filters, Regulators & Lubricators

**Particulate Filters ..... B2-B3**

F01 .....	B4
F03 .....	B6
F08 .....	B8
F18 .....	B10
F16 .....	B12
F28 .....	B14
F26 .....	B16
F90 .....	B18
F30 .....	B20
F34 .....	B22
F35 .....	B24
F43 .....	B26

**Coalescing Filters .. B28-B29**

M03 .....	B30
M08 .....	B32
M18 .....	B34
M16 .....	B36
M28 .....	B38
M26 .....	B40
M21 .....	B42
M90 .....	B44
M30 .....	B46
M31 .....	B48
M32 .....	B50
M35 .....	B52
M43 .....	B54
M45 .....	B56
M55 .....	B58

**Afterfilters ..... B59**

A18 .....	B61
A28 .....	B63

**Exhaust Mufflers**

F23 .....	B64
F33 .....	B65

**Exhaust Silencer**

XMC .....	B66
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**Liquid Separators**

WSA / WSO .....	B68
WWSA .....	B70

**External Drains**

X01 .....	B71
X02 / XB3 .....	B72
X51 .....	B74

**Regulators ..... B77-B79**

R03 .....	B80
RB3 / RA3 .....	B82
RA4 .....	B84
R24, R25 .....	B86
R45, R46 .....	B88
R08 .....	B90
R120 .....	B92
R18 .....	B96
R16 .....	B98
R28 .....	B100
R26 .....	B102
R90 .....	B104
R30 .....	B108
R40 .....	B110

**Common P1 Regulators B113**

R09 .....	B114
R19 .....	B116

**Dial-Air™****Regulators ..... B118-B119**

R11 .....	B120
R21 .....	B122
R31 .....	B124
R41 .....	B126

**Precision Regulators ... B129**

P16 .....	B130
P17 .....	B132
WRA302 .....	B134
WRA102 .....	B136
WRA102BP .....	B138
WRA171 .....	B140
WEA632 .....	B142
WBA208 .....	B144
WBA45 .....	B146

**Lubricators..... B148-B149**

L01 .....	B150
L03 .....	B152
L08 .....	B154
L18 .....	B156
L16 / L17 .....	B158
L28 .....	B160
L26 / L27 .....	B162
L90 .....	B164
L30 .....	B166
L31 .....	B168
L32 .....	B170
L40 .....	B172
L41 .....	B174
L42 .....	B176
L50 .....	B178

**Filter / Regulators B181-B183**

B03 .....	B184
BB3 / BA3 .....	B186
B08 .....	B188
B18 .....	B190
CB6 .....	B192
PC6 .....	B194
B28 .....	B196
B90 .....	B198

**Combinations –****2-Unit ..... B200-B201**

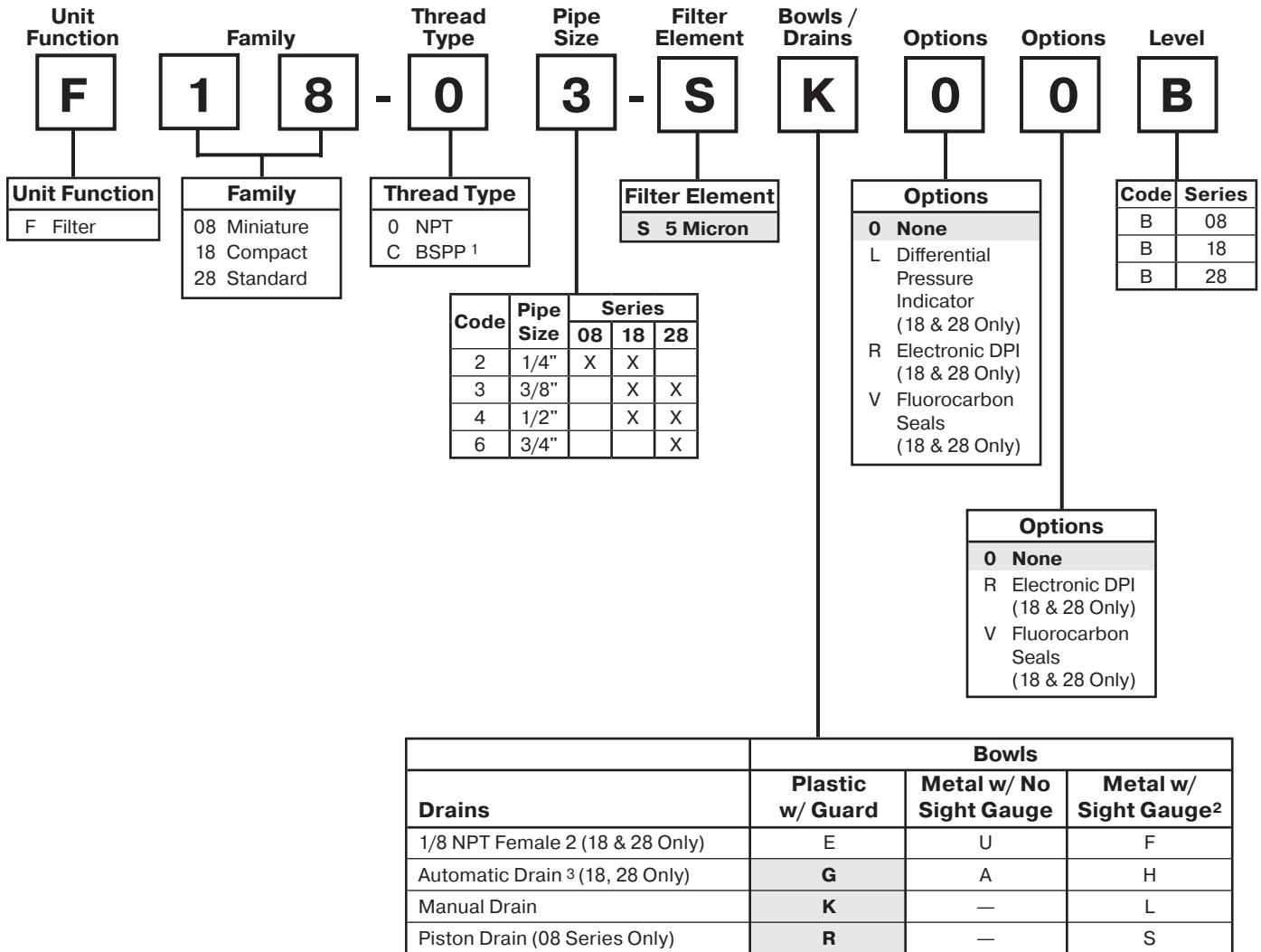
D03 .....	B202
D08 .....	B204
CB7 .....	B206
D18 .....	B208
D28 .....	B210
D90 .....	B212

**Combinations –****3-Unit ..... B214-B215**

C03 .....	B216
C08 .....	B218
C18 .....	B220
C16 .....	B222
C28 .....	B224
C26 .....	B226
C31 .....	B228
C90 .....	B230

# Particulate Filter Numbering System

   = "Most Popular"



1 ISO, R228 (G Series)

2 F08 Filter has an all Metal Bowl (no sight gauge)

3 Operating range 15 to 250 PSIG (1 to 17 bar)

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

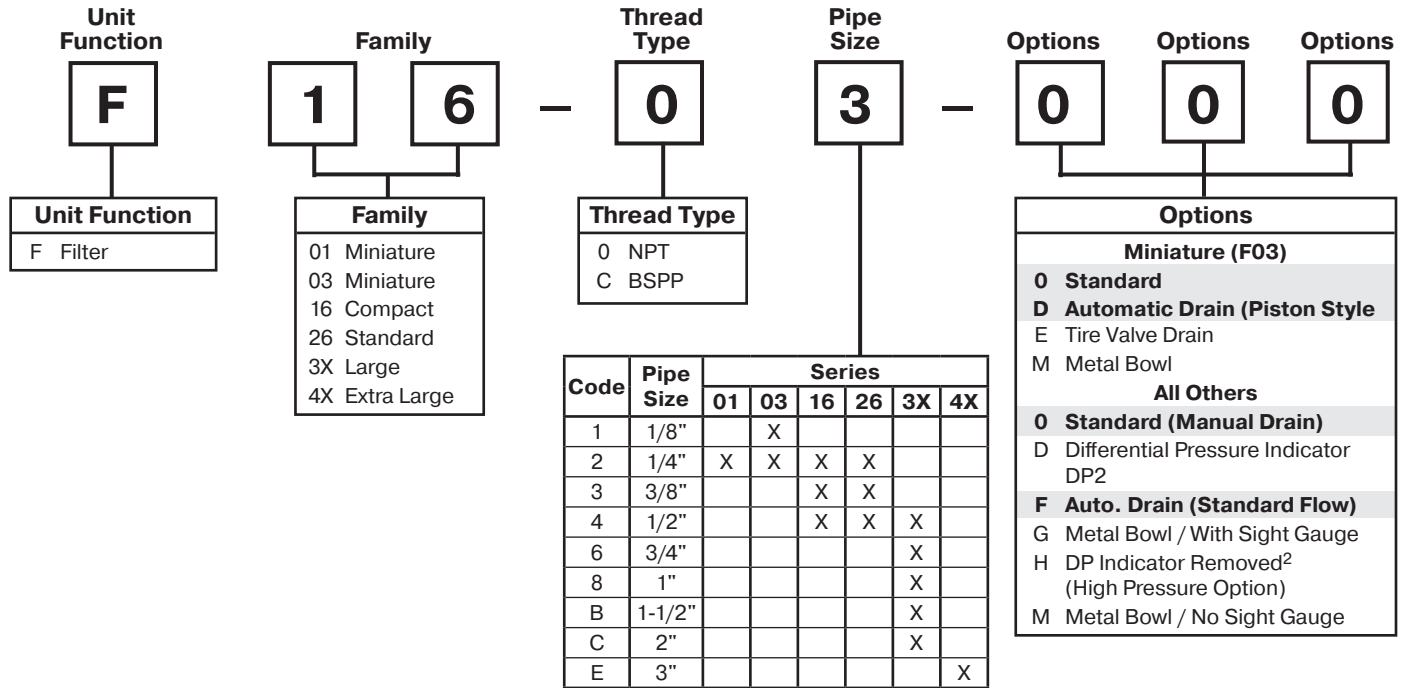
**NOTE:**All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:**

**F 1 8 - 0 3 - S K 0 0 B**

# Particulate Filter Numbering System

   = "Most Popular"



<sup>1</sup> Ports on some units are BSPP-G, others are BSPT-Rc. Consult specific model page for specifications.

<sup>2</sup> Models F35 & F43.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

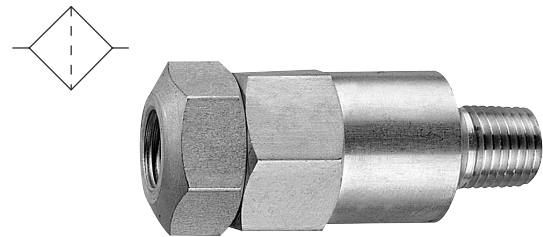
**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.**

**NOTE:** 000 in position 6, 7, and 8 signifies standard product.

# Particulate Filter F01

= "Most Popular"



**F01-02-000**

## In-Line Filter

This small, aluminum in-line filter is designed to provide protection for portable pneumatic hand tools. It weighs only 2 ounces with a throw-away filter element rated at 5 microns. Either port may be used as the inlet port. Flow is 17 SCFM (8 dm<sup>3</sup>/s) at 90 PSIG (6.2 bar) inlet pressure with 5 PSIG (0.3 bar) pressure drop.

## Specifications

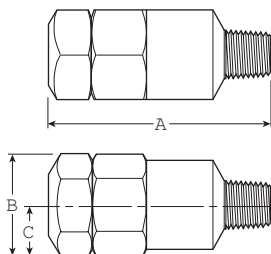
Flow Capacity*	17.0 SCFM (8 dm <sup>3</sup> /s)	
Maximum Supply Pressure	200 PSIG (13.8 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPT-Rc	1/4
Standard Filtration	5 Micron	
Weight	.13 lb. (.06 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSIG (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Aluminum
Body	Aluminum
Filter Element	Sintered Polyethylene
Seals	Nitrile



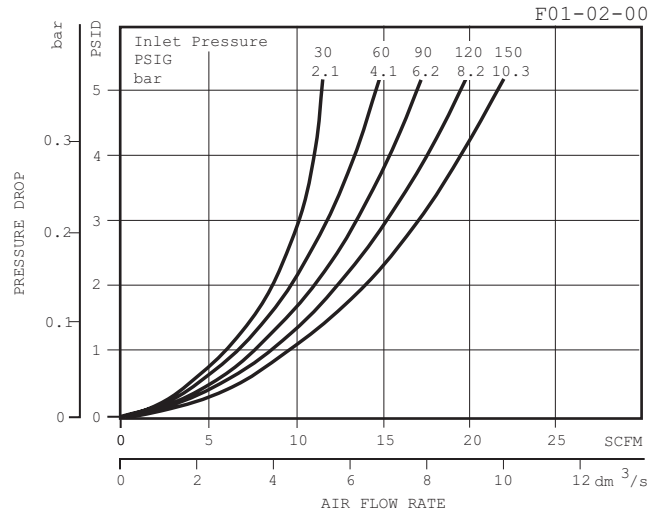
## Dimensions

Models	Inches (mm)	A	B	C
Standard Unit F01-02-000		2.50 (63.5)	1.00 (25)	.51 (13)

= "Most Popular"

### Replacement Element Kits

Type "A", 5 Micron..... FRP-95-199



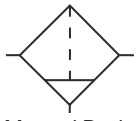
### Ordering Information

Model Type	Port Size	Standard Unit
In-Line Filter	1/4	F01-02-000

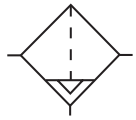
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F03

= "Most Popular"



Manual Drain



Auto Drain



**F03-02-000**

## Features

- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Easily Disassembled for Servicing Without the Use of Tools

## Specifications

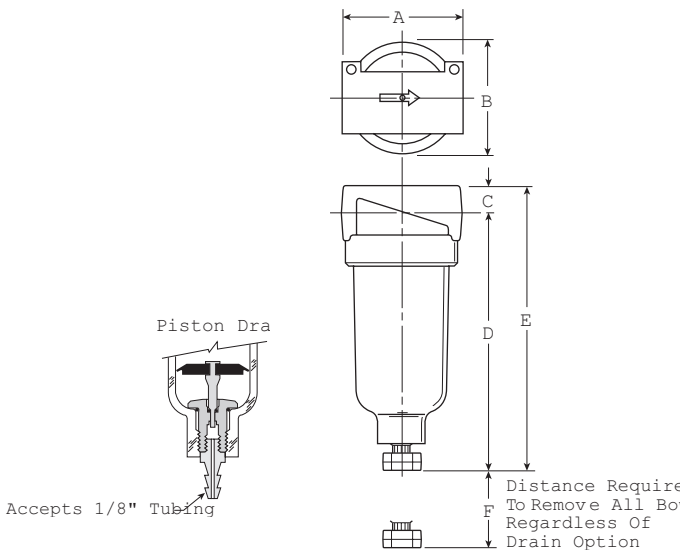
Flow Capacity*	1/8	22.0 SCFM (10 dm <sup>3</sup> /s)
	1/4	24.0 SCFM (11 dm <sup>3</sup> /s)
Maximum Supply Pressure		
Polycarbonate Bowl	0 to 150 PSIG (0 to 10.3 bar)	
Metal Bowl	0 to 250 PSIG (0 to 17.2 bar)	
Piston Drain	10 to 250 PSIG (0.7 to 17.2 bar)	
Operating Temperature		
Polycarbonate Bowl	32°F to 125°F (0°C to 52°C)	
Metal Bowl	32°F to 175°F (0°C to 80°C)	
Piston Drain	32°F to 125°F (0°C to 52°C)	
Port Size	NPT	1/8, 1/4
Standard Filtration	5 Micron	
Weight	.41 lb. (.18 kg)	

\* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc	
Bowls	Transparent Polycarbonate	Metal (Without Sight Gauge) Zinc
Deflector, Element Holder & Baffle	Plastic	
Manual Drain	Body & Stem	Plastic
	Seals	Nitrile
Piston Drain	Piston & Seals	Nitrile
	Stem, Seat, Adaptor & Washers	Aluminum
Filter Elements	5 Micron	Plastic
Seals	Nitrile	



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F03-XX-000		1.69 (43)	1.53 (39)	.39 (10)	3.82 (97)	4.21 (107)	1.60 (41)
Piston Drain F03-XX-D00		1.69 (43)	1.53 (39)	.39 (10)	3.87 (99)	4.26 (108)	1.60 (41)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –  
 Manual Drain .....PS447B  
 Piston Drain .....PS451B

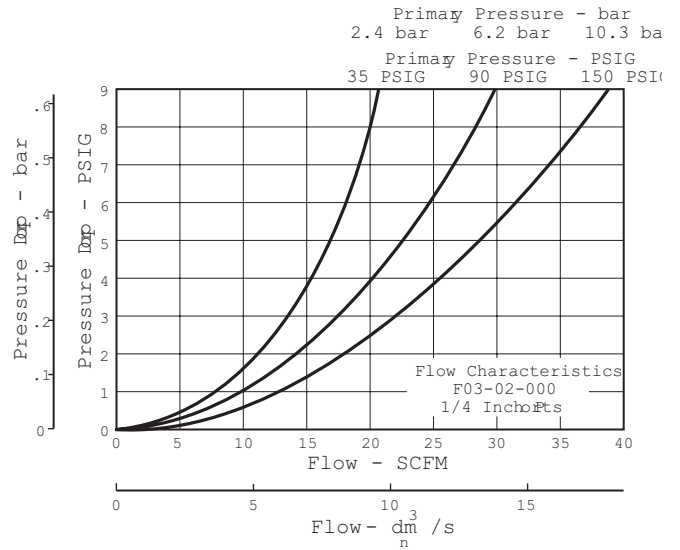
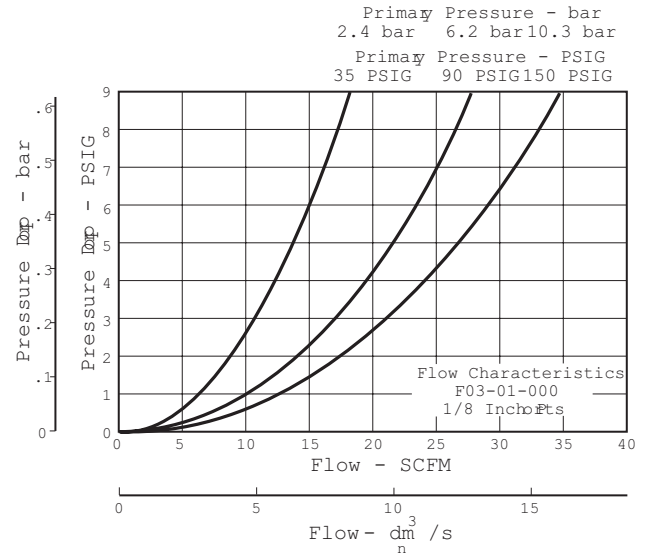
- Plastic Bowl –  
 Manual Drain .....PS404  
 Piston Drain .....PS408B

### Replacement Element Kits

- 5 Micron .....PS403

### Accessories

- Filter Element Kit (Bulk Pack, Qty. 12) ..... FRP-96-303  
 Mounting Bracket Kit ..... PS417B

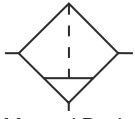


### Ordering Information

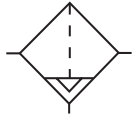
Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
Manual Drain	1/8	F03-01-000	F03-01-M00
	1/4	F03-02-000	F03-02-M00
Piston Drain	1/8	F03-01-D00	F03-01-DM0
	1/4	F03-02-D00	F03-02-DM0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F08



Manual Drain



Auto Drain



## Features

- Standard 5 Micron Filtration
- Quick-disconnect Bowl
- Bowl Guard
- High Flow Capacity

## Specifications

Flow Capacity*	1/4	42 SCFM (20 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G 1/4	
Bowl Capacity	0.6 oz	
Standard Filtration	5 Micron	
Weight	0.24 lb. (0.11 kg)	

\* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

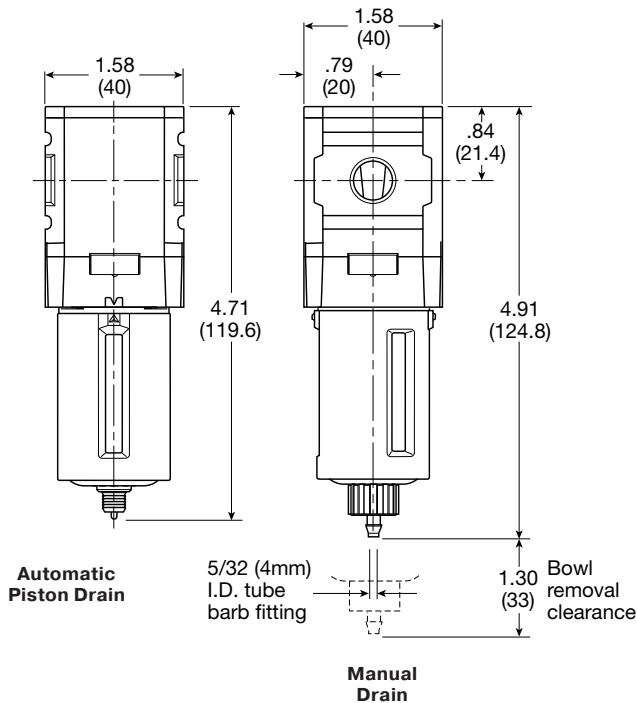
**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Acetal	
Body	Aluminum	
Body Cap	ABS	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Element Retainer	Acetal	
Filter Element	Sintered Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile

### Air quality:

Within ISO 8573-1: 1991 Class 3 (Particulates)  
Within ISO 8573-1: 2001 Class 6 (Particulates)



Inches (mm)



= "Most Popular"

### Replacement Bowl Kits

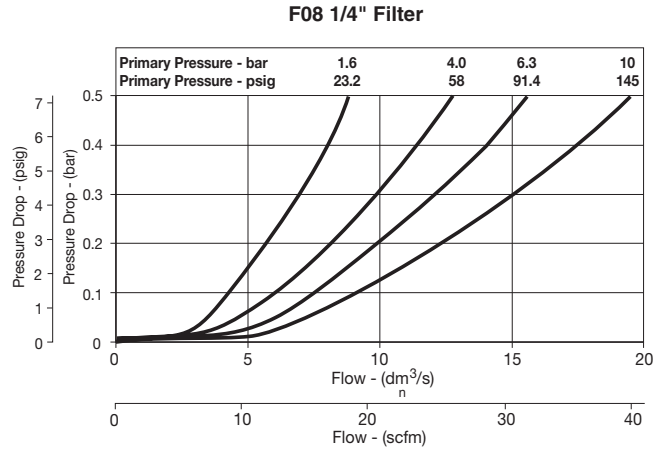
- Metal Bowl, Manual Drain ..... GRP-96-714
- Plastic Bowl / Bowl Guard, Manual Drain..... GRP-96-712

### Replacement Element Kit and Bowl Seal

- Type "A", 5 Micron.....FRP-96-729

### Accessories

- Automatic Piston Drain..... GRP-96-716
- Wall Mounting Bracket –
  - C-Type.....GPA-97-010
  - T-Type ..... GPA-96-737

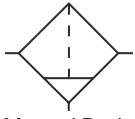


### Ordering Information

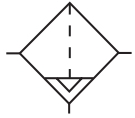
Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl (No Sight Gauge)
<b>Manual Drain</b>	1/4	F08-02-SK00B	F08-02-SL00B
<b>Automatic Piston Drain</b>	1/4	F08-02-SR00B	F08-02-SS00B

Options - To order an option supplied with the unit model, Add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F18



Manual Drain



Auto Drain



## Features

- Standard 5 Micron Filtration
- High Flow Capacities
- 1/2" NPT / BSPP-G Over-port
- Quick-disconnect Bowl
- Bowl Guard
- Light Weight
- Barbed Manual Drain Connection with Pipe-away

## Specifications

Flow Capacity*	1/4	50 SCFM (24 dm <sup>3</sup> /s, ANR)
	3/8	78 SCFM (37 dm <sup>3</sup> /s, ANR)
	1/2	82 SCFM (39 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	1.72 oz	
Standard Filtration	5 Micron	
Weight	0.62 lb. (0.28 kg)	

\* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

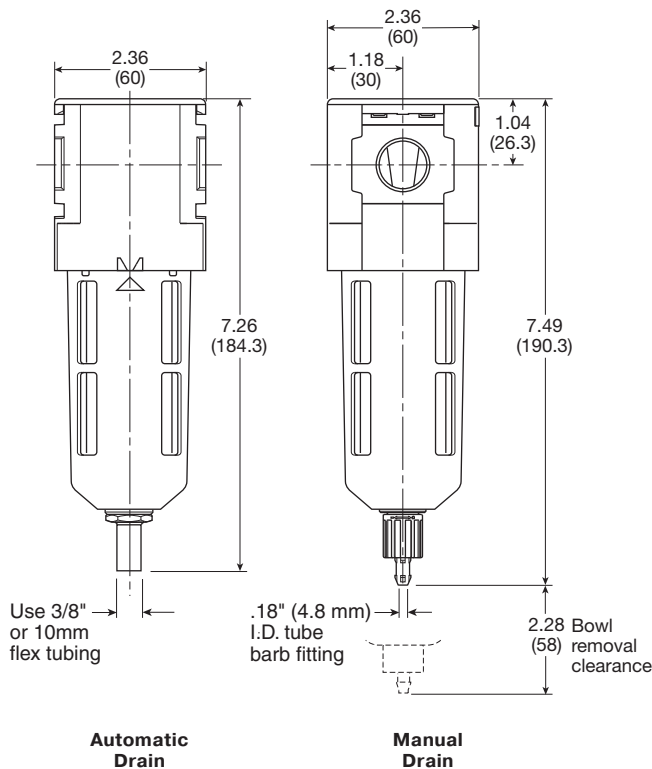
**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Deflector	Polypropylene	
Element Retainer / Baffle	Acetal	
Filter Element	Sintered Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

### Air quality:

Within ISO 8573-1: 1991 Class 3 (Particulates)  
Within ISO 8573-1: 2001 Class 6 (Particulates)



Inches (mm)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl with Sight Gauge,  
Automatic Float Drain ..... GRP-96-637
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-636
- Plastic Bowl –  
Bowl Guard, Auto Drain ..... GRP-96-635
- Bowl Guard, Manual Drain ..... GRP-96-634

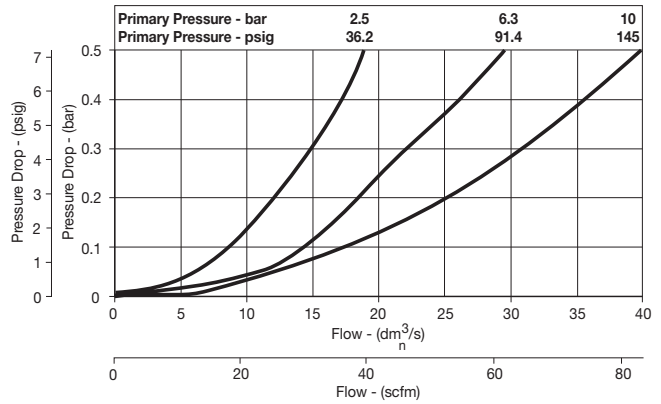
### Replacement Element Kits and Bowl Seal

- Type "A", 5 Micron Element..... FRP-96-639
- Type "A", 5 Micron with Retainer, Deflector,  
and Bowl O-ring .....FRP-96-641

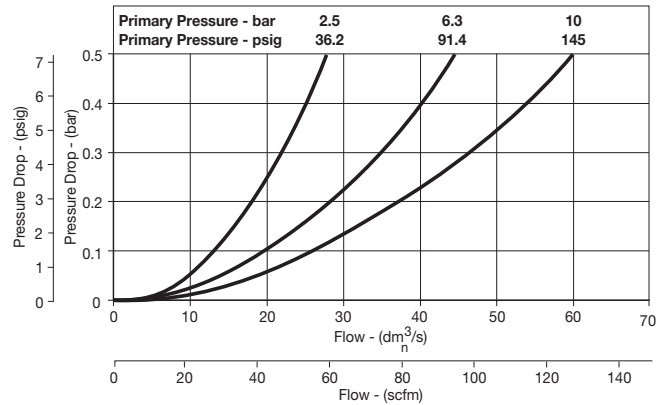
### Accessories

- Automatic Drain –  
Fluorocarbon ..... GRP-95-981
- Nitrile ..... GRP-95-973
- Manual Drain..... GRP-96-685
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –  
L-Type..... GPA-96-604
- T-Type ..... GPA-96-602

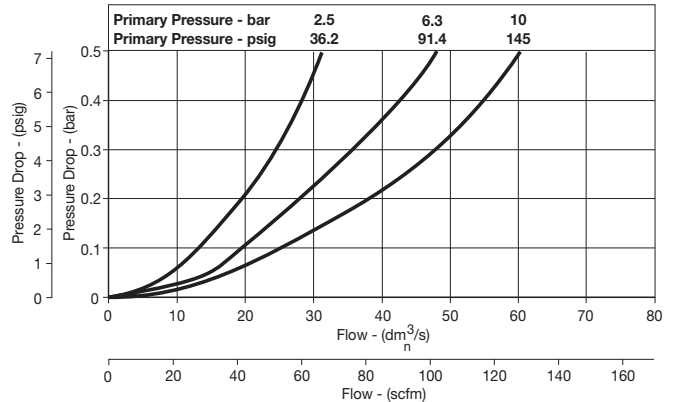
F18 1/4" Filter



F18 3/8" Filter



F18 1/2" Filter



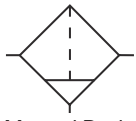
### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
Manual Drain	1/4	F18-02-SK00B	F18-02-SL00B
	3/8	F18-03-SK00B	F18-03-SL00B
	1/2	F18-04-SK00B	F18-04-SL00B
Automatic Drain	1/4	F18-02-SG00B	F18-02-SH00B
	3/8	F18-03-SG00B	F18-03-SH00B
	1/2	F18-04-SG00B	F18-04-SH00B

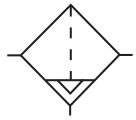
**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F16

= "Most Popular"



Manual Drain



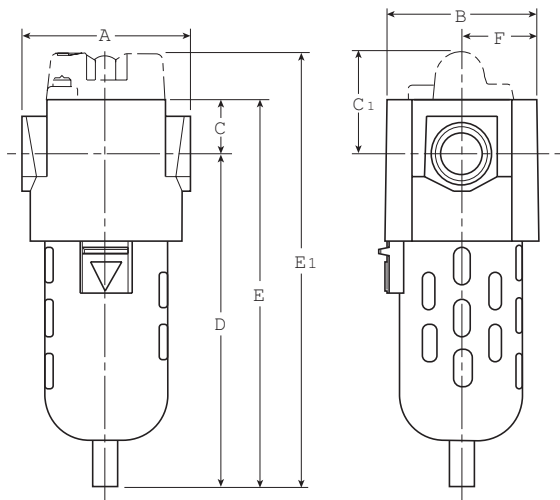
Auto Drain



**F16-02-000**

## Features

- Manual Drain
- 5 Micron Rated Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit F16-XX-000		3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	6.50 (165)	—	1.30 (33)
Differential Pressure Indicator F16-XX-D00		3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.50 (139.7)	6.50 (165)	7.33 (186)	1.30 (33)
Automatic Drain F16-XX-F00		3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	6.64 (168.7)	—	1.30 (33)
Metal Bowl / Metal Bowl with Sight Gauge F16-XX-G00		3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	7.09 (180)	—	1.30 (33)

## Specifications

Flow Capacity*	1/4	63.0 SCFM (29.7 dm <sup>3</sup> /s)
	3/8	74.1 SCFM (34.9 dm <sup>3</sup> /s)
	1/2	80.4 SCFM (37.9 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	2.7 oz	
Standard Filtration	5 Micron	
Weight	1.8 lb. (0.8 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Polypropylene	
Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Deflector	Polypropylene	
Element Retainer	Acetal	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Polycarbonate

= "Most Popular"

### Replacement Bowl Kits

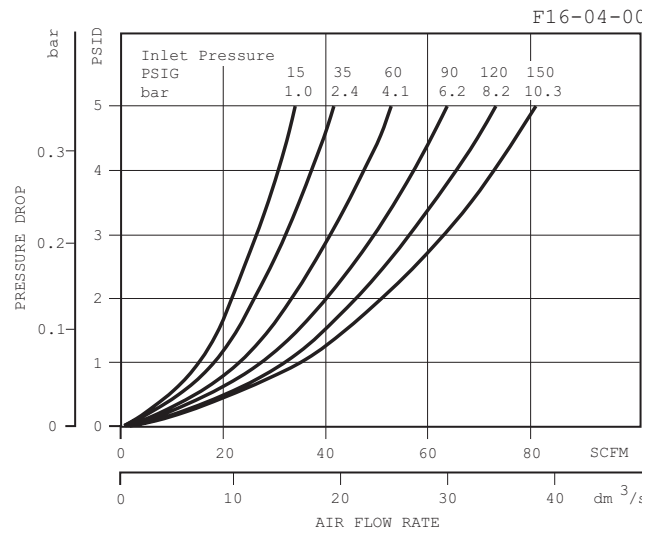
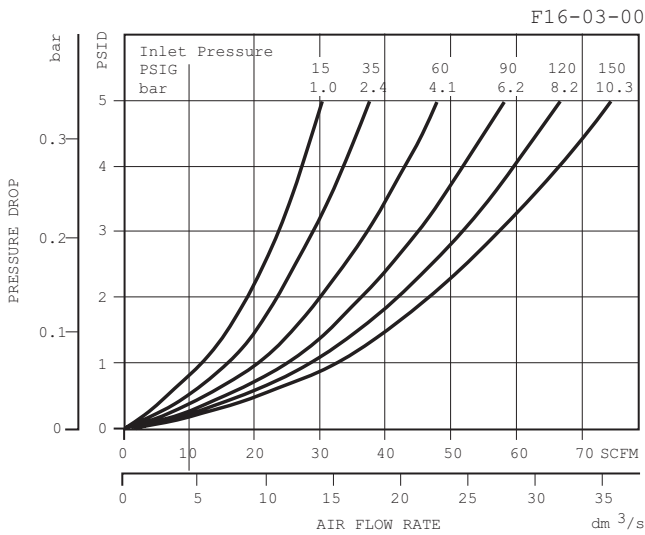
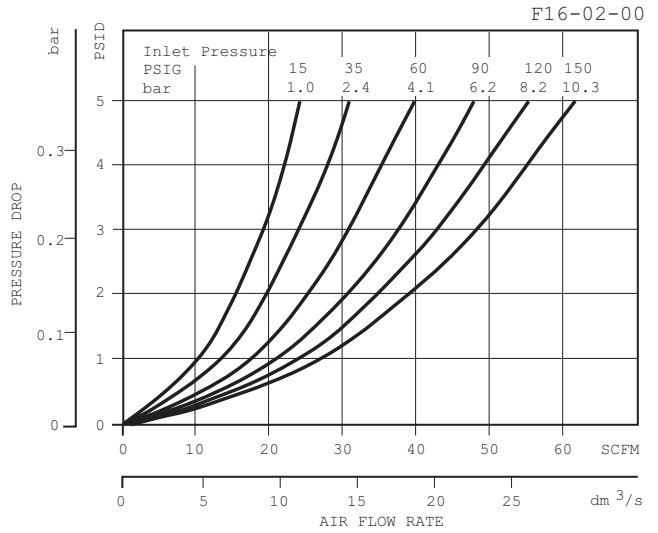
- Metal Bowl –**  
 Automatic Drain ..... FRP-95-950  
 Manual Drain ..... FRP-95-178  
 Sight Gauge, Manual Drain ..... GRP-95-133
- Plastic Bowl –**  
 Bowl Guard, Automatic Drain ..... FRP-95-015  
 Bowl Guard, Manual Drain ..... FRP-95-014  
 Manual Drain ..... FRP-95-017

### Replacement Element Kits

- Type "A", 5 Micron..... FRP-95-160

### Accessories

- Automatic Drain, Nitrile ..... GRP-95-973  
 L-Bracket ..... GPA-95-016  
 Manual Drain..... FRP-95-610  
 Sight Gauge Kit ..... GRP-95-079

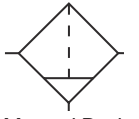


### Ordering Information

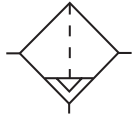
Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	1/4	F16-02-000	F16-02-M00	F16-02-G00	F16-02-D00
	3/8	F16-03-000	F16-03-M00	F16-03-G00	F16-03-D00
	1/2	F16-04-000	F16-04-M00	F16-04-G00	F16-04-D00
Automatic Drain	1/4	F16-02-F00	F16-02-FM0	F16-02-FG0	F16-02-DF0
	3/8	F16-03-F00	F16-03-FM0	F16-03-FG0	F16-03-DF0
	1/2	F16-04-F00	F16-04-FM0	F16-04-FG0	F16-04-DF0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F28



Manual Drain

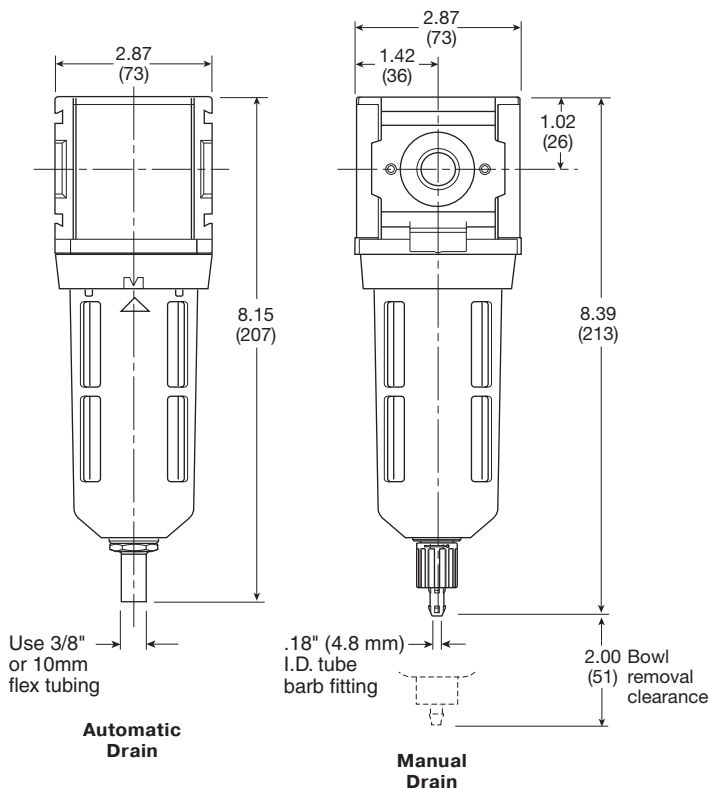


Auto Drain



## Features

- Standard 5 Micron Filtration
- High Flow Capacities
- 3/4" NPT / BSPP-G Over-port
- Quick-disconnect Bowl
- Bowl Guard
- Light Weight
- Barbed Manual Drain Connection with Pipe-away



Inches (mm)

## Specifications

Flow Capacity*	3/8	115 SCFM (54 dm <sup>3</sup> /s, ANR)
	1/2	120 SCFM (57 dm <sup>3</sup> /s, ANR)
	3/4	145 SCFM (68 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity	2.87 oz	
Standard Filtration	5 Micron	
Weight	1.01 lb. (0.46 kg)	

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (.34 bar).

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Deflector	Polypropylene	
Element Retainer / Baffle	Acetal	
Filter Element	Sintered Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

### Air quality:

Within ISO 8573-1: 1991 Class 3 (Particulates)

Within ISO 8573-1: 2001 Class 6 (Particulates)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl with Sight Gauge,  
Automatic Float Drain ..... GRP-96-645
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-644
- Plastic Bowl –  
Bowl Guard, Auto Drain ..... GRP-96-643
- Bowl Guard, Manual Drain ..... GRP-96-642

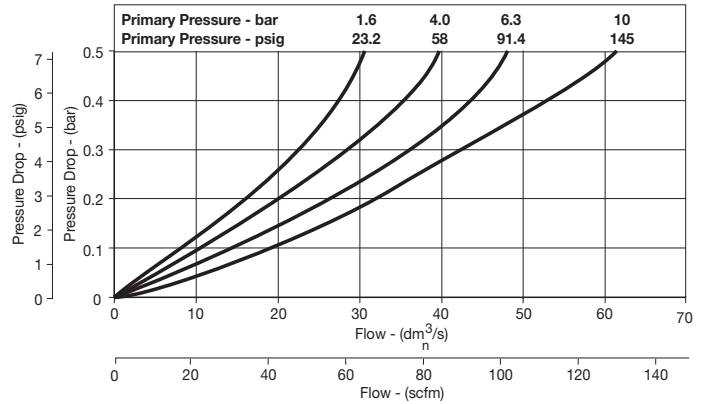
### Replacement Element Kits and Bowl Seal

- Type "A", 5 Micron with Element..... FRP-96-653
- Type "A", 5 Micron with Retainer, Deflector,  
and Bowl O-ring ..... FRP-96-283

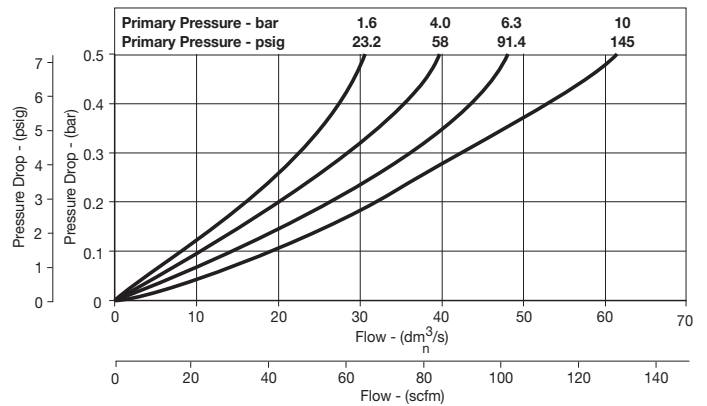
### Accessories

- Automatic Drain –  
Fluorocarbon ..... GRP-95-981
- Nitrile ..... GRP-95-973
- Manual Drain ..... GRP-96-685
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –  
L-Type ..... GPA-96-605
- T-Type ..... GPA-96-602

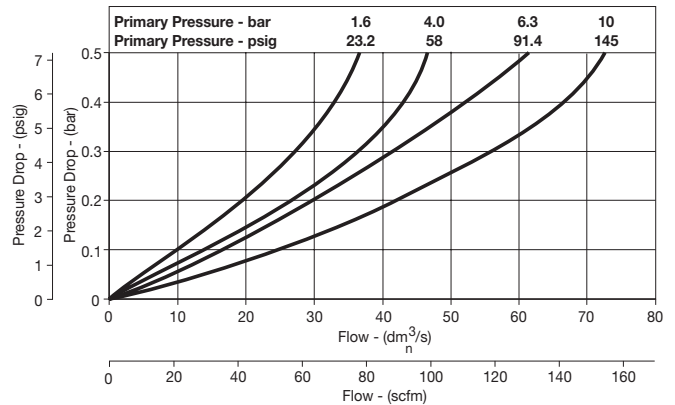
F28 3/8" Filter



F28 1/2" Filter



F28 3/4" Filter



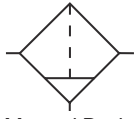
### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
Manual Drain	3/8	F28-03-SK00B	F28-03-SL00B
	1/2	F28-04-SK00B	F28-04-SL00B
	3/4	F28-06-SK00B	F28-06-SL00B
Automatic Drain	3/8	F28-03-SG00B	F28-03-SH00B
	1/2	F28-04-SG00B	F28-04-SH00B
	3/4	F28-06-SG00B	F28-06-SH00B

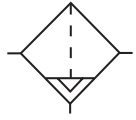
**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F26

= "Most Popular"



Manual Drain



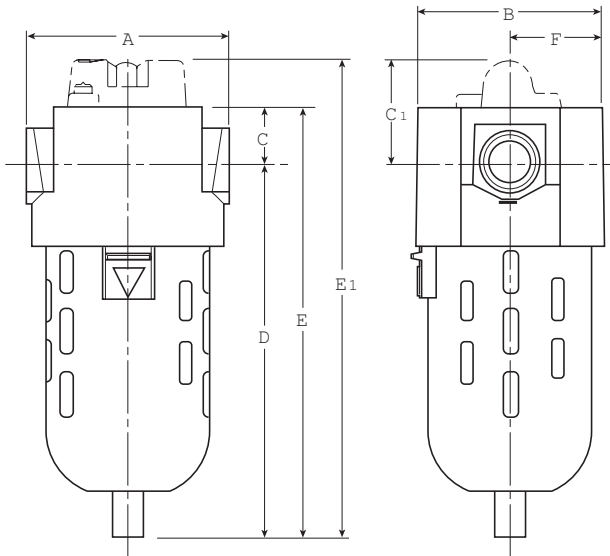
Auto Drain



**F26-02-000**

## Features

- Manual Drain
- 5 Micron Rated Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit F26-XX-000		3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.40 (188)	—	1.50 (38)
Differential Pressure Indicator F26-XX-D00		3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.40 (162.6)	7.40 (188)	8.23 (209)	1.50 (38)
Automatic Drain F26-XX-F00		3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.54 (191.5)	—	1.50 (38)
Metal Bowl / Metal Bowl with Sight Gauge F26-XX-G00		3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.30 (185)	—	1.50 (38)

## Specifications

Flow Capacity*	1/4	81.3 SCFM (28.3 dm <sup>3</sup> /s)
	3/8	117.8 SCFM (55.5 dm <sup>3</sup> /s)
	1/2	149.8 SCFM (70.6 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10,3 bar)
	Metal Bowl	200 PSIG (13,8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	3.2 oz	
Standard Filtration	5 Micron	
Weight	2.9 lb. (1.3 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Acetal	
Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Deflector	Polypropylene	
Element Retainer	Acetal	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Polycarbonate



= "Most Popular"

### Replacement Bowl Kits

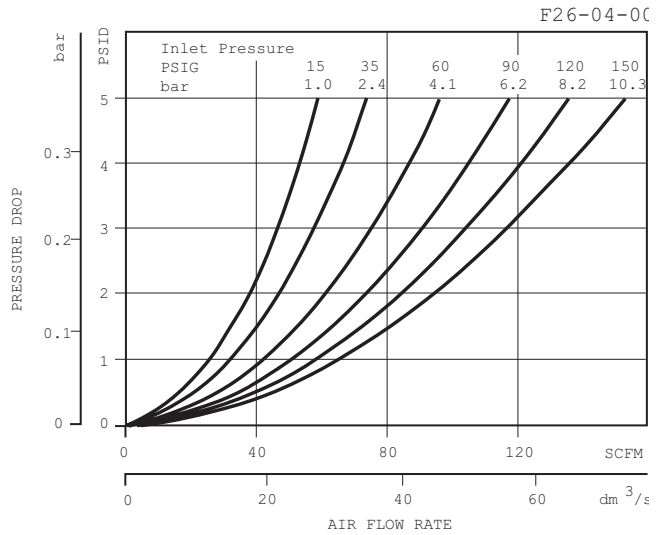
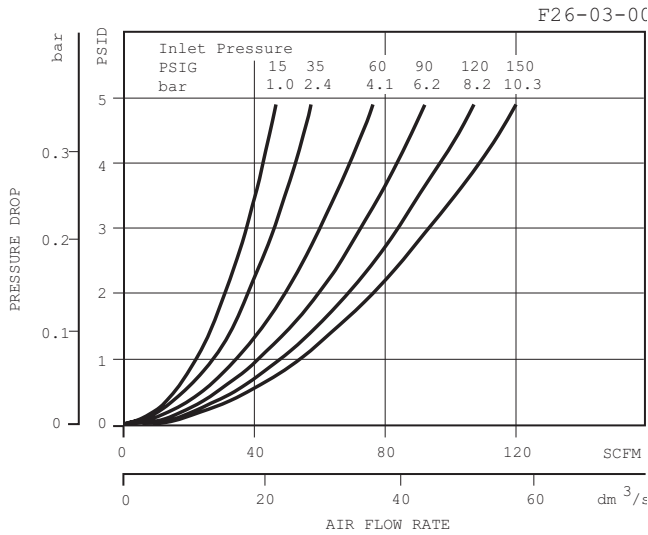
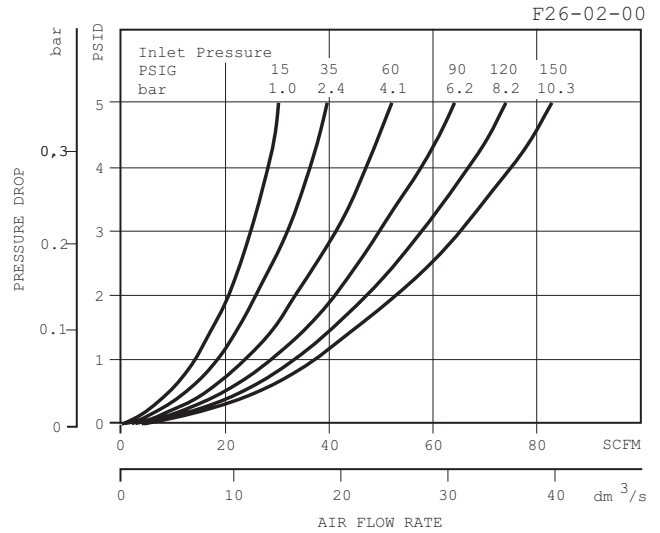
- Metal Bowl –  
 Automatic Drain ..... GRP-95-960  
 Manual Drain ..... GRP-95-930  
 Sight Gauge, Manual Drain ..... GRP-95-931
- Plastic Bowl –  
 Automatic Drain ..... GRP-95-948  
 Bowl Guard, Manual Drain ..... GRP-95-935  
 Manual Drain ..... GRP-95-929

### Replacement Element Kits

- Type "A", 5 Micron..... FRP-95-115

### Accessories

- Automatic Drain, Nitrile ..... GRP-95-973  
 Manual Drain..... FRP-95-610  
 Sight Gauge Kit ..... GRP-95-079  
 L-Bracket ..... GPA-95-946



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	1/4	F26-02-000	F26-02-M00	F26-02-G00	F26-02-D00
	3/8	F26-03-000	F26-03-M00	F26-03-G00	F26-03-D00
	1/2	F26-04-000	F26-04-M00	F26-04-G00	F26-04-D00
Automatic Drain	1/4	F26-02-F00	F26-02-FM0	F26-02-FG0	F26-02-DF0
	3/8	F26-03-F00	F26-03-FM0	F26-03-FG0	F26-03-DF0
	1/2	F26-04-F00	F26-04-FM0	F26-04-FG0	F26-04-DF0

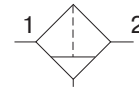
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F90

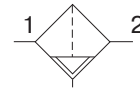
   = "Most Popular"



## Symbols

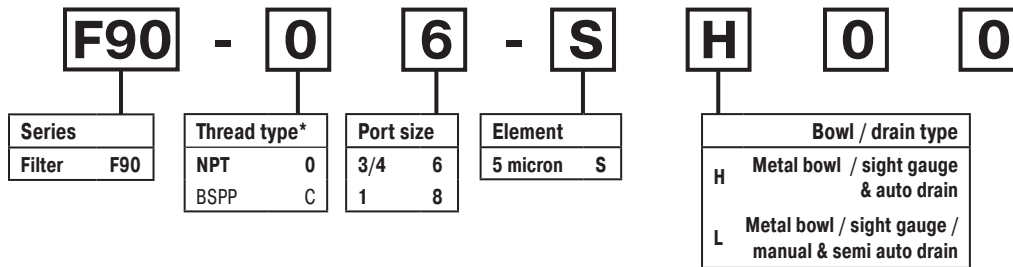


Manual drain



Auto drain

- Integral 3/4" or 1" ports (NPT & BSPP)
- High efficiency particulate element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Low temperature -40° with combined manual / semi-auto drain as standard



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering Information

Port size	Description	Flow† scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number†
3/4"	Combined manual / semi auto drain	170	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	<b>F90-06-SL00</b>
3/4"	Auto drain	170	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	F90-06-SH00
1"	Combined manual / semi auto drain	170	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	<b>F90-08-SL00</b>
1"	Auto drain	170	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	F90-08-SH00

† Standard part numbers shown in bold. For other models refer to Options chart above.

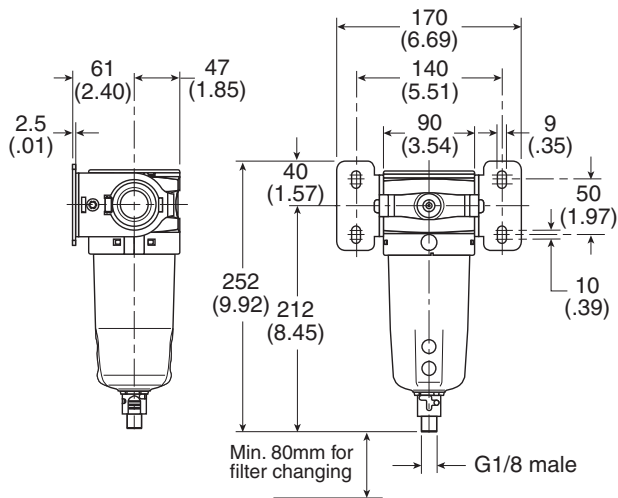
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

**Specifications**

Fluid	Compressed air	
Maximum inlet pressure*	17.5 bar (254 psig)	
Temperature range*:		
Auto drain	-10°C to 60°C (14°F to 140°F)	
Combined drain	-40°C to 60°C (-40°F to 140°F)	
Particle removal	5 micron	
Air quality	Within ISO 8573-1: 1991 Class 3 and 5 (particulates)	
	Within ISO 8573-1: 2001 Class 6 and 7 (particulates)	
Typical flow 5 micron element	1" port	
6.3 bar (91.4 psig) inlet pressure and	170 scfm	
0.5 bar (7.3 psig) pressure drop		
Manual / semi-auto drain	Closed at 0.8 bar (11.6 psig)	
	G1/8 thread male	
Auto drain bowl pressure to close drain	0.8 bar (11.6 psig)	
Operating range	0.8 bar (11.6 psig) to	
manual override facility	17.5 bar (254 psig)	
Bowl capacity	130 cm <sup>3</sup> (4.4 US oz)	

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

**Dimensions mm (inches)**

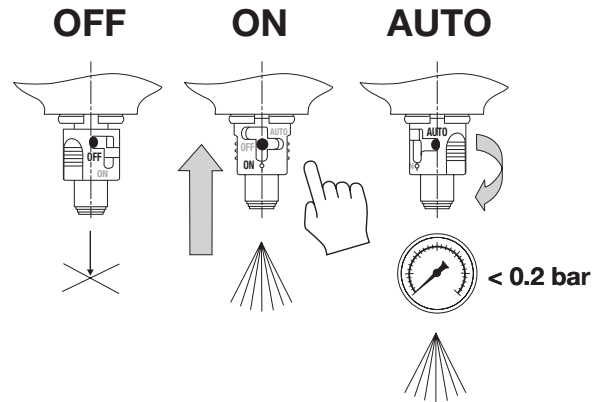


**Service kits**

- 5 micron element kit ..... P3YKA00ESE
- 40 micron element kit ..... P3YKA00ESG
- Bowl kit with combined manual / semi auto drain..... P3YKA00BSC
- Bowl kit with auto drain ..... P3YKA00BSA

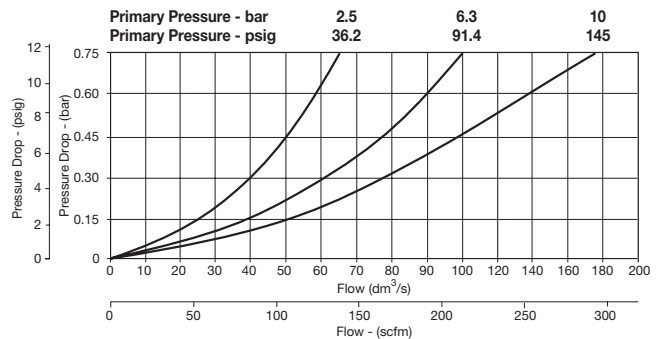
**Material specifications**

Body	Aluminum	
Sight glass	Polypropylene	
Body cover	ABS	
Element	Sintered P.E.	
Seals	Nitrile NBR	
Drains	Manual / semi-auto:	Acetal
	Automatic:	PA / Ø 10mm brass connection

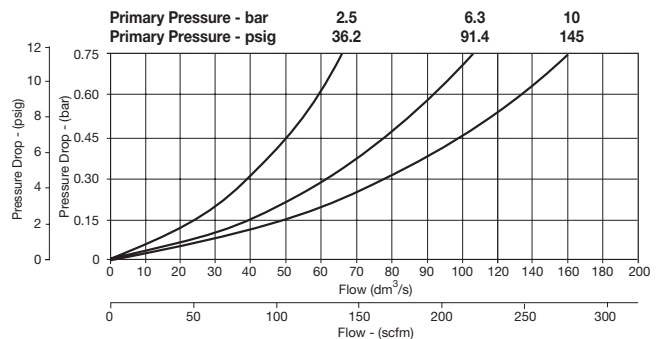


**Flow characteristics**

**(3/4") Filter**

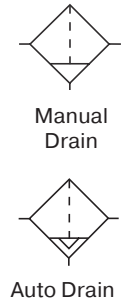


**(1") Filter**



# Particulate Filter F30

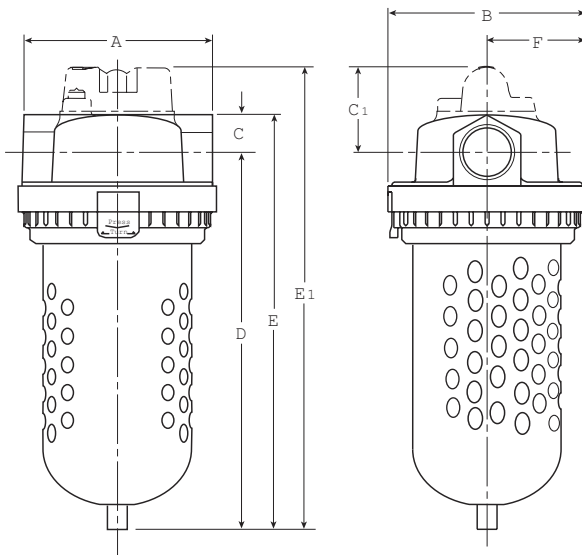
= "Most Popular"



**F30-06-000**

## Features

- Standard Manual Drain
- Standard 5 Micron Rated Element
- Quick-disconnect Clamp Ring for Easy Bowl Removal
- Bowl Guard



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit F30-XX-000		4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	9.90 (251)	—	2.40 (61)
Differential Pressure Indicator F30-XX-D00		4.63 (118)	4.79 (122)	.94 (24)	1.89 (48)	8.96 (228)	9.90 (251)	10.73 (272.5)	2.40 (61)
Automatic Drain F30-XX-F00		4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	10.04 (255)	—	2.40 (61)
Metal Bowl F30-XX-M00		4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	10.00 (254)	—	2.40 (61)
Metal Bowl with Sight Gauge F30-XX-G00		4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	9.90 (251)	—	2.40 (61)

## Specifications

Flow Capacity*	3/4 1	316 SCFM (149.1 dm <sup>3</sup> /s) 323 SCFM (152.4 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl Metal Bowl	32° to 125°F (0° to 52°C) 32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Bowl Capacity		2.0 oz
Standard Filtration		5 Micron
Weight		5.5 lb. (2.5 kg)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Zinc
Deflector		Aluminum
Element Retainer		Steel Stud
Filter Element		Polyethylene
Seals	Plastic Bowl Metal Bowl	Nitrile Fluorocarbon
Sight Gauge	Metal Bowl	Tempered Glass

= "Most Popular"

### Replacement Bowl Kits

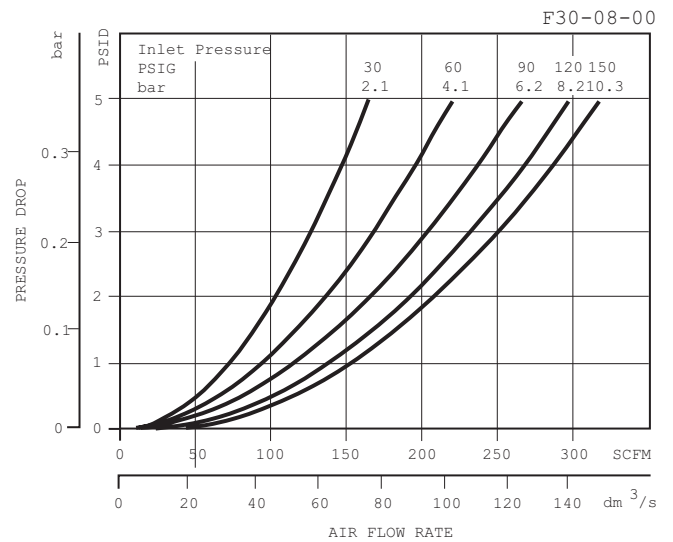
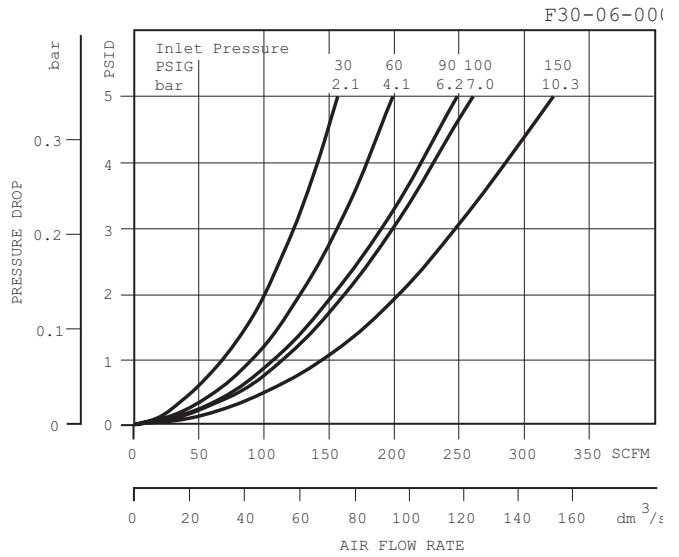
- Metal Bowl –**  
 Automatic Drain ..... GRP-95-970  
 Sight Gauge, Manual Drain ..... GRP-95-676  
 Manual Drain ..... FRP-95-593
- Plastic Bowl –**  
 Bowl Guard, Automatic Drain ..... FRP-95-775  
 Bowl Guard, Manual Drain ..... FRP-95-832  
 Manual Drain ..... FRP-96-315

### Replacement Element Kits

- Type "A", 5 Micron.....FRP-95-209

### Accessories

- Automatic Drain, Nitrile ..... GRP-95-973  
 Manual Drain.....FRP-95-610  
 Sight Gauge Kit ..... FRP-95-771



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	3/4	F30-06-000	F30-06-M00	F30-06-G00	F30-06-D00
	1	F30-08-000	F30-08-M00	F30-08-G00	F30-08-D00
Automatic Drain	3/4	F30-06-F00	F30-06-FM0	F30-06-FG0	F30-06-DF0
	1	F30-08-F00	F30-08-FM0	F30-08-FG0	F30-08-DF0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F34

= "Most Popular"



**F34-06-000**

## Features

- Standard Auto. Drain
- Standard 5 Micron Rated Element
- Quick-disconnect Clamp Ring for Easy Bowl Removal
- Bowl Guard

## Specifications

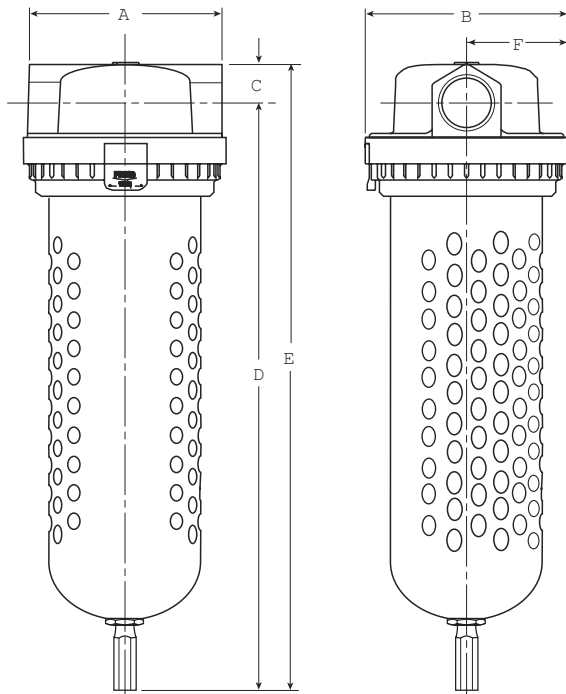
Flow Capacity*	1/2	190 SCFM (90.4 dm <sup>3</sup> /s)
	3/4	285 SCFM (134.4 dm <sup>3</sup> /s)
	1	362 SCFM (171.0 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2, 3/4, 1
Bowl Capacity	16.6 oz	
Standard Filtration	5 Micron	
Weight	6.4 lb. (2.9 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Acetal	
Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Deflector	Aluminum	
Element Retainer	Steel Stud	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit (Automatic Drain Standard) F34-XX-000		4.61 (117)	4.80 (122)	.94 (24)	14.04 (356)	14.98 (380)	2.40 (61)
Metal Bowl		4.61 (117)	4.80 (122)	.94 (24)	13.52 (343)	14.46 (367)	2.40 (61)

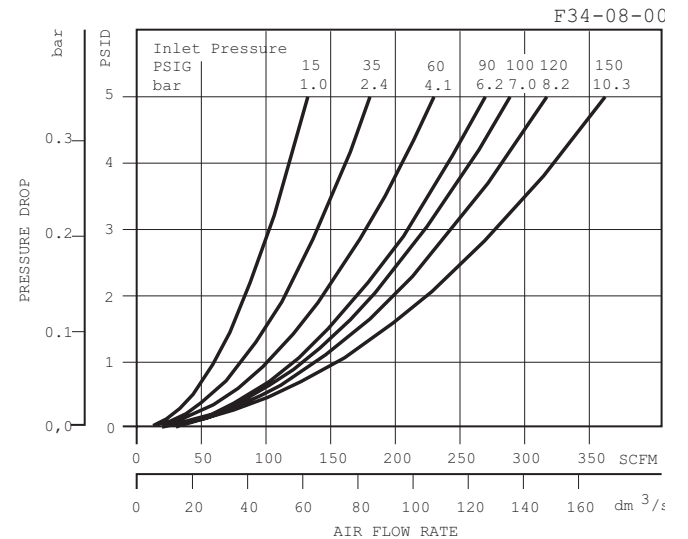
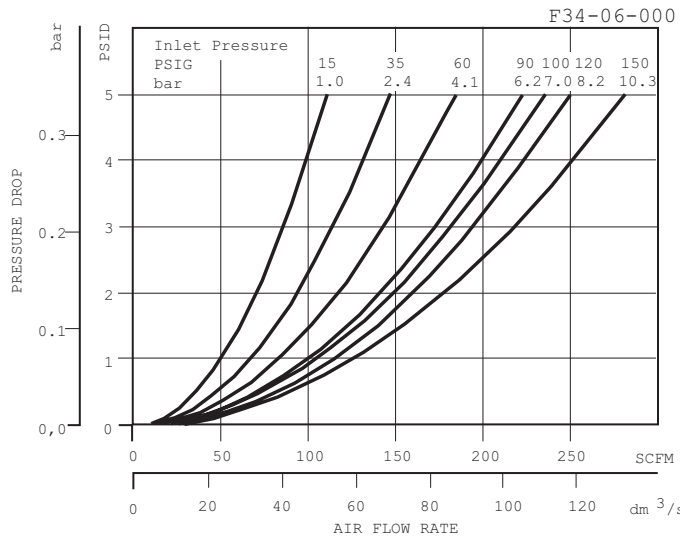
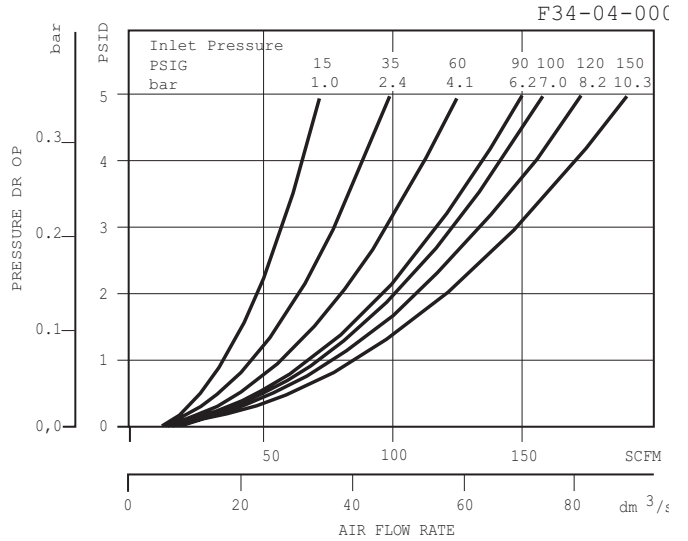
= "Most Popular"

### Replacement Bowl Kits

- Plastic Bowl –
- Bowl Guard, Auto Drain ..... GRP-95-904
- Metal Bowl –
- Includes Auto Drain Assembly..... GRP-95-905

### Replacement Element Kits

- Type "A", 5 Micron.....FRP-95-209



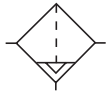
### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl
Automatic Drain	1/2	F34-04-000	F34-04-M00
	3/4	F34-06-000	F34-06-M00
	1	F34-08-000	F34-08-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F35

= "Most Popular"



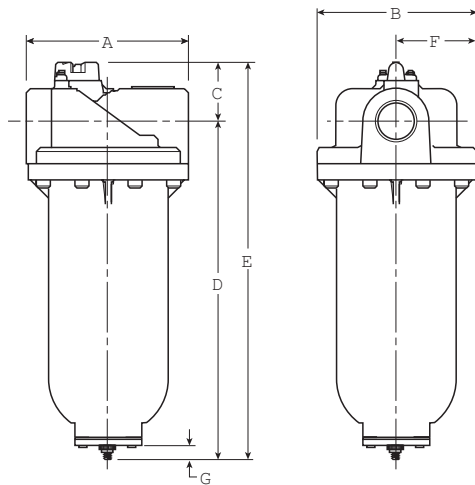
Auto Drain



**F35-0B-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG\*
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential pressure gauge available, order separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers a Trouble-free Method for Interchanging and Installing External Drains



**NOTE:** Automatic internal float drain shown is included on F35 filters with F00 suffix only. Models with 000 suffix include drain plate with tapped 1/2 NPT / BSPP-G drain port.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit F35-XX-000		7.80 (198)	7.75 (197)	2.81 (71)	16.24 (412.5)	19.07 (484)	3.88 (98.6)	.55 (14)
Automatic Drain F35-XX-F00		7.80 (198)	7.75 (197)	2.81 (71)	15.69 (398.5)	18.52 (470)	3.88 (98.6)	.55 (14)

## Specifications

Flow Capacity*	1-1/2 2	1280 SCFM (604 dm <sup>3</sup> /s) 1400 SCFM (660 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DPI and with Pressure Gauge with DPI	250 PSIG (17.2 bar) <sup>†</sup> 150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1-1/4, 1-1/2, 2
Bowl Capacity	12.5 oz	
Standard Filtration	5 Micron	
Weight	19.3 lb. (8.7 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 5 PSID (0.3 bar).

\*\* Without pressure indicator – Max. supply pressure is 250 PSIG (17.2 bar).

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Plated Steel
Body	Aluminum
Bowls	Aluminum
Deflector	Plated Steel
Element Retainer	Plated Steel
Filter Element	Polyethylene
Seals	Fluorocarbon
Stud	Plated Steel



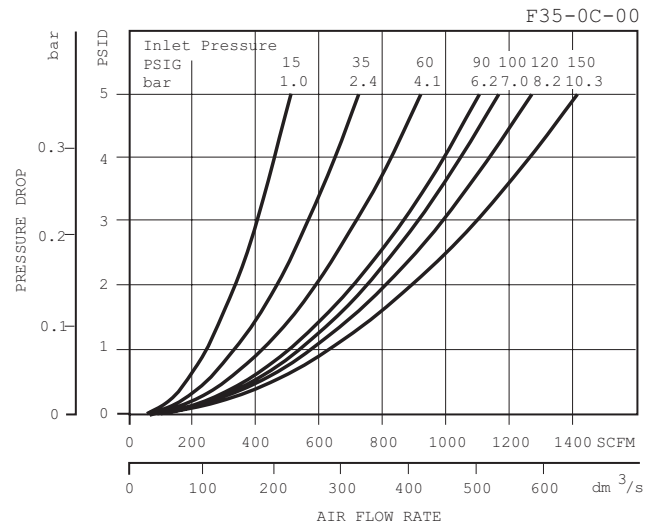
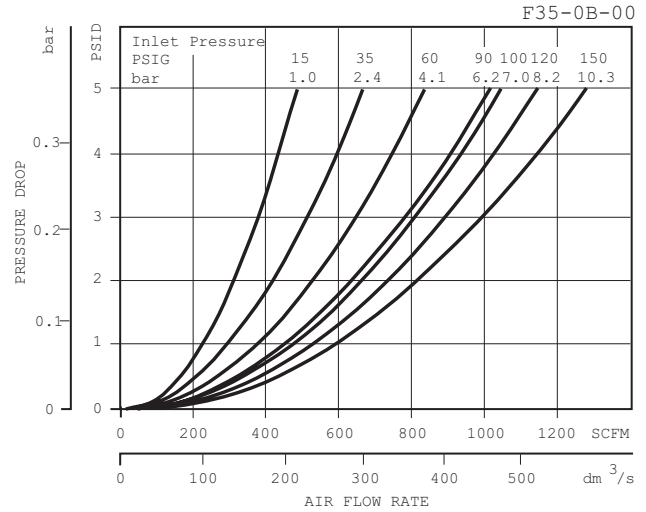
= "Most Popular"

### Replacement Element Kit

Element, F35, 5 Micron, Fluorocarbon O-rings .... FRP-95-505

### Accessories

- Cap, Differential Pressure Indicator –  
For pressures over 150 PSIG..... GRP-95-022
- Drain, Automatic, Internal, Fluorocarbon,  
1/8 NPT ..... GRP-95-981
- Drain Plate Kit –  
1/2 NPT tapped drain port ..... GRP-95-393  
5/16 Dia. Drain Port,  
For use with Internal Auto Drain..... GRP-95-391
- Gauge, Differential Pressure..... DP3-01-000
- Indicator, Differential Pressure ..... DP2-02-001
- Manual Drain Kit  
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
- Manual Override for Auto Float Drain –  
GRP-05-981 Required ..... GRP-96-001



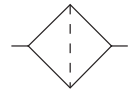
### Ordering Information

Model Type	Port Size	Metal Bowl	
Manual Drain	1-1/2	F35-0B-000	(Includes 1/2 NPT / BSPP-G Drain Plate)
	2	F35-0C-000	
Automatic Drain	1-1/2	F35-0B-F00	
	2	F35-0C-F00	

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Particulate Filter F43

 = "Most Popular"



**F43-0E-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG\*
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential pressure gauge available, order separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers a Trouble-free Method for Interchanging and Installing External Drains
- 5 Micron High Flow Particulate Element

## Specifications

Flow Capacity*	3	2900 SCFM (1368 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DPI and with Pressure Gauge	250 PSIG (17.2 bar)†
	with DPI	150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	3
Bowl Capacity	14 oz	
Standard Filtration	5 Micron	
Weight	32.8 lb. (14.9 kg)	

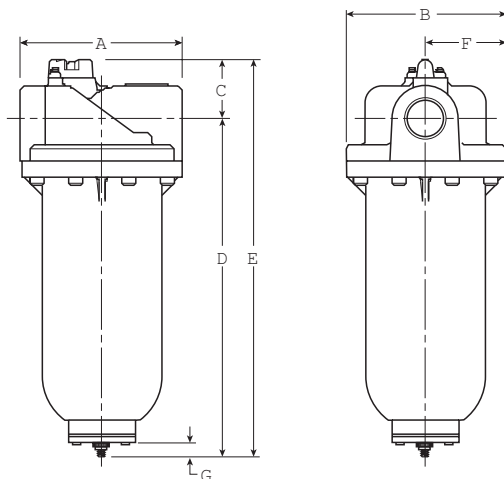
\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 5 PSID (0.3 bar).

\*\* Without pressure indicator – Max. supply pressure is 250 PSIG (17.3bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Baffle	Plated Steel
Body	Aluminum
Bowls	Aluminum
Deflector	Plated Steel
Filter Element	Polyethylene
Seals	Fluorocarbon
Stud	Plated Steel



**NOTE:** Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit F43-0E-000		8.94 (227)	8.88 (225.5)	3.48 (88)	25.96 (659.4)	29.44 (748)	4.44 (112.8)	.55 (14)

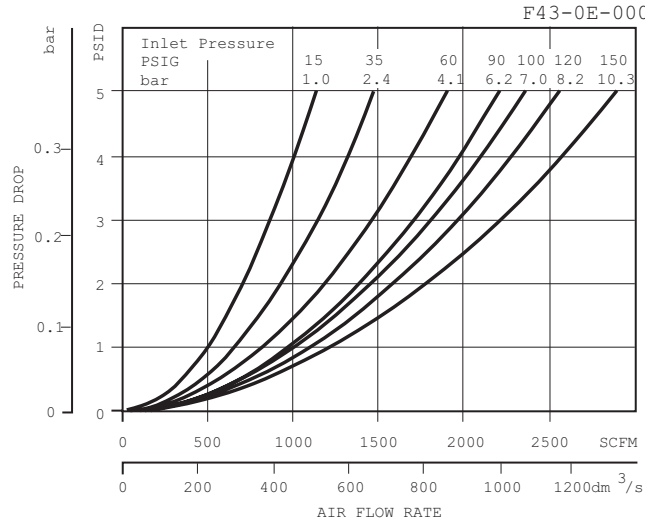
= "Most Popular"

**Replacement Element Kit**

Element, F43, 5 Micron, Fluorocarbon O-rings .... FRP-95-508

**Accessories**

- Cap, Differential Pressure Indicator –  
For pressures over 150 PSIG..... GRP-95-022
- Drain, Automatic, Internal, Fluorocarbon,  
1/8 NPT ..... GRP-95-981
- Drain Plate Kit –  
1/2 NPT tapped drain port ..... GRP-95-393  
5/16 Dia. Drain Port,  
For use with Internal Auto Drain..... GRP-95-391
- Gauge, Differential Pressure..... DP3-01-000
- Indicator, Differential Pressure .....DP2-02-001
- Manual Drain Kit  
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
- Manual Override for Auto Float Drain –  
GRP-05-981 Required .....GRP-96-000



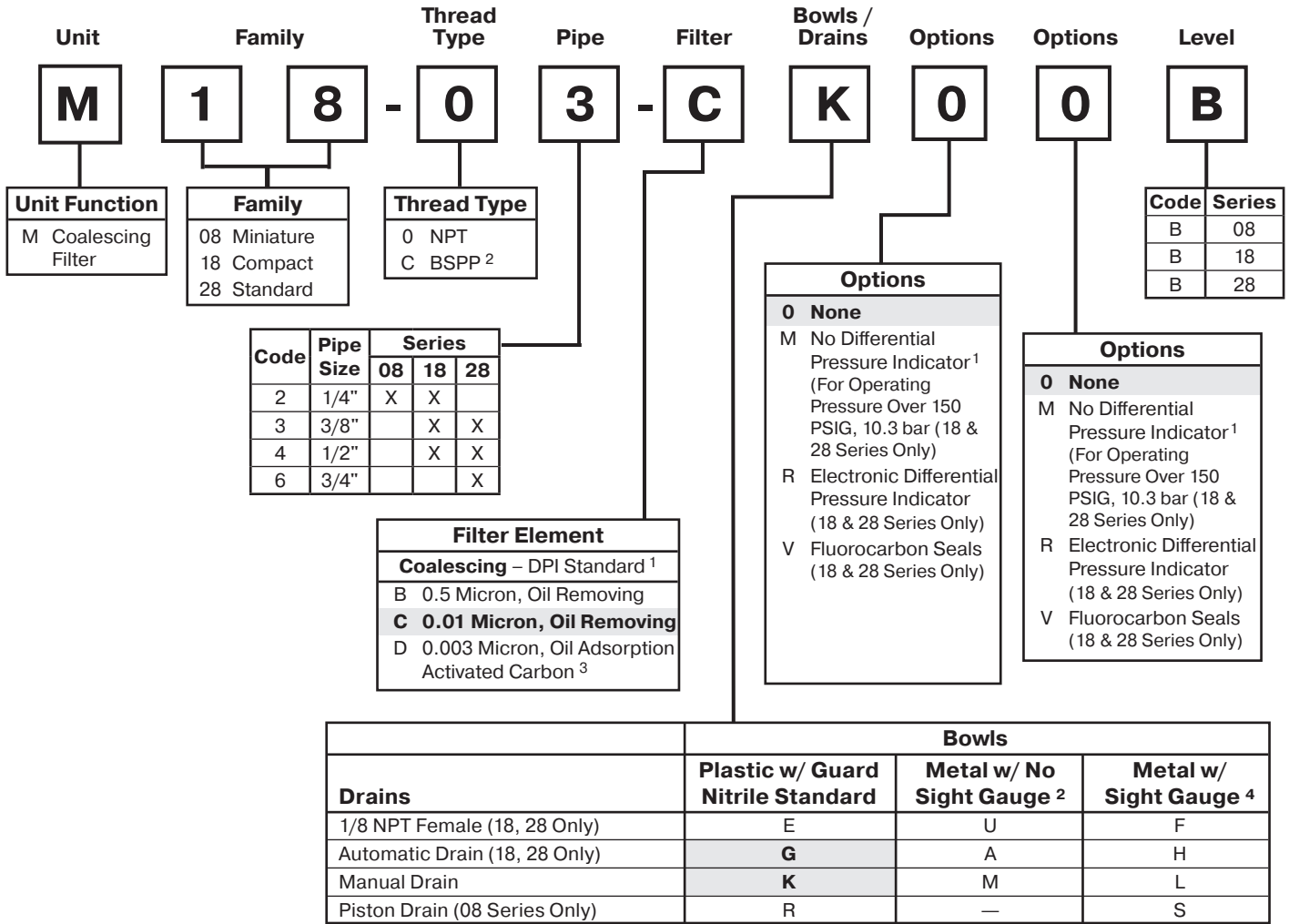
**Ordering Information**

Model Type	Port Size	Metal Bowl
<b>F43</b>	3	F43-0E-000 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing (Oil Removal) Numbering System

  = "Most Popular"



<sup>1</sup> "M" Option not available on 08 Series.

<sup>2</sup> ISO, R228 (G Series)

<sup>3</sup> Only C, D, K, and L bowl / drain configurations available.

<sup>4</sup> M08 filter has an all metal bowl (no sight gauge).

**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

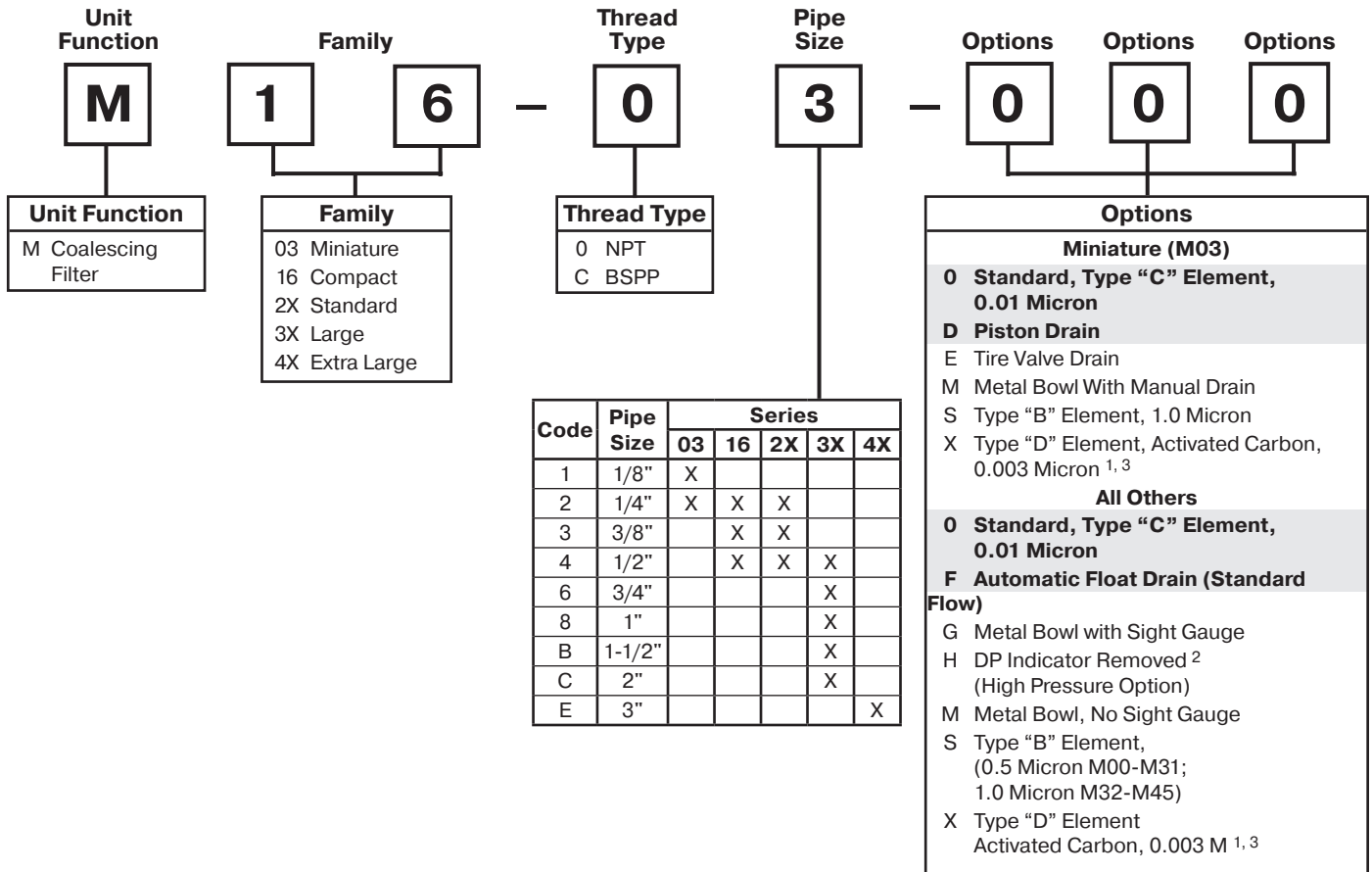
**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:**

**M 18 - 03 - C K 0 0 B**

# Coalescing Filter Numbering System

   = "Most Popular"



<sup>1</sup> Auto Float Drains not available with M16, M26- units with Type "D" Activated Carbon Elements.

<sup>2</sup> Except Models M5X.

<sup>3</sup> Units with Type "D" element do not contain DP indicator.

**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

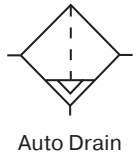
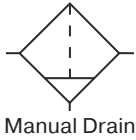
**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.**

**NOTE:** 000 in position 6, 7, and 8 signifies standard product.

# Coalescing Filter M03

= "Most Popular"



**M03-02-000**

## Features

- Removes Liquid Aerosols and Sub-micron Particles
- Liquids Gravitate to the Bottom of the Element and Will Not Re-enter the Airstream
- Oil Free Air for Critical Applications, such as Air Gauging and Pneumatic Instrumentation and Controls

## Specifications

Flow Capacity*	1/8	17.0 SCFM (8 dm <sup>3</sup> /s)
	1/4	20.0 SCFM (9 dm <sup>3</sup> /s)
Maximum Supply Pressure		
Polycarbonate Bowl		0 to 150 PSIG (0 to 10.3 bar)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar)
Piston Drain		10 to 250 PSIG (0.7 to 17.2 bar)
Operating Temperature		
Polycarbonate Bowl		32°F to 125°F (0°C to 52°C)
Metal Bowl		32°F to 175°F (0°C to 80°C)
Piston Drain		32°F to 125°F (6°C to 52°C)
Port Size	NPT	1/8, 1/4
Standard Filtration	Micron	(B) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		.41 lb. (.18 kg)

\* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

\*\*Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

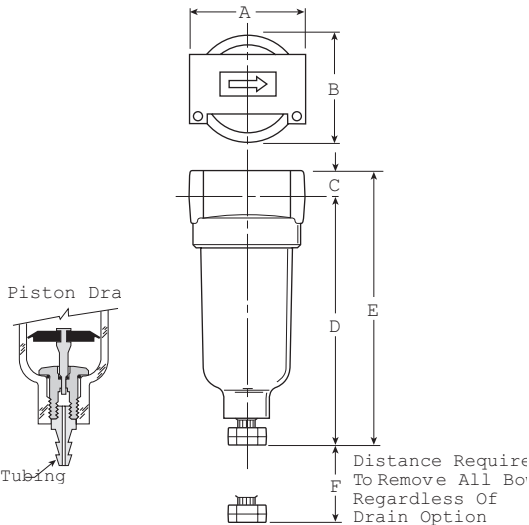
**"M" Series Coalescing Filters, with Type "B" 1 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Zinc
Bowls – Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Deflector, Element Holder & Baffle	Plastic
Drains	
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Filter Element	Plastic
Seals	Nitrile



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M03-XX-000		1.69 (43)	1.53 (39)	.39 (10)	3.82 (97)	4.21 (107)	1.60 (41)
Piston Drain M03-XX-D00		1.69 (43)	1.53 (39)	.39 (10)	3.87 (99)	4.26 (108)	1.60 (41)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –
- Manual Drain .....PS451B
- Piston Drain .....PS447B

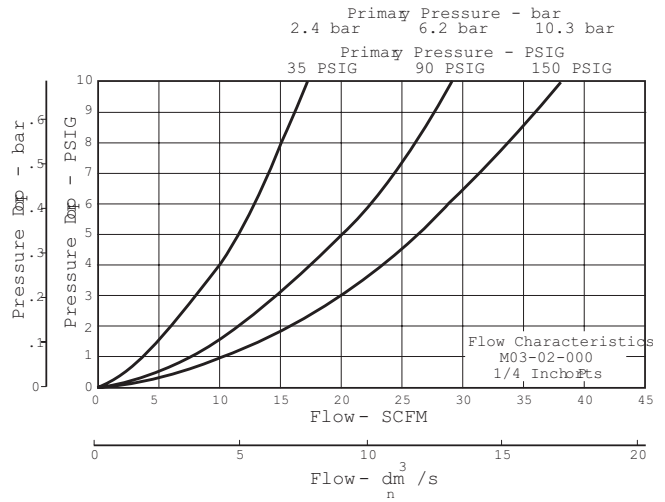
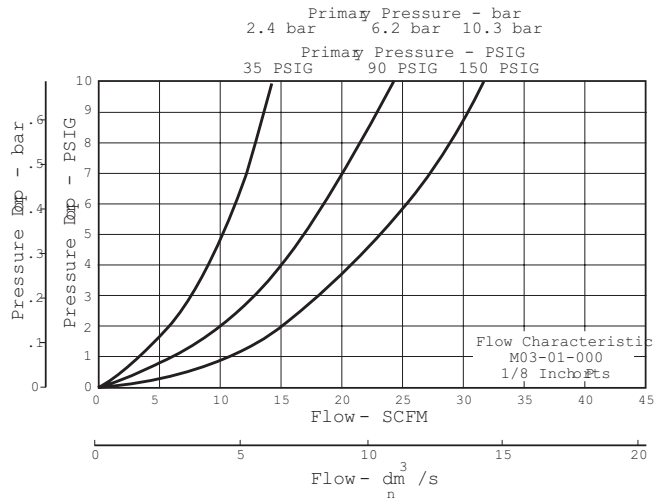
- Plastic Bowl –
- Manual Drain .....PS404
- Piston Drain .....PS408B

### Replacement Element Kits

- Type "B", 1.0 Micron .....PS456
- Type "C", 0.01 Micron .....PS446
- Type "D", Oil Vapor Removing .....PS452

### Accessories

- Mounting Bracket Kit .....PS417B

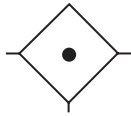


### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / "B" Micron Element	Polycarbonate Bowl / "D" Element
Manual Drain	1/8	M03-01-000	M03-01-M00	M03-01-S00	M03-01-X00
	1/4	M03-02-000	M03-02-M00	M03-02-S00	M03-02-X00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M08



Coalescing Filter



Auto Drain



## Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl

## Specifications

Flow Capacity*		
1.0 Micron Coalescing		12.0 SCFM (5.5 dm <sup>3</sup> /s, ANR)
0.01 Micron Coalescing		7.5 SCFM (3.6 dm <sup>3</sup> /s, ANR)
Activated Carbon Adsorber		12.7 SCFM (6 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10 bar)
	Metal Bowl	250 PSIG (17 bar)
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.4 oz
Standard Filtration	Micron	(B) .5, (C) 0.01
		(D) .003 ppm wt**
Weight		0.24 lb. (0.11 kg)

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

\*\*Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

**“M” Series Coalescing Filters, with Type “B” 0.5 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “B” 0.5 micron elements exceed ISO Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**“M” Series Coalescing Filters, with Type “C” 0.01 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “C” 0.01 micron elements exceed ISO Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

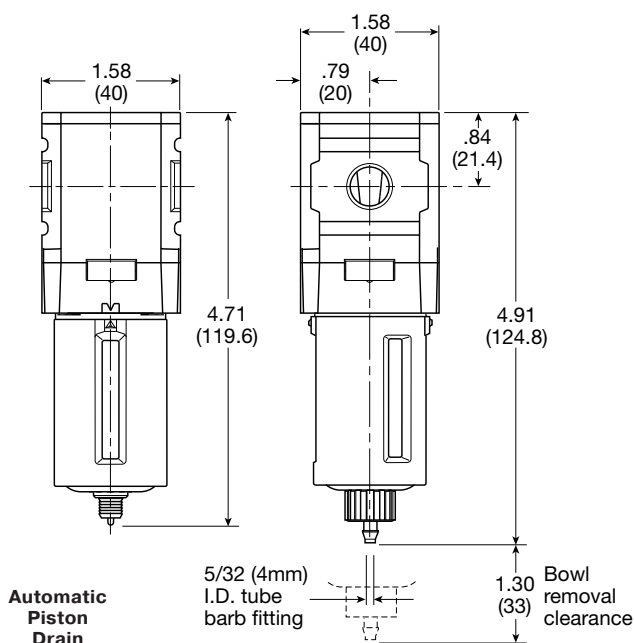
**“M” Series Adsorption Filters, with Type “D” 0.003 micron activated carbon elements:** All Wilkerson Type “M” adsorption filters with Type “D” 0.003 micron activated carbon elements exceed ISO Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type “B”, “C”	Borosilicate Cloth
	Type “D”	Activated Carbon
Seals	Nitrile	

**Notes:** To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.



Inches (mm)



= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl, Manual Drain ..... GRP-96-714
- Plastic Bowl / Bowl Guard, Manual Drain..... GRP-96-712

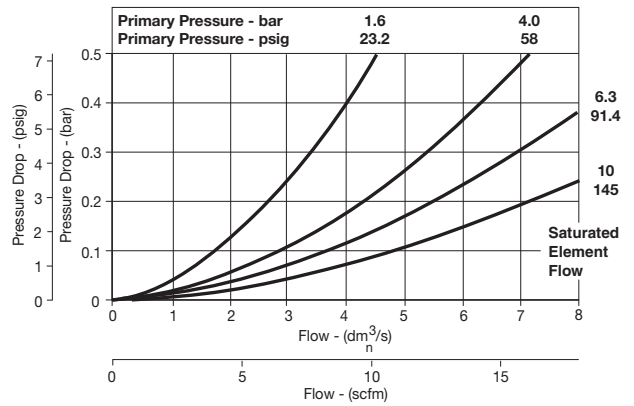
### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-96-732
- Type "C", 0.01 Micron .....MTP-96-649
- Type "D", 0.003 Micron, Activated Carbon..... MXP-96-222

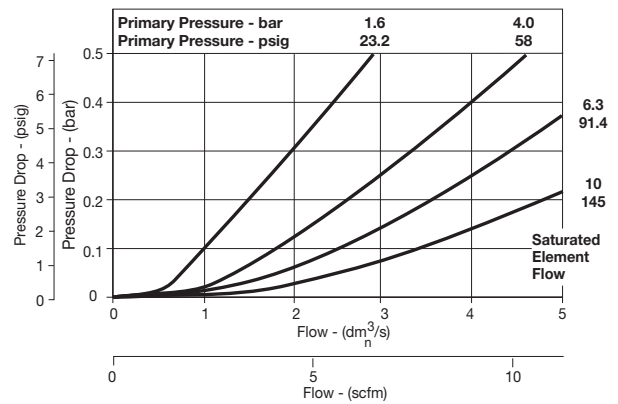
### Accessories

- Automatic Piston Drain..... GRP-96-716
- Wall Mounting Bracket –
- C-Type..... GPA-97-010
- T-Type ..... GPA-96-737

M08 1/4" Filter, 1.0 Micron



M08 1/4" Filter, 0.01 Micron

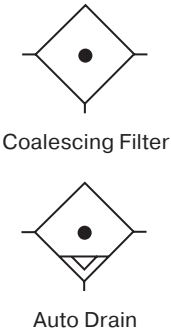


### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / C Element	Metal Bowl / B Element	Metal Bowl / D Element
<b>Manual Drain</b>	1/4	M08-02-CK00B	M08-02-BK00B	M08-02-DK00B	M08-02-CL00B	M08-02-BL00B	M08-02-DL00B
<b>Automatic Piston Drain</b>	1/4	M08-02-CR00B	M08-02-BR00B	M08-02-DR00B	M08-02-CS00B	M08-02-BS00B	M08-02-DS00B

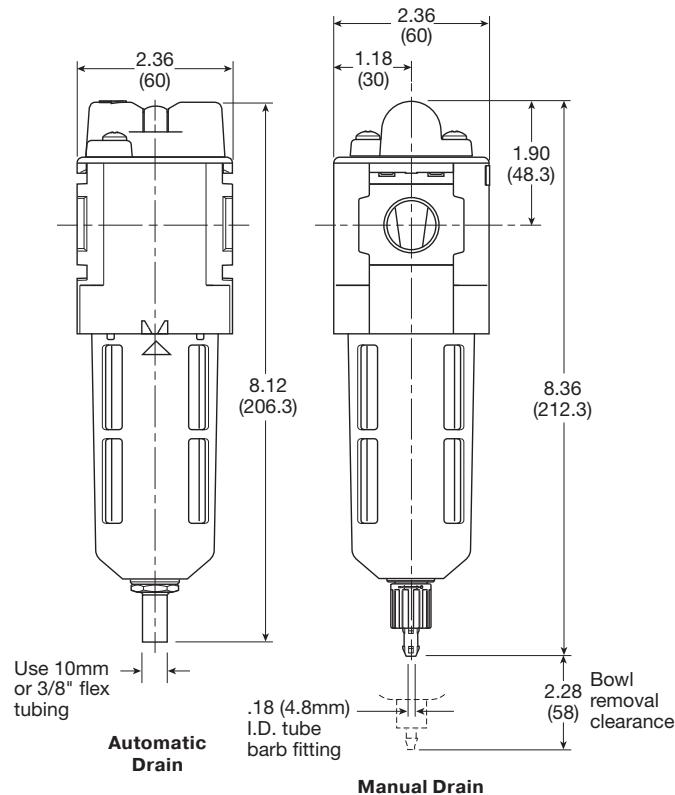
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M18



## Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl



Inches (mm)

## Specifications

Flow Capacity*		
1.0 Micron Coalescing		53 SCFM (25 dm <sup>3</sup> /s, ANR)
0.01 Micron Coalescing		36 SCFM (17 dm <sup>3</sup> /s, ANR)
Activated Carbon Adsorber		85 SCFM (40 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10 bar)†
	Metal Bowl w/ DPI	150 PSIG (10 bar)†
	Metal Bowl w/o DPI	250 PSIG (17 bar)†
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		1.72 oz
Standard Filtration Micron		(B) 0.5, (C) 0.01
		(D) 0.003 ppm wt**
Weight		0.71 lb (0.32 kg)

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

† Without pressure indicator — max. supply pressure for metal bowl version is 250 PSIG (17.2 bar).

**“M” Series Coalescing Filters, with Type “B” 0.5 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “B” 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**“M” Series Coalescing Filters, with Type “C” 0.01 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “C” 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**“M” Series Adsorption Filters, with Type “D” 0.003 micron activated carbon elements:** All Wilkerson Type “M” adsorption filters with Type “D” 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type “B”, “C”	Borosilicate Cloth
	Type “D”	Activated Carbon
Seals	Nitrile	
Sight Gauge	Metal Bowl	Polyamide (Nylon)

**Notes:** To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl with Sight Gauge,  
Automatic Float Drain ..... GRP-96-637
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-636
- Plastic Bowl –  
Bowl Guard, Auto Drain ..... GRP-96-635
- Bowl Guard, Manual Drain ..... GRP-96-634

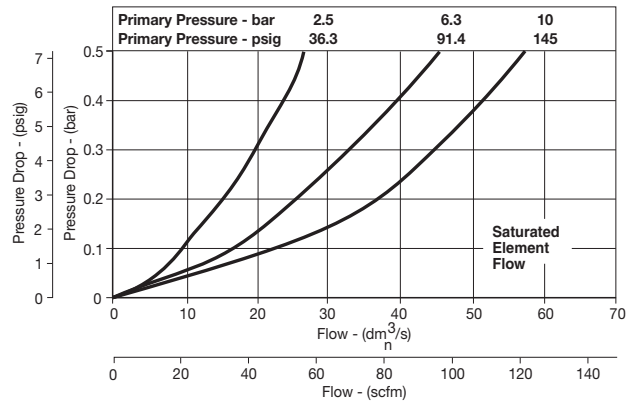
### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-96-647
- Type "C", 0.01 Micron ..... MTP-96-646
- Type "D", 0.003 Micron Activated Carbon ..... MXP-96-650

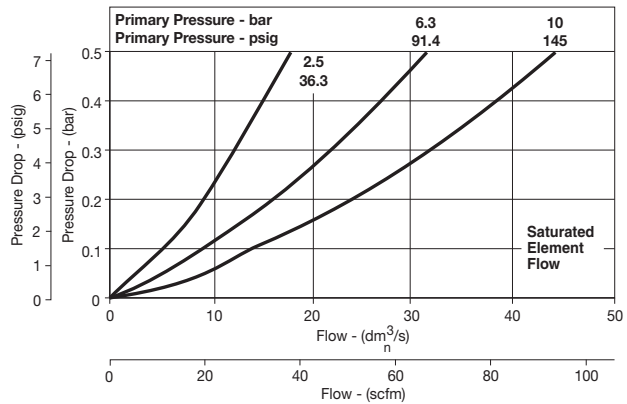
### Accessories

- Automatic Drain –  
Fluorocarbon ..... GRP-95-981
- Nitrile ..... GRP-95-973
- DPI Replacement Kit ..... DP8-01-000
- Electronic DPI Conversion Kit ..... GRP-96-823  
(Converts visual DPI to electronic DPI)
- Electronic DPI Replacement Kit ..... GRP-96-824
- Manual Drain ..... GRP-96-685
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –  
L-Type ..... GPA-96-604
- T-Type ..... GPA-96-602

M18 1/2" Filter, 1.0 Micron



M18 1/4" Filter, 0.01 Micron



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / Sight Gauge / C Element	Metal Bowl / Sight Gauge / B Element	Metal Bowl / Sight Gauge / D Element
<b>Manual Drain</b>	1/4	M18-02-CK00B	M18-02-BK00B	M18-02-DK00B	M18-02-CL00B	M18-02-BL00B	M18-02-DL00B
	3/8	M18-03-CK00B	M18-03-BK00B	M18-03-DK00B	M18-03-CL00B	M18-03-BL00B	M18-03-DL00B
	1/2	M18-04-CK00B	M18-04-BK00B	M18-04-DK00B	M18-04-CL00B	M18-04-BL00B	M18-04-DL00B
<b>Automatic Drain</b>	1/4	M18-02-CG00B	M18-02-BG00B	N/A	M18-02-CH00B	M18-02-BH00B	N/A
	3/8	M18-03-CG00B	M18-03-BG00B	N/A	M18-03-CH00B	M18-03-BH00B	N/A
	1/2	M18-04-CG00B	M18-04-BG00B	N/A	M18-04-CH00B	M18-04-BH00B	N/A

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M16

= "Most Popular"



**M16-02-000**

## Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator Standard

## Specifications

Flow Capacity*	1/4	37.0 SCFM (17.5 dm <sup>3</sup> /s)
	3/8	44.7 SCFM (21.0 dm <sup>3</sup> /s)
	1/2	46.1 SCFM (21.7 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	2.7 oz	
Standard Filtration Micron	(B) 0.5, (C) 0.01	
	(D) 0.003 ppm / wt**	
Weight	1.8 lb.(0.8 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

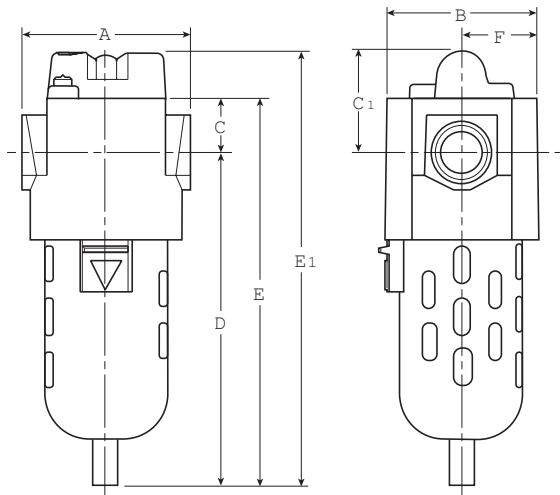
**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO Class 1** for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO Class 1** on maximum oil content (ppm/wt).

## Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Element Retainer	Brass Stud	
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals	Fluorocarbon	



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit M16-XX-000		3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.67 (144)	6.67 (169)	7.50 (190.5)	1.30 (33)
Automatic Drain M16-XX-F00		3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.81 (148)	6.81 (173)	7.64 (190.5)	1.30 (33)

= "Most Popular"

### Replacement Bowl Kits

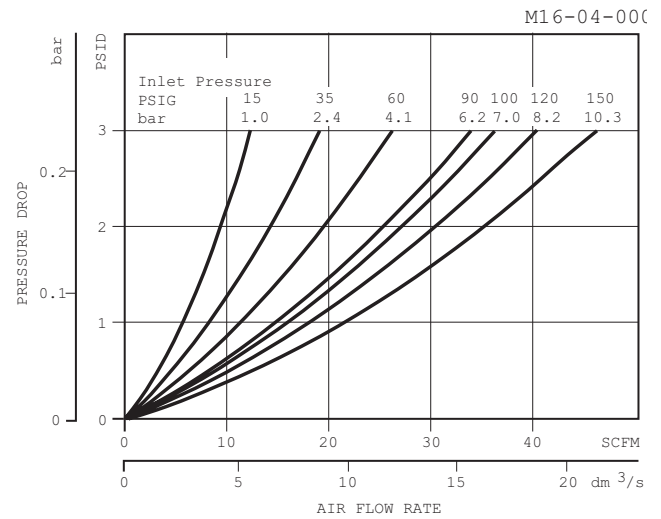
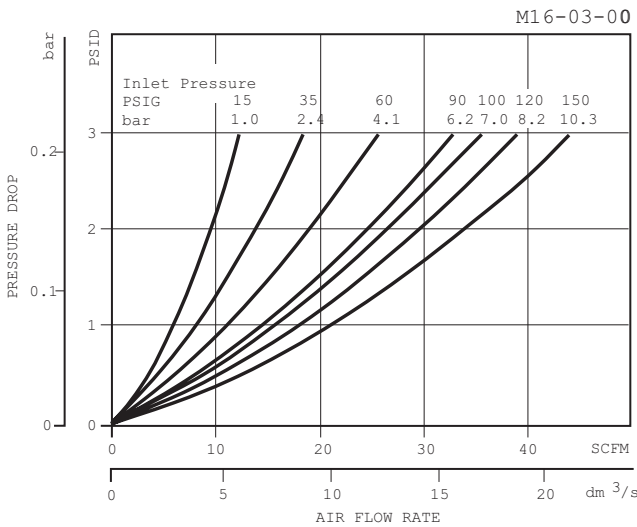
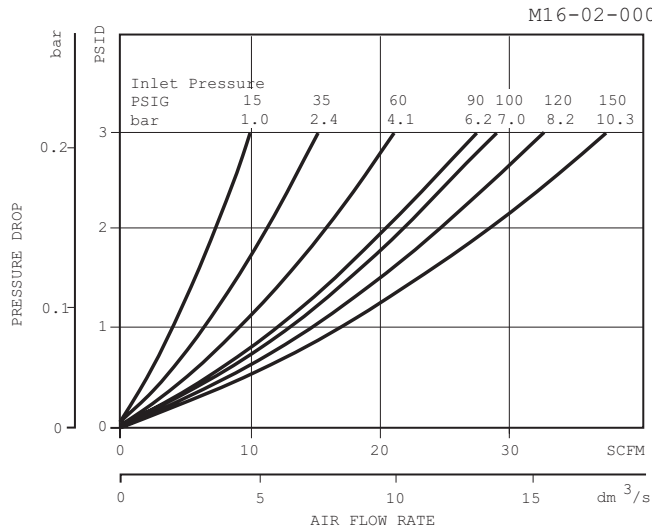
- Metal Bowl –**  
 Automatic Drain ..... FRP-95-950  
 Manual Drain ..... FRP-95-178
- Plastic Bowl –**  
 Bowl Guard, Auto Drain ..... FRP-95-015  
 Bowl Guard, Manual Drain ..... FRP-95-014  
 Manual Drain ..... FRP-95-017

### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-95-988  
 Type "C", 0.01 Micron ..... MTP-95-548  
 Type "D", Oil Vapor Removing ..... MXP-95-987

### Accessories

- Automatic Mechanical Drain..... GRP-95-973  
 Cap, Differential Pressure Indicator –  
 For pressures over 150 PSIG..... GRP-95-020  
 Differential Pressure Indicator ..... DP2-02-000  
 Manual Drain..... FRP-95-610  
 Sight Gauge Kit ..... GRP-95-079  
 Wall Mounting Bracket, L-Type..... GPA-95-016



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/4	M16-02-000	M16-02-M00	M16-02-S00	M16-02-X00
	3/8	M16-03-000	M16-03-M00	M16-03-S00	M16-03-X00
	1/2	M16-04-000	M16-04-M00	M16-04-S00	M16-04-X00
Automatic Drain	1/4	M16-02-F00	M16-02-FM0	M16-02-FS0	—
	3/8	M16-03-F00	M16-03-FM0	M16-03-FS0	—
	1/2	M16-04-F00	M16-04-FM0	M16-04-FS0	—

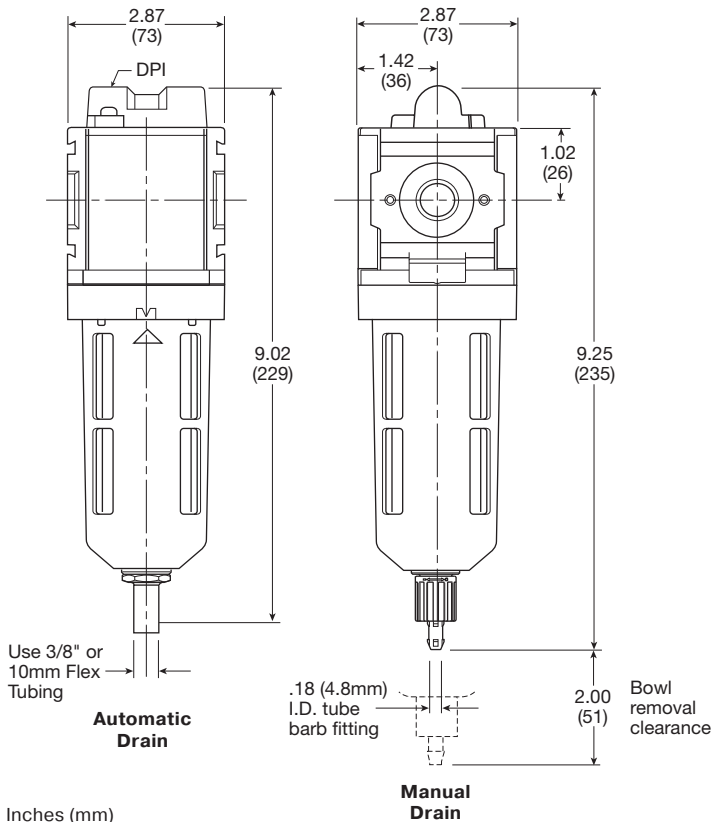
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M28



## Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl



## Specifications

Flow Capacity*		
1.0 Micron Coalescing		68 SCFM (32 dm <sup>3</sup> /s, ANR)
0.01 Micron Coalescing		42 SCFM (20 dm <sup>3</sup> /s, ANR)
Activated Carbon Adsorber		72 SCFM (34 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)†
	Metal Bowl	150 PSIG (10.3 bar)†
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity		2.87 oz
Standard Filtration Micron		(B) 0.5, (C) 0.01
		(D) 0.003 ppm wt**
Weight		1.10 lb. (0.5 kg)

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

† Without pressure indicator — max. supply pressure for metal bowl version is 250 PSIG (17.2 bar)

**“M” Series Coalescing Filters, with Type “B” 0.5 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “B” 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**“M” Series Coalescing Filters, with Type “C” 0.01 micron elements:** All Wilkerson Type “M” Oil Removal (Coalescing) Filters with Type “C” 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**“M” Series Adsorption Filters, with Type “D” 0.003 micron activated carbon elements:** All Wilkerson Type “M” adsorption filters with Type “D” 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type “B”, “C”	Borosilicate Cloth
	Type “D”	Activated Carbon
Seals	Nitrile	
Sight Gauge	Metal Bowl	Polyamide (Nylon)

**Notes:** To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl with Sight Gauge,  
Automatic Float Drain ..... GRP-96-645
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-644
- Plastic Bowl –  
Bowl Guard, Auto Drain ..... GRP-96-643
- Bowl Guard, Manual Drain ..... GRP-96-642

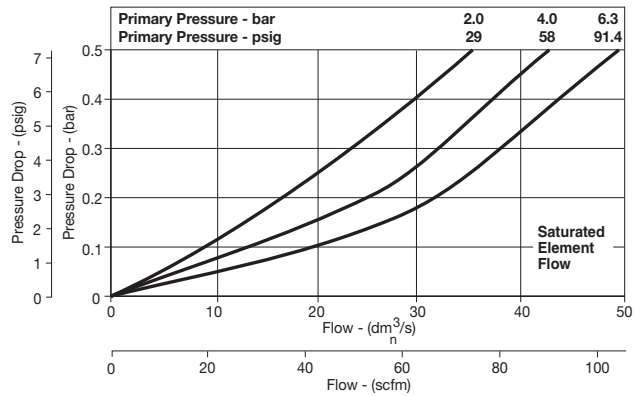
### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-96-649
- Type "C", 0.01 Micron ..... MTP-96-648
- Type "D", 0.003 Micron Activated Carbon..... MXP-96-651

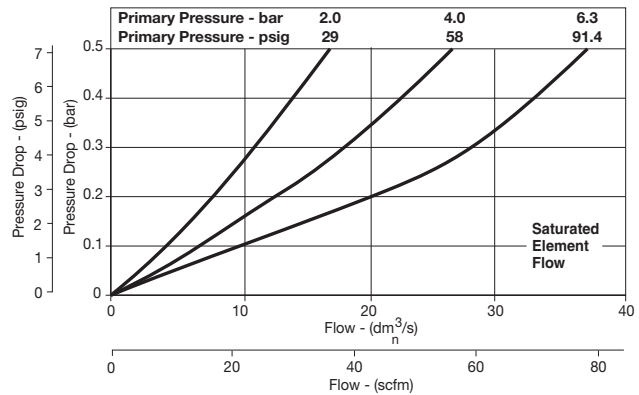
### Accessories

- Automatic Drain –  
Fluorocarbon ..... GRP-95-981
- Nitrile ..... GRP-95-973
- DPI Replacement Kit..... DP8-01-000
- Electronic DPI Conversion Kit..... GRP-96-823  
(Converts visual DPI to electronic DPI)
- Electronic DPI Replacement Kit..... GRP-96-824
- Manual Drain..... GRP-96-685
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket–  
L-Type..... GPA-96-605
- T-Type ..... GPA-96-602

M28 3/4" Filter, 1.0 Micron



M28 3/4" Filter, 0.01 Micron



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / Sight Gauge / C Element	Metal Bowl / Sight Gauge / B Element	Metal Bowl / Sight Gauge / D Element
Manual Drain	3/8	M28-03-CK00B	M28-03-BK00B	M28-03-DK00B	M28-03-CL00B	M28-03-BL00B	M28-03-DL00B
	1/2	M28-04-CK00B	M28-04-BK00B	M28-04-DK00B	M28-04-CL00B	M28-04-BL00B	M28-04-DL00B
	3/4	M28-06-CK00B	M28-06-BK00B	M28-06-DK00B	M28-06-CL00B	M28-06-BL00B	M28-06-DL00B
Automatic Drain	3/8	M28-03-CG00B	M28-03-BG00B	N/A	M28-03-CH00B	M28-03-BH00B	N/A
	1/2	M28-04-CG00B	M28-04-BG00B	N/A	M28-04-CH00B	M28-04-BH00B	N/A
	3/4	M28-06-CG00B	M28-06-BG00B	N/A	M28-06-CH00B	M28-06-BH00B	N/A

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M26

= "Most Popular"



**M26-02-000**

## Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator

## Specifications

Flow Capacity*	1/4	55.0 SCFM (25.9 dm <sup>3</sup> /s)
	3/8	65.5 SCFM (30.9 dm <sup>3</sup> /s)
	1/2	79.5 SCFM (37.5 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Standard Filtration	Micron	(B) 0.5, (C) 0.01
		(D) 0.003 ppm / wt**
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	1.7 oz	
Weight	2.4 lb. (1.1 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

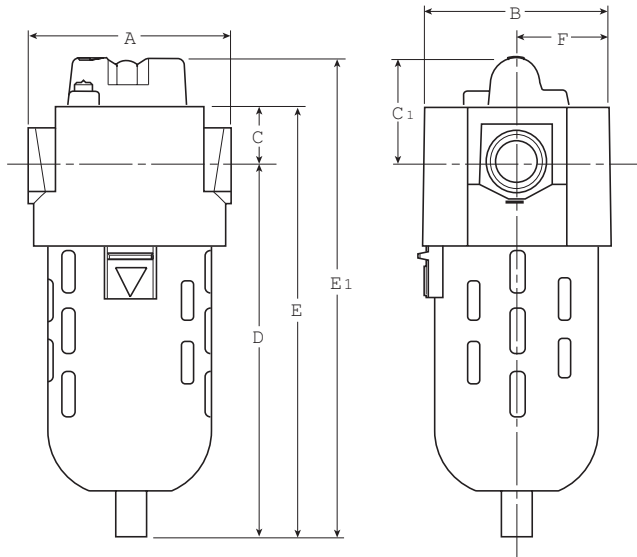
**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Element Retainer	Brass Stud	
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals	Fluorocarbon	



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit M26-XX-000		3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.40 (162.6)	7.40 (188)	8.23 (209)	1.50 (38)
Automatic Drain M26-XX-F00		3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.54 (166)	7.54 (191.5)	8.37 (212.5)	1.50 (38)



= "Most Popular"

### Replacement Bowl Kits

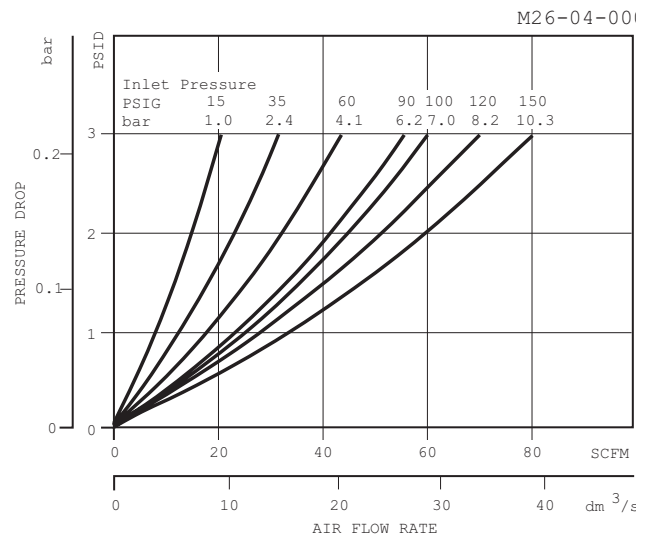
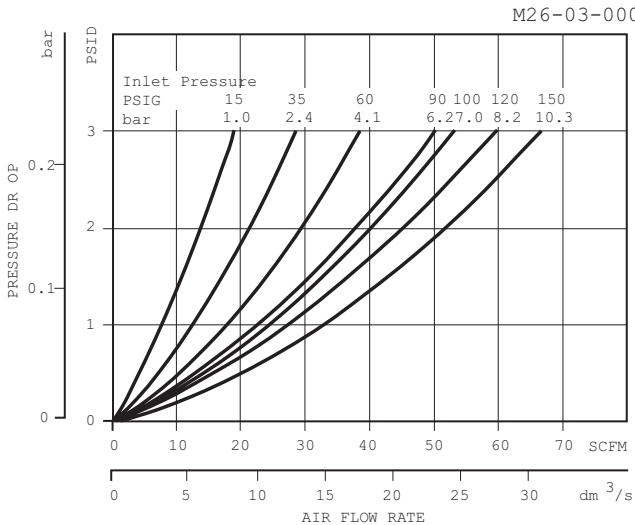
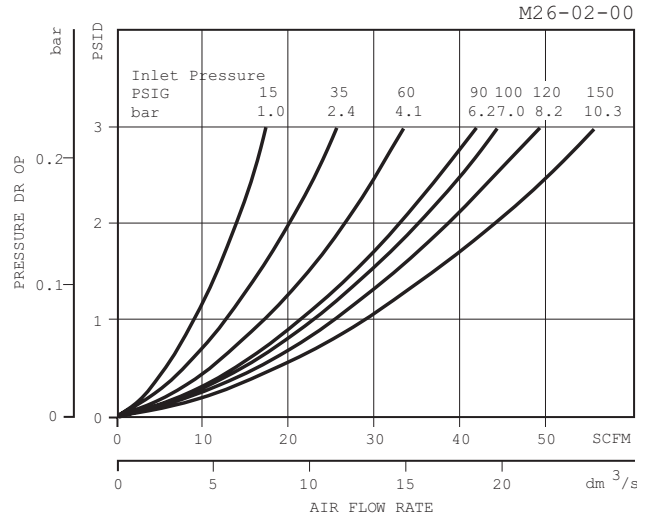
- Metal Bowl –
- Manual Drain ..... GRP-95-930
- Auto Drain..... GRP-95-960
- Plastic Bowl –
- Manual Drain ..... GRP-95-929
- Bowl Guard, Manual Drain ..... GRP-95-935
- Bowl Guard, Auto Drain ..... GRP-95-948

### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-95-989
- Type "C", 0.01 Micron ..... MTP-95-549
- Type "D", Oil Vapor Removing ..... MXP-95-540

### Accessories

- Automatic Mechanical Drain..... GRP-95-973
- Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG..... GRP-95-020
- Differential Pressure Indicator ..... DP2-02-000
- Manual Flex-Tip ..... FRP-95-610
- Sight Gauge Kit ..... GRP-95-079
- Wall Mounting Bracket, L-Type..... GPA-95-946



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/4	M26-02-000	M26-02-M00	M26-02-S00	M26-02-X00
	3/8	M26-03-000	M26-03-M00	M26-03-S00	M26-03-X00
	1/2	M26-04-000	M26-04-M00	M26-04-S00	M26-04-X00
Automatic Drain	1/4	M26-02-F00	M26-02-FM0	M26-02-FS0	—
	3/8	M26-03-F00	M26-03-FM0	M26-03-FS0	—
	1/2	M26-04-F00	M26-04-FM0	M26-04-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M21

= "Most Popular"



**M21-03-000**

## Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator

## Specifications

Flow Capacity*	3/8	95.4 SCFM (45.0 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	3/8
Bowl Capacity		3.9 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		3.7 lb. (1.68 kg)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

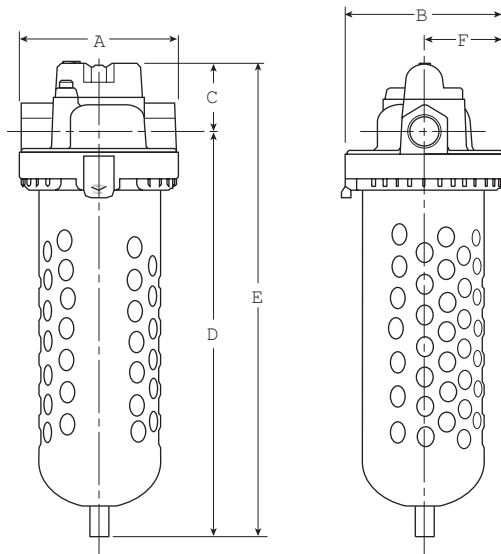
**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO Class 1** for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO Class 1** on maximum oil content (ppm/wt).

## Materials of Construction

Body		Zinc
Bowl		Polycarbonate
Element Retainer		Brass Stud
Filter Elements	Type "B", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals		Fluorocarbon



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M21-03-000		3.70 (94)	3.79 (96.5)	1.70 (43.2)	9.20 (233.7)	10.90 (276.9)	1.89 (48.1)
Automatic Drain M21-03-F00		3.70 (94)	3.79 (96.5)	1.70 (43.2)	9.58 (237)	11.22 (280)	1.89 (48.1)

= "Most Popular"

### Replacement Bowl Kits

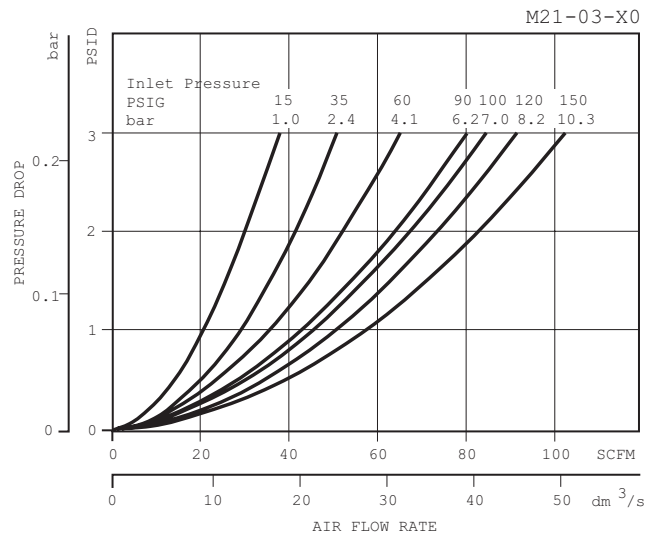
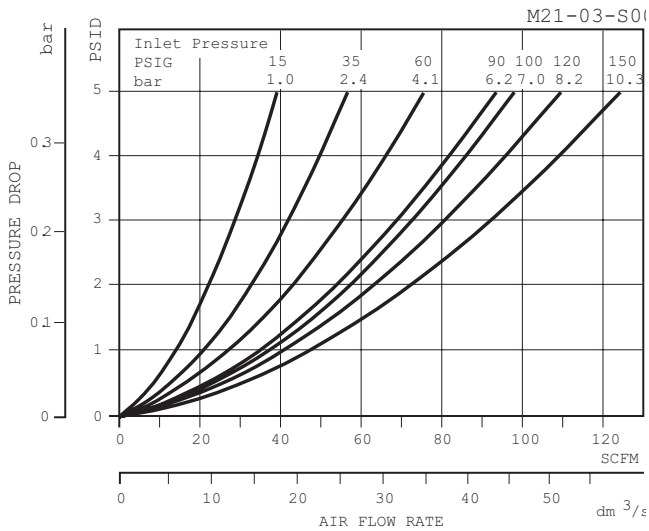
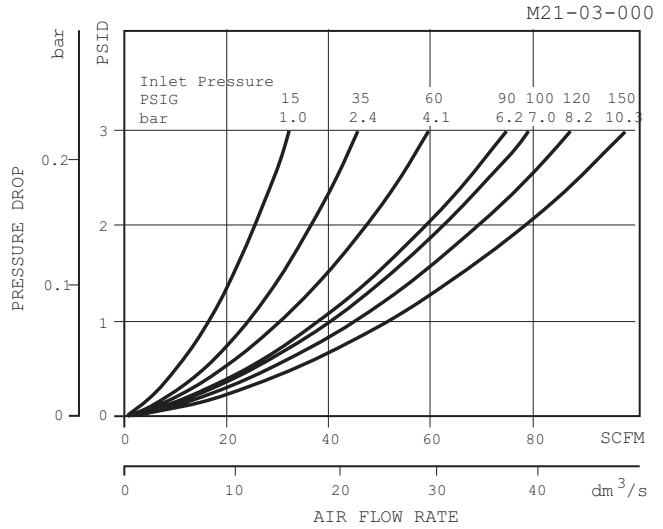
- Plastic Bowl –
- Bowl Guard, Manual Drain .....FRP-95-722
- Bowl Guard, Automatic Drain .....MRP-95-722

### Replacement Element Kits

- Type "B", 0.5 Micron .....MSP-95-990
- Type "C", 0.01 Micron .....MTP-95-550
- Type "D", Oil Vapor Removing .....MXP-95-537

### Accessories

- Automatic Drain..... GRP-95-973
- Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG..... GRP-95-020
- Differential Pressure Indicator ..... DP2-02-000
- Manual Flex-Tip .....FRP-95-610
- Wall Mounting Bracket, U-bolt Pipe Clamp ..... GRP-95-734



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element
Manual Drain	3/8	M21-03-000
Automatic Drain	3/8	M21-03-F00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M90

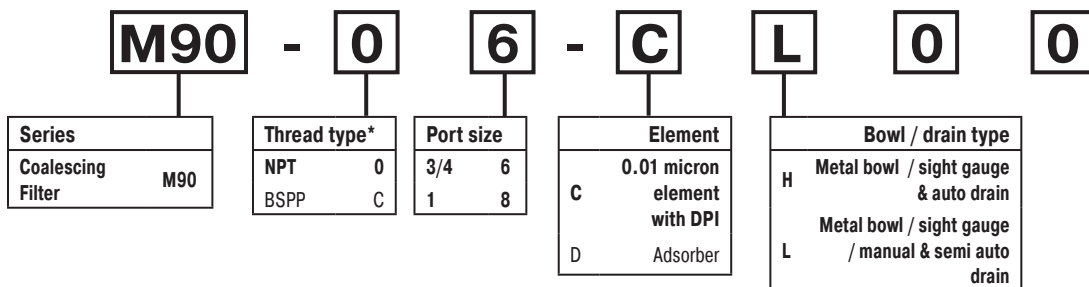
   = "Most Popular"



- Extended high efficiency filter element provides greater filtration surface area.
- Integral 3/4" or 1" ports (BSPP & NPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Adsorber activated carbon element removes oil vapors and most hydrocarbons
- Robust but lightweight aluminum construction

**Notes:** To optimize the life of the coalescing element, it is advisable to install a F90 pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a 90 Series coalescing 0.01 micron filter upstream of the adsorber filter.



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering Information

Port size	Description	Flow† scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm <sup>3</sup> (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number†
3/4"	Coalescing filter 0.01 micron, combined manual / semi auto drain	275	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	<b>M90-06-CL00</b>
3/4"	Coalescing filter 0.01 micron, auto drain	275	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	M90-06-CH00
1"	Coalescing filter 0.01 micron, combined manual / semi auto drain	307	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	<b>M90-08-CL00</b>
1"	Coalescing filter 0.01 micron, auto drain	307	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	M90-08-CH00

† Standard part numbers shown in bold. For other models refer to Options chart above.

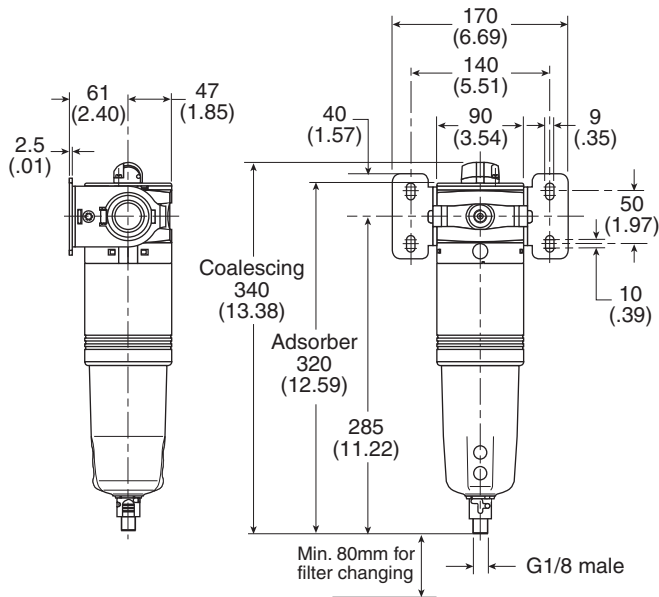
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

**Specifications**

Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-10°C to 60°C (14°F to 140°F)
Media specifications (Coalescer):	
Coalescing efficiency	99.97% (0.3 to 0.6 micron particles)
Max. oil carryover	0.008 mg/m <sup>3</sup>
Typical flow element @	
6.3 bar (91.4 psig) inlet pressure and	0.01 micron element
0.5 bar (7.3 psig) pressure drop	1" port 307 scfm
Media specifications (Adsorber):	
Max. oil carryover (PPM w/w)	0.008 mg/m <sup>3</sup>
Manual / semi-auto drain	Closed at 0.8 bar (11.6 psig) G1/8 thread male
Auto drain bowl pressure to close drain	0.8 bar (11.6 psig)
Operating range	0.8 bar (11.6 psig) to manual override facility
Bowl capacity	17.5 bar (254 psig) 130 cm <sup>3</sup> (4.4 US oz)

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

**Dimensions mm (inches)**



**Service kits**

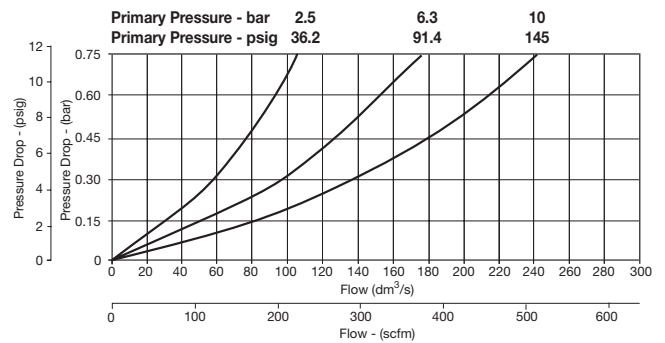
0.01 micron element kit.....	P3YKA00ESC
Adsorber element kit .....	P3YKA00ESA
Bowl kit with combined manual / semi auto drain.....	P3YKA00BSC
Bowl kit with auto drain .....	P3YKA00BSA
Differential pressure indicator kit .....	P3YKA00RQ

**Material specifications**

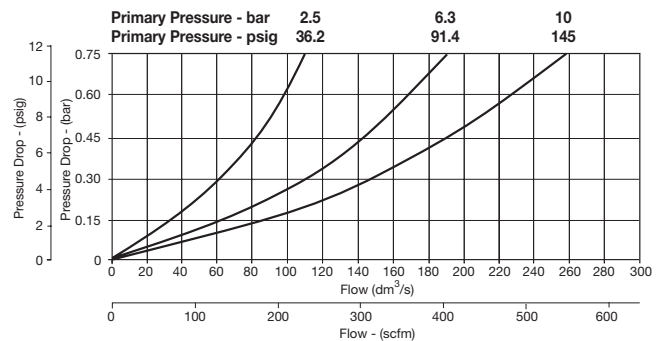
Body	Aluminum
Sight glass	Polypropylene
Filter cover	ABS
Coalescing element	Borosilicate & nano fibers
Top & bottom end cap (Coalescing)	Aluminum
Adsorber element	Activated carbon
Top & bottom end cap (Adsorber)	Glass filled nylon
Support cylinders	Grade 430 stainless steel
Support media	Polypropylene
Anti re-entrainment barrier	Polyester
Encapsulate	Epoxy resin / hardener
Seals	Nitrile NBR
Drains	Manual / semi-auto: Acetal Automatic: PA / Ø 10mm brass connection
Differential pressure indicator	
Body	Acetal
Internal parts	Acetal
Spring	Stainless steel
Seals	Nitrile NBR
Support plate	ABS
Screws	Steel / zinc plated

**Flow characteristics**

**(3/4") 0.01 Micron Coalescing Filter Saturated**



**(1") 0.01 Micron Coalescing Filter Saturated**



# Coalescing Filter M30

= "Most Popular"



**M30-04-000**

## Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator

## Specifications

Flow Capacity*	1/2	123 SCFM (58.2 dm <sup>3</sup> /s)
	3/4	173 SCFM (81.0 dm <sup>3</sup> /s)
	1	203 SCFM (96.0 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2, 3/4, 1
Bowl Capacity	2.0 oz	
Standard Filtration Micron	(B) 0.5, (C) 0.01	
	(D) 0.003 ppm / wt**	
Weight	5.4 lb. (2.4 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

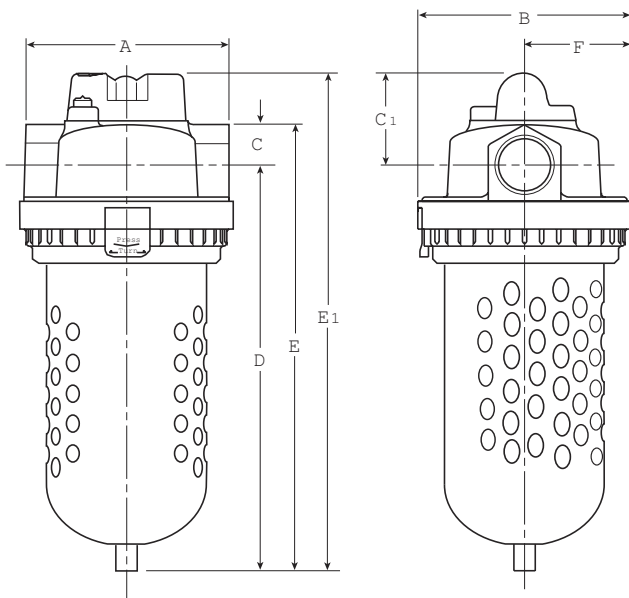
**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO Class 1** for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO Class 1** on maximum oil content (ppm/wt).

## Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Element Retainer	Brass Stud	
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals	Fluorocarbon	



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Standard Unit M30-XX-000		4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	9.13 (232)	10.07 (255.8)	10.90 (270)	2.40 (61)
Automatic Drain M30-XX-F00		4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	9.27 (235)	10.21 (259)	11.04 (273.5)	2.40 (61)
Metal Bowl M30-XX-M00		4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	8.73 (221.7)	9.67 (245.6)	10.50 (267)	2.40 (61)

= "Most Popular"

### Replacement Bowl Kits

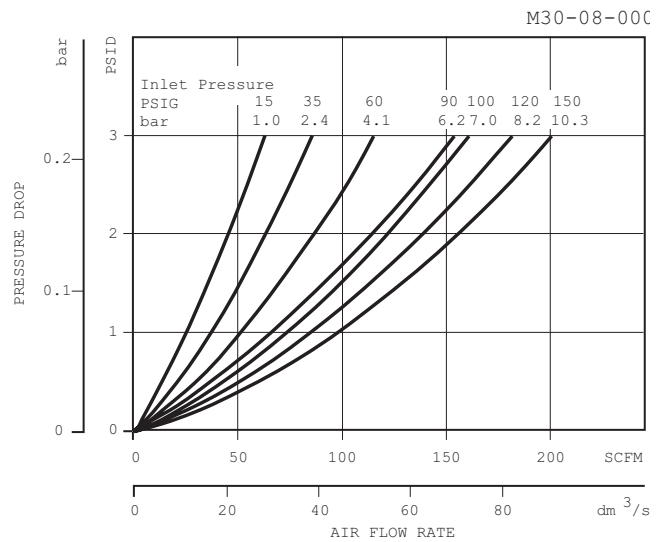
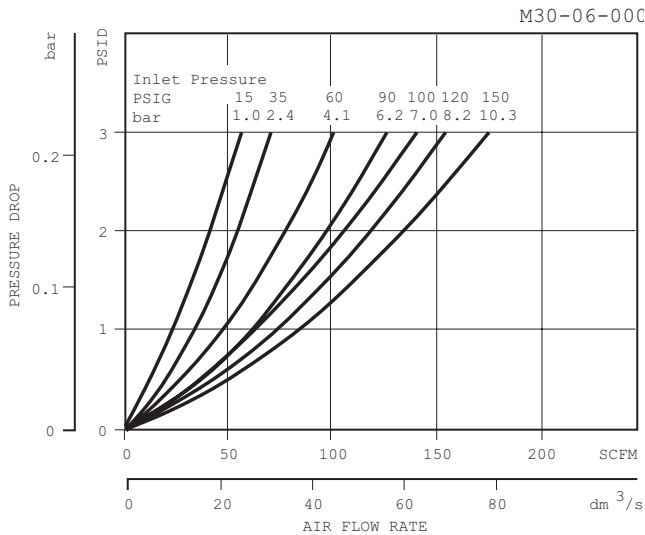
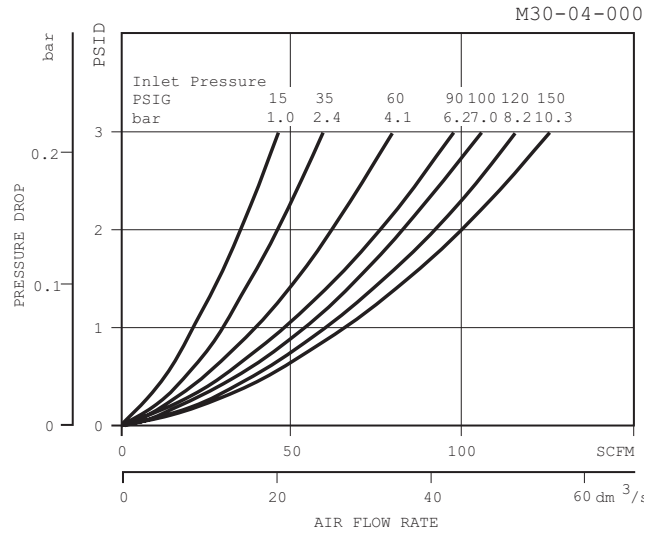
- Metal Bowl –  
 Manual Drain ..... FRP-95-593  
 Auto Drain..... GRP-95-970
- Plastic Bowl –  
 Manual Drain ..... FRP-96-315  
 Bowl Guard, Manual Drain ..... FRP-95-832  
 Bowl Guard, Auto Drain ..... FRP-95-775

### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-95-992  
 Type "C", 0.01 Micron ..... MTP-95-551  
 Type "D", Oil Vapor Removing ..... MXP-95-532

### Accessories

- Automatic Mechanical Drain..... GRP-95-973  
 Cap, Differential Pressure Indicator –  
 For pressures over 150 PSIG..... GRP-95-020  
 Differential Pressure Indicator ..... DP2-02-000  
 Manual Flex-Tip ..... FRP-95-610  
 Sight Gauge Kit ..... LRP-95-771  
 Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



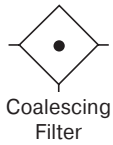
### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/2	M30-04-000	M30-04-M00	M30-04-S00	M30-04-X00
	3/4	M30-06-000	M30-06-M00	M30-06-S00	M30-06-X00
	1	M30-08-000	M30-08-M00	M30-08-S00	M30-08-X00
Automatic Drain	1/2	M30-04-F00	M30-04-FM0	M30-04-FS0	—
	3/4	M30-06-F00	M30-06-FM0	M30-06-FS0	—
	1	M30-08-F00	M30-08-FM0	M30-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M31

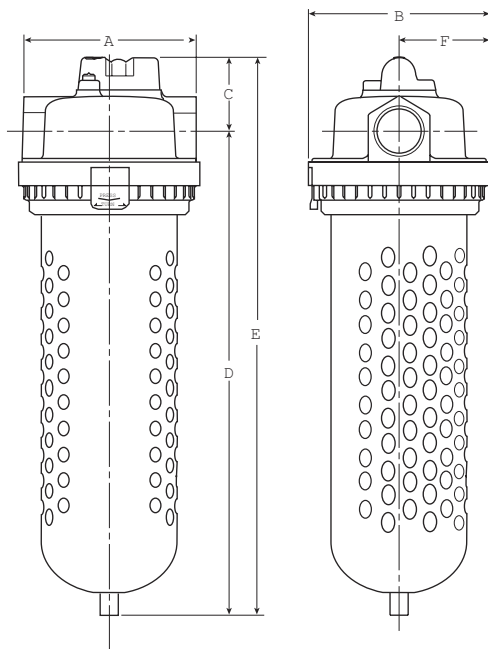
= "Most Popular"



**M31-06-000**

## Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M31-XX-000		4.61 (117)	4.80 (122)	1.90 (48)	13.00 (330)	14.90 (378)	2.40 (61)
Automatic Drain M31-XX-F00		4.61 (117)	4.80 (122)	1.90 (48)	13.14 (333.7)	15.04 (382)	2.40 (61)
Metal Bowl M31-XX-M00		4.61 (117)	4.80 (122)	1.90 (48)	13.10 (332.7)	15.00 (381)	2.40 (61)

## Specifications

Flow Capacity*	3/4 1	215 SCFM (101.4 dm <sup>3</sup> /s) 277 SCFM (130.8 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl Metal Bowl	32° to 125°F (0° to 52°C) 32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Bowl Capacity		2.3 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		6.76 lb. (3.1 kg)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

**"M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body		Zinc
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Element Holder		Brass Stud
Filter Elements	Type "B", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals		Fluorocarbon



= "Most Popular"

### Replacement Bowl Kits

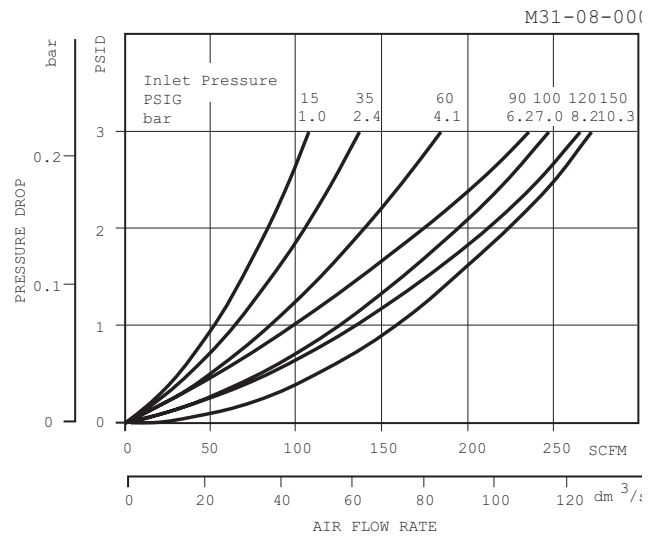
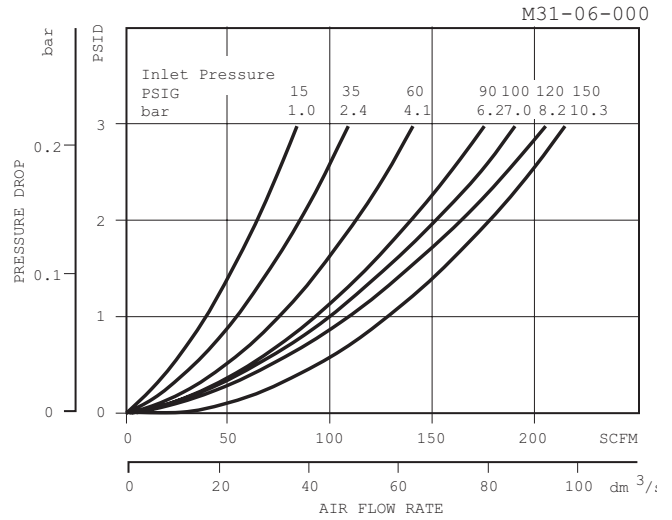
- Metal Bowl –
- Manual Drain ..... MRP-95-939
- Plastic Bowl –
- Bowl Guard, Manual Drain ..... MRP-95-938
- Bowl Guard, Auto Drain ..... MRP-95-941
- Manual Drain ..... MRP-95-940

### Replacement Element Kits

- Type "B", 0.5 Micron ..... MSP-95-993
- Type "C", 0.01 Micron ..... MTP-95-521
- Type "D", Oil Vapor Removing ..... MXP-95-522

### Accessories

- Automatic Mechanical Drain..... GRP-95-973
- Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG..... GRP-95-020
- Differential Pressure Indicator ..... DP2-02-000
- Manual Flex-Tip ..... FRP-95-610
- Wall Mounting Bracket, U-bolt Pipe Clamp ..... GRP-95-734



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	3/4	M31-06-000	M31-06-M00	M31-06-S00	M31-06-X00
	1	M31-08-000	M31-08-M00	M31-08-S00	M31-08-X00
Automatic Drain	3/4	M31-06-F00	M31-06-FM0	M31-06-FS0	—
	1	M31-08-F00	M31-08-FM0	M31-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M32

= "Most Popular"



**M32-08-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 300 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Manual Drain
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron

## Specifications

Flow Capacity*	1	419 SCFM (197 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DP2 with DP2	300 PSIG (20.7 bar)† 150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (° to 65.5°C)	
Port Size	NPT / BSPP-G	1, 1-1/4
Bowl Capacity	80.7 oz	
Standard Filtration Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**	
Weight	13 lb. (5.9 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 300 PSIG (20.7 bar).

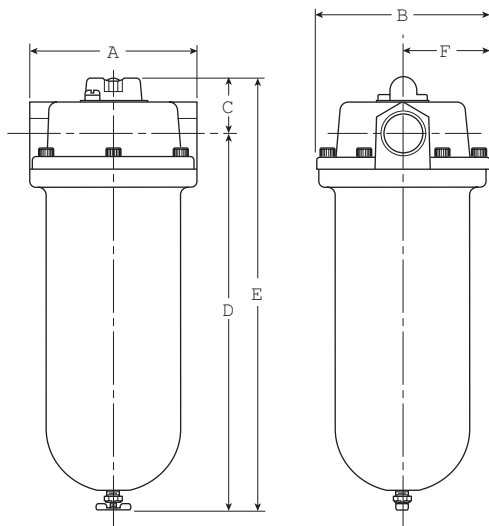
**"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Bowls	Aluminum	
Element Retainer	Brass Nut / Steel Stud	
Filter Elements	Type "B1", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals	Fluorocarbon	



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M32-XX-000		6.25 (159)	6.49 (165)	1.95 (50)	13.90 (353)	16.00 (406)	3.25 (83)
Automatic Drain M32-XX-F00		6.25 (159)	6.49 (165)	1.95 (50)	14.04 (356.6)	16.14 (410)	3.25 (83)

= "Most Popular"

**Replacement Bowl Kit**

Gasket, Bowl, Fluorocarbon (1 per Kit)..... GRP-95-288

**Replacement Element Kits**

Type "B1", 1.0 Micron .....MSP-95-873

Type "C", 0.01 Micron.....MTP-95-559

Type "D", Oil Vapor Removing .....MXP-95-558

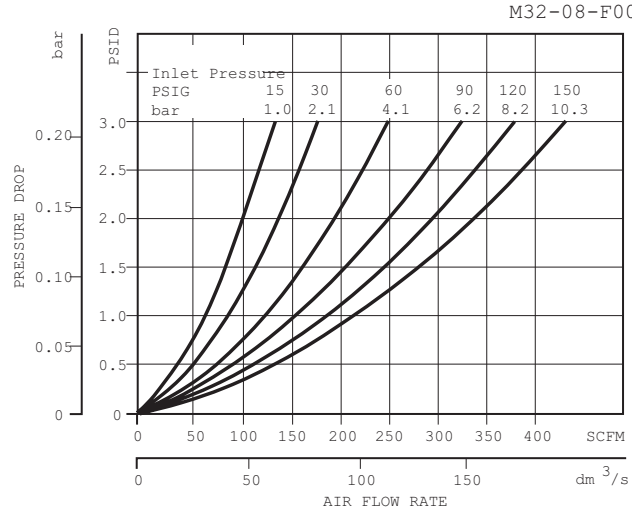
**Accessories**

Automatic Mechanical Drain..... GRP-95-981

Cap, Differential Pressure Indicator –  
For pressures over 150 PSIG, 10.3 bar..... GRP-95-020

Gauge, Differential Pressure..... DP3-01-000

Indicator, Differential Pressure ..... DP2-02-000



**Ordering Information**

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element (No DPI)
Manual Drain	1	M32-08-000	M32-08-S00	M32-08-X00
Automatic Drain	1	M32-08-F00	M32-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number

# Coalescing Filter M35

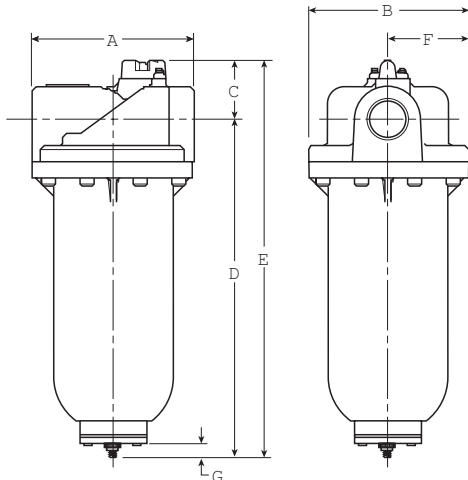
= "Most Popular"



**M35-0B-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential Pressure Gauge Available, Order Separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit M35-XX-F00		7.80 (198)	7.75 (197)	2.81 (71)	16.24 (412)	19.07 (484)	3.88 (99)	.55 (14)
Without Automatic Drain M35-XX-000		7.80 (198)	7.75 (197)	2.81 (71)	15.69 (398.5)	18.52 (470)	3.88 (99)	.55 (14)

## Specifications

Flow Capacity*	1-1/2 2	710 SCFM (335 dm <sup>3</sup> /s) 710 SCFM (335 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DPI and with Pressure Gauge with DPI	250 PSIG (17.2 bar)† 150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1-1/2, 2
Bowl Capacity	13.9 oz	
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight	19.3 lb. (8.7 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 250 PSIG (17.2 bar).

**"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Bowls	Aluminum	
Filter Elements	Type "B1", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals	Fluorocarbon	
Stud	Plated Steel	

**NOTE:** Automatic internal float drain shown is included on M35 filters with F00 suffix only. Models with 000 suffix include drain plate with tapped 1/2 NPT / BSPP-G drain port.

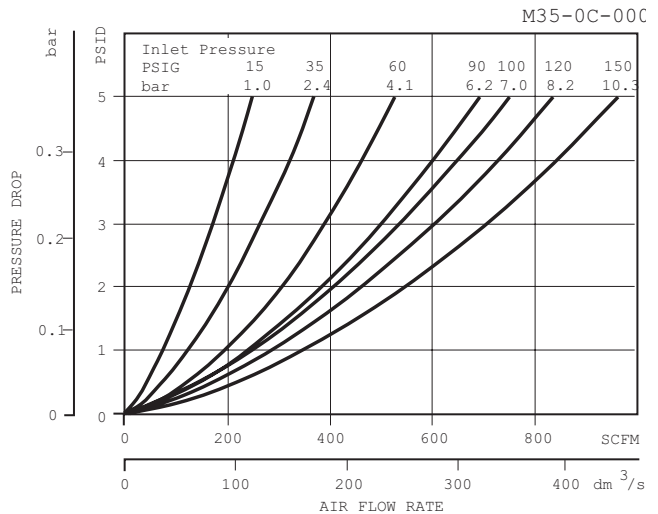
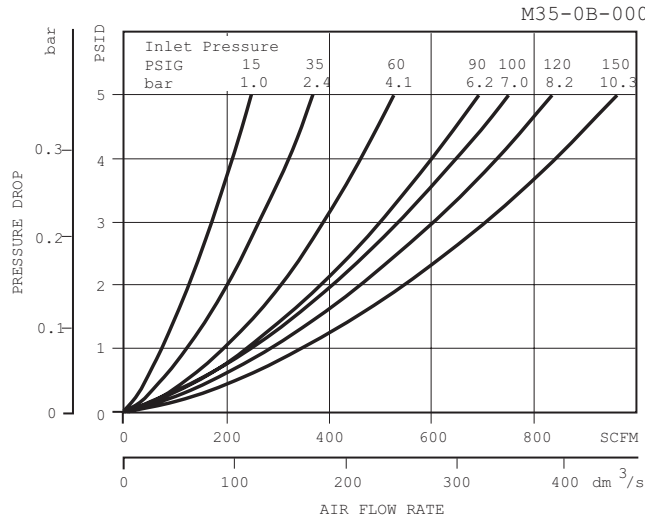
= "Most Popular"

### Replacement Element Kits

- Type "B1", 1.0 Micron.....MSP-95-502
- Type "C", 0.01 Micron .....MTP-95-502
- Type "D", Oil Vapor Removing.....MXP-95-502

### Accessories

- Cap, Differential Pressure Indicator –  
(For pressures over 150 PSIG)..... GRP-95-022
- Drain, Automatic, Internal, Fluorocarbon..... GRP-95-981
- Drain Plate Kit –  
1/2 NPT Tapped Drain Port ..... GRP-95-393
- Gauge, Differential Pressure..... DP3-01-000
- Indicator, Differential Pressure .....DP2-02-001
- Manual Drain Kit  
with 1/2" Drain Plate ..... GRP-95-392



### Ordering Information

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
Manual Drain	1-1/2	M35-0B-000	M35-0B-S00	M35-0B-X00 (Includes 1/2 NPT / BSPP-G M35-0C-X00 Drain Plate)
	2	M35-0C-000	M35-0C-S00	
Automatic Drain	1-1/2	M35-0B-F00	M35-0B-FS0	—
	2	M35-0C-F00	M35-0C-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

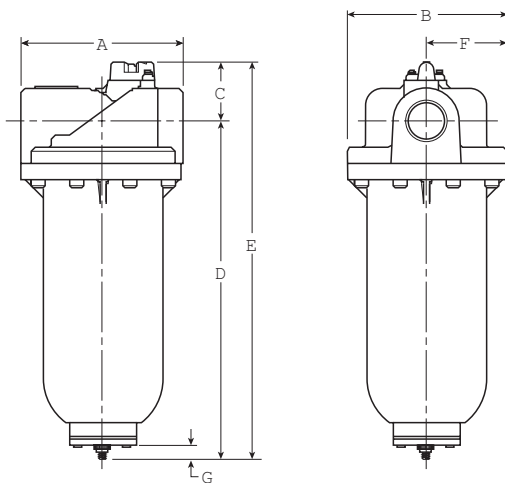
# Coalescing Filter M43



**M43-0E-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential Pressure Gauge Available, Order Separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit M43-0E-000		8.94 (227)	9.00 (229)	3.45 (88)	25.96 (660)	29.44 (748)	4.50 (114)	.55 (14)

= "Most Popular"

## Specifications

Flow Capacity*	3	1770 SCFM (800 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DPI and with Pressure Gauge with DPI	250 PSIG (17.2 bar)† 150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	3
Bowl Capacity	17.2 oz	
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight	32.8 lb. (14.9 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 250 PSIG (17.2 bar).

**"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Bowls	Aluminum	
Filter Elements	Type "B1", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals	Fluorocarbon	
Stud	Plated Steel	

**NOTE:** Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.

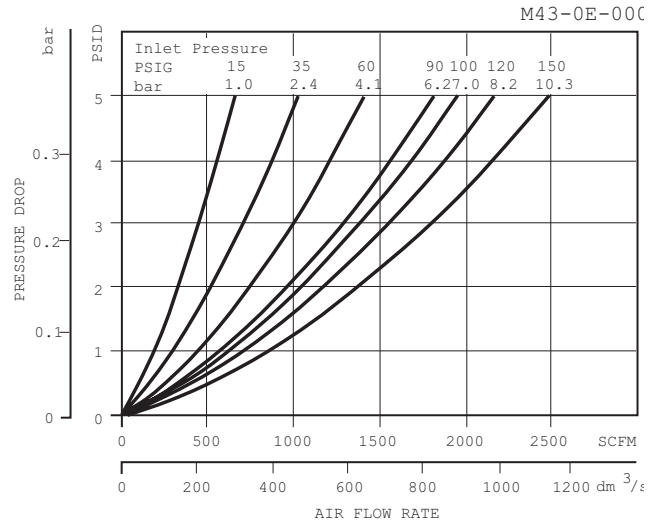
M43-0E-000 = "Most Popular"

**Replacement Element Kits**

- Type "B1", 1.0 Micron.....MSP-95-876
- Type "C", 0.01 Micron .....MTP-95-562
- Type "D", Oil Vapor Removing.....MXP-95-565

**Accessories**

- Cap, Differential Pressure Indicator –  
For pressures over 150 PSIG..... GRP-95-022
- Drain, Automatic, Internal, Fluorocarbon,  
1/8 NPT ..... GRP-95-981
- Drain Plate Kit –  
1/2 NPT tapped drain port ..... GRP-95-393  
5/16 Dia. Drain Port,  
For use with Internal Auto Drain..... GRP-95-391
- Gauge, Differential Pressure..... DP3-01-000
- Indicator, Differential Pressure .....DP2-02-001
- Manual Drain Kit  
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
- Manual Override for Auto Float Drain –  
GRP-05-981 Required ..... GRP-96-001



**Ordering Information**

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
M43	3	M43-0E-000	M43-0E-S00	M43-0E-X00 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter M45

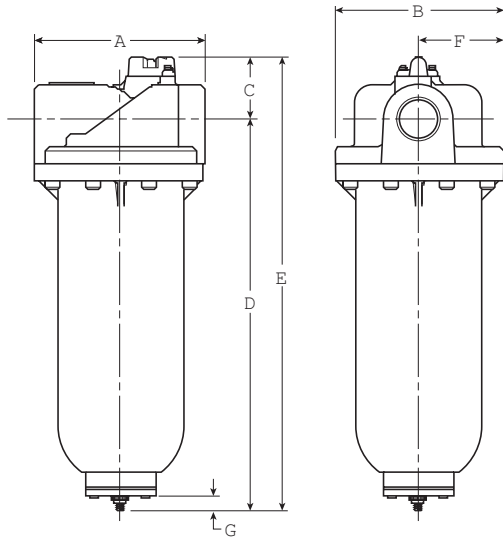
= "Most Popular"



**M45-0E-000**

## Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 300 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit M45-XX-000		8.94 (227)	8.88 (225.5)	3.48 (88)	32.52 (826)	36.00 (914)	4.44 (112.8)	.55 (14)

## Specifications

Flow Capacity*	3	2200 SCFM (1000 dm <sup>3</sup> /s)
Maximum Supply Pressure	without DP2 with DP2	300 PSIG (20.7 bar)† 150 PSIG (10.3 bar)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	3
Bowl Capacity	15 oz	
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight	39.0 lb. (17.7 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

\*\* Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 300 PSIG (20.7 bar).

**"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

**"M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

**"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

## Materials of Construction

Body	Aluminum	
Bowls	Aluminum	
Filter Elements	Type "B1", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals	Fluorocarbon	
Stud	Plated Steel	

**NOTE:** Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.



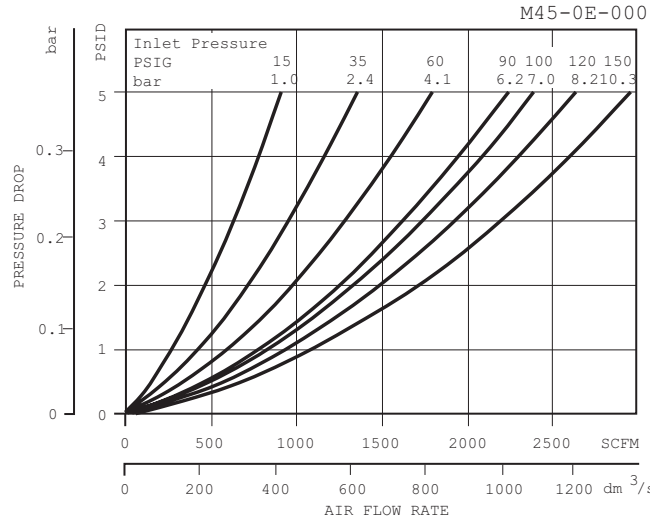
M45-0E-000 = "Most Popular"

**Replacement Element Kits**

- Type "B1", 1.0 Micron.....MSP-95-500
- Type "C", 0.01 Micron .....MTP-95-500
- Type "D", Oil Vapor Removing.....MXP-95-500

**Accessories**

- Cap, Differential Pressure Indicator –  
For pressures over 150 PSIG..... GRP-95-022
- Drain, Automatic, Internal, Fluorocarbon,  
1/8 NPT ..... GRP-95-981
- Drain Plate Kit –  
1/2 NPT tapped drain port ..... GRP-95-393  
5/16 Dia. Drain Port,  
For use with Internal Auto Drain..... GRP-95-391
- Gauge, Differential Pressure..... DP3-01-000
- Indicator, Differential Pressure .....DP2-02-001
- Manual Drain Kit  
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
- Manual Override for Auto Float Drain –  
GRP-05-981 Required ..... GRP-96-000



**Ordering Information**

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
M45	3	M45-0E-000	M45-0E-S00	M45-0E-X00 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# M55 Series Flanged Filters

 = "Most Popular"



M55 Series

## Features

- No Tie Rod Element Design
- Pleated Element Technology
- New High Efficiency Drainage Layer
- Designed in Accordance with ASME and CRN
- Connection Sizes: 4 Inch & 6 Inch Flange
- Acrylic Polyurethane Coating for Corrosion Protection
- Auto float drain is standard, shipped loose
- DP gauge is standard, installed

## Specifications

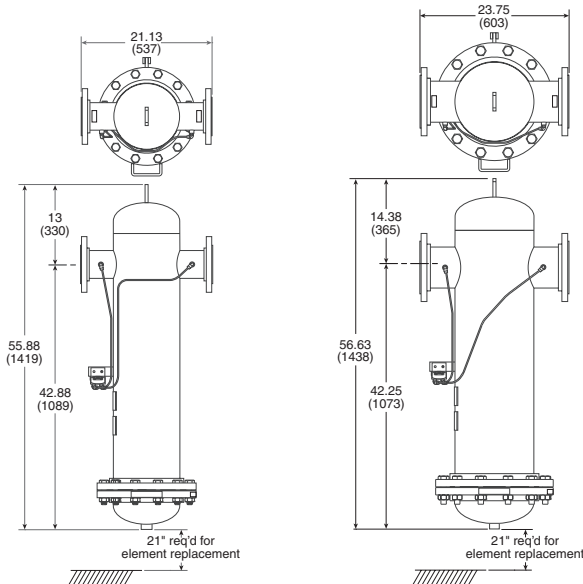
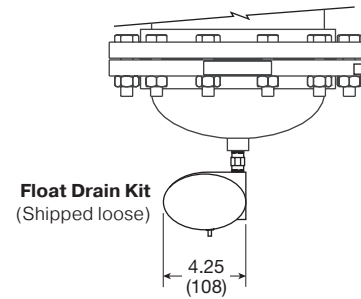
Operating Pressure	232 PSIG (16 bar)
Operating Temperature	35°F to 212°F (1.5°C to 100°C)

## Materials of Construction

Baffle	Plated Steel
Body	Steel
Deflector	Plated Steel
Filter Element	0.01 & 1.0 micron Borosilicate Cloth
Seals	Fluorocarbon
Stud	Plated Steel

## Service Kits

DP Gauge Replacement Kit	Number Required	DPG-Kit
Float Drain Kit - 1/2" NPT		HDF-120-NPT-A
Filter Element Kit	0.01 Micron 4 or 6	060AA
	1.0 Micron 4 or 6	060AO



M55-0F-F00 & M55-0F-FS0

M55-0H-F00 & M55-0H-FS0

## Inlet Air Pressure Correction

PSI	15	29	44	58	73	87	100	116	131	145
bar	1	2	3	4	5	6	7	8	9	10
Factor	0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19

For pressures above 232 PSIG (16 bar), use manual drain.

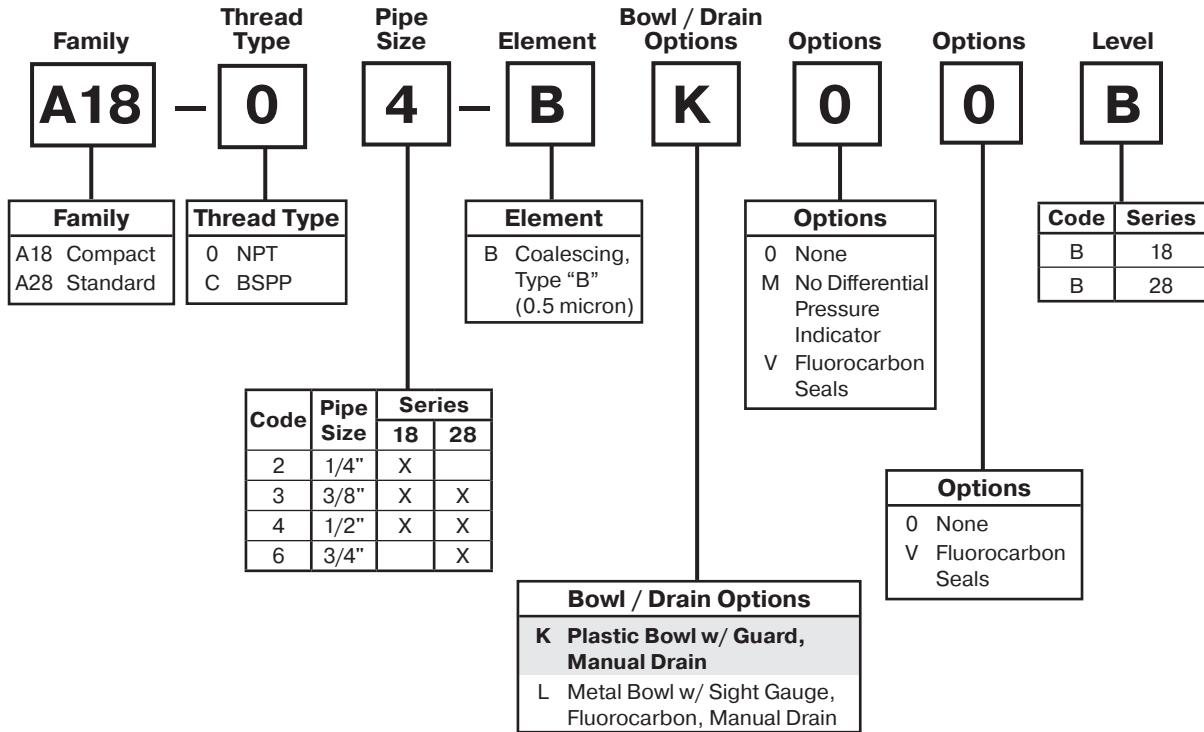
PSI	160	174	189	203	218	232	247	261	275	290
bar	11	12	13	14	15	16	17	18	19	20
Factor	1.25	1.31	1.36	1.41	1.46	1.51	1.56	1.60	1.65	1.70

## Ordering Information

Model Type	Port Size	Flow SCFM	Element Type	Number of Elements
M55-0F-F00	4" Flange	2755	0.01 micron	4
M55-0F-FS0	4" Flange	2755	1.0 micron	4
M55-0H-F00	6" Flange	4132	0.01 micron	6
M55-0H-FS0	6" Flange	4132	1.0 micron	6

# Afterfilter Numbering System

   = "Most Popular"

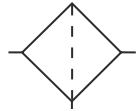


**NOTE:**All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.**



# Afterfilter A18



Afterfilter



= "Most Popular"

## Specifications

Flow Capacity*	1/4	50 SCFM (23.6 dm <sup>3</sup> /s)
	3/8	60 SCFM (28.3 dm <sup>3</sup> /s)
	1/2	67 SCFM (31.6 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration	0.5 Micron	
Weight	0.71 lb. (0.32 kg)	

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSID (0.2 bar).

**"A18" Series Afterfilters, with Type "B" 0.5 micron elements:**  
All Wilkerson Type "AF" Afterfilters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm/wt).

## Features

- Modern Design and Appearance
- 0.5 Micron Element
- Light Weight
- High Flow Capacity with Minimal Pressure Drop

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B"	Borosilicate Fiber
Seals	Nitrile	
Sight Gauge	Metal Bowl	Nylon

## Replacement Bowl Kits

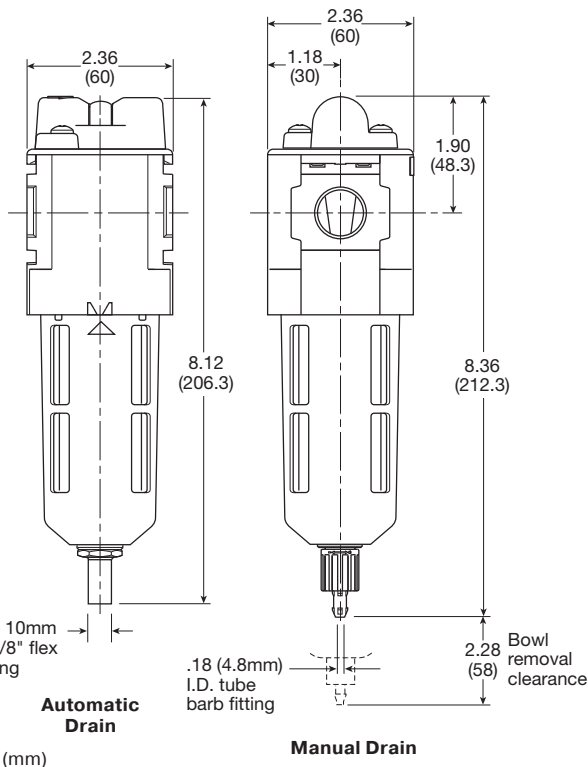
- Metal Bowl with Sight Gauge,  
Manual Drain ..... GRP-96-636
- Plastic Bowl / Bowl Guard,  
Manual Drain ..... GRP-96-634
- Plastic Bowl, Plastic Guard,  
No Drain ..... GRP-96-638

## Replacement Element Kit

- Type "B", 0.5 Micron ..... MSP-96-647

## Accessories

- Wall Mounting Bracket –  
L-Type ..... GPA-96-604  
T-Type ..... GPA-96-602



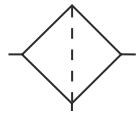
## Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "B" Element	Metal Bowl / Sight Gauge / "B" Element
Type "B" Element is Standard (Manual Drain)	1/4	A18-02-BK00B	A18-02-BL00B
	3/8	A18-03-BK00B	A18-03-BL00B
	1/2	A18-04-BK00B	A18-04-BL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



# Afterfilter A28



Afterfilter



= "Most Popular"

## Specifications

Flow Capacity*	3/8	82 SCFM (38.7 dm <sup>3</sup> /s)
	1/2	90 SCFM (42.5 dm <sup>3</sup> /s)
	3/4	98 SCFM (46.3 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Standard Filtration	0.5 Micron	
Weight	1.01 lb. (0.46 kg)	

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSID (0.2 bar).

**"A28" Series Afterfilters, with Type "B" 0.5 micron elements:**  
All Wilkerson Type "AF" Afterfilters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm/wt).

## Features

- Modern Design and Appearance
- 0.5 Micron Element
- Light Weight
- High Flow Capacity with Minimal Pressure Drop
- Bowl Guard
- Quick-Disconnect Bowl

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B"	Borosilicate Fiber
Seals	Nitrile	
Sight Gauge	Metal Bowl	Nylon

## Replacement Bowl Kits

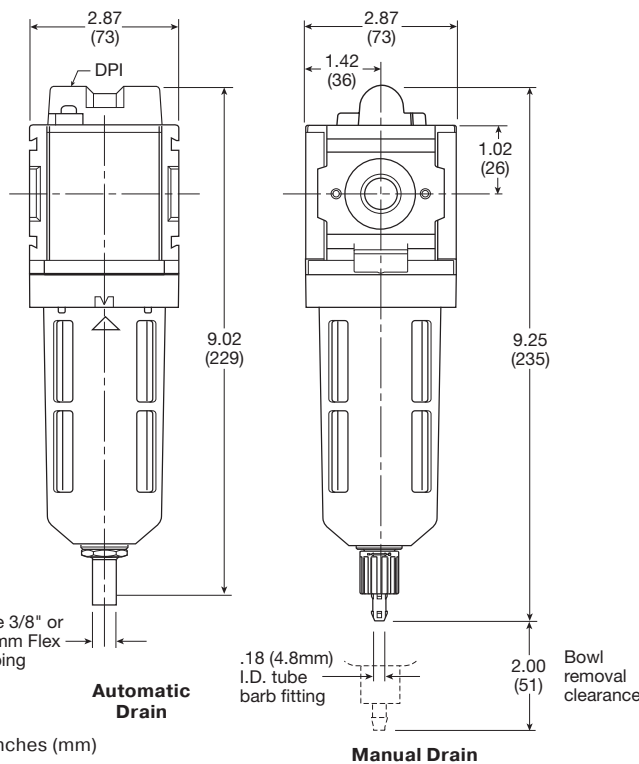
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-644
- Plastic Bowl / Bowl Guard, Manual Drain ..... GRP-96-642
- Plastic Bowl, Plastic Guard, No Drain ..... GRP-96-652

## Replacement Element Kit

- Type "B", 0.5 Micron ..... MSP-96-649

## Accessories

- Wall Mounting Bracket –
  - L-Type ..... GPA-96-605
  - T-Type ..... GPA-96-602



## Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "B" Element	Metal Bowl / Sight Gauge / "B" Element
Type "B" Element is Standard (Manual Drain)	3/8	A28-03-BK00B	A28-03-BL00B
	1/2	A28-04-BK00B	A28-04-BL00B
	3/4	A28-06-BK00B	A28-06-BL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Exhaust Muffler F23



**F23-04-000**

## Exhaust Muffler Units

Part of an OSHA requirement is to keep sustained noise levels within acceptable specifications: 90 decibels (dBA) or less. Wilkerson's mufflers and oil reclassifiers keep these objectionable exhaust noises (air motors, control valves, etc.) within the OSHA specifications.

These units have only one inlet port.

The contaminants in the exhaust flow are mechanically separated and twice filtered to 5 micron levels. The clean, muffled exhaust flows out of the unit under the metal hood on top.

## Features:

- 5 Micron Rated Reusable Elements
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Low-Pressure Drop (Back Pressure)
- Removes Oily Aerosols from Exhaust Flows
- Transparent Bowls with Metal Bowl Guards Standard

## Replacement Bowl Kits

- Metal Bowl Guard, (for Plastic Bowl) ..... GRP-95-804
- Metal Bowl, Brass Petcock ..... FRP-95-612
- Metal Bowl / Sight Gauge, Brass Petcock ..... GRP-95-613
- Plastic Bowl, Plastic Petcock Drain ..... LRP-96-157
- Plastic Bowl / Bowl Guard, Plastic Petcock Drain. GRP-95-724

## Replacement Element Kit

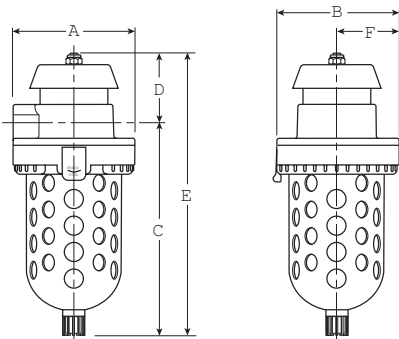
- Type A", 5 Micron (Upper & Lower Elements) ..... FRP-95-169

## Replacement Kits

- Clamp Ring Assembly ..... GRP-95-154
- Manual Drain, Brass Petcock ..... GRP-95-182
- O-ring, Bowl, Fluorocarbon (10 per kit) ..... GRP-95-109
- O-ring, Bowl, Nitrile (10 per kit) ..... GRP-95-257

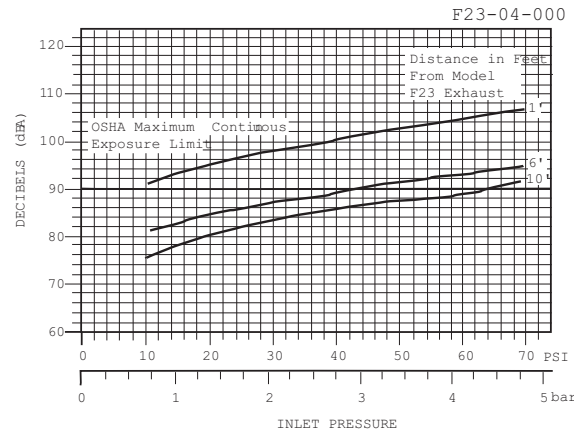
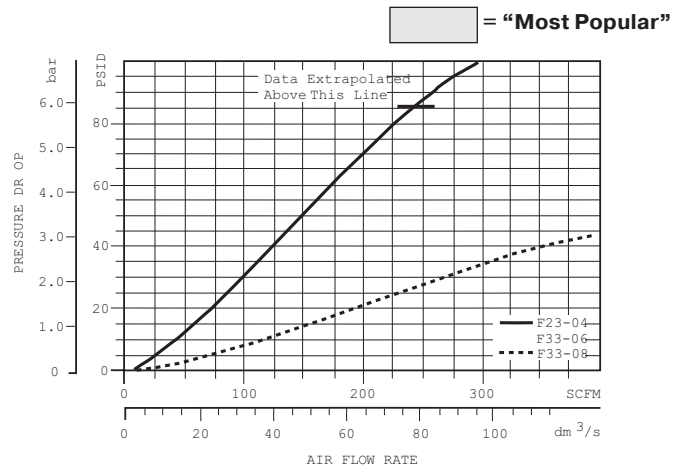
## Accessories

- Wall Mounting Bracket, U-Bolt Pipe Clamp ..... GRP-95-734



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F23-04-000		3.83 (97.5)	3.83 (97.5)	6.23 (158.2)	2.06 (52.3)	8.29 (210.6)	1.92 (48.8)



## Specifications

Maximum Supply Pressure	150 PSIG (10.3 bar)
Operating Temperature	32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G 1/2
Standard Filtration	5 Micron
Weight	3.12 lb. (1.4 kg)

## Materials of Construction

Baffle	Acetal
Body	Zinc
Bowls	Plastic Bowl: Polycarbonate Metal Bowl: Aluminum
Element Retainer	Steel Stud
Filter Element	Sintered Polyethylene
Shield	Steel
Stem	Steel



# Exhaust Muffler F33

## Exhaust Muffler Units

Part of an OSHA requirement is to keep sustained noise levels within acceptable specifications: 90 decibels (dBA) or less. Wilkerson's mufflers and oil reclassifiers keep these objectionable exhaust noises (air motors, control valves, etc.) within the OSHA specifications.

These units have only one inlet port. The contaminants in the exhaust flow are mechanically separated and twice filtered to 5 micron levels. The clean, muffled exhaust flows out of the unit under the metal hood on top.



**F33-06-000**

## Features:

- 5 Micron Rated Reusable Elements
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Low-Pressure Drop (Back Pressure)
- Removes Oily Aerosols from Exhaust Flows
- Transparent Bowls with Metal Bowl Guards Standard

## Replacement Bowl Kits

- Metal Bowl Guard, (for Plastic Bowl) ..... GRP-95-808
- Metal Bowl, Brass Petcock..... FRP-95-593
- Metal Bowl / Sight Gauge, Brass Petcock ..... GRP-95-676
- Plastic Bowl, Plastic Petcock Drain ..... LRP-96-160
- Plastic Bowl / Bowl Guard, Plastic Petcock Drain..LRP-95-830

## Replacement Element Kit

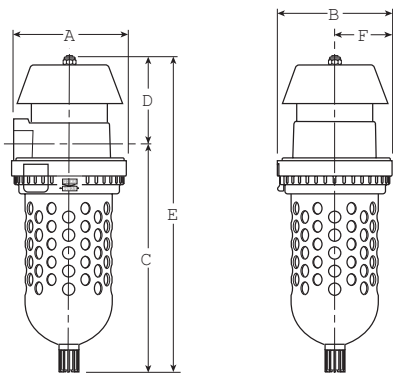
- Type "A", 5 Micron..... FRP-95-170

## Replacement Kits

- Clamp Ring Assembly ..... GRP-96-404
- Manual Drain, Brass Petcock ..... GRP-95-182
- O-ring, Bowl, Fluorocarbon (10 per kit) ..... GRP-95-942
- O-ring, Bowl, Nitrile (10 per kit)..... GRP-95-256

## Accessories

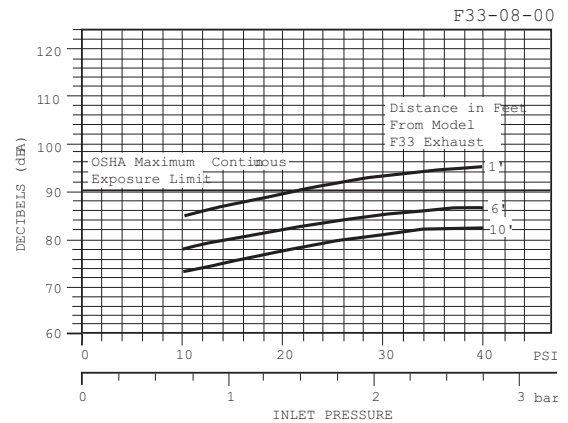
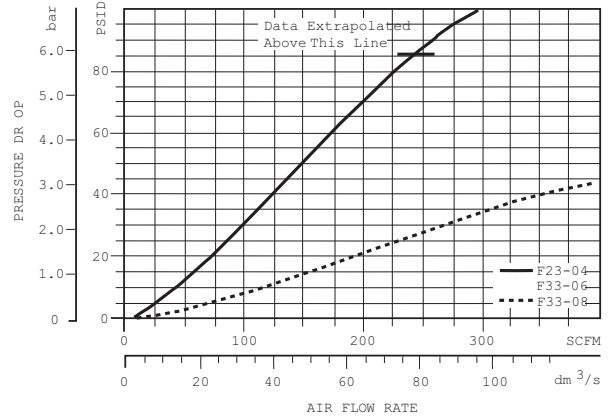
- Wall Mounting Bracket, U-Bolt Pipe Clamp ..... GRP-95-734



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F33-06-000 & F33-08-000		4.63 (117.6)	4.63 (117.6)	8.91 (226.3)	3.99 (98.6)	12.79 (324.9)	2.31 (58.7)

= "Most Popular"



## Specifications

Maximum Supply Pressure	150 PSIG (10.3 bar)
Operating Temperature	32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G 3/4, 1
Standard Filtration	5 Micron
Weight	6 lb. (2.7 kg)

## Materials of Construction

Baffle	Acetal
Body	Zinc
Bowls	Plastic Bowl: Polycarbonate Metal Bowl: Aluminum
Element Retainer	Steel Stud
Filter Element	Sintered Polyethylene
Shield	Steel
Stem	Steel

# Exhaust Silencer Mist Eliminator XMC

XMC-08-000 = "Most Popular"



**XMC-08-000**

## Features

- Port Sizes 1/2", 1" and 1-1/2" NPT
- Liquid Sump with Manual Drain
- Corrosion Resistant Construction
- Compact and Easy to Install
- Low Cost
- Low Back Pressure
- High Density Durable Plastic End Caps

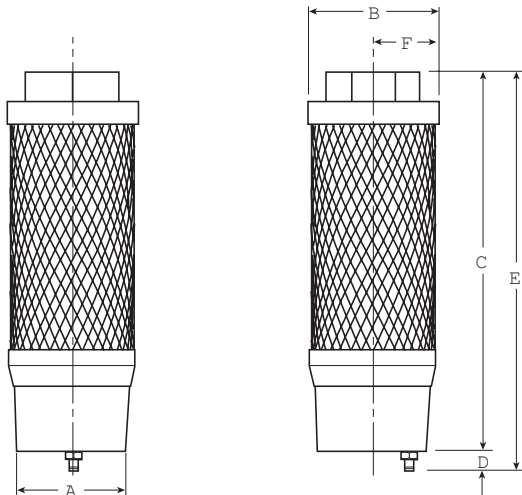
## Specifications

	XMC-04-000	XMC-08-000	XMC-0B-000
Air Flow @12 PSIG (0,8 bar)	65 SCFM (30.7 dm <sup>3</sup> /s)	110 SCFM (51.9 dm <sup>3</sup> /s)	200 SCFM (94.4 dm <sup>3</sup> /s)
Back Pressure			
Bowl Capacity	2.2 fl. oz.	5 fl. oz.	5 fl. oz.
Cv	5.5	9.3	16.9
Drain	Manual		
Oil Removal	99.9%		
Operating Temperature	36° to 122°F (2° to 50°C)		
Port Size*	1/2 NPT	1 NPT	1-1/2 NPT
Media	Air		
Noise Reduction	25 dBA		
Weight	0.4 (0,18)		

\* Place "C" in position 4 to specify BSPP-G.

## Materials of Construction

Corrosion Resistant Threaded End Cap	Nylon
Cover Cap	Plastic
Filter Elements –	
Primary	Borosilicate Cloth
Secondary	PVC Fiber
Oil Drain Cup	Plastic
Outer Support Sleeve	Plastic Mesh Screen



## Dimensions

Models	Inches (mm)	Port Size	A	B	C	D	E	F
Standard Unit XMC-04-000		1/2	2.00 (51)	2.36 (60)	3.94 (100)	0.39 (10)	5.94 (150.9)	1.18 (30)
Standard Unit XMC-08-000		1	2.00 (51)	2.36 (60)	5.83 (148)	0.39 (10)	7.83 (198.9)	1.18 (30)
Standard Unit XMC-0B-000		1-1/2	3.00 (76)	3.42 (87)	8.19 (208)	0.42 (11)	11.19 (284)	—

## Exhaust Silencer / Mist Eliminator XMC

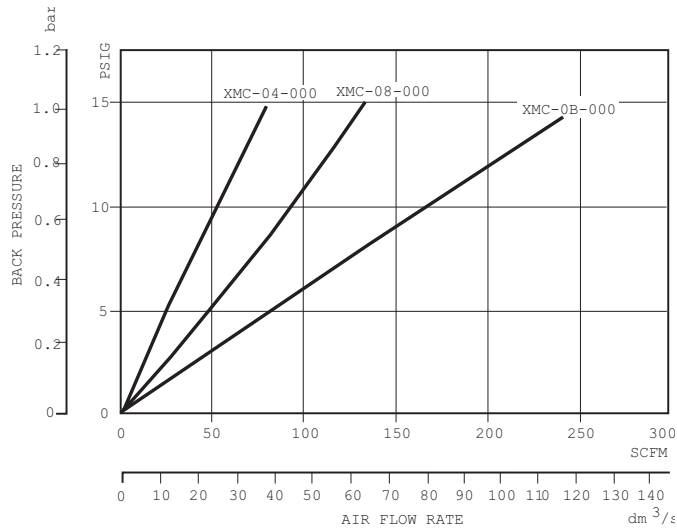
The XMC Series High Performance Exhaust Silencer / Mist Eliminator is an efficient solution to exhaust air oil mist contamination and excessive noise levels generated by exhaust air at levels generally above acceptable safety standards. The Wilkerson XMC Series Exhaust Silencer / Mist Eliminator solves the following two problems:

### Oil and Mist Contamination

Exhaust air from various in-plant pneumatic components, such as valves and cylinders generally contain a significant amount of oil mists, as well as solid particles and other lubricant additives which will pollute the working environment, affect worker's health and the quality of the final product.

### Operation

During unit operation, the XMC unit coalesces oil mists, which then collect into an integral drainage cup at the bottom of the element. Depending upon the volume of contamination exhausting into the unit, this may either be drained off periodically by removing the rubber drain plug cap and drain into a container, or continuously by connecting a suitable length of plastic tubing to the drain plug on the unit. The XMC is a disposable unit and should be changed when the back pressure becomes excessive for your particular installation.

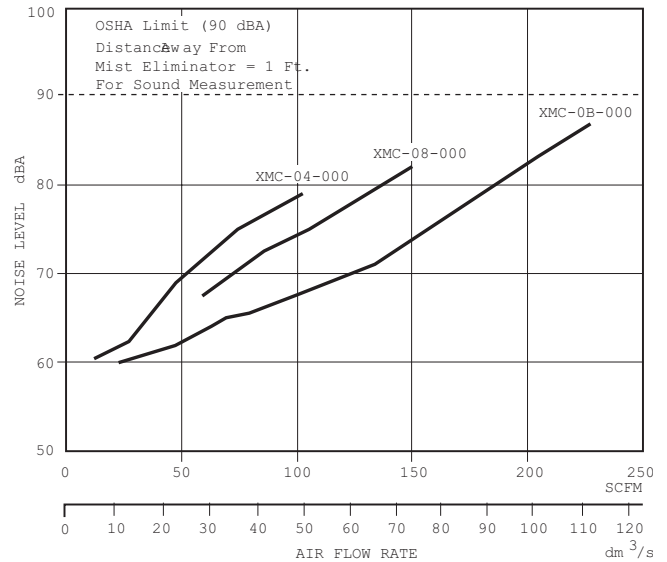


Back Pressure Chart

## Unacceptable Noise Levels

The expanding exhaust air also produces both sudden and excessive noise, generally at levels well above the OSHA requirements of 90 decibels (dBA), which makes the working environment both unpleasant and potentially unsafe.

By using a Wilkerson XMC Series unit, oil mist and other contaminants inherent in lubricated air lines are removed thus preventing them from entering the atmosphere. At the same time, the noise level is reduced to meet and exceed the requirements of OSHA standards applicable to environmental conditions. The high performance XMC models remove up to 99.9% of the oil mist from the exhaust air, providing a clean, healthy work environment.



Noise Characteristics Chart

## Installation

Wilkerson's XMC Exhaust Silencer / Mist Eliminators can be easily and quickly installed in the exhaust ports of pneumatic valves, air motors and other air operated devices to reduce work area noise and eliminate oil mist from exhaust air. Use of collective piping or manifold where multiple air devices are used makes for easy maintenance and control of oil mist collection and disposal. For manual draining, attach plastic tubing with an inside diameter of 0.25" (6.35 mm) and run tubing from the drain to the collecting container. When installed without plastic tubing, periodically remove rubber drain plug cap and manually drain unit into a proper disposable container.

# Liquid Separators WSA / WS0

= "Most Popular"



## Specifications

Maximum Operating Pressure	(WSA)	200 PSIG (13.8 bar)
	(WS0)	232 PSIG (16.0 bar)
Operating Temperature	(WSA)	32° to 150°F (0° to 65.5°C)
	(WS0)	35° to 176°F (1.6° to 80°C)
Pressure Differential at Rated Flow		1.0 PSID (0.07 bar)

## Materials of Construction

	WSA	WS0
Housing	Zinc	Aluminum
Seals	Nitrile	Fluorocarbon

## Features

- High Flow Rates
- Less than 1 PSIG Differential Pressure
- Lightweight Cast Aluminum Housing with 1" to 3" NPT Connections (WS0)
- Cast Zinc Housings with 1/4" to 1" NPT Connections (WSA)
- External Surfaces Epoxy Painted for Maximum Corrosion Protection
- Standard Equipped with Quick Disconnect Bowls for Ease of Service (WSA)
- Three (3) Optional Automatic Drains Available

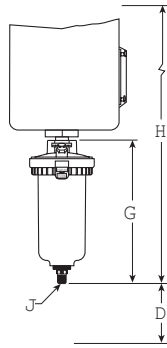
## Liquid Separators

Our unique design combines the techniques of centrifugal action and other mechanical separation principles (Impingement, Separation, Laminar Flow and Stokes Law) to remove large quantities of liquid and solid contamination.

Typical applications include water separation downstream of aftercoolers, protection of refrigerant and heatless regenerative desiccant dryers, downstream of air receivers, and other liquid / gas separation duties where the volume of water and solids poses a real problem.

Model Number	In / Out NPT Pipe Conn.	Rated Flow (SCFM) @ 100 PSIG*	Approx. Weight lbs.	Recommended Automatic Drain
WSA-02-M00**	1/4"	25	2.2	Optional
WSA-02-FM0	1/4"	25	2.2	Internal
WSA-03-M00**	3/8"	50	2.6	Optional
WSA-03-FM0	3/8"	50	2.6	Internal
WSA-04-M00**	1/2"	50	2.6	Optional
WSA-04-FM0	1/2"	50	2.6	Internal
WSA-06-M00**	3/4"	100	6.0	Optional
WSA-06-FM0	3/4"	100	6.0	Internal
WSA-08-M00**	1"	120	6.0	Optional
WSA-08-FM0	1"	120	6.0	Internal
<b>WS0-08-000B</b>	<b>1"</b>	<b>233</b>	<b>4.8</b>	<b>X02-04-FM0 WDV3-G</b>
WS0-0B-000B	1-1/2"	742	11.2	X02-04-FM0 WDV3-G
<b>WS0-0C-000B</b>	<b>2"</b>	<b>742</b>	<b>11.2</b>	<b>X02-04-FM0 WDV3-G</b>
WS0-0E-000B	3"	1700	22.0	X02-04-FM0 WDV3-G

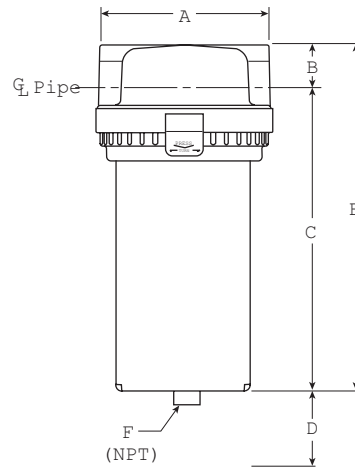
\*1 PSID maximum differential. \*\*Models have petcock.



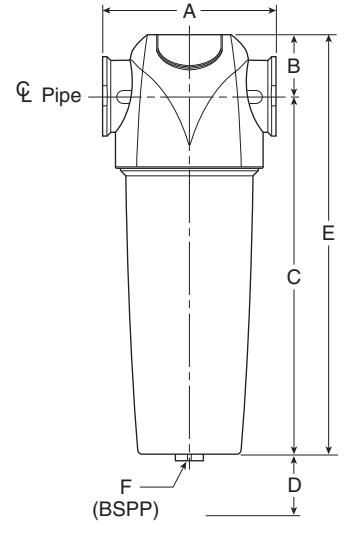
**X02**

**D** = Bowl Removal Clearance Dimension

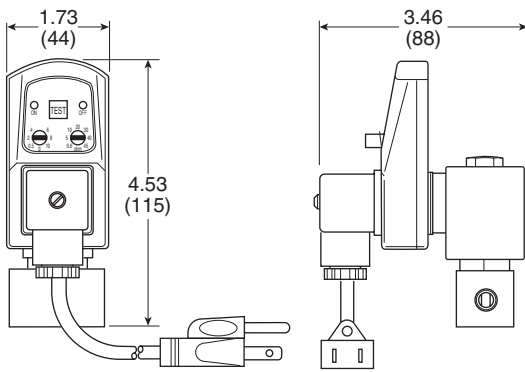
**J** = External Drain Discharge Port (NPT)



**WSA**



**WSO**



**Front View**

**Side View**

**WDV3-G**

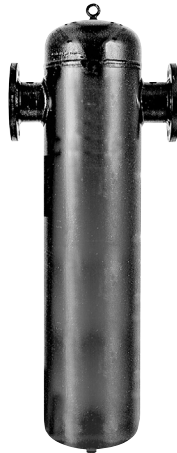
**NOTE: MAXIMUM** separator efficiency of 98%+ is achieved in the range of 15 to 100% of rated flow in SCFM. At flow rates of <15% or >100%, separator efficiency is reduced considerably. Consult your Wilkerson distributor or contact Wilkerson for assistance in selecting the correct separator model for your application.

Model Number	A	B	C	D	E	NPT F	G	H	NPT J
WSA-02-M00*	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-02-FM0	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-03-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-03-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-06-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-06-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WS0-08-000B	5.10	1.60	9.20	3.00	10.80	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.62	13.72	—
WS0-0B-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.62	13.72	—
WS0-0C-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	24.50	1/4
WDV3-G	—	—	—	—	—	—	1.62	20.22	—
WS0-0E-000B	8.10	2.40	17.50	4.72	19.90	1/2	5.90	28.90	1/4
WDV3-G	—	—	—	—	—	—	1.62	24.62	—

\*Models have petcock.

# Bulk Liquid Separators WWSA

 = "Most Popular"



WWSA Series

## Features

- Designed in Accordance with ASME and CRN
- Connection Sizes: 4 Inch & 6 Inch
- High Liquid Removal Efficiencies at All Flow Conditions
- Suitable for Variable Flow Compressors
- Works With All Types of Compressor and Compressor Condensate
- External Surface Epoxy Painted for Maximum Corrosion Resistance
- Auto float drain is standard, shipped loose

## Specifications

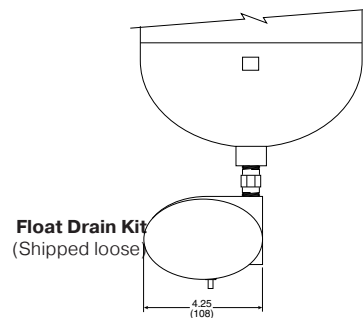
Operating Pressure	232 PSIG (16 bar)
Operating Temperature	35°F to 150°F (1.5°C to 66°C)

## Materials of Construction

Baffle	Plated Steel
Body	Steel
Deflector	Plated Steel
Seals	Fluorocarbon
Stud	Plated Steel

## Service Kits

Auto Float Drain Kit - 1/2" NPT	HDF-120-NPT-A
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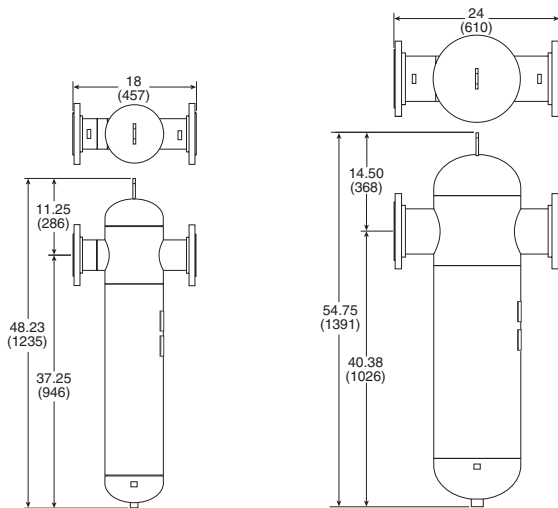
Float Drain Kit  
(Shipped loose)

## Inlet Air Pressure Correction

PSI	15	29	44	58	73	87	100	116	131	145
bar	1	2	3	4	5	6	7	8	9	10
Factor	2.65	1.87	1.53	1.32	1.18	1.08	1.00	.94	0.88	0.84

For pressures above 232 PSIG (16 bar), use manual drain.

PSI	160	174	189	203	218	232	247	261	275	290
bar	11	12	13	14	15	16	17	18	19	20
Factor	0.80	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.61	0.59



WWSA1000F

WWSA1800F

## Ordering Information

Model Type	Port Size	Flow SCFM
WWSA1000F	4" Flange	2119
WWSA1800F	6" Flange	3814

# External Drain X01

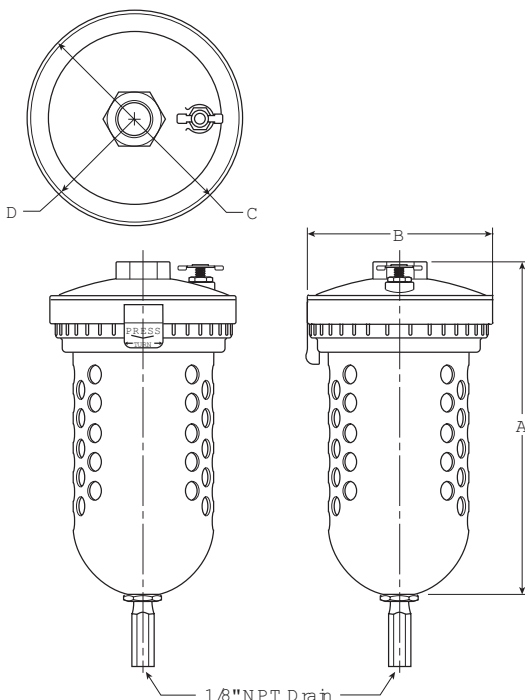
 = "Most Popular"



**X01-04-000**

## Features

- Fully Automatic Float Operated
- No Electrical Connections
- Easily Installed
- Internal Pilot Operated
- Quick-Disconnected Clamp Ring for Easy Bowl Removal when Servicing
- Transparent Bowl with Metal Bowl Guard Standard



## Specifications

Drain Rate		150 GPH @ 100 PSIG (570 l/h @ 6.9 bar)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2
Weight		4.6 lb. (2.1 kg)

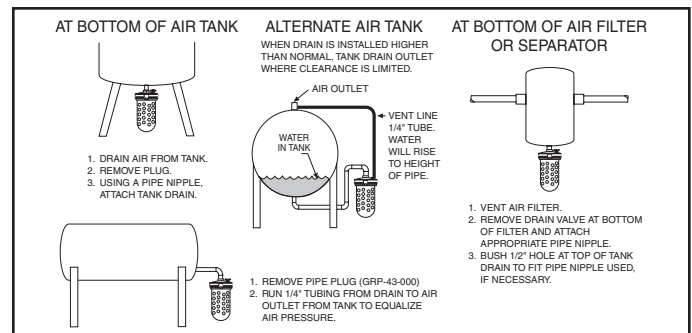
## Materials of Construction

Body	Zinc
Float Assembly	Plastic with Stainless Steel Internals

## Replacement Kits

Bowl Guard, Metal (for Plastic Bowl) .....	GRP-95-808
Clamp Ring Assembly .....	GRP-96-404
Plastic Bowl, Auto Drain and Bowl Guard Assembly .....	XRP-95-747
Metal Bowl and Auto Drain Assembly – .....	FRP-95-631
O-ring, Bowl –	
Fluorocarbon (10 per kit) .....	GRP-95-942
Bowl, Nitrile (10 per kit) .....	GRP-95-256

## Typical Installations



## External Drain

As liquid contaminants collect in the bowl, they raise a closed-cell molded float. When the liquid level reaches a given point, the float triggers a mechanism, which pilots line pressure against a large-area diaphragm, which snaps open the drain valve. The contaminants are discharged from the drain orifice at line pressure. As the liquid level falls, the pilot valve closes, line pressure against the diaphragm returns to atmosphere and the drain valve snaps closed.

## Dimensions

Models	Inches (mm)	A	B	C	D
Standard Unit X01-04-000		9.66 (245)	4.76 (121)	4.76 (121)	2.36 (60)

# External Drain X02 / XB3

= "Most Popular"



**X02-04-000**

**XB3-04-M00**

## Features

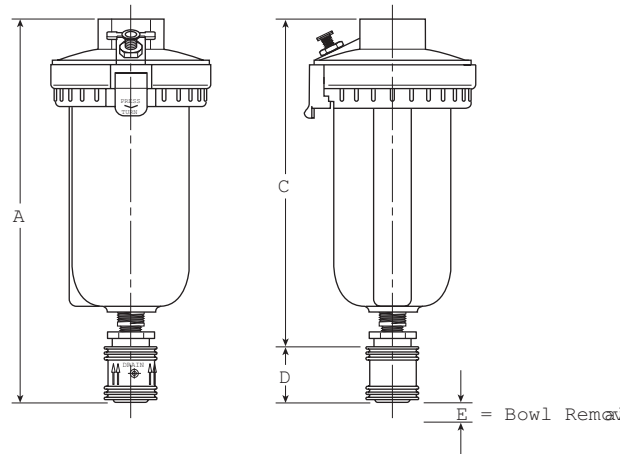
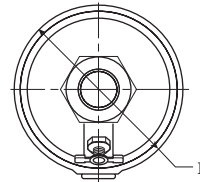
- Available in NPT and BSPP-G Ports
- The Manual Override Allows Drainage at Any Time Without Waiting
- Use of the Manual Override Does Not Interfere with the Normal Operation of the Drain
- To Assist in Compliance with EPA Regulations, a 1/8" Pipe Thread Allows the Liquid Discharge to be Piped Away. The X02 Has No Manual Override for the Automatic Drain.

## Specifications

Drain Rate	80 GPH @ 100 PSIG (300 l/h @ 6.9 bar)	
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G 1/2	
Weight	XB3	1.42 lb. (0.6 kg)
	X02	1.26 lb. (0.6 kg)

## Materials of Construction

Body	Zinc
Float Assembly	Plastic with Stainless Steel Internals
Manual Override	Brass



## Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit XB3-04-000		7.00 (179)	3.06 (78)	6.00 (152)	1.00 (25)	1.66 (42)
Standard Unit X02-04-F00		5.87 (149)	3.06 (78)	— —	— —	2.88 (73)
Metal Bowl XB3-04-M00		7.50 (190.5)	3.06 (78)	6.50 (165)	1.00 (25)	1.66 (42)
Metal Bowl X02-04-FM0		5.87 (149)	3.06 (78)	— —	— —	2.88 (73)



 = "Most Popular"

## External Drain

Wilkerson drains are designed to remove liquid oil and water contaminants from compressed air systems automatically.

Liquid contaminants collected in the bowl cause the float mechanism to rise. When the liquid reaches a specific level the float triggers a mechanism which pilots line pressure against a large-area piston. This action causes the drain orifice to open and evacuate the liquid and particulate contaminants. As the liquid level falls the pilot valve closes, line pressure against the piston returns to atmosphere and the drain valve snaps closed.

Wilkerson's XB3 model automatic drain includes the manual override. The manual override option allows for drainage at times when waiting for the system to drain automatically is not desirable.

## Replacement Bowl Kits

- Bowl Guard, Metal (for Plastic Bowls) ..... GRP-95-846
- Metal Bowl –
  - Automatic Float Drain ..... GRP-96-007
  - Brass Petcock..... GRP-95-539
  - Sight Gauge, Brass Petcock .....LRP-95-673
- Plastic Bowl –
  - Flex Tip Drain ..... FRP-95-017
  - Plastic Petcock Drain ..... LRP-96-543
- Plastic Bowl, Metal Bowl Guard –
  - Automatic Float Drain ..... GRP-95-845
  - Flex Tip Drain .....FRP-95-847

## Accessories

- Auto Float Drain –
  - Fluorocarbon .....GRP-95-981




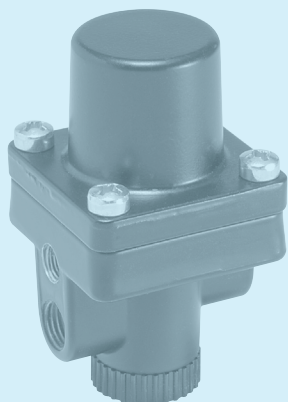
- Drain, Manual Override For Auto Float Drains –
  - with 1/8 NPT Port ..... GRP-96-001
  - (Use with GRP-95-981 shown above. Order saperately)



- Manual Drain, Flex-Tip .....FRP-95-610

# External Piston Drain X51

 = "Most Popular"



X51-02-0000

## Specifications

Maximum Supply Pressure	200 PSIG (13.8 bar)	
Minimum Supply Pressure	30 PSIG (2.1 bar)	
Minimum Differential Pressure Required	20 PSIG (1.4 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1/4
Weight	lb. (kg)	.8 (.36)

## Materials of Construction

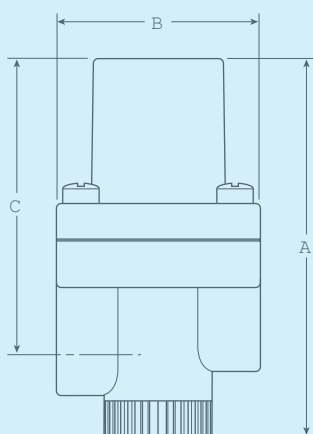
Body	Aluminum
Bottom Cap	Plastic
Check Valve Ball	Chrome Alloy Steel
Piston	Brass
Seals	Fluorocarbon
Springs	Steel

## Features

- Automatically drains liquid water from compressed air receivers
- Drains Even When System Pressure Decays (20 PSIG)

DISCONTINUED

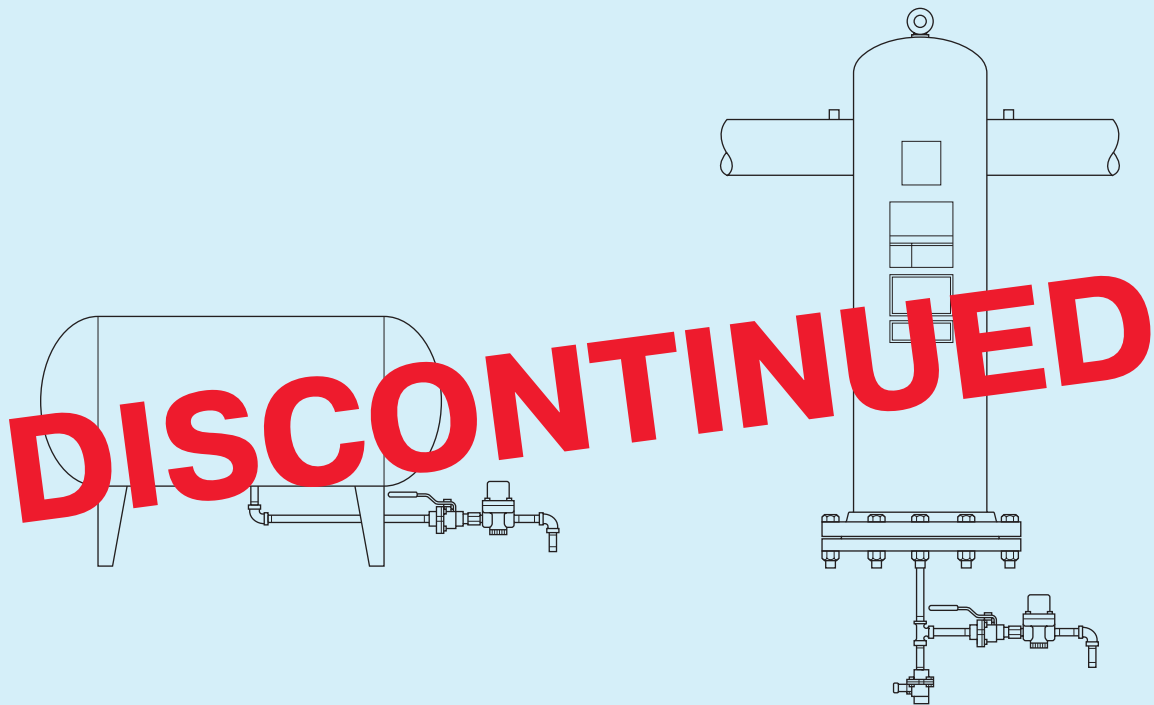
Replacement Piston	XRP-95-512
Maintenance Kit	XRP-95-511



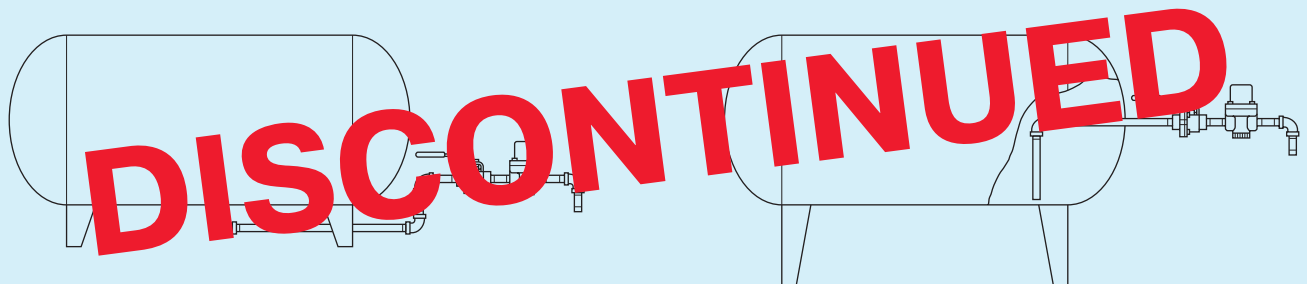
## Dimensions

Models	Inches (mm)	A	B	C
Standard Unit X51-02-0000		3.81 (96.8)	2.11 (53.6)	2.93 (74.4)

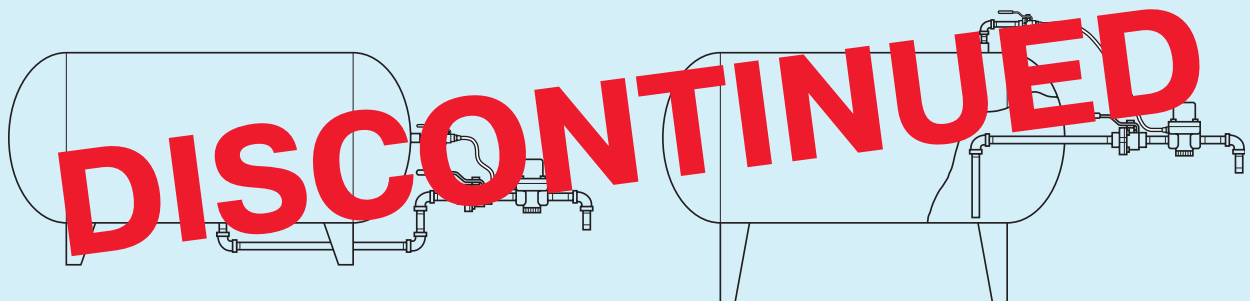
**Standard Acceptable Installation  
(X51 Mounted at Lowest Point in System)**



**Unacceptable Installation  
(X51 Installed in Piping Above Lowest Point)**



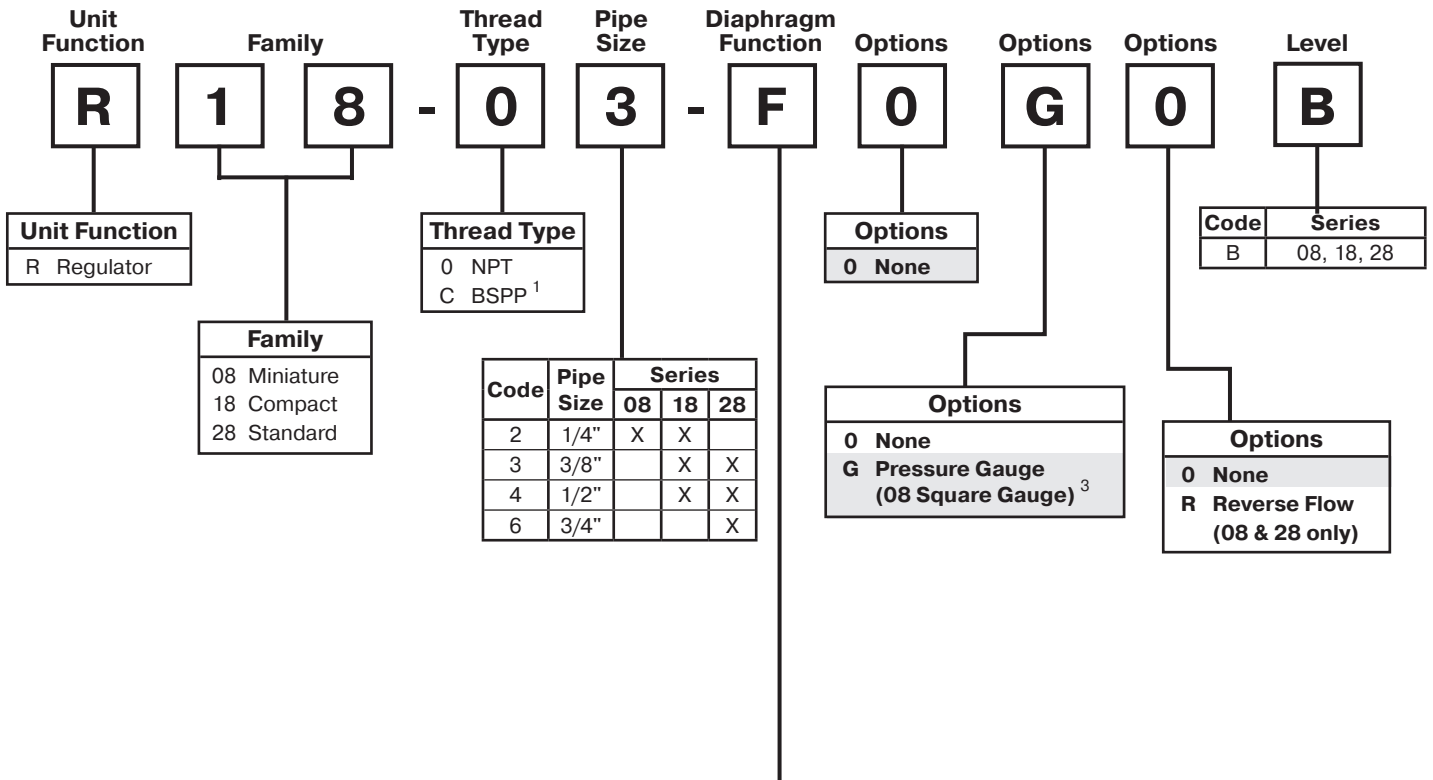
**Proper Installation of Remote Pilot  
(X51 Installed Above Lowest Point)**



# Notes

# Regulator Numbering System

   = "Most Popular"



Code	Pipe Size	Series		
		08	18	28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Diaphragm Function	Fluorocarbon (18 & 28 Series Only)	Spring Range			
		0 to 30 PSIG (0 to 2 bar)	0 to 60 PSIG (0 to 4 bar)	0 to 125 PSIG (0 to 8 bar)	0 to 250 PSIG <sup>2</sup> (0 to 17 bar)
Relieving	No	C	D	<b>F</b>	G
	Yes	J	K	L	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

<sup>1</sup> ISO, R228 (G Series).

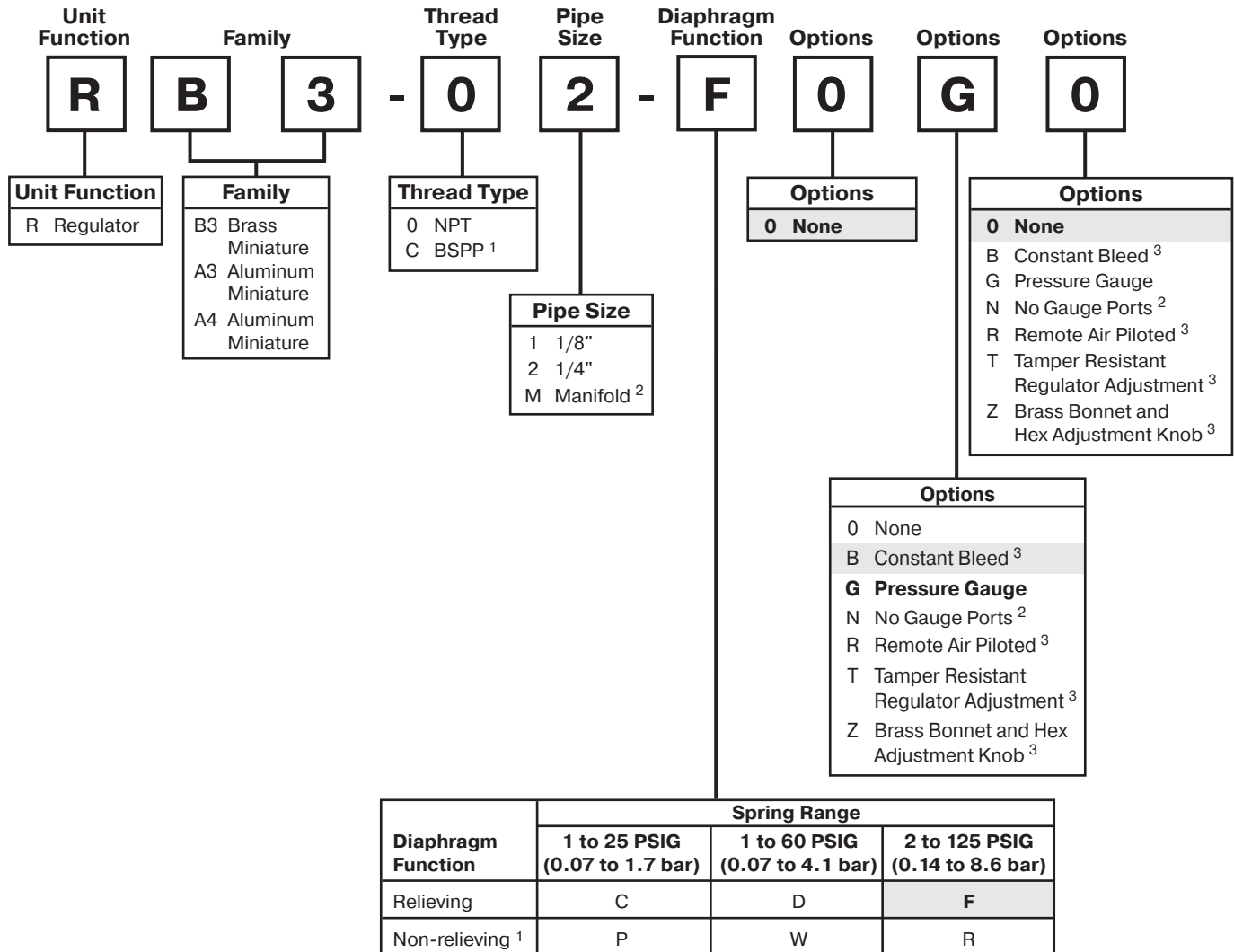
<sup>2</sup> R08 series operating range 0 to 232 PSIG (1 to 16 bar).

<sup>3</sup> Square gauge is included with all R08

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

**R08-02-F0G0B**

# RB3 / RA3 Series Regulator Numbering System    = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)  
<sup>2</sup> RA4 Only  
<sup>3</sup> Not available on RA4

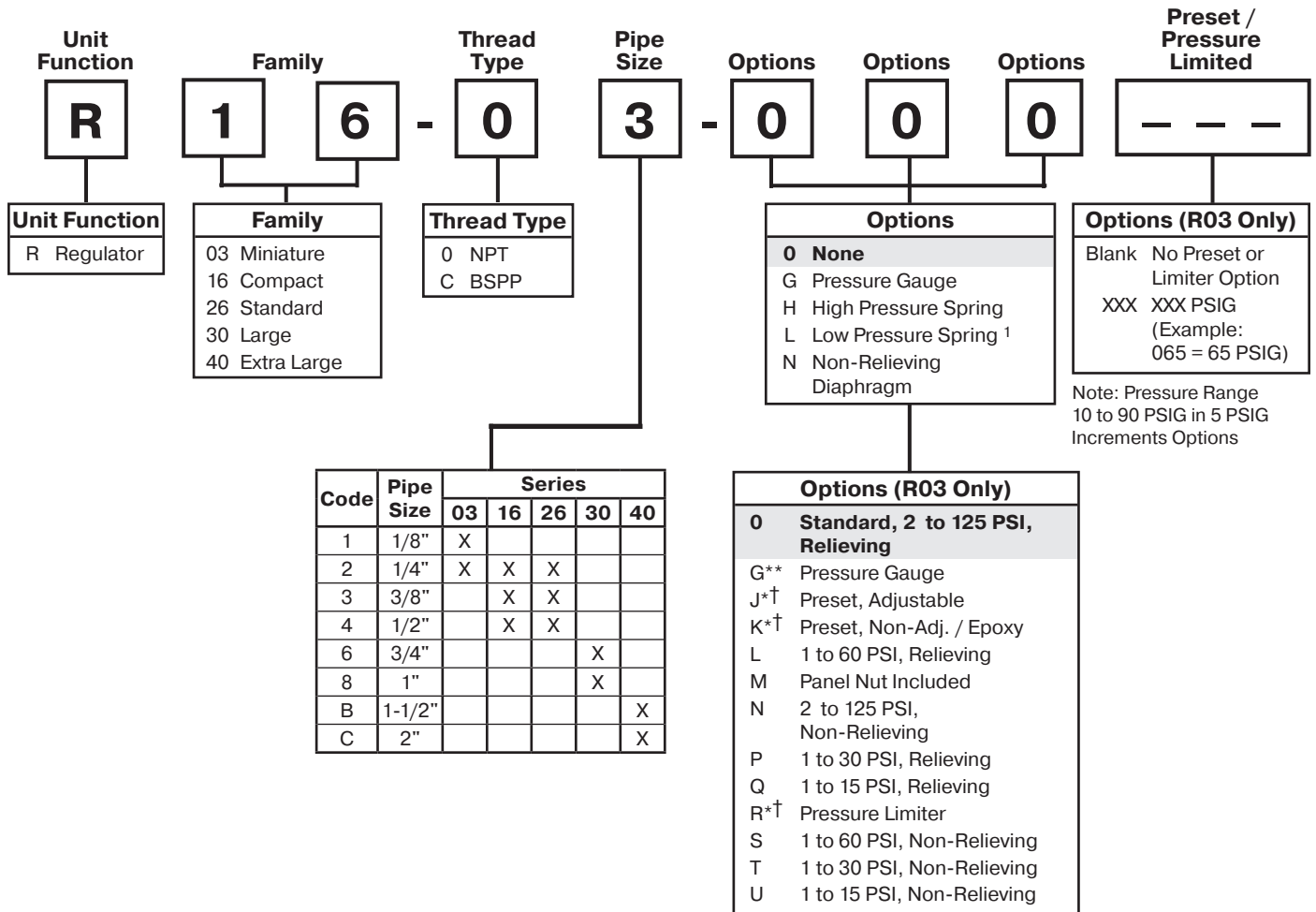
**NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 8, and 9. For example:**

**RB3 - 0 2 - F 0 G T**

**NOTE:**Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

# Regulator Numbering System

  = "Most Popular"



\* Inlet pressure is 100 PSIG. For other pressures, consult factory.  
 \*\* Not available with BSPP thread type.  
 † Must specify preset or limited pressure.

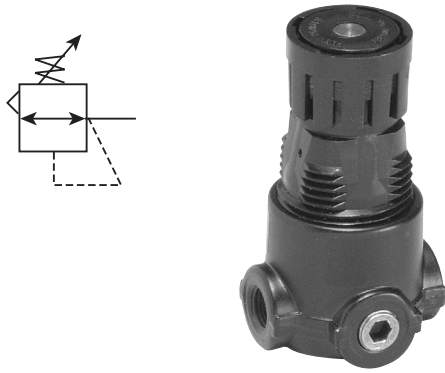
Spring Type by Preset / Limited Pressure:  
 For Preset / Limited Pressure 10 to 25 use 30 PSI Spring  
 For Preset / Limited Pressure 26 to 50 use 60 PSI Spring  
 For Preset / Limited Pressure 51 to 90 use 125 PSI Spring

**If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.**

<sup>1</sup> Not available on R30.

# Miniature Regulator R03

 = "Most Popular"



**R03-02-000**

## Features

- Unbalanced Poppet Standard
- Solid Control Piston with Lip Seal for Extended Life
- Non-rising Adjusting Knob
- Compact, 3.08 inch (78mm) High by 1.65 inch (42mm) Wide
- Easily Serviced

## Specifications

Flow Capacity*	1/8	13 SCFM (6.14 dm <sup>3</sup> /s)
	1/4	15 SCFM (7.08 dm <sup>3</sup> /s)
Gauge Ports (2)	1/8	
Port Threads	1/8, 1/4 Inch	
Supply Pressure	0 to 300 PSIG (0 to 20.7 bar)	
Operating Temperature	32°F to 125°F (0°C to 52°C)	
Secondary Pressure Ranges –		
Standard Pressure	2 to 125 PSIG (0 to 8.6 bar)	
Medium Pressure	1 to 60 PSIG (0 to 4.1 bar)	
Medium Pressure	1 to 30 PSIG (0 to 2.1 bar)	
Low Pressure	1 to 15 PSIG (0 to 1.0 bar)	
Weight	.3 lb. (.14 kg)	

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar) and 10 PSIG pressure drop.

## Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Seat, Piston & Valve Poppet	Plastic
Seals	Nitrile

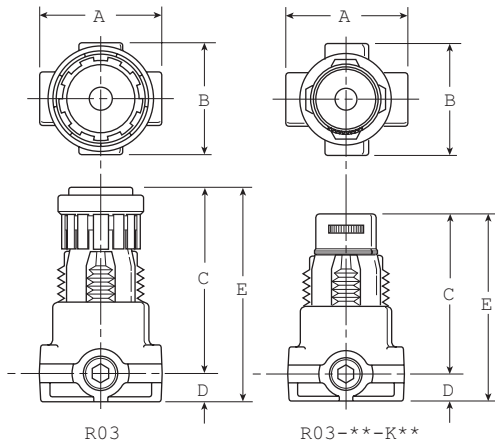
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**Note:** 1.218" dia. (31) mm hole required for panel mounting.

## Dimensions

Model	Inches (mm)	A	B	C	D	E
Standard Unit R03-XX-XXX		1.65 (42)	1.56 (39.6)	2.50 (63.5)	.38 (9.6)	2.88 (73)
Preset, Non-Adjustable Unit R03-XX-KXX		1.65 (42)	1.56 (39.6)	2.28 (57.9)	.38 (9.6)	2.66 (67.6)



= "Most Popular"

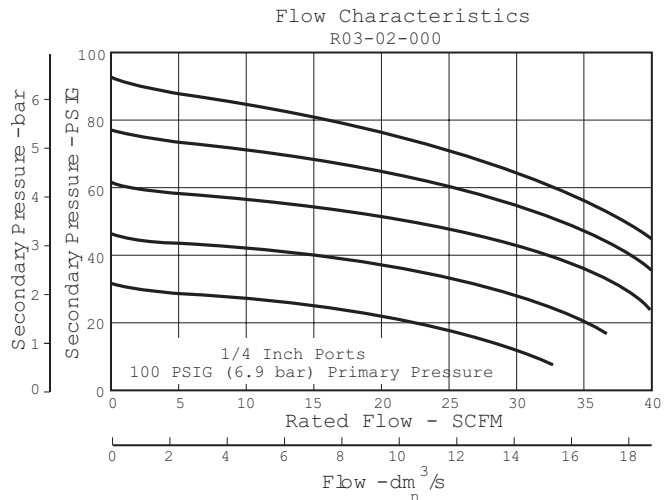
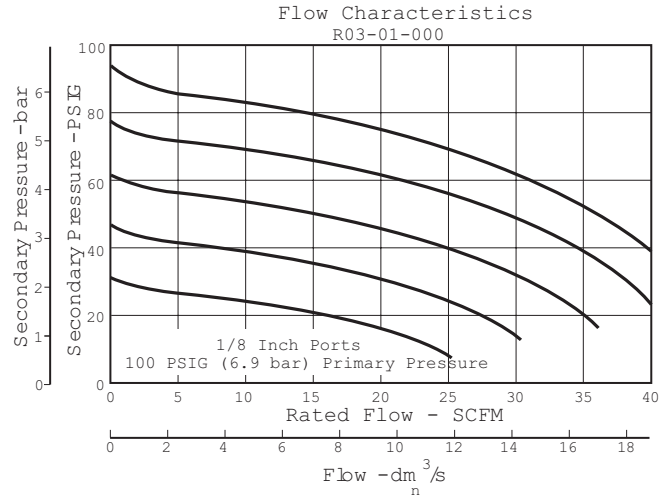
### Replacement Kits

- Poppet / Piston Kits –  
 Unbalanced, Non-Relieving ..... PS428P  
 Unbalanced, Relieving ..... PS426P
- Springs –  
 1-30 PSIG Range..... P01175  
 1-60 PSIG Range..... P01174  
 2-125 PSIG Range ..... P01173  
 1-15 PSIG Range ..... P01176
- Tamperproof Metal Disc.....P01265

### Accessories

- Gauge, Pressure –  
 30 PSIG, 1/8" NPT (0 to 2.1 bar) ..... K4515N18030  
 60 PSIG, 1/8" NPT (0 to 4.1 bar) ..... K4515N18060  
 160 PSIG, 1/8" NPT (0 to 11.0 bar)..... K4515N18160
- Mounting Bracket Kit\* (Includes Panel Mount Nut) ..... PS417B
- Panel Mount Nuts\* –  
 Plastic ..... P78652  
 Metal.....P01531

\*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.



Ordering Information					
Model Type	Port Size	Without Gauge 2 to 125 PSIG (0.2 to 8.6 bar)	Without Gauge 1 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 1 to 30 PSIG (0.2 to 2.1 bar)	Without Gauge 1 to 15 PSIG (0.2 to 1.0 bar)
Relieving	1/8	R03-01-000	R03-01-L00	R03-01-P00	R03-01-Q00
	1/4	R03-02-000	R03-02-L00	R03-02-P00	R03-02-Q00

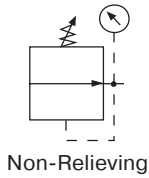
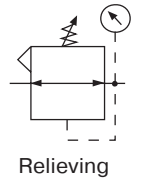
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Miniature Regulator

## RB3 – Brass

## RA3 – Aluminum

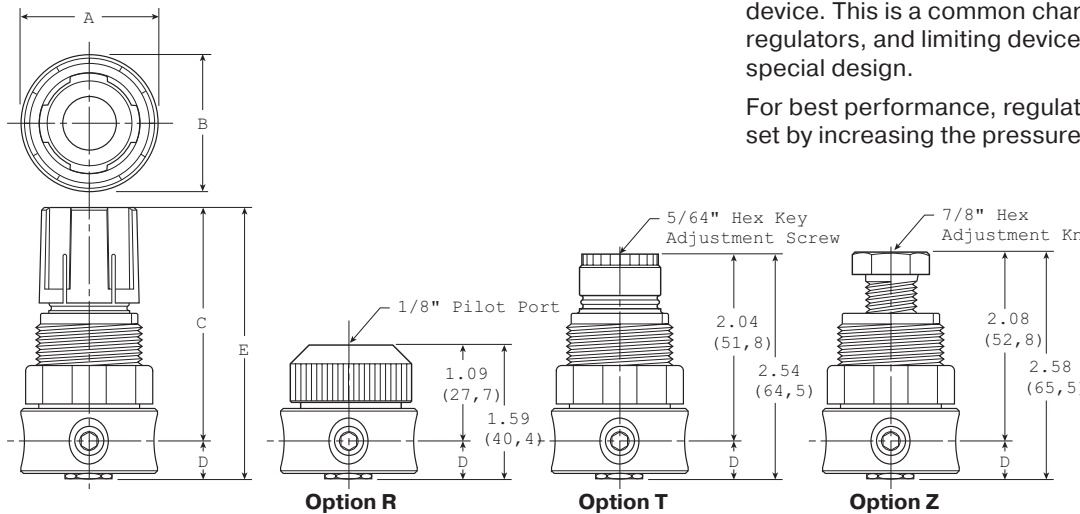
= "Most Popular"



**RB3-02-F000**

### Features

- Brass Body Construction Handles Water and Compressed Air Service
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Spring Loaded Diaphragm
- High Flow: 1/4" -14 SCFM
- Panel Mount Nut Standard
- Two 1/8" Gauge Ports



### Dimensions

Model	Inches (mm)	A	B	C	D	E
Brass Regulator - Miniature RB3-XX-XXXX		1.56 (39.8)	1.56 (39.8)	2.56 (65)	.50 (12.7)	3.06 (77.7)
Aluminum Regulator - Miniature RA3-XX-XXXX		1.56 (39.8)	1.56 (39.8)	2.56 (65)	.50 (12.7)	3.06 (77.7)

### Specifications

Flow Capacity*	1/4	14 SCFM (6.6 dm <sup>3</sup> /s)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Port Size	NPT / BSPP-G	1/8, 1/4
Weight	lb. (kg)	0.5 (0.23)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar). (flow at 25% pressure drop)

### Materials of Construction

Body	RB3 RA3	Brass Aluminum
Bonnet		Acetal
Diaphragm & Seals		Nitrile
Valve Assembly & Bottom Plug		Brass

**Note:** Panel Nut included, but not shown on dimensional drawing.

**Note:** 1.19" dia. (30.2) mm hole required for panel mounting.

### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

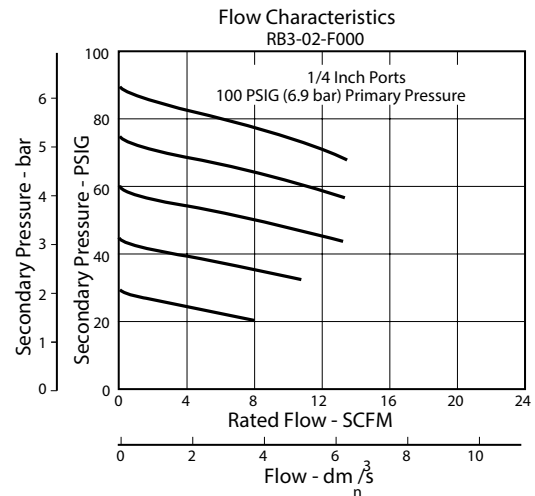
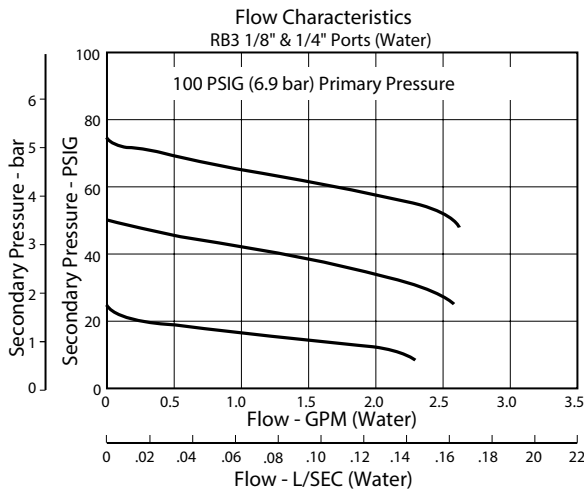
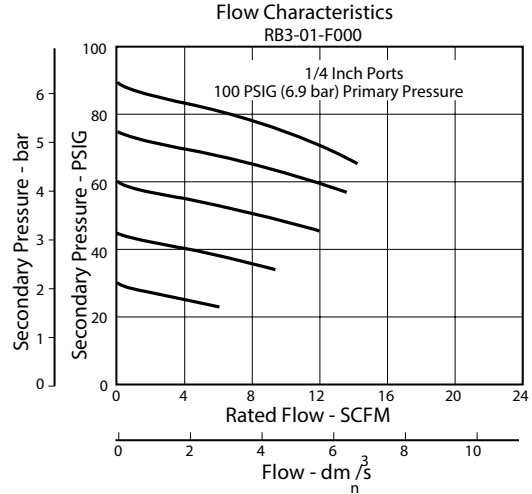
= "Most Popular"

### Repair Kits

- Bonnet, Knob, Adjusting Screw Kit ..... RRP-96-821
- Bonnet, Tamper Resistant Adjustment Kit ..... RRP-96-822
- Repair Kit –
  - Relieving..... RRP-96-824
  - Non-relieving ..... RRP-96-825

### Accessories

- Gauge, Pressure –
  - 0-160 PSI (0-11,0 bar), 1-1/2" Dial Face,  
1/8" NPT, CBM ..... K4515N18160
  - 0-60 PSI (0-4,1 bar), 1-1/2" Dial Face,  
1/8" NPT ..... K4515N18060
- Panel Mount Nut –
  - Aluminum ..... RPA-96-733
  - Plastic ..... RPA-96-734
- Wall Mounting Bracket –
  - L-Type..... GRP-95-147
  - L-Type with Plastic Panel Mount Nut ..... GRP-95-747



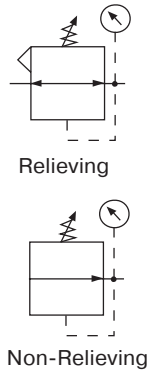
### Ordering Information

Model Type	Port Size	Without Gauge 2 to 125 PSI (0.14 to 8.6 bar)	Without Gauge 1 to 60 PSI (0.07 to 4.1 bar)	Without Gauge 1-25 PSI (0.07 to 1.7 bar)
Relieving	1/8"	RB3-01-F000	RB3-01-D000	RB3-01-C000
	1/4"	RB3-02-F000	RB3-02-D000	RB3-02-C000
Non-relieving	1/8"	RB3-01-R000	RB3-01-W000	RB3-01-P000
	1/4"	RB3-02-R000	RB3-02-W000	RB3-02-P000
Relieving	1/8"	RA3-01-F000	RA3-01-D000	RA3-01-C000
	1/4"	RA3-02-F000	RA3-02-D000	RA3-02-C000
Non-relieving	1/8"	RA3-01-R000	RA3-01-W000	RA3-01-P000
	1/4"	RA3-02-R000	RA3-02-W000	RA3-02-P000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Miniature Regulator RA4

 = "Most Popular"



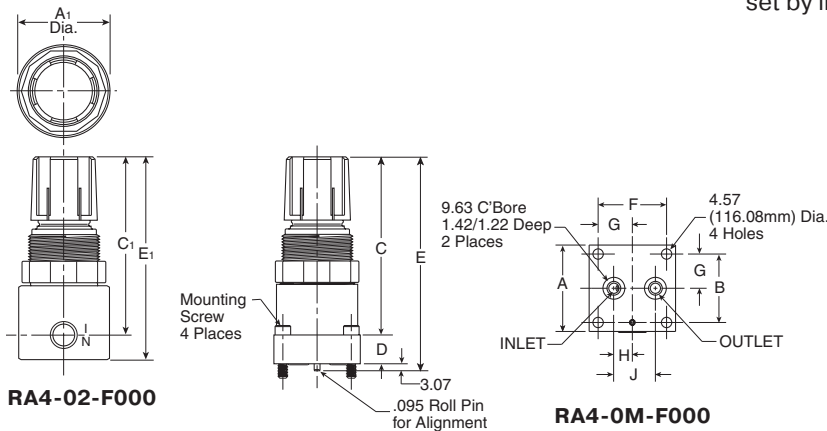
**RA4-02-F000 RA4-0M-F000**

## Features

- Diaphragm Operated for Fast Operation.
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity.
- Balanced Valve Design for Precise Regulation.
- Available in 2 or 4<sup>†</sup> Port Design.
- Available With a Manifold Mount to Minimize Plumbing.
- Suitable for Low Temperature Applications.
- Non-Rising Adjusting Knob.
- 1/8" - 17 SCFM\*
- 1/4" - 19 SCFM\*

\* SCFM = Standard cubic feet per minute at 100 PSIG inlet, 90 PSIG no flow secondary setting and 10 PSIG pressure drop.

† Not Available with Manifold Mount.



## Dimensions

Models	Inches (mm)	A	A1	B	B1	C	C1	D	E	E1	F	G	H	J
Brass Regulator - Miniature RA4-XX-XXXX		1.5 (38.1)	1.56 (39.7)	1.188 (30.18)	1.56 (39.7)	2.75 (69.92)	2.7 (68.7)	.5 (12.7)	3.25 (82.62)	3.25 (82.62)	1.188 (30.18)	.6 (15.09)	.32 (8.26)	.73 (18.42)

## Specifications

Operating Temperature	-40° F to 150°F (-40° C to 65.5°C)
Supply Pressure	300 PSIG Maximum (20.4 bar)
Port Threads	1/8, 1/4 Inch
Gauge Ports	(2) Std 1/8 Inch (No Gauge Port Version Available)
Weight	.25 lbs. (0.11 kg)

## Materials of Construction

Body	Aluminum
Bonnet	Acetal
Diaphragm & Seals	Nitrile
Valve Assembly	Brass
Springs	Steel
Panel Nut	Acetal

## WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

## Replacement Kits

### Diaphragm Assembly -

- Non-relieving .....GRP-96-726
- Relieving.....GRP-96-725

### Spring, Regulating -

- 0 to 30 PSIG (0 to 2.1 bar) ..... GRP-95-111
- 0 to 60 PSIG (0 to 4.1 bar) ..... GRP-96-718
- 0 to 125 PSIG (0 to 8.6 bar) ..... GRP-96-717
- Valve Assembly .....RRP-96-727
- Valve Spring.....RRP-96-728

## Accessories

- Adjusting Knob.....RRP-16-005-000

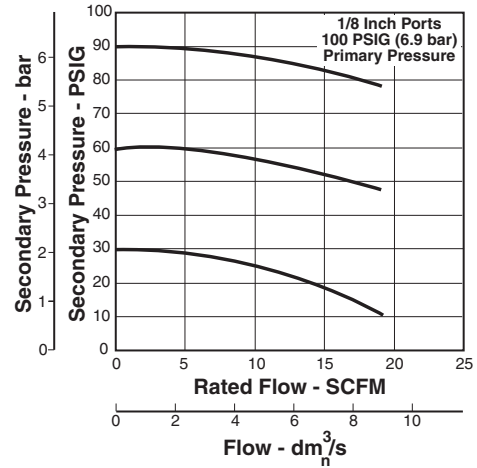
### Panel Mount Nut -

- Aluminum ..... RPA-96-733
- Plastic .....RPA-96-734

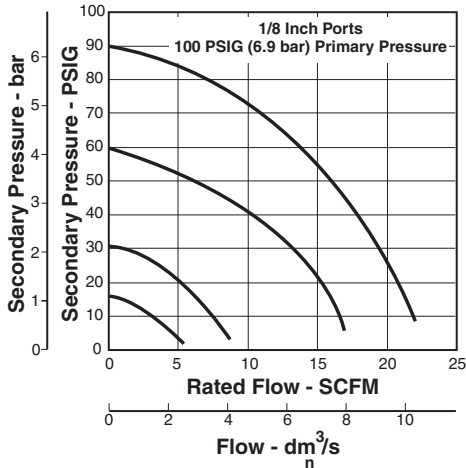
## Gauges

- 0 to 60 PSIG (0 to 4.1 bar), 1-1/2" Dial Face,  
1/8 NPT, CBM ..... K4515N18060
- 0 to 160 PSIG (0 to 11.0 bar), 1-1/2" Dial Face,  
1/8 NPT, CBM .....K4515N18160
- Tamper Resistant Kit ..... RPA-96-735

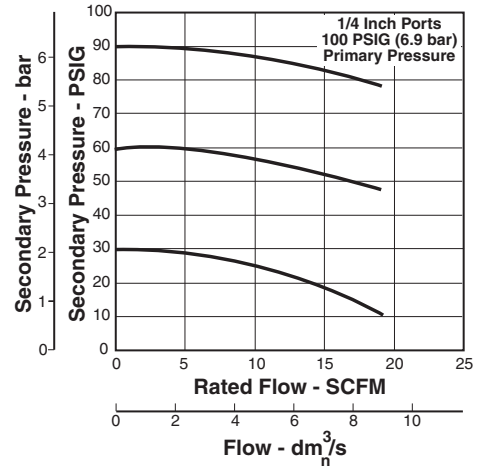
**Flow Characteristics  
RA4-01-F000**



**Flow Characteristics  
RA4-0M-F000**



**Flow Characteristics  
RA4-02-F000**

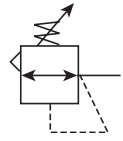


## Ordering Information

Model Type	Port Size	Without Gauge	Without Gauge	Without Gauge	With Gauge	With Gauge	With Gauge
		0 to 30 PSIG (0.0 to 2.1 bar)	0 to 60 PSIG (0.0 to 4.1 bar)	0 to 125 PSIG (0.0 to 8.6 bar)	0 to 30 PSIG (0.0 to 2.1 bar)	0 to 60 PSIG (0.0 to 4.1 bar)	0 to 125 PSIG (0.0 to 8.6 bar)
Relieving	1/8"	RA4-01-C000	RA4-01-D000	RA4-01-F000	RA4-01-C0G0	RA4-01-D0G0	RA4-01-F0G0
	1/4"	RA4-02-C000	RA4-02-D000	RA4-02-F000	RA4-02-C0G0	RA4-02-D0G0	RA4-02-F0G0
	Manifold Mount	RA4-0M-C000	RA4-0M-D000	RA4-0M-F000			
Non-relieving	1/8"	RA4-01-P000	RA4-01-W000	RA4-01-R000	RA4-01-P0G0	RA4-01-W0G0	RA4-01-R0G0
	1/4"	RA4-02-P000	RA4-02-W000	RA4-02-R000	RA4-02-P0G0	RA4-02-W0G0	RA4-02-R0G0
	Manifold Mount	RA4-0M-P000	RA4-0M-W000	RA4-0M-R000			

# Miniature Regulator R24, R25

 = "Most Popular"



**R25-02C**

## Features

- Lightweight Plastic Body
- Constructed with a Combination of N.S.F. and F.D.A. Approved Materials
- Unbalanced Poppet Standard
- Non-rising, Push-to-lock Adjusting Knob
- Compact, 3.10 inch (79mm) high by 1.60 inch (41mm) wide
- Lightweight
- Diaphragm Operated

## Specifications

Maximum Supply Pressure	150 PSIG (10 bar)	
Operating Temperature	40° to 125°F (4.4° to 52°C)	
Gauge Ports (2)	(Can be used for full flow)	1/8 Inch
Port Size	NPT	1/8, 1/4
Weight	lb. (kg)	0.25 (0.11)

## Materials of Construction

Adjusting Screw	Steel
Body	Acetal
Bonnet and Seat	Acetal
Diaphragm (R25)	Buna N
Diaphragm (R24)	EPDM
Seals (R25)	Buna N
Seals (R24)	EPDM
Springs	Stainless Steel
Valve Poppet (R25)	Buna N
Valve Poppet (R24)	EPDM

**Note:** 1.25" dia. (31.8) mm hole required for panel mounting.

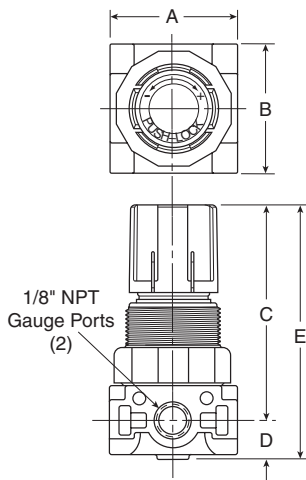
### **WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



## Dimensions

Model	Inches (mm)	A	B	C	D	E
Regulator - Miniature, Air Service R25-XXX		1.60 (41)	1.60 (41)	2.61 (66)	0.49 (13)	3.10 (79)
Regulator - Miniature, Water Service R24-XXX		1.60 (41)	1.60 (41)	2.61 (66)	0.49 (13)	3.10 (79)

= "Most Popular"

### Kits and Accessories

Panel Mount Nut –

- Plastic .....R05X51-P
- Aluminum .....R05X51-A

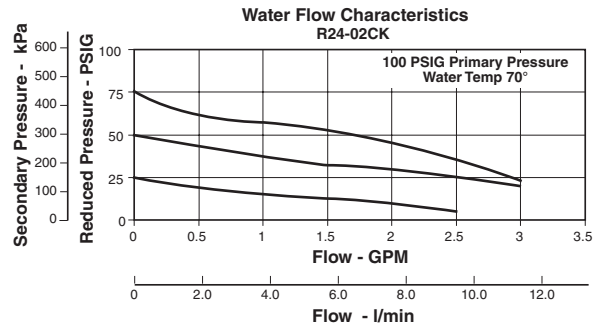
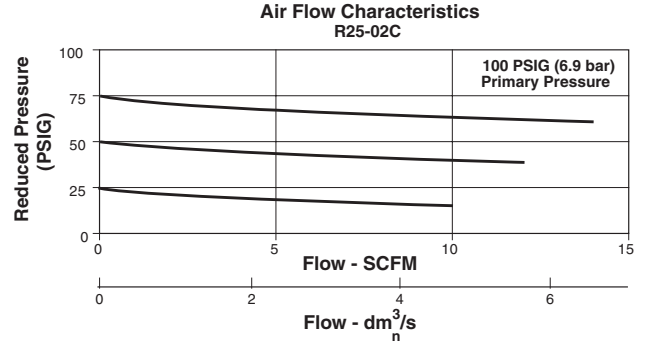
Mounting Bracket and Nut .....SA161X57

Service Kits –

- Relieving (Buna) ..... RKR25Y
- Non-Relieving (Buna) ..... RKR25KY
- Relieving (EPDM) .....RKR24Y
- Non-Relieving (EPDM) ..... RKR24KY

Springs –

- 0-25 psig Spring..... SPR-375-1
- 0-60 psig Spring ..... SPR-376
- 0-125 psig Spring ..... SPR-377



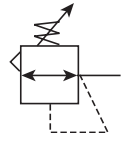
### Ordering Information

Model Type	Port Size	Without Gauge 0 to 125 PSI (0 to 8.6 bar)
Air Service Relieving	1/8"	R25-01C
	1/4"	R25-02C
Water Service Non-relieving	1/8"	R24-01CK
	1/4"	R24-02CK

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Miniature Regulator R45, R46

 = "Most Popular"



**R45-03C**

## Features

- Lightweight Plastic Body
- Constructed with a Combination of N.S.F. and F.D.A. Approved Materials
- Unbalanced Poppet Standard
- Non-rising, Push-to-lock Adjusting Knob
- Compact, 3.43 inch (87mm) high by 2.06 inch (52.3mm) wide
- Lightweight
- Diaphragm Operated

## Specifications

Maximum Supply Pressure	150 PSIG (10 bar)	
Operating Temperature	40° to 125°F (4.4° to 52°C)	
Gauge Ports (2)	(Can be used for full flow)	1/4 Inch
Port Size	NPT	1/4, 3/8
Weight	lb. (kg)	0.38 (0.17)

## Materials of Construction

Adjusting Screw	Steel
Body	Acetal
Bonnet and Seat	Acetal
Diaphragm (R45)	Buna N
Diaphragm (R46)	EPDM
Seals (R45)	Buna N
Seals (R46)	EPDM
Springs	Stainless Steel
Valve Poppet (R45)	Buna N
Valve Poppet (R46)	EPDM

**Note:** 1.25" dia. (31.8) mm hole required for panel mounting.

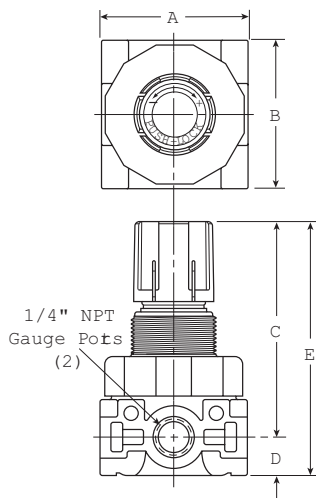
### **WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



## Dimensions

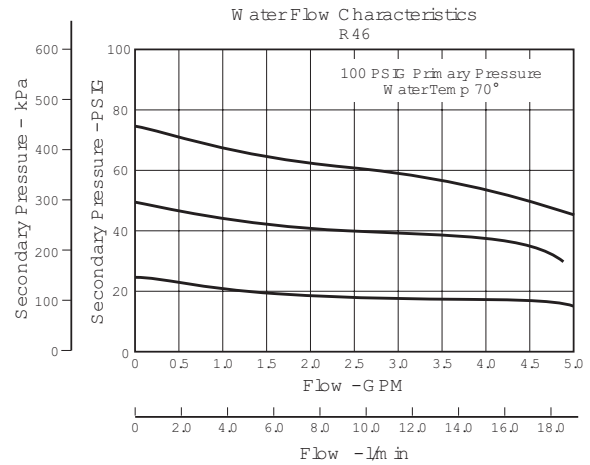
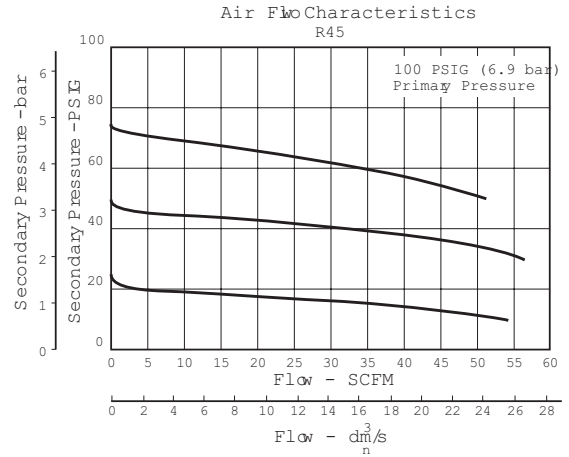
Model	Inches (mm)	A	B	C	D	E
Regulator - Miniature, Air Service R45-XXX		2.06 (52)	2.06 (52)	2.90 (74)	0.53 (143)	3.43 (87)
Regulator - Miniature, Water Service R46-XXX		2.06 (52)	2.06 (52)	2.90 (74)	0.53 (143)	3.43 (87)



= "Most Popular"

### Kits and Accessories

- Panel Mount Nut –
  - Plastic .....R05X51-P
  - Aluminum .....R05X51-A
- Mounting Bracket and Nut .....SA161X57
- Service Kits –
  - Relieving (Buna) ..... RKR45Y
  - Non-Relieving (Buna) ..... RKR45KY
- Springs –
  - 0-25 psig Spring.....SPR-46
  - 0-60 psig Spring .....SPR-47
  - 0-125 psig Spring.....SPR-48

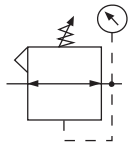


### Ordering Information

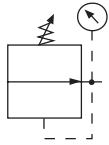
Model Type	Port Size	Without Gauge 0 to 125 PSI (0 to 8.6 bar)
Air Service Relieving	1/4"	R45-02C
	3/8"	R45-03C
Water Service Non-relieving	1/4"	R46-02CK
	3/8"	R46-03CK

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R08



Relieving



Non-Relieving



## Features

- Balanced Valve Design
- Unique Flush-mounted Pressure Gauge
- Light Weight
- Modern Modular Design and Appearance

## Specifications

Flow Capacity*	1/4	73 SCFM (34 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 232 PSIG (0 to 16 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature†		-4° to 150°F (-20° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Weight		0.37 lb. (0.17 kg)

\* Inlet pressure 145 psig (10 bar). Secondary pressure 100 psig (6.9 bar) and 14.5 psig (1 bar) pressure drop.

† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

## Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Bottom Cap	Glass-filled Nylon
Bonnet	Glass-filled Nylon
Diaphragm Assembly	Stainless Steel / Nitrile
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Acetal / Nitrile

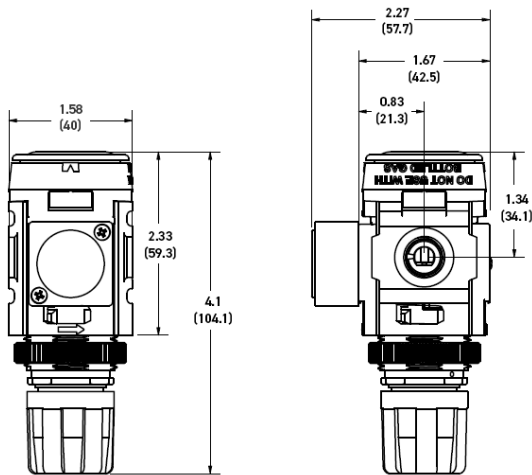
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

**NOTE:** 1.20 in. (30mm) hole required for panel nut mounting.

### Replacement Kits

Adjusting Knob ..... GRP-96-792

= "Most Popular"

### Accessories

Panel Mount Nut –  
 Aluminum ..... RPA-96-773  
 Plastic ..... RPA-96-734

Pressure Gauge– (\*see note below)

Square flush mount gauge

- 0-4 bar ..... GRP-96-791-04B
- 0-11 bar ..... GRP-96-792-11B
- 0-20 bar ..... GRP-96-792-20B
- 0-60 PSIG ..... GRP-96-791-060
- 0-160 PSIG ..... GRP-96-791-160
- 0-290 PSIG ..... GRP-96-791-290

\*For R08/R09 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.

Square flush mount gauge

- 0-4 bar ..... K4511SCR04B
- 0-11 bar ..... K4511SCR11B
- 0-60 PSIG ..... K4511SCR060
- 0-160 PSIG ..... K4511SCR160

Square with adapter kit

- 0-4 bar ..... P6G-PR10040
- 0-11 bar ..... P6G-PR10110
- 0-60 PSIG ..... P6G-PR90060
- 0-160 PSIG ..... P6G-PR90160

50mm (2") round 1/4" center back mount

- 0-30 PSIG / 0-2 bar ..... K4520N14030
- 0-60 PSIG / 0-4 bar ..... K4520N14060
- 0-160 PSIG / 0-11 bar ..... K4520N14160
- 0-300 PSIG / 0-20 bar ..... K4520N14300

1-3/4" Digital Round 1/4" NPT

- 0 to 160 PSIG ..... K4517N14160D

Tamperproof Lock and Cover Kit  
 (lock not included) ..... RPA-96-736B

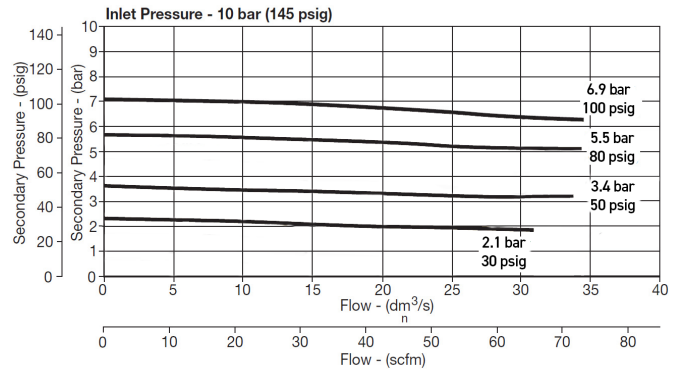
Wall Mounting Bracket –

- C-Type ..... GPA-97-010
- L-Type ..... GPA-96-739
- T-Type ..... GPA-96-737

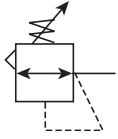
### Ordering Information

Model Type	Port Size	With Gauge 0 to 125 PSIG (0 to 8.6 bar)	With Gauge 0 to 30 PSIG (0 to 2.1 bar)	With Gauge 0 to 60 PSIG (0 to 4.1 bar)
<b>Relieving</b>	1/4	R08-02-F0G0B	R08-02-C0G0B	R08-02-D0G0B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



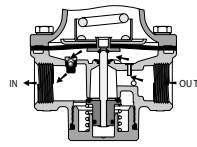
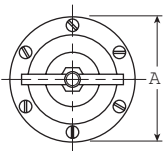
# Regulator R120



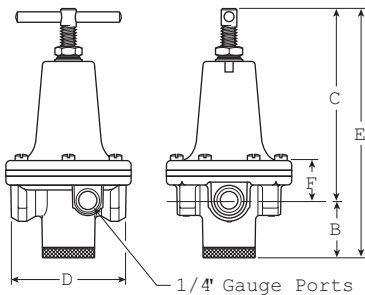
**R120-02-000**

## Features

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available



Reverse Flow Option



## Specifications

Flow Capacity <sup>§</sup>	1/4	100 SCFM (47.2 dm <sup>3</sup> /s)
	3/8	110 SCFM (51.9 dm <sup>3</sup> /s)
	1/2	150 SCFM (70.8 dm <sup>3</sup> /s)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Reduced Pressure Range	2 to 125 PSIG (0.15 to 8.5 bar)	
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	40° to 125°F (4.4° to 52°C)	
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight		
R120-02, R120-03	1.8 lb. (0.82 kg) / Unit 26 lb. (11.79) / 12-Unit Master Pack	
R120-04	3.2 lb. (1.45 kg) / Unit 27 lb. (12.25) / 8-Unit Master Pack	

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

## Materials of Construction

Adjustment Screw, Spring	Steel
Body, spring Cage	Zinc
Bottom Plug	Brass
Innervalve	Brass
Seals	Buna N



### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

## Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit, 1/4 & 3/8 Port R120-XX-000		3.00 (76)	1.38 (35)	4.60 (117)	2.74 (70.5)	5.98 (152)	0.96 (24)
Standard Unit, 1/2 Port R120-X4-000		3.56 (90)	1.56 (40)	5.20 (132)	3.25 (83)	6.76 (172)	1.27 (32)

### R120 Kits and Accessories

**Gauges –**

- 2" Dial Size, 1/4" Back Connection  
0 to 60 PSIG (0 to 400 kPa) ..... K4520N14060
- 2" Dial Size, 1/4" Back Connection  
0 to 160 PSIG (0 to 1100 kPa) ..... K4520N14160
- 2" Dial Size, 1/4" Back Connection  
0 to 300 PSIG (0 to 2068 kPa) ..... K4520N14300

**Mounting Bracket Kit –**

- 1/4", 3/8" ..... WSA15Y57
- 1/2" ..... W18A57

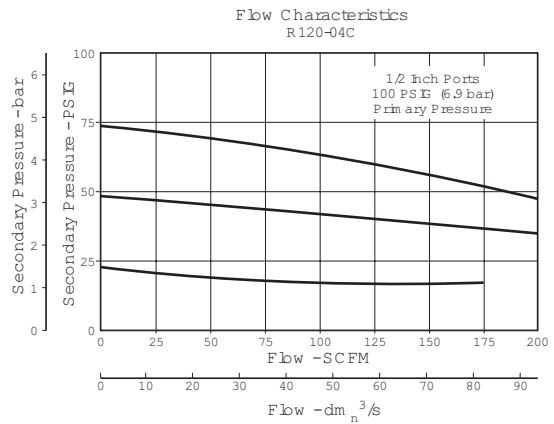
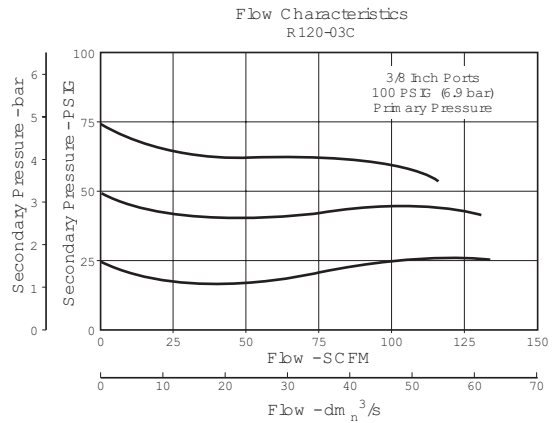
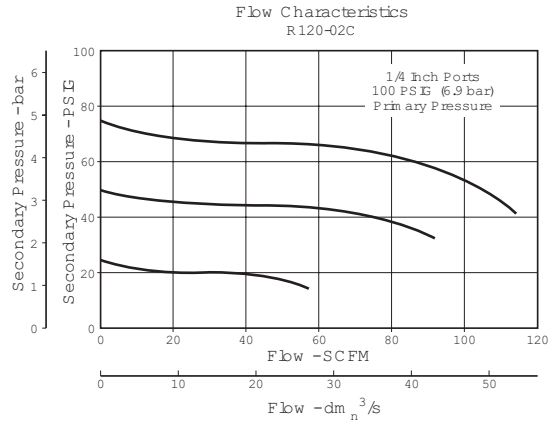
**Panel Mount Conversion Kit –**

- 1/4", 3/8" ..... W4202
- 1/2" ..... W4204

**Repair Kits –**

- Non-Relieving Diaphragm,  
Valve Assembly (1/4", 3/8"; All PSIG) ..... WRK118Y
- Relieving Diaphragm,  
Valve Assembly (1/4", 3/8"; All PSIG) ..... WRK119Y
- Non-Relieving Diaphragm,  
Valve Assembly (1/2"; 25, 60, 125 PSIG)..... WRK118A
- Non-Relieving Diaphragm,  
Valve Assembly (1/2"; 250 PSIG) ..... WRK118A250
- Relieving Diaphragm,  
Valve Assembly (1/2"; 25, 60, 125 PSIG)..... WRK119A
- Relieving Diaphragm,  
Valve Assembly (1/2"; 250 PSIG) ..... WRK119A250

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.



### Ordering Information

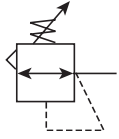
<b>R120</b> - <b>0</b>	<b>2</b> - <b>0</b>	<b>0</b>	<b>0</b>
<b>Series</b>	<b>Thread type</b>	<b>Port size</b>	<b>Options †</b>
Regular R120	NPT 0 BSPP C	2 1/4 3 3/8 4 1/2	G Pressure Gauge H High Pressure Spring (250 PSI) L Low Pressure Spring (60 PSI) N* Non-Relieving V All Fluorocarbon X Reverse Flow

Standard pressure spring is 0 to 125 PSIG

\* **Note:** Non-relieving option not available with 250 PSI spring

† For additional options, add to end of model number. Must be in alphabetical order and up to a total of 5 options.

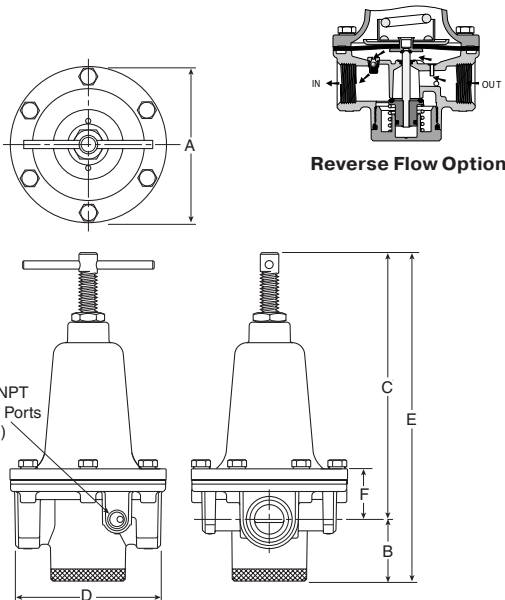
# Regulator R120



**R120-06-000**

## Features

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit, 3/4" & 1" Port R120-XX-000		4.69 (119)	1.87 (47)	8.15 (207)	4.38 (111)	10.02 (255)	1.61 (41)

## Specifications

Flow Capacity <sup>§</sup>	3/4 1	300 SCFM (141.6 dm <sup>3</sup> /s) 400 SCFM (188.8 dm <sup>3</sup> /s)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Reduced Pressure Range	2 to 125 PSIG (0.15 to 8.5 bar)	
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	40° to 125°F (4.4° to 52°C)	
Port Size	NPT / BSPP-G	3/4, 1
Weight	R120-06, R120-08 6.2 lb. (2.81 kg) / Unit 25 lb. (11.34) / 4-Unit Master Pack	

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

## Materials of Construction

Adjustment Screw, Spring	Steel
Body, Spring Cage	Zinc
Bottom Plug	Brass
Innervalve	Brass
Seals	Buna N

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

### R120 Kits and Accessories

Gauges –

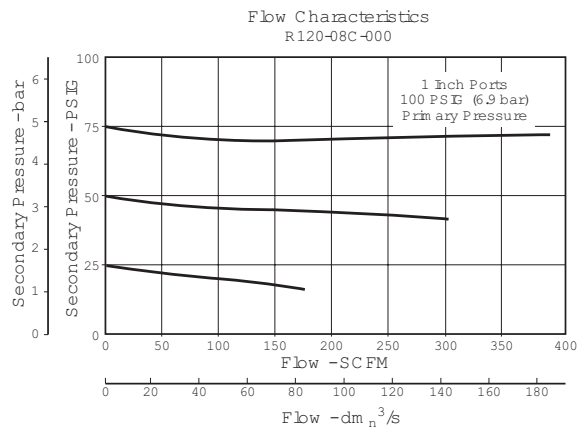
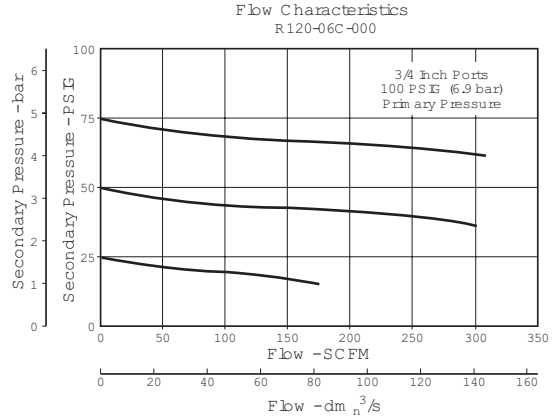
- 2" Dial Size, 1/4" Back Connection  
0 to 60 PSIG (0 to 400 kPa) ..... K4520N14060
- 2" Dial Size, 1/4" Back Connection  
0 to 160 PSIG (0 to 1100 kPa) ..... K4520N14160
- 2" Dial Size, 1/4" Back Connection  
0 to 300 PSIG (0 to 2068 kPa) ..... K4520N14300

Mounting Bracket Kit ..... W18B57

Repair Kits –

- Non-Relieving Diaphragm,  
Valve Assembly (3/4", 1") ..... WRK118B
- Relieving Diaphragm,  
Valve Assembly (1/4", 3/8"; All PSIG) ..... WRK119B

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.



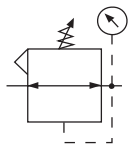
### Ordering Information

<b>R120</b> - <b>0</b>	<b>6</b> - <b>0</b>	<b>0</b> <b>0</b>								
<table border="1" style="margin: auto;"> <tr><th>Series</th></tr> <tr><td>Regular R120</td></tr> </table>	Series	Regular R120	<table border="1" style="margin: auto;"> <tr><th>Thread type</th></tr> <tr><td>NPT 0</td></tr> <tr><td>BSPP C</td></tr> </table>	Thread type	NPT 0	BSPP C	<table border="1" style="margin: auto;"> <tr><th>Port size</th></tr> <tr><td>6 3/4</td></tr> <tr><td>8 1</td></tr> </table>	Port size	6 3/4	8 1
Series										
Regular R120										
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NPT 0										
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<table border="1" style="margin: auto;"> <tr><th>Options †</th></tr> <tr><td>G Pressure Gauge</td></tr> <tr><td>H High Pressure Spring (250 PSI)</td></tr> <tr><td>N Non-Relieving</td></tr> <tr><td>V All Fluorocarbon</td></tr> <tr><td>X Reverse Flow</td></tr> </table>			Options †	G Pressure Gauge	H High Pressure Spring (250 PSI)	N Non-Relieving	V All Fluorocarbon	X Reverse Flow		
Options †										
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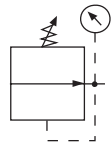
Standard pressure spring is 0 to 125 PSIG.

† For additional options, add to end of model number. Must be in alphabetical order and up to a total of 5 options.

# Regulator R18



Relieving



Non-Relieving



## Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 1/2" NPT / BSPP-G Over-port
- 2 Gauge Ports
- Regulator will Reverse-flow as Standard

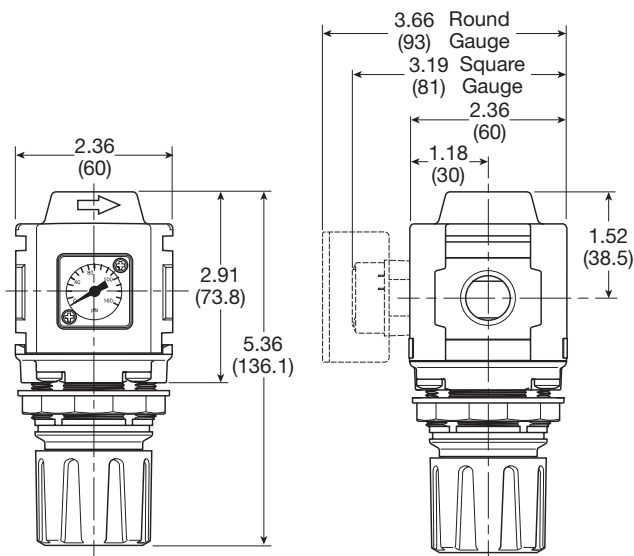
## Specifications

Flow Capacity*	1/4	148 SCFM (70 dm <sup>3</sup> /s, ANR)
	3/8	165 SCFM (78 dm <sup>3</sup> /s, ANR)
	1/2	165 SCFM (78 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar)
		0 to 60 PSIG (0 to 4 bar)
		0 to 125 PSIG (0 to 8 bar)
		0 to 250 PSIG (0 to 17 bar)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight		0.90 lb (0.41 kg)

\* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

## Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Body Cap	ABS
Bonnet	33% glass-filled nylon
Diaphragm Assembly	
Nitrile / Steel	
Valve Assembly	Brass / Nitrile
Panel Nut	Acetal
Seals	Nitrile
Springs	Main Regulating Valve: Steel Valve: Stainless Steel



Inches (mm)

**NOTE:** 1.90 in. (48mm) hole required for panel nut mounting.

### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



= "Most Popular"

### Replacement Kits

- Adjusting Knob ..... RRP-96-655
- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-657B
  - Relieving ..... RRP-96-656B
- Spring, Regulating –
  - 0 to 30 PSIG (0 to 2.1 bar) ..... RRP-96-659B
  - 0 to 60 PSIG (0 to 4.1 bar) ..... RRP-96-660B
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-96-661B
  - 0 to 250 PSIG (0 to 17.2 bar) ..... RRP-96-662B

### Accessories

- Panel Mount Nut –
  - Aluminum ..... RRP-96-673
  - Plastic ..... RRP-96-675B

- Gauge, Pressure –
  - Square flush mount gauge
    - 0-4 bar ..... K4511SCR04B
    - 0-11 bar ..... K4511SCR11B
    - 0-60 PSIG ..... K4511SCR060
    - 0-160 PSIG ..... K4511SCR160

- Square with adapter kit
  - 0-4 bar ..... P6G-PR10040
  - 0-11 bar ..... P6G-PR10110
  - 0-60 PSIG ..... P6G-PR90060
  - 0-160 PSIG ..... P6G-PR90160

- 50mm (2") round 1/4" center back mount
  - 0-30 PSIG / 0-2 bar ..... K4520N14030
  - 0-60 PSIG / 0-4 bar ..... K4520N14060
  - 0-160 PSIG / 0-11 bar ..... K4520N14160
  - 0-300 PSIG / 0-20 bar ..... K4520N14300

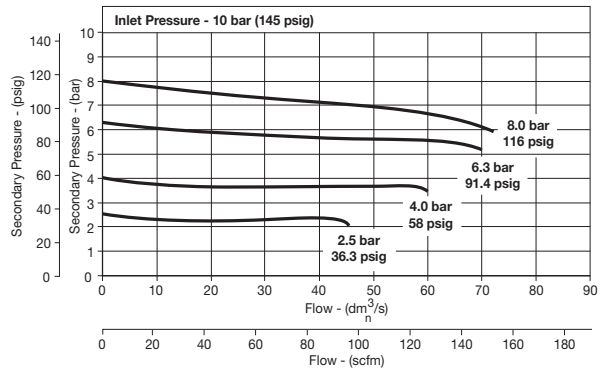
- 1-3/4" Digital Round 1/4" NPT
  - 0 to 160 PSIG ..... K4517N14160D

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

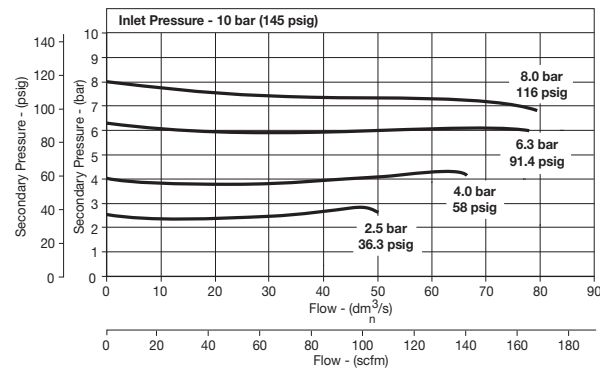
- Tamper Resistant Kit ..... RRP-96-671
- Tamperproof Lock and Cover Kit ..... RPA-96-737
- Tamperproof Knob Kit ..... RPA-96-738

- Wall Mounting Bracket –
  - L-Type ..... GPA-96-606
  - T-Type ..... GPA-96-602

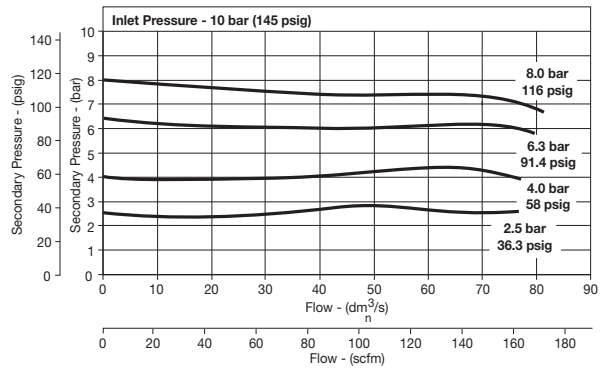
R18 1/4" Regulator



R18 3/8" Regulator



R18 1/2" Regulator



### Ordering Information

Model Type	Port Size	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Relieving	1/4	R18-02-F0G0B	R18-02-G0G0B	R18-02-D0G0B	R18-02-F000B
	3/8	R18-03-F0G0B	R18-03-G0G0B	R18-03-D0G0B	R18-03-F000B
	1/2	R18-04-F0G0B	R18-04-G0G0B	R18-04-D0G0B	R18-04-F000B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R16

 = "Most Popular"



**R16-02-000**

## Features

- Non-Rising Adjustment Knob with Friction Lock Knob
- Standard with Two Full Flow 1/4" NPT / BSPT-Rc Gauge Ports
- Panel Mount Nut
- High Flow Capacity
- Balanced Valve Design for Excellent Regulation Characteristics

## Specifications

Flow Capacity*	1/4	71.5 SCFM (33.7 dm <sup>3</sup> /s)
	3/8	80.5 SCFM (38.0 dm <sup>3</sup> /s)
	1/2	88.0 SCFM (41.5 dm <sup>3</sup> /s)
Adjusting Range Pressure		0 to 60 PSIG (0 to 4.1 bar)
		0 to 125 PSIG (0 to 8.6 bar)
		0 to 250 PSIG (0 to 17.2 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	1.7 (0.77)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

## Materials of Construction

Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

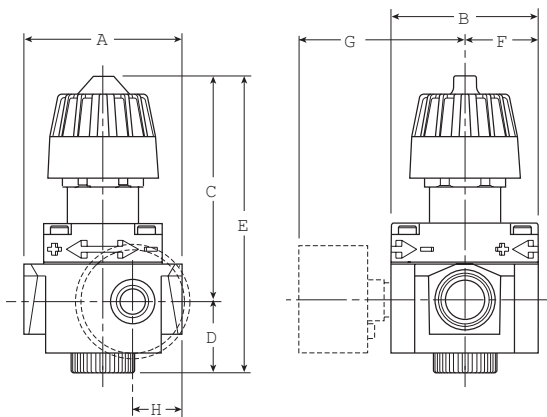
### **WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**NOTE:** 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit R16-XX-000		2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	— —	1.02 (25.9)
With Gauge R16-XX-G00		2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	2.80 (71)	1.02 (25.9)

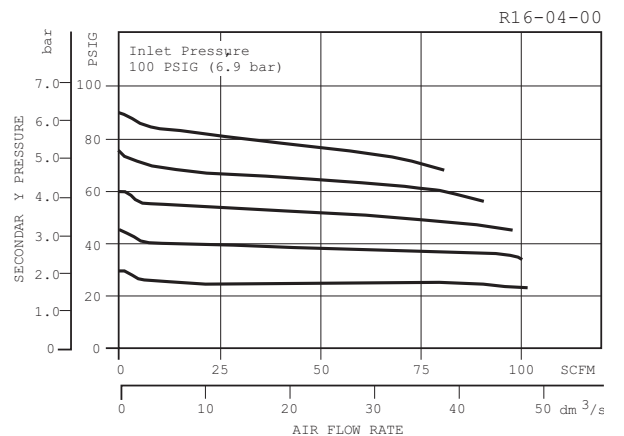
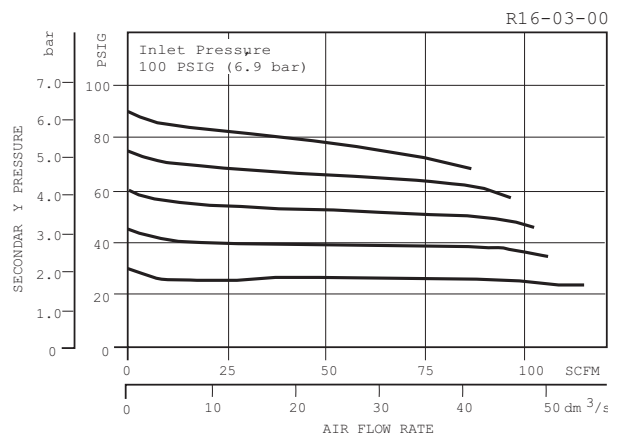
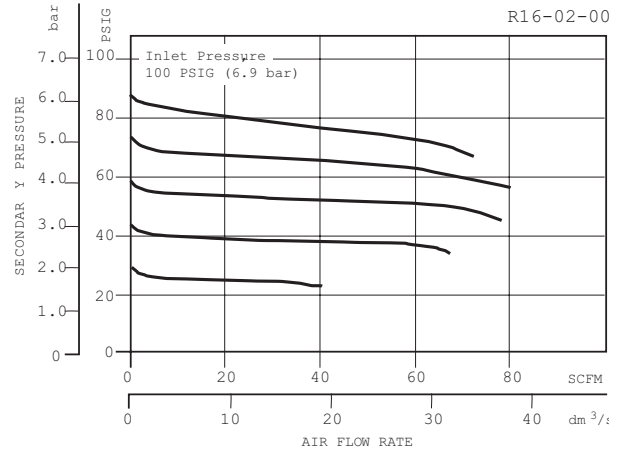
= "Most Popular"

### Replacement Kits

- Adjusting Knob ..... RRP-95-023
- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-216
  - Self-relieving.....RRP-96-213
- Spring, Regulating –
  - 0 to 50 PSIG (0 to 3.4 bar) ..... RRP-95-222
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-95-224
  - 0 to 250 PSIG (0 to 17.2 bar).....RRP-95-218
- Valve Assembly –
  - Valve, Valve Spring, Bottom Plug O-ring .....RRP-96-215

### Accessories

- Gauge, Pressure –
  - 0 to 60 PSIG (0 to 4 bar), 2" Dial Face, 1/4 NPT, CBM .....K4520N14060W
  - 0 to 160 PSIG (0 to 11 bar), 2" Dial Face, 1/4 NPT, CBM ..... K4520N14160W
  - 0 to 300 PSIG (0 to 20 bar), 2" Dial Face, 1/4 NPT, CBM .....K4520N14300W
  - 0 to 160 PSIG, 1-3/4" Digital Round ..... K4517N14160D
- Panel Mount Nut, Plastic ..... GPA-95-032
- Tamper Resistant Kit, Ring Style..... RPA-95-006
- Wall Mounting Bracket, Gauge Port Adapter, 1/4 NPT ..... RRP-95-590
- Wall Mounting Bracket –
  - L-Type, Heavy Duty..... RPA-95-090
  - L-Type, Standard .....GPA-95-012
  - L-Type with Plastic Panel Mount Nut .....GPA-95-011

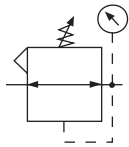


### Ordering Information

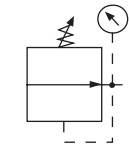
Model Type	Port Size	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Without Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	Without Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)
<b>Relieving</b>	1/4	R16-02-000	R16-02-H00	R16-02-L00	R16-02-G00	R16-02-GH0	R16-02-GL0
	3/8	R16-03-000	R16-03-H00	R16-03-L00	R16-03-G00	R16-03-GH0	R16-03-GL0
	1/2	R16-04-000	R16-04-H00	R16-04-L00	R16-04-G00	R16-04-GH0	R16-04-GL0
<b>Non-relieving</b>	1/4	R16-02-N00	R16-02-HN0	R16-02-LN0	R16-02-GN0	R16-02-GHN	R16-02-GLN
	3/8	R16-03-N00	R16-03-HN0	R16-03-LN0	R16-03-GN0	R16-03-GHN	R16-03-GLN
	1/2	R16-04-N00	R16-04-HN0	R16-04-LN0	R16-04-GN0	R16-04-GHN	R16-04-GLN

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R28



Relieving



Non-Relieving



## Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 3/4" NPT / BSPP-G Over-port
- Reverse-flow Available
- 2 Gauge Ports

## Specifications

Flow Capacity*	3/8	228 SCFM (108 dm <sup>3</sup> /s, ANR)
	1/2	233 SCFM (110 dm <sup>3</sup> /s, ANR)
	3/4	233 SCFM (110 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar)
		0 to 60 PSIG (0 to 4 bar)
		0 to 125 PSIG (0 to 8 bar)
		0 to 250 PSIG (0 to 17 bar)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Weight		1.37 lb. (0.62 kg)

\* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

## Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Body Cap	ABS
Bonnet	33% Glass-filled Nylon
Diaphragm Assembly	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Main Regulating Valve: Steel Valve: Stainless Steel
Valve Assembly	Brass / Nitrile / Acetal

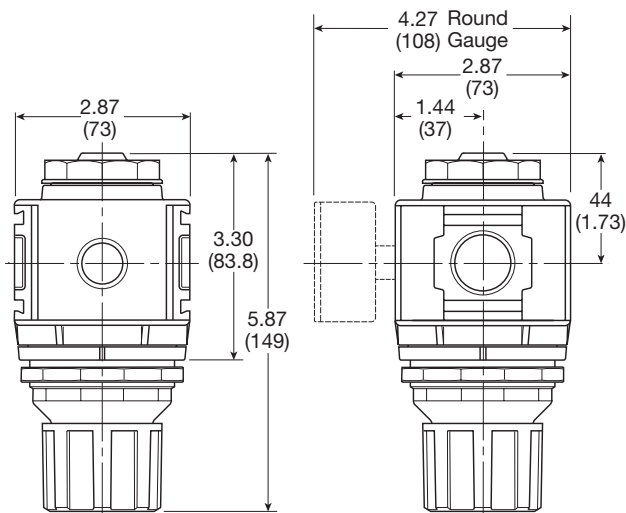
### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

**NOTE:** 2.40 in. (61mm) hole required for panel nut mounting.

= "Most Popular"

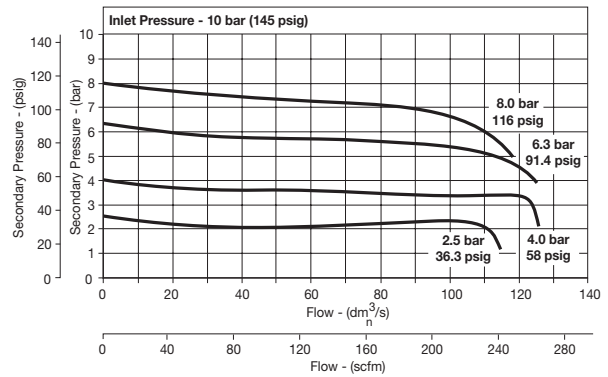
### Replacement Kits

- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-987
  - Relieving..... RRP-96-986
- Valve Assembly ..... RRP-96-049
- Adjusting Knob ..... RRP-16-341-000
- Spring, Regulating
  - 0 to 30 PSIG (0 to 2.1 bar) ..... RRP-96-163
  - 0 to 60 PSIG (0 to 4.1 bar) ..... RRP-96-164
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-96-165
  - 0 to 250 PSIG (0 to 17.2 bar)..... RRP-96-166

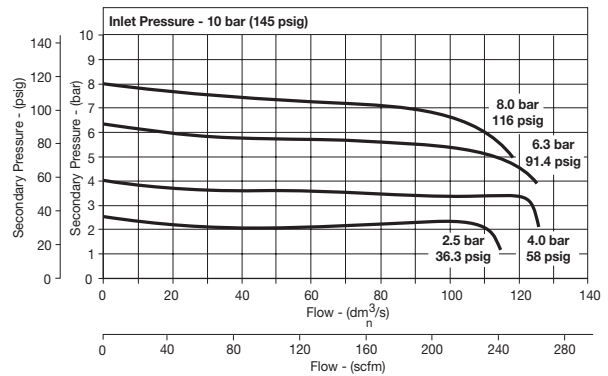
### Accessories

- Panel Mount Nut –
  - Aluminum ..... RRP-96-674
  - Plastic ..... RRP-96-676
- Gauge, Pressure –
  - 50mm (2") round 1/4" center back mount
    - 0-30 PSIG / 0-2 bar ..... K4520N14030
    - 0-60 PSIG / 0-4 bar ..... K4520N14060
    - 0-160 PSIG / 0-11 bar ..... K4520N14160
    - 0-300 PSIG / 0-20 bar ..... K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit..... RRP-96-672
- Wall Mounting Bracket
  - L-Type ..... GPA-96-607
  - T-Type ..... GPA-96-602

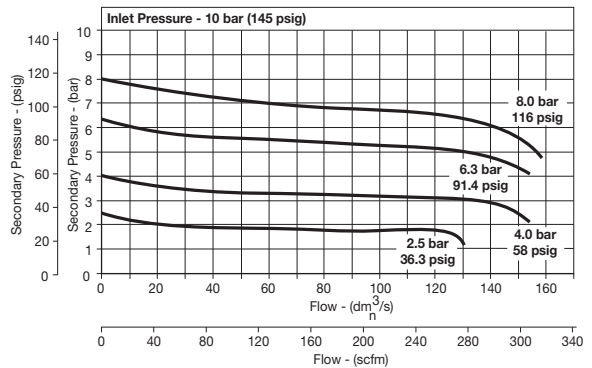
R28 3/8" Regulator



R28 1/2" Regulator



R28 3/4" Regulator



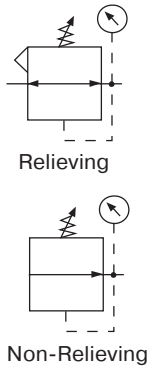
### Ordering Information

Model Type	Port Size	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Relieving	3/8	R28-03-F0G0B	R28-03-G0G0B	R28-03-D0G0B	R28-03-F000B
	1/2	R28-04-F0G0B	R28-04-G0G0B	R28-04-D0G0B	R28-04-F000B
	3/4	R28-06-F0G0B	R28-06-G0G0B	R28-06-D0G0B	R28-06-F000B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R26

= "Most Popular"



**R26-02-000**

## Features

- Non-Rising Adjustment Knob with Friction Lock Knob
- Standard with Two Full Flow 1/4" NPT / BSPT-Rc Gauge Ports
- Panel Mount Nut
- High Flow Capacity
- Balanced Valve Design for Excellent Regulation Characteristics

## Specifications

Flow Capacity*	1/4	112 SCFM (53 dm <sup>3</sup> /s)
	3/8	148 SCFM (70 dm <sup>3</sup> /s)
	1/2	185 SCFM (87 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 60 PSIG (0 to 4.1 bar)	
	0 to 125 PSIG (0 to 8.6 bar)	
	0 to 250 PSIG (0 to 17.2 bar)	
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Maximum Supply Pressure	300 PSIG (21 bar)	
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight	lb. (kg)	2.5 (1.34)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

## Materials of Construction

Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

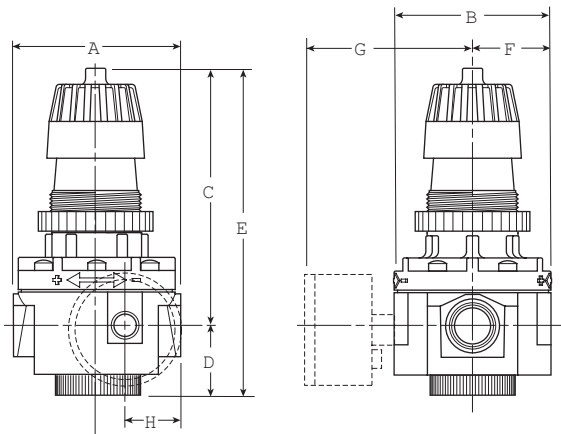
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**NOTE:** 1.88" Dia. (47.8 mm) hole required for panel nut mounting.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit R26-XX-000		3.35 (85)	3.10 (79)	5.13 (130.3)	1.35 (34)	6.48 (165)	1.55 (39.4)	— —	1.13 (28.7)
With Gauge R26-XX-G00		3.35 (85)	3.10 (79)	5.13 (130.3)	1.35 (34)	6.48 (165)	1.55 (39.4)	3.13 (79.5)	1.13 (28.7)

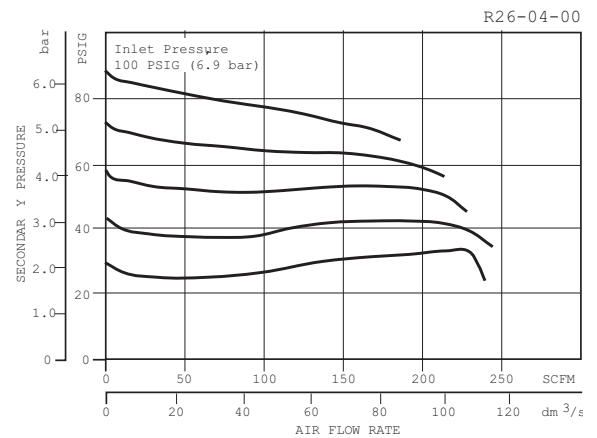
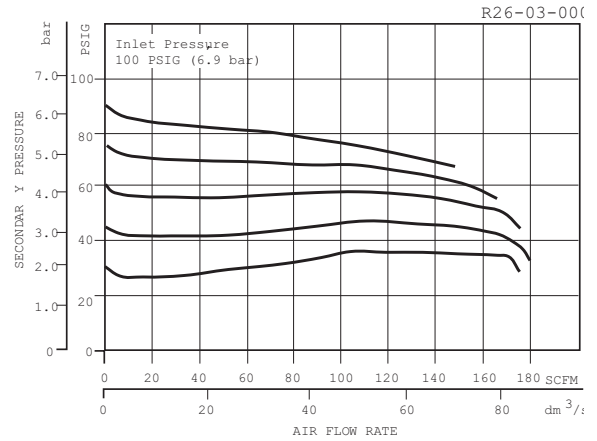
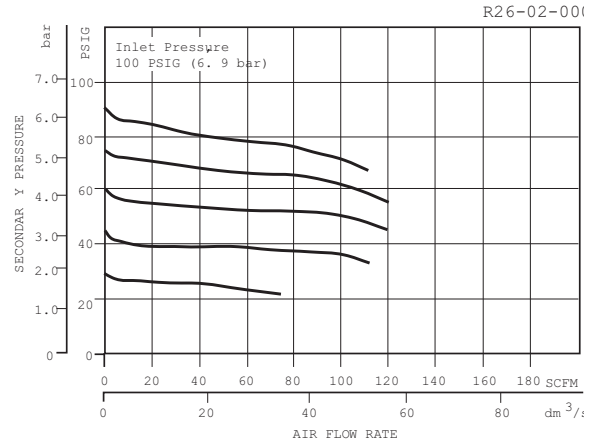
= "Most Popular"

### Replacement Kits

- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-332
  - Self-relieving..... RRP-96-238
- Knob, Adjusting –
  - Used on Units with Plastic Bonnets..... RRP-95-023
- Spring, Regulating –
  - 0 to 60 PSIG (0 to 4,1 bar) ..... RRP-95-962
  - 0 to 125 PSIG (0 to 8,6 bar) ..... GRP-95-225
  - 0 to 250 PSIG (0 to 17,2 bar)..... RRP-95-219
- Valve Assembly –
  - Valve, Valve Spring, Bottom Plug O-ring ..... RRP-96-294

### Accessories

- Gauge, Pressure –
  - 0 to 60 PSIG (0 to 4 bar), 2" Dial Face,  
1/4" NPT, CBM ..... K4520N14060W
  - 0 to 160 PSIG (0 to 11 bar), 2" Dial Face,  
1/4" NPT, CBM ..... K4520N14160W
  - 0 to 300 PSIG (0 to 20 bar), 2" Dial Face,  
1/4" NPT, CBM ..... K4520N14300W
  - 0 to 160 PSIG, 1-3/4" Digital Round  
1/4" NPT ..... K4517N14160D
- Nut, Panel Mount, Plastic..... RRP-95-954
- Tamper Resistant Kit –
  - Ring Style used on Plastic Bonnets ..... RPA-95-006
- Wall Mounting Bracket –
  - C-type ..... GPA-95-051
  - C-type ..... RPA-95-947
  - L-Type – Heavy Duty ..... GPA-95-956
- Wall Mounting Bracket, Gauge Port Adapter,  
1/4" NPT ..... RRP-95-590



### Ordering Information

Model Type	Port Size	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Without Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	Without Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)
<b>Relieving</b>	1/4	R26-02-000	R26-02-H00	R26-02-L00	R26-02-G00	R26-02-GH0	R26-02-GL0
	3/8	R26-03-000	R26-03-H00	R26-03-L00	R26-03-G00	R26-03-GH0	R26-03-GL0
	1/2	R26-04-000	R26-04-H00	R26-04-L00	R26-04-G00	R26-04-GH0	R26-04-GL0
<b>Non-relieving</b>	1/4	R26-02-N00	R26-02-HN0	R26-02-LN0	R26-02-GN0	R26-02-GHN	R26-02-GLN
	3/8	R26-03-N00	R26-03-HN0	R26-03-LN0	R26-03-GN0	R26-03-GHN	R26-03-GLN
	1/2	R26-04-N00	R26-04-HN0	R26-04-LN0	R26-04-GN0	R26-04-GHN	R26-04-GLN

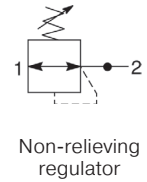
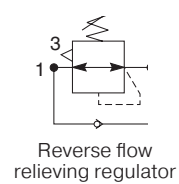
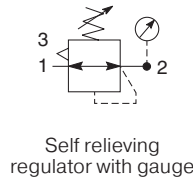
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R90

   = "Most Popular"

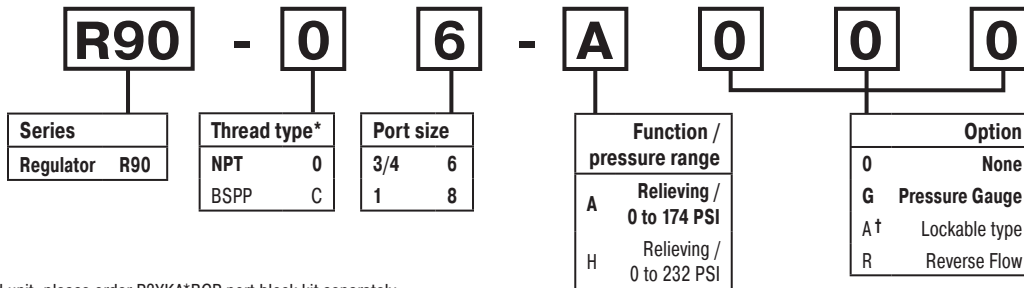


## Symbols



## Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 12 and 16 bar
- Rolling diaphragm for extended life
- Secondary aspiration plus rolling diaphragm provides quick response and accurate pressure regulation
- Optional tamperproof regulator padlock
- Reverse flow / relieving option
- Low temperature -40°



**Notes:**

\* For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

† Not field convertible.

**Bold items are most common.**

## Ordering information

Port size	Description	Flow† scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	12 bar relieving	380	17.5 (254)	-40 (-40)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.08 (2.4)	<b>R90-06-A000</b>
3/4"	12 bar relieving + pressure gauge	380	17.5 (254)	-10 (14)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.13 (2.5)	<b>R90-06-AG00</b>
1"	12 bar relieving	550	17.5 (254)	-40 (-40)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.08 (2.4)	<b>R90-08-A000</b>
1"	12 bar relieving + pressure gauge	550	17.5 (254)	-10 (14)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.19 (2.6)	<b>R90-08-AG00</b>

† Standard part numbers shown in bold. For other models refer to Options chart above.

‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

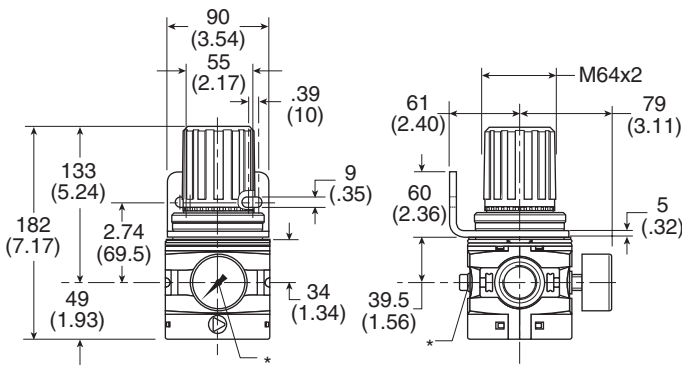


**Specifications**

Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-40°C to 60°C (-40°F to 140°F)
Typical flow with 10 bar (145 psig) inlet pressure and 6.3 bar (91 psig) set pressure and 0.5 bar (7.3 psig) pressure drop	1" size 550 scfm
Gauge port ( x 2 )	1/4"

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

**Dimensions mm (inches)**



\* 1/4" gauge port

**Service kits**

- Angle bracket + metal lock ring ..... P3YKA00MS
- Panel mounting nut..... P3YKA00MM
- Diaphragm kit (relieving type).....P3YKA00RR
- Diaphragm kit (non-relieving type)..... P3YKA00RN
- Gauge - 1/4" port
- 0 to 10 bar (0 to 160 psig) ..... K4520N14160
- 0 to 20 bar (0 to 300 psig) .....K4520N14300

**⚠ WARNING**

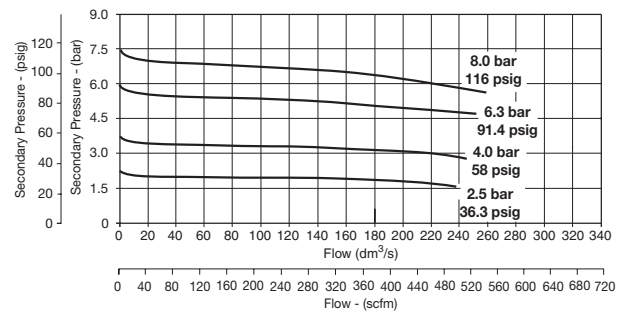
**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

**Material specifications**

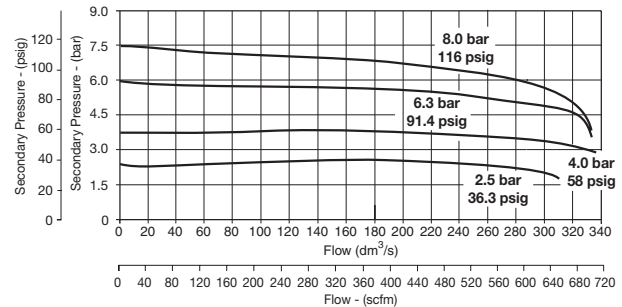
Body	Aluminum
Bonnet	Glass filled polyamide
Regulator cover	ABS
Control knob	Glass filled polyamide
Valve	Brass / NBR
Seals	Nitrile NBR
Screws	Steel / zinc plated

**Flow characteristics**

**(3/4") Regulator**



**(1") Regulator**



**CAUTION:**

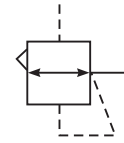
**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

# Pilot Operated Regulator R90

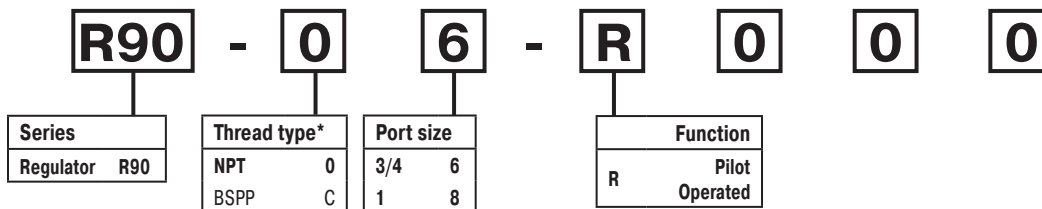
   = "Most Popular"

## Symbol



## Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Constant pilot bleed control for accurate pressure control
- Balanced poppet provides quick response
- High flow



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering information

Port size	Description	Flow <sup>‡</sup> scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number <sup>†</sup>
3/4"	Pilot operated regulator	550	17.5 (254)	-10 (14)	60 (140)	105.5 (4.15)	90 (3.54)	90 (3.54)	1.2 (2.6)	<b>R90-06-R000</b>
1"	Pilot operated regulator	550	17.5 (254)	-10 (14)	60 (140)	105.5 (4.15)	90 (3.54)	90 (3.54)	1.2 (2.6)	<b>R90-08-R000</b>

<sup>†</sup> Standard part numbers shown in bold. For other models refer to Options chart above.

<sup>‡</sup> Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

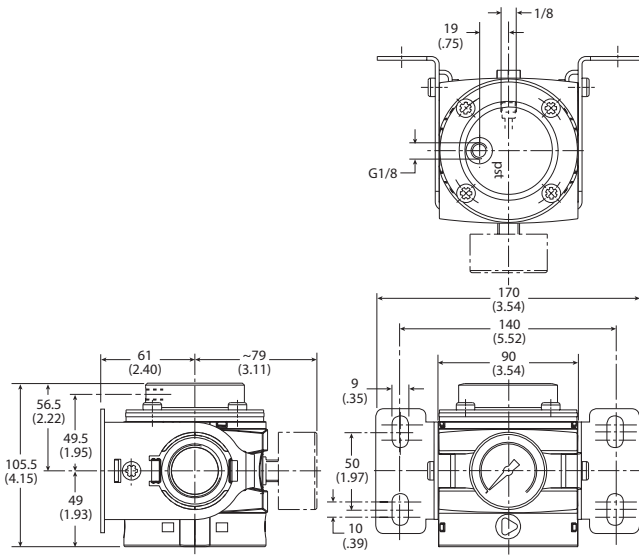
**Specifications**

Fluid	Compressed air
Max. pressure air pilot operated	17.5 bar (254 psig)
Operating temperature	-10°C to 60°C (14°F to 140°F)
Weight	3/4" 1.2 kg (2.6 lb)
	1" 1.2 kg (2.6 lb)

**Material specifications**

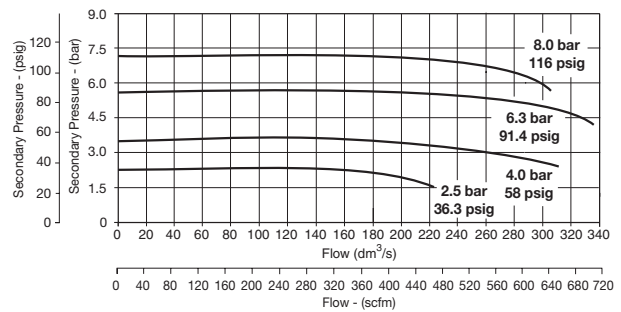
Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR
Screws	Zinc plated steel

**Dimensions mm (inches)**



**Flow characteristics**

**3/4" and 1" Pilot Regulator**



**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

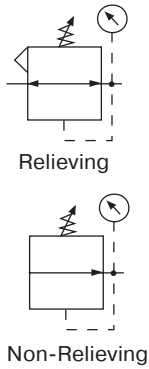
**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

# Regulator R30

= "Most Popular"



**R30-06-000**

## Features

- Balanced Valve Design
- Standard Self-Relieving
- Two 1/4 NPT / BSPT-Rc Gauge Ports Standard – Can Be Used for Additional Outlet Ports
- Piston Operated
- High Flow Capacity

## Specifications

Flow Capacity*	3/4 1	481 SCFM (227 dm <sup>3</sup> /s) 500 SCFM (236 dm <sup>3</sup> /s)
Adjusting Range Pressure		0 to 125 PSIG (0 to 8.6 bar) 0 to 180 PSIG (0 to 12.4 bar)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Weight	lb. (kg)	6 (2.7)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Steel

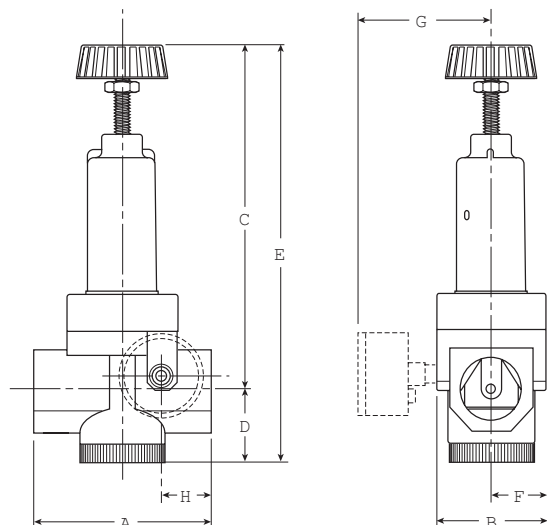
### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit R30-XX-000		4.33 (110)	2.65 (67)	8.62 (218.9)	1.75 (44)	10.37 (263)	1.33 (34)	—	1.23 (31.2)
With Gauge R30-XX-G00		4.33 (110)	2.65 (67)	8.62 (218.9)	1.75 (44)	10.37 (263)	1.33 (34)	2.99 (76)	1.23 (31.2)

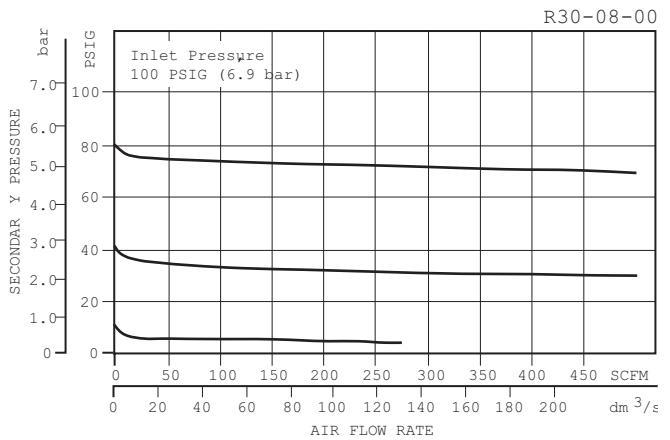
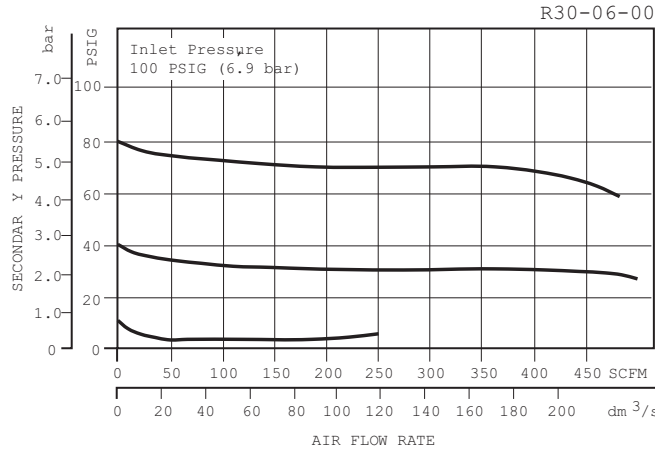
= "Most Popular"

### Replacement Kits

- Piston Assembly –
  - Non-relieving ..... RRP-95-451
  - Relieving..... RRP-95-964
- Spring, Regulating –
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-95-226
  - 0 to 180 PSIG (0 to 12.4 bar)..... RRP-95-220
- Valve Assembly –
  - Valve, Valve Spring, Bottom Plug O-ring ..... RRP-95-159

### Accessories

- Gauge, Pressure –
  - 0 to 160 PSIG (0 to 11 bar), 2" Dial Face,  
1/4" NPT, CBM ..... K4520N14160
  - 0 to 300 PSIG (0 to 20 bar), 2" Dial Face,  
1/4" NPT, CBM .....K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round,  
1/4" NPT ..... K4517N14160D
- Wall Mounting Bracket –
  - Gauge Port Adapter, 1/4" NPT ..... RRP-95-590
  - U-bolt Pipe Clamp ..... GRP-95-734



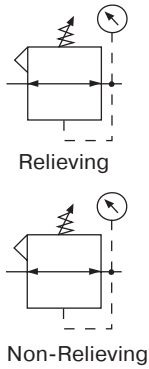
### Ordering Information

Model Type	Port Size	Standard Pressure 10 to 125 PSIG (0.7 to 8.6 bar)	High Pressure 10 to 180 PSIG (0.7 to 12.4 bar)
Relieving	3/4	R30-06-000	R30-06-H00
	1	R30-08-000	R30-08-H00
Non-relieving	3/4	R30-06-N00	R30-06-HN0
	1	R30-08-N00	R30-08-HN0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Regulator R40

 = "Most Popular"



**R40-0B-000**

## Features

- Balanced Valve Design
- Standard Self-Relieving
- Two 1/4 NPT / BSPT-Rc Gauge Ports Standard – Can Be Used for Additional Outlet Ports
- Piston Operated
- High Flow Capacity

## Specifications

Flow Capacity*	1-1/2, 2	1200 SCFM (566 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 125 PSIG (0 to 8.6 bar)	0 to 180 PSIG (0 to 12.4 bar)
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1-1/2, 2
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	10.8 (4.9)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 85 PSIG (5.9 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

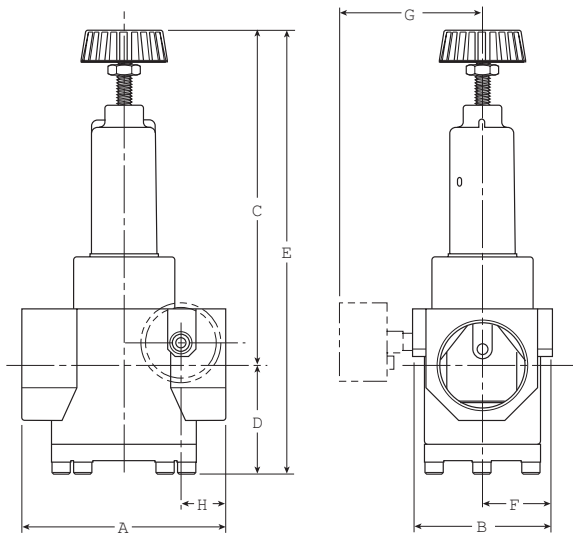
### **WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit R40-XX-000		5.30 (135)	3.63 (92)	9.05 (230)	2.83 (72)	11.88 (302)	1.82 (43)	— —	1.15 (29.2)
With Gauge (order separately) R40-XX-XXX		5.30 (135)	3.63 (92)	9.05 (230)	2.83 (72)	11.88 (302)	1.82 (43)	4.02 (102)	1.15 (29.2)

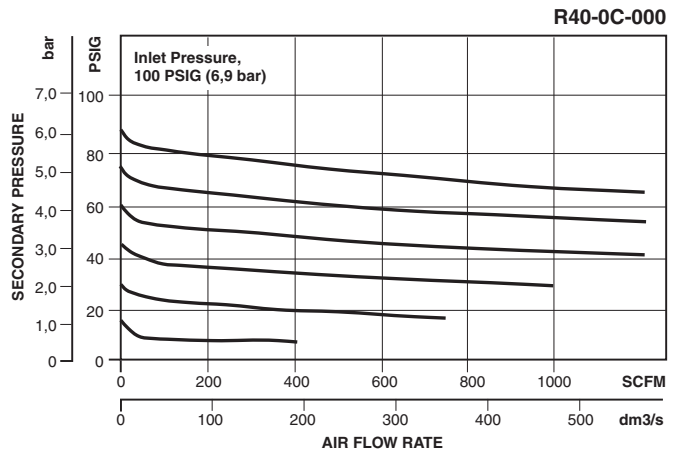
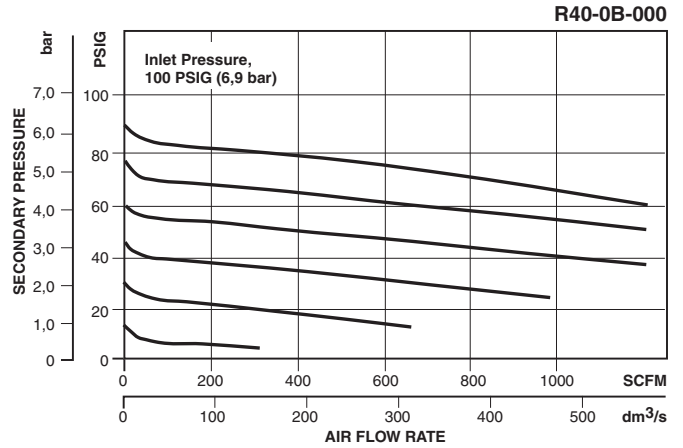
= "Most Popular"

### Replacement Kits

- Piston Assembly –
  - Non-relieving ..... RRP-95-451
  - Relieving..... RRP-95-964
- Spring, Regulating –
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-95-226
  - 0 to 180 PSIG (0 to 12.4 bar)..... RRP-95-220
- Spring, Valve ..... RRP-95-024
- Valve Assembly (Non-relieving) –
  - Valve, Valve Spring ..... RRP-95-162
- Valve Assembly (Self-relieving) –
  - Valve, Valve Spring, Ret. Ring, O-rings ..... RRP-95-161

### Accessories

- Gauge, Pressure –
  - 0 to 160 PSIG (0 to 11 bar), 2" Dial Face, 1/4" NPT, CBM ..... K4520N14160
  - 0 to 300 PSIG (0 to 20 bar), 2" Dial Face, 1/4" NPT, CBM ..... K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT ..... K4517N14160D
- Wall Mounting Bracket, Gauge Port Adapter, 1/4" NPT ..... RRP-95-590



### Ordering Information

Model Type	Port Size	Without Gauge 10 to 125 PSIG (0.7 to 8.6 bar)	High Pressure 10 to 180 PSIG (0.7 to 12.4 bar)
Relieving	1-1/2	R40-0B-000	R40-0B-H00
	2	R40-0C-000	R40-0C-H00
Non-relieving	1-1/2	R40-0B-N00	R40-0B-HN0
	2	R40-0C-N00	R40-0C-HN0

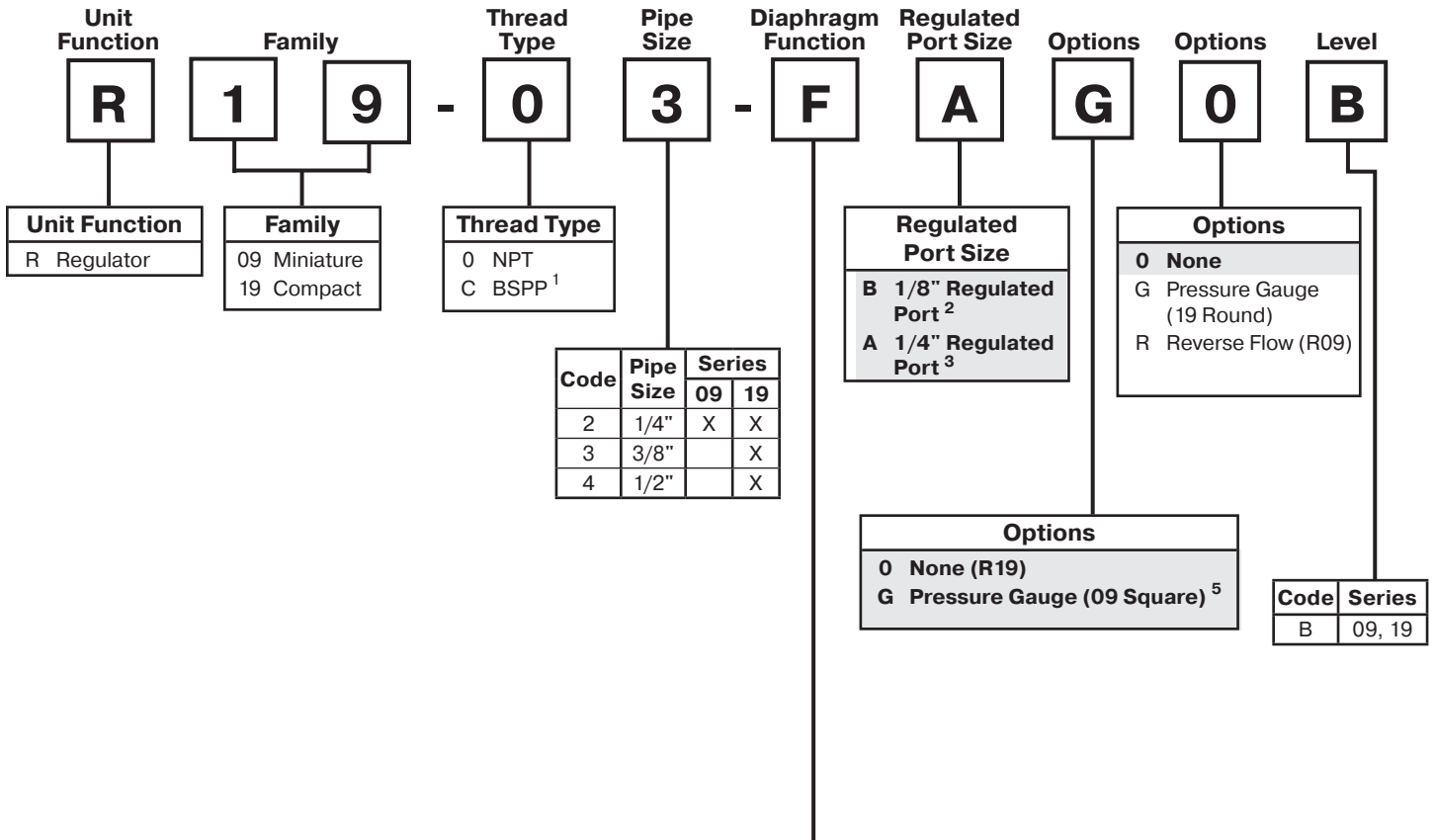
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes



# Common-P1 Regulator Numbering System

   = "Most Popular"



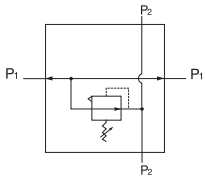
Diaphragm Function	Fluorocarbon (19 Series Only)	Spring Range			
		0 to 30 PSIG (0 to 2.1 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 125 PSIG (0 to 8.6 bar)	0 to 250 PSIG <sup>4</sup> (0 to 17.2 bar)
Relieving	No	C	D	<b>F</b>	G
	Yes	J	K	L	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

1 ISO, R228 (G Series)  
 2 Not available on R19  
 3 Not available on R09  
 4 R09 series operating range 0 to 232 PSIG (1 to 16 bar)  
 5 Square gauge is included with all R08

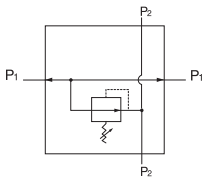
**Note: When selecting from the options columns, please enter letters in alphabetical order, for example:**

**R09-02-FAG0B**

# Common-P1 Regulator R09



Relieving



Non-Relieving



## Specifications

Flow Capacity*	1/4	42 SCFM (20 dm <sup>3</sup> /s)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2.1 bar)
		0 to 60 PSIG (0 to 4.1 bar)
		0 to 125 PSIG (0 to 8.6 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-4° to 150°F (-20° to 65.5°C)
P1 Port Size (Inlet / Outlet)	NPT / BSPP-G	1/4
P2 Regulated Ports (2 ea.)	NPT / BSPP-G	1/8
Weight		0.37 lb (0.17 kg)

\* Inlet pressure 145 PSIG (10 bar). Secondary pressure 100 PSIG (6.9 bar).

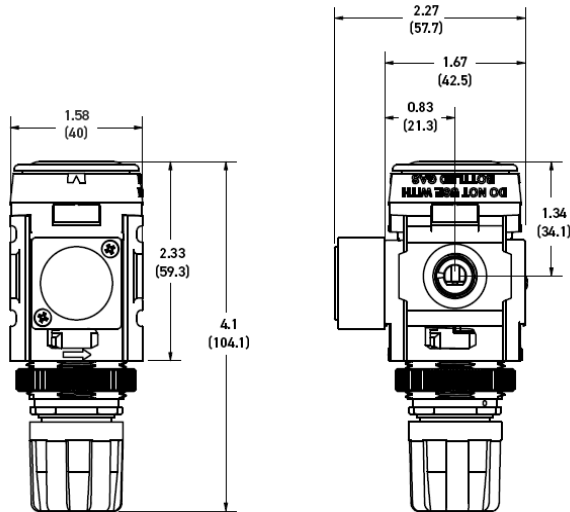
Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

## Features

- Balanced Valve Design
- 2 Regulated Ports
- Light Weight
- Modern Modular Design and Appearance

## Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Bottom Cap	Glass-filled Nylon
Bonnet	Glass-filled Nylon
Diaphragm Assembly	Stainless Steel / Nitrile
Valve Assembly	Acetal / Nitrile



Inches (mm)

**NOTE:** 1.90 in. (48mm) hole required for panel nut mounting.

### ⚠ WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

## Replacement Kits

Adjusting Knob ..... GRP-96-792

## Accessories

Panel Mount Nut –

Aluminum ..... RPA-96-773  
 Plastic ..... RPA-96-734

Pressure Gauge– (\*see note below)

Square flush mount gauge

0-4 bar ..... GRP-96-791-04B  
 0-11 bar ..... GRP-96-792-11B  
 0-20 bar ..... GRP-96-792-20B  
 0-60 PSIG ..... GRP-96-791-060  
 0-160 PSIG ..... GRP-96-791-160  
 0-290 PSIG ..... GRP-96-791-290

\*For R08/R09 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.

Square flush mount gauge

0-4 bar ..... K4511SCR04B  
 0-11 bar ..... K4511SCR11B  
 0-60 PSIG ..... K4511SCR060  
 0-160 PSIG ..... K4511SCR160

Square with adapter kit

0-4 bar ..... P6G-PR10040  
 0-11 bar ..... P6G-PR10110  
 0-60 PSIG ..... P6G-PR90060  
 0-160 PSIG ..... P6G-PR90160

50mm (2") round 1/4" center back mount

0-30 PSIG / 0-2 bar ..... K4520N14030  
 0-60 PSIG / 0-4 bar ..... K4520N14060  
 0-160 PSIG / 0-11 bar ..... K4520N14160  
 0-300 PSIG / 0-20 bar ..... K4520N14300

1-3/4" Digital Round 1/4" NPT

0 to 160 PSIG ..... K4517N14160D

Tamperproof Lock and Cover Kit

(lock not included) ..... RPA-96-736B

Wall Mounting Bracket –

C-Type ..... GPA-97-010  
 L-Type ..... GPA-96-739  
 T-Type ..... GPA-96-737

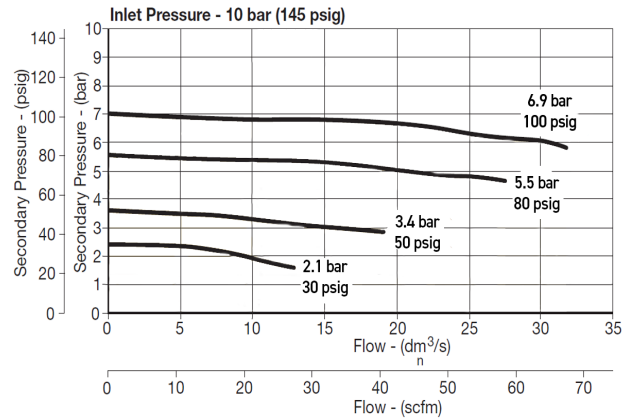
## Ordering Information

All P2 Regulated Ports are 1/8" Ports

Model Type	P1 Port Size	Without Gauge 0 to 125 PSIG (0 to 8.6 bar)	Without Gauge 0 to 30 PSIG (0 to 2.1 bar)	Without Gauge 0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	R09-02-FB00B	R09-02-CB00B	R09-02-DB00B
Non-relieving	1/4	R09-02-RB00B	R09-02-PB00B	R09-02-WB00B

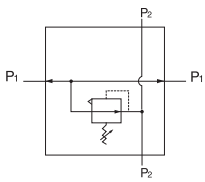
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

= "Most Popular"

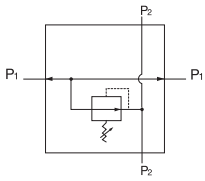


Typical Application

# Common-P1 Regulator R19



Relieving



Non-Relieving



## Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 1/2" NPT / BSPP-G Over-port
- 2 Regulated Ports

## Specifications

Flow Capacity*	1/4, 3/8, 1/2	64.0 SCFM (31 dm <sup>3</sup> /s)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2.1 bar)
		0 to 60 PSIG (0 to 4.1 bar)
		0 to 125 PSIG (0 to 8.6 bar)
		0 to 250 PSIG (0 to 17.2 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
P1 Port Size (Inlet / Outlet)	NPT / BSPP-G	1/4, 3/8, 1/2
P2 Regulated Ports (2 ea.)	NPT / BSPP-G	1/4
Weight		0.50 lb (0.22 kg)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

## Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Body Cap	ABS
Bonnet	33% Glass-filled Nylon
Bottom Plug	33% Glass-filled Nylon
Diaphragm Assembly	Nitrile / Steel
Panel Nut	Acetal
Seals	Nitrile
Springs	Main Regulating Valve: Steel Valve: Stainless Steel
Valve Assembly	Brass / Nitrile

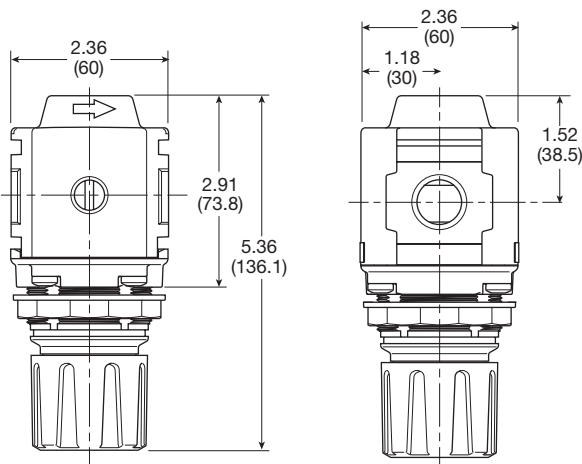
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

**NOTE:** 1.90 in. (48mm) hole required for panel nut mounting.

Inches (mm)

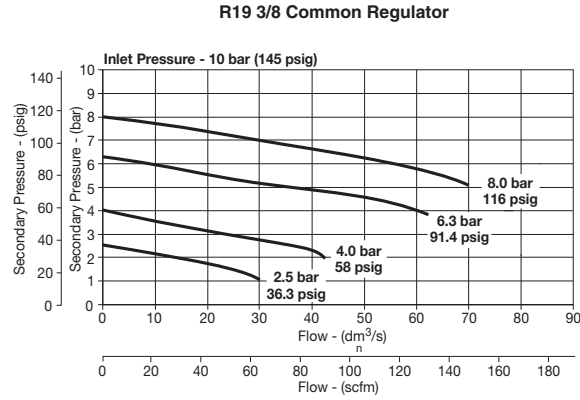
 = "Most Popular"

### Replacement Kits

- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-761B
  - Relieving..... RRP-96-760B
- Spring, Regulating–
  - 0 to 30 PSIG (0 to 2.1 bar) ..... RRP-96-659B
  - 0 to 60 PSIG (0 to 4.1 bar) ..... RRP-96-660B
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-96-661B
  - 0 to 250 PSIG (0 to 17.2 bar)..... RRP-96-662B

### Accessories

- Gauge, Pressure –
  - 50mm (2") round 1/4" center back mount
    - 0-30 PSIG / 0-2 bar..... K4520N14030
    - 0-60 PSIG / 0-4 bar..... K4520N14060
    - 0-160 PSIG / 0-11 bar ..... K4520N14160
    - 0-300 PSIG / 0-20 bar ..... K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT ..... K4517N14160D
- Panel Mount Nut –
  - Aluminum ..... RRP-96-673
  - Plastic ..... RRP-96-675
- Tamper Resistant Kit..... RRP-96-671
- Wall Mounting Bracket –
  - L-Type..... GPA-96-606
  - T-Type ..... GPA-96-603



NOTE: Gauge not included, order separately by accessory number.



Typical Application

### Ordering Information

All units shown with 1/4" regulated ports.

Model Type	P1 Port Size	5-125 PSIG (0.4 to 8.6 bar)	10-250 PSIG (0.7 to 7.2 bar)	3-60 PSIG (0.2 to 4.1 bar)
Relieving	1/4	R19-02-FA00B	R19-02-GA00B	R19-02-DA00B
	3/8	R19-03-FA00B	R19-03-GA00B	R19-03-DA00B
	1/2	R19-04-FA00B	R19-04-GA00B	R19-04-DA00B
Non-relieving	1/4	R19-02-RA00B	R19-02-SA00B	R19-02-WA00B
	3/8	R19-03-RA00B	R19-03-SA00B	R19-03-WA00B
	1/2	R19-04-RA00B	R19-04-SA00B	R19-04-WA00B

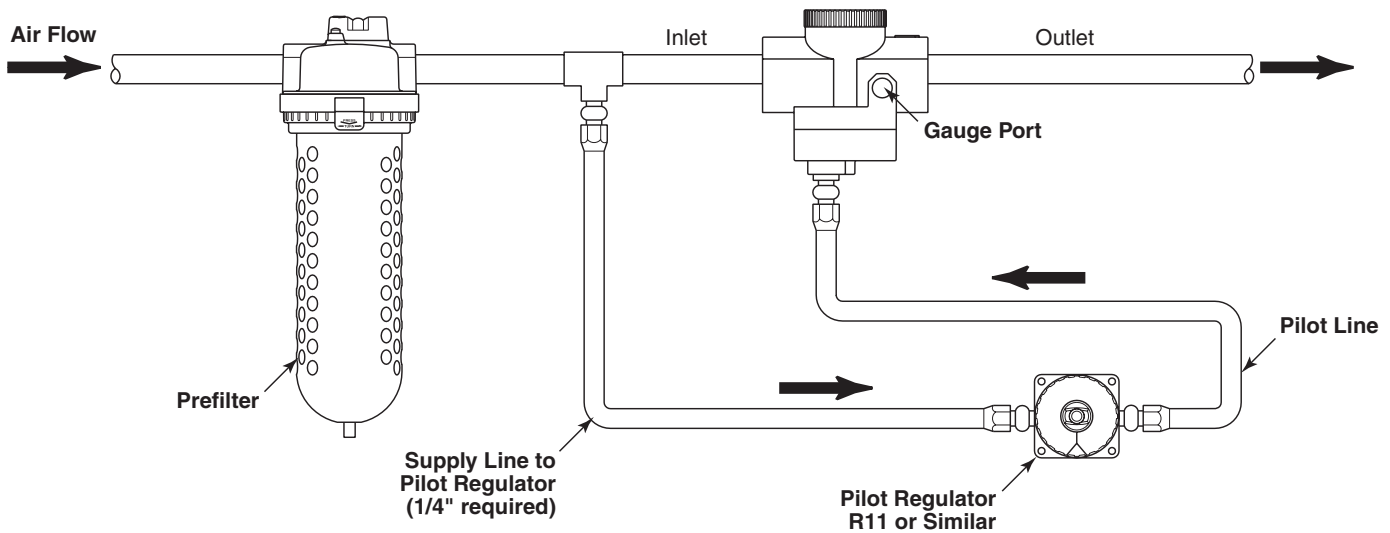
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

## Principal Regulator (Remote Operated) – R21 / 31 / 41-XX-RXX

### Remote-control Dial-Air™ Regulator

Incorporates all the features of the standard Dial-Air™ Regulator plus the additional advantage of remote installation using the R11 model Pilot Regulator. Maximum inlet operating pressure and temperature ratings are 300 PSIG (20.7 bar) and 150°F (65.5°C).

The Remote-control Dial-Air™ Regulators are available in five pipe sizes, with 1/4" NPT connections on the pilot regulator and pilot port of remote-controlled regulators. Typical installation is shown below. For other remote models, see R21, R31 & R41.

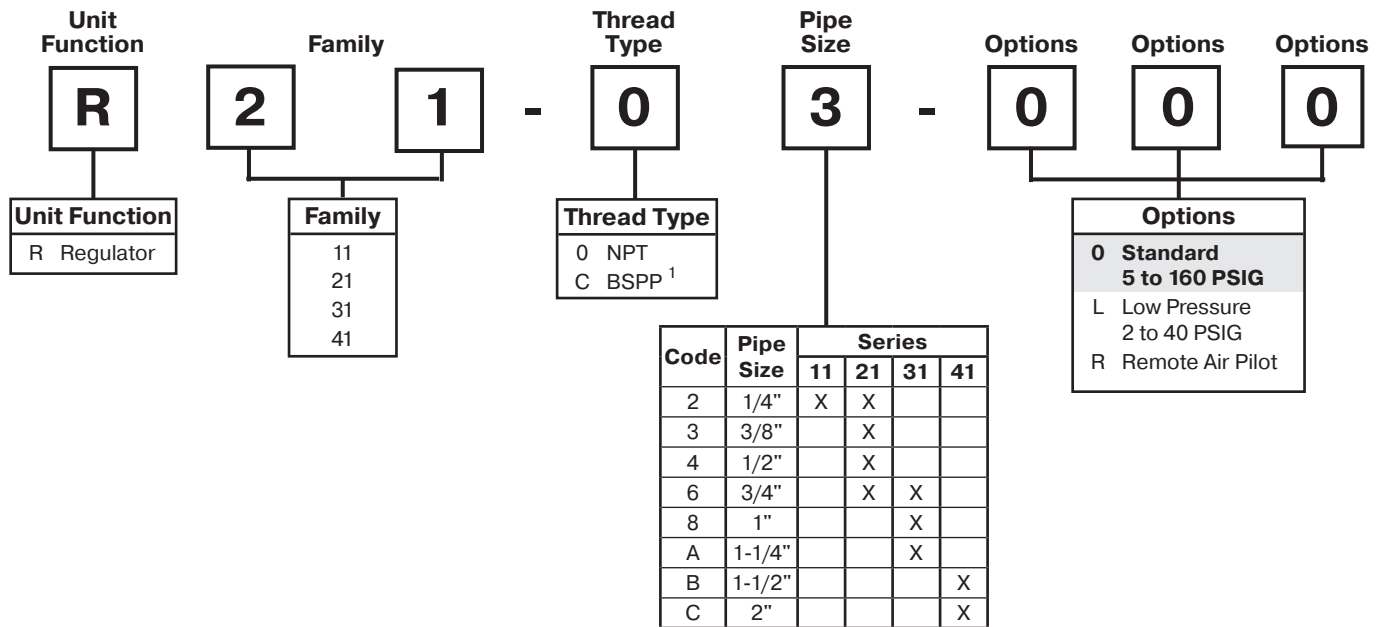


### Dial-Air™

Dial-Air™ regulators feature a transparent, pressure-calibrated, non-rising adjustment dial for quick adjustment of secondary pressure. If a gauge (R21, R31, R41) is required for monitoring reasons, two 1/4" gauge ports are provided; however, these are usually used for additional outlet ports. The full reduced pressure range can be dialed in less than 270° of dial rotation. This feature is particularly advantageous if secondary pressure must be changed frequently. The transparent dial can be color or graphics coded for easy reference to required pressure changes. Dial-Air™ regulators can be mounted in any position so dial face is always visible. All Dial-Air™ units have a slight constant air bleed: 0.05 SCFM (0.024 dm<sup>3</sup>/s), @100 PSIG (6.9 bar) inlet and 90 PSIG (6.2 bar) outlet.

# Dial-Air™ Regulator Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

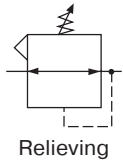
**NOTE:** Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8.  
**For example:**

**R21 - 03 - 000**

# Dial-Air™ Regulator R11

= "Most Popular"



**R11-02-000**

## Features

- Pressure Reference Indicating Dial Face
- Non-rising Pressure Adjustment Knob
- Self-Relieving
- Full Pressure Adjustment in Less Than One Full Turn
- Recommended for Pilot-Air Applications (Low Flow)

## Specifications

Flow Capacity*	1/4	0.8 SCFM (0.377 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 40 PSIG (0 to 2.8 bar)	0 to 160 PSIG (0 to 11 bar)
Bleed Rate	0.05 SCFM (0.024 dm <sup>3</sup> /s)	
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1/4
Weight	lb. (kg)	1.3 (0.5)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

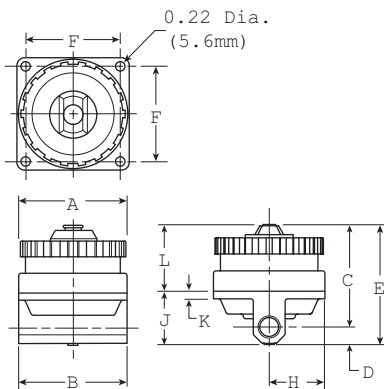
### ⚠ WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**NOTE:** Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

## Dimensions

Model	Inches (mm)	A	B	C	D	E	F	H	J	K	L
Standard Unit R11-02-000		2.60 (66)	2.60 (66)	2.40 (60.9)	.40 (10)	2.80 (71)	2.20 (55.9)	1.30 (33)	1.25 (31.8)	.18 (4.6)	1.56 (39.6)



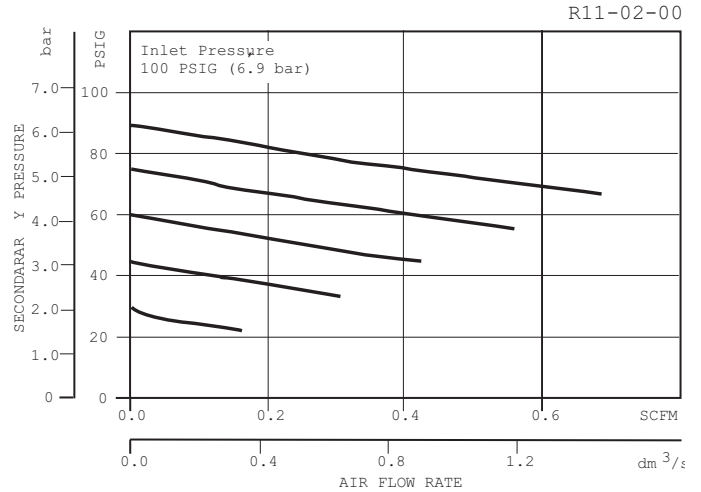
R11-02-00 = "Most Popular"

**Replacement Kits**

- Conversion Kit (Series A to Series B) ..... RRP-95-765
- O-ring, Repair Kit ..... GRP-95-260
- Spring, Regulating, Belleville Washer –  
 2 to 40 PSIG (0.1 to 3 bar) ..... RRP-95-906
- 5 to 160 PSIG (0.4 to 11 bar)..... RRP-95-905
- Valve, Pilot with O-ring and Valve Spring ..... RRP-96-934

**Accessories**

- Tamper Resistant Kit..... RRP-95-585



**Ordering Information**

Model Type	Port Size	Standard Pressure 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)
<b>Pilot</b>	1/4	R11-02-000	R11-02-L00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Dial-Air™ Regulator R21

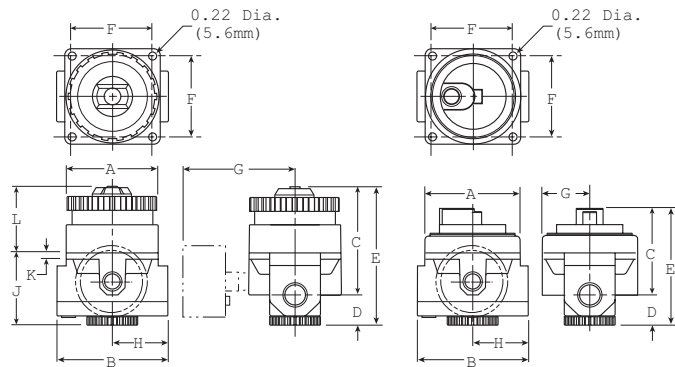
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**R21-02-000**

## Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT Gauge Ports, Usually Used for Additional Outlets
- Piston Operated



**Remote Operated**

**NOTE:** Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K	L
Standard Unit R21-XX-000		2.60 (66)	3.19 (81)	3.14 (79.8)	.95 (24)	4.09 (104)	2.20 (55.9)	—	1.61 (41)	2.08 (52.8)	.18 (4.6)	2.07 (52.6)
With Gauge (order separately) R21-XX-XXX		2.60 (66)	3.19 (81)	3.14 (79.8)	.95 (24)	4.09 (104)	2.20 (55.9)	2.70 (68.5)	1.61 (41)	2.08 (52.8)	.18 (4.6)	2.07 (52.6)
Remote Operated R21-XX-R00		2.60 (66)	3.19 (81)	2.24 (56.9)	.95 (24)	3.19 (81)	2.20 (55.9)	1.33 (33.8)	1.61 (41)	2.08 (52.8)	.18 (4.6)	1.11 (28.2)

## Specifications

Flow Capacity*	1/4	117 SCFM (55 dm <sup>3</sup> /s)
	3/8	180 SCFM (85 dm <sup>3</sup> /s)
	1/2	195 SCFM (92 dm <sup>3</sup> /s)
	3/4	220 SCFM (103 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 40 PSIG (0 to 2.8 bar) 0 to 160 PSIG (0 to 11 bar)	
Bleed Rate	0.05 SCFM (0.024 dm <sup>3</sup> /s)	
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2, 3/4
Remote Pilot Port Size	1/4	
Weight	lb. (kg)	2.3 (1.04)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure (1/4, 1/2 & 3/4) 90 PSIG (6.2 bar); (3/8) 80 PSIG (5.5 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

## WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

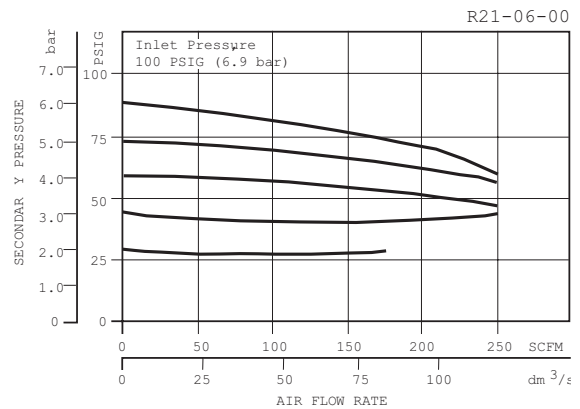
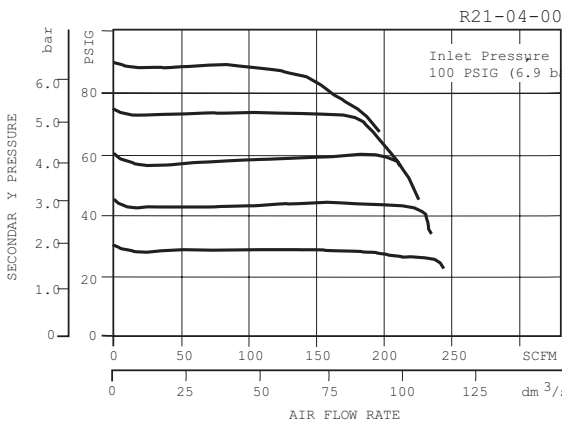
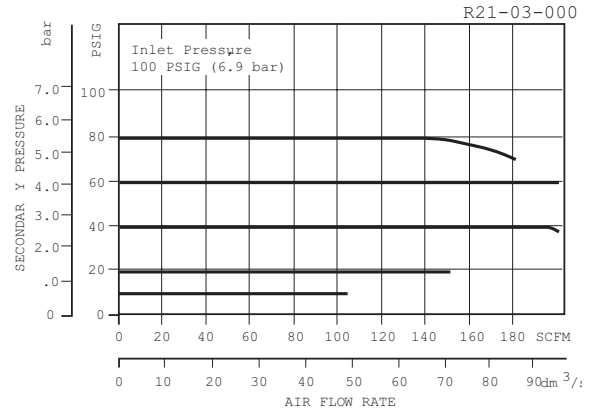
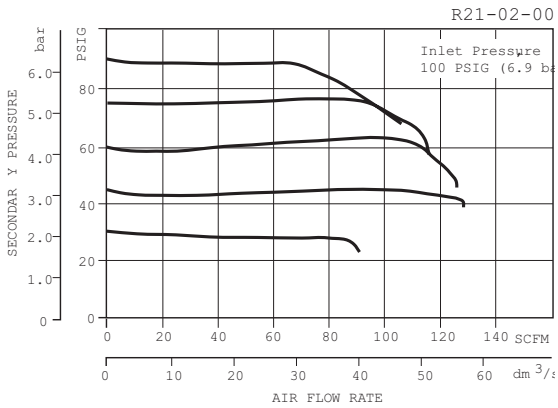
### Replacement Kits

- Adjustment Dial Knob ..... RRP-16-024-000
- Conversion Kit (Series A to Series B) ..... RRP-95-766
- Cover Kit (Remote) –
  - Bonnet and Nitrile, O-ring (Series B)..... RRP-95-910
  - Bonnet and Fluorocarbon, O-ring (Series B) ..... RRP-95-911
- O-ring, Repair Kit ..... GRP-95-260
- Piston, Bottom and O-ring Seal ..... RRP-95-192
- Spring, Regulating, Belleville Washer –
  - 2 to 40 PSIG (0.1 to 3 bar) ..... RRP-95-906
  - 5 to 160 PSIG (0.4 to 11 bar)..... RRP-95-905
- Valve, Main with U-cup Seal ..... RRP-95-151
- Valve, Main with U-cup Seal and Bottom Plug –
  - Nitrile Elastomers..... RRP-95-914
  - Fluorocarbon Elastomers..... RRP-95-915
- Valve, Main (Remote) with U-cup Seal..... RRP-96-952

- Valve, Main (Remote) with U-cup Seal and Bottom Plug –
  - Nitrile Elastomers)..... RRP-95-912
  - Fluorocarbon Elastomers..... RRP-95-913
- Valve, Pilot with O-ring and Valve Spring ..... RRP-96-934

### Accessories

- Wall Mounting Bracket, Gauge Port Adapter,
  - 1/4" NPT ..... RRP-95-590
- Gauge, Pressure –
  - 0 to 60 PSIG (0 to 4 bar), 2" Dial Face,
    - 1/4" NPT, CBM ..... K4520N14060
  - 0 to 160 PSIG (0 to 11 bar), 2" Dial Face,
    - 1/4" NPT, CBM ..... K4520N14160
  - 0 to 160 PSIG, 1-3/4" Digital Round,
    - 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit..... RRP-95-585



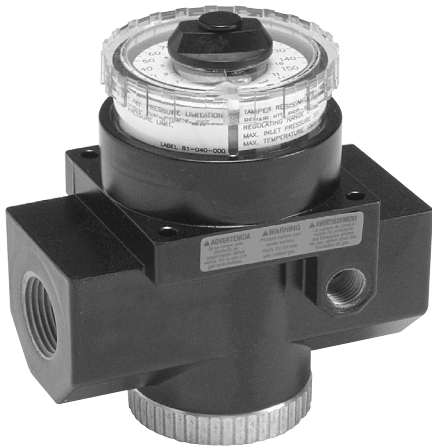
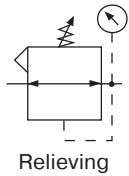
### Ordering Information

Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	1/4	R21-02-000	R21-02-L00	R21-02-R00
	3/8	R21-03-000	R21-03-L00	R21-03-R00
	1/2	R21-04-000	R21-04-L00	R21-04-R00
	3/4	R21-06-000	R21-06-L00	R21-06-R00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Dial-Air™ Regulator R31

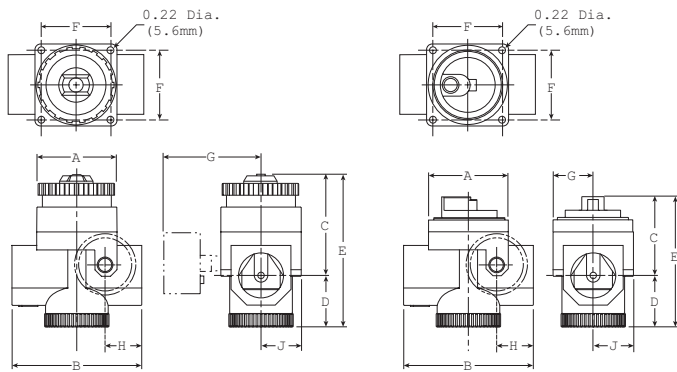
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**R31-06-000**

## Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT / BSPT-Rc Gauge Ports, Usually Used for Additional Outlets
- Piston Operated



**Remote Operated**

**NOTE:** Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J
Standard Unit R31-XX-000		2.59 (66)	4.29 (109)	3.50 (88.9)	1.69 (43)	5.19 (132)	2.20 (55.9)	—	1.23 (31.2)	1.31 (33.3)
With Gauge (order separately) R31-XX-XXX		2.59 (66)	4.29 (109)	3.50 (88.9)	1.69 (43)	5.19 (132)	2.20 (55.9)	3.00 (76)	1.23 (31.2)	1.31 (33.3)
Remote Operated R31-XX-R00		2.59 (66)	4.29 (109)	2.63 (66.8)	1.69 (43)	4.32 (109.7)	2.20 (55.9)	1.33 (33.7)	1.23 (31.2)	1.31 (33.3)

## Specifications

Flow Capacity*	3/4	400 SCFM (189 dm <sup>3</sup> /s)
	1	650 SCFM (307 dm <sup>3</sup> /s)
	1-1/4	700 SCFM (330 dm <sup>3</sup> /s)
Adjusting Range Pressure		0 to 40 PSIG (0 to 2.7 bar) 0 to 160 PSIG (0 to 11 bar)
Bleed Rate		0.05 SCFM (0.024 dm <sup>3</sup> /s)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1, 1-1/4
Remote Pilot Port Size		1/4
Weight	lb. (kg)	4.0 (1.8)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

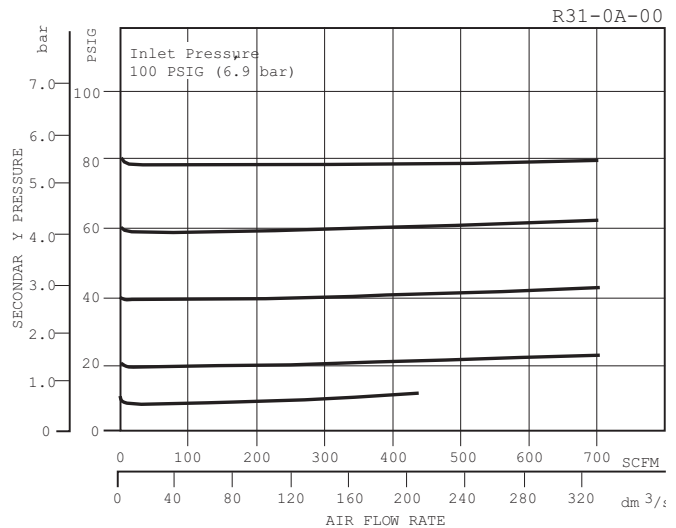
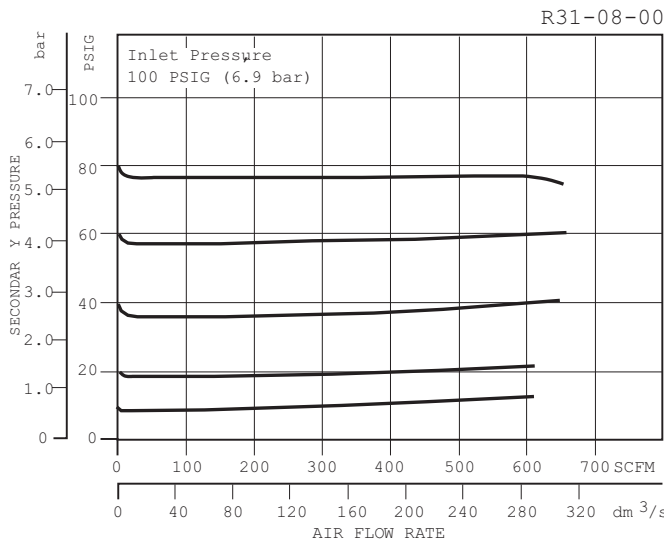
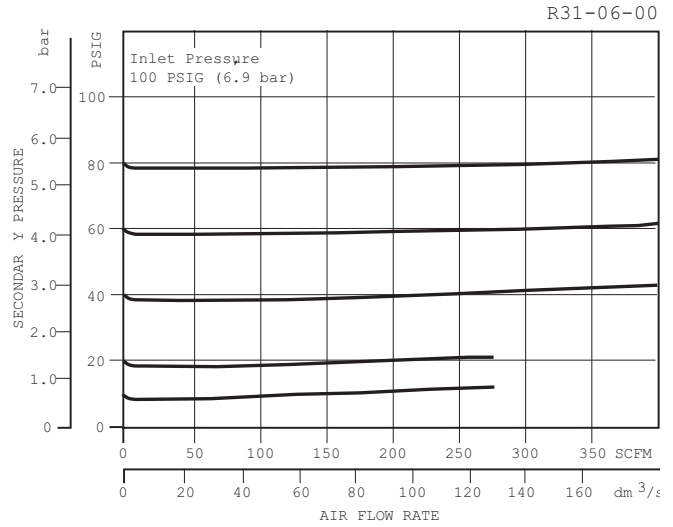
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### Replacement Kits

- Adjustment Dial Knob ..... RRP-16-024-000
- Conversion Kit (Series A to Series B) ..... RRP-95-766
- O-ring, Repair Kit ..... GRP-95-261
- Piston, Bottom and O-ring seal.....RRP-95-192
- Spring, Regulating, Belleville Washer –  
 2 to 40 PSIG (0.1 to 3 bar) ..... RRP-95-906  
 5 to 160 PSIG (0.4 to 11 bar)..... RRP-95-905
- Valve, Main with O-ring Seal.....RRP-95-152
- Valve, Main (Remote) with O-ring Seal ..... RRP-96-950
- Valve, Pilot with O-ring and Valve Spring ..... RRP-96-935

### Accessories

- Gauge, Pressure –  
 0 to 60 PSIG (0 to 4 bar), 2" Dial Face,  
 1/4" NPT, CBM .....K4520N14060
- 0 to 160 PSIG (0 to 11 bar), 2" Dial Face,  
 1/4" NPT, CBM ..... K4520N14160
- 0 to 160 PSIG, 1-3/4" Digital Round,  
 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit..... RRP-95-585
- Wall Mounting Bracket, Gauge Port Adapter,  
 1/4" NPT ..... RRP-95-590



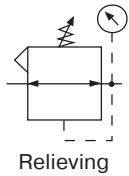
### Ordering Information

Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	3/4	R31-06-000	R31-06-L00	R31-06-R00
	1	R31-08-000	R31-08-L00	R31-08-R00
	1-1/4	R31-0A-000	R31-0A-L00	R31-0A-R00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Dial-Air™ Regulator R41

= "Most Popular"



**R41-0B-000**

## Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT / BSPT-Rc Gauge Ports, Usually Used for Additional Outlets
- Piston Operated

## Specifications

Flow Capacity*	1-1/2, 2	1600 SCFM (755 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 160 PSIG (0 to 11 bar)	
Bleed Rate	0.05 SCFM (0,024 dm <sup>3</sup> /s)	
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1-1/2, 2
Remote Pilot Port Size	1/4	
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	9 (4.1)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

## Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

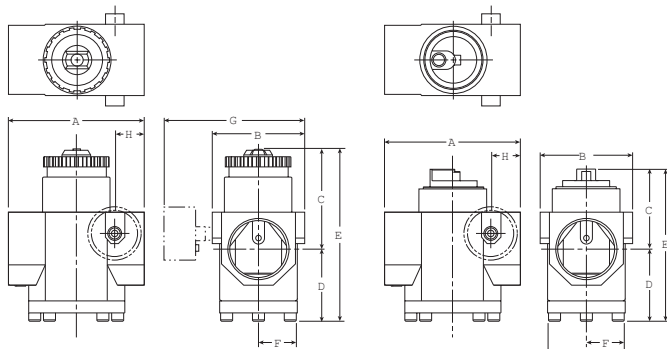
### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**Remote Operated**

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit R41-XX-000		5.31 (135)	3.58 (91)	4.02 (102)	2.79 (71)	6.81 (173)	1.79 (45.7)	— —	1.15 (29.2)
With Gauge (order separately) R41-XX-XXX		5.31 (135)	3.58 (91)	4.02 (102)	2.79 (71)	6.81 (173)	1.79 (45.7)	5.29 (134.6)	1.15 (29.2)
Remote Operated R41-XX-R00		5.31 (135)	3.58 (91)	3.11 (78.9)	2.79 (71)	5.90 (149.8)	1.50 (38)	3.00 (76)	1.15 (29.2)

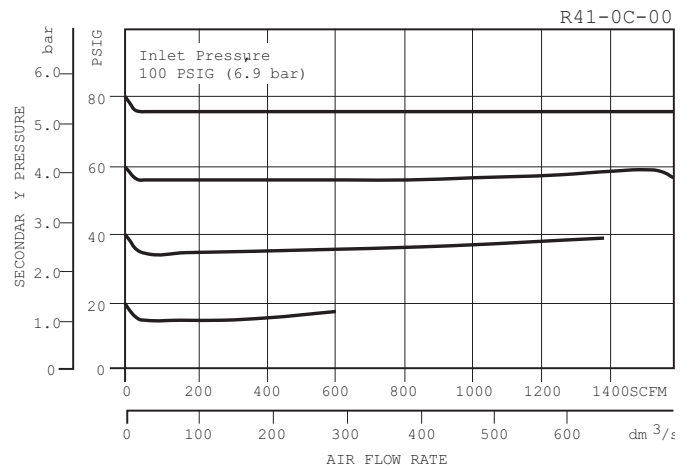
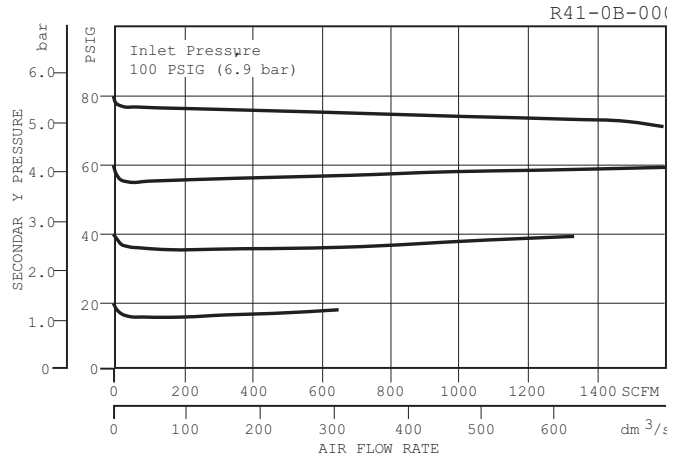
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### Replacement Kits

- Adjustment Dial Knob ..... RRP-16-024-000
- Conversion Kit (Series A to Series B) ..... RRP-95-766
- O-ring, Repair Kit ..... GRP-95-262
- Piston, Bottom and O-ring Seal ..... RRP-95-192
- Spring, Regulating, Belleville Washer –  
 2 to 40 PSIG (0.1 to 3 bar) ..... RRP-95-906  
 5 to 160 PSIG (0.4 to 11 bar) ..... RRP-95-905
- Spring, Valve ..... RRP-95-024
- Valve –  
 Main with O-ring Seal ..... RRP-95-153  
 Main (Remote) with O-ring Seal ..... RRP-96-951  
 Pilot with O-ring and Valve Spring ..... RRP-96-935

### Accessories

- Gauge, Pressure –  
 0 to 60 PSIG (0 to 4 bar), 2" Dial Face,  
 1/4" NPT, CBM ..... K4520N14060
- 0 to 160 PSIG (0 to 11 bar), 2" Dial Face,  
 1/4" NPT, CBM ..... K4520N14160
- 0 to 160 PSIG, 1-3/4" Digital Round,  
 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit ..... RRP-95-585
- Wall Mounting Bracket, Gauge Port Adapter,  
 1/4" NPT ..... RRP-95-590



### Ordering Information

Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	1-1/2	R41-0B-000	R41-0B-L00	R41-0B-R00
	2	R41-0C-000	R41-0C-L00	R41-0C-R00

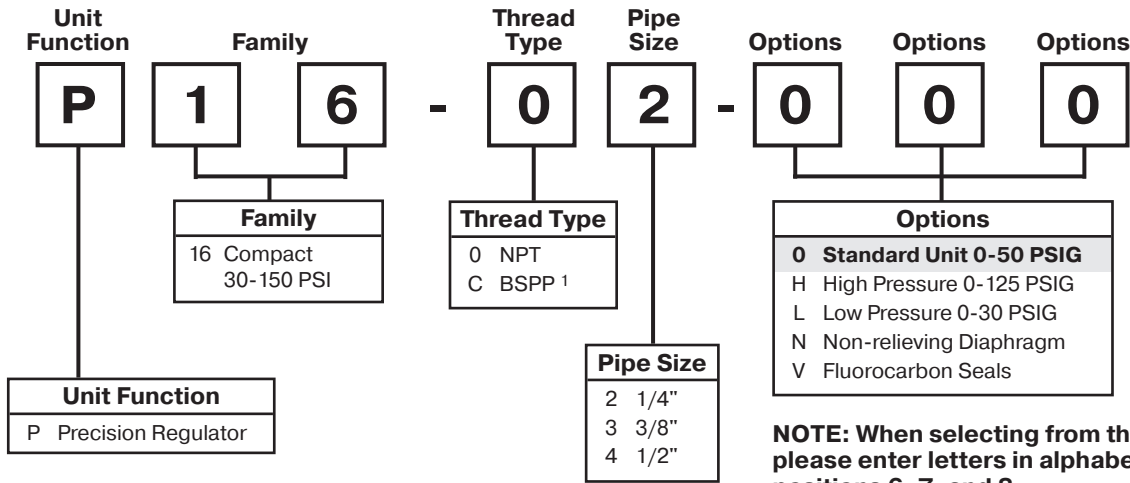
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes



# Precision Regulator Numbering System (16 Series)

  = "Most Popular"

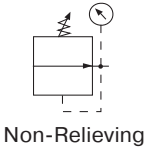
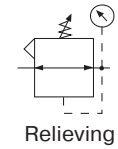


**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8.  
For example:

**P 1 6 - 0 2 - H 0 0**

# Precision Regulator P16 (Modular)

= "Most Popular"



**P16-02-000**

The P16 models are general purpose regulators specifically designed for applications that require reliable performance and accurate pressure control.

## Features

- *Stable Output* – Aspirator Design Minimizes “Droop” at Higher Flow Levels
- *Accuracy* – High Diaphragm-to-Valve-Area Ratio Combined with Unbalanced Valve Provides High Precision with Minimal Initial Pressure Droop
- *Sensitive* – Responds Quickly to the Slightest Change in Downstream Pressure
- *Easy Maintenance* – May be Disassembled and Serviced without Removal from Air Line
- *Modular Design* – Available in a Modular Configuration to Work with Other Wilkerson Modular Units, Accessories and Options

## Specifications

Flow Capacity*	P16	22.0 SCFM (10.4 dm <sup>3</sup> /s)
Bleed Rate		0.03 SCFM (0.014 dm <sup>3</sup> /s) max.
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight	lb. (kg)	1.66 (0.75)

\* Inlet pressure 100 PSIG (6,9 bar). Secondary pressure 45 PSIG (3,1 bar).

## Materials of Construction

Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile

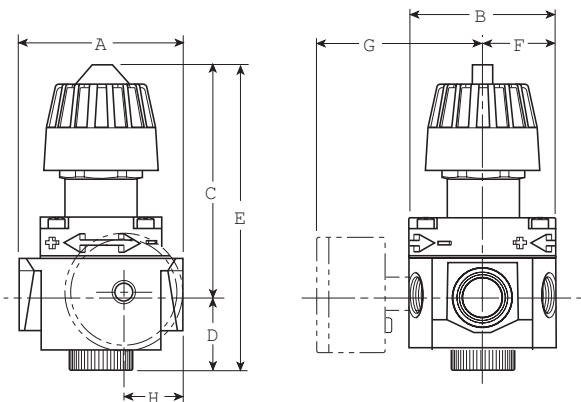
### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



**NOTE:** 1.31" Dia. (33,3 mm) hole required for panel nut mounting.

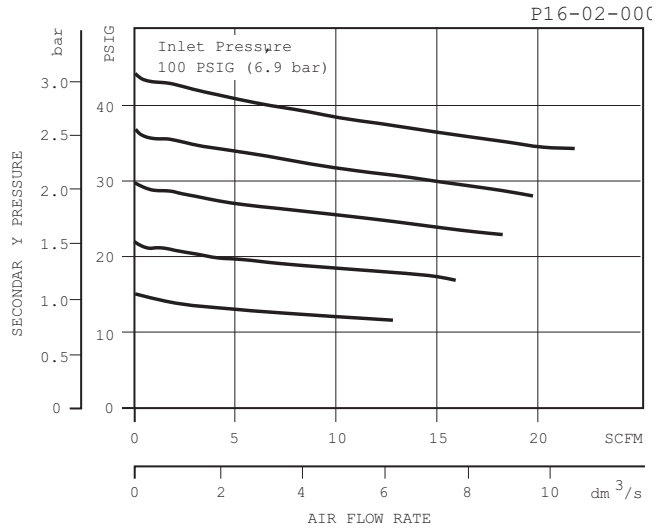
## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit P16-XX-000		2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	— —	1.02 (25.9)
With Gauge (order gauge separately) P16-XX-XXX		2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	2.99 (76)	1.02 (25.9)

= "Most Popular"

### Replacement Kits

- Diaphragm Assembly
  - Self-relieving, Fluorocarbon..... PRP-95-073
  - Self-relieving, Nitrile..... PRP-95-960
- Knob, Adjusting (Series A)
  - Used on Units with Plastic Bonnets..... RRP-95-023
- Knob, Adjusting (Prior to Series A)
  - Used on Units with Zinc Bonnets..... RRP-95-007
- Repair Kit, Non-relieving Diaphragm, Valve / Valve Spring, O-rings..... PRP-95-053
- Repair Kit, Self-relieving Diaphragm, Valve / Valve Spring, O-rings..... PRP-95-004
- Spring, Regulating –
  - 0 to 15 PSIG (0 to 1 bar)..... RRP-95-233
  - 0 to 30 PSIG (0 to 2.1 bar)..... RRP-95-916
  - 0 to 50 PSIG (0 to 3.4 bar)..... RRP-95-222
  - 0 to 125 PSIG (0 to 8.6 bar)..... RRP-95-224
- Valve, Fluorocarbon (Valve Only).....PPA-95-067
- Valve Assembly – Valve and Valve Spring..... PRP-95-959



### Accessories

- Gauge, Pressure, 2" Dial Face, 1/4 NPT, CBM
  - 0 to 30 PSIG (0 to 2.1 bar).....K4520N14030W
  - 0 to 60 PSIG (0 to 4 bar).....K4520N14060W
  - 0 to 160 PSIG (0 to 11 bar)..... K4520N14160W
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT..... K4517N14160D
- Nut, Panel Nut, Plastic..... GPA-95-032
- Tamper Resistant Kit, Ring Style..... RPA-95-006
- Wall Mounting Bracket
  - Gauge Port Adapter, 1/4 NPT..... RRP-95-590
  - L-Type – Heavy Duty..... RPA-95-090
  - L-Type – Standard.....GPA-95-012
  - L-Type with Plastic Panel Mount Nut..... GPA-95-011

### Ordering Information

Model Type	Port Size	Standard Unit 0 to 50 PSIG (0 to 3.4 bar)	High Pressure 0 to 125 PSIG (0 to 8.6 bar)	Low Pressure 0 to 30 PSIG (0 to 2.1 bar)	Fluorocarbon Seals
<b>P16 Relieving</b>	1/4	P16-02-000	P16-02-H00	P16-02-L00	P16-02-V00
	3/8	P16-03-000	P16-03-H00	P16-03-L00	P16-03-V00
	1/2	P16-04-000	P16-04-H00	P16-04-L00	P16-04-V00

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# High Precision Regulator

## P17

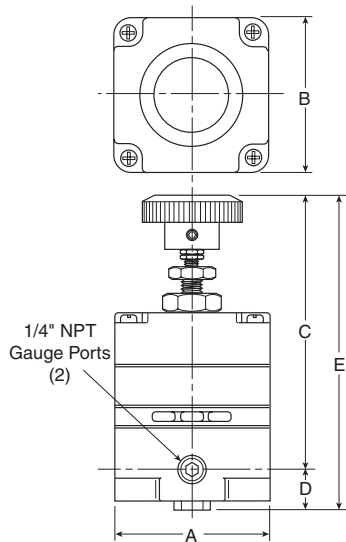
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**P17-02-F00**

### Features

- Accurate Pressure Regulation Controls Output Pressure to Within 0.1% Accuracy
- Multi-stage Regulation for Maximum Control and Stability
- Two Full Flow Gauge Ports
- Super Sensitive Relief. Downstream Pressure Buildup, Down to 0.005 PSIG Above the Set Pressure, is Automatically Vented through Internal Relief Valve
- P17 has High Exhaust Relief Capacity



### Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit P17-02-F00		2.10 (53)	2.10 (53)	3.82 (97)	0.43 (11)	4.35 (110)

### Specifications

Flow Capacity at 100 PSIG (6.89 bar) Supply, 20 PSIG (1.38 bar) Outlet	14 SCFM (25m <sup>3</sup> /hr)	
Constant Bleed Rate (Equals Bleed Rate plus other consumption)	Less than 0.08 SCFM (0.15m <sup>3</sup> /hr)	
Effect of Supply Pressure Variation of 25 PSIG (1.7 bar) on outlet:	Less than 0.005 PSIG (0.0003 bar)	
Exhaust (Relief) Capacity at 5 PSIG (0.34 bar) above 20 PSIG (1.38 bar) Setpoint	Standard Model	3 SCFM (3.4m <sup>3</sup> /hr)
	High-Relief Model	11 SCFM (17m <sup>3</sup> /hr)
Gauge Ports (Can be used as additional full flow 1/4" outlet ports)	1/4" NPTF	
Operating Pressure Range –	PSIG	bar
Primary – Maximum	150	10.34
Secondary – Spring Pressure		
40 PSIG	Minimum 2	0.14
	Maximum 40	2.76
120 PSIG	Minimum 2	0.14
	Maximum 120	8.27
Operating Temperature Range 0°F* to 150°F (-18°C * to 65°C) Temperatures below (0°C) 32°F require moisture free air.		
Port Threads	1/4"	
Repeatability / Sensitivity	0.005 PSIG (0.0003 bar) Inches of Water Column = 1/8"	
Total Air Consumption	6 SCFH (0.21m <sup>3</sup> /hr.)	
Weight	1.4 lb (0.64 kg)	

### Materials of Construction

Adjusting Stem & Capsule	Stainless Steel
Body	Zinc
Control Knob	Plastic
Diaphragm(s)	Buna-N
Seals	Buna-N
Springs	Stainless Steel
Valve Poppet	Stainless Steel

The P17 is a high precision, multi-stage pressure regulator. This pressure controller provides the highest level of regulation accuracy and repeatability available and is ideal for applications that call for the utmost in control and maximum stability under variable operating conditions. A stainless steel measuring capsule is used as a sensing element to activate the high gain servo balanced control mechanism in which the main valve is controlled by a pilot valve. This allows for greater accuracy and eliminates many of the problems associated with conventional regulators using range springs and diaphragms.

= "Most Popular"

## Regulator Kits

### Service Kits

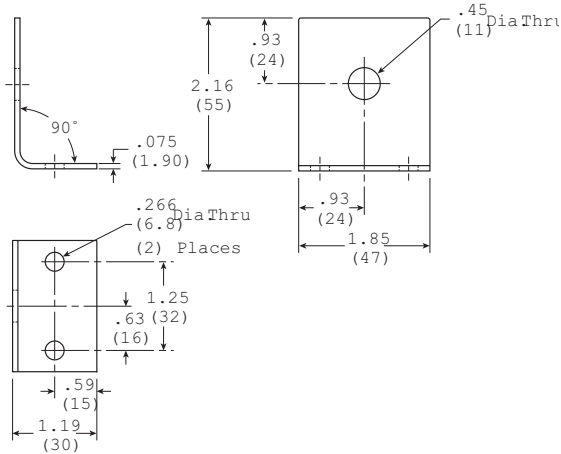
2-40 PSIG .....	RKR210A*
2-120 PSIG .....	RKR210C*
2-120 PSIG (High Relieving) .....	RKR220C*

\* Parts in Kit

### Accessories

#### Mounting Bracket Kits

Pipe Mounting .....	SA200YW57
Right Angle Mounting .....	446-707-045



Mounting Bracket: 446-707-045

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

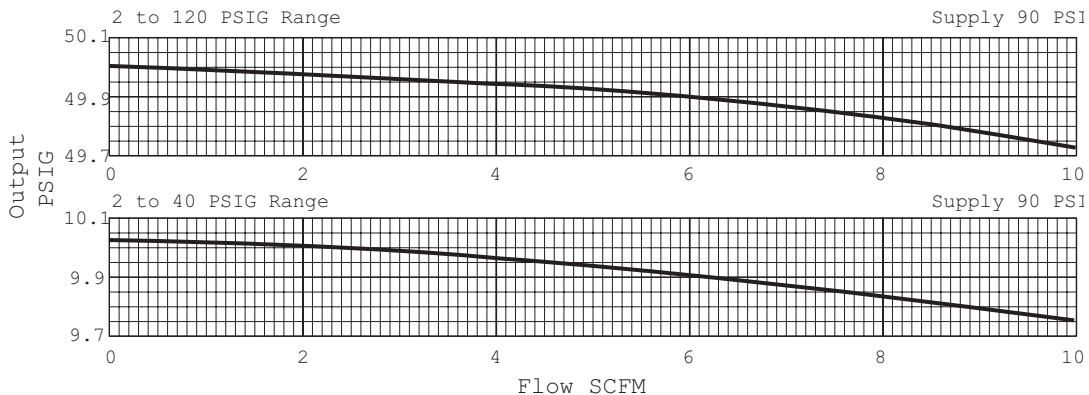
### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

### Applications

The P17 regulators are well suited for any process that requires very precise regulation of air pressure in pipes and vessels. These regulators are often used, but not limited to the following applications:

- Air Gauging
- Gas Mixing
- Calibration Standards
- Air Hoists
- Web Tensioning
- Gate Actuators
- Roll Loading
- Valve Operators
- Cylinder Loading

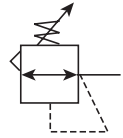


## Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		2 to 40	2 to 120	2 to 120 High Relief
In / Out Ports	1/4"	P17-02-B00	P17-02-F00	P17-02-FH0

# Compact High Precision Regulator WRA302

 = "Most Popular"



**WRA302**

## Features

- Control Sensitivity of .250" (.63 cm) Water Column Variation Allows Use in Precision Applications
- A Compensating Diaphragm Lets the Regulator Remain Unaffected by Supply Pressure Changes
- Flow of Up to 40 SCFM with 100 PSIG Supply Allows Use in Applications with High Flow Requirements
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Lets You Service the Regulator Without Removing it From the Line

## Specifications

**Supply Pressure** 250 PSIG, (17.0 bar), (1700 kPa) Maximum

**Flow Capacity –**

40 SCFM (68 m<sup>3</sup>/HR) @ 100 PSIG, (7.0 bar), (700 kPa) Supply and 20 PSIG, (1.5 bar), (150 kPa) Setpoint

**Exhaust Capacity –**

2.0 SCFM (3.4 m<sup>3</sup>/HR) where downstream pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) Setpoint

**Supply Pressure Effect –**

Less than 0.2 PSIG, (.014 bar), (.14 kPa) for 100 PSIG, (7.0 bar), (700 kPa) change in Supply Pressure

**Sensitivity** .250" (.010 PSIG) (.64 cm) Water Column

**Ambient Temperature** -40°F to +200°F, (-40°C to 93°C)

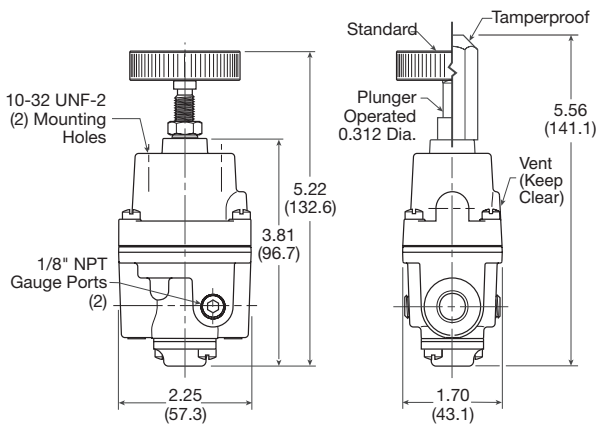
**Hazardous Locations –**

Acceptable for use in Zones 1 and 2 for Gas Atmosphere: Groups IIA and IIB and Zones 21 and 22 for Dust Atmospheres

## Materials of Construction

<b>Body and Housing</b>	Aluminum
<b>Diaphragms</b>	Nitrile on Dacron
<b>Trim</b>	Brass

The WRA302 Regulator is designed for applications that require high capacity and accurate process control in a small package. A poppet valve which is balanced by utilizing a convoluted diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.



Inches (mm)

## Dimensions

Models	Inches (mm)	A	A1	B	C	D	E	E1
Standard Unit WRA302		2.25 (57.3)	1.70 (43.1)	1.25 (31.8)	3.81 (96.7)	0.25 (6.4)	5.22 (132.6)	5.56 (141.1)

= "Most Popular"

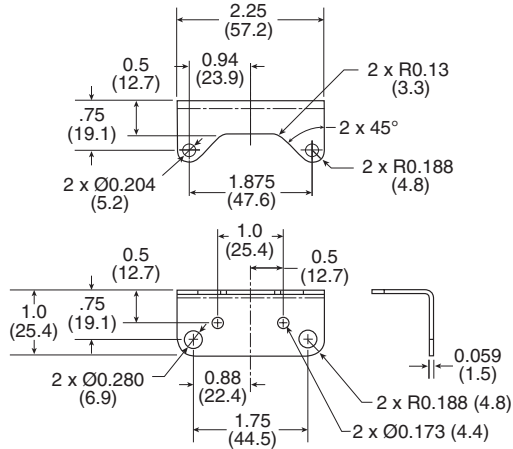
## WRA302 Kits and Accessories

### Service Kits

- 1/2 to 30, 1 to 60, & 2 to 100 PSIG,  
Nitrile, Standard.....PS16116-13
- 1/2 to 30, 1 to 60, & 2 to 100 PSIG,  
Nitrile, Non-relieving .....PS16116-14

**Tamper Resistant Kit**..... PS12163

**Mounting Bracket Kit**..... PS21667-1



**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Springs
3 0.5 to 30 PSIG
4 1 to 60 PSIG
5 2 to 100 PSIG

Pipe Size
2 1/4" NPT

Options
Blank No Options
H BSPP
N Non-Relieving

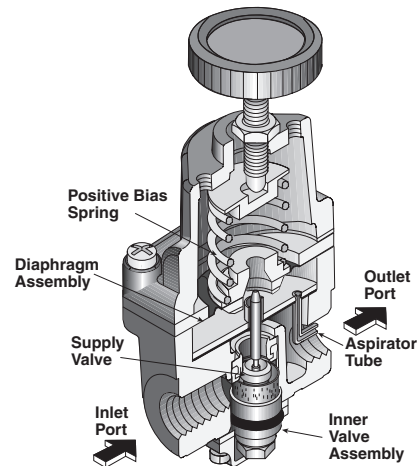
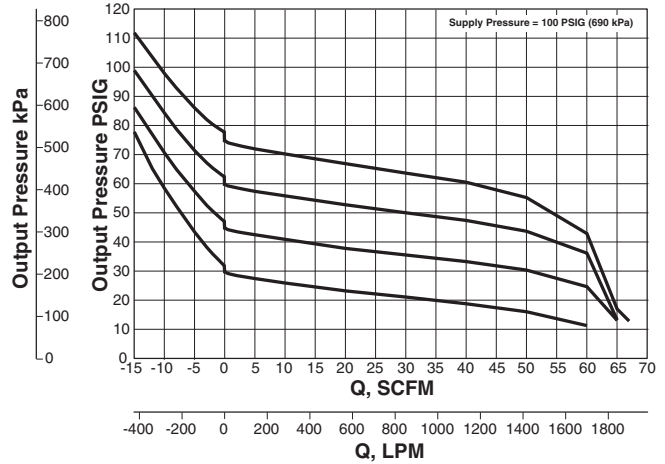
**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

## Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 100
In / Out Ports	1/4 Inch	WRA30232	WRA30242	WRA30252

## Technical Information

**Flow Characteristics**  
**Model WRA302**  
**2-100 PSIG (13.8-690 kPa) Range**

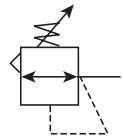


## Operating Principles

The WRA302 Regulator uses the force balance principal to control the movement of the valve assembly which in turn controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring causes the Diaphragm Assembly to move downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias spring is balanced by the upward force of the downstream pressure acting on the bottom of the Diaphragm Assembly. The resultant force moves the supply Valve upward to reduce the flow of air to the Outlet Port. Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

# Standard High Precision Regulator WRA102

 = "Most Popular"



**WRA102**

## Features

- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Processes
- Pressure Balanced Supply Valve Prevents Supply Pressure Changes From Affecting the Setpoint
- Optional Check Valve Permits Dumping of Downstream Pressure When Supply is Opened to Atmosphere
- Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions

## Specifications

**Supply Pressure** 500 PSIG, (35.0 bar), (3500 kPa) Maximum

### Flow Capacity –

40 SCFM (68 m<sup>3</sup>/HR) @ 100 PSIG, (7.0 bar), (700 kPa) Supply and 20 PSIG, (1.5 bar), (150 kPa) Setpoint

### Exhaust Capacity –

5.5 SCFM (9.35 m<sup>3</sup>/HR) where Downstream Pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) Setpoint

### Supply Pressure Effect –

Less than 0.1 PSIG, (.007 bar), (.7 kPa) for 100 PSIG, (7.0 bar), (700 kPa) change in Supply Pressure

**Sensitivity** .125" (.005 PSIG) (.32 cm) Water Column

**Ambient Temperature** -40°F to +200°F, (-40°C to 93°C)

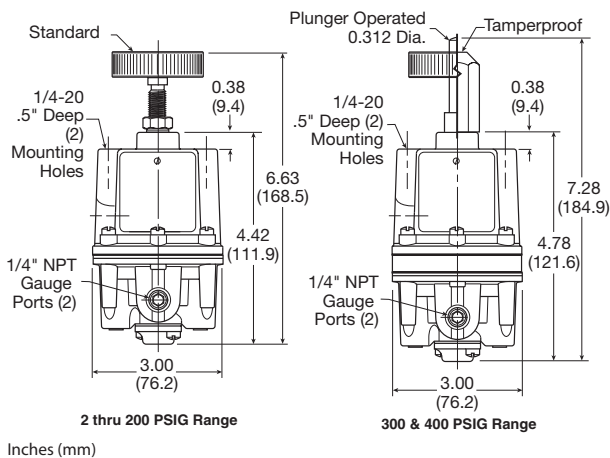
### Hazardous Locations –

Acceptable for use in Zones 1 and 2 for Gas Atmosphere: Groups IIA and IIB and Zones 21 and 22 for Dust Atmospheres

## Materials of Construction

<b>Body and Housing</b>	Aluminum
<b>Diaphragms</b>	Buna N on Dacron (Standard Unit Only)
<b>Trim</b>	Brass, Zinc Plated Steel

The WRA102 Regulator is designed for applications that require high capacity and accurate process control. A poppet valve which is balanced by utilizing a rolling diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.



## Dimensions

Models	Inches (mm)	A	B	B1	C	C1	D	E	E1
Standard Unit WRA102		3.00 (76.2)	2.22 (56.5)	2.13 (53.9)	4.42 (111.9)	4.78 (121.6)	0.38 (9.4)	6.63 (168.5)	7.28 (184.9)

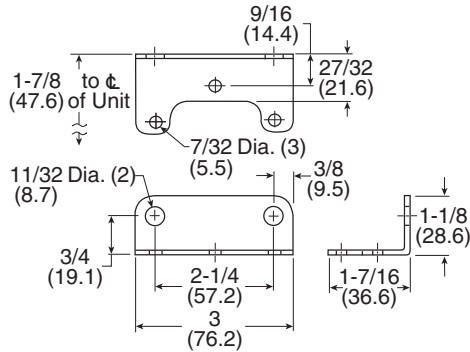


= "Most Popular"

### WRA102 Kits & Accessories

#### Mounting Bracket Kit –

Zinc Plated Steel..... PS09921



#### Service Kits

- 0 to 200 PSIG, Relieving ..... PS12125-1
- 0 to 200 PSIG, Non--relieving ..... PS12125-4

**Tamper Resistant Kit** ..... PS12165

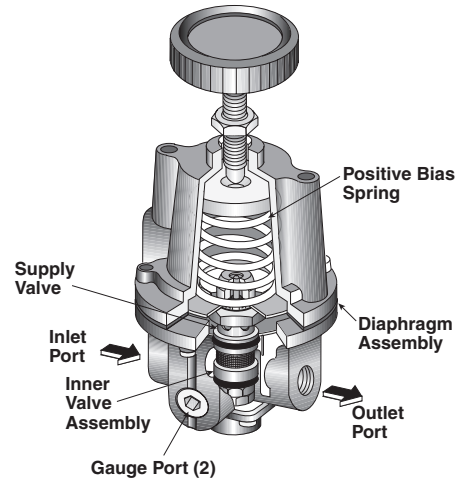
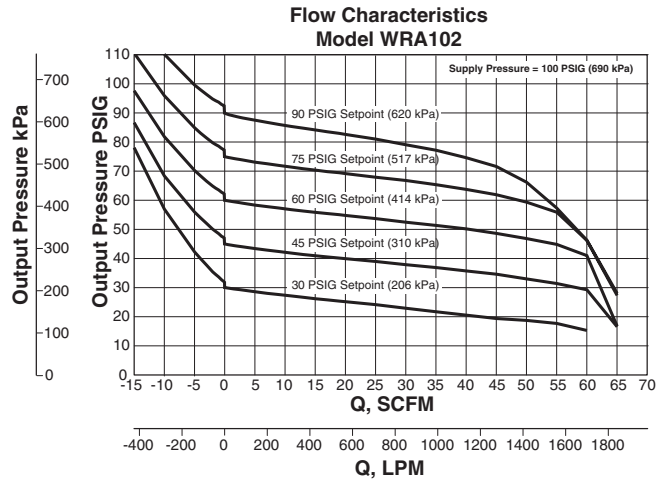
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

#### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

### Technical Information



#### Operating Principles

The WRA102 Series regulator use the force balance principal to control the movement of the Valve Assembly that controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring moves the Diaphragm Assembly downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias Spring is balanced by the force of the downstream pressure that acts on the Diaphragm Assembly. The resultant force moves the Supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

WRA102		6	2	
Springs	Pipe Size	Options		
3 0.5 to 30 PSIG 4 1 to 60 PSIG 6 2 to 150 PSIG	2 1/4" NPT	Blank No Options H BSPP N Non-Relieving		

**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

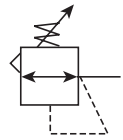
#### Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 150
In / Out Ports	1/4 Inch	WRA10232	WRA10242	WRA10262

# Compact High Precision Relief Valve

## WRA102BP

 = "Most Popular"



**WRA102BP**

### Features

- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Applications
- A Separate Control Chamber and Aspirator Tube Isolate the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Lets You Service the WRA102BP Without Removing it From the Line
- Mounting Bracket is Available

### Specifications

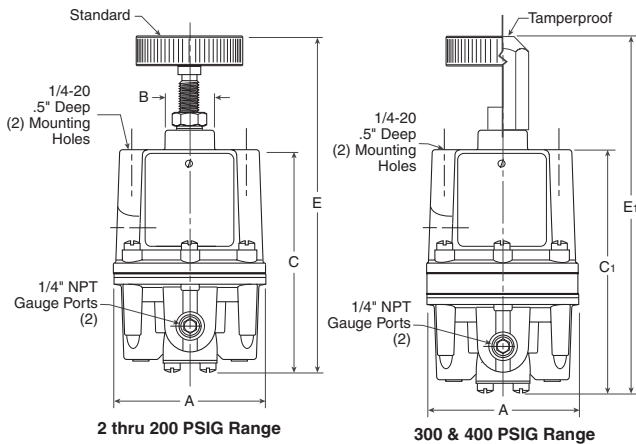
Set Point Range	System Pressure (Maximum)
2-200 PSIG (0.15-14 bar) (15-1400 kPa)	300 PSIG (21.0 bar) (2100 kPa)
300-400 PSIG (21-28 bar) (2100-2800 kPa)	500 PSIG (35.0 bar) (3500 kPa)
<b>Flow Capacity (SCFM) –</b> 40 (68 m <sup>3</sup> /HR) @ 100 PSIG, (7.0 bar), (700 kPa) System Pressure	
<b>Sensitivity</b> .125" (.005 PSIG) (.32 cm) Water Column	
<b>Ambient Temperature</b> -40°F to +200°F, (-40°C to +93°C)	

### Materials of Construction

<b>Body and Housing</b>	Aluminum
<b>Trim</b>	Zinc Plated Steel, Brass
<b>Nozzle</b>	Nitrile on Dacron

The WRA102BP is a high capacity relief valve that relieves excess pressure in a pneumatic system.

The WRA102BP provides greater accuracy than standard relief valves over a narrow pressure range. The WRA102BP is an excellent choice for a wide range of precision applications.



### Dimensions

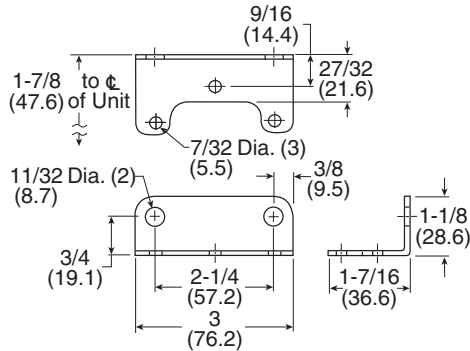
Models	Inches (mm)	A	B	C	C1	E	E1
Standard Unit WRA102BP		3.00 (76.2)	0.97 (24.6)	4.19 (106.4)	4.56 (115.9)	6.31 (160.3)	6.75 (171.4)

= "Most Popular"

## WRA102BP Kits & Accessories

### Mounting Bracket Kit –

Zinc Plated Steel..... PS09921



### Service Kits

0 to 200 PSIG, Standard..... PS12127-1

Tamper Resistant Kit..... PS12165

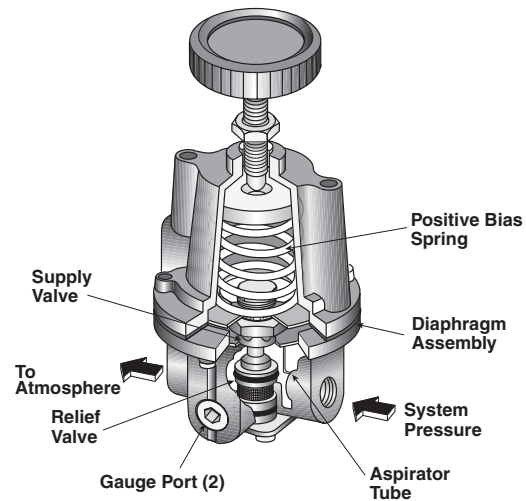
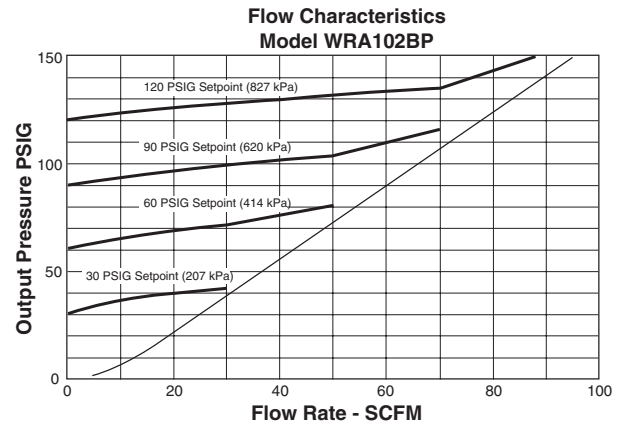
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

## Technical Information



### Operating Principles

The WRA102BP Regulator uses the force balance principle to open the Relief Valve and vent system pressure when the set point is exceeded.

Downstream pressure is transmitted through the Aspirator Tube to the bottom of the Diaphragm Assembly. When you adjust the range screw for a specific set point, the Positive Bias Spring compresses and exerts a force on the top of the Diaphragm Assembly. As long as the pressure acting on the bottom of the Diaphragm Assembly produces a force less than the spring force acting on the top of the Diaphragm Assembly, the Relief Valve remains closed. When system pressure increases, the force on the bottom of the Diaphragm Assembly increases until it reaches the set point. When system pressure increases beyond the set point, the assembly moves upward, lifting the Relief Valve from its seat and vents the downstream air.

If downstream pressure decreases below the set point, the assembly moves downward closing the Relief Valve.

<b>WRA102</b>	<b>6</b>	<b>2</b>	<b>BP</b>	
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Springs
3 0.5 to 30 PSIG
4 1 to 60 PSIG
6 2 to 150 PSIG

Pipe Size
2 1/4" NPT

Options
BP Back Pressure

Options
Blank No Options
H BSPP
N Non-Relieving

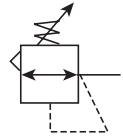
**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

### Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 150
In / Out Ports	1/4 Inch	WRA10232BP	WRA10242BP	WRA10262BP

# High Precision Vacuum Regulator WRA171

 = "Most Popular"



**WRA171**

## Features

- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Applications
- Balanced Supply Valve Minimizes Effects of Vacuum Variation
- Aspirator Tube Compensates for Downstream Pressure Droop Under Flow Conditions
- Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Construction Allows Servicing Without Removing From the Line

## Specifications

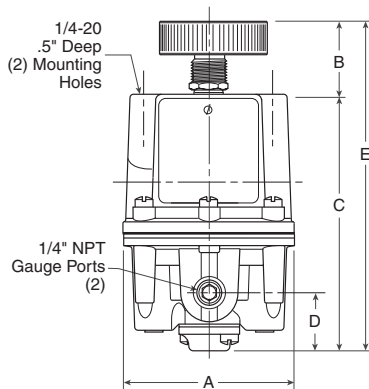
<b>Vacuum Supply (Max)</b>	29.92 Hg (760 torr)
<b>Flow Capacity</b>	3 SCFM @ 650 torr Supply, 250 torr Setpoint
<b>Sensitivity</b>	.125" (.005 PSIG) (.32 cm) Water Column
<b>Ambient Temperature</b>	-40°F to +200°F, (-40°C to +93°C)
<b>Vacuum Supply Effect –</b>	Less than 1 torr for 100 torr (.04 Hg for 3.94 Hg) change in Vacuum Supply

## Materials of Construction

<b>Body and Housing</b>	Aluminum
<b>Trim</b>	Zinc Plated Steel, Brass
<b>Elastomers</b>	Nitrile

The WRA171 is a high accuracy vacuum regulator that provides uniform vacuum regulation independent of vacuum supply changes and flow demand.

This unit has a diaphragm assembly with three springs to provide a more balanced loading of the diaphragm.



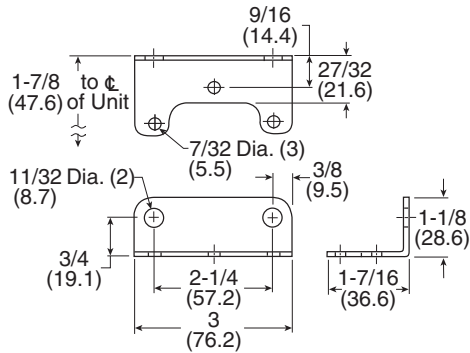
## Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit WRA171		3.00 (76.2)	1.13 (28.7)	4.83 (122.6)	1.00 (25.4)	5.96 (151.3)

= "Most Popular"

## WRA171 Kits and Accessories

Mounting Bracket ..... PS09921



### Service Kits

(Includes Diaphragm Assy, Valve Assy, Seat Assy & Gasket) –

0-30" Hg, Nitrile, Nonrelieving..... PS20966-9

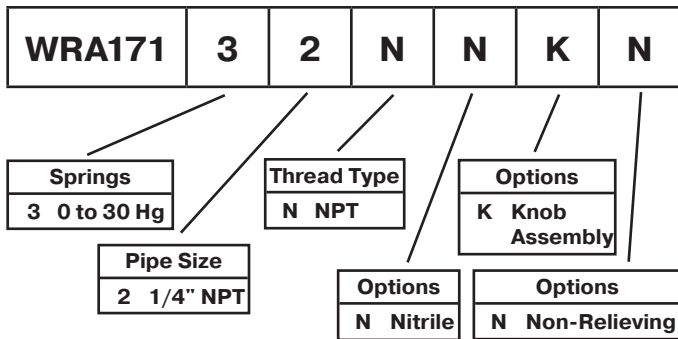
Tamper Resistant Kit.....PS20967-1

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



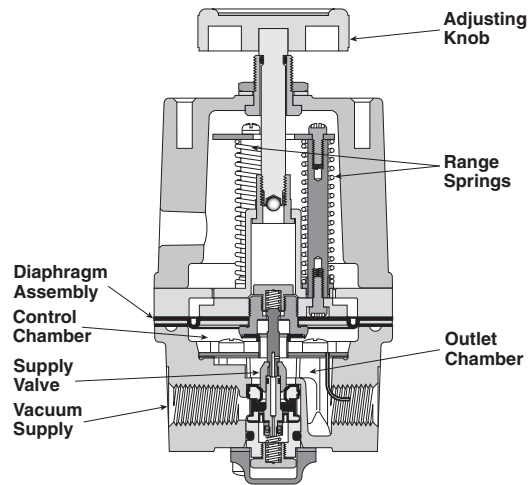
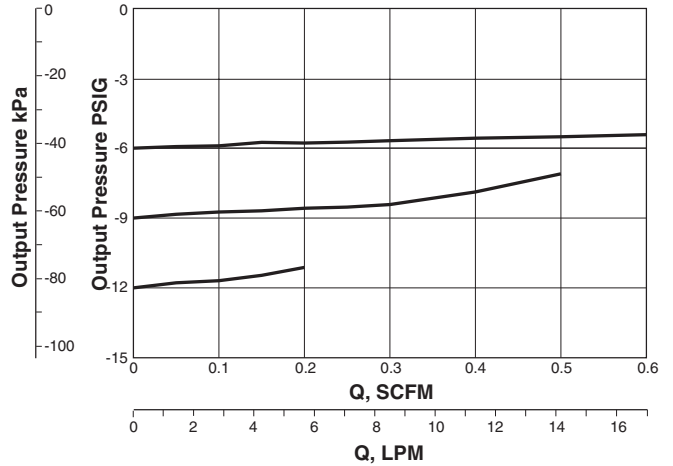
**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

## Ordering Information

	<b>Relieving</b>	<b>Reduced Pressure Range (PSIG)</b>
		<b>0 to 30</b>
<b>In / Out Ports</b>	1/4 Inch	WRA17132NNKN

## Technical Information

**Flow Characteristics**  
Model WRA171



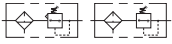
## Operating Principles

The Model WRA171 Series vacuum regulator uses the force balance principle to control the movement of the Valve Assembly that controls output vacuum.

When the regulator is adjusted for a specific set point, the upward force of the Range Springs moves the Diaphragm Assembly upward. The Supply Valve opens and allows air to pass to the inlet port. As the set point is reached, the upward force exerted by the Range Springs is balanced by the force of the vacuum that pulls downward on the Diaphragm Assembly. The resultant force moves the Supply Valve downward to reduce the flow of air to the inlet port. Outlet vacuum is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

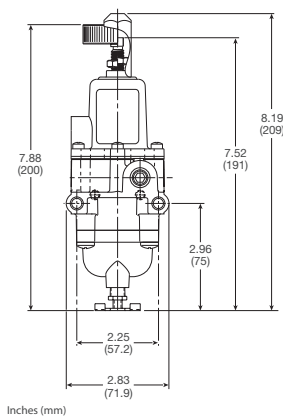
# Precision Filter / Regulator WEA632

= "Most Popular"



## Features

- The No-brass Construction is Well Suited to Harsh Environments
- Internal and External Epoxy Finish for Superior Corrosion Resistance
- Non-Bleed Design to Reduce Consumption.
- Integral Relief Valve
- A Gauge Port Provides Convenient Pressure Gauge Mounting
- The Standard 5-Micron Filter Minimizes Internal Contamination
- The Filter Dripwell Contains a Drain Plug to Easily Drain Trapped Liquids
- Standard Tapped Exhaust
- Soft Relief Seat Minimizes Air Loss.



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit WEA632		2.83 (71.9)	2.25 (57.2)	7.88 (200)	2.96 (75)	7.52 (1916)	8.19 (209)

## Specifications

<b>Supply Pressure</b>	250 PSIG, (17 bar), (1700 kPa) Maximum
<b>Flow Capacity (SCFM) –</b>	25 (42.5 m <sup>3</sup> /HR) @ 100 psig, (7 bar), (700 kPa) supply and 20 PSIG, (1.5 bar), (150 kPa) setpoint
<b>Exhaust Capacity (SCFM) –</b>	0.8 (1.36 m <sup>3</sup> /HR) where downstream pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) setpoint. (0.8 SCFM for 120 # unit)
<b>Maximum Supply Pressure</b>	250 PSIG, (14 bar), (1400 kPa)
<b>Consumption</b>	Undetectable
<b>Supply Pressure Effect –</b>	Less than 1.25 PSIG, (.09 bar), (9 kPa) change for 100 psig, (7.0 bar), (700 kPa) change in supply pressure (1.90 psig for 120 # unit)
<b>Sensitivity</b>	1.0" (.036 PSIG) (2.54 cm) Water Column
<b>Temperature Range</b>	-40 <sup>o</sup> F to + 160 <sup>o</sup> F, (-40 <sup>o</sup> C to + 71 <sup>o</sup> C)

## Materials of Construction

<b>Body and Housing</b>	Epoxy Coated Aluminum
<b>Trim</b>	Stainless Steel, Nickel Plated Steel
<b>Elastomers</b>	Nitrile

= "Most Popular"

### WEA632 Kits & Accessories

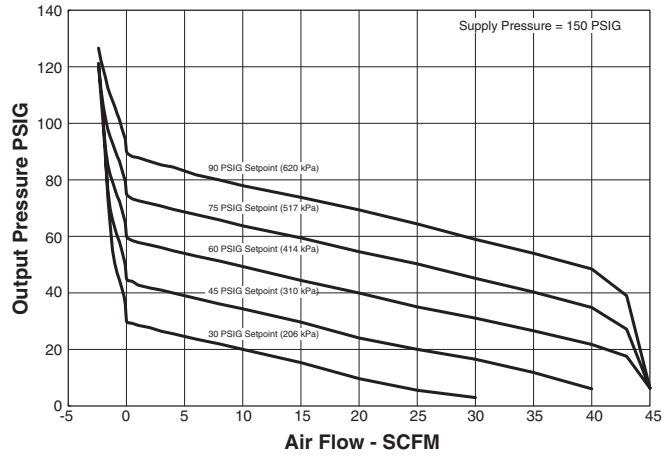
**Service Kits**

1 to 60, 2 to 120 PSIG .....PS19968-NR

**Tamper Resistant Kit** ..... PS12165

### Technical Information

**Flow Characteristics  
Model WEA632**

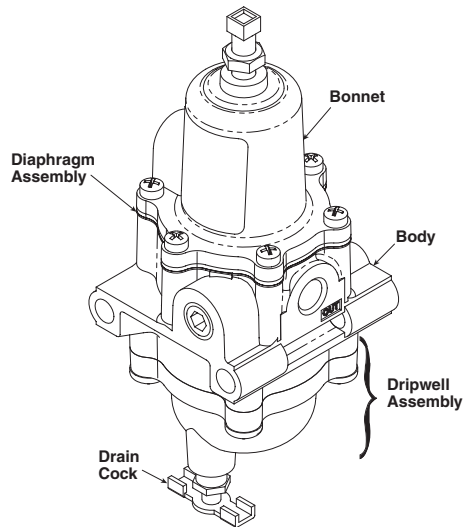


**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



### Operating Principles

When you turn the Adjustment Screw to a specific setpoint, the Spring exerts a downward force against the top of the Diaphragm Assembly. This downward force opens the Supply Valve. Output pressure flows through the Outlet Port and the passage to the Control Chamber where it creates an upward force on the bottom of the Diaphragm Assembly.

When the setpoint is reached, the force of the Spring that acts on the top of the Diaphragm Assembly balances with the force of output pressure that acts on the bottom of the Diaphragm Assembly and closes the Supply Valve.

When the output pressure increases above the setpoint, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Output pressure flows through the Exhaust Valve and out of the Exhaust Vent on the side of the unit until it reaches the setpoint.

<b>WEA632</b>	<b>5</b>	<b>2</b>	<b>N</b>	<b>S</b>		
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**Springs**

4 1 to 60 PSIG  
5 2 to 120 PSIG

**Pipe Size**

2 1/4" NPT

**Thread Type**

N NPT  
U BSPP

**Adjustment**

S Screw (Std.)  
K Knob  
T Tamperproof

**Options**

Blank None

**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

### Ordering Information

Relieving		Reduced Pressure Range (PSIG)	
		0 to 60	2 to 120
In / Out Ports	1/4 Inch	WEA63242NS	WEA63252NS

# Precision Pneumatic Input Signal Amplifier WBA208

= "Most Popular"



## Features

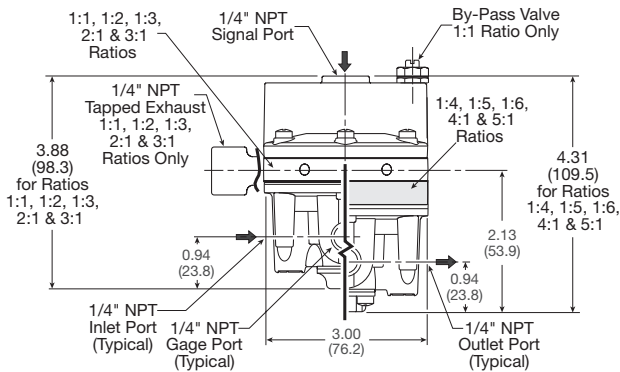
- The WBA208 Uses a Pneumatic Input Signal to Accurately Control Output Pressure Based on a Predetermined Ratio
- A Balanced Supply Valve Minimizes the Effects of Supply Pressure Variation
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flowing Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Allows Servicing Without Removal
- Mounting Bracket Available

## Specifications

Ratio	Signal:Output		
	1:1	1:2	1:3
<b>Maximum Output Pressure, PSIG (bar)</b>	150 (10.0)	150 (10.0)	150 (10.0)
<b>Maximum Supply Pressure, PSIG (bar)</b>	250 (17.0)	250 (17.0)	250 (17.0)
<b>Flow Capacity SCFM, (m<sup>3</sup>/HR)</b> 100 PSIG, (7.0 bar ) Supply, 20 PSIG, (1.5 bar ) Output.	45 (76.5)	45 (76.5)	45 (76.5)
<b>Exhaust Capacity SCFM, (m<sup>3</sup>/HR)</b> Downstream Pressure 5 PSIG, (.35 bar) Above Output Pressure Set Point of 20 PSIG, (1.5 bar).	11 (18.7)	11 (18.7)	11 (18.7)
<b>Sensitivity (Water Column)</b>	.250" (.64 cm)	.500" (1.27 cm)	.750" (1.9 cm)
<b>Ratio Accuracy</b> % of 100 PSIG, (7.0 bar) Output Span	1.0	1.0	1.0
% of Output Span with (7.0 bar) Input Span	—	—	—
<b>Supply Pressure Effect, PSIG (bar)</b> for change of 100 PSIG, (7.0 bar).	0.10 (.007)	0.20 (.014)	0.30 (.021)
<b>Ambient Temperature, °F (°C)</b>	-40 to +200 (-40 to +93)		

## Materials of Construction

<b>Body and Housing</b>	Aluminum
<b>Diaphragm</b>	Nitrile on Dacron Fabric
<b>Trim</b>	Zinc Plated Steel, Brass



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>
Standard Unit WBA208		3.00 (76.2)	.94 (23.8)	2.13 (53.9)	.94 (23.8)	.13 (3.2)	3.88 (98.3)	4.31 (109.5)



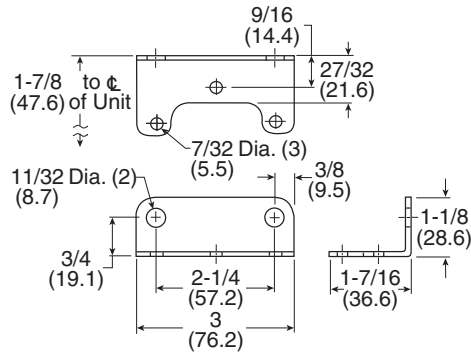
= "Most Popular"

## WBA208 Kits and Accessories

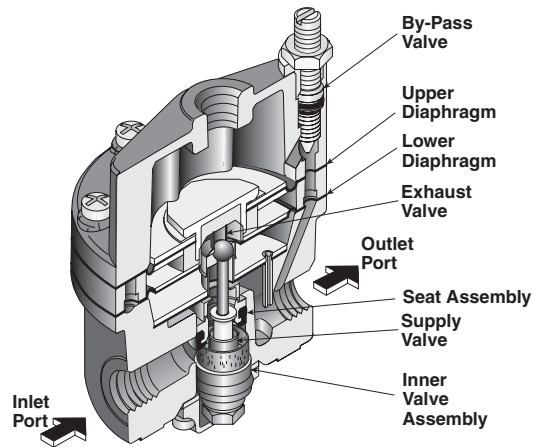
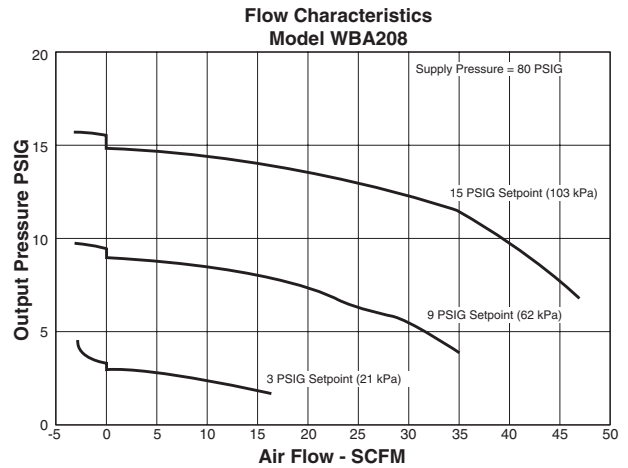
Mounting Bracket ..... PS09921

### Service Kits

- 1:1 Ratio .....PS19513-11
- 1:1 Ratio w/ By-Pass Valve ..... PS19513-11I
- 1:2 Ratio ..... PS19513-12
- 1:3 Ratio ..... PS19513-13



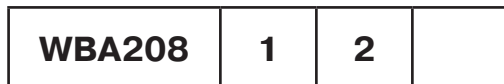
## Technical Information



## Operating Principles

The WBA208 Input Signal Amplifier is a pneumatic device capable of high flow and exhaust capacity. This device uses a force balance system to control the movement of the supply and exhaust valves.

At set point, the force due to signal pressure that acts on the top of the Upper Diaphragm balances with the force due to output pressure acting on the bottom of the Lower Diaphragm.



Pilot Ratio
1 1:1
2 1:2
3 1:3

Pipe Size
2 1/4" NPT

Options	
Blank	No Options
E	Tapped Exhaust
H	BSPP
I	By-Pass Valve

**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

## Ordering Information

Relieving		Pilot Ratio		
		1:1	1:2	1:3
In / Out Ports	1/4 Inch	WBA20812	WBA20822	WBA20832

# Precision Pneumatic Input Signal Amplifier WBA45

= "Most Popular"

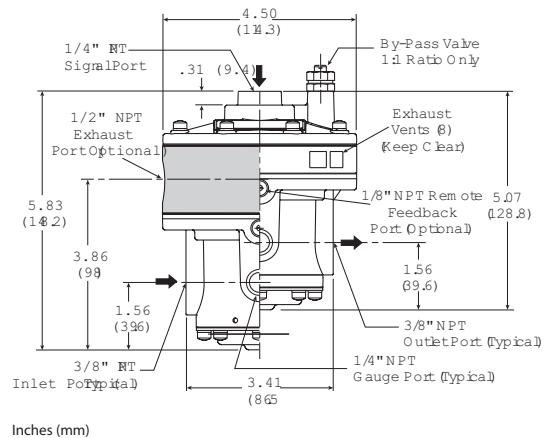


## Features

- Five Signal to Output Ratios Meet Most Control Element Requirements
- Control Sensitivity of Water Column Allows Use in Precision Applications
- Large Supply and Exhaust Valves Provide High Forward and Exhaust Flows
- Soft Supply and Exhaust Valve Seats Minimize Air Consumption
- A Balanced Supply Valve Minimizes the Effect of Supply Pressure Variation
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Optional Remote Feedback Port Minimizes Pressure Drop at Final Control Element Under Flow Conditions
- Unit Construction Lets You Service the WBA45 Without Removing it From the Line

## Specifications

Ratio	Signal:Output		
	1:1	1:2	1:3
<b>Maximum Output Pressure, PSIG (bar)</b>	150 (10.0)	150 (10.0)	150 (10.0)
<b>Maximum Supply Pressure, PSIG (bar)</b>	250 (17.0)	250 (17.0)	250 (17.0)
<b>Flow Capacity SCFM, (m<sup>3</sup>/HR)</b> 100 PSIG, (7.0 bar) Supply, 20 PSIG, (1.5 bar) Output	150 (255)	150 (255)	150 (255)
<b>Exhaust Capacity SCFM, (m<sup>3</sup>/HR)</b> Downstream Pressure 5 PSIG, (.35 bar) Above 20 PSIG, (1.5 bar) Setpoint	40 (62.5)	40 (62.5)	40 (62.5)
<b>Sensitivity (Water Column)</b>	1.0" (2.54 cm)	2.0" (5.08 cm)	3.0" (7.62 cm)
<b>Ratio Accuracy –</b> % of 100 PSIG, (7.0 bar) Output Span	3.0	3.0	3.0
% of Output Span with 100 PSIG (7.0 bar) Input Span	—	—	—
<b>Supply Pressure Effect, PSIG (bar)</b> for change of 100 PSIG, [7.0 bar], (700 kPa).	0.10 (.007)	0.20 (.014)	0.30 (.021)
<b>Ambient Temperature, °F (°C)</b>	-40 to +200 (-40 to +93)		
<b>Hazardous Locations</b>	Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres.		



## Dimensions

Models	Inches (mm)	A	B	C	C <sub>1</sub>	D	E	E <sub>1</sub>
Standard Unit WBA45		4.50 (114.3)	3.41 (86.5)	3.86 (98)	1.56 (39.6)	.31 (7.9)	5.07 (128.8)	5.83 (148.2)

= "Most Popular"

## WBA45 Kits and Accessories

### Service Kits

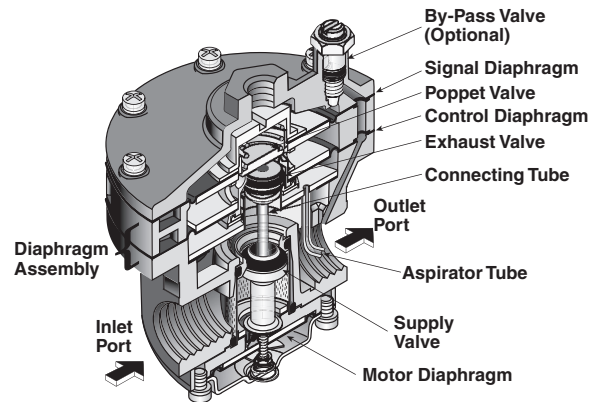
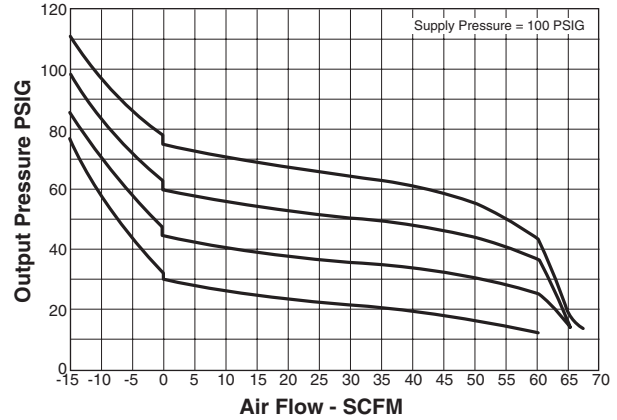
1:1 Ratio .....	PS19549-1
1:1 Ratio w/ Tapped Exhaust .....	PS19549-1E
1:3 Ratio .....	PS19549-3
1:2 Ratio .....	PS19549-2
1:1 w/ Tapped Exhaust, I Option .....	PS19549-20E

### Materials of Construction

<b>Body and Housing</b> .....	Aluminum
<b>Diaphragm</b> .....	Nitrile on Dacron Fabric
<b>Trim</b> .....	Zinc Plated Steel, Brass

## Technical Information

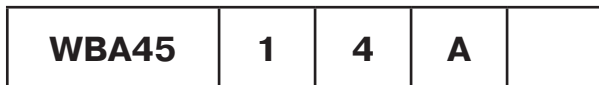
Flow Characteristics  
Model WBA45



### Operating Principles

When signal pressure on the top of the Signal Diaphragm creates a downward force on the Diaphragm Assembly, the Supply Valve opens. Output pressure flows through the Outlet Port and the Aspirator Tube to the Control Chamber to create an upward force on the bottom of the Control Diaphragm. When the setpoint is reached, the force of the signal pressure that acts on the top of the Signal Diaphragm balances with the force of the output pressure that acts on the bottom of the Control Diaphragm to close the Supply Valve.

When the output pressure increases above the signal pressure, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Because the Poppet Valve is closed, pressure flows down the Connecting Tube to the bottom of the Motor Diaphragm. This pressure keeps the Supply Valve tightly closed while in the exhaust mode. The Poppet Valve opens and excess output pressure exhausts through the vent in the side of the unit until it reaches the setpoint.



Pilot Ratio
1 1:1
2 1:2
3 1:3

Pipe Size
4 1/2" NPT
6 3/4" NPT

Type
A 45 Series

Options	
Blank	No Options
E	Tapped Exhaust
H	BSPP
I	By-Pass Valve

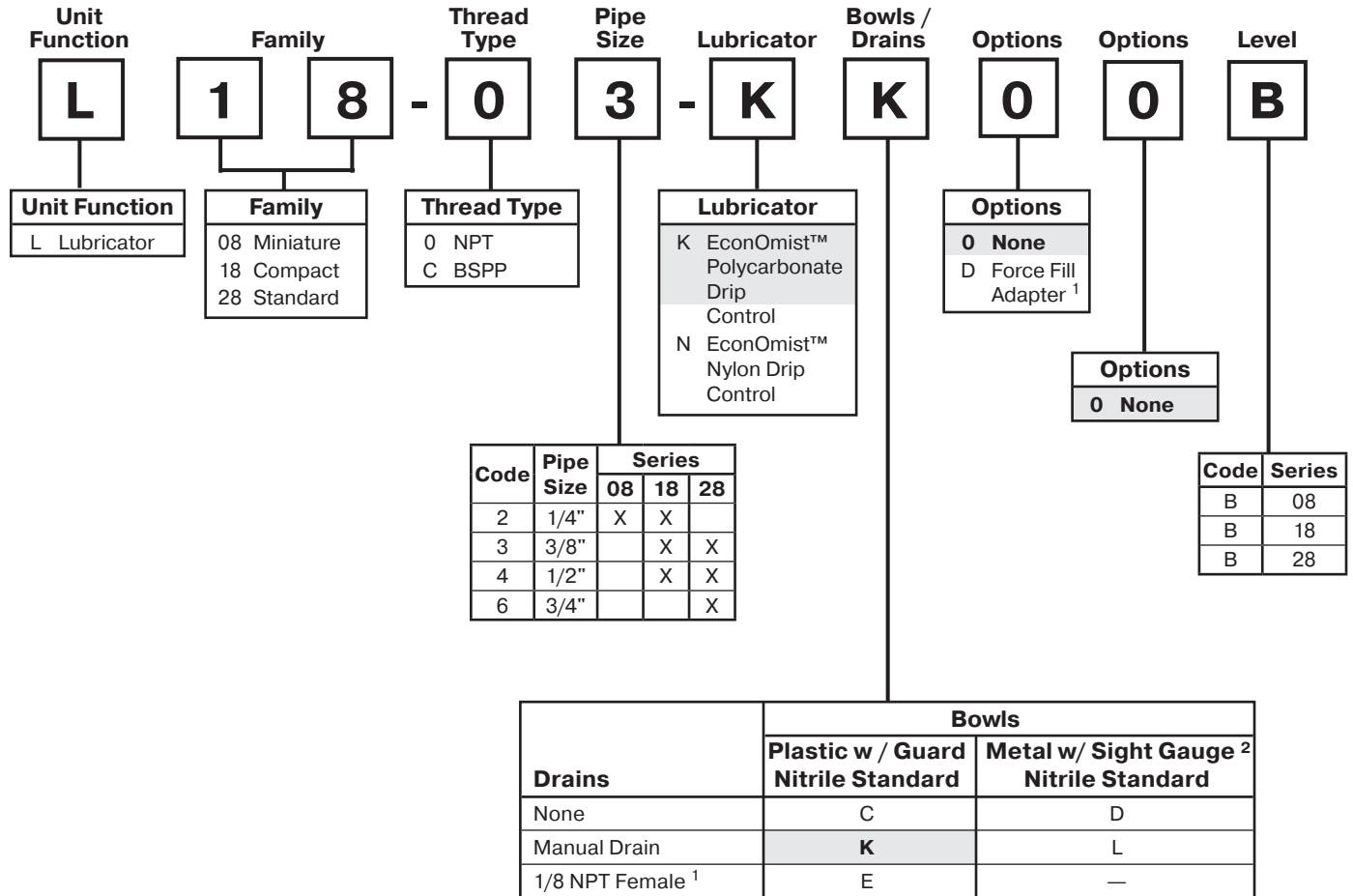
**Note:** Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

### Ordering Information

Relieving		Pilot Ratio		
		1:1	1:2	1:3
In / Out Ports	1/2 Inch	WBA4514A	WBA4524A	WBA4534A
	3/4 Inch	WBA4516A	WBA4526A	WBA4536A

# Lubricator Numbering System

   = "Most Popular"



<sup>1</sup> Not available on L08

<sup>2</sup> No sight gauge on L08

**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

**L 18 - 03 - K K 0 0 B**

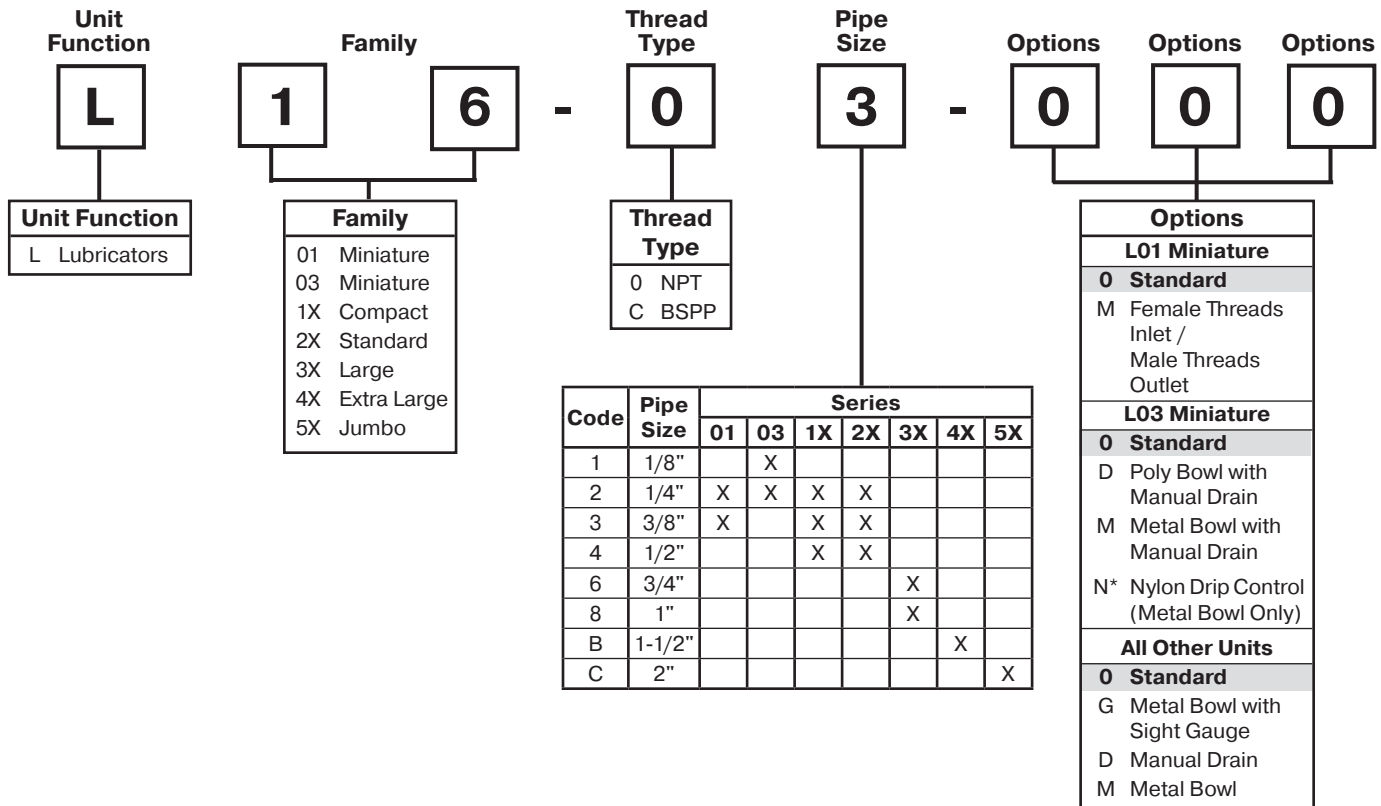
### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Lubricator Numbering System

   = "Most Popular"



\* Available only with Metal Bowl "M".

**Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8. For example:**

**L16-03-000**

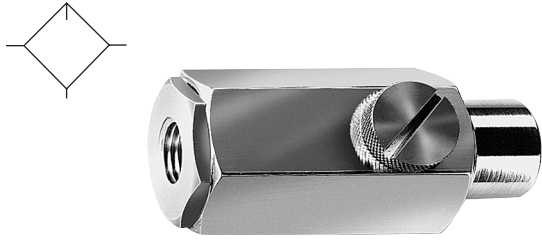
**Suggested Lubricant**

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Lubricator L01 EconOmist™

 = "Most Popular"



**L01-02-000**

## In-Line Lubricator

In-Line Lubricators assure proper lubrication for small pneumatic hand tools. These in-line lubricators put the oil source right at the tool. Oil capacity is 1/4 oz. (1 ml) enough to last through an average 8-hour shift. This lubricator requires cyclical or intermittent airflow for proper operation, and consequently works best when installed at the tool inlet or on a short hose near the tool.

**The L01 cannot be filled under pressure.**

## Specifications

Flow Capacity*	1/4	36.0 SCFM (17.0 dm <sup>3</sup> /s)
	3/8	38.1 SCFM (18.0 dm <sup>3</sup> /s)
Maximum Supply Pressure	200 PSIG (13.8 bar)	
Oil Capacity**	oz. (cm <sup>3</sup> )	0.25 (7.4)
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPT-Rc	1/4, 3/8
Weight	lb. (kg)	0.2 (0.1)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

\*\* Oil Capacity refers to usable volume.

## Materials of Construction

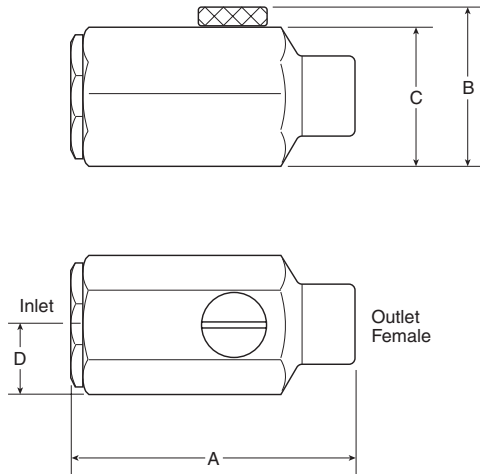
Body	Aluminum
Seals	Nitrile

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Pipe Size Inlet	Pipe Size Outlet	Inches (mm)	A	B	C	D
Standard Unit	1/4" NPT Female	1/4" NPT Female		2.65 (67)	1.30 (33)	1.12 (28.5)	.65 (16.5)
L01-02-M00	1/4" NPT Female	1/4" NPT Male		2.93 (74)	1.30 (33)	1.12 (28.5)	.65 (16.5)
L01-03-M00	3/8" NPT Female	3/8" NPT Male		3.19 (81)	1.30 (33)	1.12 (28.5)	.65 (16.5)

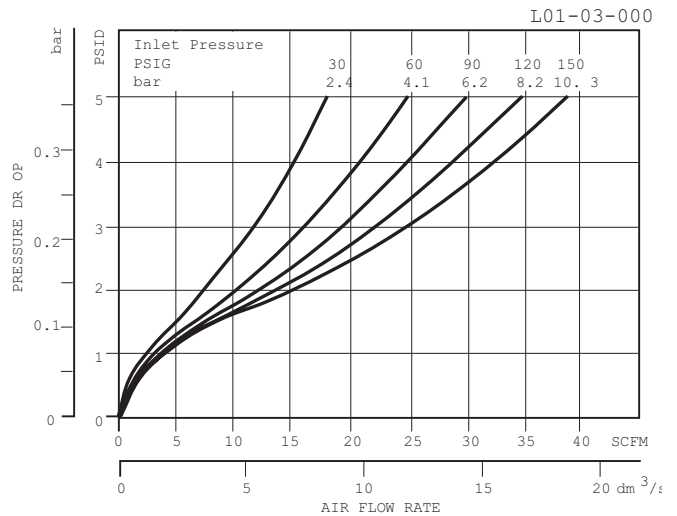
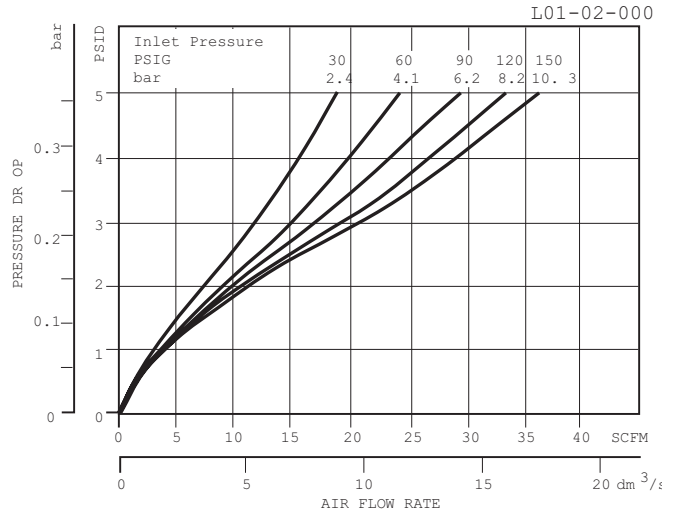
= "Most Popular"

**Replacement Kits**

- Fill Plug Kit – Brass Fill Plug and O-ring.....LRP-95-254
- O-ring Repair Kit .....LRP-95-074

**Accessories**

- Air Line Oil (1 Qt. Bottle).....F442001



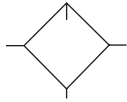
**Ordering Information**

Model Type	Port Size	Female Threads Inlet / Female Threads Outlet	Female Threads Inlet / Male Threads Outlet
In-Line Lubricator	1/4	L01-02-000	L01-02-M00
	3/8	L01-03-000	L01-03-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L03 EconOmist™

 = "Most Popular"



**L03-01-000**

## Features

- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light Flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility

## Specifications

Flow Capacity*	1/8	20 SCFM (9.4 dm <sup>3</sup> /s)
	1/4	20 SCFM (9.4 dm <sup>3</sup> /s)
Minimum Flow for Lubrication		0.7 SCFM at 100 PSIG
Port Threads		1/8, 1/4 Inch
Pressure & Temperature Ratings –		
Polycarbonate Bowl –		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl –		0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Weight		.4 lb. (.18 kg)

\* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

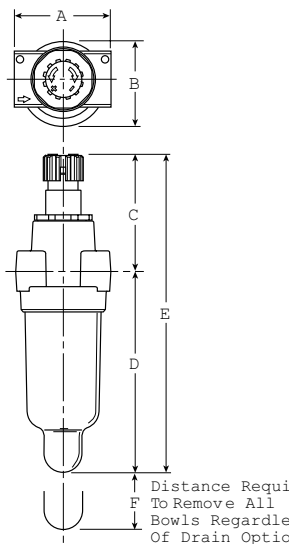
## Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl (Without Sight Gauge)	Zinc
Drains – Manual – Body & Nut		Plastic
Seals		Nitrile
Sight Dome		Polycarbonate

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F  
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	D†	E	E†	F
Standard Unit L03-XX-000		1.73 (44)	1.56 (40)	2.16 (55)	3.64 (92)	3.78 (96)	5.80 (147)	5.94 (151)	1.60 (41)

† With Twist Drain



**Replacement Kits**

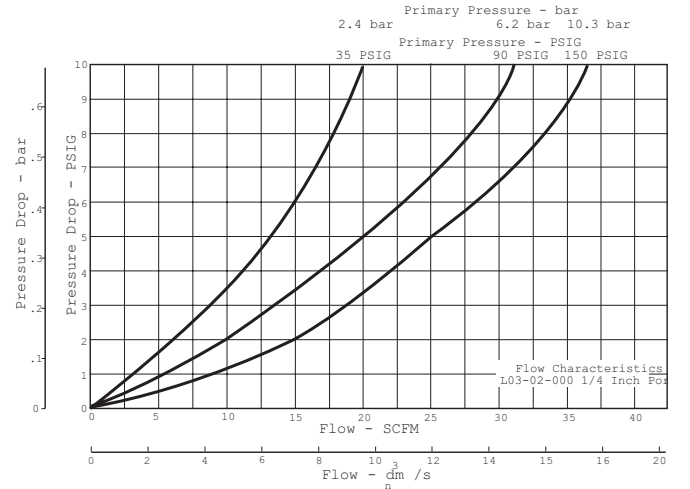
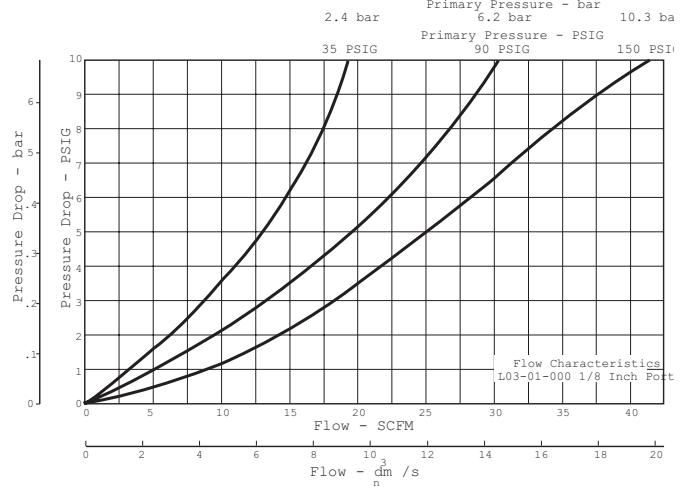
**Bowl Kits –**

- Poly Bowl, Manual Drain .....PS420
- Metal Bowl – Manual Drain (No Sight Gauge).....PS447B
- Poly Bowl – No Drain .....PS421

**Accessories**

- Air Line Oil (1 Qt. Bottle).....F442001
- Mounting Bracket Kit ..... PS419

= "Most Popular"

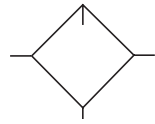


**Ordering Information**

Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
EconOmist™	1/8	L03-01-000	L03-01-M00
	1/4	L03-02-000	L03-02-M00

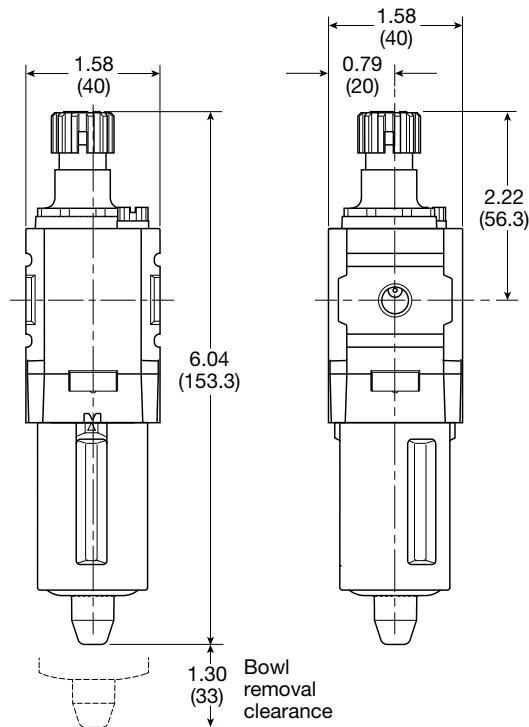
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L08 EconOmist™



## Features

- Integral Sight Dome and Adjustment Knob
- Fill-under Pressure Design
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Quick-disconnect Bowl



Inches (mm)

## Specifications

Flow Capacity*	1/4	52 SCFM (25 dm <sup>3</sup> /s, ANR)
Initial Drip Flow		1.3 SCFM
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Minimum Flow for Lubrication		1.3 SCFM @ 100 PSIG
Operating Temperature	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.6 oz
Weight		0.29 lb. (0.13 kg)

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Pick-up Filter		Sintered Bronze
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile
Sight Dome	Polycarbonate	

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –
- Manual Drain ..... GRP-96-714
- No Drain Port ..... GRP-96-715

- Plastic Bowl –
- Bowl Guard, Manual Drain ..... LRP-96-736
- Bowl Guard, No Drain Port ..... LRP-96-713

### Replacement Kits

- Bowl O-ring –
- Fluorocarbon ..... GRP-96-711
- Nitrile ..... GRP-96-710

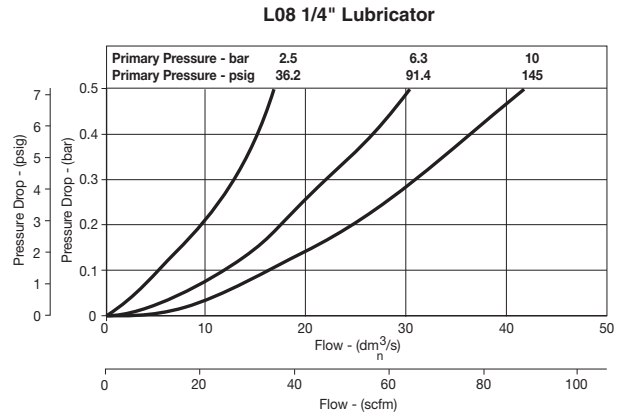
- Fill Plug Kit ..... LRP-96-730

- Sight Dome Assembly –
- Nylon ..... LRP-96-720
- Polycarbonate, L08-XX-**K**XXX ..... LRP-96-725

- Siphon Tube Assembly ..... LRP-96-731

### Accessories

- Wall Mounting Bracket –
- C-Type ..... GPA-97-010
- T-Type ..... GPA-96-737



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / No Sight Gauge
No Drain	1/4	L08-02-KC00B	L08-02-KD00B
Manual Drain	1/4	L08-02-KK00B	L08-02-KL00B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L18 EconOmist™



## Features

- Integral Sight Dome and Adjustment Knob
- 1/2" NPT / BSPP-G Over-port
- Can be Filled while Under Pressure
- Quick-disconnect Bowl / Bowl Guard
- Manual Drain
- High Flow Capacities

## Specifications

Flow Capacity*	1/4	88 SCFM (42 dm <sup>3</sup> /s, ANR)
	3/8	90 SCFM (43 dm <sup>3</sup> /s, ANR)
	1/2	96 SCFM (45 dm <sup>3</sup> /s, ANR)
Initial Drip Flow	0.68 SCFM	
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Minimum Flow for Lubrication	.7 SCFM @ 100 PSIG	
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	4 oz	
Weight	0.68 lb. (0.31 kg)	

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

## Materials of Construction

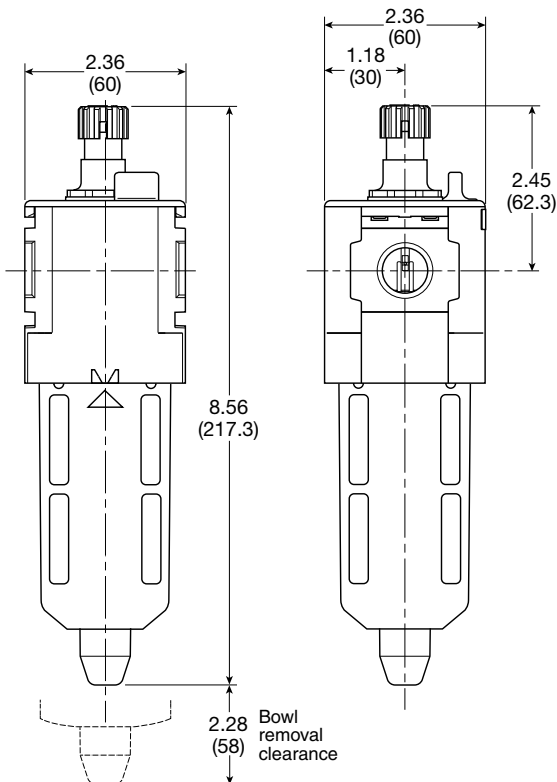
Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Pick-up Filter	Sintered Bronze	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



Inches (mm)

= "Most Popular"

### Replacement Bowl Kits

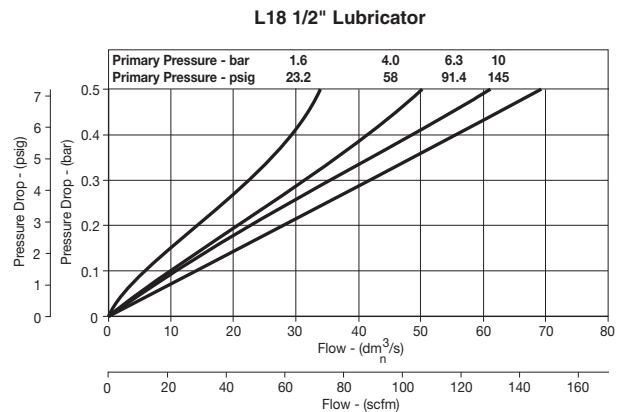
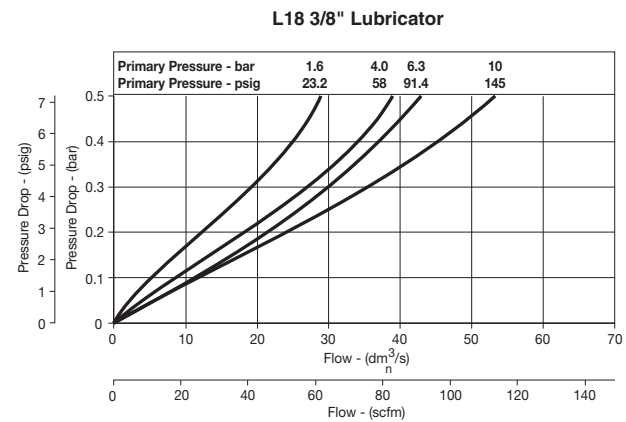
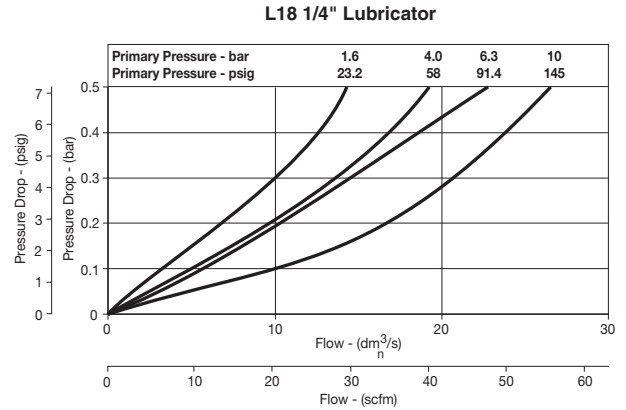
- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-636
- Plastic Bowl / Bowl Guard, Manual Drain..... LRP-96-701

### Replacement Kits

- Bowl O-ring –
  - Fluorocarbon ..... GRP-96-754
  - Nitrile ..... GRP-96-640
- Bypass Assembly ..... LRP-96-678
- Fill Plug Kit ..... LRP-96-679
- Sight Dome Assembly –
  - Nylon..... LRP-96-720
  - Polycarbonate, L18-XX-**KK00** ..... LRP-96-725
- Siphon Tube Assembly..... LRP-96-677

### Accessories

- Force Fill Adapter ..... LRP-96-704
- Manual Drain..... GRP-96-685
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –
  - L-Type ..... GPA-96-604
  - T-Type ..... GPA-96-602



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
<b>No Drain</b>	1/4	L18-02-KC00B	L18-02-KD00B
	3/8	L18-03-KC00B	L18-03-KD00B
	1/2	L18-04-KC00B	L18-04-KD00B
<b>Manual Drain</b>	1/4	L18-02-KK00B	L18-02-KL00B
	3/8	L18-03-KK00B	L18-03-KL00B
	1/2	L18-04-KK00B	L18-04-KL00B

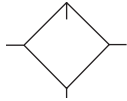
**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator

## L16 EconOmist™

## L17 AtoMist™

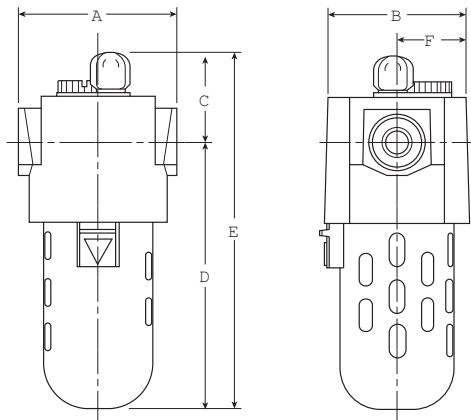
= "Most Popular"



**L16 / L17-02-000**

### Features

- L16 Model Can be Filled with Lubricant while Under Pressure (**L17 AtoMist™ Cannot be Filled Under Pressure**)
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Adjustable Oil Feed
- Optional Petcock Drain in Polycarbonate Bowl



### Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L16-XX-000 & L17-XX-000		3.00 (76)	2.62 (66.5)	1.62 (41)	5.03 (128)	6.66 (169)	1.31 (33.3)
Manual Drain L16-XX-D00 & L17-XX-D00		3.00 (76)	2.62 (66.5)	1.62 (41)	5.83 (148)	6.58 (167)	1.31 (33.3)
Metal Bowl with Sight Gauge L16-XX-G00 & L17-XX-G00		3.00 (76)	2.62 (66.5)	1.62 (41)	6.21 (158)	7.80 (198)	1.31 (33.3)

### Specifications

Flow Capacity*	1/4	36.1 SCFM (17.0 dm <sup>3</sup> /s)
	3/8	58.5 SCFM (27.6 dm <sup>3</sup> /s)
	1/2	64.0 SCFM (30.2 dm <sup>3</sup> /s)
Initial Drip Flow		.38 - 1.37 SCFM
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Minimum Flow for Lubrication		1.4 SCFM @ 100 PSIG
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	L16	5.0 oz
	L17	3.4 oz
Weight		1.8 lb. (0.82 kg)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

### Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polycarbonate

### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

= "Most Popular"

### Replacement Bowl Kits

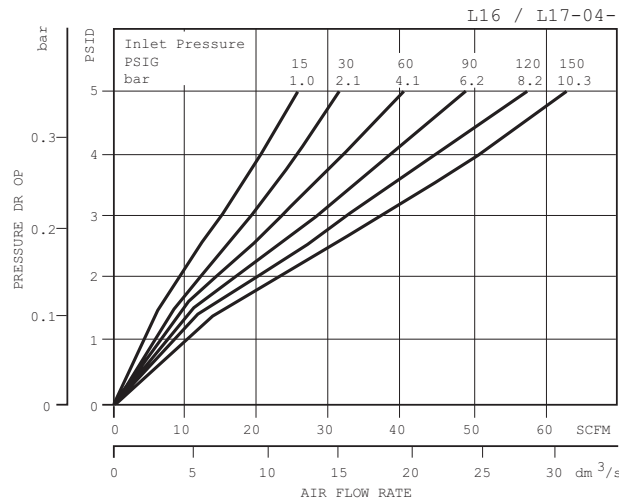
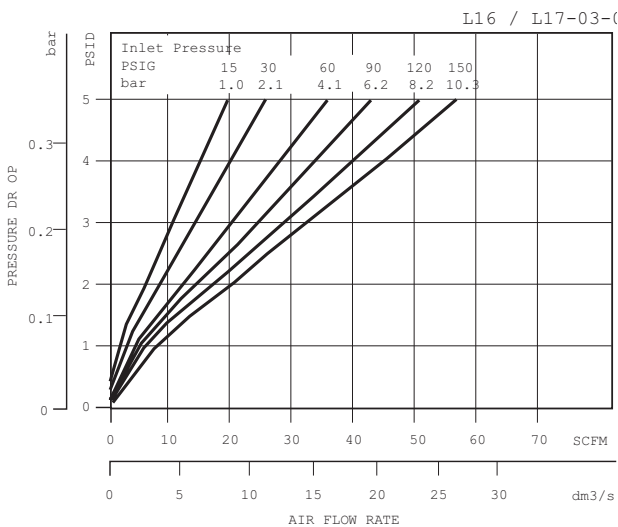
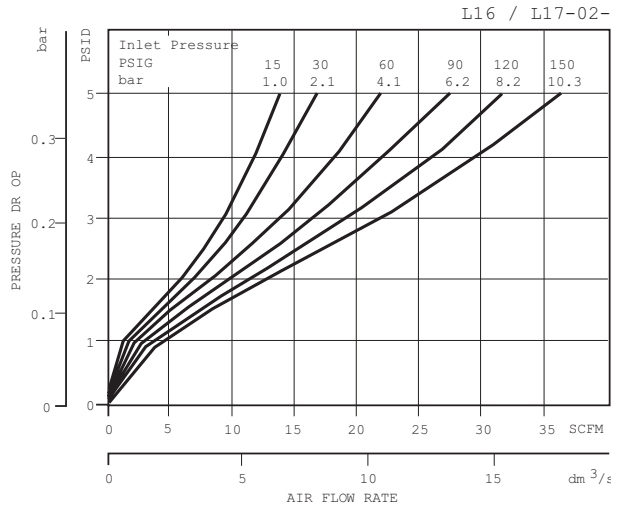
- Metal Bowl with Sight Gauge,
  - Brass Petcock Drain ..... GRP-95-133
- Plastic Bowl –
  - No Drain Port ..... LRP-96-937
  - Plastic Petcock Drain ..... LRP-96-543

### Replacement Kits

- Fill Plug Kit – Fill Plug and O-ring ..... LRP-95-253
- Flow Guide –
  - 1/4 NPT / BSPP-G, L16 ..... LRP-95-241
  - 3/8 and 1/2 NPT / BSPP-G, L16 ..... LRP-95-242
  - 1/4 NPT / BSPP-G, L17 ..... LRP-95-246
  - 3/8 and 1/2 NPT / BSPP-G, L17 ..... LRP-95-247
- Sight Dome Kit – Sight Dome and O-ring ..... LRP-95-239
- Tube, Siphon – Tube and Bronze Filter ..... LRP-96-005

### Accessories

- Air Line Oil (1 Qt. Bottle) ..... F442001
- Low Level Switch ..... LRP-95-093
- Manual Drain –
  - Brass Petcock ..... GRP-95-182
  - Plastic Petcock ..... LRP-95-181
- Tamper Resistant Kit ..... LRP-95-587
- Wall Mounting Bracket, L-Type ..... GPA-95-016



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
<b>EconOmist™</b>	1/4	L16-02-000	L16-02-D00	L16-02-G00
	3/8	L16-03-000	L16-03-D00	L16-03-G00
	1/2	L16-04-000	L16-04-D00	L16-04-G00
<b>AtoMist™</b>	1/4	L17-02-000	L17-02-D00	L17-02-G00
	3/8	L17-03-000	L17-03-D00	L17-03-G00
	1/2	L17-04-000	L17-04-D00	L17-04-G00

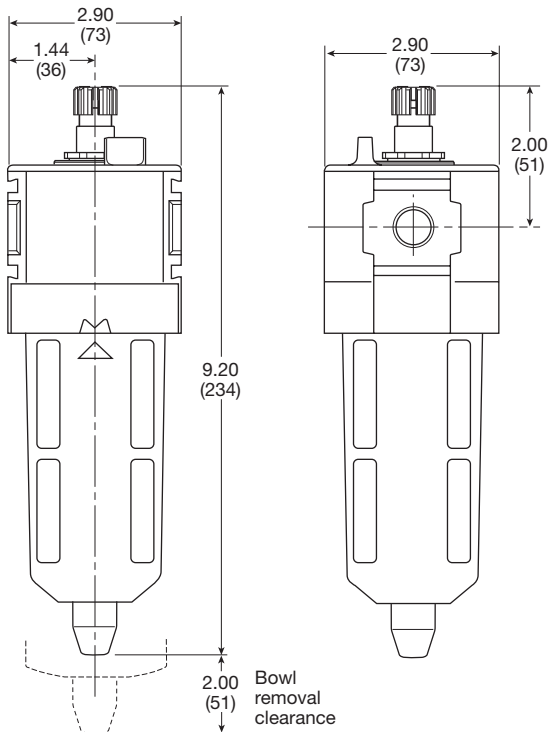
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L28 EconOmist™



## Features

- Integral Sight Dome and Adjustment Knob
- 3/4" NPT / BSPP-G Over-port
- Can be Filled while Under Pressure
- Quick-disconnect Bowl / Bowl Guard
- High Flow Capacities



Inches (mm)

## Specifications

Flow Capacity*	3/8	110 SCFM (52 dm <sup>3</sup> /s, ANR)
	1/2	110 SCFM (52 dm <sup>3</sup> /s, ANR)
	3/4	150 SCFM (71 dm <sup>3</sup> /s, ANR)
Initial Drip Flow	1.26 SCFM	
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Minimum Flow for Lubrication	1.3 SCFM@ 100 PSIG	
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G 3/8, 1/2, 3/4	
Bowl Capacity	6 oz	
Weight	1.04 lb. (0.47 kg)	

\* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Pick-up Filter	Sintered Bronze	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl with Sight Gauge, Manual Drain ..... GRP-96-644
- Plastic Bowl / Bowl Guard, Manual Drain..... LRP-96-702

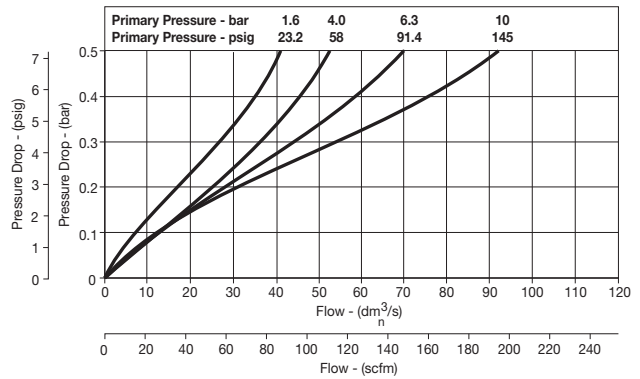
### Replacement Kits

- Bowl O-ring, Nitrile ..... GRP-96-654
- Bowl O-ring, Fluorocarbon ..... GRP-96-755
- Bypass Assembly ..... LRP-96-678
- Fill Plug Kit ..... LRP-96-679
- Sight Dome Assembly –
  - Nylon..... LRP-96-720
  - Polycarbonate, L28-XX-KK00..... LRP-96-725
- Siphon Tube Assembly..... LRP-96-681

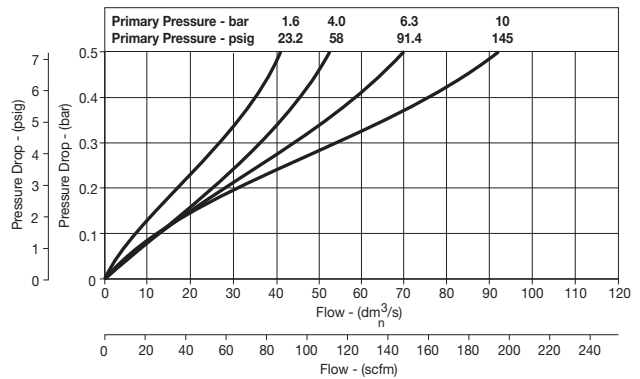
### Accessories

- Force Fill Adapter ..... LRP-96-704
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –
  - L-Type..... GPA-96-605
  - T-Type ..... GPA-96-602

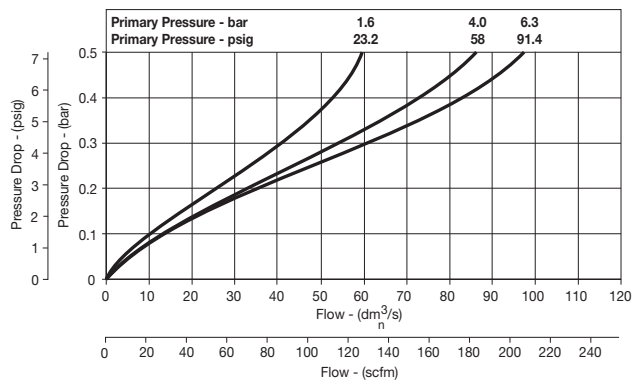
L28 3/8" Lubricator



L28 1/2" Lubricator



L28 3/4" Lubricator



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
No Drain	3/8	L28-03-KC00B	L28-03-KD00B
	1/2	L28-04-KC00B	L28-04-KD00B
	3/4	L28-06-KC00B	L28-06-KD00B
Manual Drain	3/8	L28-03-KK00B	L28-03-KL00B
	1/2	L28-04-KK00B	L28-04-KL00B
	3/4	L28-06-KK00B	L28-06-KL00B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator

## L26 EconOmist™

## L27 AtoMist™

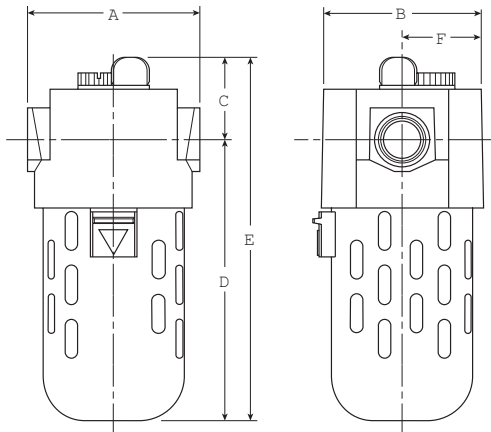
= "Most Popular"



**L26 / L27-02-000**

### Features

- L26 Model Can be Filled with Lubricant while Under Pressure (**L27 AtoMist™ Cannot be Filled Under Pressure**)
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Adjustable Oil Feed
- Optional Petcock Drain in Polycarbonate Bowl



### Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L26-XX-000 & L27-XX-000		3.35 (85)	3.06 (78)	1.60 (41)	5.46 (139)	7.06 (179)	1.53 (38.9)
Manual Drain L26-XX-D00 & L27-XX-D00		3.35 (85)	3.06 (78)	1.60 (41)	6.42 (163)	7.76 (197)	1.53 (38.9)
Metal Bowl with Sight Gauge L26-XX-G00 & L27-XX-G00		3.35 (85)	3.06 (78)	1.60 (41)	6.42 (163)	7.80 (198)	1.53 (38.9)

### Specifications

Flow Capacity*	1/4	35 SCFM (16.5 dm <sup>3</sup> /s)
	3/8	60 SCFM (28.3 dm <sup>3</sup> /s)
	1/2	128 SCFM (60.4 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	L26	10.0 oz
	L27	6.6 oz
Weight	2.4 lb. (1.07 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

### Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Nylon
Sight Dome	Nylon	

### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

= "Most Popular"

### Replacement Bowl Kits

Metal Bowl / Sight Gauge, Brass Petcock Drain .. GRP-95-931

Plastic Bowl –

No Drain Port .....LRP-96-938

Plastic Petcock Drain .....LRP-95-958

Plastic Bowl / Guard, Brass Petcock Drain .....LRP-95-967

### Replacement Kits

Fill Plug Kit – Fill Plug and O-ring .....LRP-95-253

Flow Guide –

1/4 NPT / BSPP-G, L26 ..... LRP-95-241

3/8 NPT / BSPP-G, L26 ..... LRP-95-242

1/2 NPT / BSPP-G, L26..... LRP-95-243

1/4 NPT / BSPP-G, L27..... LRP-95-246

3/8 NPT / BSPP-G, L27 ..... LRP-95-247

1/2 NPT / BSPP-G, L27..... LRP-95-248

Sight Dome Kit – Sight Dome and O-ring .....LRP-95-239

Tube, Siphon – Tube and Bronze Filter ..... LRP-96-137

### Accessories

Air Line Oil (1 Qt. Bottle).....F442001

Auto-Fill™ Adapter Kit.....LRP-95-965

Low Level Switch .....LRP-95-093

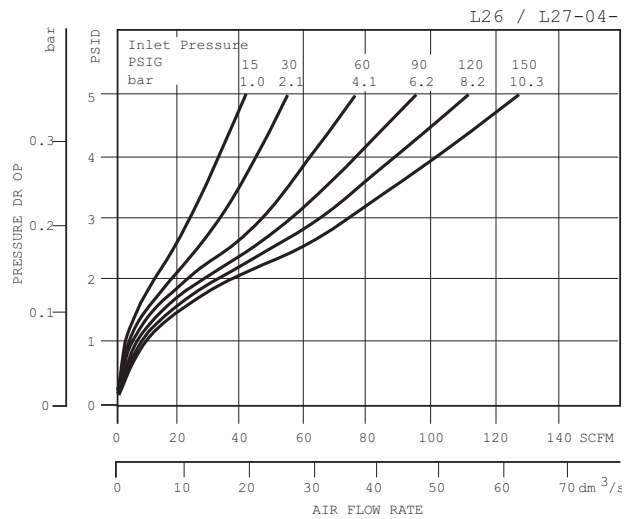
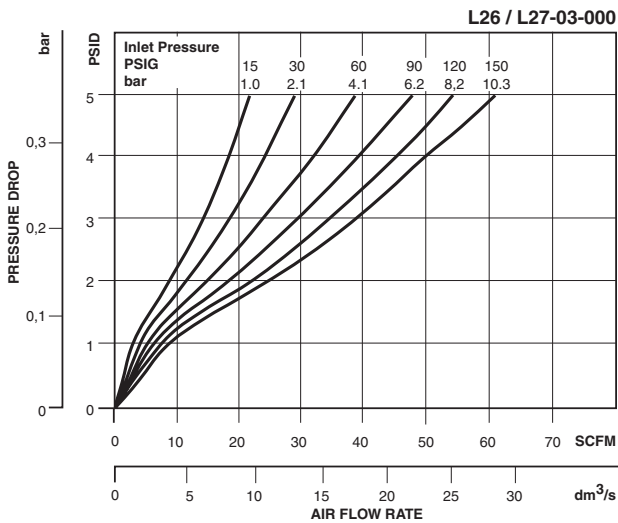
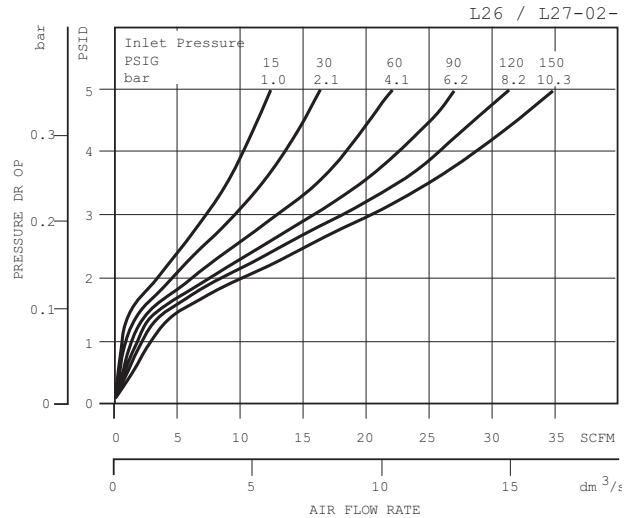
Manual Drain –

Brass Petcock..... GRP-95-182

Plastic Petcock ..... LRP-95-181

Tamper Resistant Kit.....LRP-95-587

Wall Mounting Bracket, L-Type..... GPA-95-946



### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
EconOmist™	1/4	L26-02-000	L26-02-D00	L26-02-G00
	3/8	L26-03-000	L26-03-D00	L26-03-G00
	1/2	L26-04-000	L26-04-D00	L26-04-G00
AtoMist™	1/4	L27-02-000	L27-02-D00	L27-02-G00
	3/8	L27-03-000	L27-03-D00	L27-03-G00
	1/2	L27-04-000	L27-04-D00	L27-04-G00

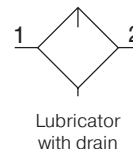
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L90

= "Most Popular"

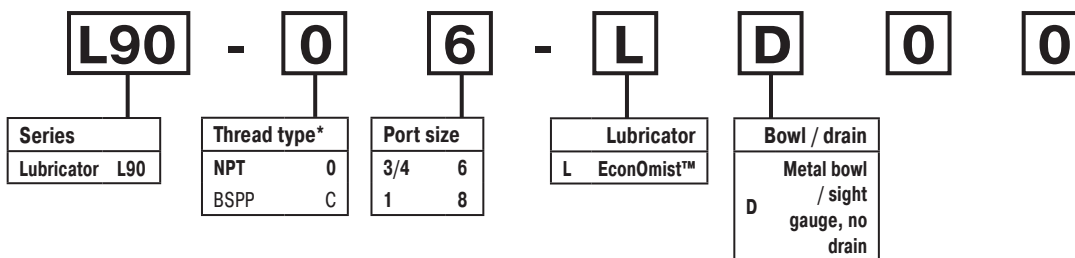


## Symbol



## Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Possible to fill under system pressure eliminating down time
- Large oil reservoir



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering information

Port size	Description	Flow † scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm <sup>3</sup> (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Oil mist, fill under pressure	315	17.5 (254)	-10 (14)	60 (140)	500 (16.9)	247 (9.7)	90 (3.5)	94 (3.7)	0.8 (1.8)	<b>L90-06-LD00</b>
1"	Oil mist, fill under pressure	390	17.5 (254)	-10 (14)	60 (140)	500 (16.9)	247 (9.7)	90 (3.5)	94 (3.7)	0.8 (1.8)	<b>L90-08-LD00</b>

† Standard part numbers shown in bold. For other models refer to Options chart above.

‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

**Specifications**

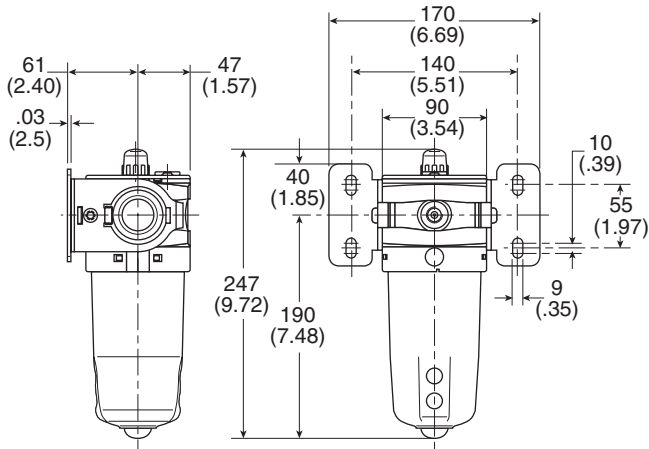
Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-10°C to 60°C (14°F to 140°F)

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

Low flow start point (lubrication pick-up): at 6.3 bar (91.4 psig) inlet pressure 0.5 dm<sup>3</sup>/s (1.1 scfm).

Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 bar (7.3 psig) pressure drop.

**Dimensions mm (inches)**



**Service kits**

Bowl kit.....	P3YKA00BSN
Refill plug.....	P3YKA00PL
Lubricator oil.....	F442002

**Material specifications**

Body	Aluminum
Sight glass	Polypropylene
Sight dome	Polyamide
Lubricator cover	ABS
Top & bottom end cap	Glass filled nylon
Bayonet support	Nylon
Seals	Nitrile NBR

**Suggested Lubricant**

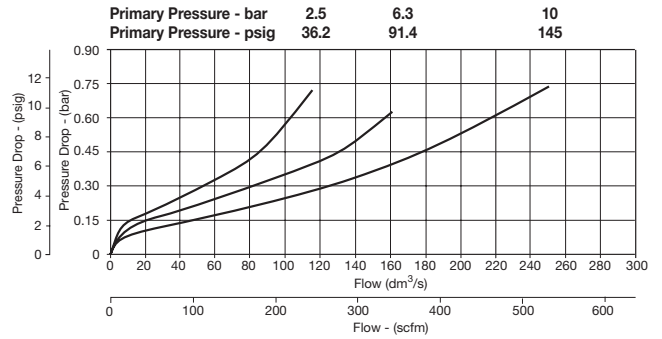
Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

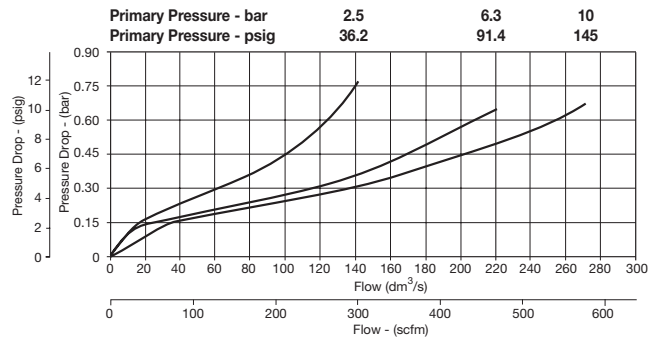
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

**Flow characteristics**

**(3/4") Lubricator**

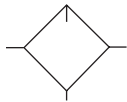


**(1") Lubricator**



# Lubricator L30 EconOmist™

= "Most Popular"



**L30-06-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Optional Petcock in Polycarbonate Bowl
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	3/4 1	196 SCFM (92.4 dm <sup>3</sup> /s) 374 SCFM (176.4 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl Metal Bowl	32° to 125°F (0° to 52°C) 32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G 3/4, 1	
Bowl Capacity	26.0 oz	
Weight	5.6 lb. (2.54 kg)	

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

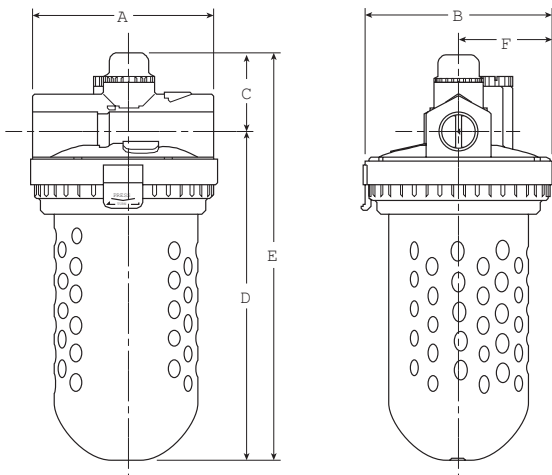
Body	Zinc	
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Seals	Plastic Bowl Metal Bowl	Nitrile Fluorocarbon
Sight Dome	Nylon	
Sight Gauge	Metal Bowl	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L30-XX-000		4.63 (117)	4.79 (122)	1.98 (50)	8.36 (212)	10.38 (264)	2.40 (61)
Manual Drain L30-XX-D00		4.63 (117)	4.79 (122)	1.98 (50)	8.90 (226)	10.90 (277)	2.40 (61)
Metal Bowl with Sight Gauge L30-XX-G00		4.63 (117)	4.79 (122)	1.98 (50)	8.90 (226)	10.95 (278)	2.40 (61)

= "Most Popular"

### Replacement Bowl Kits

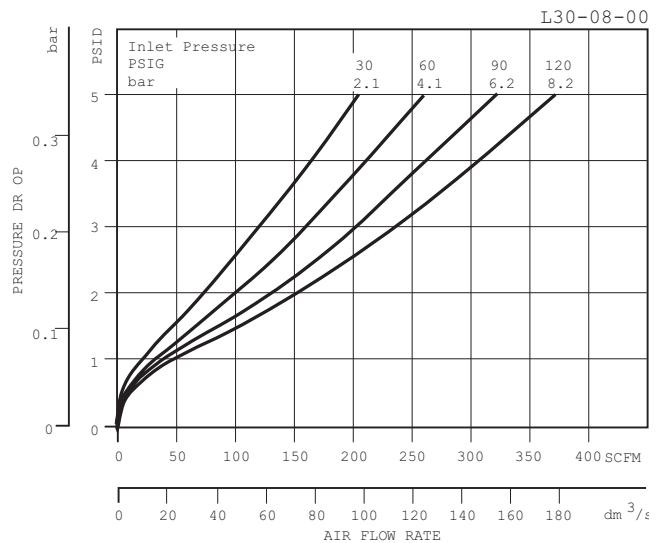
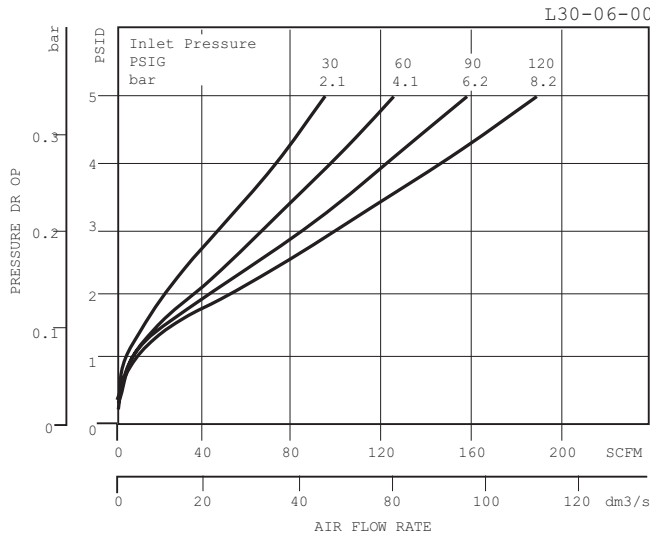
- Metal Bowl / Sight Gauge, Brass Petcock Drain .. GRP-95-676
- Plastic Bowl –
  - Guard, Plastic Petcock Drain .....LRP-95-830
  - No Drain Port ..... LRP-96-940
  - Plastic Petcock Drain ..... LRP-96-160

### Replacement Kits

- Fill Plug Kit – Fill Plug and O-ring .....LRP-95-253
- Flow Guide –
  - 3/4 NPT / BSPP-G ..... LRP-95-189
  - 1 NPT / BSPP-G ..... LRP-95-190
- Sight Dome Kit – Sight Dome and O-ring .....LRP-95-249
- Tube, Siphon – Tube and Bronze Filter ..... LRP-96-182

### Accessories

- Air Line Oil (1 Qt.).....F442001
- Air Line Oil (1 Gal.) .....F442002
- Auto-Fill™ Adapter Kit.....LRP-95-698
- Force Fill Adapter ..... GRP-96-394
- Manual Drain –
  - Brass Petcock..... GRP-95-182
  - Plastic Petcock ..... LRP-95-181
- Sight Gauge Kit ..... LRP-95-771
- Tamper Resistant Kit.....LRP-95-587
- Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



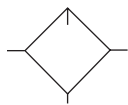
### Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
EconOmist™	3/4	L30-06-000	L30-06-D00	L30-06-G00
	1	L30-08-000	L30-08-D00	L30-08-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L31 EconOmist™

 = "Most Popular"



**L31-08-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Metal Bowl with Sight Gauge Standard
- Manual Drain Standard
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	1	374 SCFM (176.4 dm <sup>3</sup> /s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1
Bowl Capacity		96.0 oz
Weight		16.1 lb.(7.3 kg)

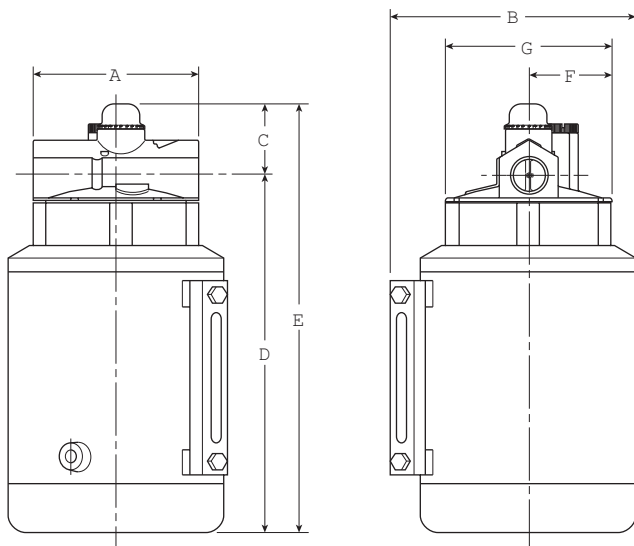
\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001  
 Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F  
 (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L31-08-000		4.63 (117)	7.27 (185)	1.98 (50)	9.97 (253)	11.96 (304)	3.00 (76.2)	4.63 (117)



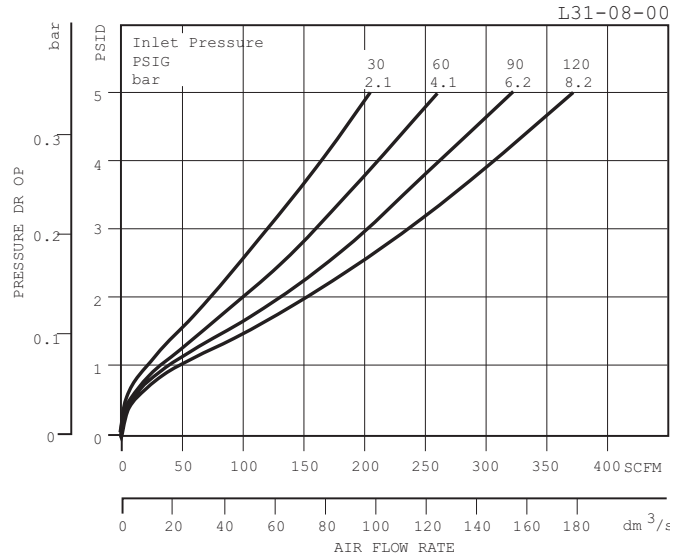
L31-08-00 = "Most Popular"

**Replacement Kits**

- Fill Plug Kit – Fill Plug and O-ring .....LRP-95-253
- Flow Guide, 1 NPT / BSPP-G ..... LRP-95-190
- Sight Dome Kit – Sight Dome and O-ring .....LRP-95-249

**Accessories**

- Air Line Oil (1 Gal.) .....F442002
- Air Line Oil (4 Gal. Case).....F442005
- Force Fill Adapter ..... GRP-96-394
- Manual Drain, Brass Petcock ..... GRP-95-182
- Tamper Resistant Kit.....LRP-95-587
- Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



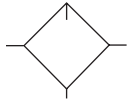
**Ordering Information**

Model Type	Port Size	Metal Bowl with Sight Gauge and Manual Drain
EconOmist™	1	L31-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L32 EconOmist™

= "Most Popular"



**L32-08-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Metal Bowl with Sight Gauge Standard
- Manual Drain Standard
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	1	374 SCFM (176.4 dm <sup>3</sup> /s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1
Bowl Capacity		208.0 oz
Weight		18 lb. (8.2 kg)

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

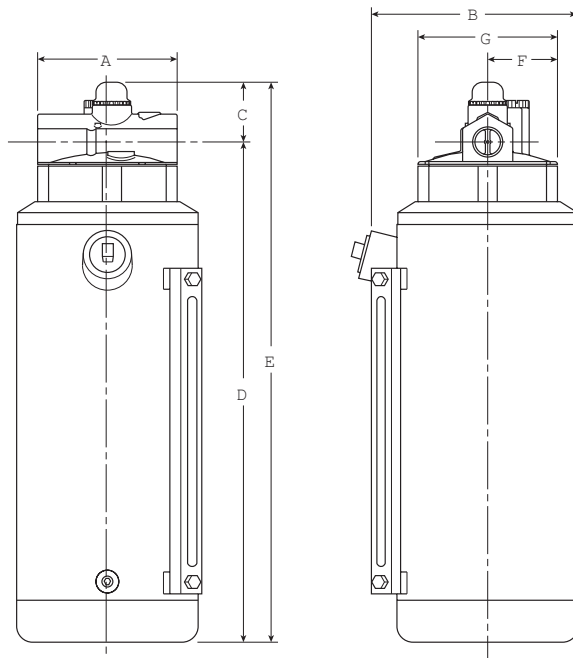
Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L32-XX-000		4.63 (117)	8.30 (211)	1.98 (50)	16.54 (420)	18.52 (470)	3.00 (76.2)	4.63 (117)

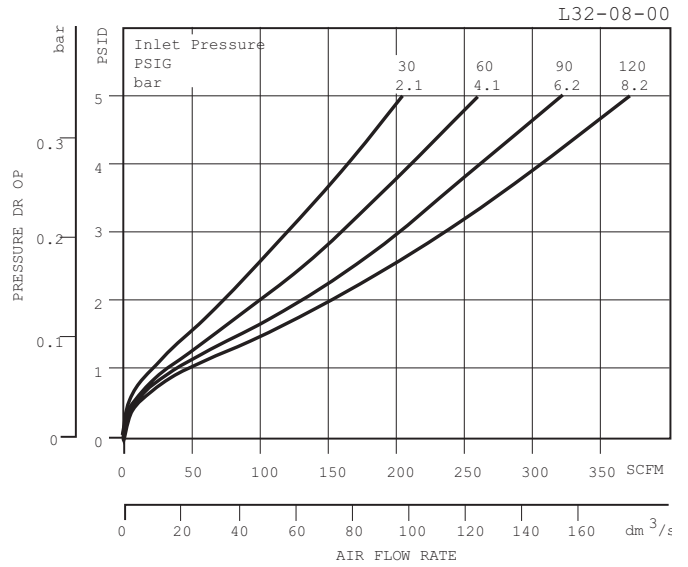
= "Most Popular"

**Replacement Kits**

- Fill Plug Kit – Fill Plug and O-ring .....LRP-95-253
- Flow Guide, 1 NPT / BSPP-G ..... LRP-95-190
- Sight Dome Kit – Sight Dome and O-ring .....LRP-95-249

**Accessories**

- Air Line Oil (4 Gal. Case).....F442005
- Force Fill Adapter ..... GRP-96-394
- Manual Drain, Brass Petcock ..... GRP-95-182
- Tamper Resistant Kit.....LRP-95-587
- Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



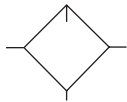
**Ordering Information**

Model Type	Port Size	Metal Bowl with Sight Gauge and Manual Drain
EconOmist™	1	L32-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L40 EconOmist™

 = "Most Popular"



**L40-0B-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm <sup>3</sup> /s)
Initial Drip Flow		.95 SCFM
Maximum Supply Pressure		150 PSIG (10.3 bar)
Minimum Flow for Lubrication		1 SCFM @ 100 PSIG
Operating Temperature		32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		26.0 oz
Weight		9.4 lb. (4.3 kg)

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

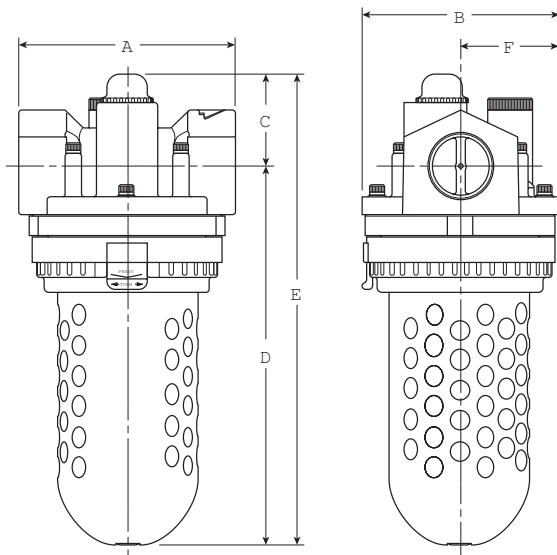
Body	Zinc
Bowl	Polycarbonate
Seals	Nitrile
Sight Dome	Nylon

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L40-XX-000		5.50 (140)	4.79 (122)	2.27 (58)	9.40 (239)	11.67 (296)	2.40 (61)

= "Most Popular"

### Replacement Bowl Kits

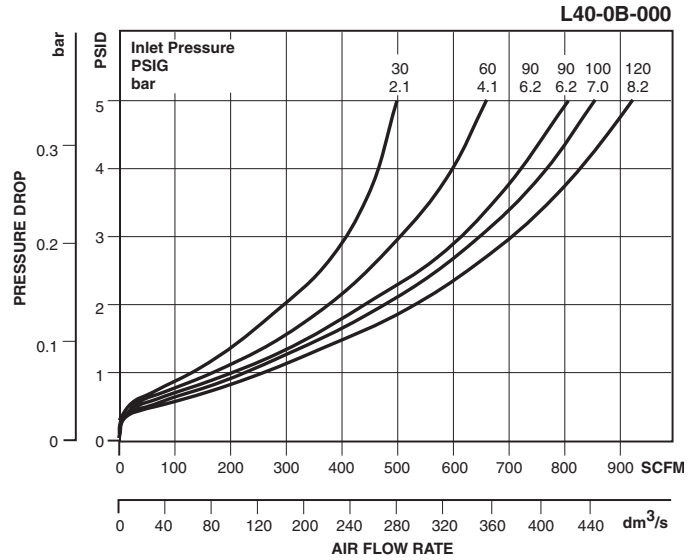
- Metal Bowl –**  
 Brass Petcock Drain ..... FRP-95-593  
 Sight Gauge, Brass Petcock Drain..... GRP-95-676
- Plastic Bowl –**  
 Plastic Petcock Drain ..... LRP-96-160  
 Guard, Plastic Petcock Drain ..... LRP-95-830  
 No Drain Port ..... LRP-96-940

### Replacement Kits

- Fill Plug Kit – Fill Plug and O-ring ..... LRP-95-250  
 Sight Dome Kit – Sight Dome and O-ring ..... LRP-95-249  
 Tube, Siphon – Tube and Bronze Filter ..... LRP-96-182

### Accessories

- Air Line Oil (1 Qt.)..... F442001  
 Air Line Oil (1 Gal.) ..... F442002  
     Brass Petcock..... GRP-95-182  
     Plastic Petcock ..... LRP-95-181  
 Tamper Resistant Kit..... LRP-95-587



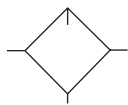
### Ordering Information

Model Type	Port Size	Metal Bowl / Sight Gauge / Manual Drain	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard / Manual Drain
EconOmist™	1-1/2	L40-0B-G00	L40-0B-000	L40-0B-D00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L41 EconOmist™

 = "Most Popular"



**L41-0B-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm <sup>3</sup> /s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		96.0 oz
Weight		16.3 lb. (7.4 kg)

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

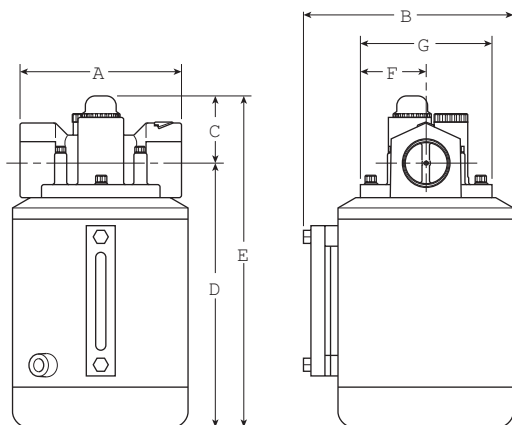
Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L41-XX-000		5.50 (140)	7.19 (183)	2.28 (58)	9.03 (229)	11.31 (287)	3.00 (76.2)	4.50 (114.7)

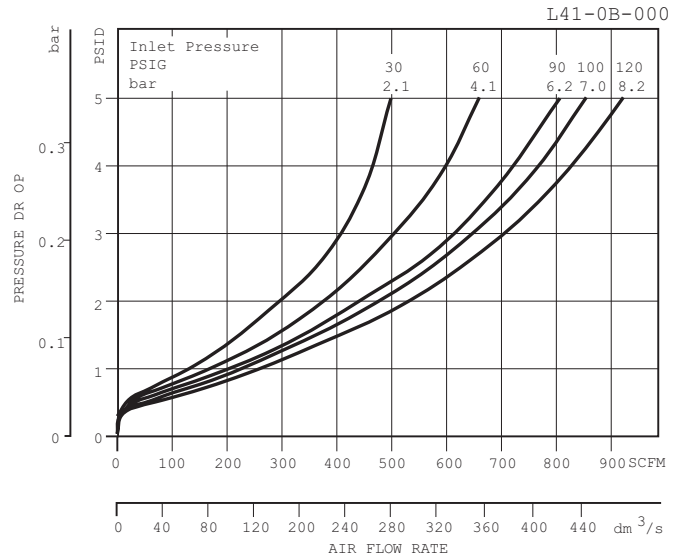
L41-0B-000 = "Most Popular"

### Replacement Kits

- Fill Plug Kit – Fill Plug and O-ring ..... LRP-95-250
- Flow Guide ..... LRP-95-251
- Sight Dome Kit – Sight Dome and O-ring ..... LRP-95-249

### Accessories

- Air Line Oil (1 Gal.) ..... F442002
- Air Line Oil (4 Gal. Case)..... F442005
- Manual Drain, Brass Petcock ..... GRP-95-182
- Tamper Resistant Kit..... LRP-95-587



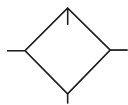
### Ordering Information

Model Type	Port Size	Metal Bowl / Sight Gauge
EconOmist™	1-1/2	L41-0B-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L42 EconOmist™

 = "Most Popular"



**L42-0B-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm <sup>3</sup> /s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		208.0 oz
Weight		22.5 lb. (10.2 kg)

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

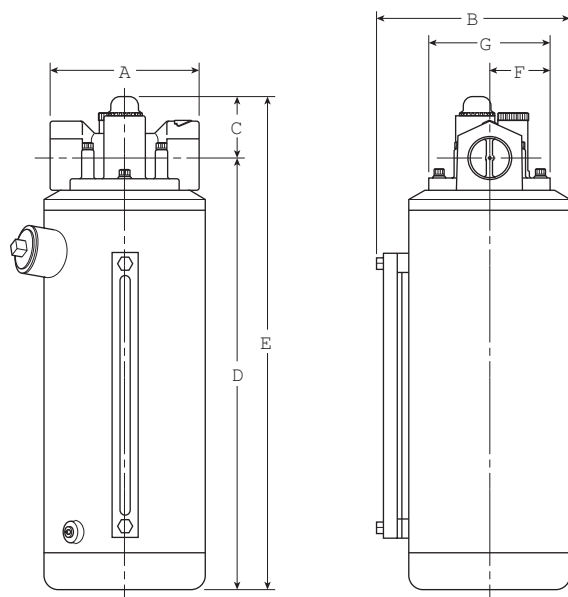
Body	Zinc
Bowls	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L42-XX-000		5.50 (140)	7.19 (183)	2.28 (58)	16.01 (407)	18.29 (465)	3.00 (76.2)	4.50 (114)



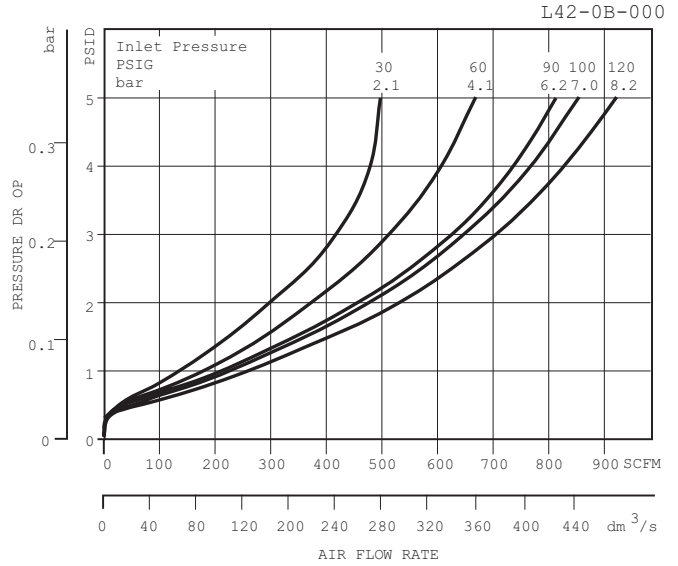
L42-0B-000 = "Most Popular"

**Replacement Kits**

- Fill Plug Kit – Fill Plug and O-ring ..... LRP-95-250
- Flow Guide ..... LRP-95-251
- Sight Dome Kit – Sight Dome and O-ring ..... LRP-95-249

**Accessories**

- Air Line Oil (4 Gal. Case).....F442005
- Force Fill Adapter ..... LRP-96-420
- Manual Drain, Brass Petcock ..... GRP-95-182
- Tamper Resistant Kit.....LRP-95-587



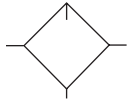
**Ordering Information**

Model Type	Port Size	Metal Bowl / Sight Gauge
EconOmist™	1-1/2	L42-0B-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Lubricator L50 EconOmist™

 = "Most Popular"



**L50-0C-000**

## Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Can be Filled while Under Pressure

## Specifications

Flow Capacity*	2	1186 SCFM (560 dm <sup>3</sup> /s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G 2	
Bowl Capacity	26.0 oz	
Weight	10.2 lb. (4.6 kg)	

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

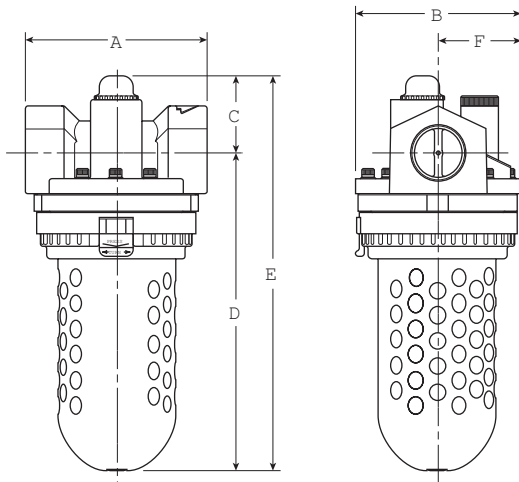
Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Dome	Nylon	
Sight Gauge	Metal Bowl	Tempered Safety Glass

## Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L50-0C-000		5.50 (140)	5.00 (127)	2.64 (67)	9.68 (246)	12.32 (313)	2.50 (64)

= "Most Popular"

**Replacement Bowl Kits**

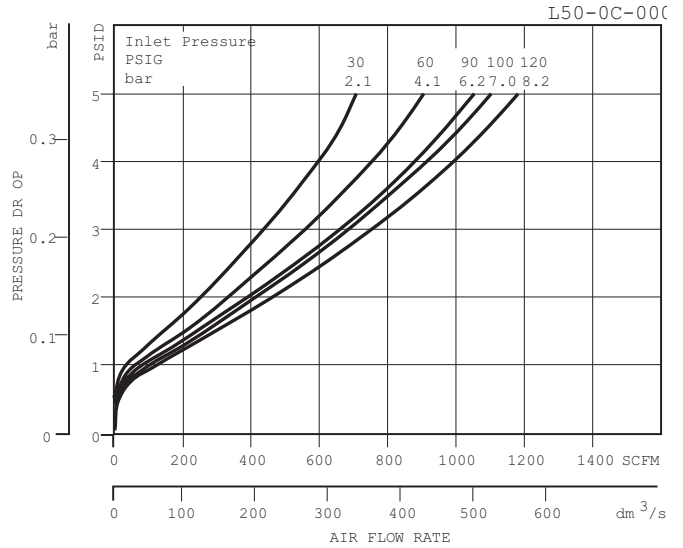
- Metal Bowl / Sight Gauge, Brass Petcock Drain .. GRP-95-676
- Plastic Bowl –
  - Plastic Petcock Drain ..... LRP-96-160
  - Guard, Plastic Petcock Drain ..... LRP-95-830
  - No Drain Port ..... LRP-96-940

**Replacement Kits**

- Fill Plug Kit – Fill Plug and O-ring ..... LRP-95-250
- Flow Guide ..... LRP-95-252
- Sight Dome Kit – Sight Dome and O-ring ..... LRP-95-249
- Tube, Siphon – Tube and Bronze Filter ..... LRP-96-182

**Accessories**

- Air Line Oil (1 Qt.).....F442001
- Air Line Oil (1 Gal.) .....F442002
- Manual Drain –
  - Brass Petcock..... GRP-95-182
  - Plastic Petcock ..... LRP-95-181
- Tamper Resistant Kit.....LRP-95-587



**Ordering Information**

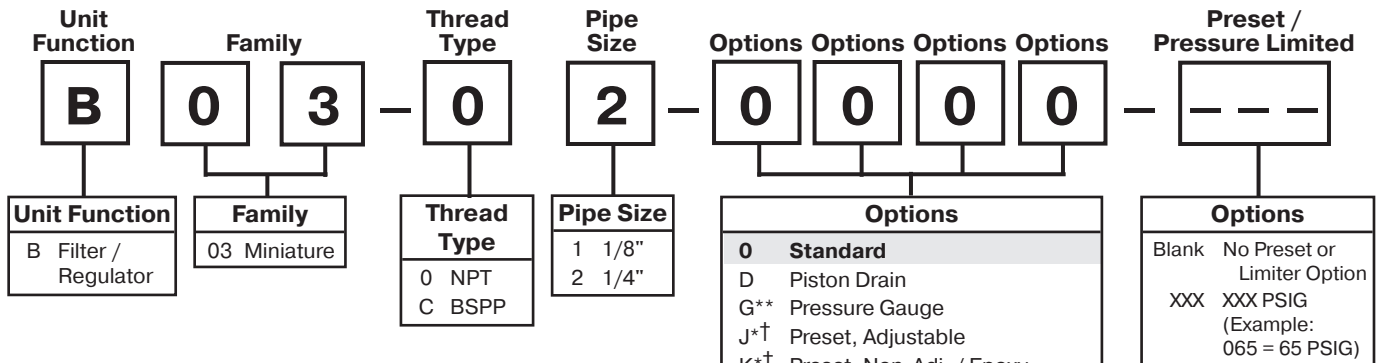
Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl / Sight Gauge
EconOmist™	2	L50-0C-000	L50-0C-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes

# Filter / Regulator Numbering System

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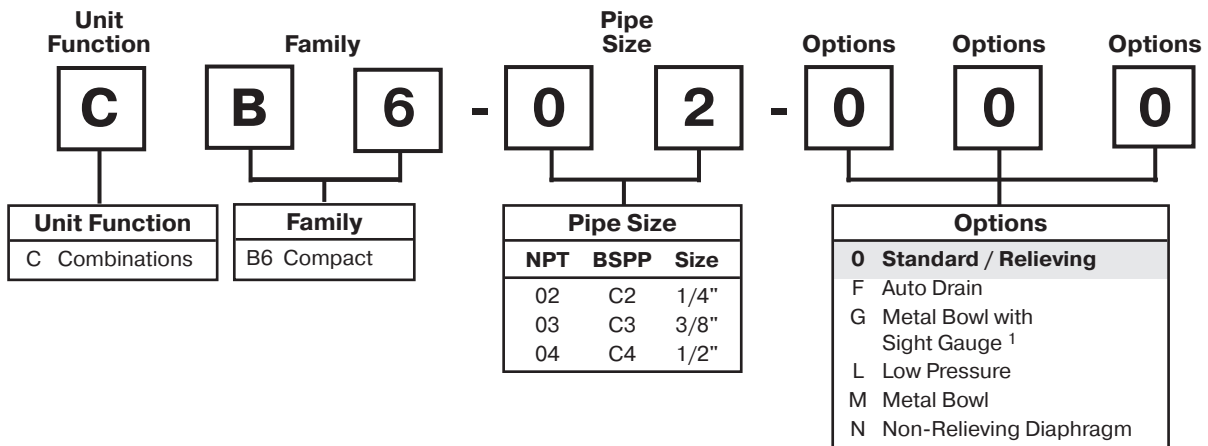


**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8 and 9.  
For example: **B 0 3 - 0 1 - D M 0 0**

**NOTE:** 0000 in position 6, 7, 8 and 9 signifies standard product.  
(Poly Bowl, Manual Drain, 2 to 125 PSIG, Relieving)

**Spring Type by Preset / Limited Pressure:**  
For Preset / Limited Pressure 10 to 25 use 30 PSI Spring  
For Preset / Limited Pressure 26 to 50 use 60 PSI Spring  
For Preset / Limited Pressure 51 to 90 use 125 PSI Spring

\* Inlet pressure is 100 PSIG.  
For other pressures, consult factory.  
\*\* Not available with BSPP thread type.  
† Must specify preset or limited pressure.



<sup>1</sup> For miniature family units, G option is a pressure gauge.  
For compact, G option is a metal bowl with sight gauge.

**"F" Series Filters, Type "A" 5 micron elements:**  
All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

**NOTE:**All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

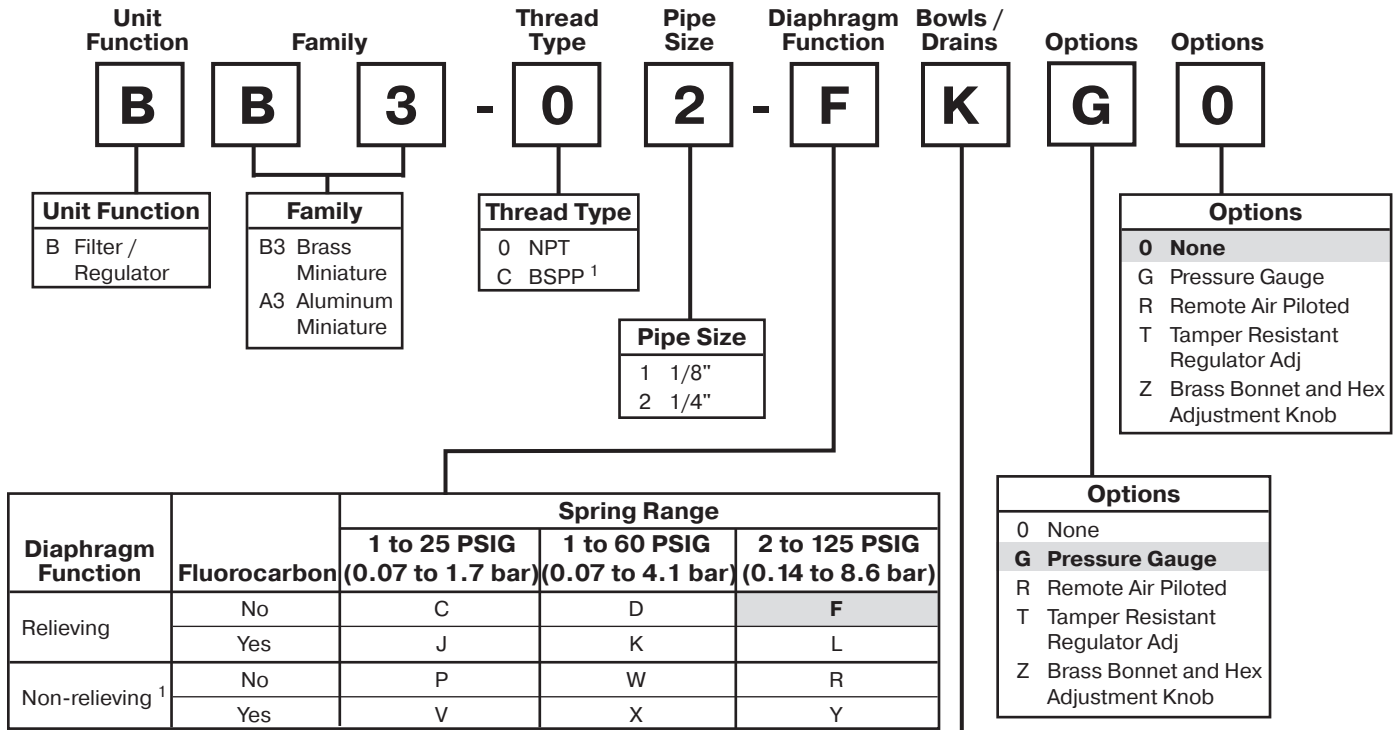
**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8.  
For example:

**CB6-02-0 0 0**

**Note:** 000 in positions 6, 7 and 8 signifies standard product.

# Filter / Regulator Numbering System

   = "Most Popular"



**NOTE:** Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

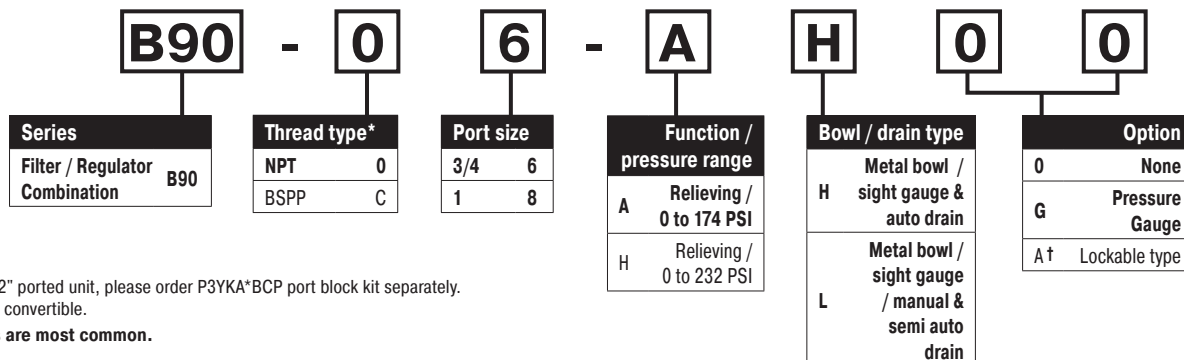
<sup>1</sup> ISO, R228 (G Series)

**Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 8 and 9. For example:

**BB3-02-F K G T**



**Notes:**

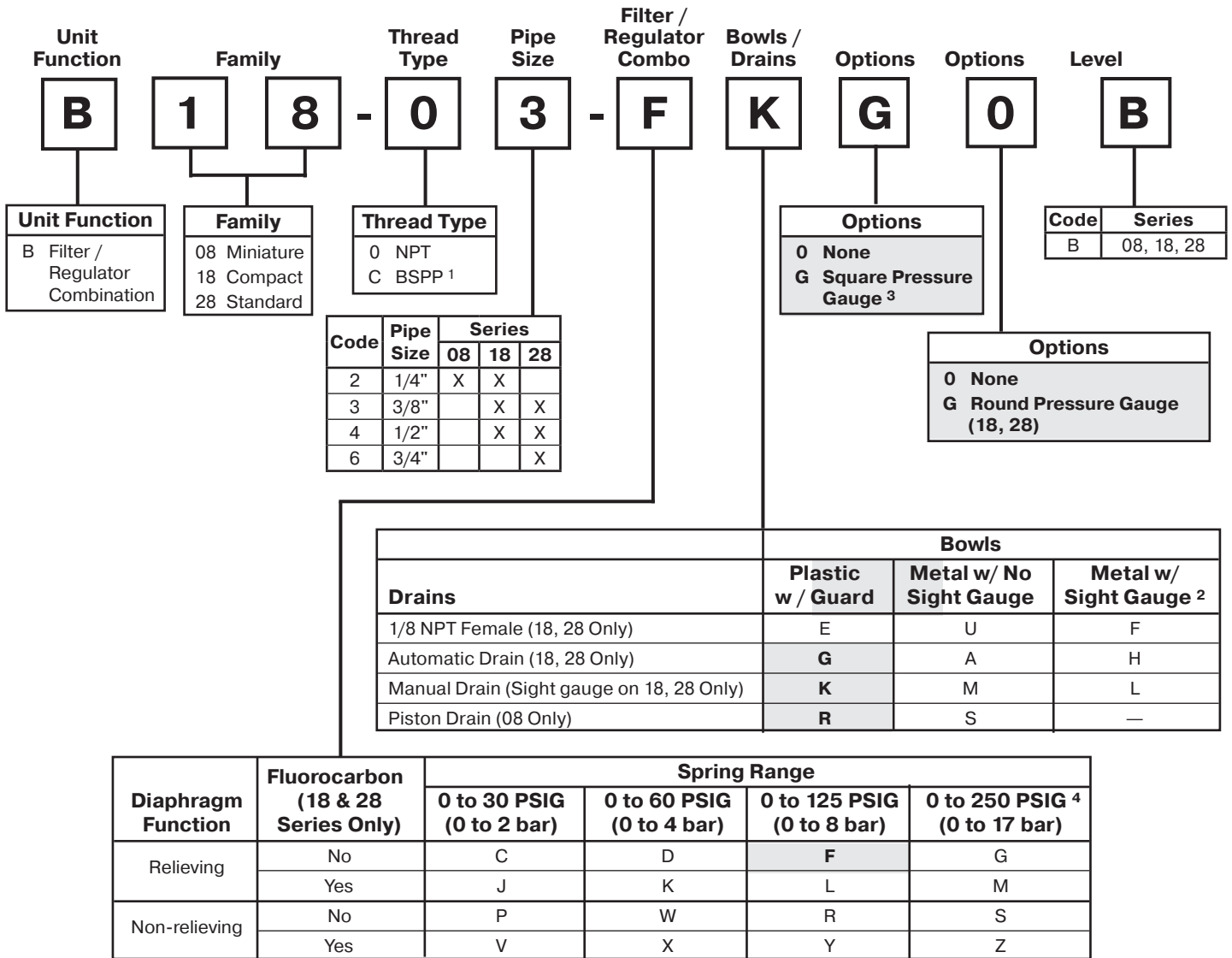
\* For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

† Not field convertible.

**Bold items are most common.**

# Filter / Regulator Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)  
<sup>2</sup> B08 Filter / Regulator has an all metal bowl (no sight gauge)  
<sup>3</sup> Square gauge included with B08  
<sup>4</sup> B08 series operating range 0 to 232 PSIG (1 to 16 bar)

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order, for positions 7, 8, 9. For example:

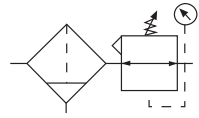
**B 18-03-F K 0 0 B**

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

# Filter / Regulator B03

= "Most Popular"

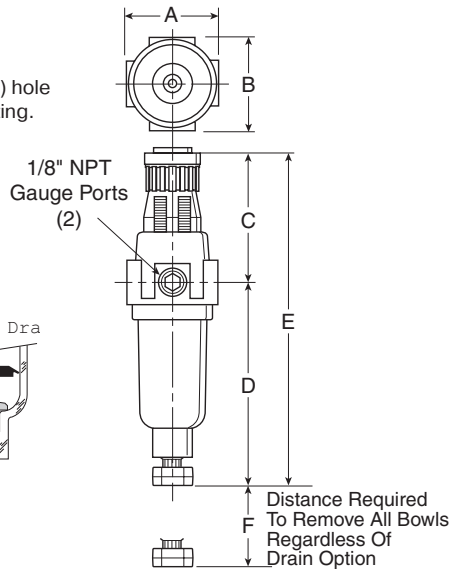


**B03-02-0000**

## Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Space Saving Package offers both Filter and Regulator features in One Integral Unit
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports

NOTE: 1.218 Dia. (31mm) hole required for panel mounting.



## Specifications

Flow Capacity*	1/8	16 SCFM (7.5 dm <sup>3</sup> /s)
	1/4	18 SCFM (8.5 dm <sup>3</sup> /s)
Gauge Ports (2)	1/8 Inch	
Port Threads	1/8, 1/4 Inch	
Pressure & Temperature Ratings –		
Plastic Bowl	0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)	
Metal Bowl	0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)	
Secondary Pressure Ranges –		
Standard Pressure	2 to 125 PSIG (0 to 8.6 bar)	
Medium Pressure	1 to 60 PSIG (0 to 4.1 bar)	
Medium Pressure	1 to 30 PSIG (0 to 2.1 bar)	
Low Pressure	1 to 15 PSIG (0 to 1.0 bar)	
Weight	.4 lb. (.18 kg)	

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar) and 10 PSIG pressure drop.

## Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls – Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile

## Dimensions

Model	Inches (mm)	A	B	C	D	D†	E	E†	F
Standard Unit B03-XX-XXXX		1.62 (41)	1.58 (40)	2.42 (61)	3.79 (96)	3.64 (92)	6.21 (158)	6.06 (154)	1.60 (41)

† With Piston Drain



= "Most Popular"

**Replacement Kits**

- Filter Element Kit, 5 Micron .....PS403
- Metal Bowl –
  - Piston Drain ..... PS451B
  - Manual Drain ..... PS447B
- Poly Bowl –
  - Piston Drain ..... PS408B
  - Manual Drain ..... PS404
- Poppet / Piston Kits –
  - Unbalanced, Non-Relieving ..... PS428P
  - Unbalanced, Relieving ..... PS426P

**Accessories**

- Gauge, Pressure –
  - 30 PSIG (0 to 2.1 bar)..... K4515N18030
  - 60 PSIG (0 to 4.1 bar)..... K4515N18060
  - 160 PSIG (0 to 11.0 bar) ..... K4515N18160
- Mounting Bracket Kit\* (Includes Panel Mount Nut) ..... PS417B
- Panel Mount Nut\* –
  - Plastic ..... P78652
  - Metal ..... P01531
- Springs –
  - 1 to 15 PSIG Range ..... P01176
  - 1 to 30 PSIG Range ..... P01175
  - 1 to 60 PSIG Range ..... P01174
  - 2 to 125 PSIG Range..... P01173

\*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

**WARNING**

**Product rupture can cause serious injury.**  
**Do not connect regulator to bottled gas.**  
**Do not exceed maximum primary pressure rating.**

**CAUTION:**

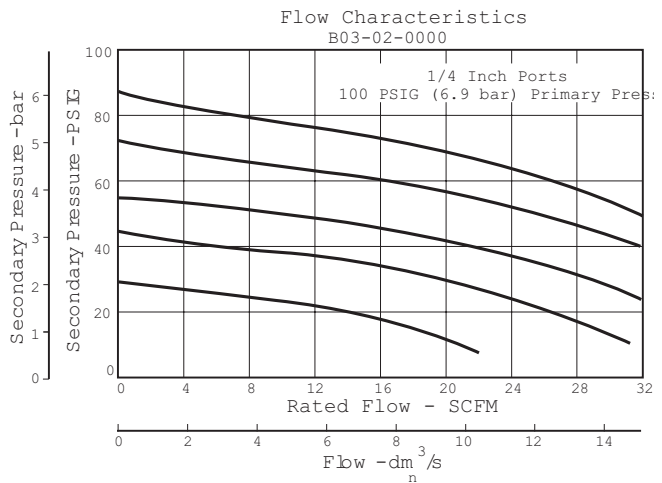
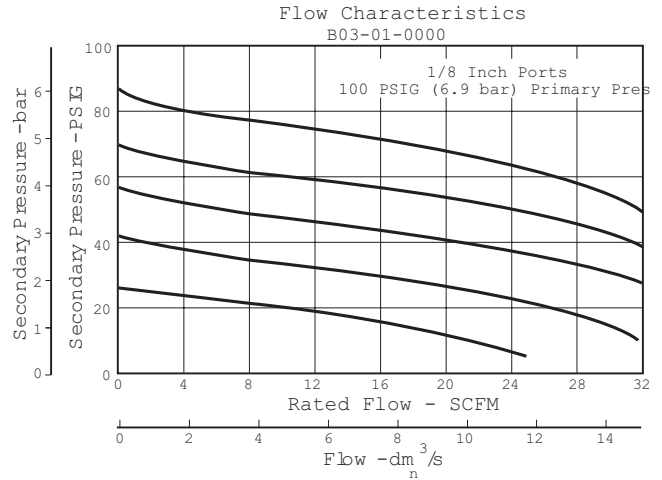
**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Ordering Information**

Model Type	Port Size	Plastic Bowl	Metal Bowl
<b>Manual Drain</b>	1/8	B03-01-0000	B03-01-M000
	1/4	B03-02-0000	B03-02-M000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

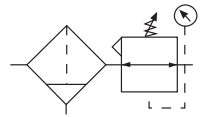


# Miniature Filter / Regulator

## BB3 – Brass

## BA3 – Aluminum

= "Most Popular"



**BB3-02-FK00**

### Features

- Brass Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Plastic Bowl or Black Painted Zinc Metal Bowl
- High Flow: 1/4" -16 SCFM
- Fluorocarbon Seals Optional

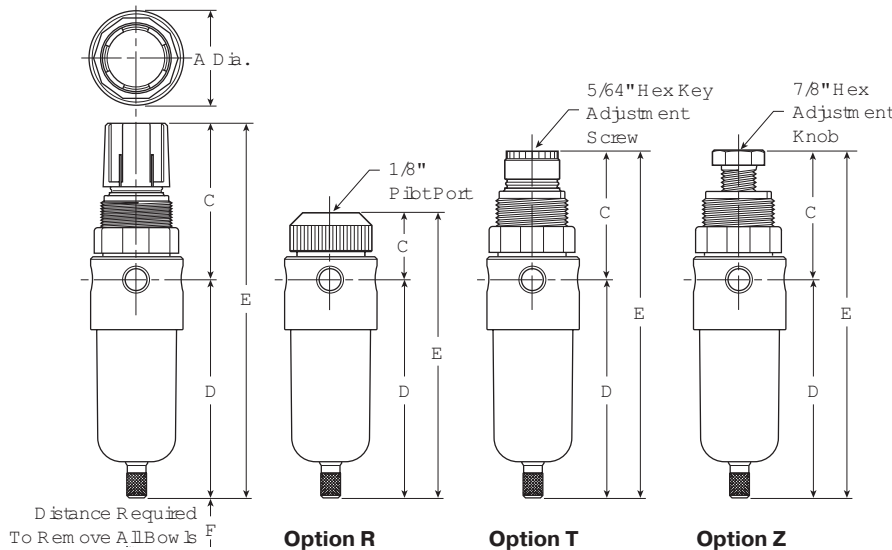
### Specifications

Flow Capacity*	1/4	16 SCFM (7.6 dm <sup>3</sup> /s)
Maximum Supply Pressure		
Polycarbonate Bowl		150 PSIG (10.37 bar)
Metal Bowl		300 PSIG (20.7 bar)
Operating Temperature		40°F to 125°F (4.4°C to 52°C)
Port Size	NPT / BSPP-G	1/8, 1/4
Standard Filtration		5 Micron
Weight		0.8 lb. (0.36 kg)

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 75 PSIG (5.2 bar).

### Materials of Construction

Body	Brass	
Bowls	Polycarbonate or Zinc - Painted Black	
Manual Drain	Brass	
Diaphragm and Seals	Nitrile	
Element Holder / Deflector / Bonnet	Acetal	
Filter Elements	Type A	Polyethylene
Knob	Acetal	
Springs	Plated Steel	
Valve Assembly and Bottom Plug	Brass	



**NOTES:** Panel Nut included, but not shown on dimensional drawing. 1.19" dia. (30,2) mm hole required for panel mounting.

### Dimensions

Model	Inches (mm)	A	C	C			D	E	E			F
				Option R	Option T	Option Z			Option R	Option T	Option Z	
Standard Unit - Brass Body BB3-02-XXXX		1.56 (40)	2.63 (67)	1.09 (27.7)	2.04 (51.8)	2.08 (52.8)	3.63 (92)	6.25 (159)	4.72 (119.9)	5.67 (144.0)	5.71 (145.0)	1.58 (40)
Standard Unit - Aluminum Body BA3-02-XXXX		1.56 (40)	2.63 (67)	1.09 (27.7)	2.04 (51.8)	2.08 (52.8)	3.63 (92)	6.25 (159)	4.72 (119.9)	5.67 (144.0)	5.71 (145.0)	1.58 (40)

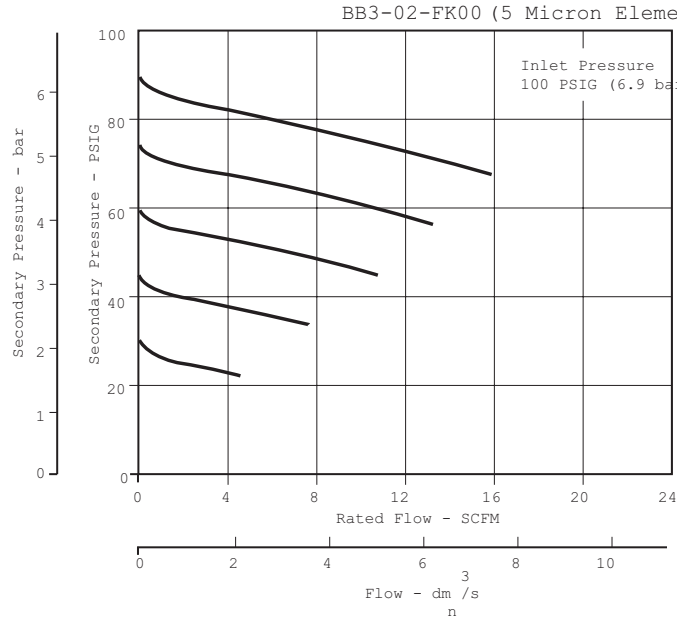
= "Most Popular"

### Replacement Element and Repair Kits

- 5 Micron Element ..... FRP-96-806
- Bonnet, Knob, Adjusting Screw Kit ..... RRP-96-821
- Bonnet, Tamper Resistant Adjustment Kit ..... RRP-96-822
- Diaphragm and Valve Repair Kit –
  - Relieving ..... RRP-96-819
  - Non-Relieving ..... RRP-96-820
- Plastic Bowl –
  - No Guard, Manual Twist Drain ..... GRP-96-808
  - No Guard, Piston Drain ..... GRP-96-809
- Metal Bowl –
  - Manual Twist Drain ..... GRP-96-810
  - Piston Drain ..... GRP-96-811

### Accessories

- Gauge, Pressure –
  - 0 to 60 PSI (0 to 4.1 bar), 1-1/2" Dial Face, 1/8" NPT ..... K4515N18060
  - 0 to 160 PSI (0 to 11.0 bar), 1-1/2" Dial Face, 1/8" NPT, CBM ..... K4515N18160
- Manual Drain ..... GRP-96-812
- Piston Type Drain ..... GRP-96-813
- Panel Mount Nut –
  - Aluminum ..... RPA-96-733
  - Plastic ..... RPA-96-734
- Wall Mounting Bracket –
  - L-Type ..... GRP-95-147
  - L-Type with Plastic Panel Mount Nut ..... GRP-95-747



**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

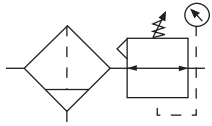
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

### Ordering Information

Model Type	Port Size	Relieving 2 to 125 PSI (0.14 to 8.6 bar)	Relieving 1 to 60 PSI (0.07 to 4.1 bar)	Relieving 1 to 25 PSI (0.07 to 1.7 bar)	Relieving 2 to 125 PSI (0.14 to 8.6 bar)	Relieving 1 to 60 PSI (0.07 to 4.1 bar)	Relieving 1 to 25 PSI (0.07 to 1.7 bar)
		No Bowl Guard	No Bowl Guard	No Bowl Guard	Metal Bowl	Metal Bowl	Metal Bowl
Manual Drain	1/8"	BB3-01-FK00	BB3-01-DK00	BB3-01-CK00	BB3-01-FL00	BB3-01-DL00	BB3-01-CL00
	1/4"	BB3-02-FK00	BB3-02-DK00	BB3-02-CK00	BB3-02-FL00	BB3-02-DL00	BB3-02-CL00
Piston Drain	1/8"	BB3-01-FR00	BB3-01-DR00	BB3-01-CR00	BB3-01-FS00	BB3-01-DS00	BB3-01-CS00
	1/4"	BB3-02-FR00	BB3-02-DR00	BB3-02-CR00	BB3-02-FS00	BB3-02-DS00	BB3-02-CS00
Manual Drain	1/8"	BA3-01-FK00	BA3-01-DK00	BA3-01-CK00	BA3-01-FL00	BA3-01-DL00	BA3-01-CL00
	1/4"	BA3-02-FK00	BA3-02-DK00	BA3-02-CK00	BA3-02-FL00	BA3-02-DL00	BA3-02-CL00
Piston Drain	1/8"	BA3-01-FR00	BA3-01-DR00	BA3-01-CR00	BA3-01-FS00	BA3-01-DS00	BA3-01-CS00
	1/4"	BA3-02-FR00	BA3-02-DR00	BA3-02-CR00	BA3-02-FS00	BA3-02-DS00	BA3-02-CS00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator B08



## Features

- Space-Saving Integral Filter / Regulator Design
- Unique Flush-mounted Pressure Gauge Available
- Balanced Valve Design
- Modern Design and Appearance
- Light Weight
- High Flow Capacities
- Quick-Disconnect Bowl / Bowl Guard

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## Specifications

Flow Capacity*	1/4	73 SCFM (35 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar)
		0 to 60 PSIG (0 to 4 bar)
		0 to 125 PSIG (0 to 8 bar)
		0 to 232 PSIG (0 to 16 bar)
Gauge Ports (2)**	NPT	1/8
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature†	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.4 oz
Standard Filtration		5 Micron
Weight		0.42 lb. (0.19 kg)

\* Inlet pressure 145 psig (10 bar). Secondary pressure 100 psig (6.9 bar) and 14.5 psig (1 bar) pressure drop.

† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)  
Within ISO 8573-1: 2001 Class 6 (Particulates)

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

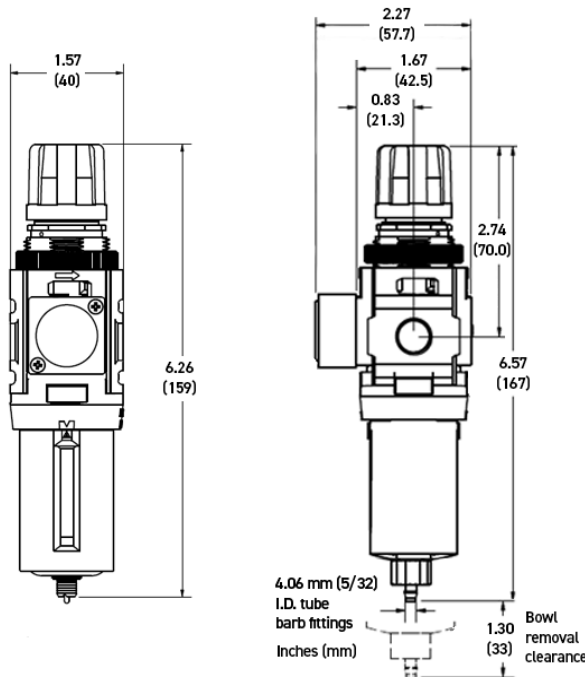
## Materials of Construction

Adjustment Knob	Acetal	
Body	Aluminum	
Bottom Cap	Glass-filled Nylon	
Bonnet	Glass-filled Nylon	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Diaphragm Assembly	Stainless Steel / Nitrile	
Filter Element	Polyethylene	
Panel Nut	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Springs	Steel	
Valve Assembly	Acetal / Nitrile	

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

**Accessories**

- Automatic Piston Drain..... GRP-96-716
- Panel Mount Nut –
  - Aluminum .....RPA-96-773
  - Plastic .....RPA-96-734

Pressure Gauge– (\*see note below)

Square flush mount gauge

- 0-4 bar ..... GRP-96-791-04B
- 0-11 bar ..... GRP-96-792-11B
- 0-20 bar ..... GRP-96-792-20B
- 0-60 PSIG ..... GRP-96-791-060
- 0-160 PSIG..... GRP-96-791-160
- 0-290 PSIG ..... GRP-96-791-290

\*For B08 Filter Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.

- Square flush mount gauge
  - 0-4 bar .....K4511SCR04B
  - 0-11 bar .....K4511SCR11B
  - 0-60 PSIG ..... K4511SCR060
  - 0-160 PSIG..... K4511SCR160

- Square with adapter kit
  - 0-4 bar .....P6G-PR10040
  - 0-11 bar .....P6G-PR10110
  - 0-60 PSIG .....P6G-PR90060
  - 0-160 PSIG.....P6G-PR90160

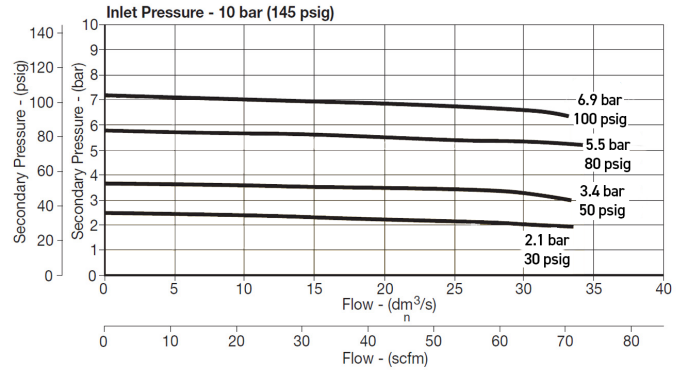
- 50mm (2") round 1/4" center back mount
  - 0-30 PSIG / 0-2 bar ..... K4520N14030
  - 0-60 PSIG / 0-4 bar ..... K4520N14060
  - 0-160 PSIG / 0-11 bar ..... K4520N14160
  - 0-300 PSIG / 0-20 bar ..... K4520N14300

- 1-3/4" Digital Round 1/4" NPT
  - 0 to 160 PSIG ..... K4517N14160D

- Tamperproof Lock and Cover Kit  
(lock not included)..... RPA-96-736B

- Wall Mounting Bracket –
  - C-Type.....GPA-97-010
  - L-Type..... GPA-96-739
  - T-Type ..... GPA-96-737

= "Most Popular"



**Replacement Bowl Kits**

- Metal Bowl, Manual Drain ..... GRP-96-714
- Plastic Bowl / Bowl Guard, Manual Drain..... GRP-96-712

**Replacement Element Kit**

- Type "A", 5 Micron.....FRP-96-729

**Replacement Kits**

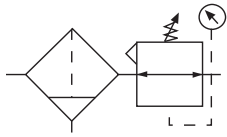
- Adjusting Knob..... GRP-96-792

**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard / Manual Drain / With Gauge 0 to 125 PSIG (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / Manual Drain / With Gauge 0 to 30 PSIG (0 to 2.0 bar)	Plastic Bowl / Bowl Guard / Automatic Piston / With Gauge 0 to 125 PSIG (0 to 8.6 bar)
Relieving	1/4	B08-02-FKG0B	B08-02-CKG0B	B08-02-FRG0B
Non-relieving	1/4	B08-02-RKG0B	B08-02-PKG0B	B08-02-RRG0B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator B18



## Features

- 5 Micron Filtration
- Balanced Valve Design
- Spring Loaded Diaphragm
- 1/2" NPT / BSPP-G Over-Ported
- Quick-Disconnect Bowl / Bowl Guard
- Light Weight
- High Flow Capacities

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## Specifications

Flow Capacity*	1/4	148 SCFM (70 dm <sup>3</sup> /s, ANR)
	3/8	158 SCFM (75 dm <sup>3</sup> /s, ANR)
	1/2	164 SCFM (77 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure	0 to 30 PSIG (0 to 2 bar)	
	0 to 60 PSIG (0 to 4 bar)	
	0 to 125 PSIG (0 to 8 bar)	
	0 to 250 PSIG (0 to 17 bar)	
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	1.72 oz	
Standard Filtration	5 Micron	
Weight	1.17 lb. (0.53 kg)	

\* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)  
Within ISO 8573-1: 2001 Class 6 (Particulates)

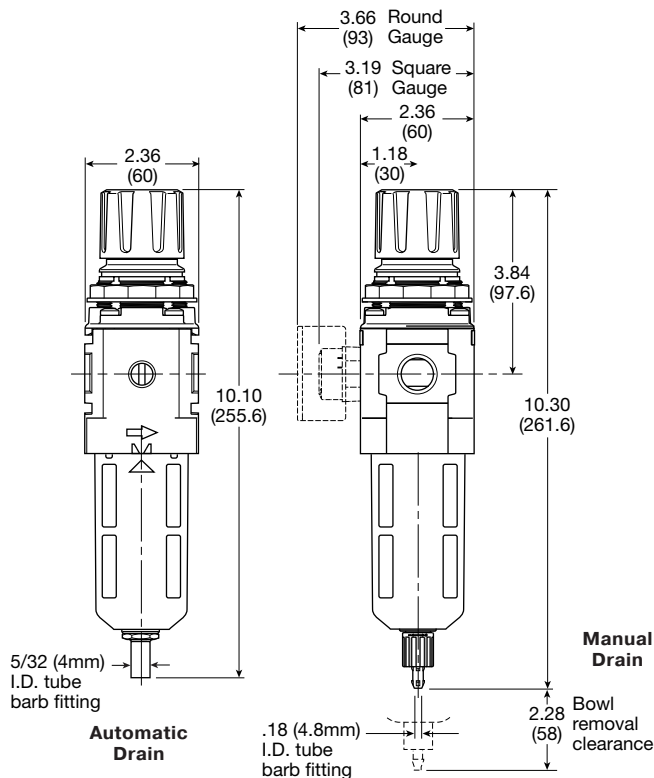
## Materials of Construction

Adjustment Knob	Acetal	
Body	Aluminum	
Body Cap	ABS	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Diaphragm Assembly	Nitrile / Steel	
Element Retainer / Baffle	Acetal	
Filter Element	Sintered Polyethylene	
Panel Nut	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating / Valve	Steel / S.S.
Valve Assembly	Brass / Nitrile	

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –  
 Sight Gauge, Automatic Drain ..... GRP-96-637  
 Sight Gauge, Manual Drain ..... GRP-96-636
- Plastic Bowl –  
 Bowl Guard, Automatic Drain ..... GRP-96-635  
 Bowl Guard, Manual Drain ..... GRP-96-634

### Replacement Element Kits

- Type "A", 5 Micron ..... FRP-96-639  
 Retainer, Deflector, and Element Kit ..... FRP-96-641

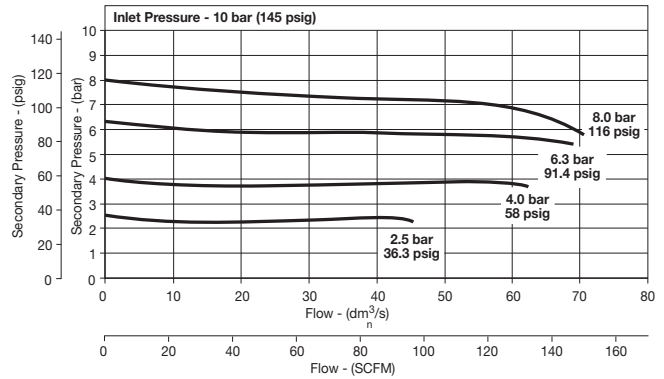
### Replacement Kits

- Adjusting Knob ..... RRP-16-340-000
- Diaphragm Assembly –  
 Non-relieving ..... RRP-96-657B  
 Relieving ..... RRP-96-656B
- Spring, Regulating –  
 0 to 30 PSIG (0 to 2.1 bar) ..... RRP-96-659B  
 0 to 60 PSIG (0 to 4.1 bar) ..... RRP-96-660B  
 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-96-661B  
 0 to 250 PSIG (0 to 17.2 bar) ..... RRP-96-662B

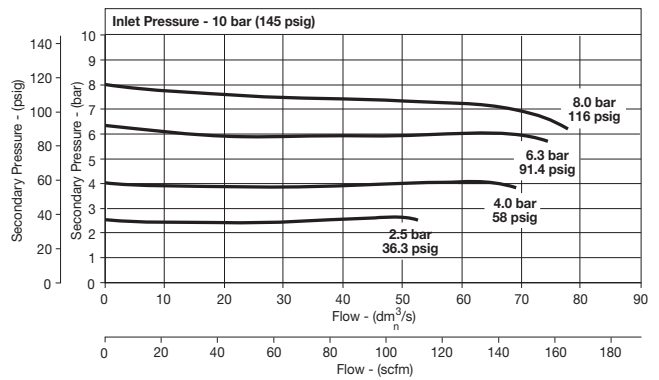
### Accessories

- Automatic Drain –  
 Fluorocarbon ..... GRP-95-981  
 Nitrile ..... GRP-95-973
- Drain, Manual Override ..... GRP-96-000
- Manual Drain ..... GRP-96-685
- Panel Mount Nut –  
 Aluminum ..... RRP-96-673  
 Plastic ..... RRP-96-675B
- Gauge, Pressure –  
 50mm (2") round 1/4" center back mount  
 0-30 PSIG / 0-2 bar ..... K4520N14030  
 0-60 PSIG / 0-4 bar ..... K4520N14060  
 0-160 PSIG / 0-11 bar ..... K4520N14160  
 0-300 PSIG / 0-20 bar ..... K4520N14300
- 0 to 160 PSIG, 1-3/4" Digital Round,  
 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit ..... RRP-96-671  
 Tamperproof Lock & Cover Kit ..... RPA-96-736  
 Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket  
 L-Type (Body) ..... GPA-96-604  
 L-Type (Bonnet) ..... GPA-96-606  
 T-Type ..... GPA-96-602

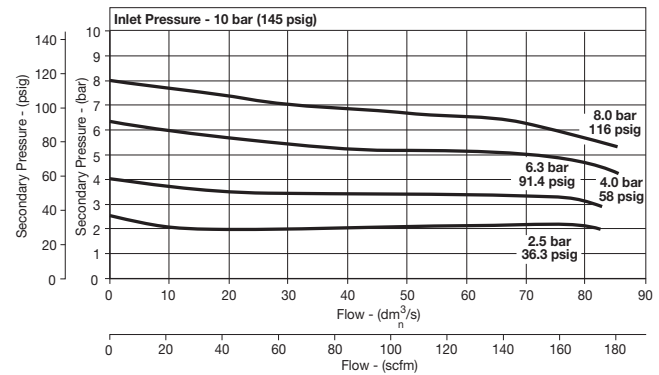
B08 1/4" Filter / Regulator



B18 3/8" Filter / Regulator



B08 1/2" Filter / Regulator



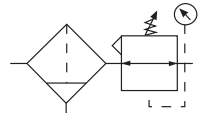
### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Manual Drain	1/4	B18-02-FKG0B	B18-02-FLG0B
	3/8	B18-03-FKG0B	B18-03-FLG0B
	1/2	B18-04-FKG0B	B18-04-FLG0B
Automatic Drain	1/4	B18-02-FGG0B	B18-02-FHG0B
	3/8	B18-03-FGG0B	B18-03-FHG0B
	1/2	B18-04-FGG0B	B18-04-FHG0B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator CB6

 = "Most Popular"



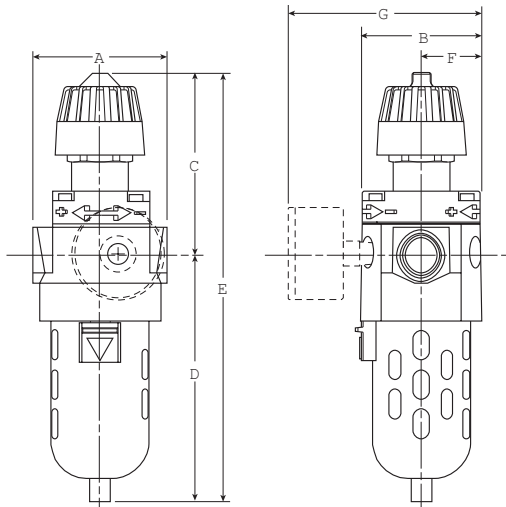
**CB6-02-000**

## Features

- 5 Micron Filtration
- Balanced Valve
- Manual Flex Drain
- Integral Plastic Bowl / Bowl Guard
- Quick-Disconnect Bowl

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**



**NOTE:** 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit CB6-XX-000		3.00 (76)	2.64 (67)	3.95 (100)	5.43 (137.9)	9.38 (238)	1.34 (34)	4.18 (106)
Automatic Drain CB6-XX-F00		3.00 (76)	2.64 (67)	3.95 (100)	5.55 (140.9)	9.50 (241)	1.34 (34)	4.18 (106)
Metal Bowl CB6-XX-M00		3.00 (76)	2.64 (67)	3.95 (100)	6.05 (153.7)	10.00 (254)	1.34 (34)	4.18 (106)
Metal Bowl with Sight Gauge CB6-XX-G00		3.00 (76)	2.64 (67)	3.95 (100)	6.15 (156)	10.10 (256.5)	1.34 (34)	4.18 (106)

## Specifications

Flow Capacity*	1/4	64.0 SCFM (30.2 dm <sup>3</sup> /s)
	3/8	70.0 SCFM (33.0 dm <sup>3</sup> /s)
	1/2	70.0 SCFM (33.0 dm <sup>3</sup> /s)
Adjusting Range Pressure	0 to 50 PSIG (0 to 3.5 bar)	
	0 to 125 PSIG (0 to 8.6 bar)	
Gauge Port (2)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration	5 Micron	
Weight	2.4 lb. (1.1 kg)	

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

**"F" Series Filters, Type "A" 5 Micron Elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc	
Bonnet, Knob	PBT	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc	
Filter Element	Polyethylene	
Panel Nut	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Stem, Element Retainer and Deflector	Acetal	
Springs	Steel	
Valve Assembly	Brass / Nitrile	

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –
  - Automatic Float Drain ..... FRP-95-950
  - Brass Petcock Drain ..... FRP-95-178
- Metal Bowl / Sight Gauge, Brass Petcock Drain .. GRP-95-133
- Plastic Bowl, Flex Tip Drain ..... FRP-95-017
- Plastic Bowl / Bowl Guard –
  - Automatic Float Drain ..... FRP-95-015
  - Flex Top Drain ..... FRP-95-014

### Replacement Element Kits

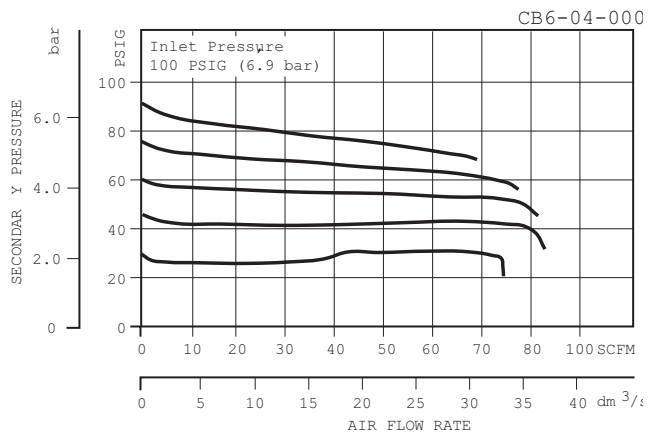
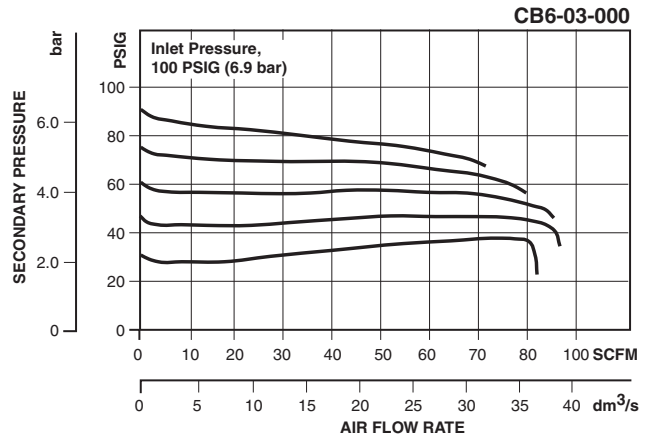
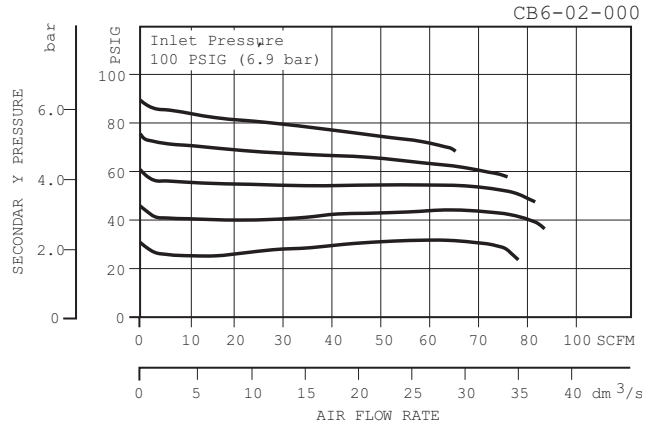
- Type "A", 5 Micron w/ Nitrile Bowl O-Ring ..... FRP-95-160

### Replacement Kits

- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-216
  - Self-relieving.....RRP-96-213
- Spring, Regulating –
  - 0 to 50 PSIG (0 to 3.4 bar) Blue Color ..... RRP-95-222
  - 0 to 125 PSIG (0 to 8.5 bar) Silver Color ..... RRP-95-224

### Accessories

- Automatic Mech. Drain, 1/8" NPT –
    - Fluorocarbon ..... GRP-95-981
    - Nitrile ..... GRP-95-973
  - Manual Flex Tip Drain ..... FRP-95-610
  - Wall Mounting Bracket –
    - Gauge Port Adapter, 1/4" NPT ..... RRP-95-590
    - L-Type.....GPA-95-012
  - Drain, Manual Override for
    - Auto Float Drain, 1/8 NPT.....GRP-96-000
  - Gauge, Pressure, 2" Dial Face, 1/4" NPT CBM –
    - 0 to 60 PSIG (0 to 4.1 bar) ..... K4520N14060W
    - 0 to 160 PSIG (0 to 11.0 bar)..... K4520N14160W
    - 0 to 300 PSIG (0 to 21 bar) ..... K4520N14300W
    - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT . K4517N14160D
  - Panel Nut, Plastic ..... GPA-95-032
  - Tamper Resistant Kit..... RPA-95-006
- NOTE: Gauge not included, order separately by accessory number.



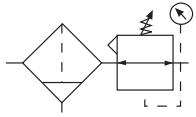
### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl w/ Sight Gauge 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl Low Pressure 0 to 50 PSIG (0 to 3.4 bar)
<b>Manual Drain</b>	1/4	CB6-02-000	CB6-02-M00	CB6-02-G00	CB6-02-LM0
	3/8	CB6-03-000	CB6-03-M00	CB6-03-G00	CB6-03-LM0
	1/2	CB6-04-000	CB6-04-M00	CB6-04-G00	CB6-04-LM0
<b>Automatic Drain</b>	1/4	CB6-02-F00	CB6-02-FM0	CB6-02-FG0	CB6-02-FLM
	3/8	CB6-03-F00	CB6-03-FM0	CB6-03-FG0	CB6-03-FLM
	1/2	CB6-04-F00	CB6-04-FM0	CB6-04-FG0	CB6-04-FLM

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Precision Filter / Regulator PC6

= "Most Popular"



**PC6-02-000**

## Precision Filter / Regulator

The PC6 models are general purpose regulators specifically designed for applications that require reliable performance and accurate pressure control.

### Features

- *Stable Output* – Aspirator Design Minimizes “Droop” at Higher Flow Levels
- *Accuracy* – High Diaphragm-to-Valve-Area Ratio Combined with Unbalanced Valve Provides High Precision with Minimal Initial Pressure Droop
- *Quality Air* – 5 Micron Filtration for Superior Protection of Critical Downstream Equipment
- *Easy Maintenance* – May be Disassembled and Serviced without Removal from Air Line
- *Competitive* – Compact, Integral Filter / Regulator Can be Used Where Limited Space or Lower Cost is Required

## Specifications

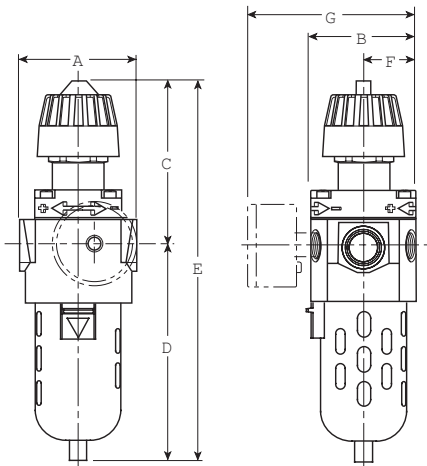
Flow Capacity*	PC6	19.0 SCFM (9.0 dm <sup>3</sup> /s)
Gauge Port (2)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Weight	2.4 lb. (1.1 kg)	

\* Inlet pressure 100 PSIG (6.9 bar).  
Secondary pressure PC6, 45 PSIG (3.1 bar).

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc	
Bonnet, Knob	PBT	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc	
Filter Element	Polypropylene	
Panel Nut	Acetal	
Seals	Plastic Bowl	Nitrile
Springs	Steel	
Stem, Element Retainer and Deflector	Acetal	
Valve Assembly	Brass / Nitrile	



**NOTE:** 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit PC6-XX-000		3.00 (76)	2.64 (67)	3.95 (100)	5.43 (137.9)	9.38 (238)	1.34 (34)	4.18 (106)
Automatic Drain PC6-XX-F00		3.00 (76)	2.64 (67)	3.95 (100)	5.55 (140.9)	9.50 (241)	1.34 (34)	4.18 (106)
Automatic Drain PC6-XX-G00		3.00 (76)	2.64 (67)	3.95 (100)	6.15 (156)	10.10 (256.5)	1.34 (34)	4.18 (106)

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –
  - Automatic Drain ..... PRP-96-006
  - Manual Drain ..... PRP-95-070
- Metal Bowl / Sight Gauge, Brass Petcock Drain .. PRP-95-071
- Plastic Bowl, FlexTip Drain ..... FRP-95-017
- Plastic Bowl / Bowl Guard –
  - Automatic Drain ..... FRP-95-015
  - FlexTip Drain ..... FRP-95-014

### Replacement Element Kits

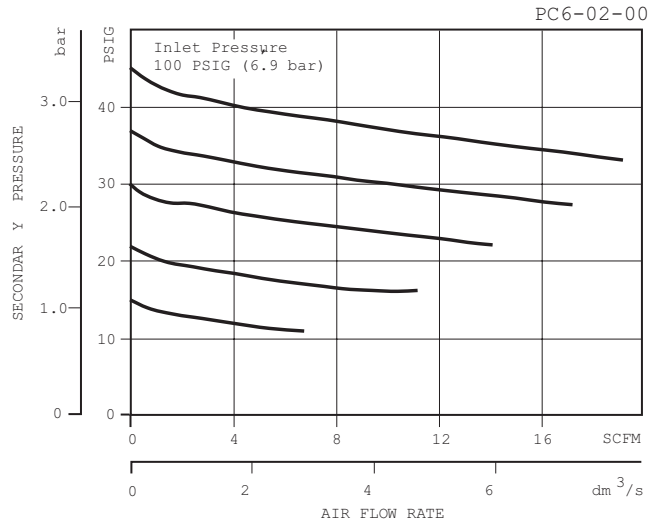
- Type "A", 5 Micron..... FRP-95-160

### Replacement Kits

- Diaphragm Assembly –
  - Non-relieving, Nitrile..... PRP-95-055
  - Self-relieving, Nitrile ..... PRP-95-025
- Spring, Regulating –
  - 0 to 15 PSIG (1 bar) ..... RRP-95-233
  - 0 to 30 PSIG (2,1 bar)..... RRP-95-916
  - 0 to 50 PSIG (0 to 3,4 bar)..... RRP-95-222
  - 0 to 125 PSIG (0 to 8,5 bar) ..... RRP-95-224

### Accessories

- Automatic Mechanical Drain
  - 1/8 NPT, Fluorocarbon..... GRP-95-981
  - 1/8 NPT, Nitrile..... GRP-95-973
- Drain, Manual Override for
  - Auto Float Drain, 1/8 NPT..... GRP-96-000
- FlexTip Drain ..... FRP-95-610
- Gauge, Pressure, 2" Dial Face, 1/4 NPT, CBM –
  - 0 to 30 PSIG (0 to 2,1 bar) ..... K4520N14030W
  - 0 to 60 PSIG (0 to 4 bar)..... K4520N14060W
  - 0 to 120 PSIG (0 to 8,3 bar) ..... K4520N14160W
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT . K4517N14160D
- Panel Nut, Plastic ..... GPA-95-032
- Tamper Resistant Kit..... RPA-95-006
- Wall Mounting Bracket –
  - Gauge Port Adapter, 1/4 NPT ..... RRP-95-590
  - L-Type w/Panel Mount Nut ..... GPA-95-011

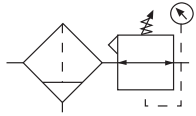


### Ordering Information

Model Type	Port Size	Standard Unit 0 to 50 PSIG (0 to 3.4 bar)	Automatic Mechanical Drain	Sight Gauge	High Pressure 0 to 125 PSIG (0 to 8.6 bar)	Low Pressure 0 to 30 PSIG (0 to 2.1 bar)	Metal Bowl	Fluorocarbon Seals
Relieving	1/4	PC6-02-000	PC6-02-F00	PC6-02-G00	PC6-02-H00	PC6-02-L00	PC6-02-M00	PC6-02-V00
	3/8	PC6-03-000	PC6-03-F00	PC6-03-G00	PC6-03-H00	PC6-03-L00	PC6-03-M00	PC6-03-V00
	1/2	PC6-04-000	PC6-04-F00	PC6-04-G00	PC6-04-H00	PC6-04-L00	PC6-04-M00	PC6-04-V00
Non-relieving	1/4	PC6-02-N00	PC6-02-FN0	PC6-02-GN0	PC6-02-HN0	PC6-02-LN0	PC6-02-MN0	PC6-02-VN0
	3/8	PC6-03-N00	PC6-03-FN0	PC6-03-GN0	PC6-03-HN0	PC6-03-LN0	PC6-03-MN0	PC6-03-VN0
	1/2	PC6-04-N00	PC6-04-FN0	PC6-04-GN0	PC6-04-HN0	PC6-04-LN0	PC6-04-MN0	PC6-04-VN0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator B28

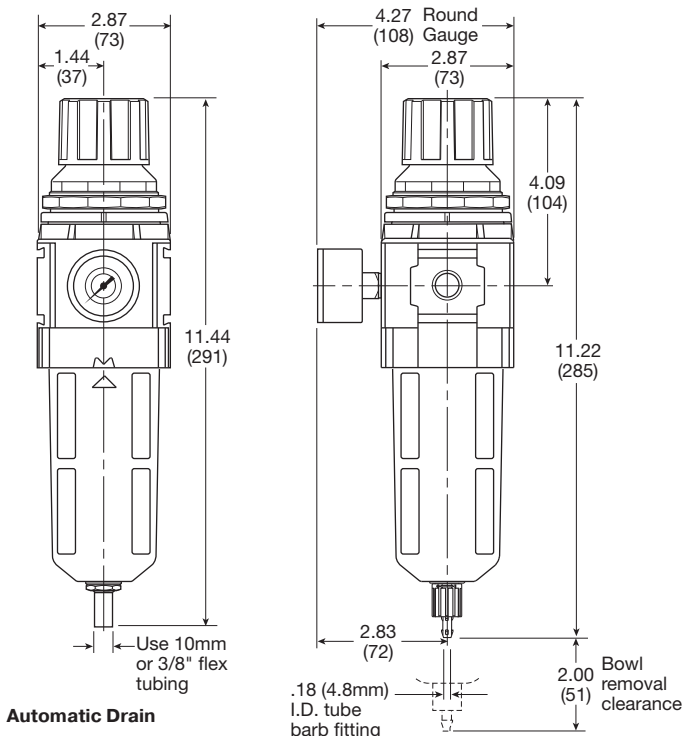


## Features

- 5 Micron Filtration
- Balanced Valve Design
- Spring Loaded Diaphragm
- 3/4" NPT / BSPP-G Over-Ported
- Quick-Disconnect Bowl / Bowl Guard
- Light Weight
- High Flow Capacities

**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**



Inches (mm)

## Specifications

Flow Capacity*	3/8	200 SCFM (94 dm <sup>3</sup> /s, ANR)
	1/2	200 SCFM (94 dm <sup>3</sup> /s, ANR)
	3/4	235 SCFM (109 dm <sup>3</sup> /s, ANR)
Adjusting Range Pressure	0 to 30 PSIG (0 to 2.1 bar)	
	0 to 60 PSIG (0 to 4.1 bar)	
	0 to 125 PSIG (0 to 8.6 bar)	
	0 to 250 PSIG (0 to 17.2 bar)	
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity	2.87 oz	
Standard Filtration	5 Micron	
Weight	1.87 lb. (0.85 kg)	

\* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)  
Within ISO 8573-1: 2001 Class 6 (Particulates)

## Materials of Construction

Adjustment Knob	Acetal	
Body	Aluminum	
Body Cap	ABS	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Nitrile / Zinc	
Element Retainer / Baffle	Acetal	
Filter Element	Sintered Polyethylene	
Panel Nut	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating / Valve	Steel / S.S.
Valve Assembly	Brass / Nitrile	

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

### Replacement Bowl Kits

- Metal Bowl –
  - Sight Gauge, Automatic Drain ..... GRP-96-645
  - Sight Gauge, Manual Drain ..... GRP-96-644
- Plastic Bowl –
  - Bowl Guard, Automatic Drain ..... GRP-96-643
  - Bowl Guard, Manual Drain ..... GRP-96-642

### Replacement Element Kits

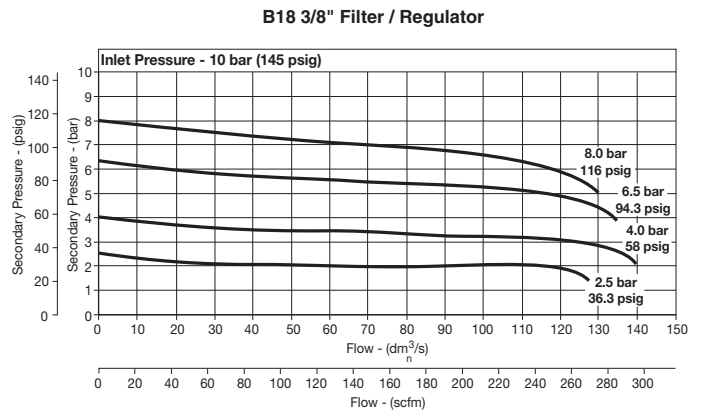
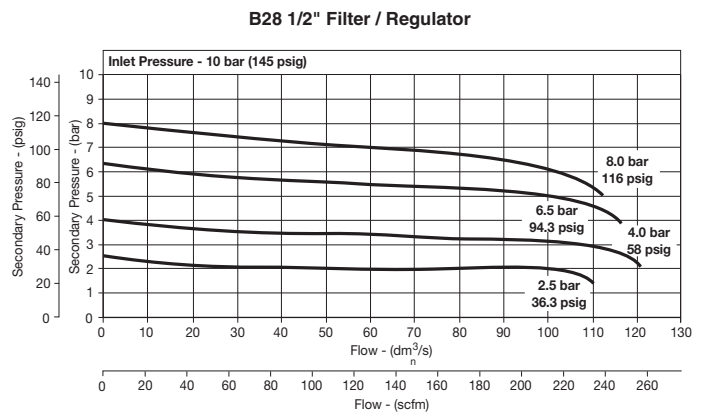
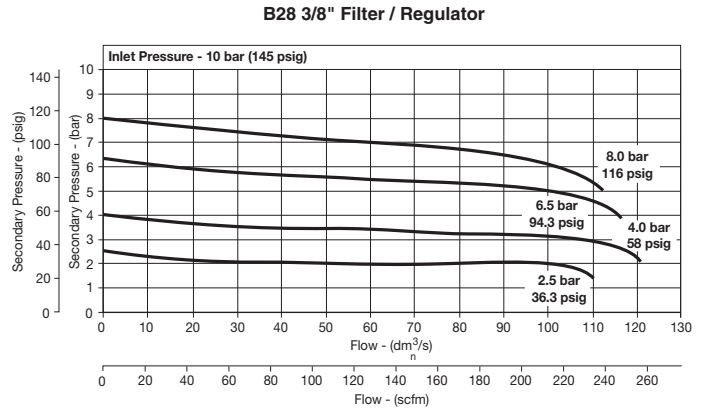
- Type "A", 5 Micron ..... FRP-96-653
- Element, Deflector, Retainer kit ..... FRP-96-283

### Replacement Kits

- Adjusting Knob ..... RRP-16-341-000
- Diaphragm Assembly –
  - Non-relieving ..... RRP-96-987
  - Relieving ..... RRP-96-986
- Spring, Regulating –
  - 0 to 30 PSIG (0 to 2.1 bar) ..... RRP-96-163
  - 0 to 60 PSIG (0 to 4.1 bar) ..... RRP-96-164
  - 0 to 125 PSIG (0 to 8.6 bar) ..... RRP-96-165
  - 0 to 250 PSIG (0 to 17.2 bar) ..... RRP-96-166
- Valve Assembly ..... RRP-96-049

### Accessories

- Automatic Drain –
  - Fluorocarbon ..... GRP-95-981
  - Nitrile ..... GRP-95-973
- Manual Drain ..... GRP-96-685
- Panel Mount Nut –
  - Aluminum ..... RRP-96-674
  - Plastic ..... RRP-96-676
- Gauge, Pressure –
  - 50mm (2") round 1/4" center back mount
    - 0-30 PSIG / 0-2 bar ..... K4520N14030
    - 0-60 PSIG / 0-4 bar ..... K4520N14060
    - 0-160 PSIG / 0-11 bar ..... K4520N14160
    - 0-300 PSIG / 0-20 bar ..... K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT ..... K4517N14160D
- Tamper Resistant Kit ..... RRP-96-672
- Sight Gauge Kit ..... GRP-96-825
- Wall Mounting Bracket –
  - L-Type (Body) ..... GPA-96-605
  - L-Type (Bonnet) ..... GPA-96-607
  - T-Type ..... GPA-96-602



### Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Manual Drain	3/8	B28-03-FKG0B	B28-03-FLG0B
	1/2	B28-04-FKG0B	B28-04-FLG0B
	3/4	B28-06-FKG0B	B28-06-FLG0B
Automatic Drain	3/8	B28-03-FGG0B	B28-03-FHG0B
	1/2	B28-04-FGG0B	B28-04-FHG0B
	3/4	B28-06-FGG0B	B28-06-FHG0B

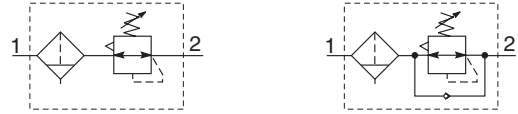
**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator B90

   = "Most Popular"



## Symbols



## Features

- Integral 3/4" or 1" ports (BSPP or NPT)
- High efficiency element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Secondary pressure ranges 12 and 16 bar
- Rolling diaphragm for extended life
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow / relieving option
- Low temperature -40° with combined manual / semi-auto drain as standard

<b>B90</b>	-	<b>0</b>	-	<b>6</b>	-	<b>A</b>	<b>H</b>	<b>0</b>	<b>0</b>
<b>Series</b> Filter / Regulator Combination <b>B90</b>		<b>Thread type*</b> NPT <b>0</b> BSPP <b>C</b>		<b>Port size</b> 3/4 <b>6</b> 1 <b>8</b>		<b>Function / pressure range</b> A Relieving / 0 to 174 PSI H Relieving / 0 to 232 PSI	<b>Bowl / drain type</b> H Metal bowl / sight gauge & auto drain L Metal bowl / sight gauge / manual & semi auto drain	<b>Option</b> 0 None G Pressure Gauge A† Lockable type	

**Notes:**  
 \* For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
 † Not field convertible.

**Bold items are most common.**

## Ordering information

Port size	Description	Flow‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	12 bar, relieving, combined manual / semi auto drain	335	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	<b>B90-06-AL00</b>
3/4"	12 bar, relieving, auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-06-AH00
3/4"	12 bar, relieving, gauge, combined manual / semi auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-06-ALG0
3/4"	12 bar, relieving, gauge, auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-06-AHGO
1"	12 bar, relieving, combined manual / semi auto drain	465	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	<b>B90-08-AL00</b>
1"	12 bar, relieving, auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-08-AH00
1"	12 bar, relieving, gauge, combined manual / semi auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-08-ALG0
1"	12 bar, relieving, gauge, auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	B90-08-AHGO

† **Standard part numbers shown in bold. For other models refer to Options chart above.**

‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

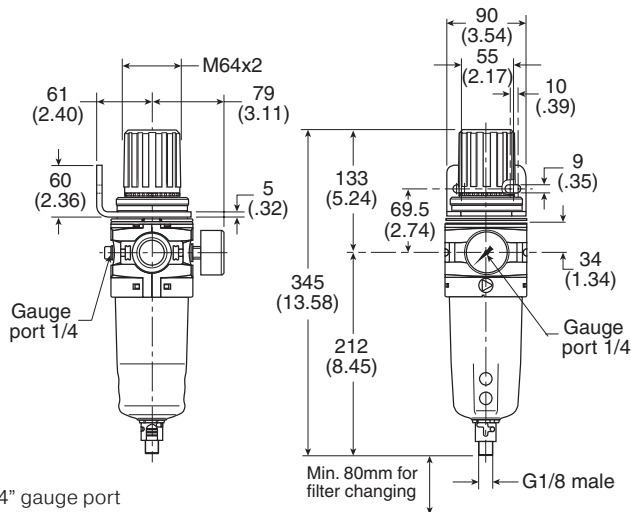
Lockable regulators will require key lock kit (opposite page).

**Specifications**

Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*:	
Auto drain	-10°C to 60°C (14°F to 140°F)
Combined drain	-40°C to 60°C (-40°F to 140°F)
Particle removal	5 micron
Air quality	Within ISO 8573-1: 1991 Class 3 and 5 (particulates) Within ISO 8573-1: 2001 Class 6 and 7 (particulates)
Typical flow with 10 bar (145 psig) inlet pressure and 6.3 bar (91 psig) set pressure and 0.5 bar (7.3 psig) pressure drop	1" size 465 scfm
Manual / semi-auto drain	Closed at 0.8 bar (11.6 psig) G1/8 thread male
Auto drain bowl pressure to close drain	0.8 bar (11.6 psig)
Operating range manual override facility	0.8 bar (11.6 psig) to 17.5 bar (254 psig)
Bowl capacity	130 cm <sup>3</sup> (4.4 US oz)
Gauge ports (x2)	1/4"

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

**Dimensions mm (inches)**



\* 1/4" gauge port

**Service kits**

- 5 micron element kit ..... P3YKA00ESE
- Bowl kit
  - Manual/semi auto drain (combined) ..... P3YKA00BSC
  - Auto drain ..... P3YKA00BSA
- Key lock kit..... P3XKA00AS
- Diaphragm kit
  - Relieving type ..... P3YKA00RR
  - Non-relieving type..... P3YKA00RN
- Angle bracket + metal lock ring ..... P3YKA00MS
- Panel mount nut ..... P3YKA00MM

**Material specifications**

Body	Aluminum
Sight glass	Polypropylene
Body cover	ABS
Element	Sintered polypropylene
Seals	Nitrile NBR
Drains	Manual / semi-auto: Acetal Automatic: PA / Ø 10mm brass connection
Bonnet	Glass filled polyamide
Control knob	Glass filled polyamide
Valve	Brass / NBR
Screws	Steel / zinc plated

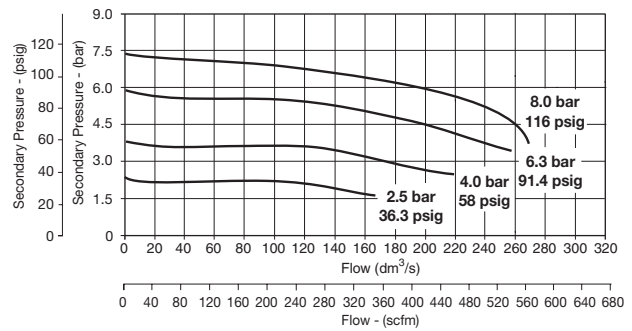
**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

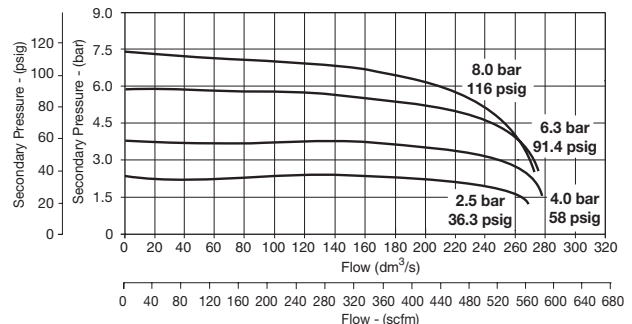
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Flow characteristics**

**(3/4") 5 Micron Filter / Regulator**

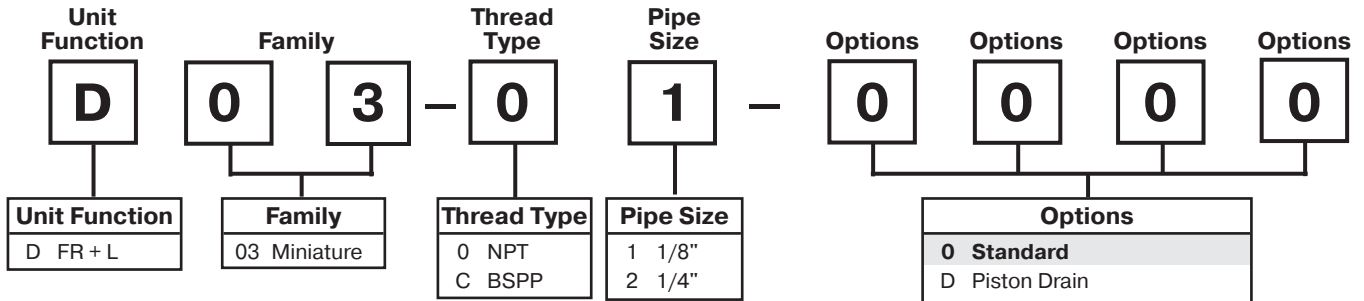


**(1") 5 Micron Filter / Regulator**



# Filter / Regulator-Lubricator Numbering System

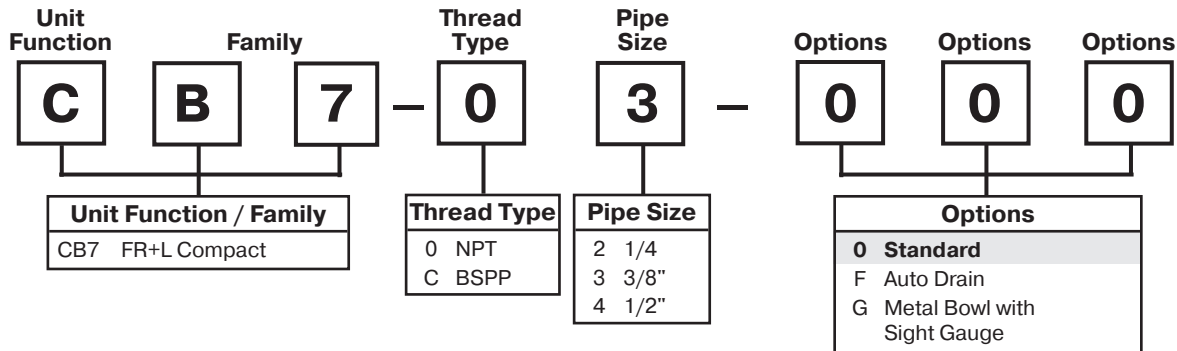
   = "Most Popular"



**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8, and 9.  
For example: **M 0 3 - 0 1 - D M 0 0**

**NOTE:** 0000 in position 6, 7, 8 and 9 signifies standard product.  
(Poly Bowl, Manual Drain on Filter, no Drain on Lubricator, 2 to 125 PSIG, Relieving)

\* Not available with BSPP thread type.

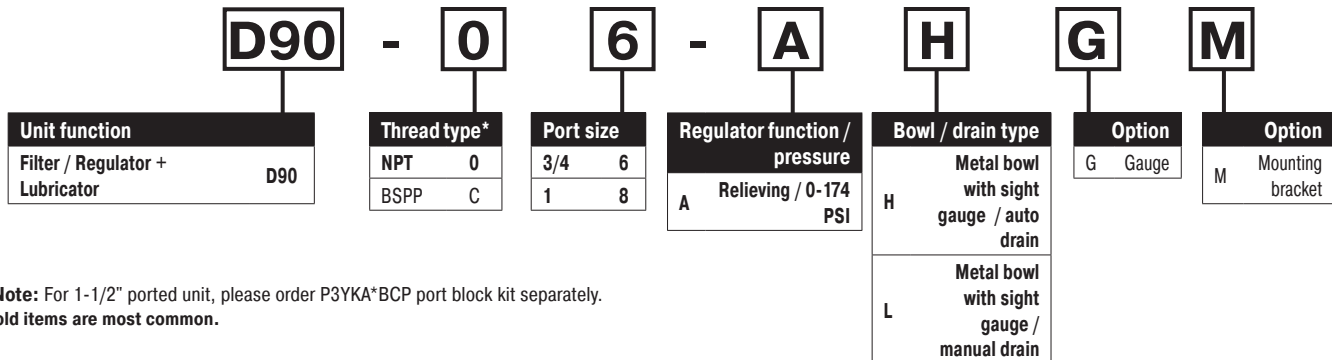


**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

**Note:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8.  
For example:

**C B 7 - 0 3 - 0 0 0**

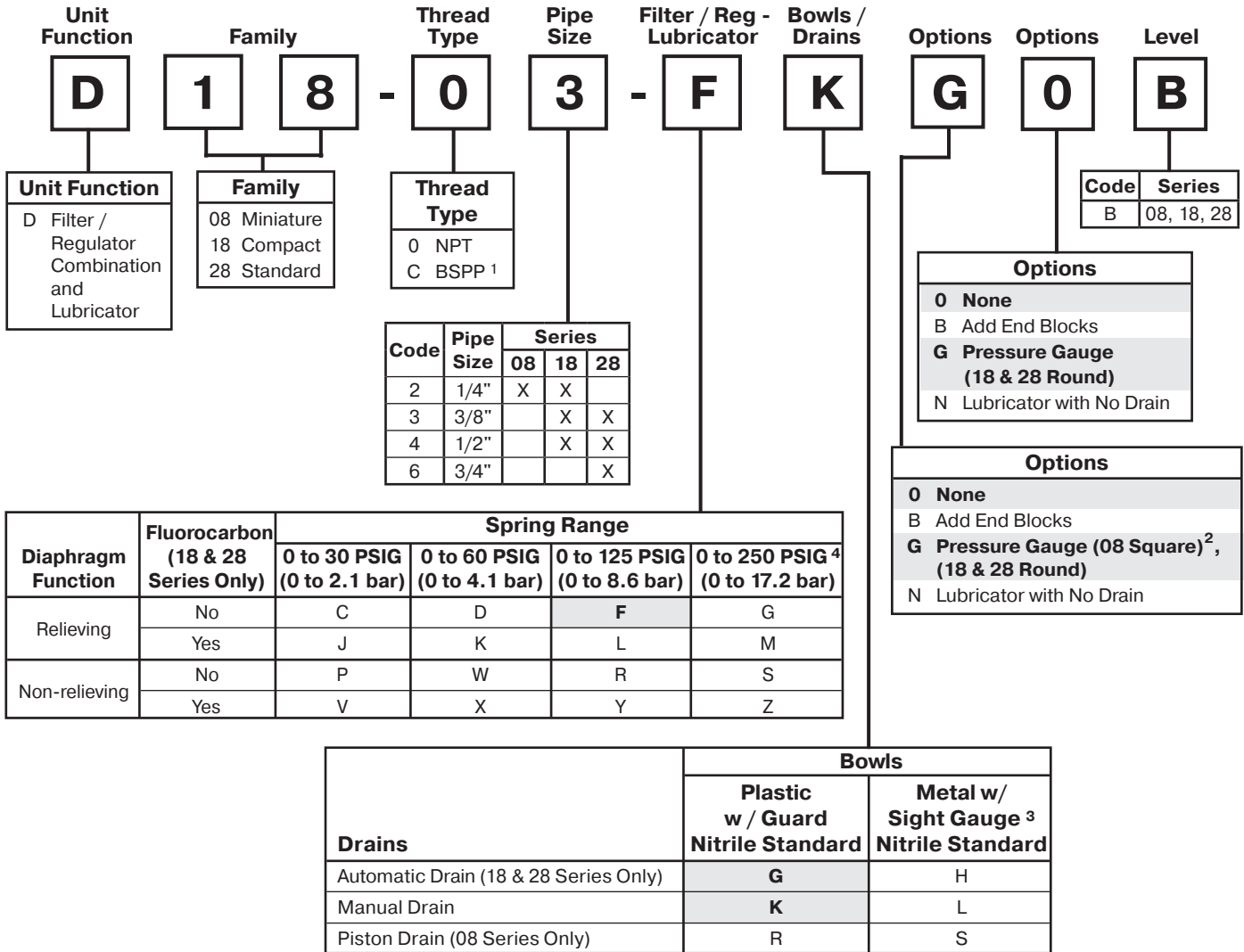


\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
Bold items are most common.



# Filter / Regulator-Lubricator Numbering System

  = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)  
<sup>2</sup> Square gauge included with all D08  
<sup>3</sup> 08 series has all metal bowl (no sight gauge)  
<sup>4</sup> 08 series operating range 0 to 232 PSIG (1 to 16 bar)

**NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, 9. For example:**

**D 1 8 - 0 3 - F K G 0 B**

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

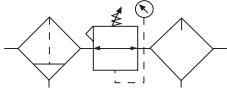
**Note:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**Suggested Lubricant**

Airline Oil F442001  
 Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F  
 (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Combination D03

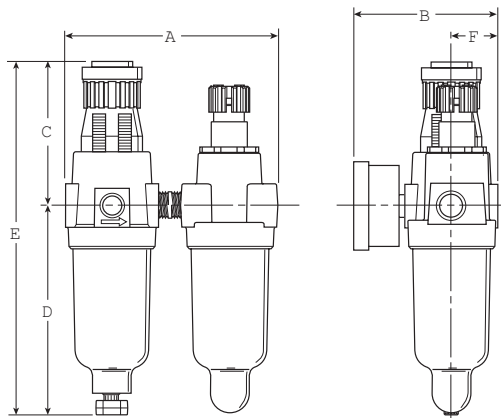
= "Most Popular"



**D03-02-0000**

## Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports
- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit D03-XX-XXXX		3.75 (95)	2.83 (71.9)	2.42 (61)	3.79 (96)	6.21 (158)	.79 (20)

## Specifications

Flow Capacity*	1/8	20 SCFM (9.4 dm <sup>3</sup> /s)
	1/4	20 SCFM (9.4 dm <sup>3</sup> /s)
Gauge Ports (2)	1/8	
Minimum Flow for Lubrication	0.7 SCFM at 100 PSIG	
Port Threads	1/8, 1/4	
Pressure & Temperature Ratings –		
Plastic Bowl	0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)	
Metal Bowl	0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)	
Secondary Pressure Ranges –		
Standard Pressure	2 to 125 PSIG (0 to 8.6 bar)	
Medium Pressure	1 to 60 PSIG (0 to 4.1 bar)	
Medium Pressure	1 to 30 PSIG (0 to 2.1 bar)	
Low Pressure	1 to 15 PSIG (0 to 1.0 bar)	
Weight	.9 lb. (.36 kg)	

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).


**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls –	
Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile
Sight Dome	Polycarbonate
Suggested Lubricant	Airline Oil F442001

 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

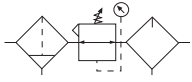
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Ordering Information**

Model Type	Port Size	Plastic Bowl with Gauge	Metal Bowl with Gauge
Manual Drain	1/8	D03-01-G000	D03-01-GM00
	1/4	D03-02-G000	D03-02-GM00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination D08



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Flush-Mount Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

## Specifications

Flow Capacity*	1/4	28 SCFM (14 dm <sup>3</sup> /s, ANR)
Gauge Port (2)**	NPT	1/8
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Standard Filtration		5 Micron
Weight		1.43 lb. (0.6 kg)

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 100 PSIG (6.9 bar), 14.5 PSIG (1 bar) pressure drop.

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

## Materials of Construction

Body	Aluminum	
Bonnet	Glass-filled Nylon	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Stainless Steel / Nitrile	
Filter Element	Polyethylene	
Knob	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Springs	Steel	
Valve	Brass / Nitrile	

### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

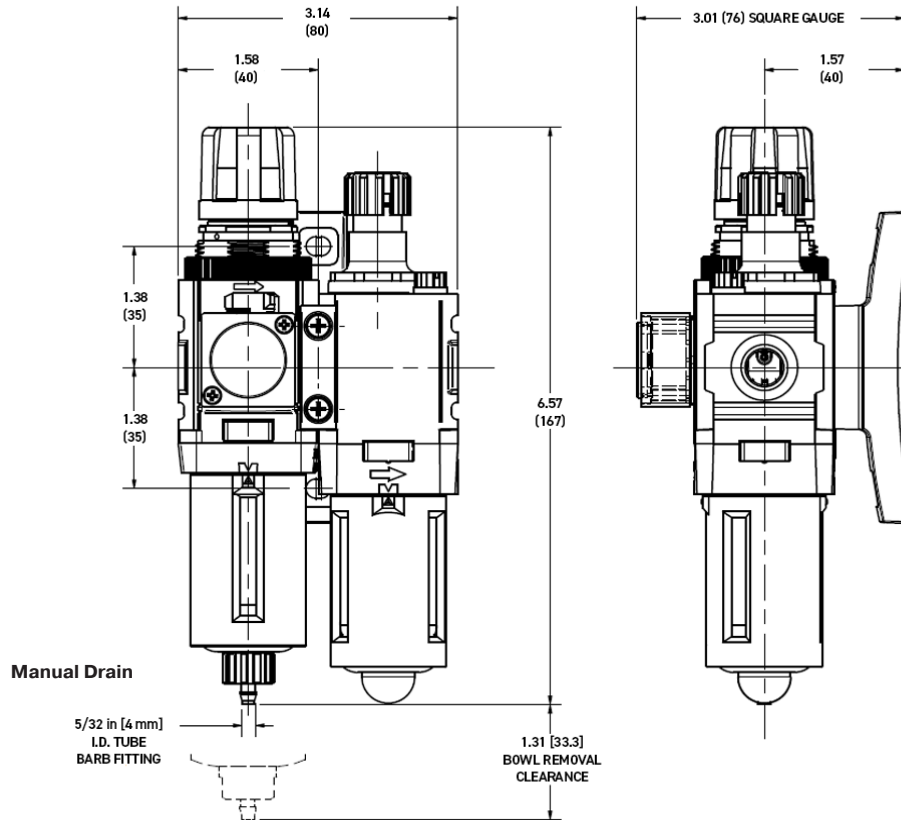
## Ordering Information

Model	Port Size	Plastic Bowl w / Plastic Bowl Guard 0 to 125 PSI (0 to 8.6 bar) With Gauge	Metal Bowl w / 0 to 125 PSI (0 to 8.6 bar) With Gauge
Manual Drain	1/4	D08-02-FKG0B	D08-02-FLG0B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**



Inches (mm)

 **WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

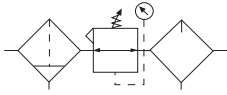
**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

# Combination CB7

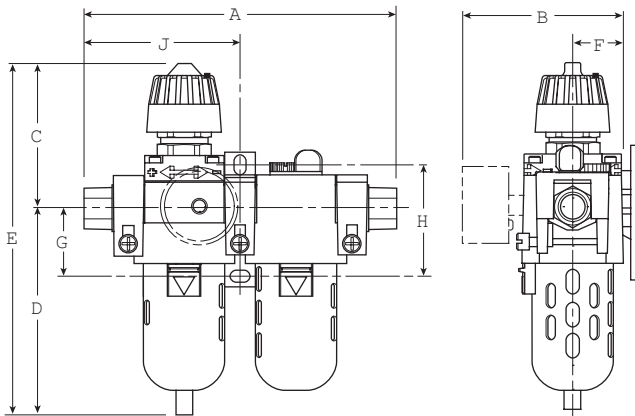
= "Most Popular"



**CB7-02-000**

## Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G	H	J
Standard Unit With End Blocks CB7-XX-000		8.35 (212)	4.18 (106)	3.95 (44)	5.43 (137.9)	9.38 (238)	1.34 (34)	1.73 (44)	2.98 (75.7)	4.17 (76)

## Specifications

Flow Capacity*	1/4	36.1 SCFM (17.0 dm <sup>3</sup> /s)
	3/8	58.5 SCFM (27.6 dm <sup>3</sup> /s)
	1/2	64.0 SCFM (30.2 dm <sup>3</sup> /s)
Gauge Ports (2)	NPT / BSPP-G	1/4
Port Threads	NPT	1/4, 3/8, 1/2
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 14 bar) 32°F to 175°F (0°C to 80°C)
Weight		5.58 lb. (2.5 kg)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Transparent	Polycarbonate
Metal	Zinc
Diaphragm	Nitrile / Zinc
Drain Stem	Acetal / Polycarbonate
Filter Elements	Polypropylene
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals –	
Transparent	Nitrile
Metal	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Stem, Element Retainer and Deflector	Acetal
Suggested Lubricant	Airline Oil F442001

= "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

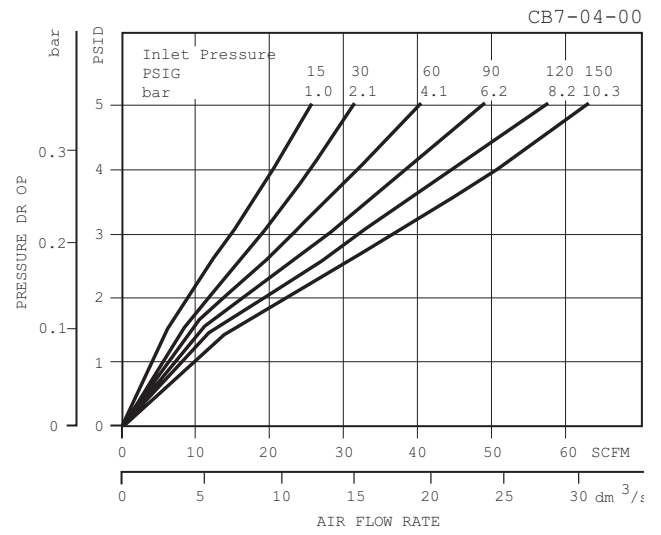
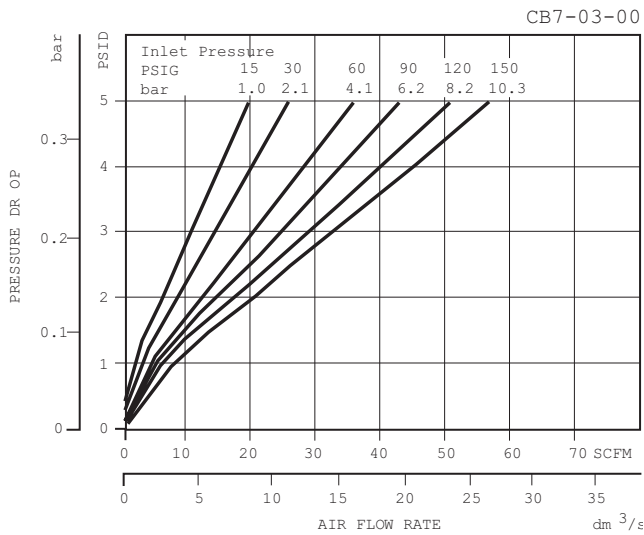
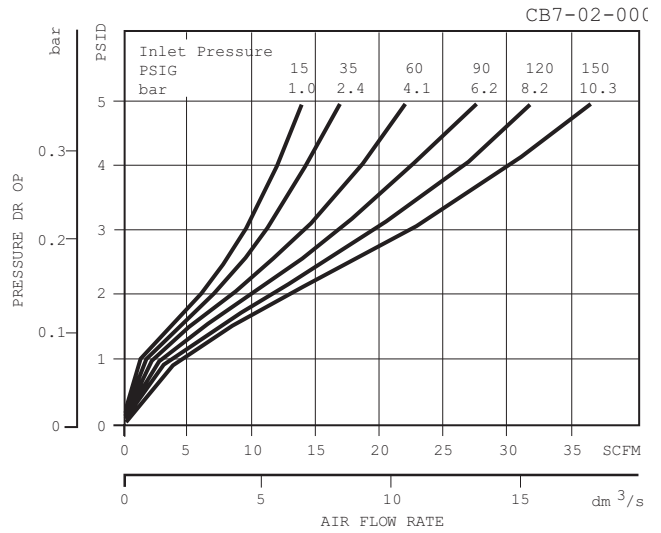
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

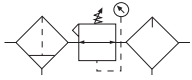


**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)	Automatic Drain 0 to 125 PSIG (0 to 8.5 bar)
<b>CB7</b>	1/4	CB7-02-000	CB7-02-G00	CB7-02-F00
	3/8	CB7-03-000	CB7-03-G00	CB7-03-F00
	1/2	CB7-04-000	CB7-04-G00	CB7-04-F00

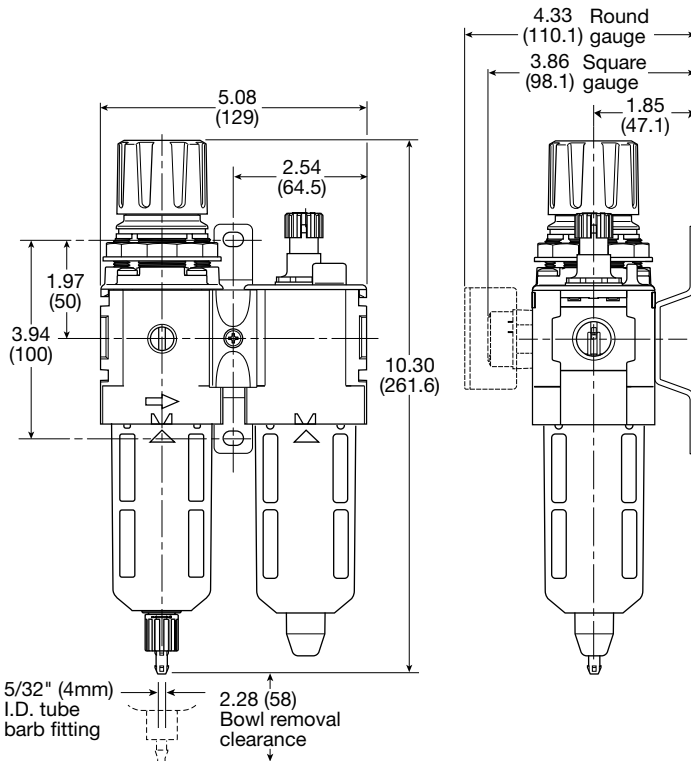
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination D18



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard



Manual Drain

Inches (mm)

## Specifications

Flow Capacity*	1/4	45 SCFM (22 dm <sup>3</sup> /s, ANR)
	3/8	70 SCFM (33 dm <sup>3</sup> /s, ANR)
	1/2	90 SCFM (43 dm <sup>3</sup> /s, ANR)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration	5 Micron	
Weight	2.98 lb. (1.3 kg)	

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.


## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bonnet / Knob	Nylon / Acetal	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Nitrile / Steel	
Element Retainer / Baffle and Deflector	Acetal Polypropylene	
Filter Element	5 micron	Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Polyamide (Nylon)	
Springs	Main Regulating Valve	Steel Stainless Steel
Suggested Lubricant	Airline Oil F442001	
Valve Assembly	Brass / Nitrile	



 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

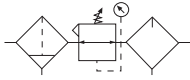
**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard Without Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard With Gauge 0 to 125 PSI (0 to 8.6 bar)
<b>Manual Drain</b>	1/4	D18-02-FK00B	D18-02-FKG0B
	3/8	D18-03-FK00B	D18-03-FKG0B
	1/2	D18-04-FK00B	D18-04-FKG0B
<b>Automatic Drain</b>	1/4	D18-02-FG00B	D18-02-FGG0B
	3/8	D18-03-FG00B	D18-03-FGG0B
	1/2	D18-04-FG00B	D18-04-FGG0B

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

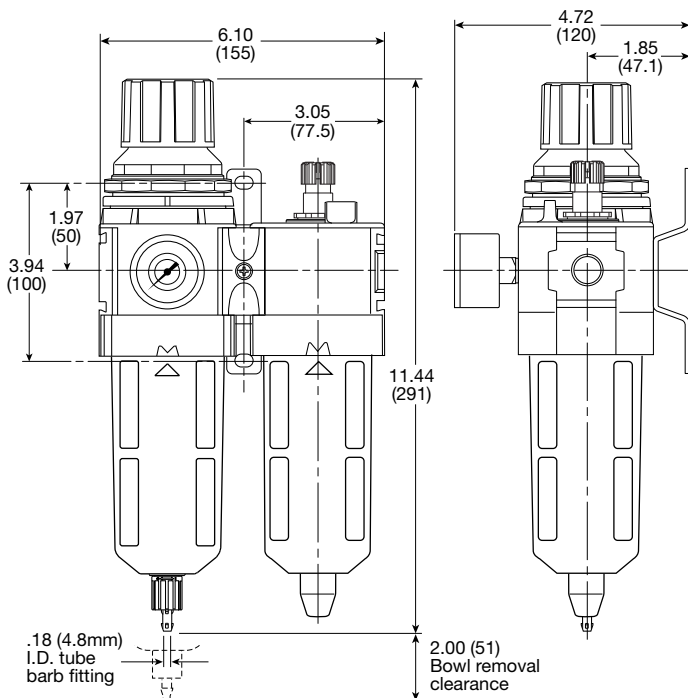
# Combination D28

= "Most Popular"



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard



Manual Drain

Inches (mm)

## Specifications

Flow Capacity*	3/8	110 SCFM (52 dm <sup>3</sup> /s, ANR)
	1/2	110 SCFM (52 dm <sup>3</sup> /s, ANR)
	3/4	150 SCFM (71 dm <sup>3</sup> /s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT/BSPP-G	3/8, 1/2, 3/4
Standard Filtration	5 Micron	
Weight	4.65 lb. (2.1 kg)	

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.


**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Aluminum	
Body Cap	ABS	
Bonnet / Knob	Nylon / Acetal	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Nitrile / Zinc	
Element Retainer / Baffle and Deflector	Acetal Polypropylene	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating Valve	Steel Stainless Steel
Suggested Lubricant	Airline Oil F442001	
Valve Assembly	Brass / Nitrile / Acetal	

 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

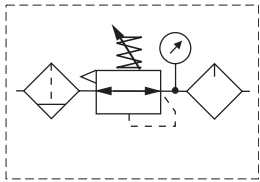
**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard With Gauge & End Blocks 0 to 125 PSI(0 to 8.6 bar)
<b>Manual Drain</b>	3/8	D28-03-FKG0B	D28-03-FLG0B	D28-03-FKBGB
	1/2	D28-04-FKG0B	D28-04-FLG0B	D28-04-FKBGB
	3/4	D28-06-FKG0B	D28-06-FLG0B	D28-06-FKBGB
<b>Automatic Drain</b>	3/8	D28-03-FGG0B	D28-03-FHG0B	D28-03-FGBGB
	1/2	D28-04-FGG0B	D28-04-FHG0B	D28-04-FGBGB
	3/4	D28-06-FGG0B	D28-06-FHG0B	D28-06-FGBGB

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination D90

= "Most Popular"



## Options

<b>D90</b>	-	<b>0</b>	<b>6</b>	-	<b>A</b>	<b>H</b>	<b>G</b>	<b>M</b>
Unit function		Thread type*	Port size		Regulator function / pressure	Bowl / drain type	Option	Option
Filter / Regulator + Lubricator		NPT 0 BSPP C	3/4 6 1 8		A Relieving / 0-174 PSI	H Metal bowl with sight gauge / auto drain L Metal bowl with sight gauge / manual drain	G Gauge	M Mounting bracket

\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**


## Filter / Regulator + Lubricator Combinations 5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket

### Ordering information

Port size	Flow† scfm	Weight kg (lb)	Combined manual / semi-auto drain part number†	Auto drain part number†
3/4"	315	2.8 (6.2)	<b>D90-06-ALGM</b>	<b>D90-06-AHGM</b>
1"	340	2.8 (6.2)	<b>D90-08-ALGM</b>	<b>D90-08-AHGM</b>

† Standard part numbers shown in bold. For other models refer to Options chart below.  
 ‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

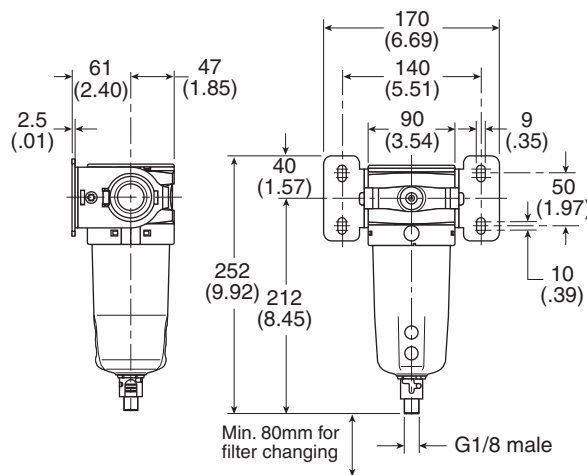
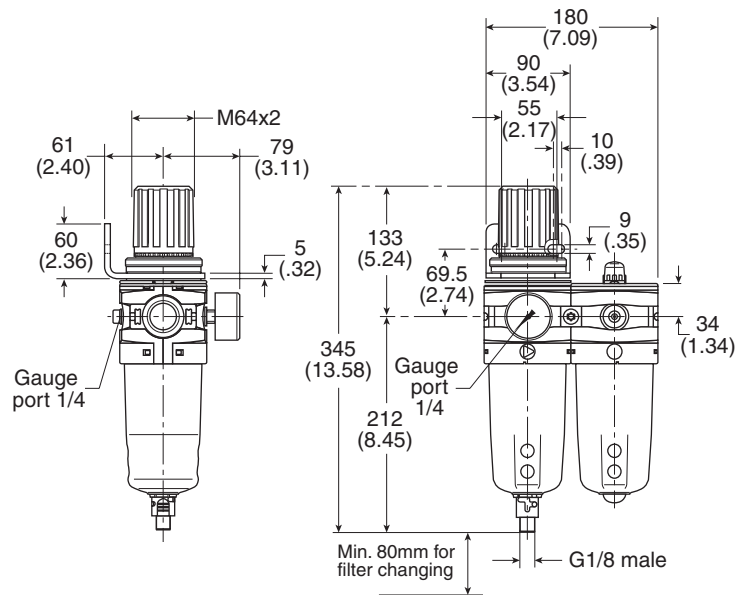
 <b>WARNING</b>
<b>Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.</b>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

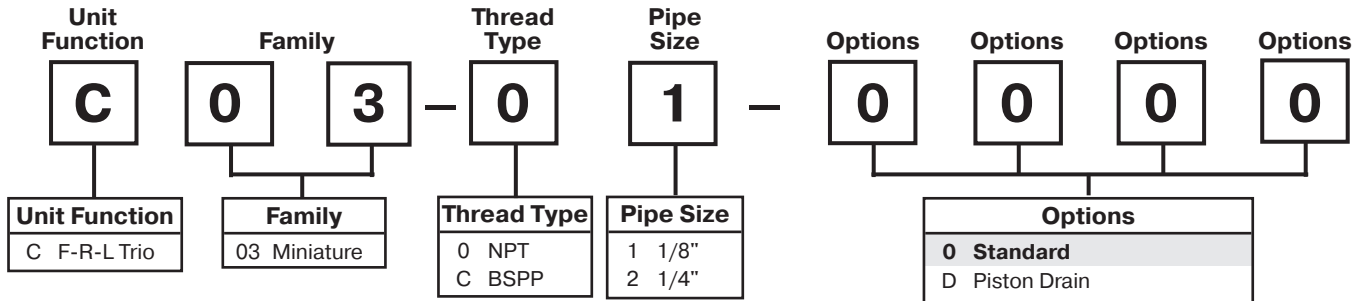
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Dimensions mm (inches)**



# Combination Numbering System

  = "Most Popular"

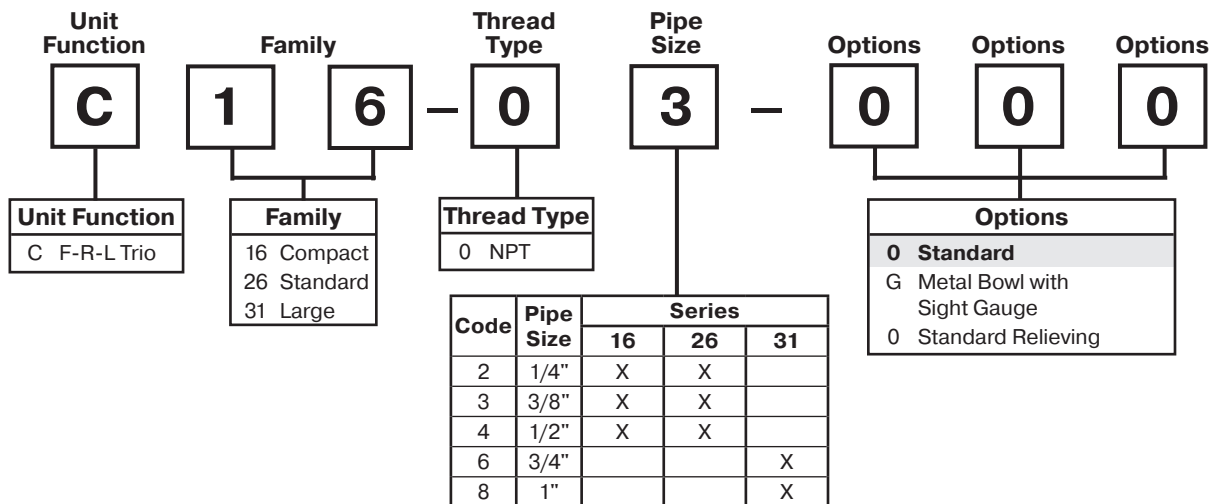


**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8, and 9.  
For example: **M03-01-DM00**

**NOTE:** 0000 in position 6, 7, 8 and 9 signifies standard product.  
(Poly Bowl, Manual Drain on Filter, no Drain on Lubricator, 2 to 125 PSIG, Relieving)

Options	
<b>0</b>	Standard
D	Piston Drain
G*	Pressure Gauge
L	1 to 60 PSI, Relieving
M	Metal Bowl
N	2 to 125 PSI, Non-Relieving
P	1 to 30 PSI, Relieving
Q	1 to 15 PSI, Relieving
S	1 to 60 PSI, Non-Relieving
T	1 to 30 PSI, Non-Relieving
U	1 to 15 PSI, Non-Relieving

\* Not available with BSPP thread type.



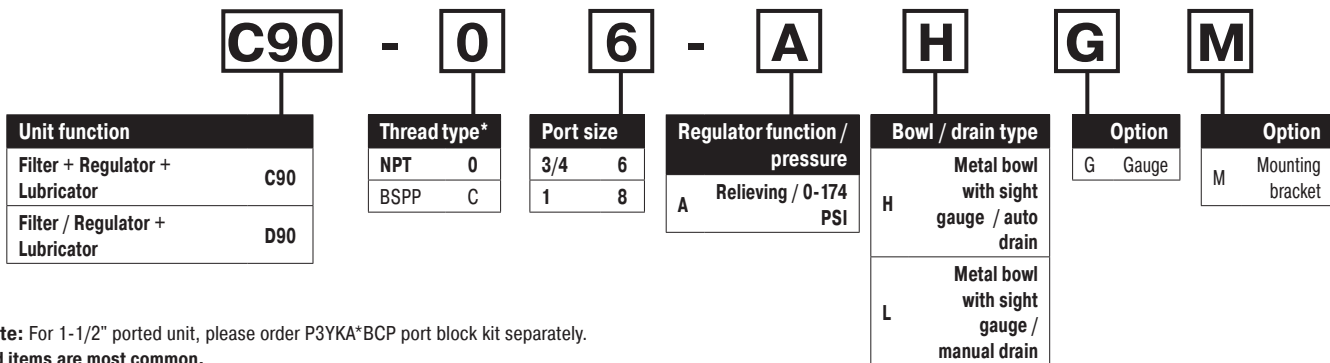
Code	Pipe Size	Series		
		16	26	31
2	1/4"	X	X	
3	3/8"	X	X	
4	1/2"	X	X	
6	3/4"			X
8	1"			X

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

**Note:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8.  
For example:

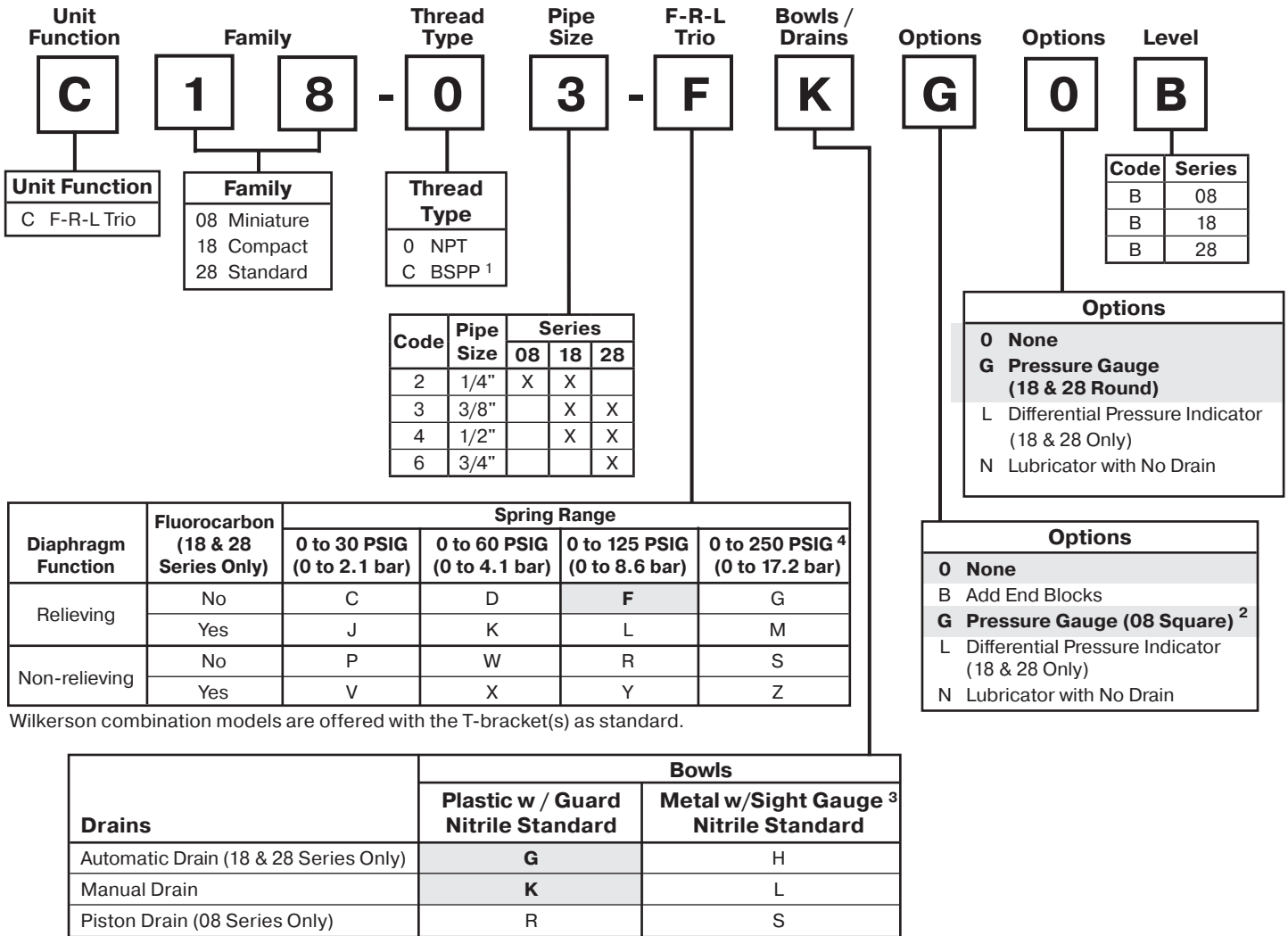
**C16-03-000**



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
Bold items are most common.

# Combination Numbering System

   = "Most Popular"



Wilkerson combination models are offered with the T-bracket(s) as standard.

- 1 ISO, R228 (G Series)
- 2 Square gauge included with all C08
- 3 08 series has all metal bowl (no sight gauge).
- 4 08 series operating range 0 to 232 PSIG (1 to 16 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

**NOTE:** All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

**\*Note:** For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

**NOTE:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, 9. For example:

**C 1 8 - 0 3 - F K G 0 B**

**Suggested Lubricant**

Airline Oil F442001  
 Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F  
 (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Combination C03

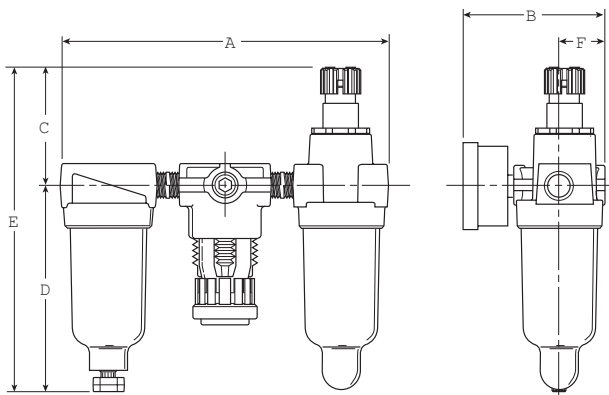
= "Most Popular"



**C03-02-0000**

## Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports
- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility
- Regulator can be mounted with knob in up or down position. (Factory supplied in down position)



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit C03-XX-XXXX		5.77 (147)	2.83 (71.9)	2.16 (55)	3.82 (97)	5.98 (152)	.79 (20)

## Specifications

Flow Capacity*	1/8	20 SCFM (9.4 dm <sup>3</sup> /s)
	1/4	20 SCFM (9.4 dm <sup>3</sup> /s)
Gauge Ports (2)	1/8	
Minimum Flow for Lubrication	0.7 SCFM at 100 PSIG	
Port Threads	1/8, 1/4	
Pressure & Temperature Ratings –		
Plastic Bowl	0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)	
Metal Bowl	0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)	
Secondary Pressure Ranges –		
Standard Pressure	2 to 125 PSIG (0 to 8.6 bar)	
Medium Pressure	1 to 60 PSIG (0 to 4.1 bar)	
Medium Pressure	1 to 30 PSIG (0 to 2.1 bar)	
Low Pressure	1 to 15 PSIG (0 to 1.0 bar)	
Weight	.9 lb. (.36 kg)	

\* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.


## Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls –	
Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile
Sight Dome	Polycarbonate
Suggested Lubricant	Airline Oil F442001



 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

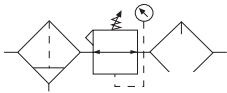
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Ordering Information**

Model Type	Port Size	Plastic Bowl with Gauge	Plastic Bowl without Gauge	Metal Bowl with Gauge	Metal Bowl without Gauge
Manual Drain	1/8	C03-01-G000	C03-01-0000	C03-01-GM00	C03-01-M000
	1/4	C03-02-G000	C03-02-0000	C03-02-GM00	C03-02-M000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C08



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Flush-Mount Pressure Gauge and Modular T-bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

## Specifications

Flow Capacity*	1/4	27 SCFM (13 dm <sup>3</sup> /s, ANR)
Gauge Port** (2)	NPT	1/8
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Standard Filtration	5 Micron	
Weight	1.96 lb. (0.9 kg)	

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 100 PSIG (6.9 bar), 14.5 PSIG (1 bar) pressure drop.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

## Materials of Construction

Body	Aluminum	
Bonnet	Glass-filled Nylon	
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard	Nylon	
Diaphragm Assembly	Stainless Steel/ Nitrile	
Filter Element	Polyethylene	
Knob	Acetal	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Springs	Steel	
Valve	Brass / Nitrile	

### Suggested Lubricant

Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

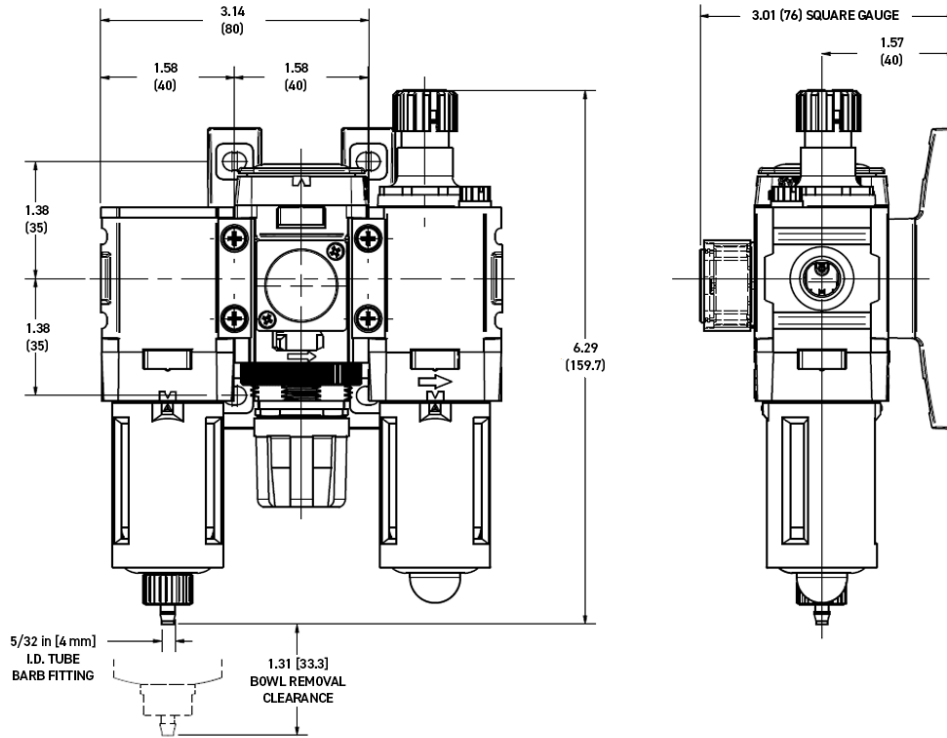
## Ordering Information

Model Type	Port Size	Plastic Bowl /Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl /With Gauge 0 to 125 PSI (0 to 8.6 bar)
Manual Drain	1/4	C08-02-FKG0B	C08-02-FLG0B


**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**



Inches (mm)

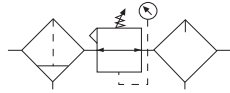
 <b>WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

# Combination C18



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

## Specifications

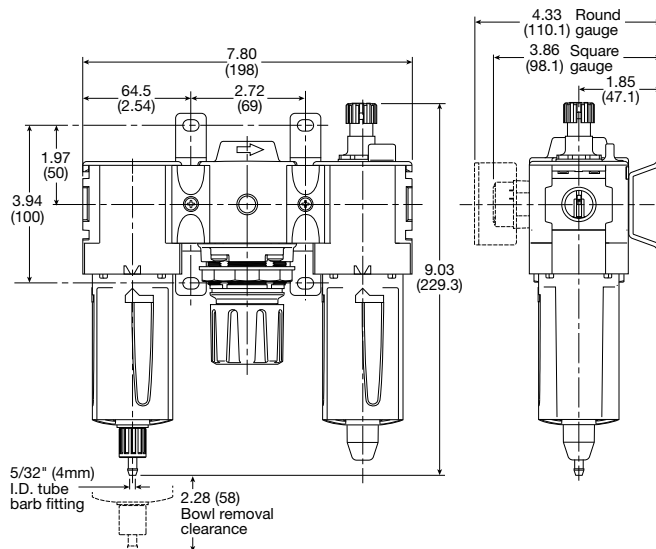
Flow Capacity*	1/4	42 SCFM (20 dm <sup>3</sup> /s, ANR)
	3/8	68 SCFM (32 dm <sup>3</sup> /s, ANR)
	1/2	85 SCFM (40 dm <sup>3</sup> /s, ANR)
Gauge Port (2)	NPT / BSPP-G 1/4	
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G 1/4, 3/8, 1/2	
Standard Filtration	5 Micron	
Weight	4.04 lb. (1.83 kg)	

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

**“F” Series Filters, Type “A” 5 micron elements:** All Wilkerson Type “A” 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Aluminum	
Bonnet / Knob	Nylon / Acetal	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Nitrile / Zinc	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating Valve	Steel
		Stainless Steel
Suggested Lubricant	Airline Oil F442001	
Valve	Brass / Nitrile	




Inches (mm)

Manual Drain

 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<b>Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.</b>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

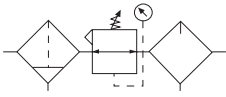
**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / With Gauge & End Blocks 0 to 125 PSI (0 to 8.6 bar)
<b>Manual Drain</b>	1/4	C18-02-FKG0B	C18-02-FLG0B	C18-02-FKBGB
	3/8	C18-03-FKG0B	C18-03-FLG0B	C18-03-FKBGB
	1/2	C18-04-FKG0B	C18-04-FLG0B	C18-04-FKBGB
<b>Automatic Drain</b>	1/4	C18-02-FGG0B	C18-02-FHG0B	C18-02-FGBGB
	3/8	C18-03-FGG0B	C18-03-FHG0B	C18-03-FGBGB
	1/2	C18-04-FGG0B	C18-04-FHG0B	C18-04-FGBGB

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C16

= "Most Popular"



**C16-02-000**

## Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving

## Specifications

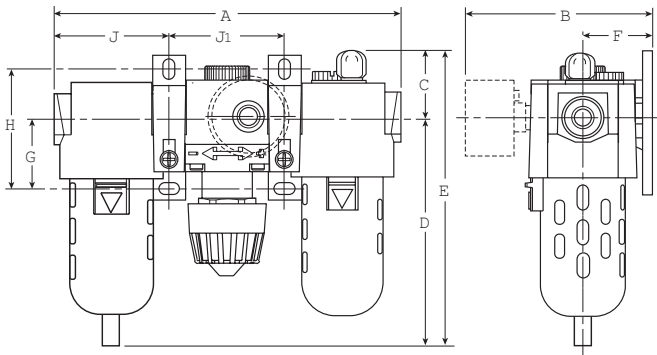
Flow Capacity*	1/4	36.1 SCFM (17.0 dm <sup>3</sup> /s)
	3/8	58.5 SCFM (27.6 dm <sup>3</sup> /s)
	1/2	64.0 SCFM (30.2 dm <sup>3</sup> /s)
Gauge Ports (2)	NPT	1/4
Port Threads	NPT	1/4, 3/8, 1/4
Pressure & Temperature Ratings –		
Plastic Bowl	0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)	
Metal Bowl	0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)	
Standard Filtration	5 Micron	
Weight	7.3 lb. (3.3 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G	H	J	J <sub>1</sub>
Standard Unit with End Blocks C16-XX-000		11.30 (287)	4.30 (109)	1.62 (41)	5.50 (139.7)	7.12 (180.8)	1.30 (33)	1.74 (44)	2.98 (75.7)	5.65 (143.5)	2.91 (73.9)

 = "Most Popular"

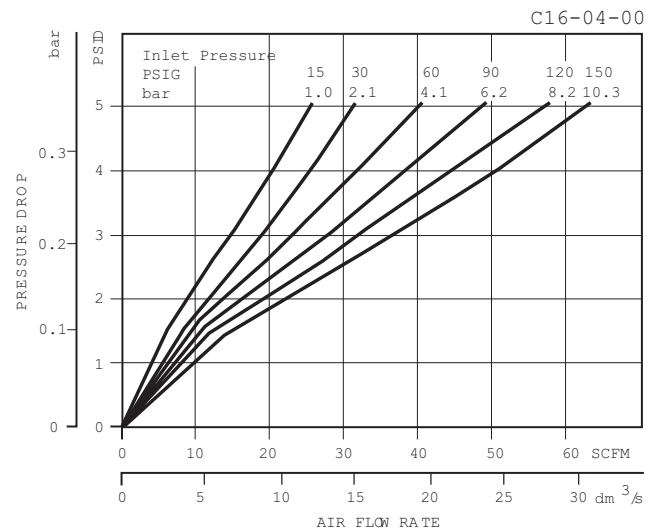
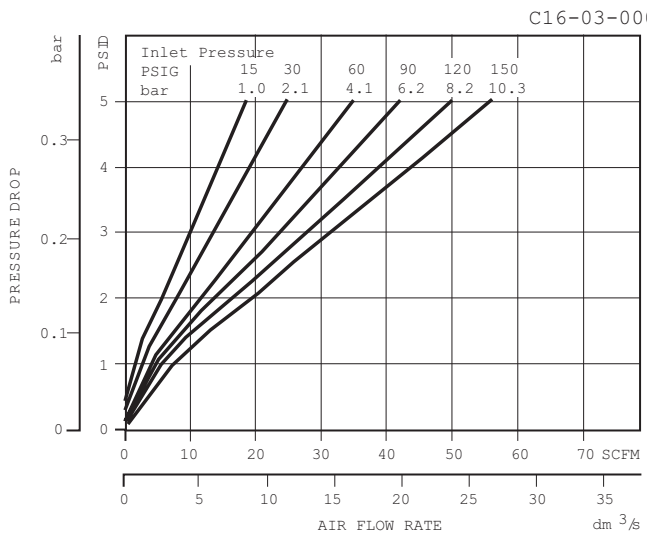
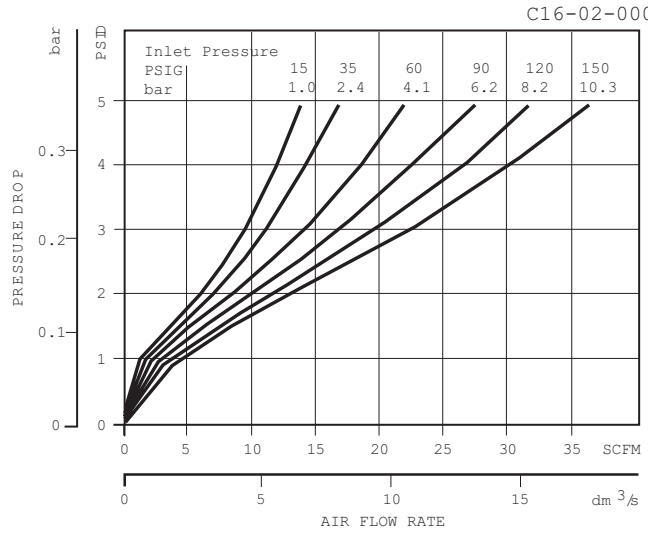
**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

<b>⚠ WARNING</b>
<b>Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.</b>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

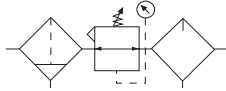


**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)
<b>C16</b>	1/4	C16-02-000	C16-02-G00
	3/8	C16-03-000	C16-03-G00
	1/2	C16-04-000	C16-04-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C28



## Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

## Specifications

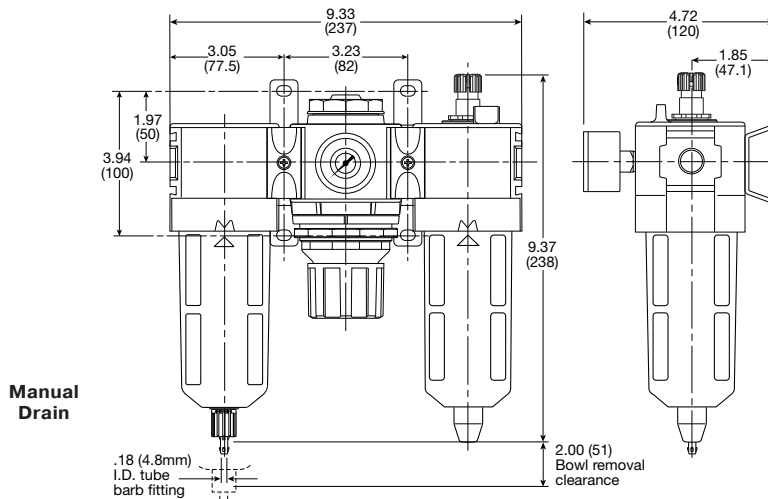
Flow Capacity*	3/8	90 SCFM (43 dm <sup>3</sup> /s, ANR)
	1/2	90 SCFM (43 dm <sup>3</sup> /s, ANR)
	3/4	110 SCFM (52 dm <sup>3</sup> /s, ANR)
Gauge Port (2)	NPT / BSPP-G 1/4	
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G 3/8, 1/2, 3/4	
Standard Filtration	5 micron	
Weight	5.90 lb. (2.6 kg)	

\* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Aluminum	
Bonnet / Knob	Nylon / Acetal	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly	Nitrile / Zinc	
Filter Element	Polyethylene	
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating Valve	Steel
		Stainless Steel
Suggested Lubricant	Airline Oil F442001	
Valve	Brass / Nitrile / Acetal	



Inches (mm)



 = "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

<b>⚠ WARNING</b>
<b>Product rupture can cause serious injury.                  Do not connect regulator to bottled gas.                  Do not exceed maximum primary pressure rating.</b>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / With Gauge & End Blocks 0 to 125 PSI (0 to 8.6 bar)
<b>Manual Drain</b>	3/8	C28-03-FKG0B	C28-03-FLG0B	C28-03-FKBGB
	1/2	C28-04-FKG0B	C28-04-FLG0B	C28-04-FKBGB
	3/4	C28-06-FKG0B	C28-06-FLG0B	C28-06-FKBGB
<b>Automatic Drain</b>	3/8	C28-03-FGG0B	C28-03-FHG0B	C28-03-FGBGB
	1/2	C28-04-FGG0B	C28-04-FHG0B	C28-04-FGBGB
	3/4	C28-06-FGG0B	C28-06-FHG0B	C28-06-FGBGB

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C26

 = "Most Popular"



**C26-02-000**

## Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving

## Specifications

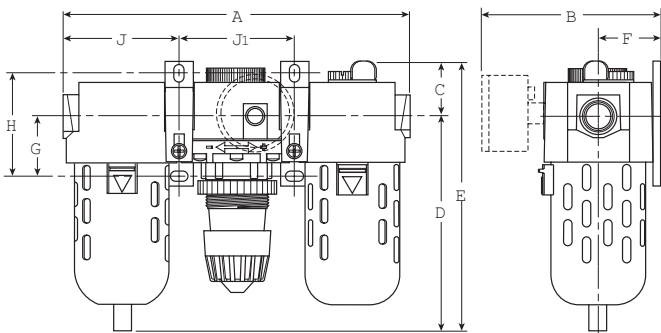
Flow Capacity*	1/4	35.0 SCFM (16.5 dm <sup>3</sup> /s)
	3/8	60.0 SCFM (28.3 dm <sup>3</sup> /s)
	1/2	128 SCFM (60.4 dm <sup>3</sup> /s)
Gauge Ports (2)	NPT / BSPP-G	1/4
Port Threads	NPT	1/4, 3/8, 1/2
Pressure & Temperature Ratings –		
Plastic Bowl	0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)	
Metal Bowl	0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)	
Standard Filtration	5 Micron	
Weight	10.5 lb. (4.7 kg)	

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal




## Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G	H	J	J <sub>1</sub>
Standard Unit with End Blocks C26-XX-000		12.35 (314)	4.80 (122)	1.60 (41)	6.40 (162.6)	8.00 (203)	1.50 (38)	1.74 (44)	2.98 (75.7)	6.17 (157)	3.35 (85.1)

 = "Most Popular"

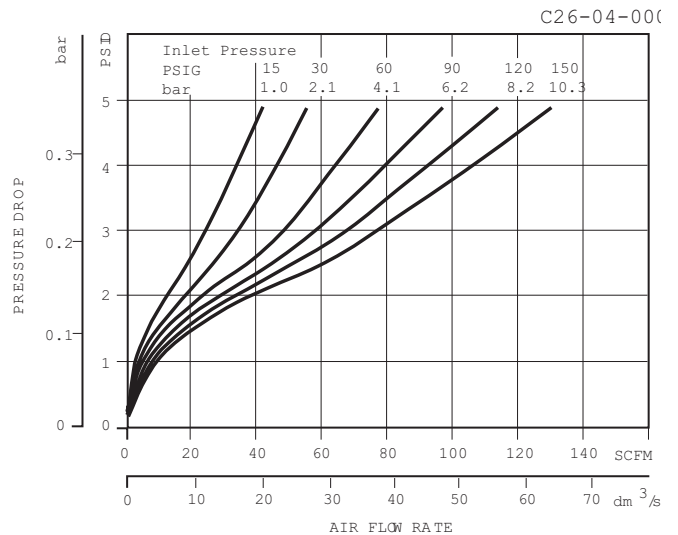
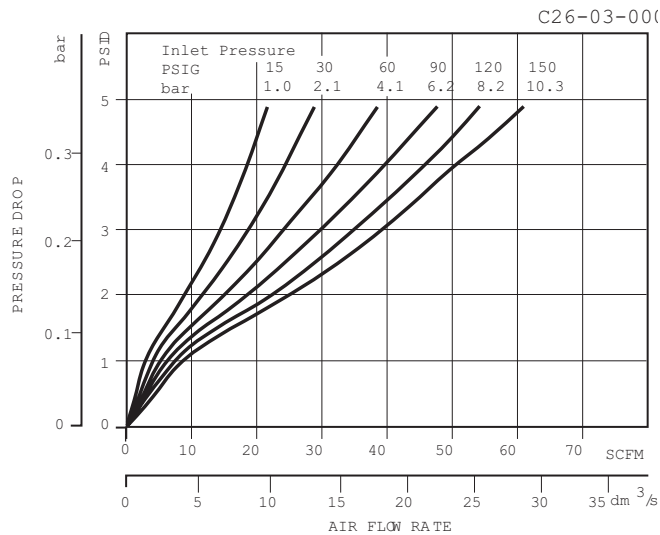
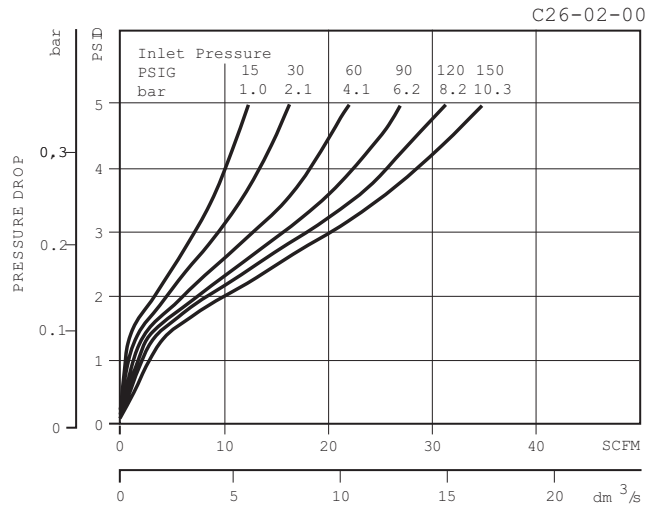
**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

 <b>WARNING</b>
<b>Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.</b>

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



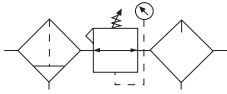
**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)
<b>C26</b>	1/4	C26-02-000	C26-02-G00
	3/8	C26-03-000	C26-03-G00
	1/2	C26-04-000	C26-04-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C31

= "Most Popular"



**C31-06-000**

## Features

- 5 Micron Filtration
- High Flow Capacity
- Large Bowl Reservoir
- Pressure Gauge
- Standard Self-relieving

## Specifications

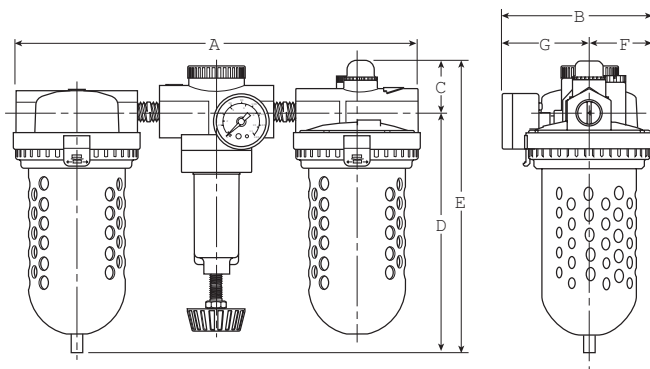
Flow Capacity*	3/4, 1	374 SCFM (176.5 dm <sup>3</sup> /s)
Gauge Ports (2)	NPT	1/4
Port Threads	NPT	3/4, 1
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)
Standard Filtration		5 Micron
Weight		18.2 lb. (8.2 kg)

\* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

**"F" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

## Materials of Construction

Body	Zinc
Bonnet, Piston	Zinc
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal



## Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G
Standard Unit C31-XX-000		15.30 (389)	5.70 (145)	1.98 (50)	8.96 (228)	10.94 (278)	2.40 (60.9)	3.30 (83.8)

= "Most Popular"

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

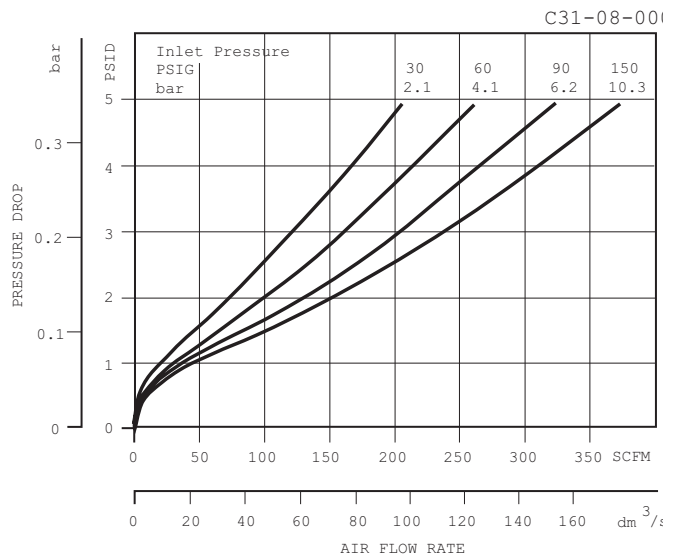
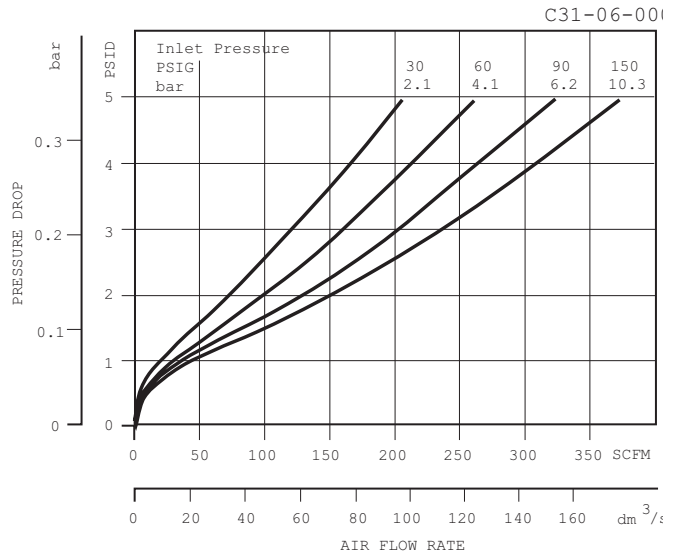
**⚠ WARNING**

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

**CAUTION:**

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



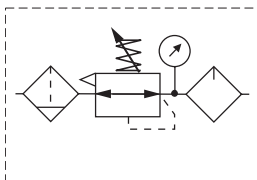
**Ordering Information**

Model Type	Port Size	Plastic Bowl / Bowl Guard 0 to 125 PSIG (0 to 8.5 bar)
<b>C31</b>	3/4	C31-06-000
	1	C31-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Combination C90

= "Most Popular"



## Options

<b>C90</b>	-	<b>0</b>	-	<b>6</b>	-	<b>A</b>	<b>H</b>	<b>G</b>	<b>M</b>																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Unit function</th></tr> <tr><td>Filter + Regulator + Lubricator</td></tr> <tr><td style="text-align: right;"><b>C90</b></td></tr> </table>	Unit function	Filter + Regulator + Lubricator	<b>C90</b>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Thread type*</th></tr> <tr><td>NPT <b>0</b></td></tr> <tr><td>BSPP C</td></tr> </table>	Thread type*	NPT <b>0</b>	BSPP C		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Port size</th></tr> <tr><td>3/4 <b>6</b></td></tr> <tr><td>1 8</td></tr> </table>	Port size	3/4 <b>6</b>	1 8		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Regulator function / pressure</th></tr> <tr><td>Relieving / 0-174 PSI</td></tr> <tr><td><b>A</b></td></tr> </table>	Regulator function / pressure	Relieving / 0-174 PSI	<b>A</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Bowl / drain type</th></tr> <tr><td>Metal bowl with sight gauge / auto drain</td></tr> <tr><td><b>H</b></td></tr> <tr><td>Metal bowl with sight gauge / manual drain</td></tr> <tr><td><b>L</b></td></tr> </table>	Bowl / drain type	Metal bowl with sight gauge / auto drain	<b>H</b>	Metal bowl with sight gauge / manual drain	<b>L</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Option</th></tr> <tr><td>Gauge</td></tr> <tr><td><b>G</b></td></tr> </table>	Option	Gauge	<b>G</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>Option</th></tr> <tr><td>Mounting bracket</td></tr> <tr><td><b>M</b></td></tr> </table>	Option	Mounting bracket	<b>M</b>
Unit function																																
Filter + Regulator + Lubricator																																
<b>C90</b>																																
Thread type*																																
NPT <b>0</b>																																
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Regulator function / pressure																																
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Option																																
Mounting bracket																																
<b>M</b>																																

\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Filter + Regulator + Lubricator Combinations 5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket


### Ordering information

Port size	Flow† scfm	Weight kg (lb)	Combined manual / semi-auto drain part number†	Auto drain part number†
3/4"	170	3.3 (7.3)	<b>C90-06-ALGM</b>	<b>C90-06-AHGM</b>
1"	170	3.3 (7.3)	<b>C90-08-ALGM</b>	<b>C90-08-AHGM</b>

† Standard part numbers shown in bold. For other models refer to Options chart below.

‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

**Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.**

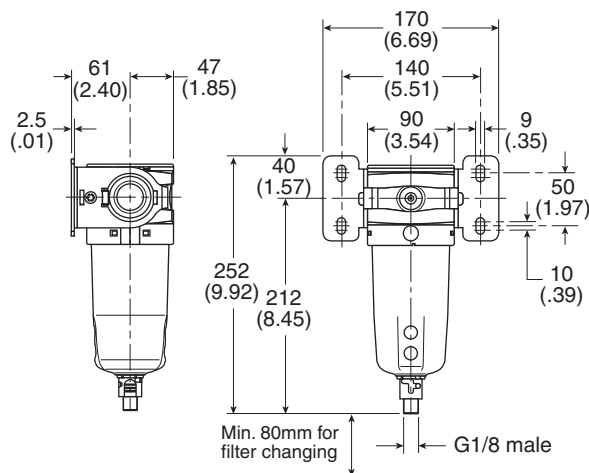
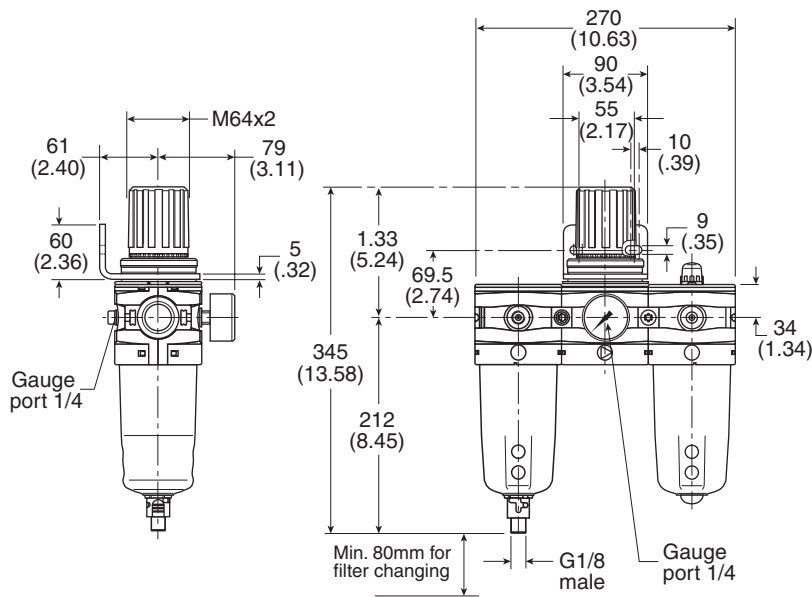
 <b>WARNING</b>
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For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Dimensions mm (inches)**



# Notes





## Additional Modular Products

**Slow-Start / Quick Dump Valves C2-C3**

E09 .....	C4
E18 / E28 .....	C6
E28 .....	C8
E90 .....	C12
S18 / S28 .....	C14
S90 .....	C16
Q09 / Q19 .....	C18

**Electronic****Proportional Regulator ..... C20-C21**

ER09, ER19 .....	C22
ER90 .....	C38
ER1 / ER2 .....	C40

**Electronic Proportional Valve ..... C43**

EPV .....	C44
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**Safety Lockout Valves ..... C52**

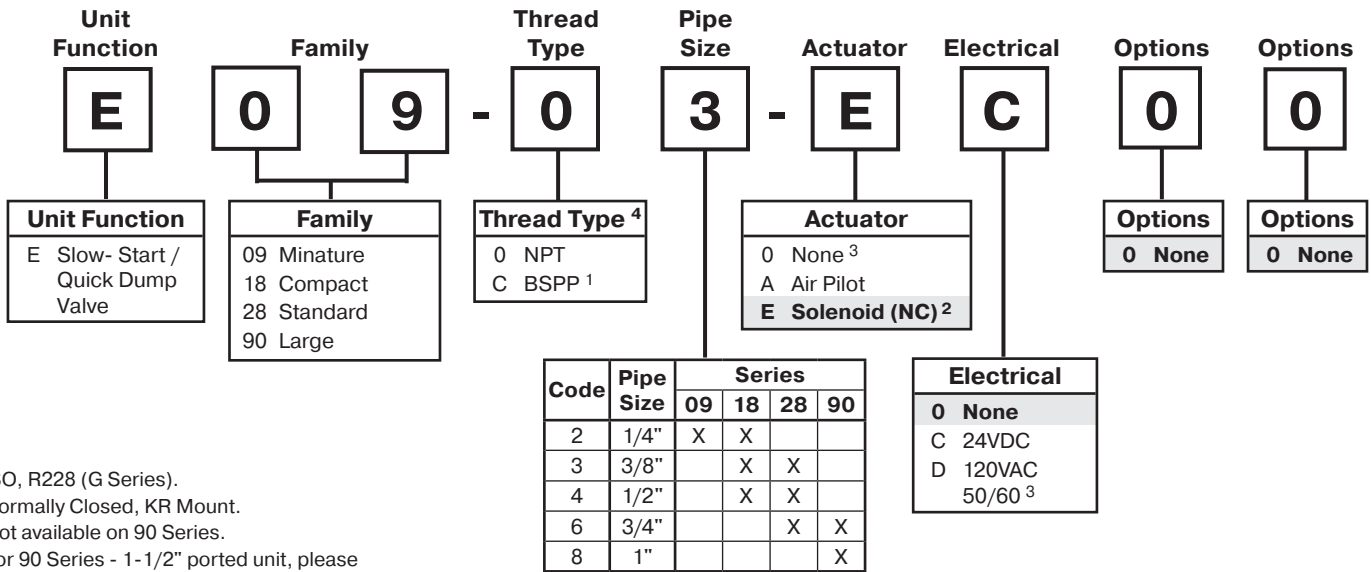
V40 / V60 / V73 .....	C52
V90 .....	C53

**Diverter Blocks ..... C54**

N08 .....	C55
N18 / N28 .....	C56
NJ8 .....	C57
P3YKA .....	C58
P3YMA .....	C58

# Slow-Start / Quick Dump Valve Numbering System

   = "Most Popular"



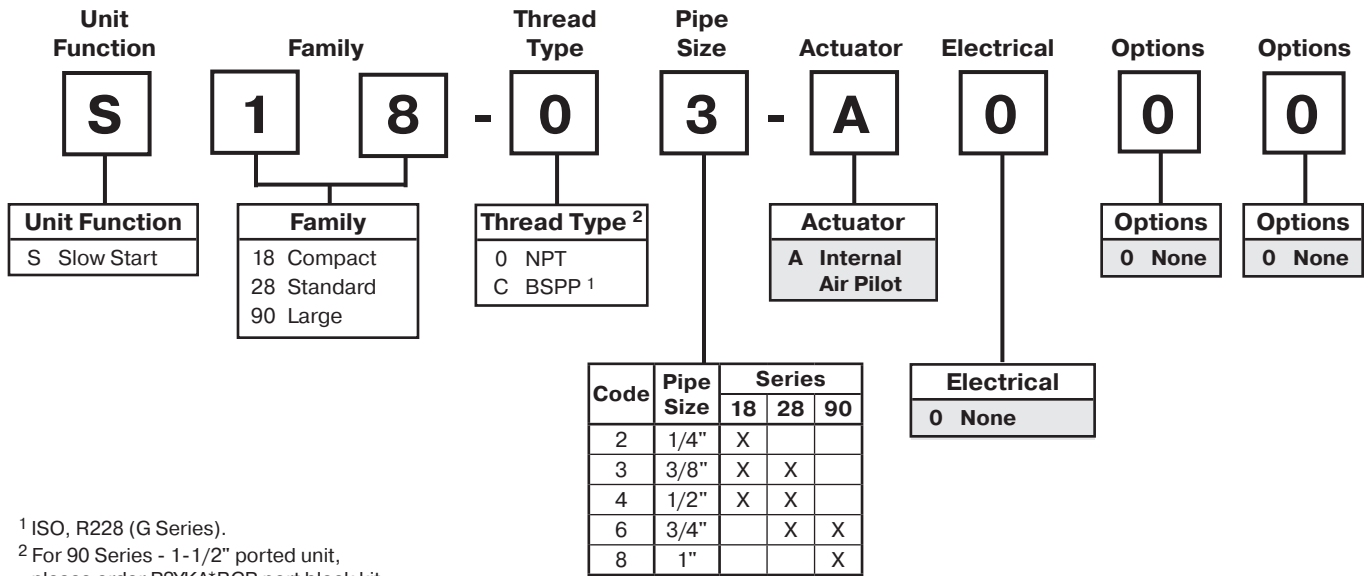
<sup>1</sup> ISO, R228 (G Series).  
<sup>2</sup> Normally Closed, KR Mount.  
<sup>3</sup> Not available on 90 Series.  
<sup>4</sup> For 90 Series - 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

## Slow-Start / Quick Dump Valve

The Slow-Start / Quick Dump Valve is designed as a three-way Quick Dump Valve with a built-in Slow-Start capability. This Slow-Start capability allows control of downstream pressure buildup at start-up of a compressed air system. The combination of Slow-Start and Quick Dump reduces the number of pneumatic components and the unique volume-independent design allows any number of additions to the pneumatic circuit without readjusting the Slow-Start function.

# Slow-Start Valve Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series).

<sup>2</sup> For 90 Series - 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

## Slow-Start Valve

The Slow Start Valve is used in compressed air systems to control the rate of downstream pressure buildup at start-up. The Slow Start Valve is also referred to as the "Monday Morning" valve or smooth start valve.

The Slow Start Valve allows cylinders, valves and other pneumatically operated components to gradually move into their normal start-up position. The design and operation of the slow start valve can reduce the possibility of equipment or part damage and occupational hazard to the worker.

The normally closed slow start valves are air-piloted.

Testing was conducted by applying a P1 pressure and measuring an increasing P2 pressure until P2 reached P1.

Response time conducted with 46.36 in<sup>3</sup> (759.8 cm<sup>3</sup>) volume.

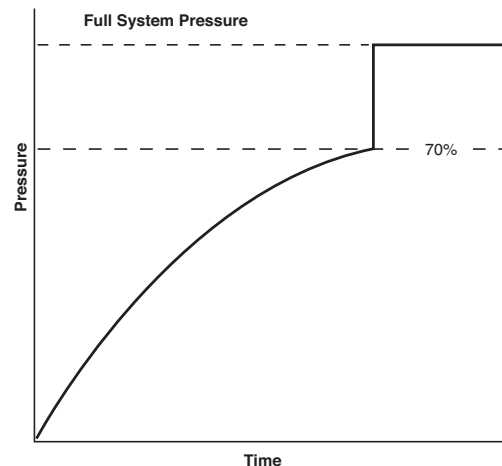
The S18 and S28 Slow Start Valves are volume dependent devices. The amount of time it takes for the valve to open fully is dependent on the system volume downstream of the slow start valve. The adjusting screw meters the air flow that is pressurizing the system volume. When the system volume is pressurized to approximately 70% of the line pressure, the main valve inside the slow start valve is snapped open. When this occurs, the system volume (i.e. the cylinders, air motors, air tools, etc.) sees full line pressure.

The S18 / S28 is offered as standard in the internal air-piloted version. It can be field converted to

solenoid-operated by removing the top cap to access the KR solenoid valve mounting pattern, which pre-drilled and tapped on all bodies. A CNOMO Mount Solenoid valve can also be used by ordering kit number VRP-95-713, KR to CNOMO adapter block.

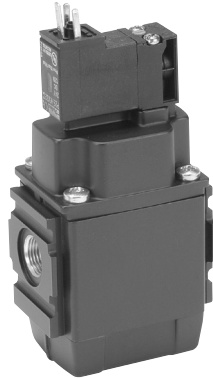
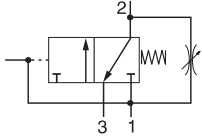
**Note: Minimum Operating Pressure = 30 PSIG (2.1 bar)**

**Maximum Flow Across Needle Valve = 12 SCFM (5.6 dm<sup>3</sup>/s)**



# Combined Soft-Start Dump Valve & Remote Operated Dump Valve E09

 = "Most Popular"



**E09-02 -EC00**

## Specifications

Flow Capacity*	1/4	17 SCFM (36 dm <sup>3</sup> /s)
Exhaust Port		1/4
Air Pilot Port		1/8
Port Threads –	NPT or BSPT	1/4
Pressure & Temperature Ratings –		
Solenoid	150 PSIG (10 bar)	122°F (50°C)
Air Pilot	250 PSIG (17 bar)	176°F (80°C)
Minimum Operating Pressure		44 PSIG (3 bar)
Weight		13 oz. (.41 kg)

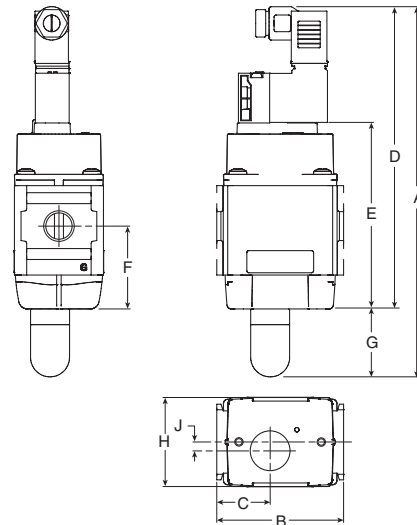
\* Inlet pressure 91 PSIG (6.3 bar). Pressure drop 14.5 PSID (1 bar).

## Materials of Construction

Body	Aluminum
Body Cover	Polyester
Seals	Nitrile NBR

## Features

- Modular Design with 1/4" (BSPT or NPT)
- Provides for the Safe Introduction of Pressure
- The 3-way, 2-position Function Automatically Dumps Downstream Pressure on the Loss of Pilot Signal
- 24VDC, 120VAC Solenoid or Air Pilot Versions Available
- Soft Start Fill Rate Easily Adjusted
- Solenoid or Air Pilot Options
- High Flow & Exhaust Capability

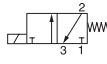





## Dimensions

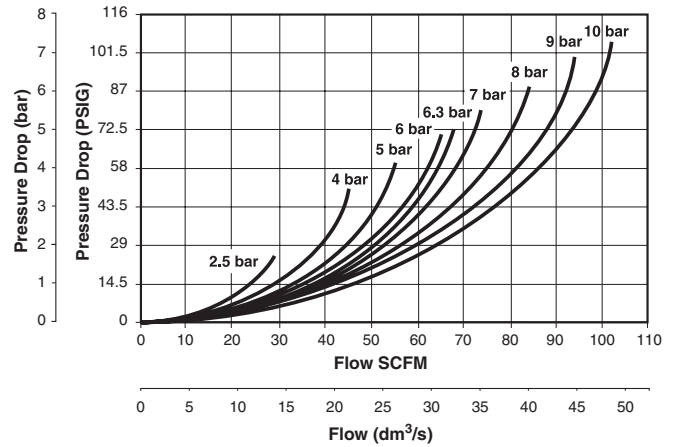
Models	Inches (mm)	A	B	C	D	E	F	G	H	J
Standard Unit E09-02-EC00		6.53 (166)	2.24 (57)	94 (24)	5.35 (136)	3.30 (84)	1.45 (37)	1.20 (30.5)	1.57 (40)	0.15 (4)

= "Most Popular"

**Solenoids 15mm NC, Standard Flow DIN 1.2W / 1.6 VA**

Voltage	Weight g	Order code Override, blue, non locking flush
 12 VDC	38	P2E-KV32B1
 24 VDC	38	P2E-KV32C1
 115 VAC 50 Hz/ 120 VAC 60 Hz	38	P2E-KV31F1
 230 VAC 50 Hz/ 240 VAC 60 Hz	38	P2E-KV31J1

**Flow characteristics 1/4 Soft Start & Dump Valve**



**Mounting Brackets**

Description	Order code
L-Bracket mounting kit	P3HKA00ML
Foot bracket mounting kit	P3HKA00MC

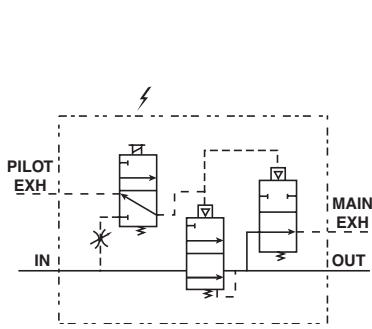
**Ordering Information**

Model Type	Port Size	24VDC Solenoid & Cable Plug	120VAC Solenoid & Cable Plug	Air Pilot Operated
E09	1/4	E092-02-EC00	E092-02-ED00	E09-02-A000

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Slow-Start / Quick Dump Valve E18 / E28

= "Most Popular"



**E18-03-EC00**

## Features

- Modular Design
- True Volume Independence
- High Flow Capacity
- Choice of Two Exhaust Port Locations

## Specifications

Flow Capacity*	E18	1/4	95 SCFM (44.8 dm <sup>3</sup> /s)
		3/8	101 SCFM (47.7 dm <sup>3</sup> /s)
		1/2	113 SCFM (53.3 dm <sup>3</sup> /s)
	E28	3/8	196 SCFM (92.5 dm <sup>3</sup> /s)
		1/2	210 SCFM (99.1 dm <sup>3</sup> /s)
		3/4	230 SCFM (108.5 dm <sup>3</sup> /s)
Exhaust Ports	NPT / BSPP-G		E18 3/8
			E28 3/8
Maximum Supply Pressure	150 PSIG (10.3 bar)		
Minimum Pressure	30 PSIG (2.1 bar)		
Operating Temperature	32° to 150°F (0° to 65.5°C)		
Port Size	NPT / BSPP-G		E18 1/4, 3/8, 1/2
			E28 3/8, 1/2, 3/4
Weight	lb. (kg)	E18	2.23 (1.01)
		E28	2.50 (1.14)

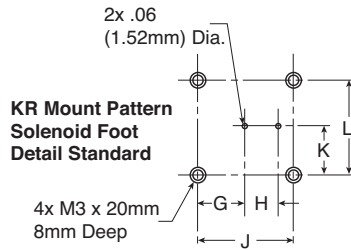
\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

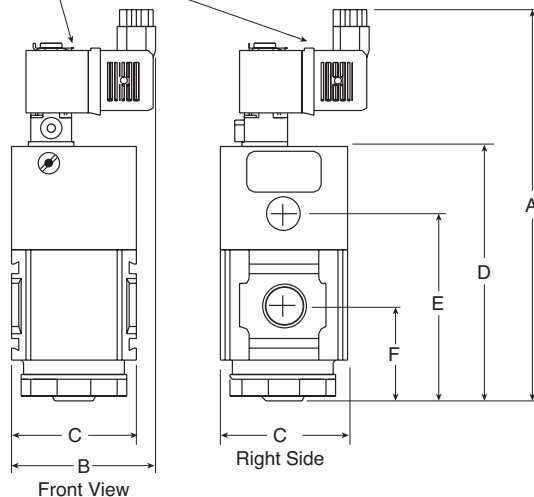
Body	Aluminum
Bottom Plug	33% Glass-Filled Nylon
Seals	Nitrile
Springs	Music Wire / Stainless Steel
Valve Assembly	Brass / Nitrile

## Replacement Kits

Actuating Valve, KR Mount, 24VDC .....	VRP-95-776
Actuating Valve, KR Mount, 120VAC .....	VRP-95-777
Actuating Valve, CNOMO, 24VDC .....	VRP-95-778
Actuating Valve, CNOMO, 120VAC .....	VRP-95-779
Muffler .....	VRP-95-780
Valve / Spring Kit .....	VRP-95-781
Repair Kit (Includes Valve / Spring) .....	VRP-95-782
Body Cap Kit (E18) .....	VRP-95-784
Body Cap Kit (E28) .....	VRP-95-785
KR to CNOMO Adapter Block .....	VRP-95-712
C-Bracket -	
E18 .....	GPA-97-086
E28 .....	GPA-97-087



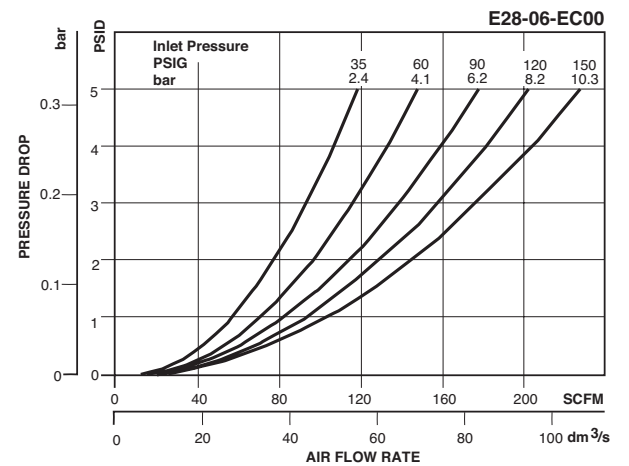
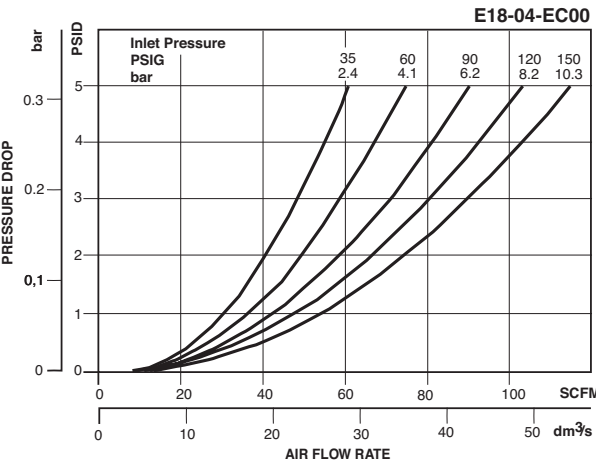
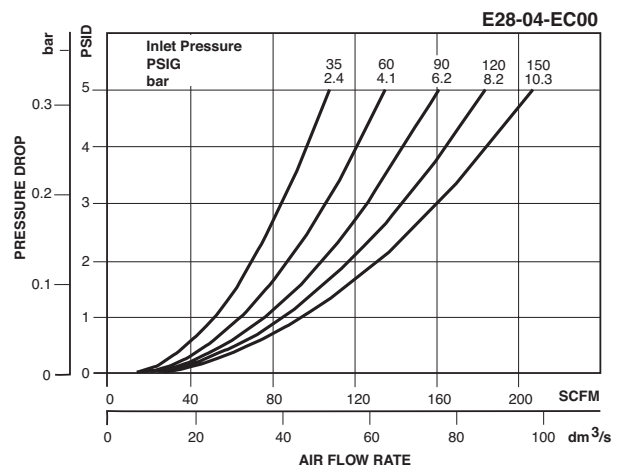
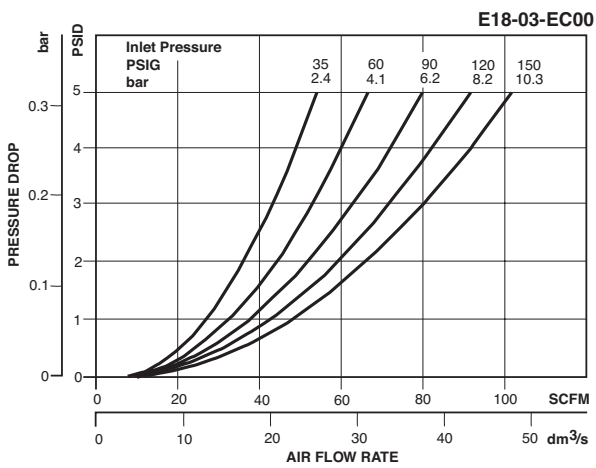
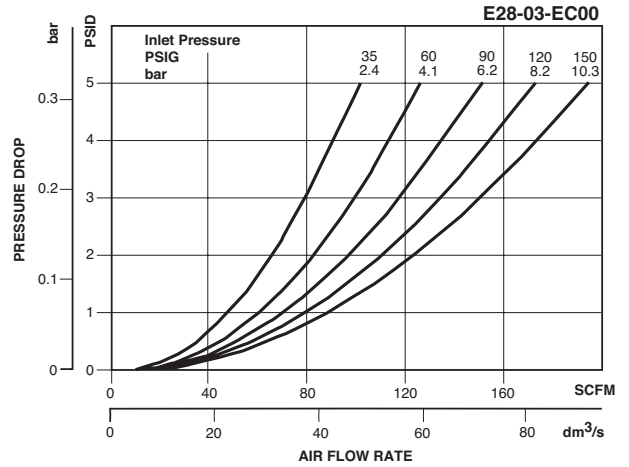
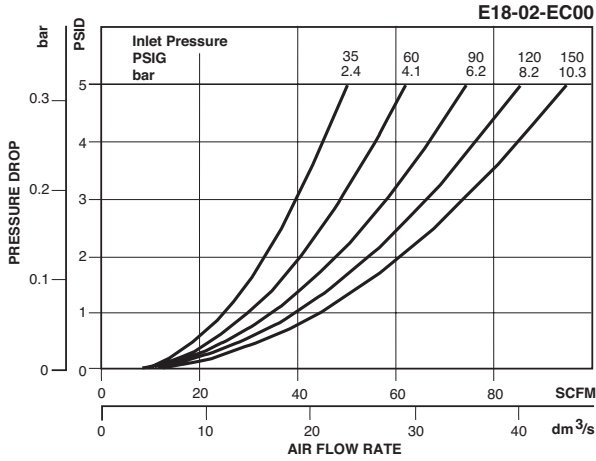
Solenoid can be rotated for mounting convenience



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K	L
Standard Unit E18-XX-EC00		7.32 (186)	2.70 (68.5)	2.36 (60)	4.79 (121.6)	3.52 (89.4)	1.79 (45.4)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)
Standard Unit E28-XX-EC00		7.32 (186)	2.96 (75.1)	2.88 (73.1)	4.79 (121.6)	3.52 (89.4)	1.79 (45.4)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)

= "Most Popular"

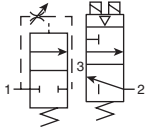


### Ordering Information

Model Type	Port Size	24V / DC N.C.	120V / 60 Hz N.C.
<b>E18</b>	1/4	E18-02-EC00	E18-02-ED00
	3/8	E18-03-EC00	E18-03-ED00
	1/2	E18-04-EC00	E18-04-ED00
<b>E28</b>	3/8	E28-03-EC00	E28-03-ED00
	1/2	E28-04-EC00	E28-04-ED00
	3/4	E28-06-EC00	E28-06-ED00

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Redundant Safety Exhaust Valve E28



## Features

- Proven control reliable technology with integrated soft start
- Soft start application of air to the system when energized; can be adjusted for slower or faster buildup of system pressure
- Rapid exhaust of downstream air when de-energized to remove stored energy and allow safe access
- Memory, monitoring, and air flow control functions are integrated into two identical valve elements. Valves lock-out if asynchronous movement of valve elements occurs during actuation or de-actuation, resulting in a residual outlet pressure of less than 1% of supply.
- Reset can only be accomplished by the integrated electrical (solenoid) reset. Cannot be reset by removing and re-applying supply pressure.
- Basic 3/2 normally closed valve function: Dirt tolerant, wear compensating poppet design for quick response and high flow capacity.
- LED indicators of main solenoid operation, reset solenoid operation, and status indicator condition.
- Optional transducer for monitoring of downstream pressure in the system.
- Dual exhaust silencers included.
- Not for use with clutch / brake applications.
- For use in conjunction with a safety relay or safety PLC.

## Specifications

Pilot Solenoids:	According to VDE 0580
Enclosure Rating:	According to DIN 400 50 IP65
Connector Socket:	According to DIN 43650 Form A
Three Solenoids, Rated for Continuous Duty	
Standard Voltages:	24VDC
Power Consumption (Each Solenoid):	
For Primary and Reset Solenoids:	1.2 Watts on DC
Enclosure Rating:	IP65, IEC 60529
Electrical Connection:	M12, 5 Pin
Ambient Temperature:	15°F to 122°F (-10°C to 50°C)
Media Temperature:	40°F to 175°F (4°C to 80°C)
Flow Media:	Compressed Air, Filtered to Minimum 40 Micron
Inlet Pressure:	30 to 150 PSIG (2 to 10 bar)
Pressure Switch (Status Indicator)	
Rating:	5 Amps at 30 Volts DC.
Monitoring:	Dynamically, cyclically, internally during each actuating and de-actuating movement. Monitoring function has memory and requires an overt act to reset unit after lockout.
Mounting Orientation:	Vertically with Pilot Solenoids on Top
Port Threads:	3/4 NPT, 3/4 BSPP
Control Reliable:	Category 4 (Cat 4); performance Level e (PLe) in accordance with Machine Directive - EN ISO 13849-1 (certification pending)

## Accessories

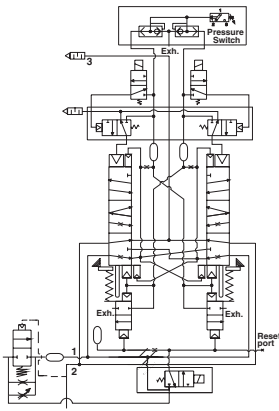
Black Grill .....	1834C05-001
Cables	
M12, 5-Pin Female To Flying Lead Cable, TPE; 2 m (6.6 ft) .....	RKC 4.5T-2/S1587
M12, 5-Pin Male To Flying Lead Cable, TPE; 2 m (6.6 ft) .....	RSC 4.5T-2/S1587
End Block	
1/2 NPT .....	GPA-96-612
3/4 NPT .....	GPA-96-613
1/2 BSPP .....	GPA-96-622
3/4 BSPP .....	GPA-96-623
Joiner Set .....	GPA-96-601
Pressure Switch .....	1227A30-001
Pressure Transducer .....	1232H30-001
T-bracket w/ Joiner Set .....	GPA-96-603
T-bracket (Fits to Joiner Set or End Block) .....	GPA-96-602
Silencer (s) 3/4" .....	5500A5013
Solenoid (Main & Reset) .....	1527B7916-001
Square Flush Mounting Gauge Kit	
0-160 psig .....	K4511SCR160



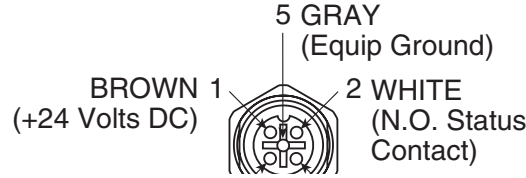
= "Most Popular"

**E28 Schematic**

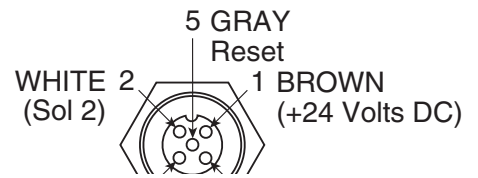
**Pin Wiring**



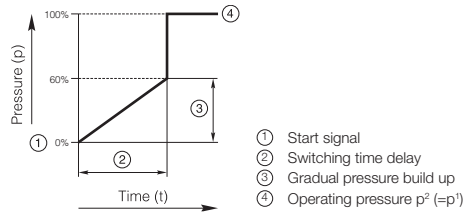
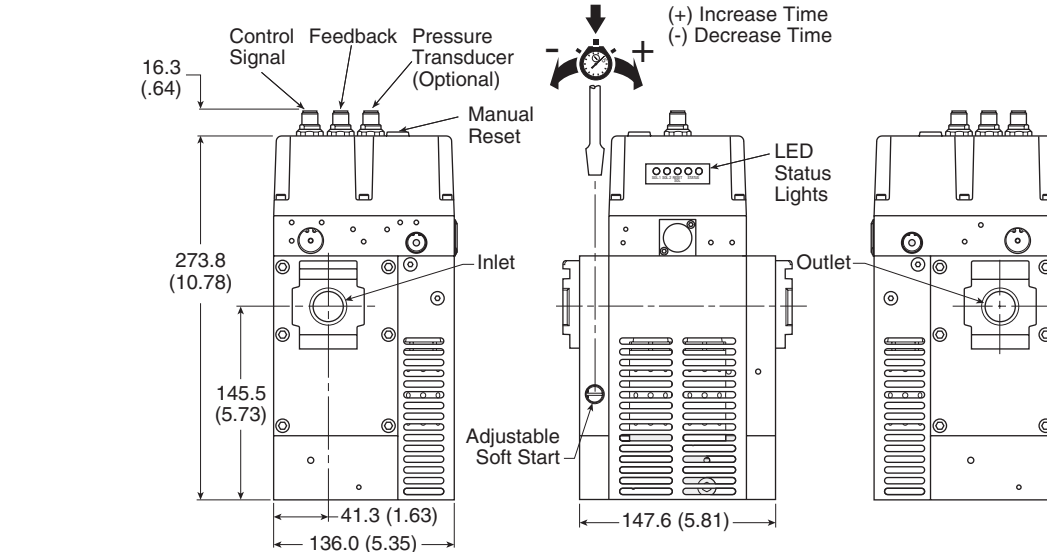
**5-Pin "A" Code Female Connector (Feedback)**



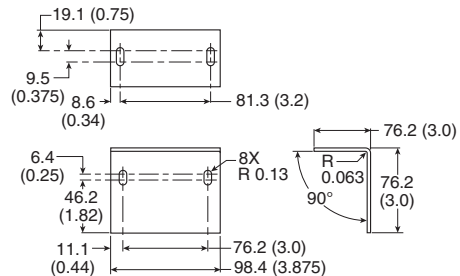
**5-Pin "A" Code Male Connector (Control Signal)**



**Dimensions**



**Angle Mounting Bracket**



**Note:** Mounting bracket and installation screws included and required to install unit in the system.

**Ordering Information**

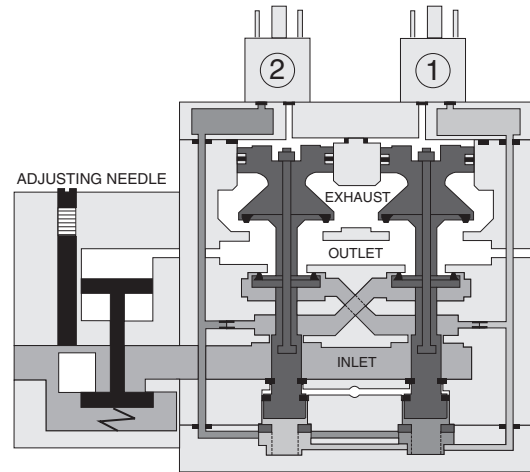
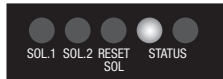
Port Size		Transducer	Cv		Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Order Code*
Inlet	Outlet		1 to 2	2 to 3					
3/4	3/4	w/o transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (5.81)	7.3 (16.1)	<b>E28-06-EC4N</b>
3/4	3/4	w/ transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (5.81)	7.4 (16.3)	<b>E28-06-EC4T</b>

\* NPT port threads. For BSPP threads, replace "0" in the part number with a "C".

### Valve De-actuated (ready-to-run):

The flow of inlet air pressure to the inlet chamber of the main valve internals is restricted by a fixed orifice and an adjustable flow control as well as an air piloted 2-way normally closed poppet valve. The flow of inlet air pressure into the crossover passages is restricted by the size of the passage between the stem and the valve body opening. Flow is sufficient to quickly pressurize pilot supply / timing chambers 1 and 2. The inlet poppets prevent air flow from crossover passages into the outlet chamber. Air pressure acting on the inlet poppets and return pistons securely hold the valve elements in the closed position. (Reset adapter omitted for clarity.)

The green "Status" LED will be illuminated indicating the valve is ready to run.

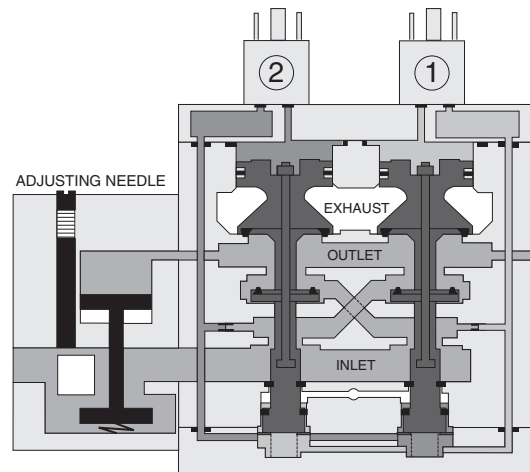
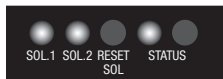


### Valve Actuated:

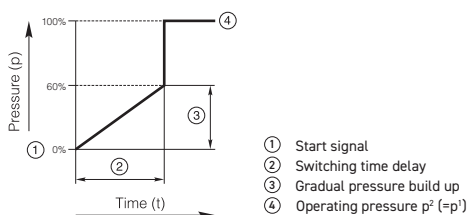
Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized at a rate allowed by the fixed orifice and the adjusted flow control. Once the air pressure in the outlet chamber reaches approximately 60% of inlet pressure, the air piloted 2-way normally closed poppet valve opens fully and the pressure in the inlet, crossovers, outlet, and timing chambers are quickly equalized. The adjustable flow control will control the time it takes for the outlet air pressure to reach approximately 60% of inlet pressure.

De-energizing the pilots quickly causes the valve elements to return to the ready-to-run position.

Solenoid 1, Solenoid 2 and the green "Status" LED's will be illuminated indicating the valve is operating properly.



### Soft Start Function:

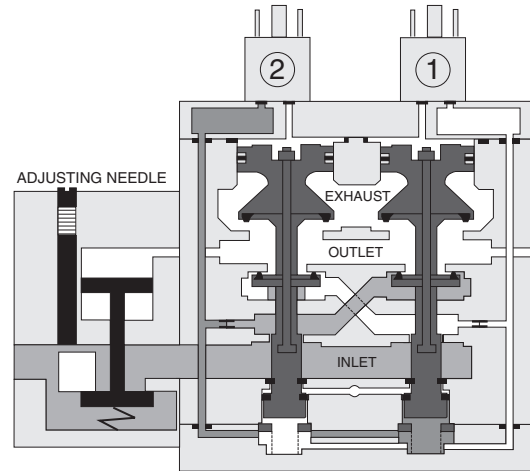
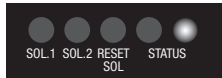


**Valve Fault and Lock-out:**

Whenever the valve elements operate in a sufficiently asynchronous manner, either on actuation or de-actuation, the valve will move to a locked-out position. In the locked-out position, one crossover and its related timing chamber will be exhausted, and the other crossover and its related timing chamber will be fully pressurized. The valve element (side 2) that is partially actuated has pilot air available to fully actuate it, but no air pressure on the return piston to fully de-actuate the valve element.

Air pressure in the crossover acts on the differential of side 2 stem diameters creating a latching force. Side 1 is in a fully closed position, and has no pilot air available to actuate, but has full pressure on the inlet poppet and return piston to hold the element in the fully closed position. Inlet air flow on side 2 through the open inlet poppet on side 2, through the outlet into the exhaust port, and from the exhaust port to atmosphere. Residual pressure in the outlet is less than 1% of inlet pressure. The return springs are limited in travel, and can only return the valve elements to the intermediate (locked-out) position. Sufficient air pressure acting on the return pistons is needed to return the valve elements to a fully closed position.

The red "Status" LED will be illuminated indicating the valve in fault and lock-out must be reset



**Valve Reset (electrical or manual):**

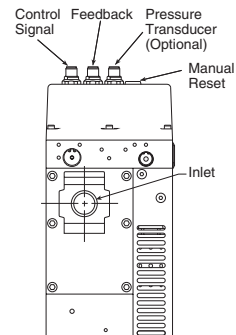
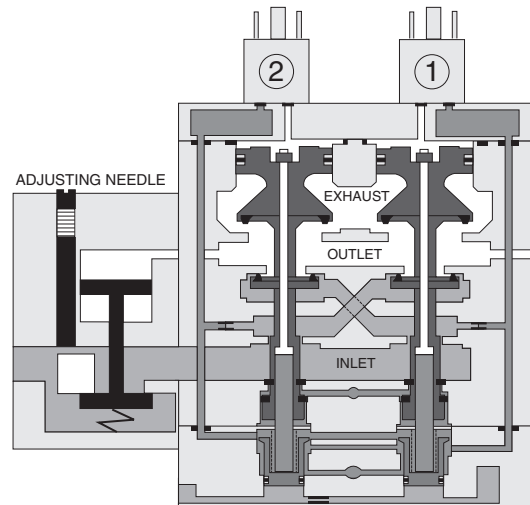
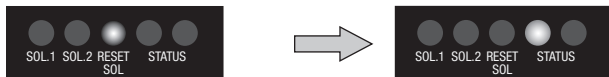
The reset procedure is as follows:

- Remove the electrical signals to the main coils
- Ensure there is air supplied to the valve
- Energize the reset solenoid for a minimum of 200 ms
- Allow a 200 ms delay after de-energizing the reset solenoid and re-energizing the main solenoids

The valve will remain in the locked-out position, even if the inlet air supply is removed and re-applied.

A remote reset signal must be applied to reset the valve. A momentary, remote electrical signal must be applied to the reset solenoid to apply pressure to the reset pistons in the valve. Actuation of the reset piston physically pushes the main valve elements to their closed position. Inlet air fully pressurizes the crossovers and holds the inlet poppets on seat. Actuation of the reset piston opens the reset poppet, thereby, immediately exhausting pilot supply air, thus, preventing valve operation during reset (Reset adapter added to illustration.). De-actuation of reset pistons causes the reset poppets to close and pilot supply to fully pressurize. Reset air pressure is applied by a 3/2 normally closed solenoid, or a manual push button mounted on the reset adapter in the top valve cover.

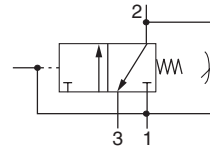
The green "Status" LED will be illuminated once the valve is reset.



# Combined Soft-Start Dump Valve & Remote Operated Dump Valve E90

   = "Most Popular"

## Symbol



- Modular design with 3/4" & 1" integral ports (BSPP or NPT)
- Provides for the safe introduction of pressure
- Automatically dumps downstream pressure on the loss of pilot signal
- Adjustable slow start
- Solenoid or air pilot options
- High flow & exhaust capability

90 Series Combined Soft Start / Dump Valves, provide for the safe introduction of pressure to machines or systems. Soft Start / Dump Valves when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.

<b>E90</b>	-	<b>0</b>	<b>6</b>	-	<b>E</b>	<b>C</b>	<b>0</b>	<b>0</b>
Series High flow emergency stop valve with slow start <b>E90</b>		Thread type* NPT <b>0</b> BSPP C	Port size 3/4 <b>6</b> 1 8		Actuator option E Solenoid A Air pilot	Option C 24VDC 0 None		

\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering information

Port size	Description	Flow scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Air pilot operated	371	17.5 (254)	-10 (14)	60 (140)	145 (5.71)	90 (3.5)	104 (4.1)	1.4 (3.1)	<b>E90-06-A000</b>
3/4"	24VDC 30mm coil	371	16 (232)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.6 (3.5)	<b>E90-06-EC00</b>
1"	Air pilot operated	424	17.5 (254)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.4 (3.1)	<b>E90-08-A000</b>
1"	24VDC 30mm coil	424	16 (232)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.6 (3.5)	<b>E90-08-EC00</b>

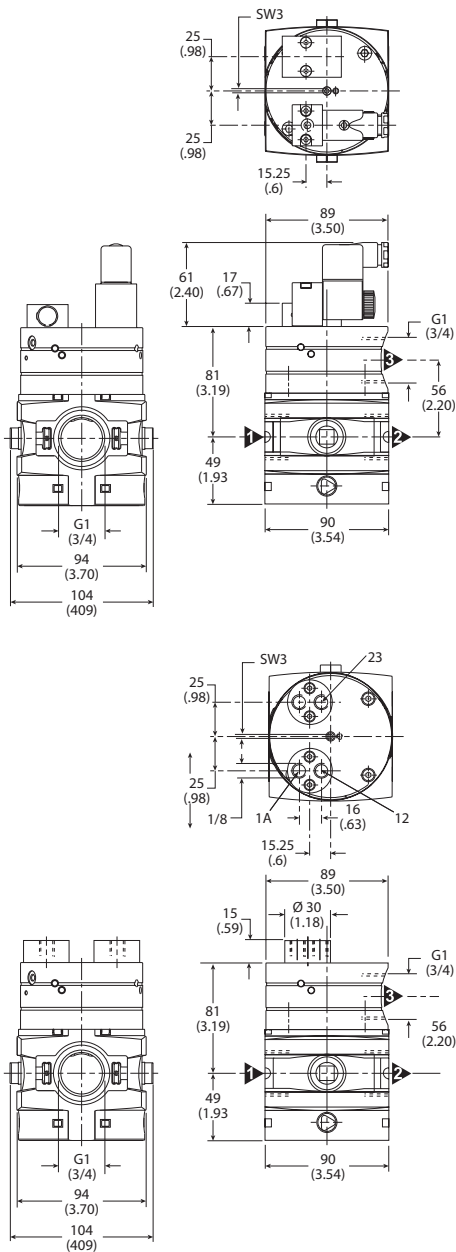
† Standard part numbers shown in bold. For other models refer to Options chart above.

**Specifications**

Fluid	Compressed air
Max. pressure solenoid operated 30mm coil	16 bar (232 psig)
Minimum operating pressure	2 bar (29 psig)
Temp. range* solenoid operated	-10°C to 60°C (14°F to 140°F)
Temp. range* air pilot operated	-10°C to 60°C (14°F to 140°F)
Air pilot port	1/8"
Exhaust port	1"
Gauge port	1/4"

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F)  
Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

**Dimensions mm (inches)**

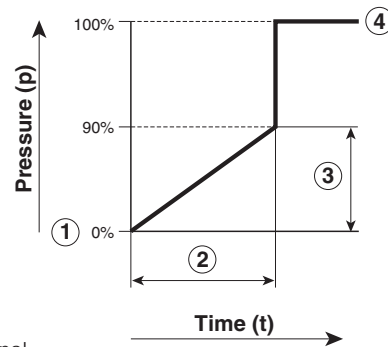


**Material specifications**

Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR

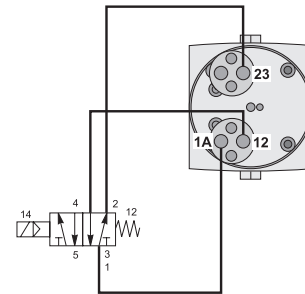
**Note:** For solenoid coil and cable plug options see page 24.

**Flow characteristics**

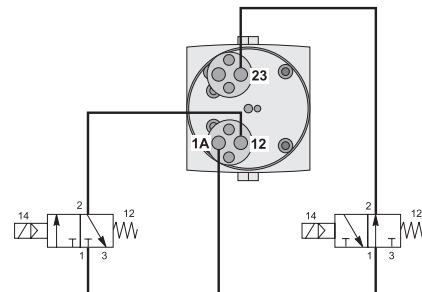


- ① Start signal
- ② Switching time delay
- ③ Gradual pressure build up
- ④ Operating pressure  $p^2 (= p^1)$

**Combined start / stop function**

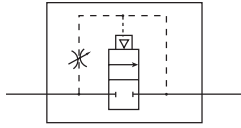


**Combined start / stop function with acknowledgement**



# Slow Start Valve S18 / S28

= "Most Popular"



**S18-02-A000**

## Specifications

Flow Capacity*	S18	1/4	95 SCFM (44.8 dm <sup>3</sup> /s)
		3/8	101 SCFM (47.6 dm <sup>3</sup> /s)
		1/2	113 SCFM (53.3 dm <sup>3</sup> /s)
	S28	3/8	196 SCFM (92.5 dm <sup>3</sup> /s)
		1/2	210 SCFM (99.0 dm <sup>3</sup> /s)
		3/4	230 SCFM (108.5 dm <sup>3</sup> /s)
Maximum Flow Rate Across Needle Valve	12 SCFM (5.7 dm <sup>3</sup> /s)		
Operating Temperature	32° to 150°F (0° to 65.5°C)		
Maximum Supply Pressure	150 PSIG (10.3 bar)		
Minimum Operating Pressure	30 PSIG (2.1 bar)		
Port Size	NPT / BSPP-G	S18	1/4, 3/8, 1/2
		S28	3/8, 1/2, 3/4
Weight	lb. (kg)	S18	.93 (.42)
		S28	1.16 (.53)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

## Features

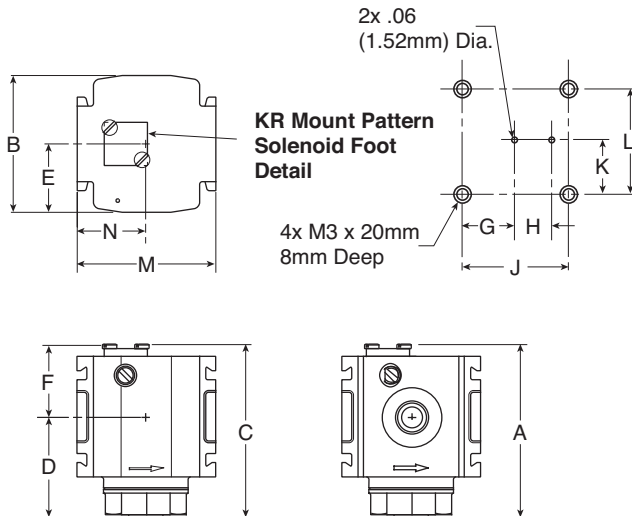
- Can Reduce the Possibility of Equipment or Part Damage and Occupational Hazard to the Worker
- Volume Dependent Devices
- Air-Piloted
- Modern Design and Appearance

## Materials of Construction

Body	Aluminum
Bottom Plug	33% Glass-Filled Nylon
Valve Assembly	Brass / Nitrile
Springs	Music Wire
Seals	Nitrile

## Replacement Kit

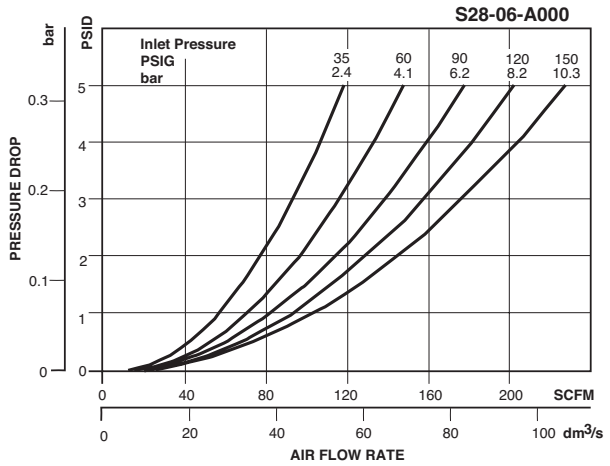
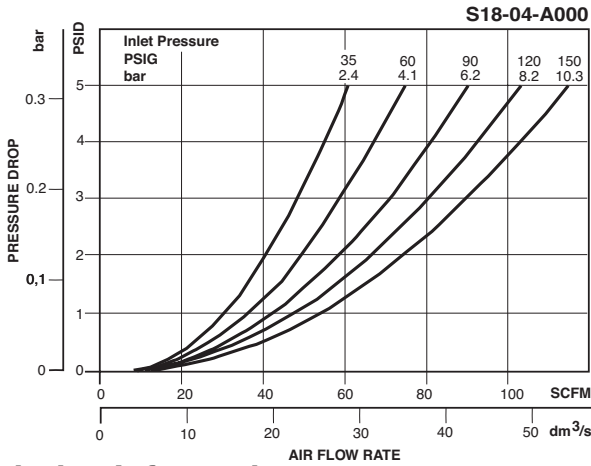
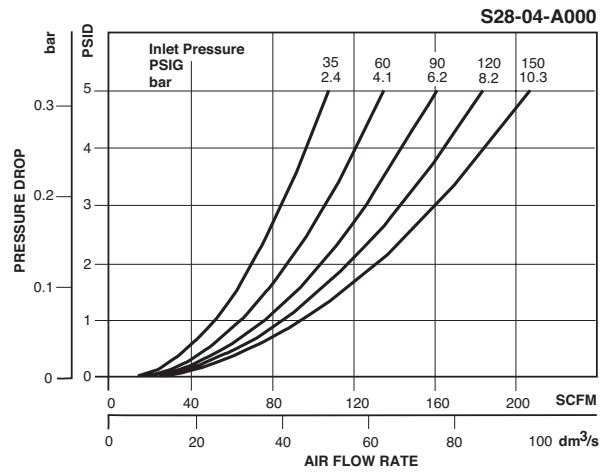
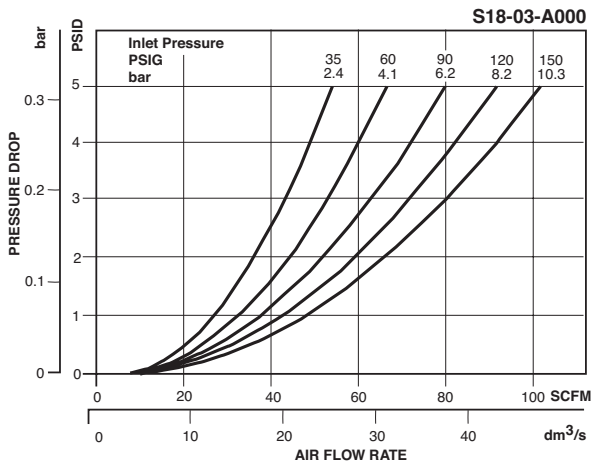
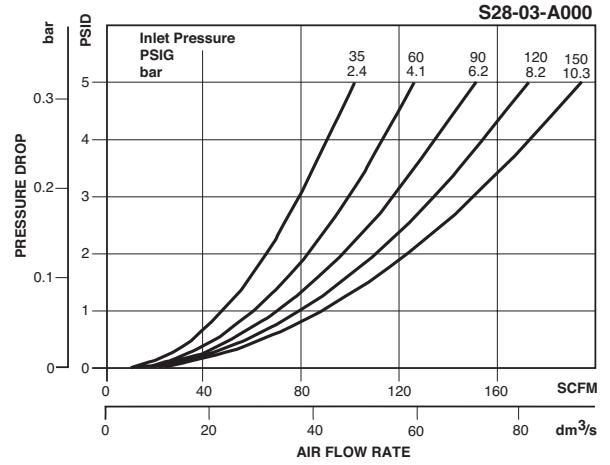
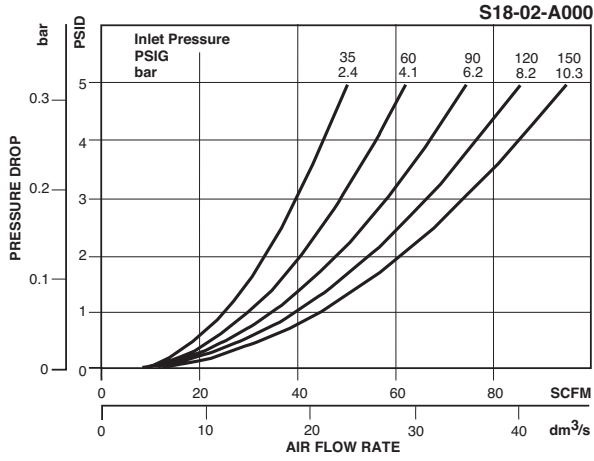
Valve Assembly Kit.....VRP-96-927



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N
Standard Unit S18-XX-A000		2.94 (75)	2.36 (60)	2.94 (75)	1.71 (43.5)	1.18 (30)	1.23 (31)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)	2.36 (60)	1.18 (30)
Standard Unit S28-XX-A000		3.03 (77)	2.88 (73)	3.03 (77)	1.79 (45.5)	1.44 (36.5)	1.24 (31)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)	2.88 (73)	1.44 (36.5)

= "Most Popular"



**Ordering Information**

Model Type	Port Size	Internal Air Pilot Minimum Flow 12 SCFM (5,6 dm <sup>3</sup> /s)
<b>S18</b>	1/4	S18-02-A000
	3/8	S18-03-A000
	1/2	S18-04-A000
<b>S28</b>	3/8	S28-03-A000
	1/2	S28-04-A000
	3/4	S28-06-A000

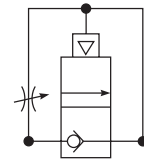
**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Slow Start Valve S90

   = "Most Popular"



## Symbol



- Integral 3/4" or 1" ports
- Smooth start-up of pneumatic system
- Air pilot operation
- Adjustable slow start
- High flow

<b>S90</b>	-	<b>0</b>	<b>6</b>	-	<b>A</b>	<b>0</b>	<b>0</b>	<b>0</b>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Series</th> <td>Soft Start Valve S90</td> </tr> </table>	Series	Soft Start Valve S90		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Thread type*</th> <td>NPT 0</td> <td>BSPP C</td> </tr> </table>	Thread type*	NPT 0	BSPP C	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Port size</th> <td>3/4 6</td> <td>1 8</td> </tr> </table>	Port size	3/4 6	1 8		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Function</th> <td>Air Pilot A</td> </tr> </table>	Function	Air Pilot A			
Series	Soft Start Valve S90																	
Thread type*	NPT 0	BSPP C																
Port size	3/4 6	1 8																
Function	Air Pilot A																	

\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering information

Port size	Description	Flow scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Soft start valve	324	17.5 (253.8)	-10 (14)	60 (140)	85 (3.3)	90 (3.5)	97 (3.8)	.8 (1.8)	<b>S90-06-A000</b>
1"	Soft start valve	324	17.5 (253.8)	-10 (14)	60 (140)	85 (3.3)	90 (3.5)	97 (3.8)	.8 (1.8)	<b>S90-08-A000</b>

† Standard part numbers shown in bold. For other models refer to Options chart above.



### Specifications

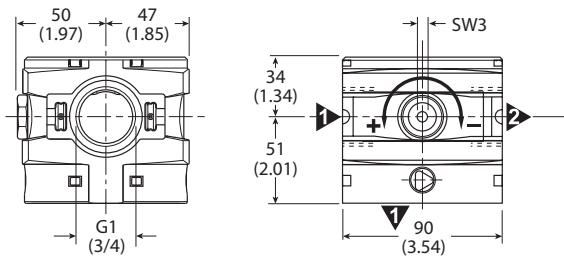
Fluid	Compressed air
Max. pressure air pilot operated	17.5 bar (254 psig)
Minimum operating pressure	2 bar (29 psig)
Temp. range* solenoid operated	-10°C to 60°C (14°F to 140°F)
Temp. range* air pilot operated	-10°C to 60°C (14°F to 140°F)

\* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F)  
 Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

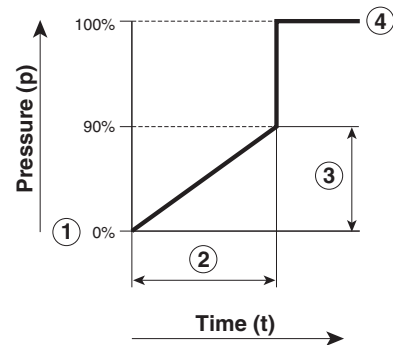
### Material specifications

Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR

### Dimensions mm (inches)

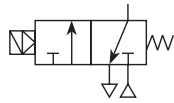


### Flow characteristics



- ① Start signal
- ② Switching time delay
- ③ Gradual pressure build up
- ④ Operating pressure  $p^2 (= p^1)$

# Dump Valves Q09 / Q19



= "Most Popular"



## Specifications

Flow Capacity*	Q09 1/4	36 SCFM (17 dm <sup>3</sup> /s)
	Q19 1/2	108 SCFM (51 dm <sup>3</sup> /s)
Max. Pressure Solenoid operated	150 PSIG (10 bar)	
Max. Pressure Air Pilot operated	250 PSIG (17 bar)	
Min. Operating Pressure	44 PSIG (3 bar)	
Temperature Max.† Solenoid Operated	14°F to 122°F (-10°C to 50°C)	
Temperature Max.† Air Pilot Operated	-4°F to 176°F (-20°C to 80°C)	
Air Pilot Port	1/8"	
Exhaust Port	Q09 - 1/4" / Q19 - 1/2"	
Weight	1/4" 120VAC	0.8lbs (0.37kg)
	1/4" 24VDC	0.9lbs (0.41kg)
	1/4" Air Pilot	0.8lbs (0.37kg)
	1/2" 120VAC	1.5lbs (0.69kg)
	1/2" 24VDC	2.0lbs (0.91kg)
	1/2" Air Pilot	1.9lbs (0.87kg)

## Features

- Modular Design with 1/4" or 1/2" Integral Ports (NPT, BSPP & BSPT)
- Provides for the Safe Introduction of Pressure
- The 3-way, 2-position Function Automatically Dumps Downstream Pressure on the Loss of Pilot Signal
- Solenoid or Air Pilot Options
- High Flow & Exhaust Capability
- Silencer Included

\* Inlet pressure 91 PSIG (6.3 bar). Pressure drop 15 PSID (1 bar).

† Air supply must be dry enough to avoid ice formation at temperatures below +2C

Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

## Materials of Construction

Body	Aluminum
Body Cover	Polyester
Seals	Nitrile NBR

## Mounting Brackets

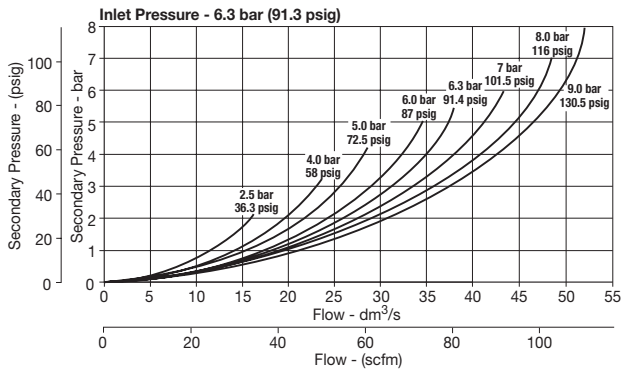
Description	Order code	Order code
	Q09	Q19
L-Bracket mounting kit	<b>P3HKA00ML</b>	<b>P3KKA00ML</b>
Foot bracket mounting kit	<b>P3HKA00MC</b>	<b>P3KKA00MC</b>

## Ordering Information

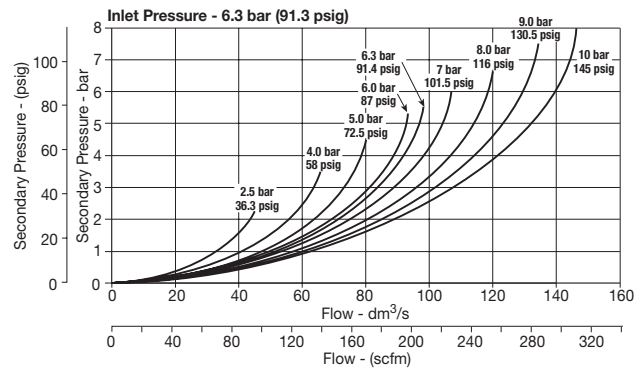
Model Type	Port Size	Description	Order Code
Q09	1/4"	120VAC Solenoid & cable plug	<b>Q09-02-ED00</b>
	1/4"	24VDC Solenoid & cable plug	<b>Q09-02-EC00</b>
	1/4"	External air pilot operated	<b>Q09-02-A000</b>
Q19	1/2"	120VAC 30mm coil & cable plug incl.	<b>Q19-04-ED00</b>
	1/2"	24VDC 30mm coil & cable plug incl.	<b>Q19-04-EC00</b>
	1/2"	External air pilot operated	<b>Q19-04-A000</b>

= "Most Popular"

**1/4 Remote Dump Valve**



**1/2 Remote Dump Valve**

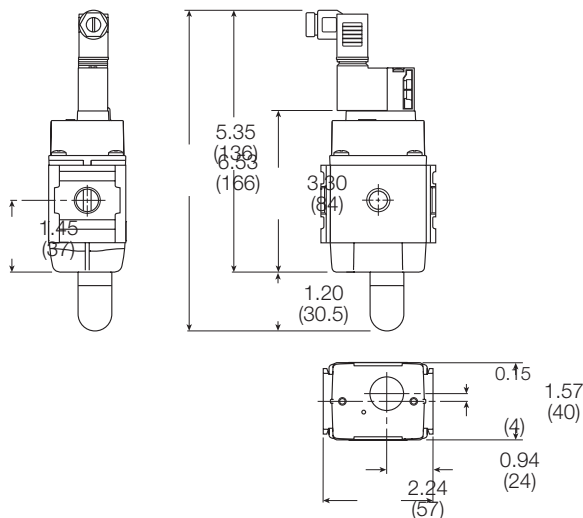


Remotely operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.

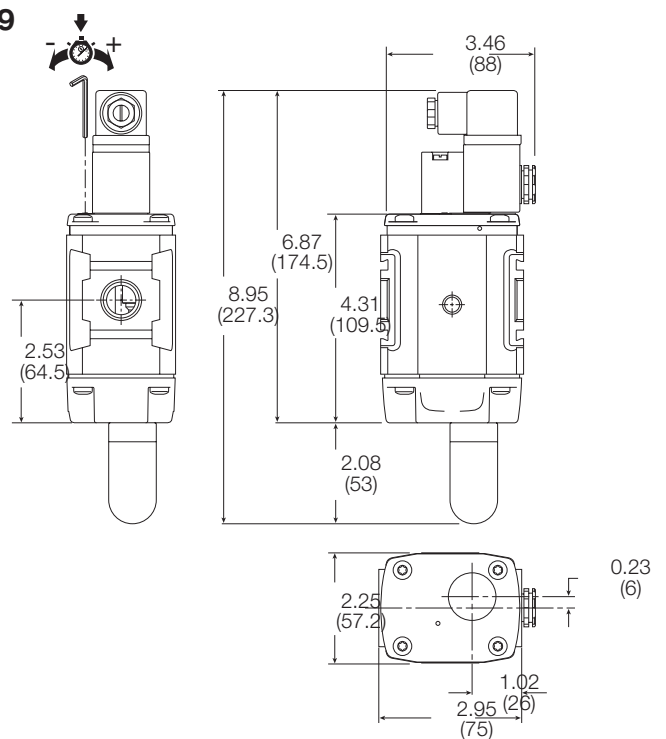
To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained. The valve will automatically dump when the holding signal is removed.

**Dimensions**  
inches (mm)

**Q09**

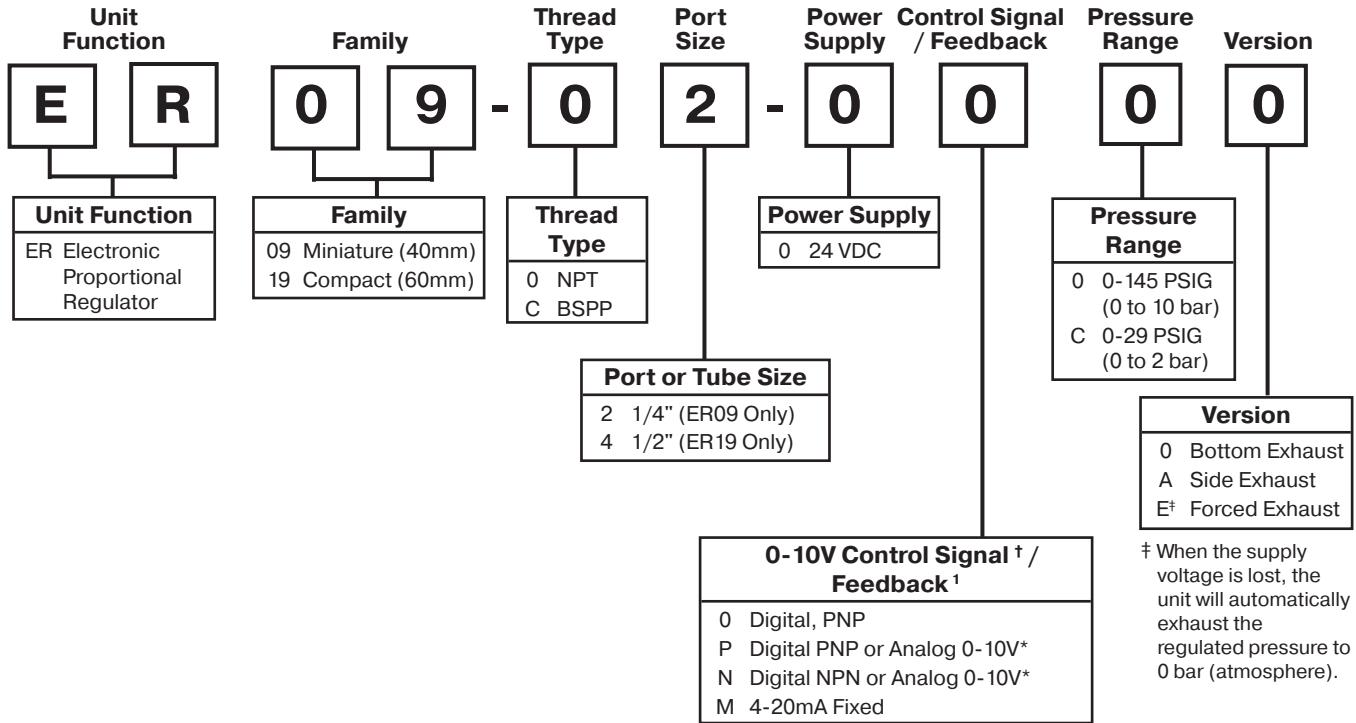


**Q19**



# Electronic Proportional Regulator Numbering System

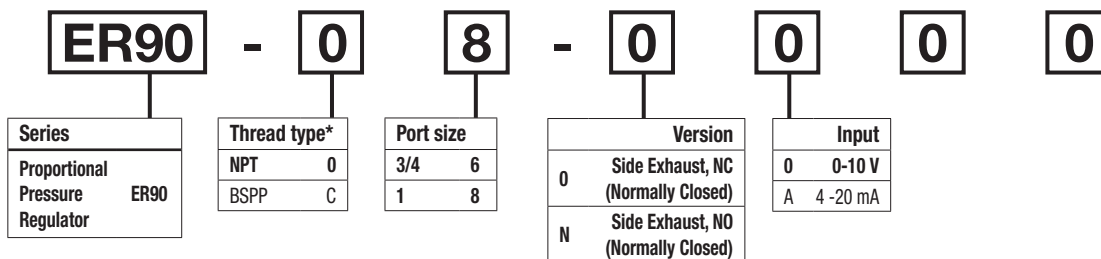
   = "Most Popular"



† All products have a 0-10V control signal, this is switchable to 4-20mA by means of parameter 4.

\* Selectable by means of Parameter 6

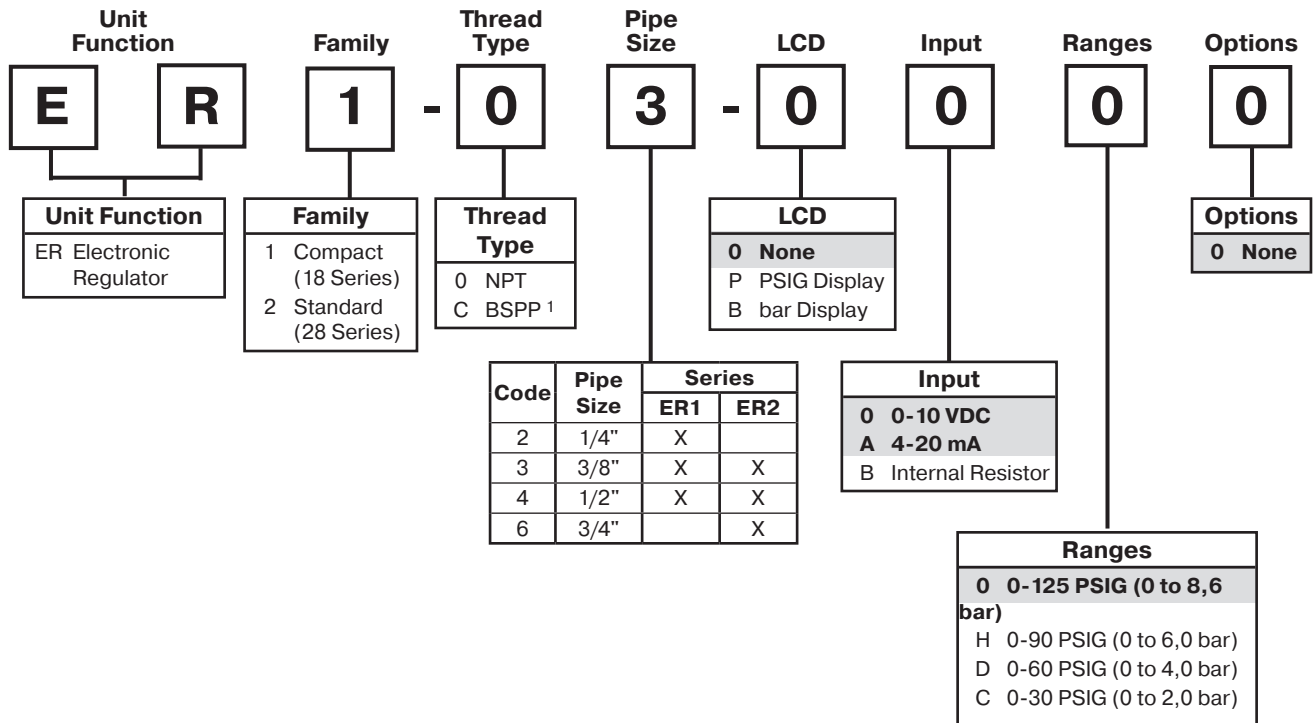
- 1 0) Digital PNP output only, no analog output selectable
- P) Digital PNP and analog 0-10V outputs selectable by means of parameter 6 (factory defaults 0-10V)
- N) Digital NPN and analog 0-10V outputs selectable by means of parameter 6 (factory defaults 0-10V)
- M) Analog 4-20mA output only



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.

# Electronic Regulator Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

# Electronic Proportional Regulator ER09, ER19

 = "Most Popular"



**ER09**

**ER19**

## Features

- Very fast response times
- Accurate output pressure
- Micro parameter settings
- Selectable I/O parameters
- Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65

## Materials

Magnet Core	Steel
Solenoid Valve Poppet	FPM
Solenoid Valve Housing	Techno Polymer
Regulator Body (ER09 / ER19)	Aluminum
Regulator Top Housing	Nylon
Valve Head	Brass & NBR
Remaining Seals	NBR

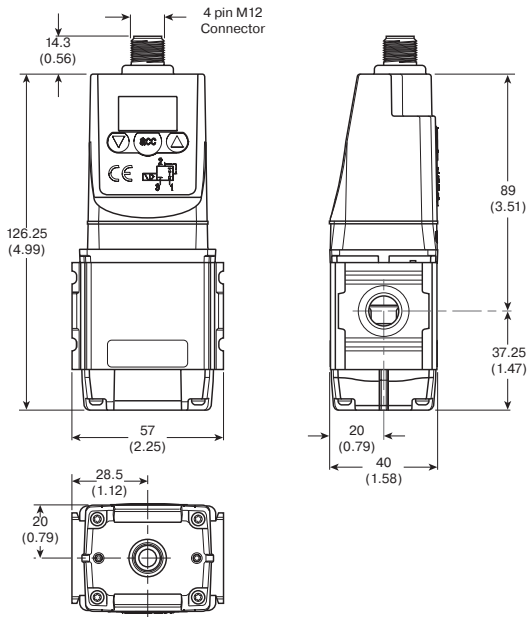
## Accessories

- Cable (M12, 4-Pin connection w/2m cable) ..CB-M12-4P-2M
- DIN Rail Mounting Kit – ER09 ..... P3HKA00ML
- Foot Bracket Mounting Kit – ER09..... P3HKA00MC
- L-Bracket Mounting Kit – ER19 ..... P3KKA00ML
- Foot Bracket Mounting Kit – ER19 ..... P3KKA00MC
- Seal Kit (valve seat, cover seal) ..... 3538200
- Valve Kit (2 valves, screws, cover seal) ..... 3538100

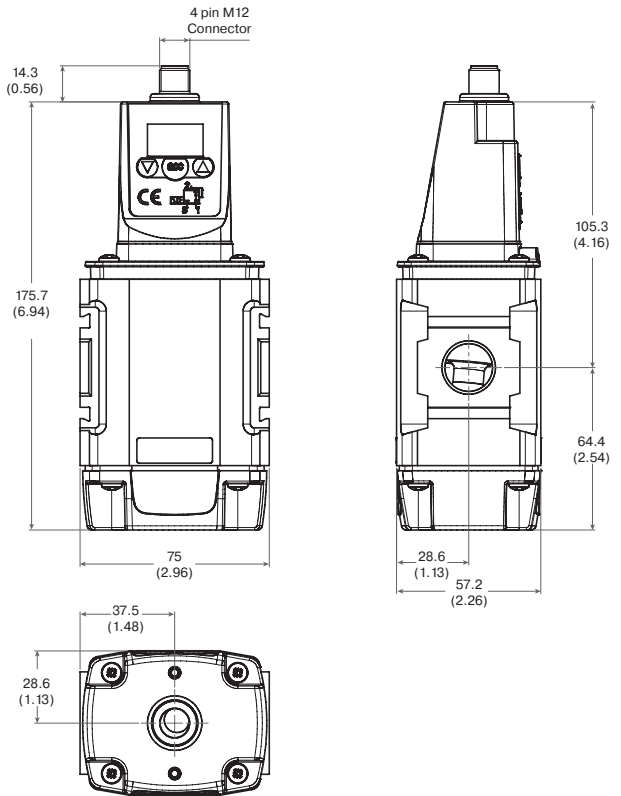
## Ordering Information

Port Size	Order Code	Control Signal	Output Signal	Output Pressure
1/4	<b>ER09-02-00C0</b>	0 - 10 V	Digital PNP Only	0-29 PSIG (0 -2 bar)
1/4	<b>ER09-02-0000</b>	0 - 10 V	Digital PNP Only	0-145 PSIG (0 -10 bar)
1/4	<b>ER09-02-0PC0</b>	0 - 10 V	Digital PNP or 0-10V	0-29 PSIG (0 -2 bar)
1/4	<b>ER09-02-0P00</b>	0 - 10 V	Digital PNP or 0-10V	0-145 PSIG (0 -10 bar)
1/4	<b>ER09-02-0NC0</b>	0 - 10 V	Digital NPN or 0-10V	0-29 PSIG (0 -2 bar)
1/4	<b>ER09-02-0N00</b>	0 - 10 V	Digital NPN or 0-10V	0-145 PSIG (0 -10 bar)
1/4	<b>ER09-02-0MC0</b>	0 - 10 V	4-20mA Analog Only	0-29 PSIG (0 -2 bar)
1/4	<b>ER09-02-0M00</b>	0 - 10 V	4-20mA Analog Only	0-145 PSIG (0 -10 bar)
1/2	<b>ER19-04-00C0</b>	0 - 10 V	Digital PNP Only	0-29 PSIG (0 -2 bar)
1/2	<b>ER19-04-0000</b>	0 - 10 V	Digital PNP Only	0-145 PSIG (0 -10 bar)
1/2	<b>ER19-04-0PC0</b>	0 - 10 V	Digital PNP or 0-10V	0-29 PSIG (0 -2 bar)
1/2	<b>ER19-04-0P00</b>	0 - 10 V	Digital PNP or 0-10V	0-145 PSIG (0 -10 bar)
1/2	<b>ER19-04-0NC0</b>	0 - 10 V	Digital NPN or 0-10V	0-29 PSIG (0 -2 bar)
1/2	<b>ER19-04-0N00</b>	0 - 10 V	Digital NPN or 0-10V	0-145 PSIG (0 -10 bar)
1/2	<b>ER19-04-0MC0</b>	0 - 10 V	4-20mA Analog Only	0-29 PSIG (0 -2 bar)
1/2	<b>ER19-04-0M00</b>	0 - 10 V	4-20mA Analog Only	0-145 PSIG (0 -10 bar)

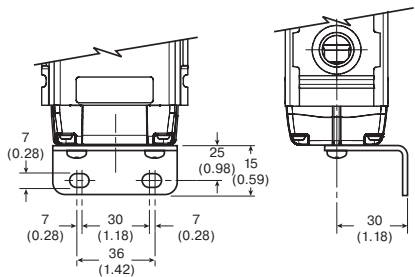
### ER09 Bottom Exhaust Version



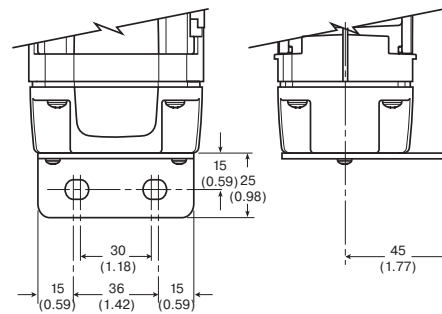
### ER19 Bottom Exhaust Version



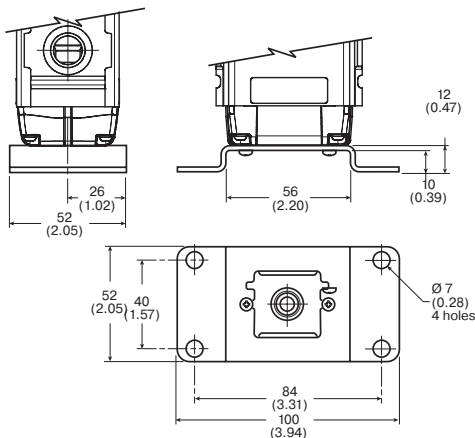
### L-Bracket



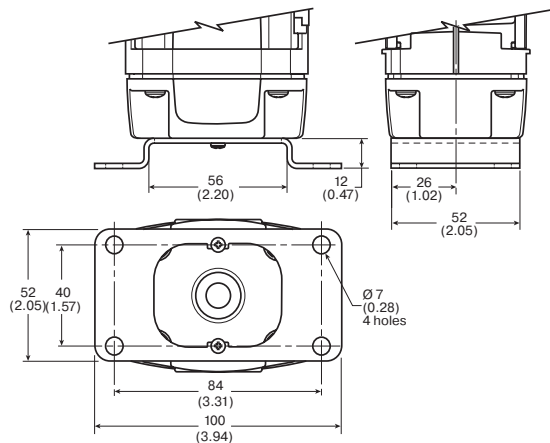
### L-Bracket



### Foot Bracket



### Foot Bracket



Dimensions are in mm (Inches)

**Energy Saving**

Low Watt Power Consumption  
 No Unnecessary Loss of Air in Steady State

**Man-Machine Interface**

High Visibility LED Display  
 Easy to Read Characters  
 All Controls on the Same Face

**Total Flexibility**

User Friendly and Easily Accessible Software Controls  
 One Basic Unit Suits All Customer Requirements -  
 0- 10V Control Signal Standard  
 4-20mA Control Signal Software Selectable  
 Modular Mounting  
 10 bar & 2 bar Version

**Special Applications**

Clean Line Design  
 Suitable for Washdown: IP65  
 Forced Exhaust Option Available  
 4 Output Signal Versions Available

**Compact and Light Weight**

40 & 60 mm Body Sizes  
 Light Weight Aluminum Bodies

**Flexible Mounting Options**

Stand-alone or Modular Mounting  
 Foot Bracket Mounting  
 DIN-Rail Mounting



**Outstanding Performance**

Very Fast Response Times  
 Full Flow Exhaust  
 Excellent Linearity  
 High Flow



## Generic Industries



The new Proportional Regulator is designed to quickly and accurately adjust and maintain a set output pressure.

The unit will operate regardless of flow, in response to an electronic control signal. The media can be compressed air or an inert gas.

Applications for this technology are virtually unlimited; from paint spray control, paper manufacturing and printing to weaving and laser cutting control; in fact anywhere that requires accurate remote pressure control.

## Automation

In the field of general automation, the need to control processes or movement via electronic signals is of paramount importance. The Proportional Regulator unit provides the facility to incorporate pressure control into a fully integrated control system.



## Packaging and Food

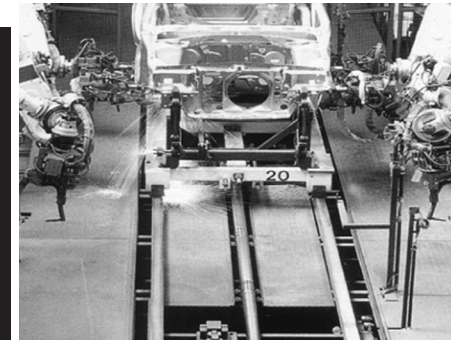


The Packaging and Food industry provides another ideal area for application of the Electronic Proportional Regulator, where fine control of tension on wrapping foils and paper is required. The degree of control and the ability to manually change parameters makes this unit ideally suited to the varying requirements of this industry.

## Automotive

Applications for this innovative product in the Automotive industry can be seen in major manufacturers' "body-in-white" lines.

The control of clamping and welding forces during panel assembly is an ideal application, also accurate control in paint dipping and spraying can be achieved.



## Why Proportional Technology ?

### The Difference Between Open or Closed Circuit Control

Standard pressure regulators go a long way towards meeting customers needs. In most cases these regulators work well in general pneumatic and automation applications. However, sometimes the application calls for more precise pressure control. The effects of time, cycling, input, back pressure or pressure and flow variation can all cause inconsistencies in pneumatic systems. Proportional Regulators are designed to eliminate those inconsistencies.

### Open Control Circuit

In a normal pressure regulated control system, the inlet pressure ( $p_1$ ) is converted into the output pressure ( $p_2$ ) by the regulator. The set pressure (set value) is usually manually set by adjusting the control knob and in normal circumstances the regulator maintains the output pressure (actual value).

No facility for monitoring the output pressure is provided and there is consequently no way of checking that the set value and the actual value are the same. Also, no account is taken of external influences such as air consumption by the system, which can drastically alter the actual value.

### Closed Loop Control Circuit

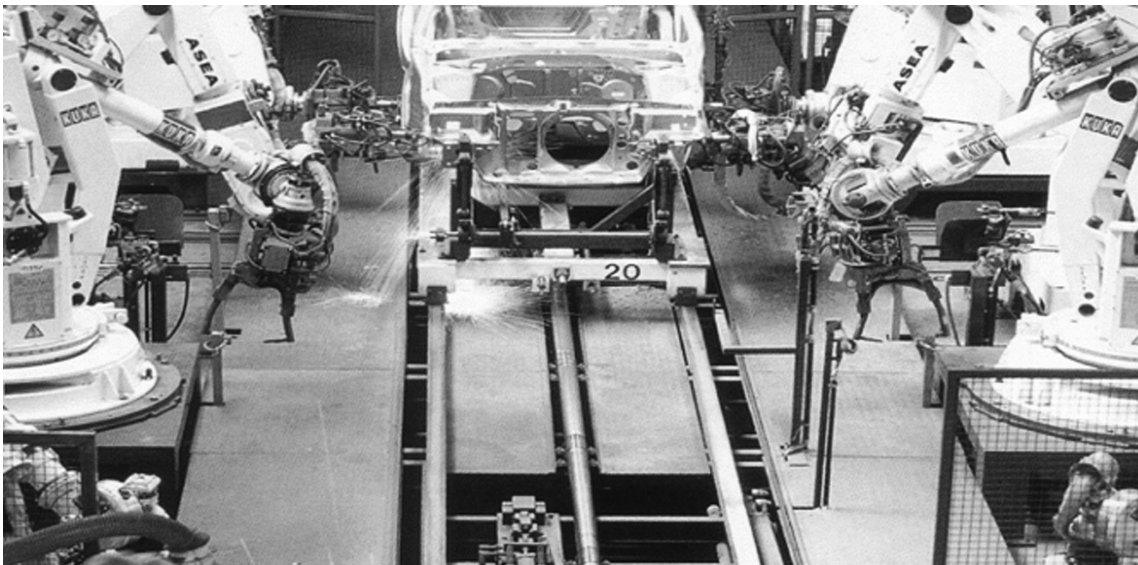
The input signal (Electronic Control Signal) is converted into the output value (P2 Output Pressure). This output value is continuously measured and compared with the input signal. If they are different, the unit adjusts the output value to correspond to the set value, to close the loop.

### Proportional Pressure Regulators

The Proportional Regulators provide all the advantages of a closed circuit regulated system. When a set value is defined via the input signal (e.g. 0-10 V), the pressure regulator sets the corresponding output pressure (e.g. 0-150 PSI/0-10 bar). At the same time the integrated pressure sensor measures the actual pressure at the unit's outlet (actual value).

If the electronic regulation system finds that the actual value has deviated from the set value, it immediately corrects the actual value. This is a continuous process ensuring fast, accurate pressure regulation.

### Typical Application in Automotive Body in White Welding Pressure Control



## Pneumatics

### Working Media

Compressed air or inert gasses, filtered to 40µ.

### Operating Pressure

	Max. Operating Pressure
2 bar unit	3 bar (43.5 PSI)
10 bar unit	10.5 bar (152 PSI)
Min. Operating Pressure	P2 Pressure + 0.5 bar (7.3 PSI)

### Pressure Control Range

Available in two pressure ranges, 0-2 bar (0-29 PSI) or 0-10 bar (0-145 PSI). Pressure range can be changed through the software at all times. (parameter 19)

### Temperature Range

32°F to 122°F (0°C to 50°C)

### Weight

ER09	0.64 lbs (.291 kg)
ER19	1.42 lbs (.645 kg)

### Air Consumption

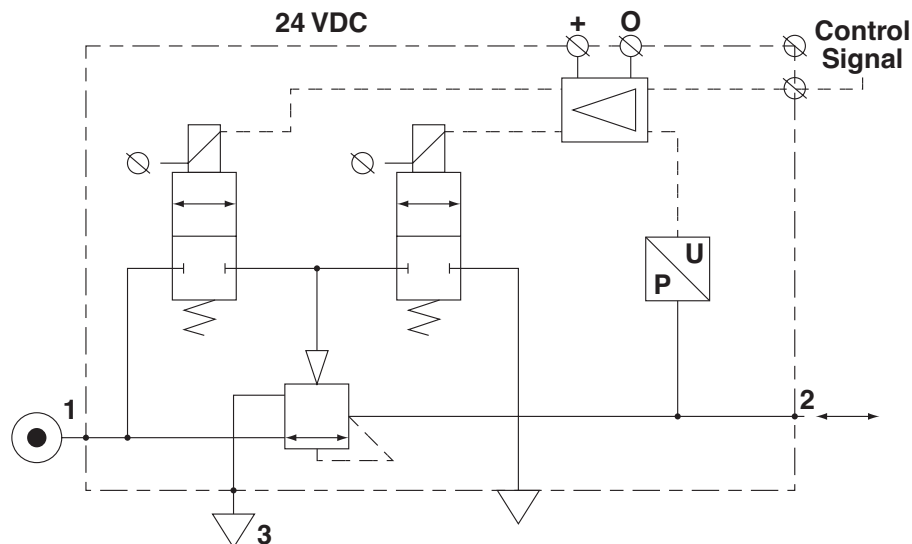
No consumption in stable regulated situation.

### Display

The regulator is provided with a digital display, indicating the output pressure, either in PSI or bar.

The factory setting is as indicated on the label, can be changed through the software at all times (parameter 14).

## Schematic



## Electronics

### Supply Voltage

24 VDC +/- 10%

### Power Consumption

1.1 W with unloaded signal outputs

### Current Consumption

Max. 200 mA with no load

### Control Signals

The electronic pressure regulator can be externally controlled through an analog control signal of 0-10 V, adjustable to 4-20 mA via parameter 4.

### Connections

Central M12 male connector 4-pole.

The electrical connections are as follows:

Pin No.	Function	Color	
1	24 V	Supply	Brown
2	0 to 10 V	Control Signal Ri = 100k Ω	White
	4 to 20mA	Control Signal Ri = 500 Ω	
3	0 V (GND)	Supply	Blue
4	24 V	Alarm Output Signal	Black

## Technical Information

### Dead Band

The dead band is preset at 1.3% of Full Scale\*, adjustable via parameter 13.

### Accuracy

Linearity = < 0.3% of Full Scale.\*

### Proportional Band

The proportional band is preset at 10% of Full Scale.\*

### Fail Safe Operation

- If the ER09 / ER19 unit has an “0” or “A” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to the fail safe mode. The last known output pressure is maintained at approximately the same level depending upon air consumption. The digital display indicates the last known pressure setting.
  - When the supply voltage is reinstated to the correct level, the valve moves from the fail safe mode and the output pressure immediately follows the control signal requirement. The display indicates the actual output pressure.
  - Note: In the event of loss of both power and inlet pressure the unit will exhaust downstream pressure.
- If the ER09 / ER19 unit has an “E” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to “Forced Exhaust Mode” and will automatically exhaust the downstream (regulated) pressure.
  - When the supply voltage is reinstated to the correct level the unit will return to normal operation and follows the control signal requirement. The display indicates the actual pressure.
- If the unit has been programmed in manual mode (not with a control signal) the unit will EXHAUST and the regulator will need to be reset when power is applied.

### Full Exhaust

Complete exhaust of the regulator is defined as  $P_2 \leq 1\% \text{ Full Scale}$

### \* Full Scale (F.S.)

For 2 bar versions this will be 2 bar, for the 10 bar version full scale will be 10 bar.

### Degree of Protection

IP65

### EU Conformity

CE: standard

EMC: according to directive 89/336/EEC

The new pressure regulator is in accordance with:

**EN 61000-6-1:2001**  
**EN 61000-6-2:2001**  
**EN 61000-6-3:2001**  
**EN 61000-6-4:2001**

These standards ensure that this unit meets the highest level of EMC protection.

### Mounting Position

Preferably vertical, with the cable gland on top.

## Advanced Functionality

### Pilot Valve Protection

When the required output pressure can not be achieved due to lack of input pressure, the unit will open fully and will display “NoP”. Approximately every 10 seconds the unit will retry. The output pressure will then be approximately equal to the inlet pressure. As soon as the input pressure is back on the required level, the normal control function follows.

### Safety Exhaust

Should the control signal fall below 0.1 volts, the valve will automatically dump downstream system pressure.

### Input Protection

The unit has built-in protection against failure and burnout resulting from incorrect input value, typically:

The 24v DC supply is connected to the setpoint input, the display will show ‘OL’, as an overload indication. The unit will need to be rewired and when correctly connected will operate normally.

The overload indicator ‘OL’ will also appear should the wrong input value be applied or the wrong input value be programmed: 4 - 20m instead of 0 - 10V. To correct this a different set point value should be input or the unit reprogrammed to correct the set point value acceptance. (via parameter 4).

### Response Times

Response time	ER09	ER19
2 to 4 bar	25 msecs	35 msecs
1 to 6 bar	55 msecs	135 msecs
4 to 2 bar	70 msecs	85 msecs
6 to 1 bar	80 msecs	225 msecs

To fill volume of:

100cm<sup>3</sup> - ER09

330cm<sup>3</sup> - ER19

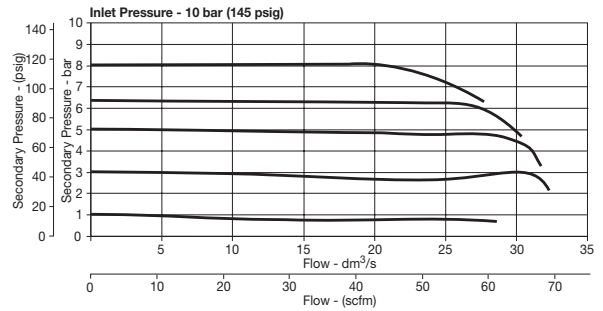
connected to the outlet of the regulator.

### Settings

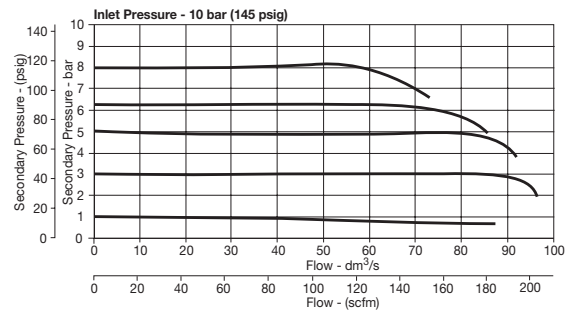
The regulator is pre-set at the factory. If required, adjustments can be made.

## Flow Charts

### ER09 Regulator 1/4” Ports



### ER19 Regulator 1/2” Ports



## How to Change Parameters

Pressing the Accept key “acc” for more than 3 seconds, will activate parameter change mode. The user can then select the parameters by pressing up or down key. (display will show Pxx). When parameter number is correct, pressing accept again will enter parameter number. (display will show parameter value).

Pressing the up or down key will change the parameter itself. (display will flash indicating parameter editing mode). Pressing the accept key will accept the new parameter value. (all digits will flash whilst being accepted).

After releasing all keys, the next parameter number will be presented on the display. (you may step to the next parameter). When no key is pressed, after 3 seconds the display will show the actual output pressure.

When the unit is initially powered up allow approximately 10 seconds for the unit to “boot-up” before changing parameter settings.

Only parameter numbers 0, 4, 6, 8, 9, 14, 18, 19, 20, 12, 13 and 21 are accessible to edit. All other parameters are fixed.

### Manual mode:

When keys DOWN and UP are pressed during startup, (connecting to the 24V power supply) manual mode is activated. This means that the user is able to in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.



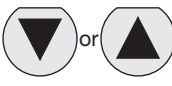

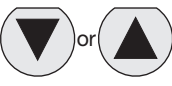

## Back to Factory Setting

After start up. (Power is on)

Entering this value in parameter 0 will store the calibrated factory data into the working parameters.

(Default calibration data is used)



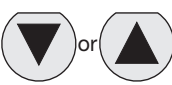

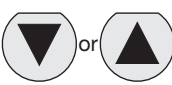

### Parameter Number 0 – Reset Back to Factory Settings

Step	1	2	3	4	5	
	 3-6 seconds					
Until Display Reads	Pxx	P00	000. Flashing Decimal	003. Flashing Decimal	003 Flashing	P01
Description	Accesses changeable parameters.	Accesses parameter no. 0.	Displays current parameter value.	Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3	Accepts and saves new parameter setting.	Sequences to next parameter.

## Set Control Signal

The unit is factory set for 0-10 V control signal. If 4-20 mA control signal is required, change parameter 4.

### Parameter Number 4 – Set Control Signal in Volts or Milliamps

Step	1	2	3	4	5	
	 3-6 seconds					
Until Display Reads	Pxx	P04	001. Flashing Decimal	000. Flashing Decimal	000 Flashing	P05
Description	Accesses changeable parameters.	Accesses parameter no. 4.	Displays current parameter value. 1 = V 0 = mA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Set Output Signal

Parameter 6 is used to set the type of output signal to your PLC.

This parameter is used as follows:

Output Signal option "0" = Digital Output – PNP

- Factory set at "0" Non Adjustable

Output Signal option "P" = Digital PNP or Analog 1-10V

- Factory set at "1" for Analog Signal
- Convert to Digital PNP by changing parameter to "0" setting



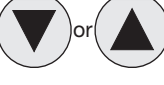

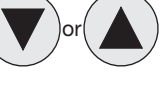

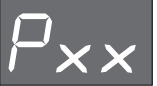





Output Signal option "N" = Digital NPN or Analog 1-10V

- Factory set at "1" Analog Signal
- Convert to Digital NPN by changing parameter to "0"

Output Signal option "M" = Analog 4-20 mA

- Factory set at "2" Non Adjustable

### Parameter Number 6 – Set Output Signal

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (Value 0, 1 or 2)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 6.	Displays current parameter value. 1 = m factory default for P3H with analog options	Edits parameter. 0 = digital (NPN or PNP) 1 = analog 0..10V 2 = analog 4..20 mA	Accepts and saves new parameter setting.	Sequences to next parameter.













### Adjust Span Analog Output Signal

Set value is a % of Full Analog range. As an example for a 0-10V output signal, the original factory setting of 100% will give you an adjustment of 0-10V. If you reset Parameter 8 to 50%, the new output range would be 0-5V or 50% of the full range.

In the event that the output signal is to low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale.

Note that all values are nominal and that an actual measurement may be required to ensure signal strength.



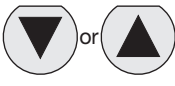

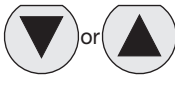







### Parameter Number 8 – Adjust Span Analog Output Signal

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal (For 2 bar versions value = 92)	 Flashing Decimal (Value between 0 and 130)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 8.	Displays current parameter value.	Edits parameter.	Accepts and saves new parameter setting and implements the new analog signal span.	Sequences to next parameter.

### Adjust Digital Display

If necessary, adjustments can be made to the digital display when using an external pressure sensor.













#### Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration)

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 9.	Displays current digital display	Use up or down arrows and accept to adjust the display value if using an external pressure sensor.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Set Pressure Scale

Units with NPT port threads are supplied with a factory set psig pressure scale. Use parameter 14 to change scale to bar.

#### Parameter Number 14 – Set Pressure Scale in psig or bar



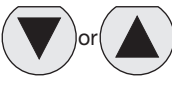

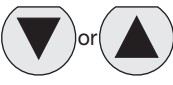







Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 14.	Displays current parameter value. 1 = psig 0 = bar 2 = MPA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.



### Preset Minimum Pressure

If there is a need for a pre-set Minimum pressure, use parameter 18. (Note: preset pressure is affected by % P19.)

#### Parameter Number 18 – Set Minimum Preset Pressure

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 0 and 200)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 18.	Displays current parameter value. Incremental value is: <u>2 bar unit:</u> x 2 mbar x % P19 <u>10 bar unit:</u> x 10 mbar x % P19	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Set Pressure Correction



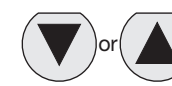









Pressure correction allows the user to set a Maximum pressure as a percentage of secondary pressure F.S.

Example: If F.S. is 10 bar, set parameter 19 to 50 for Maximum preset pressure of 5 bar.

Pressure correction also affects the Minimum preset pressure in parameter 18.

Example: If F.S. is 10 bar and parameter 18 is set to a value of 100 (1 bar), and parameter 19 is set to 50%, then the actual Minimum preset pressure seen is 0.5 bar.

#### Parameter Number 19 – Set Maximum Preset Pressure



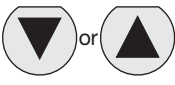

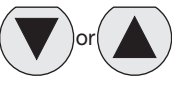







Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 0 and 100)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 19.	Displays current parameter value. Incremental value is: % of F.S.	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Behavior Control

The regulation speed of the pressure regulator can be modified by means of one parameter. (P 20)

The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

### Parameter Number 20 – Set Behavior Control





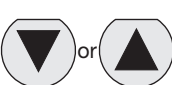







Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 0 and 5)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 20.	Displays current parameter value.	Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)	Accepts and saves new parameter setting.	Sequences to next parameter.

\* When the value 0 is entered, you are able to create your own custom settings true parameters 12, 13 and 21.

### Fine Settings Set Proportional Band

Proportional band is used for setting the reaction sensitivity of the regulator. The displayed value is X 10 mbar and has a range between 50 (0.5 bar) and 250 (2.5 bar).



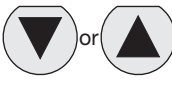

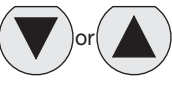







### Parameter Number 12 – Set Proportional Band (P20 Must be Set to 0)

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 50 and 250)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 12.	Displays current parameter value. Incremental value is: x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Set Deadband



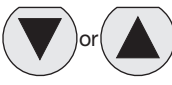

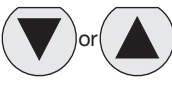







Deadband is the Minimum limit of accuracy at which the regulator is set for normal operation. The displayed value is X 10 mbar and has a range between 4 (40 mbar) and 40 (400 mbar).

#### Parameter Number 13 – Set Deadband (P20 Must be Set to 0)



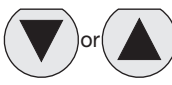




Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 4 and 40)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 13.	Displays current parameter value. Incremental value is x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

### Proportional Effect

#### Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)

Step	1	2	3	4	5	
<b>Press</b> 	 3-6 seconds					
<b>Until Display Reads</b>			 Flashing Decimal	 Flashing Decimal (value between 5 and 100)	 Flashing	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 21.	Displays current parameter value.	Edits parameter. 5 = fastest regulation 100 = slowest regulation.	Accepts and saves new parameter setting.	Sequences to next parameter.

#### Parameter Number 39 – Displays Current Software Version

Step	1	2	3	
<b>Press</b> 	 3-6 seconds			
<b>Until Display Reads</b>			 Flashing Decimal	
<b>Description</b>	Accesses changeable parameters.	Accesses parameter no. 39.	Displays current parameter value. XXX = current software version	

Problem	Possible Reason	Solution
Display will not light up	No 24 volts power supply	Check if the wiring is connected according to the schematic wiring diagram
Unit will not, or not correctly respond to given setpoint	Wrong current applied ( i.e. Volt instead of mA or mA instead of Volt  Setpoint signal is not stable enough	Change setpoint current or re configure the setpoint current through the software by changing parameter 4  Check wiring if the setpoint signal lead is connected to the right pin within the male M12 connector ( should be pin 2)  Stabilize setpoint signal input
Display shows NoP.	Unit detects that required output pressure is higher than the supplied pressure  No inlet pressure at all	Adjust the inlet pressure to a higher value, preferably 0,5 bar higher than requested output pressure  Give lower setpoint value which corresponds to a output pressure lower than the inlet pressure  Connect port 1 to the supply pressure
Unit behavior is not considered normal	Faulty settings made in the parameters	Reset the unit to factory settings by using the green key function under parameter 0
Desired pressure can not be reached	Setpoint value to low  Pre-set pressure limit has been changed to a lower max. outlet pressure  Supply pressure is to low	Increase setpoint value  Change max. outlet pressure back to required pressure by changing parameter 19  Increase supply pressure
Secondary side stays pressurized	Setpoint value is higher than 0,1 Volt  Pre-set pressure has been enabled to a certain pressure	Lower your setpoint value, preferably to 0 Volts  Reset parameter 18 to 0
Display shows unrealistic value	Display maybe configured in the wrong value ( bar instead of psi)	Check through parameter 14, if the display value is set on either psi or bar, if necessary change it to the required setting
Unit response time too slow or too quick	Volume behind the unit is either too big or too small	Adjust the regulating speed of the unit through parameter 20
Unit gives too much overshoot	Relation between volume and response me is out of balance	Adjust response time to a higher value through parameter 20, to achieve more accurate behavior
Unit is adjusting / regulating constantly	Air leakage in the system behind the unit  Constant changing volume behind the unit  "Deadband "area is set too small	Resolve leakage  Unit needs to regulate to keep required pressure at the same level  Try to minimize the volume changes  Enlarge deadband setting through parameter 13 in the software ( parameter 20 has to be set to 0 before changing parameter 13)
Can not enter software through touchpad	Unit is currently working/processing  Activating time is too short	Make sure that the unit is in steady state while activating the software  Hold the accept button for at least 3 seconds
Display indicates 'OL'	Wiring not according to diagram (24 volt connected on the setpoint connection pin)  Wrong setpoint value given in relation to programmed setpoint value acceptance	Rewire so that on the setpoint connection pin will be either 0-10v or 4-20mA  Change over setpoint value to either V or mA or Reprogram the unit to the correct setpoint value via parameter 4
Any other problem	Please consult factory	

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## Glossary

**Hysteresis** – The mechanical limits of accuracy of the unit. The regulator cannot be adjusted within the inherent mechanical limits of the design.

**Dead Band** – The minimum limit of accuracy at which the regulator is set for normal operation. This band must be equal to, or exceed, the inherent design limits of the regulator or the hysteresis band.

**Proportional Band** – The band used for setting reaction sensitivity of the regulator. The regulator senses the excursion from the set pressure and adjusts response in relation to the degree of excursion beyond the dead band. This band must exceed the dead band of the unit.

**Proportional Effect** – The speed at which the unit approaches P2 (secondary pressure).

**Sensitivity** – The smallest change in the control signal, or feedback signal, to cause a change in regulated output pressure.

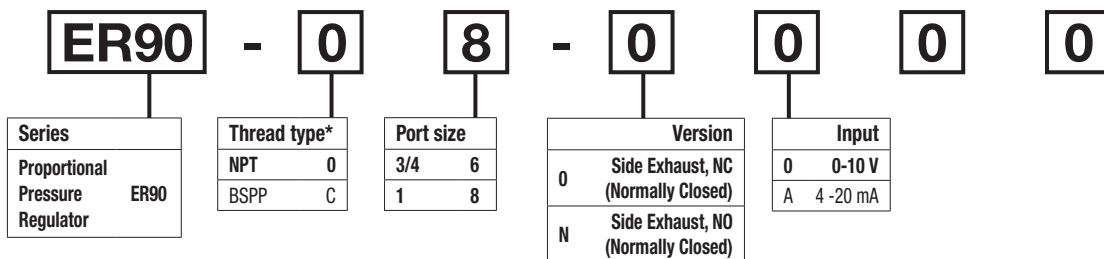
**Repeatability** – a measurement of how consistently the unit can reproduce an output pressure in relation to a specific set pressure.

**Linearity** – A measure of how closely the relationship of output pressure vs. the control signal deviates from a straight line function.

# Proportional Pressure Regulator ER90

   = "Most Popular"

- Integral 3/4" or 1" ports (BSPP & NPT)
- Accurate output pressure
- Very fast response times
- Robust but lightweight design



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

## Ordering information

Port size	Description	Control signal	Output signal)	Outlet pressure	Weight kg ( lb)	Part number†
3/4"	Normally closed	0 - 10 V	0 - 10 V	0 - 10 bar (0 to 145 psig)	1.2 (2.7)	<b>ER90-06-0000</b>
1"	Normally closed	0 - 10 V	0 - 10 V	0 - 10 bar (0 to 145 psig)	1.2 (2.7)	<b>ER90-08-0000</b>

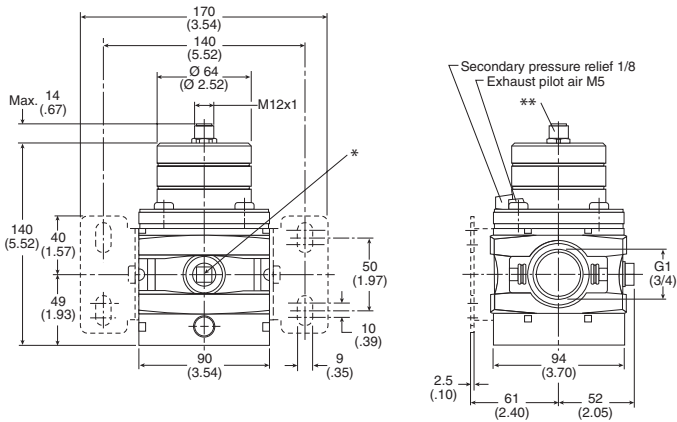
† Standard part numbers shown in bold. For other models refer to Options chart above.

**Specifications**

Operating pressure range	P <sup>1</sup> min	1 bar (14.5 psig)	
Inlet pressure <sup>1</sup>	P <sup>1</sup> max	16 bar (232 psig)	
Operating pressure range	P <sup>2</sup> min	0.2 bar (2.9 psig)	
Outlet pressure	P <sup>2</sup> max	10 bar (145 psig)	
Operating temperature		0°C to 50°C (32°F to 122°F)	
	Maximum flow	Q <sub>n</sub> l/min	20000
			m <sup>3</sup> /h
		SCFM	706
Hysteresis	P <sup>2</sup> max	< 1%	
Repeatability	P <sup>2</sup> max	< 0.5%	
Sensitivity	P <sup>2</sup> max	< 0.5%	
Linearity	P <sup>2</sup> max	< 1%	
Nominal voltage	U <sub>n</sub> V DC	24V = ±10%	
Residual ripple		10%	
Power consumption	I <sub>Bmax</sub>	0.15 A	
Set value input	U <sub>w</sub> V	0 - 10	
	I mA	0 - 20	
	I mA	4 - 20	
Input resistance	R <sub>E</sub>	243 K	
		Ω	
Actual valve output	U <sub>x</sub>	0 - 10 V	
Output current	I <sub>Amax</sub>	10 mA	
Degree of protection		IP65 to DIN 40050, EN 60529	

<sup>1</sup>) p<sup>1</sup> > p<sup>2</sup> + 10% p<sup>2</sup>  
<sup>2</sup>) at p<sup>1</sup> - 10 bar to p<sup>2</sup> - 6.3 bar

**Dimensions mm (inches)**



\* Two opposite gauge ports 1/4, plug screw mounted  
 \*\* Connection for 5-pin plug M12 x 1

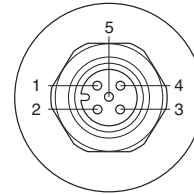
**Material specifications**

Housing	Aluminum
Pilot valve booster	Brass / NBR composite aluminum
Standard seals	NBR
Body cover screws	Steel / zinc plated

**Cables**

Type	Part number
M12, 5-pin female to flying lead cable, TPE; 2m (6.6 ft)	<b>RKC 4.5T-2/S1587</b>

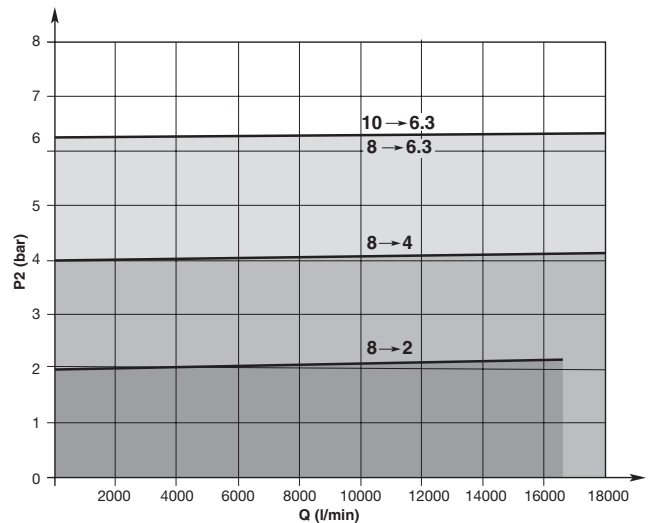
**Connection diagram**



**Connector M12 x 1**

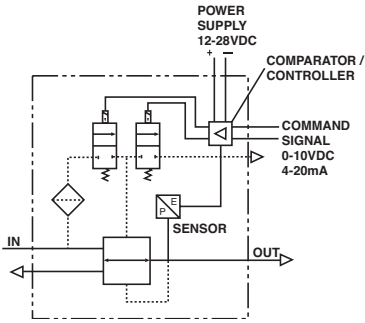
Pin No.	Function
1	24 V Supply
2	0 V Reference & mass capacity
3	0 - 10 V Set value input
4	0 V Signal
5	0 - 10 V Analog output

**Flow characteristics**



# Electronic Regulator ER1 / ER2

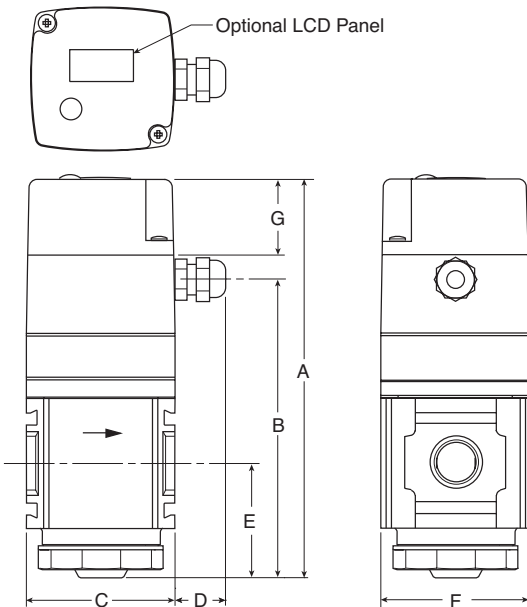
 = "Most Popular"



**ER1-02-0000**

## Features

- Optional LCD Panel Displays P2 Pressure in PSIG or bar
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- 5 Micron Filtration to Controller is Built-in



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit ER1-XX-0000		6.31 (160)	4.71 (120)	2.35 (60)	0.79 (20)	1.79 (45)	2.35 (60)	1.20 (30)
Standard Unit ER2-XX-0000		6.31 (160)	4.71 (120)	2.88 (73)	0.79 (20)	1.79 (45)	2.88 (73)	1.20 (30)

## Specifications

Flow Capacity*	ER1	1/4	165 SCFM (77.9 dm <sup>3</sup> /s)
		3/8	200 SCFM (94.4 dm <sup>3</sup> /s)
		1/2	200 SCFM (94.4 dm <sup>3</sup> /s)
	ER2	3/8	200 SCFM (94.4 dm <sup>3</sup> /s)
		1/2	200 SCFM (94.4 dm <sup>3</sup> /s)
		3/4	200 SCFM (94.4 dm <sup>3</sup> /s)
Adjusting Range	0 to 125 PSIG (0 to 8.6 bar)		
Hysteresis / Repeatability	± .8% of Full Scale		
Linearity	< 1.0 PSIG (0.6 bar)		
Maximum Supply Pressure	150 PSIG (10.3 bar)		
Operating Temperature	32° to 125°F (0° to 52°C)		
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2, 3/4	
Response	with Step Input 600 ms		
Sensitivity	± .8% of Full Scale		
Weight	lb. (kg)	ER1	1.76 (0.8)
		ER2	2.43 (1.1)

\* Inlet pressure 150 PSIG (10.3 bar). Secondary pressure 90 PSIG (6.2 bar).

## Materials of Construction

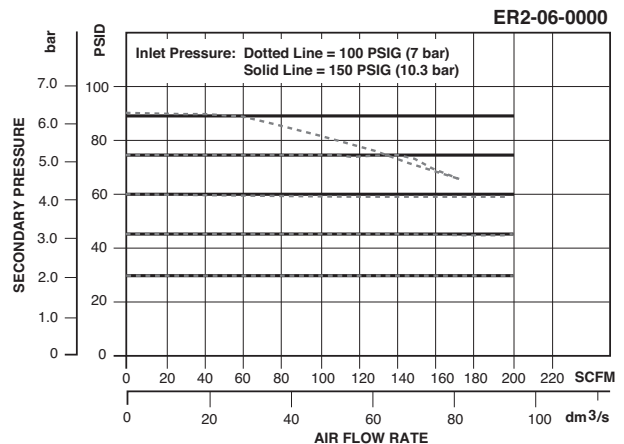
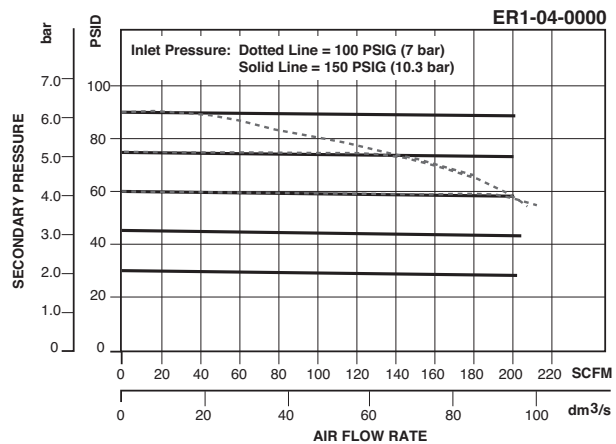
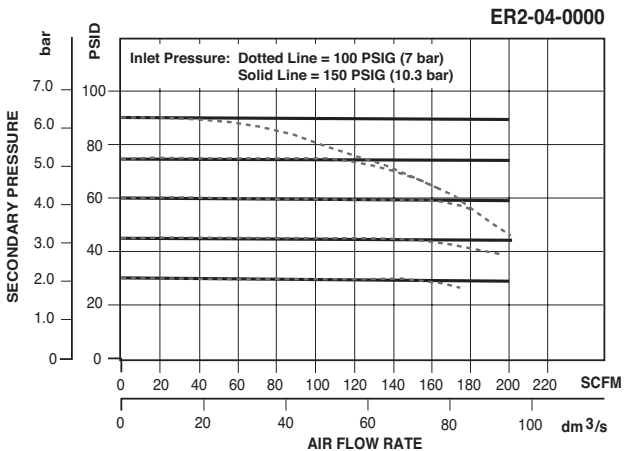
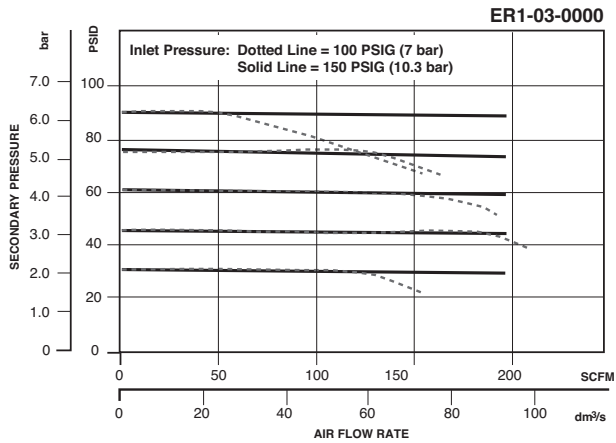
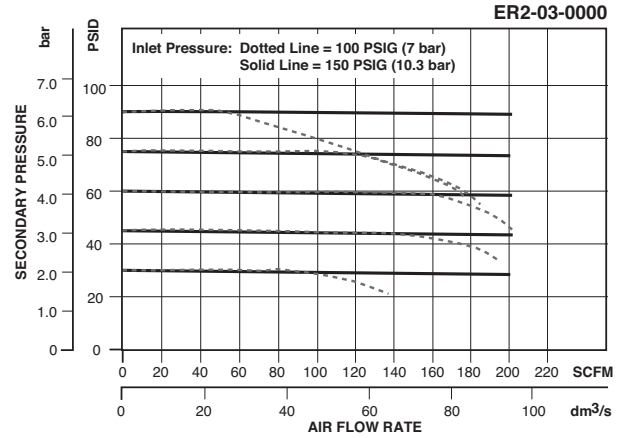
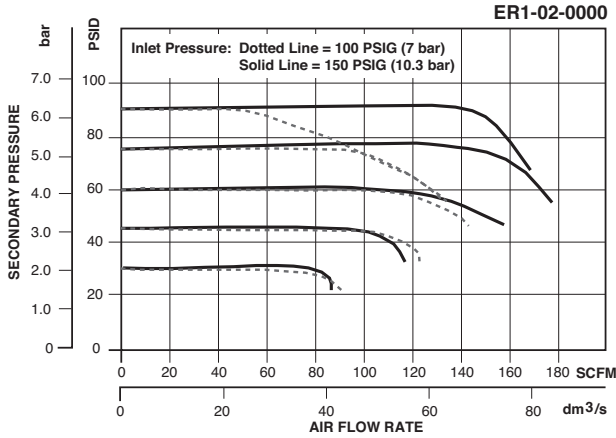
Body	Aluminum
Body Cover	ABS
Bottom Plug	33% Glass-Filled – Nylon 6-12
Diaphragms	Nitrile / Zinc / Brass
Diaphragm Plate	Acetal
Panel Nut	Acetal
Seals	Nitrile
Springs	Music Wire / Stainless Steel
Valve Assembly	Brass / Nitrile

## Accessories

Bottom Valve & Spring .....	ERP-95-794
C-Bracket –	
ER1 .....	GPA-97-086
ER2 .....	GPA-97-087
Diaphragm Kit –	
ER1 .....	ERP-95-792
ER2 .....	ERP-95-793
Exhaust Muffler .....	VRP-95-780



= "Most Popular"



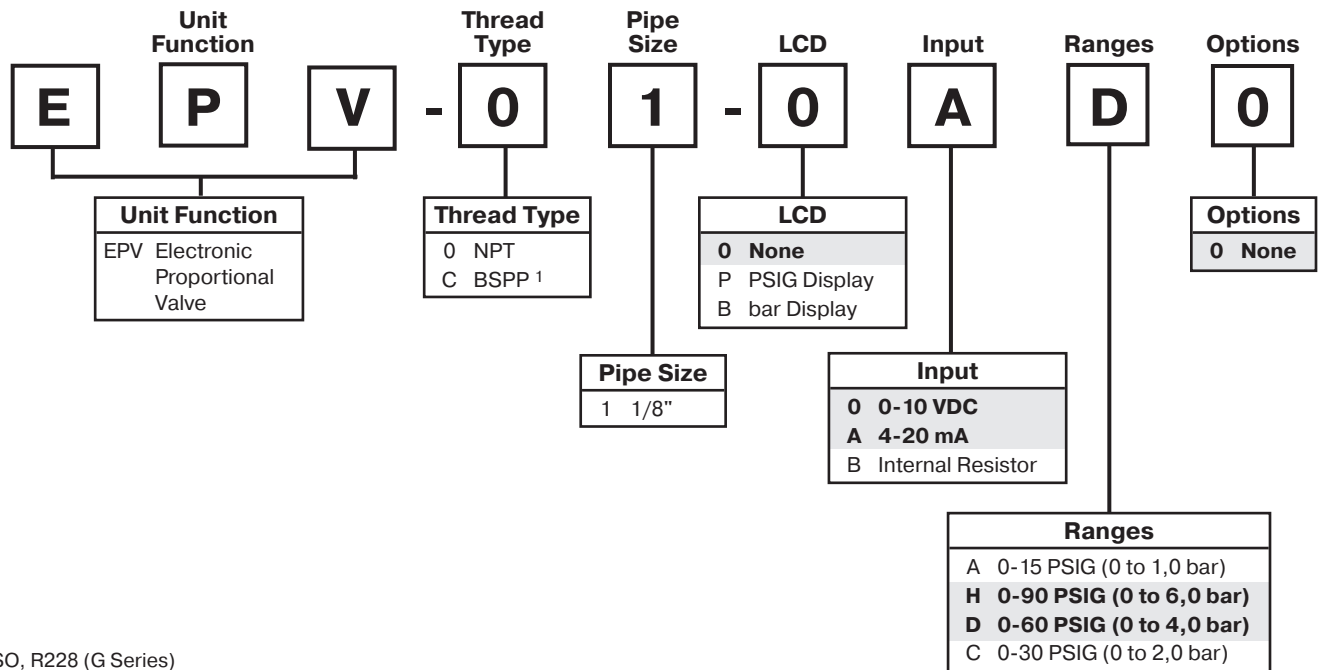
### Ordering Information

Model Type	Port Size	0 to 10VDC With LCD (PSI)	0 to 10VDC With LCD (bar)	4 to 20mA With LCD (PSI)	4 to 20mA With LCD (bar)	0 to 10VDC Without LCD	4 to 20mA Without LCD	Internal With LCD (PSI)	Internal With LCD (bar)
<b>ER1</b>	1/4	ER1-02-P000	ER1-C2-B000	ER1-02-PA00	ER1-C2-BA00	ER1-02-0000	ER1-02-0A00	ER1-02-PB00	ER1-C2-BB00
	3/8	ER1-03-P000	ER1-C3-B000	ER1-03-PA00	ER1-C3-BA00	ER1-03-0000	ER1-03-0A00	ER1-03-PB00	ER1-C3-BB00
	1/2	ER1-04-P000	ER1-C4-B000	ER1-04-PA00	ER1-C4-BA00	ER1-04-0000	ER1-04-0A00	ER1-04-PB00	ER1-C4-BB00
<b>ER2</b>	3/8	ER2-03-P000	ER2-C3-B000	ER2-03-PA00	ER2-C3-BA00	ER2-03-0000	ER2-03-0A00	ER2-03-PB00	ER2-C3-BB00
	1/2	ER2-04-P000	ER2-C4-B000	ER2-04-PA00	ER2-C4-BA00	ER2-04-0000	ER2-04-0A00	ER2-04-PB00	ER2-C4-BB00
	3/4	ER2-06-P000	ER2-C6-B000	ER2-06-PA00	ER2-C6-BA00	ER2-06-0000	ER2-06-0A00	ER2-06-PB00	ER2-C6-BB00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes

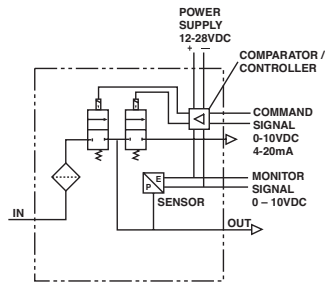
# Electronic Proportional Valve Numbering System    = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

# Electronic Proportional Valve EPV

   = "Most Popular"



**EPV-01-00H0**

## Features

- Optional LCD Panel Displays P2 Pressure in PSIG or bar
- Modern Design and Appearance
- Light Weight
- 0-10 VDC, 4-20mA, or Internal Control Signal Options Available

## Specifications

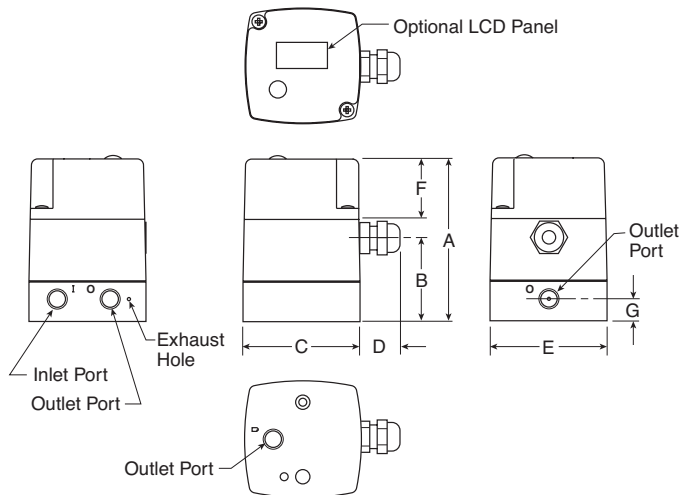
Flow Rate	$C_v = .02$
Linearity	< 1.0 PSIG (.06 bar)
Maximum Supply Pressure	150 PSIG (10.3 bar)
Operating Temperature	32° to 125°F (0° to 52°C)
Output Pressure Ranges	15 / 30 / 60 / 90 PSIG 1/2, 1/4, 1/6, 2 bar
Overall Accuracy	0.8% Scale
Port Size	NPT / BSPP-G 1/8
Response*	50 mSEC
Step Response**	with Step Input 600 mSEC
Weight	lb. (kg) .92 (.42)

\* Response time for the unit to recognize and correct for a change in set value or conditions.

\*\* Step response is the time to go from 10 to 90% of set value with a 60 PSIG (4.0 bar) step input.

## Materials of Construction

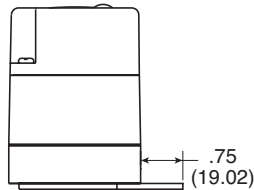
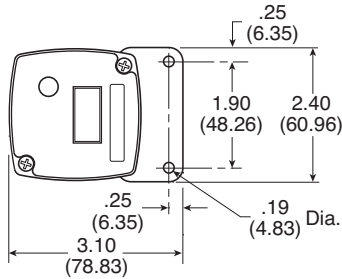
Body / Cap	Aluminum
Body Cover	ABS
Seals	Nitrile
Valve Assembly	Brass / Nitrile



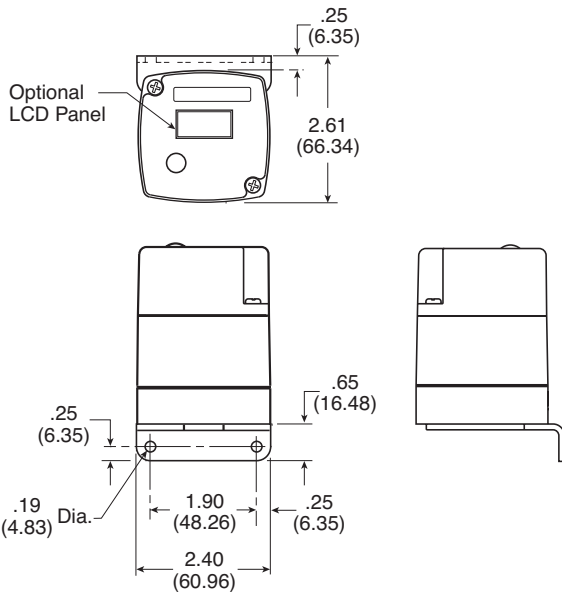
## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit EPV-XX-0000		3.28 (83)	1.69 (43)	2.35 (60)	0.79 (20)	2.35 (60)	1.20 (30)	0.45 (11)

 = "Most Popular"



**Flat Bracket**



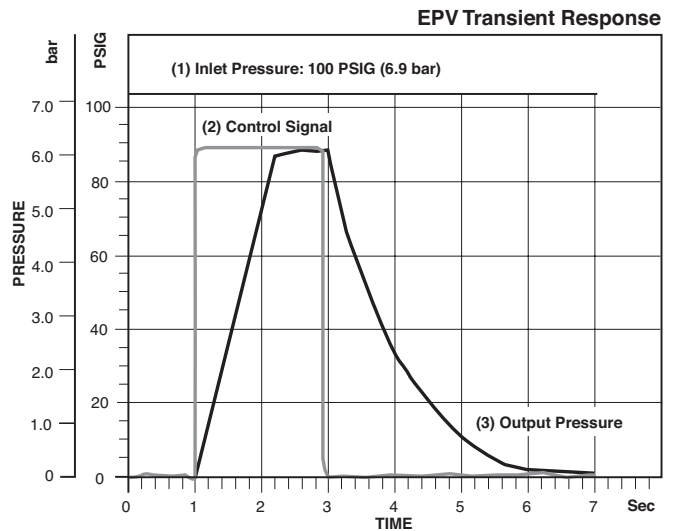
**Angled Bracket**

The EPV provides highly accurate pressure for static and low flow applications. In addition, the EPV is available in both 1/8" NPT or G-series outlet ports on three sides and has a unique compact design which allows for easy installation.

For optimum valve and system performance, we recommend a pre-filter package consisting of a 5 micron particulate filter and a .01 micron coalescing filter.

**Replacement Kits**

- Flat Bracket Kit..... EPP-95-351
- Angled Bracket Kit..... EPP-95-352
- Control Board, EPV 15 / 30 PSIG ..... EPP-95-782



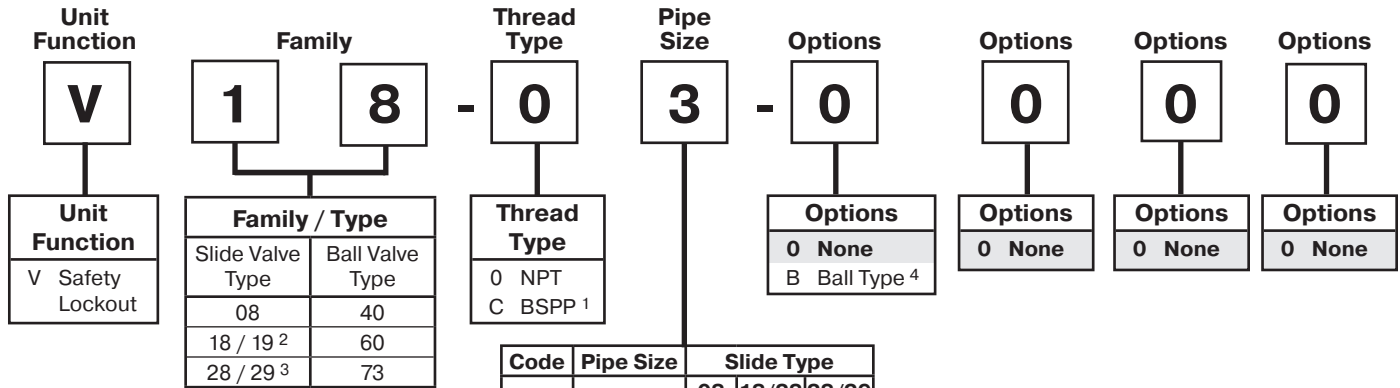
**Ordering Information**

Model Type	Port Size	Display	0 to 10VDC w/ LCD	4 to 20mA w/ LCD	Internal With LCD
EPV	1/8	PSI	EPV-01-P0H0	EPV-01-PAH0	EPV-01-PBH0
		bar	EPV-C1-B0H0	EPV-C1-BAH0	EPV-C1-BBH0
		None	EPV-01-00H0	EPV-01-0AH0	—

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

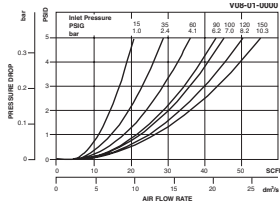
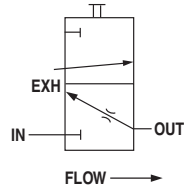
## Safety Lockout Valve Numbering System

   = "Most Popular"



## Safety Lockout Valve V08

= "Most Popular"



### V08-01-0000

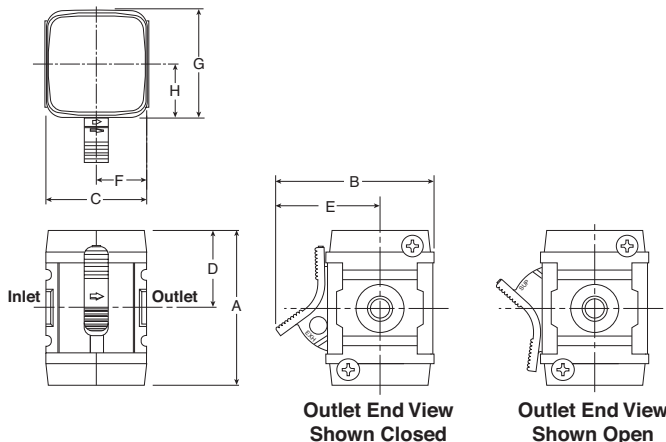
### Features

The V08 safety lockout valve is a manually operated, slide-type, 2-position, 3-way valve. In the closed position, downstream air is exhausted to atmosphere. The valve slide can be locked in the closed position with a customer supplied padlock. The V08 safety lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).

### Ordering Information

Model Type	Port Size	Safety Lockout Valve
V08	1/8	V08-01-0000
	1/4	V08-02-0000

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



### Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit V08-XX-0000		2.41 (61.2)	2.46 (62.5)	1.58 (40)	1.21 (30.7)	1.63 (41.4)	0.79 (20)	1.68 (42.7)	0.84 (21.3)

### Specifications

Flow Capacity*	1/8	55 SCFM (26 dm <sup>3</sup> /s)
	1/4	100 SCFM (47.2 dm <sup>3</sup> /s)
Exhaust Flow	V08 1/8	C <sub>v</sub> = 0.241
	V08 1/4	C <sub>v</sub> = 0.253
Maximum Supply Pressure	150 PSIG (10.3 bar)	
Operating Temperature	32° to 150°F (0° to 65.5°C)	
Port Size	NPT / BSPP-G	1/8, 1/4
Weight	lb. (kg)	.66 (0.3)

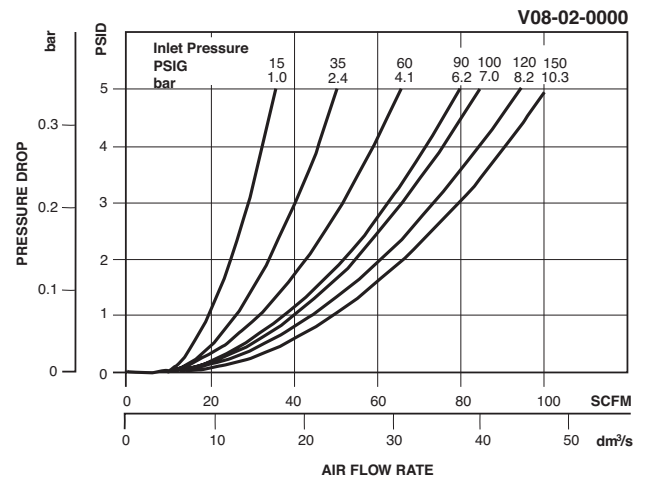
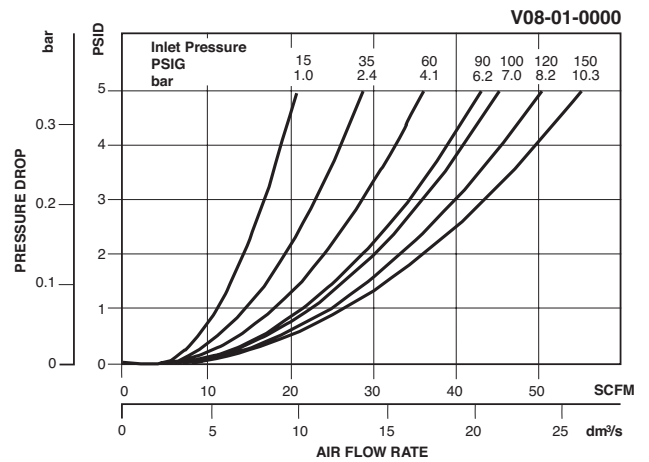
\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

### Materials of Construction

Blade	Acetal
Body	Zinc
Seals	Nitrile

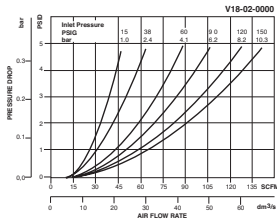
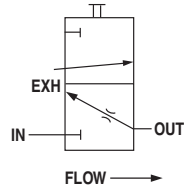
### Replacement Kit

Blade and O-ring ..... VRP-96-92



## Safety Lockout Valve V18 / V28

= "Most Popular"



### V18-02-0000 Left to Right Flow (Orange Slide)

### Features

The V18 / V28 safety lockout valve is a manually operated, slide-type, 2-position, 3-way valve. In the closed position, downstream air is exhausted to atmosphere. The valve slide can be locked in the closed position with a customer supplied padlock. The V18 / V28 safety lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).

### Specifications

Flow Capacity*	V18	1/4	141 SCFM (66.5 dm <sup>3</sup> /s)
		3/8	216 SCFM (101.9 dm <sup>3</sup> /s)
		1/2	272 SCFM (128.4 dm <sup>3</sup> /s)
	V28	3/8	208 SCFM (98.2 dm <sup>3</sup> /s)
		1/2	290 SCFM (136.9 dm <sup>3</sup> /s)
		3/4	300 SCFM (141.6 dm <sup>3</sup> /s)
Exhaust Flow	V18	3/8	C <sub>v</sub> = 1.03
	V28	1/2	C <sub>v</sub> = 1.05
Maximum Supply Pressure	150 PSIG (10.3 bar)		
Operating Temperature	32° to 150°F (0° to 65.5°C)		
Port Size	NPT / BSPP-G	V18	1/4, 3/8, 1/2
		V28	3/8, 1/2, 3/4
Weight	lb. (kg)	V18	.74 (.34)
		V28	.90 (.41)

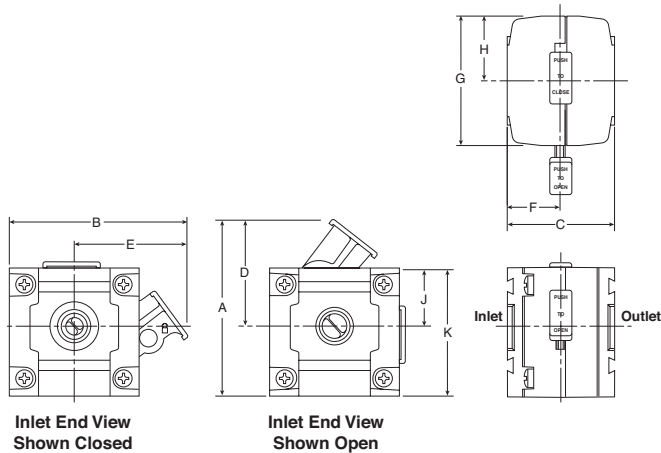
\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

### Materials of Construction

Blade	Acetal
Body	Zinc
Seals	Nitrile

### Replacement Kits

- Plastic Slide And O-rings, (Orange) (V18).....VRP-96-925
- Plastic Slide And O-rings, (Orange) (V28).....VRP-96-926

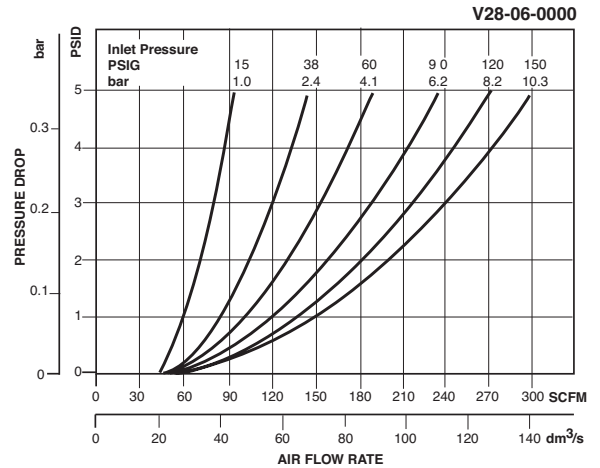
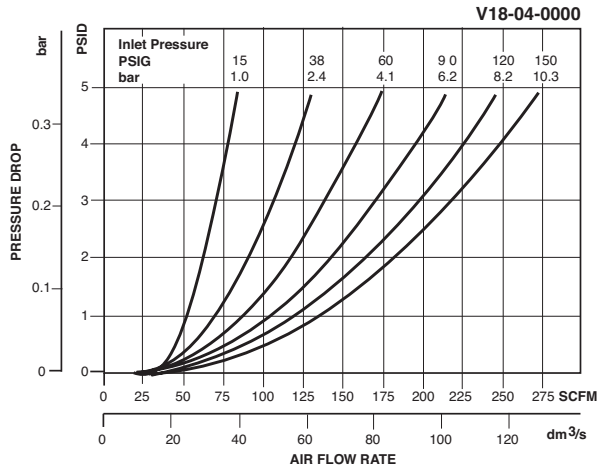
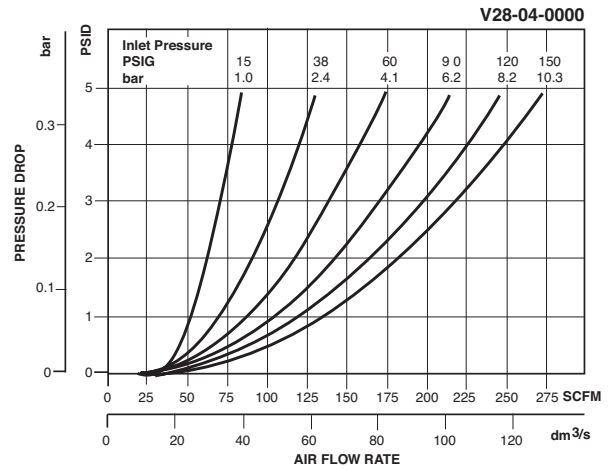
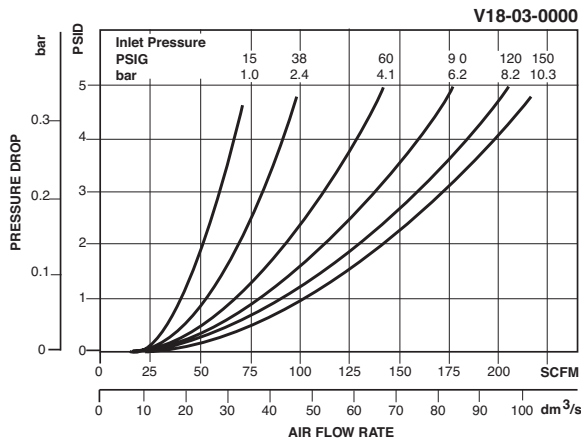
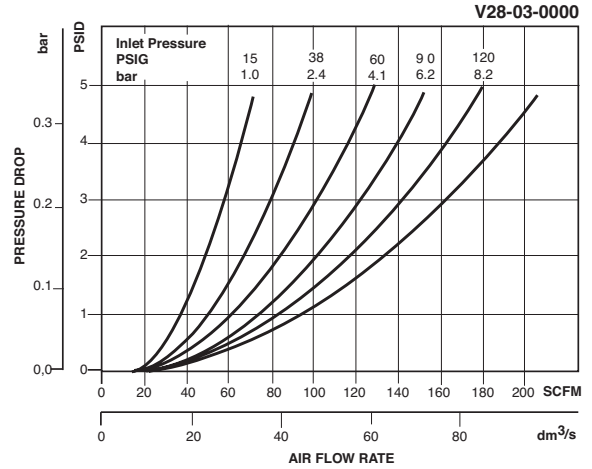
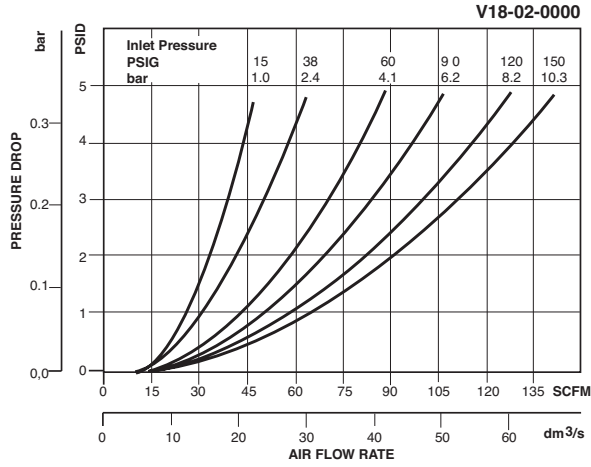


### Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K
Standard Unit V18-XX-0000		3.16 (80)	3.19 (81)	1.93 (49)	1.91 (48.5)	2.02 (51)	0.97 (24.5)	2.36 (60)	1.18 (30)	1.03 (26)	2.28 (58)
Standard Unit V28-XX-0000		3.23 (82)	3.41 (86)	2.28 (58)	1.98 (50)	2.13 (54)	1.14 (28)	2.58 (65)	1.29 (33)	1.03 (26)	2.28 (58)



= "Most Popular"



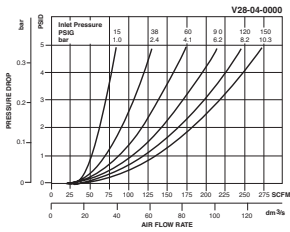
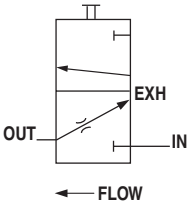
## Ordering Information

Model Type	Port Size	Safety Lockout Valve
<b>V18</b>	1/4	V18-02-0000
	3/8	V18-03-0000
	1/2	V18-04-0000
<b>V28</b>	3/8	V28-03-0000
	1/2	V28-04-0000
	3/4	V28-06-0000

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

## Safety Lockout Valve V19 / V29

= "Most Popular"



### V19-02-0000 Right to Left Flow (Yellow Slide)

### Features

The V19 / V29 safety lockout valve is a manually operated, slide-type, 2-position, 3-way valve. In the closed position, downstream air is exhausted to atmosphere. The valve slide can be locked in the closed position with a customer supplied padlock. The V19 / V29 safety lockout valves have yellow slides and are for use in right-to-left flow applications. The V19 / V29 valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).

### Specifications

Flow Capacity*	V19	1/4	141 SCFM (65.5 dm <sup>3</sup> /s)
		3/8	216 SCFM (101.9 dm <sup>3</sup> /s)
		1/2	272 SCFM (128.4 dm <sup>3</sup> /s)
	V29	3/8	208 SCFM (98.2 dm <sup>3</sup> /s)
		1/2	290 SCFM (136.9 dm <sup>3</sup> /s)
		3/4	300 SCFM (141.6 dm <sup>3</sup> /s)
Exhaust Flow	V19	3/8	C <sub>v</sub> = 1.03
	V29	1/2	C <sub>v</sub> = 1.05
Maximum Supply Pressure	150 PSIG (10.3 bar)		
Operating Temperature	32° to 150°F (0° to 65.5°C)		
Port Size	NPT / BSPP-G	V19	1/4, 3/8, 1/2
		V29	3/8, 1/2, 3/4
Weight	lb. (kg)	V19	.74 (.34)
		V29	.90 (.41)

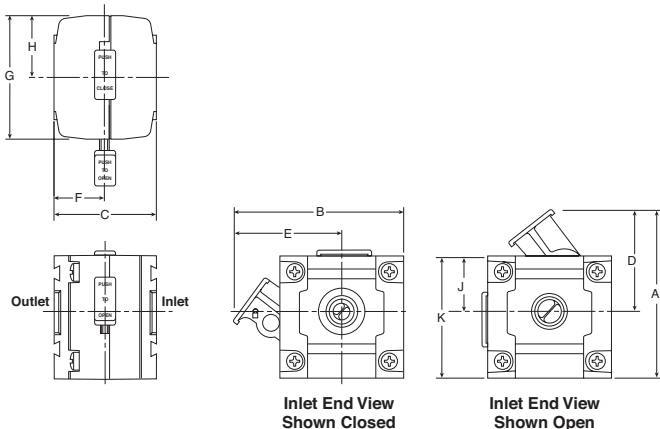
\* Inlet pressure 150 PSIG (10,3 bar). Pressure drop 5 PSID) (0,3 bar).

### Materials of Construction

Blade	Acetal
Body	Zinc
Seals	Nitrile

### Replacement Kits

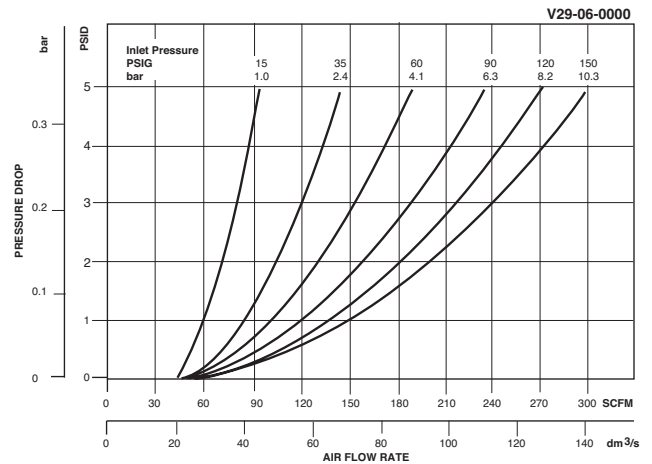
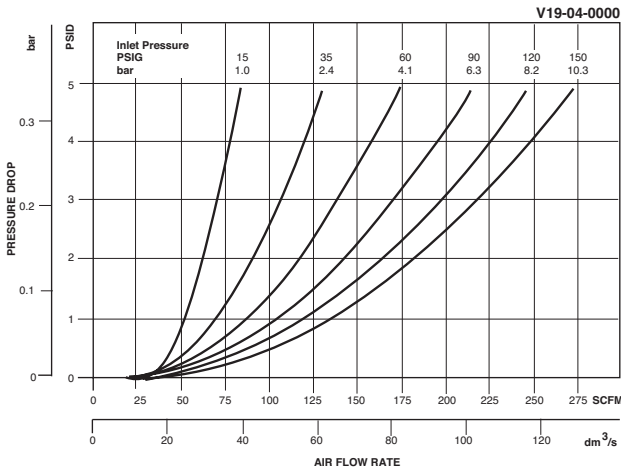
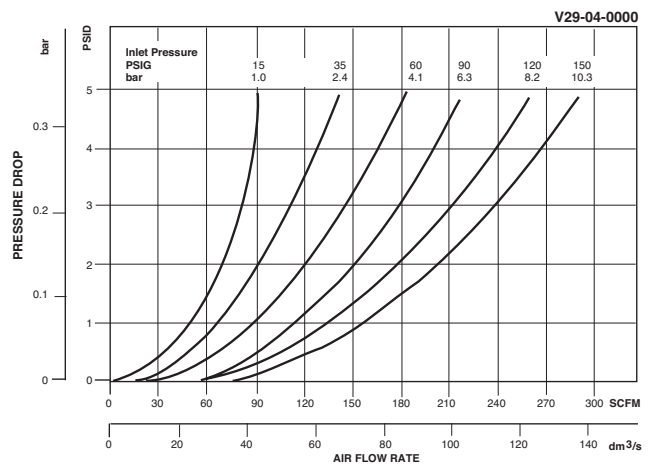
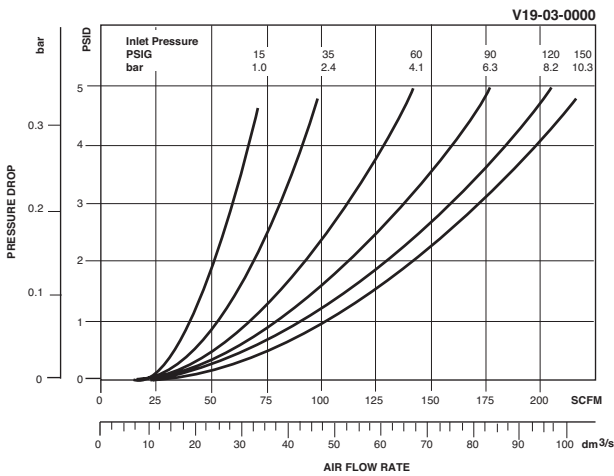
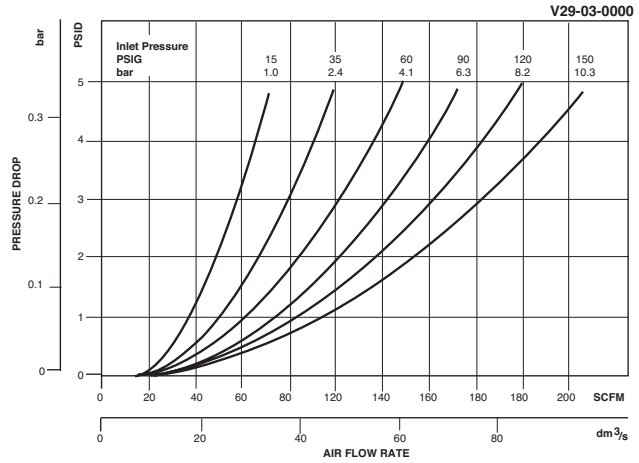
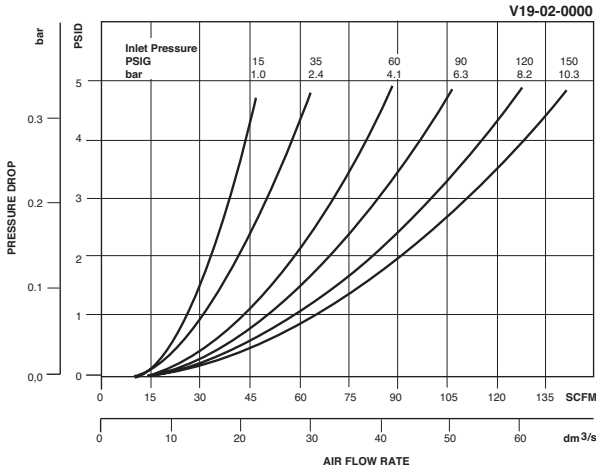
- Plastic Slide And O-rings, (Yellow) (V19)..... VRP-97-100
- Plastic Slide And O-rings, (Yellow) (V29) ..... VRP-97-101



### Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K
Standard Unit V19-XX-0000		3.16 (80)	3.19 (80)	1.93 (81)	1.91 (49)	2.02 (51)	0.97 (24.5)	2.36 (60)	1.18 (30)	1.03 (26)	2.28 (58)
Standard Unit V29-XX-0000		3.23 (82)	3.41 (86)	2.28 (58)	1.98 (50)	2.13 (54)	1.14 (28)	2.58 (65)	1.29 (33)	1.03 (26)	2.28 (58)

= "Most Popular"



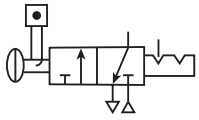
## Ordering Information

Model Type	Port Size	Safety Lockout Valve
<b>V19</b>	1/4	V19-02-0000
	3/8	V19-03-0000
	1/2	V19-04-0000
<b>V29</b>	3/8	V29-03-0000
	1/2	V29-04-0000
	3/4	V29-06-0000

**Options** - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Modular Ball Valve V40, V60, V73

= "Most Popular"



## Specifications

Operating Temperature	-40°C to 80°C (40°F to 176°F)		
Max. Supply Pressure	17 bar (246 psi)		
Port Size	NPT / BSPP / BSPT	1/4, 3/8, 1/2, 3/4	
Weight	<b>V40:</b>	0.15 kg (0.33 lbs)	
	<b>V60:</b>	0.36 kg (0.79 lbs)	
	<b>V73:</b>	0.55 kg (1.21 lbs)	

## Materials of Construction

Body	Aluminum		
Seals	PTFE		
Ball	<b>V40</b>	Brass	
	<b>V60 / V73</b>	Chrome plated brass	

## Features

The Modular Ball Valves provide shut off line pressure with a non-sticking 90° turn handle to prevent unauthorized adjustment. When the inlet pressure is turned off the downstream air pressure vents through the exhaust port. The padlock slide may be assembled on either side. It is recommended that this is assembled after mounting.

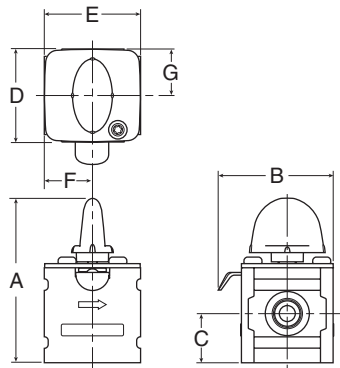
The Safety Lockout valves conform to OSHA #29 CFR part 1910 — control of hazardous energy source (lockout / tagout).

**Note:** This padlock slide is a permanent assembly and may not be removed later

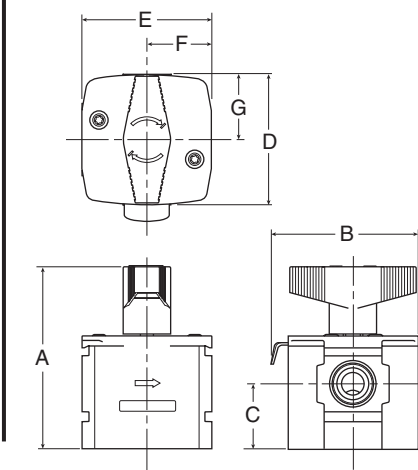
## Ordering Information

Model Type	Port Size	Thread Type	Flow SCFM
<b>V40-02-B000B</b>	1/4	NPT	42
<b>V60-03-B000B</b>	3/8	NPT	190
<b>V60-04-B000B</b>	1/2	NPT	258
<b>V73-04-B000B</b>	1/2	NPT	561
<b>V73-06-B000B</b>	3/4	NPT	678

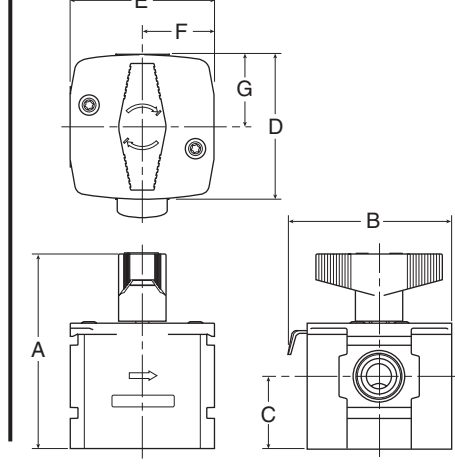
### V40



### V60



### V73



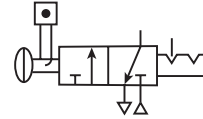
## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit V40-XX-B000B		2.81 (71.4)	1.96 (50)	0.84 (21.4)	1.57 (40)	1.65 (42)	0.82 (21)	0.78 (20)
Standard Unit V60-XX-B000B		3.46 (88)	2.87 (73)	1.00 (25.4)	2.36 (60)	2.36 (60)	1.18 (30)	1.18 (30)
Standard Unit V73-XX-B000B		3.87 (98.4)	3.25 (82.6)	1.44 (36.5)	2.87 (73)	2.87 (73)	1.43 (36.5)	1.43 (36.5)

# Modular Ball Valve V90



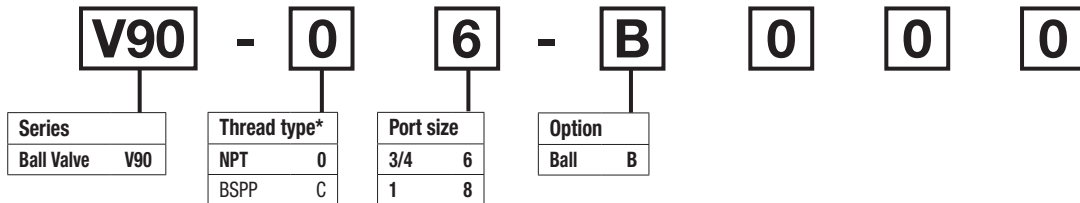
## Symbol



- Positive bubble tight shut-off
- 90° turn handle to prevent unauthorized adjustment
- Padlockable (up to 6 times)
- When the inlet pressure is turned off the downstream vents through the exhaust port

Ball / Lockout Valve shuts off downstream line pressure in the closed position with a 90° turn of the handle. In the closed position, inlet air pressure is blocked and downstream / system air is exhausted through a threaded port. To prevent unauthorized adjustment, the padlock slide may be assembled on either side. It is recommended that this slide is installed after final system assembly.

The Safety Lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).



\*Note: For 1-1/2" ported unit, please order P3YKA\*BCP port block kit separately.  
**Bold items are most common.**

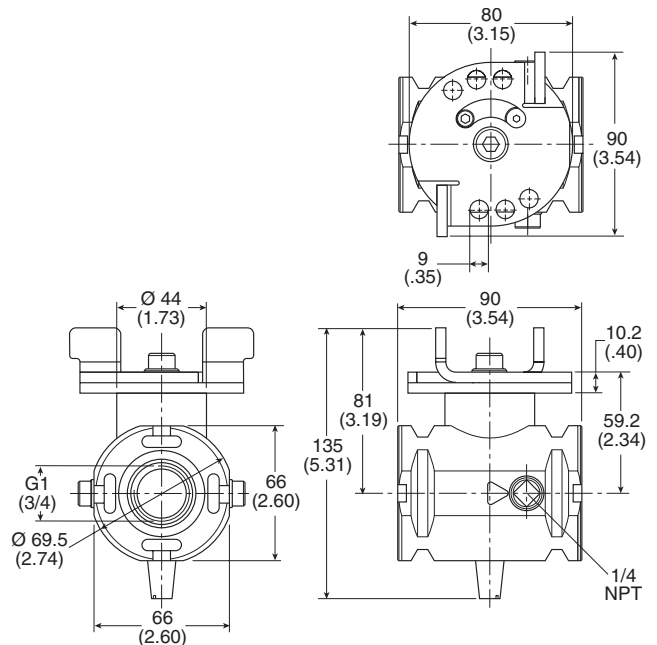
## Specifications

Flow capacity	3/4" 333 dm <sup>3</sup> /s (705.6 scfm)
	1" 333 dm <sup>3</sup> /s (705.6 scfm)
Max. pressure air pilot operated	17.5 bar (254 psig)
Operating temperature	-10°C to 60°C (14°F to 140°F)
Weight	3/4" 1.1 kg (2.4 lb)
	1" 1.1 kg (2.4 lb)

## Material Specifications

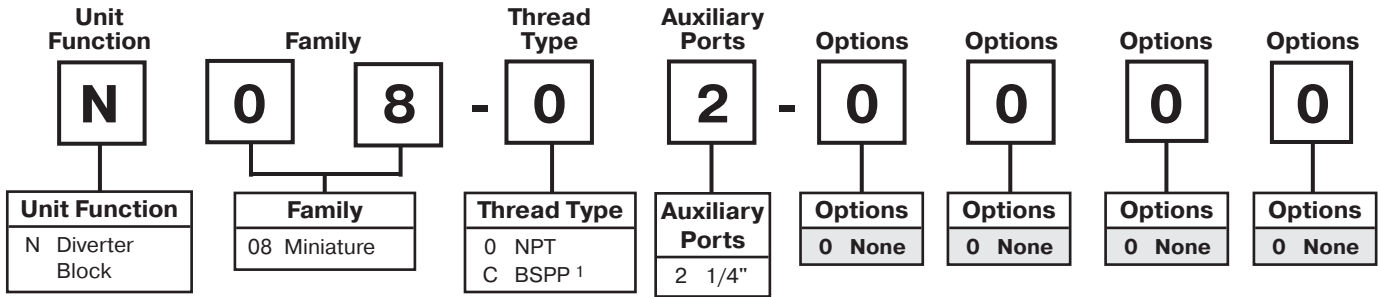
Body	Aluminum
Valve ball	Brass / Nickle plated
Handle	Aluminum
Seals	Nitrile NBR
Exhaust silencer	Sintered bronze

## Dimensions mm (inches)



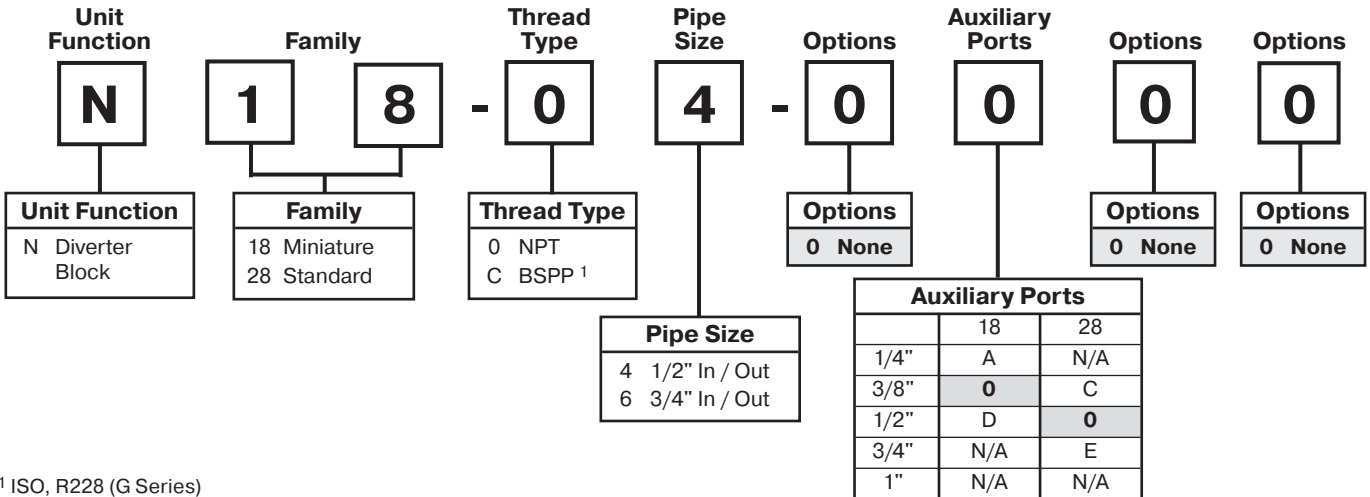
# 08 Series Diverter Block Numbering System

   = "Most Popular"



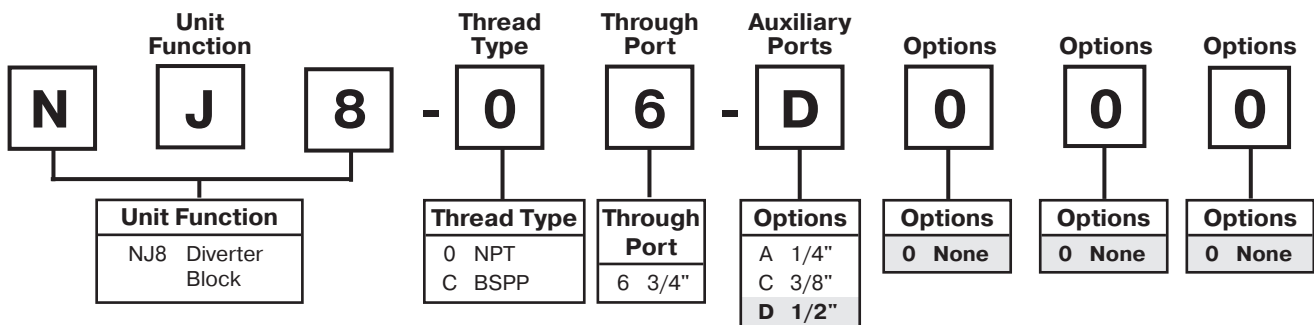
<sup>1</sup> ISO, R228 (G Series)

# 18 / 28 Series Diverter Block Numbering System



<sup>1</sup> ISO, R228 (G Series)

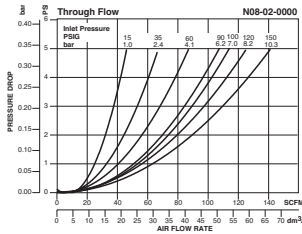
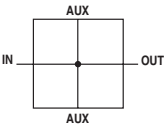
# NJ8 Diverter Block Numbering System



Auxiliary Ports  
2 Each (one top, one bottom)

# Diverter Block N08

  = "Most Popular"



## Specifications

Flow Capacity*	1/4	140 SCFM (66.1 dm <sup>3</sup> /s)
Auxiliary Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	300 PSIG (20.7 bar)	
Operating Temperature	-40° to 150°F (0° to 65.5°C)	
Port Size (In / Out)	NPT / BSPP-G	1/4
Weight	lb. (kg)	.42 (0.19)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

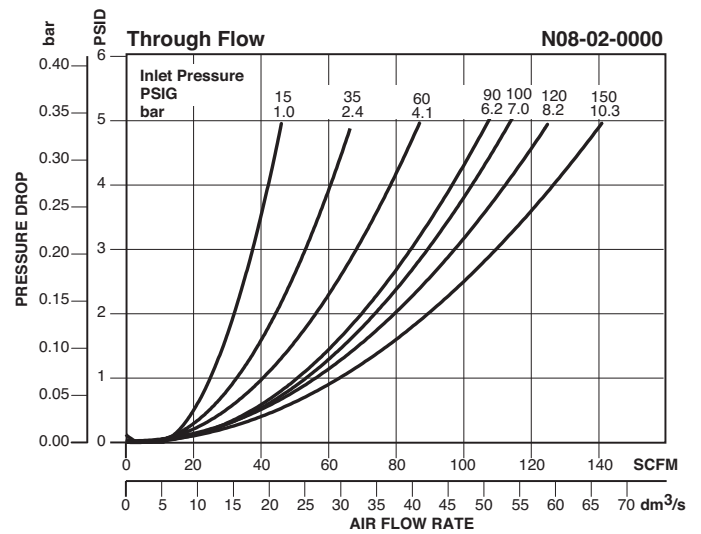
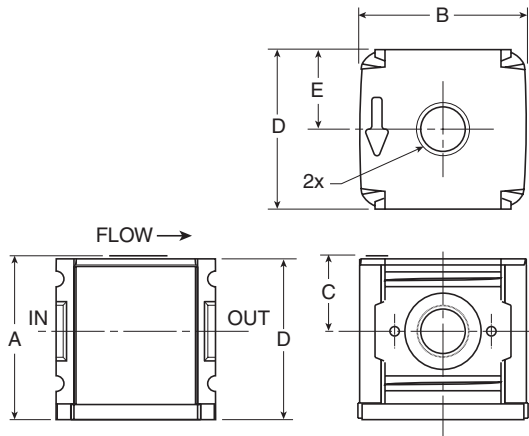
## Materials of Construction

Body	Zinc
------	------

### N08-02-0000

## Features

- Available in 1/4 Threaded Ports
- Modern Design and Appearance
- Light Weight
- Two 1/4 Threaded Auxiliary Ports Standard
- Two Additional Auxiliary Ports Optional
- Can be Mounted Anywhere in the FRL System
- Includes One Pipe Plug



## Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit N08-02-0000		1.61 (41)	1.66 (42)	0.74 (19)	1.58 (40)	0.79 (20)

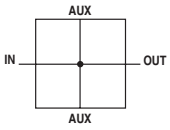
## Ordering Information

Model Type	In / Out Port Size	Auxiliary Port Size	Model
N08	1/4	1/4	N08-02-0000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Diverter Block N18 / N28

= "Most Popular"



**N18-04-0000**

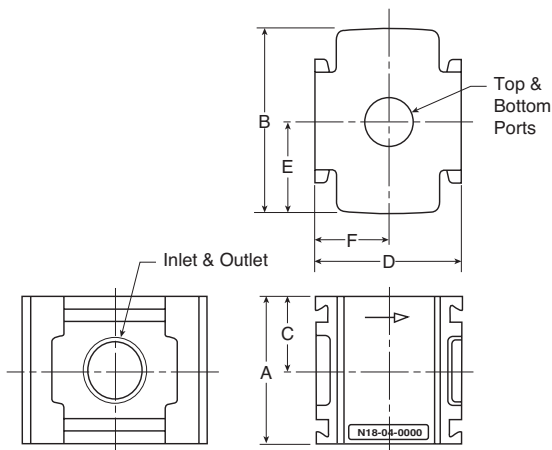
## Features

- Available in 1/2 (N18) or 3/4 (N28) Threaded Ports
- Two Auxiliary Ports Standard
- Can be Mounted Anywhere in the FRL System

## Ordering Information

Model Type	In / Out Port Size	Auxiliary Port Size	Model
<b>N18</b>	1/2	1/4	N18-04-0A00
		3/8	<b>N18-04-0000</b>
		1/2	N18-04-0D00
<b>N28</b>	3/4	3/8	N28-06-0C00
		1/2	<b>N28-06-0000</b>
		3/4	N28-06-0E00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit N18-XX-0000		1.88 (48)	2.36 (60)	0.94 (24)	1.88 (48)	1.18 (30)	0.94 (24)
Standard Unit N28-XX-0000		1.88 (48)	2.88 (73)	0.94 (24)	2.60 (66)	1.44 (36.5)	1.30 (33)

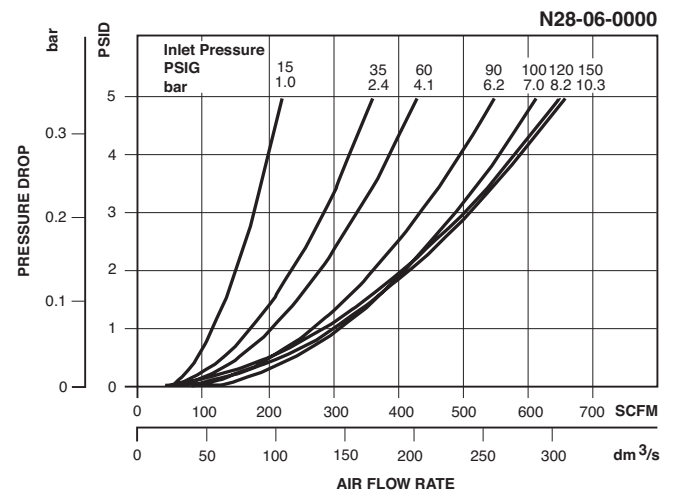
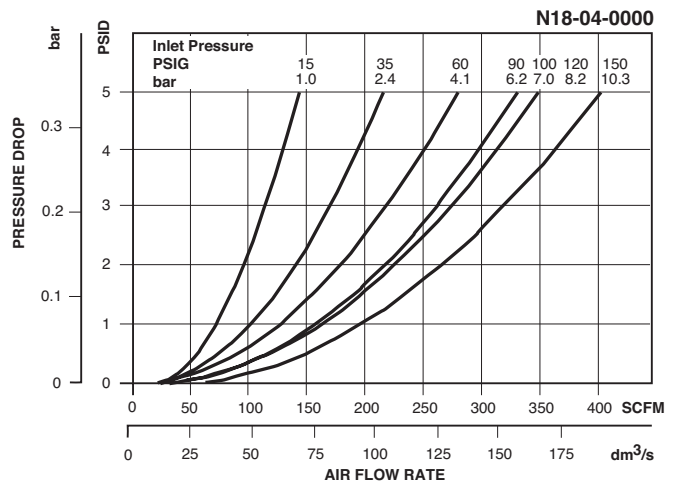
## Specifications

Flow Capacity*	N18	1/2	400 SCFM (189 dm <sup>3</sup> /s)
	N28	3/4	647 SCFM (305 dm <sup>3</sup> /s)
Auxiliary Port (2)	NPT / BSPP-G	N18	3/8
		N28	1/2
Maximum Supply Pressure	300 PSIG (20.7 bar)		
Operating Temperature	32° to 150°F (0° to 65.5°C)		
Port Size (In / Out)	NPT / BSPP-G	N18	1/2
		N28	3/4
Weight	lb. (kg)	N18	.261 (.346)
		N28	.94 (1.08)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

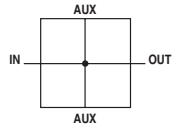
Body Aluminum





# Diverter Block NJ8

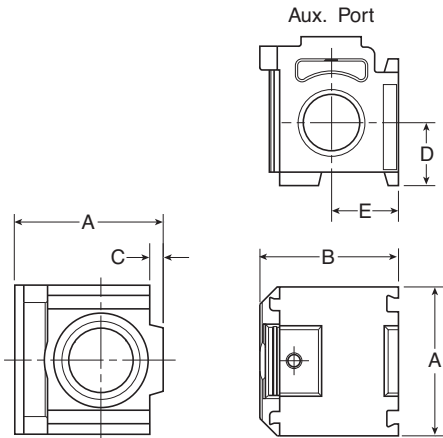
= "Most Popular"



**NJ8-06-D000**

## Features

- Eliminates One Joiner Set
- Space-Saving Design.
- Can be Wall Mounted with T-Bracket
- Includes O-ring, One Pipe Plug and Joiner Clamp
- A000 Models Will Accept an Electronic Pressure Switch
- Can Assemble Multiple Units to Form a Manifold
- Auxiliary Ports Top and Bottom



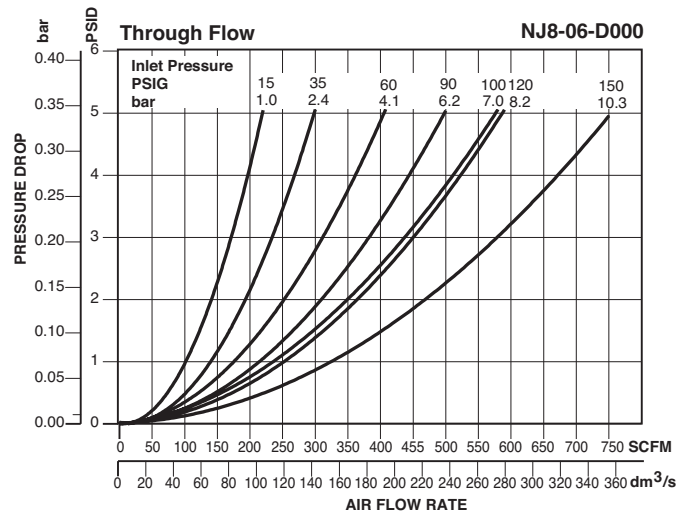
## Specifications

Flow Capacity*	(Model D000)	750 SCFM (354 dm <sup>3</sup> /s)
Auxiliary Port (2)	NPT / BSPP-G	1/4, 3/8, 1/2
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size (Out Only)	NPT / BSPP-G	3/4
Weight	lb. (kg)	.74 (0.34)

\* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

## Materials of Construction

Body	Zinc
------	------



## Dimensions

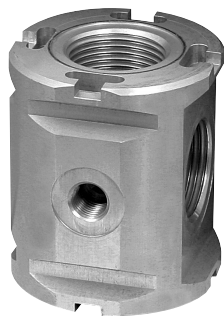
Models	Inches (mm)	A	B	C	D	E
Standard Unit NJ8-X6-X000		1.88 (48)	1.75 (44)	0.17 (4)	0.80 (20)	0.85 (22)

## Ordering Information

Model Type	Out Port Size	Auxiliary Port Size	Model
NJ8	3/4	1/4	NJ8-06-A000
		3/8	NJ8-06-C000
		1/2	NJ8-06-D000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Modular Manifold P3YMA



90 Series Manifolds provide up to 4 extra outlet ports. They may be assembled at any position in a combination e.g. before the lubricator to provide oil free take off or at the end of a combination to provide extra outlet ports.

Thread type	Part number
NPT	P3YMA9V0N
BSPP	P3YMA1V0N

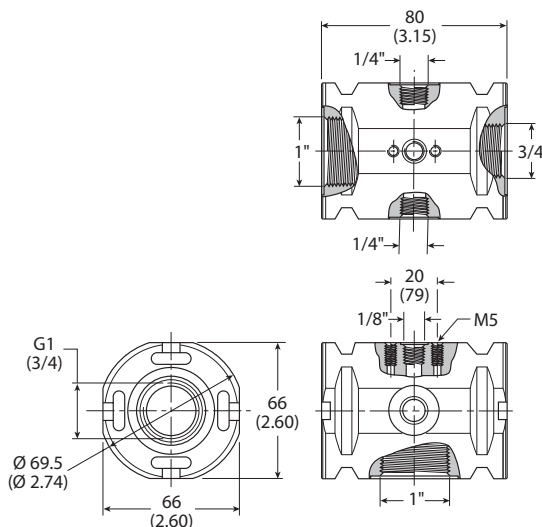
### Port sizes

Inlet port	Top	Bottom	Front and Back
3/4"	1/8"	1"	1/4"
1"	1/8"	1"	1/4"

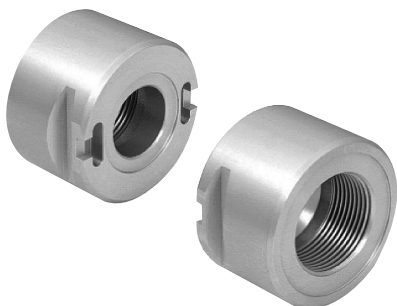
### Material specifications

Body	Aluminum
Weight	0.7 kg (1.5 lb)

### Dimensions mm (inches)



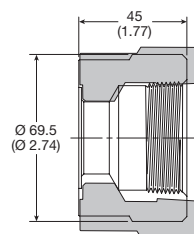
# Optional Port Block Kits P3YKA



- To change port sizes Port Block Kits are available, they are attached to any unit utilizing the connecting kit.
- Allows assemblies to be removed from a hard piped system.

### Material specifications

Body	Aluminum
Weight	0.65 kg (1.43 lb)



Inches (mm)

**P3YKA** **9** **B** **CP**

Basic series	Thread type	Port size
Port Blocks P3YKA	BSPP 1	1-1/2 B
	NPT 9	



# Modular Accessories and Repair Kits

D

Accessories &amp; Repair Kits

Filter Replacement Element Kits.....	D2	Accessories –	
Filter Replacement Bowl Kits .....	D3	Filter / Regulators.....	D13-D15
Accessories – Filters .....	D4-D5	Accessories – 08 Series .....	D16
Accessories – Regulators .....	D6-D7	Accessories – 18 / 28 Series .....	D17
Regulator Replacement Kits .....	D8	Accessories – 16 / 26 Series .....	D18
Lubricator Replacement Kits .....	D9	Accessories – 90 Series .....	D19
Accessories – Lubricators.....	D10-D11		
Filter / Regulator –			
Replacement Repair Kits .....	D12		

# Filter Replacement Element Kits



Model	Type A 5 Micron	Type B1 1 Micron	Type B 0.5 Micron	Type C 0.01 Micron	Type D Oil Vapor Removing
<b>Particulate Filters</b>					
F01	FRP-95-199	—	—	—	—
F03	PS403	—	—	—	—
F08	FRP-96-729	—	—	—	—
F16	FRP-95-160	—	—	—	—
F18	FRP-96-639	—	—	—	—
F26	FRP-95-115	—	—	—	—
F28	FRP-96-653	—	—	—	—
F30	FRP-95-209	—	—	—	—
F34	FRP-95-209	—	—	—	—
F35	FRP-95-505	—	—	—	—
F36	FRP-95-506	—	—	—	—
F37	FRP-95-507	—	—	—	—
F39	P3NKA00ESE	—	—	—	—
F43	FRP-95-508	—	—	—	—
F50	FRP-95-212	—	—	—	—
F51	FRP-95-213	—	—	—	—
F52	FRP-95-212 (3 kits)	—	—	—	—
F53	FRP-95-213 (3 kits)	—	—	—	—
<b>Coalescing Filters</b>					
M03	—	PS456	—	PS446	PS452
M08	—	—	MSP-96-732	MTP-96-649	MXP-96-222
M16	—	—	MSP-95-988	MTP-95-548	MXP-95-987
M18	—	—	MSP-96-647	MTP-96-646	MXP-96-650
M21	—	—	MSP-96-649	MTP-96-648	MXP-96-651
M26	—	—	MSP-95-989	MTP-95-549	MXP-95-540
M28	—	—	MSP-96-649	MTP-96-648	MXP-96-651
M30	—	—	MSP-95-992	MTP-95-551	MXP-95-532
M31	—	—	MSP-95-993	MTP-95-521	MXP-95-522
M32	—	MSP-95-873	—	MTP-95-559	MXP-95-558
M35	—	MSP-95-502	—	MTP-95-502	MXP-95-502
M36	—	MSP-95-503	—	MTP-95-503	MXP-95-503
M37	—	MSP-95-504	—	MTP-95-504	MXP-95-504
M39	—	—	P3NKA00ES9	P3NKA00ESC	—
M43	—	MSP-95-876	—	MTP-95-562	MXP-95-565
M45	—	MSP-95-500	—	MTP-95-500	MXP-95-500

\* For F12 Series Filters.

D

Accessories & Repair Kits

# Filter Replacement Bowl Kits



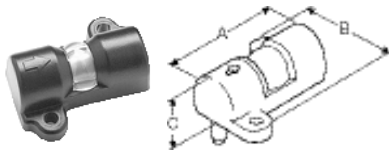
Model	Plastic Bowl / Bowl Guard / No Drain	Plastic Bowl / Manual Drain	Plastic Bowl / Bowl Guard / Manual Drain	Metal Bowl / Manual Drain	Metal Bowl / Sight Gauge / Manual Drain	Plastic Bowl / Bowl Guard / Automatic Drain	Metal Bowl / Automatic Drain	Metal Bowl / Sight Gauge / Automatic Drain
<b>Particulate Filter / Coalescing Filter</b>								
F03 / M03	—	PS404	—	PS447B	—	—	PS451B**	—
F08 / M08	—	—	GRP-96-712	GRP-96-714*	—	—	—	—
F18 / M18	GRP-96-638	—	GRP-96-634	—	GRP-96-636	GRP-96-635	—	GRP-96-637
F16 / M16	—	FRP-95-017	FRP-95-014	FRP-95-178	GRP-95-133	FRP-95-015	FRP-95-950	—
F28 / M28	GRP-96-652	—	GRP-96-642	—	GRP-96-644	GRP-96-643	—	GRP-96-645
F26 / M26	—	GRP-95-929	GRP-95-935	GRP-95-930	GRP-96-931	GRP-95-948	GRP-95-960	—
M21	—	MRP-96-415	FRP-95-722	—	—	—	—	—
F39 / M39	—	—	—	—	P3NKA00BSM	—	—	P3NKA00BSA
F30 / M30	—	FRP-96-315	FRP-95-832	FRP-95-593	GRP-95-676	FRP-95-77	GRP-95-970	—
F34	—	—	GRP-95-902	—	—	—	—	—
M31	—	MRP-95-940	MRP-95-938	MRP-95-939	—	MRP-95-941	—	—

\* Metal bowl does not have sight gauge.  
 \*\* 12 Series has Piston Style Drain.

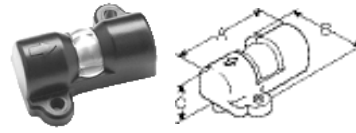
Model	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Filter Retainer Element Baffle	Manual Drain
<b>Particulate Filter</b>				
F08	GRP-96-710	GRP-96-711	—	—
F18	GRP-96-640	GRP-96-754	FRP-96-641	GRP-96-685
F28	GRP-96-654	GRP-96-755	FRP-96-283	GRP-96-685
F39	—	—	—	PS512
<b>Coalescing Filter</b>				
M08	GRP-96-710	GRP-96-711	—	—
M18	GRP-96-640	GRP-96-754	—	GRP-96-685
M28	GRP-96-654	GRP-96-755	—	GRP-96-685
M30	—	—	—	PS512

**D**  
Accessories & Repair Kits

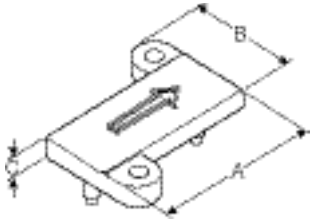
# Accessories – Filters



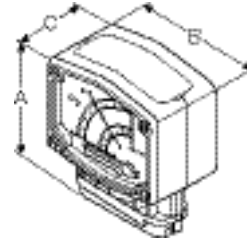
**Differential Pressure Indicator**  
DP2-01-000, DP2-01-001



**Differential Pressure Indicator**  
DP8-01-000



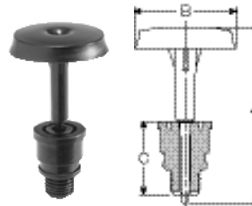
**Cap, Differential Pressure Indicator**  
GRP-95-020, GRP-95-022



**Differential Pressure Gauge**  
DP3-01-000



**Automatic Drain**  
GRP-95-973, GRP-95-981



**Piston Drain**  
GRP-96-716



(Use with GRP-95-981 shown above. Order separately)

**Manual Override for Auto Float Drains**  
GRP-96-001

## Dimensions

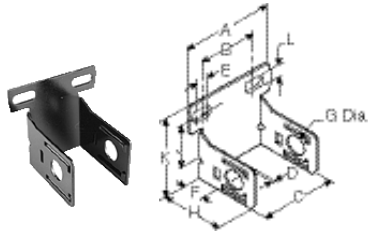
Inches (mm)

Accessories	Part Number	Used On	A	B	C
Differential Pressure Indicator	DP2-01-000	M16, M21, M26, M30, M31, M32	2.12 (54)	1.85 (47)	0.84 (21)
	DP2-01-001	F35, F36, F37, F43, M35, M36, M37, M43, M45			
	DP8-01-000	F18, F28, M18, M28	2.12 (54)	1.85 (47)	.84 (21)
Cap, Differential Pressure Indicator (Pressures over 150 PSIG, 10.3 bar)	GRP-95-020	M16, M21, M26, M30, M31, M32	2.12 (54)	1.85 (47)	0.25 (6.3)
	GRP-95-022	F35, F36, F37, F43, M35, M36, M37, M43, M45			
Differential Pressure Gauge	DP3-01-000	M32, M42	3.0 (75.9)	2.55 (65)	1.54 (39)
Automatic Drains, Nitrile	GRP-95-973	F18, M18, B18 F28, M28, B28 F16, F26, F30, F35, F36, F43	2.93 (74.4)	1.47 (37.3)	1.17 (29.7)
Automatic Drains, Fluorocarbon	GRP-95-981				
Manual Override for Auto Float Drains	GRP-96-001	GRP-95-981	—	—	—
Piston Drain	GRP-96-716	F08, M08, B08	1.70 (43)	.94 (24)	.68 (17)

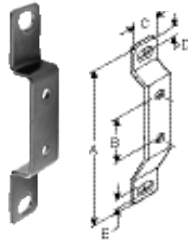
D

Accessories & Repair Kits

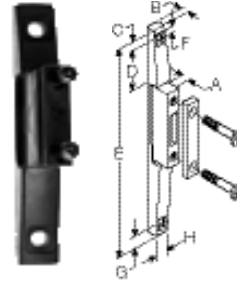
# Accessories – Filters



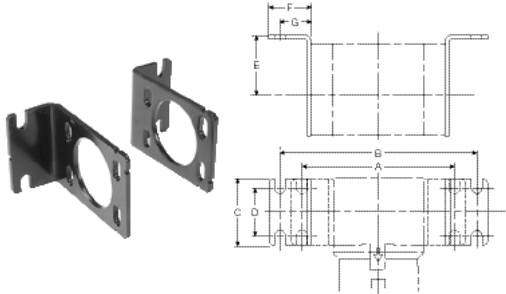
**C-Bracket**  
GPA-97-010



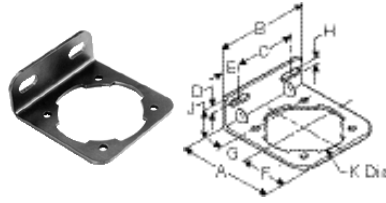
**T-Bracket**  
GPA-96-602



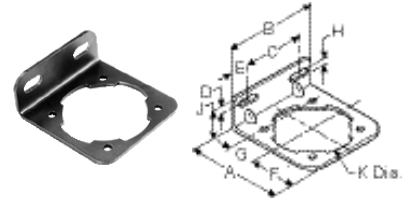
**T-Bracket**  
GPA-96-737  
w/ Joiner



**L-Bracket**  
P3NKA00MW

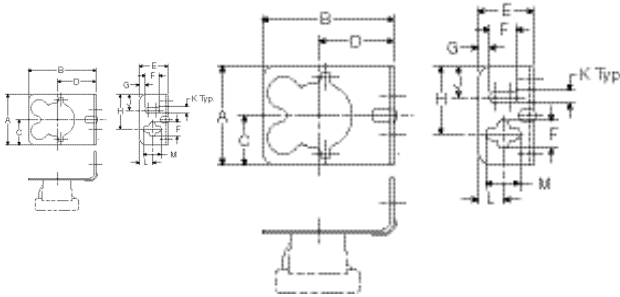


**L-Bracket**  
GPA-96-604

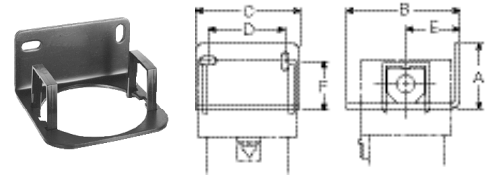


**L-Bracket**  
GPA-96-605

For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA0BMW**



**L-Bracket**  
PS417B



**L-Bracket**  
GPA-95-016, GPA-95-946

## Dimensions Inches (mm)

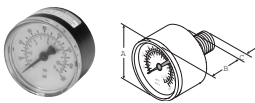
Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
<b>C-Bracket</b>	<b>GPA-97-010</b>	F08, M08, B08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
<b>L-Bracket</b>	<b>GPA-95-016</b>	F16, M16	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	1.60 (41)	—	—	—	—	—	—
	<b>GPA-95-946</b>	F26, M26	2.12 (53)	3.62 (91)	3.80 (96)	2.93 (74)	1.88 (47)	1.60 (41)	—	—	—	—	—	—
	<b>GPA-96-604</b>	F18, M18, B18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	<b>GPA-96-605</b>	F28, M28, B28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	<b>P3NKA00MW</b>	F39, B39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	<b>PS417B</b>	F03, M03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)
<b>T-Bracket</b>	<b>GPA-96-602</b>	F18, F28, M18, M28	3.75 (95)	1.25 (32)	.76 (19.3)	.25 (6.3)	.28 (7.1)	—	—	—	—	—	—	—
<b>T-Bracket w/ Joiner</b>	<b>GPA-96-737</b>	F08, M08	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—	—	—

# Accessories – Regulators

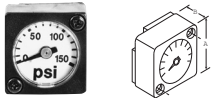
## Dimensions Inches (mm)



Flush Mount Gauge\*



Gauges



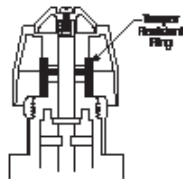
Flush Mount Gauge

Digital Gauge

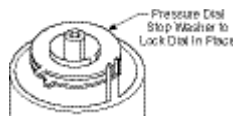
D

Accessories & Repair Kits

Accessories		Used On	A	B	C
<b>Flush Mount Series Gauge</b>  *For R08/R09 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.	GRP-96-791-04B (0 to 4 bar)	R08, R09	1.06 (26.9)	.63 (16)	-
	GRP-96-792-11B (0 to 11 bar)				
	GRP-96-792-20B (0 to 20 bar)				
	GRP-96-791-060 (0 to 60 psig)				
	GRP-96-791-160 (0 to 160 psig)				
	GRP-96-791-290 (0 to 290 psig)				
<b>Gauges, 5mm 2" Round 1/4" Center Back Mount</b>	K4520N14030 (0 to 30 PSIG)	R18, R28	1.97 (50)	0.94 +(24)	0.71 (18)
	K4520N14060 (0 to 60 PSIG)				
	K4520N14160 (0 to 160 PSIG)				
	K4520N14300 (0 to 300 PSIG)				
<b>Gauges, 1/8 Port, CBM</b>	K4515N18060 (0 to 60 PSIG)	R08	1.64 (41.6)	1.09 (27.6)	.80 (20)
	K4515N18160 (0 to 160 PSIG)				
<b>Flush Mount Series Gauges</b>	K4511SCR060 (0 to 60 PSIG)	R08	1.06 (26.9)	.63 (16)	—
	K4511SCR160 (0 to 160 PSIG)	R08			
	K4511SCR11B (0 to 11 bar)	R08			
<b>Round Digital Gauge, 1/4 Port</b>	K4517N14160D (0 to 160 PSIG)	R18, R28	1-3/4" Diameter		
<b>Tamper Resistant Kit</b>	RPA-95-006	R16, R26, P15, P16	—	—	—
	RRP-95-585	R11, R21, R31, R41	—	—	—
<b>Tamperproof Lock and Cover Kit</b>	RPA-96-736B	R08, R09, B08	—	—	—
	RPA-96-737B	R18, B18	—	—	—



RPA-95-006



RRP-95-585

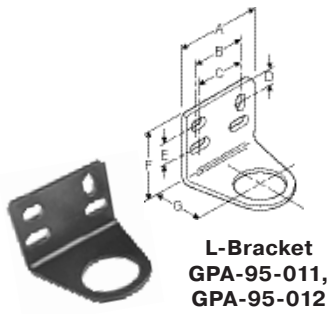


Tamperproof Lock and Cover Kit

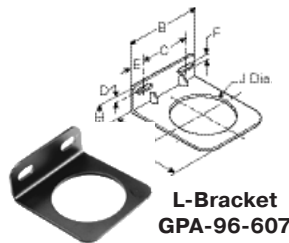
Tamper Resistant Kit



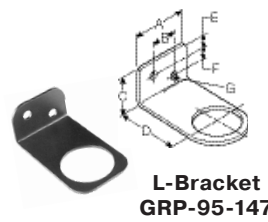
# Accessories – Regulators



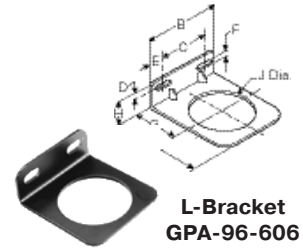
**L-Bracket  
GPA-95-011,  
GPA-95-012**



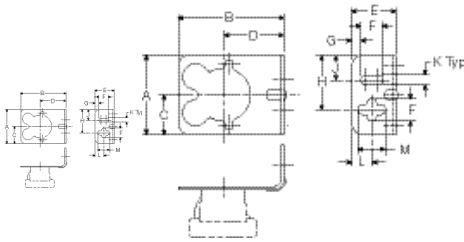
**L-Bracket  
GPA-96-607**



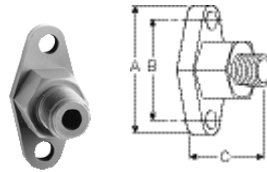
**L-Bracket  
GRP-95-147**



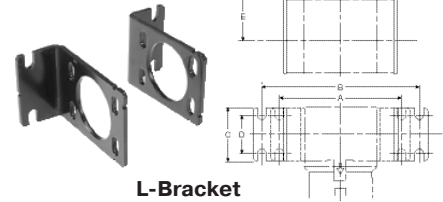
**L-Bracket  
GPA-96-606**



**L-Bracket  
PS417B  
(Includes Panel Mount Nut)**

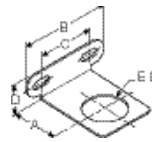


**Wall Mounting Bracket –  
Gauge Port Adapter  
RRP-95-590, 1/4" Pipe Thread  
RRP-95-591, 1/8" Pipe Thread**

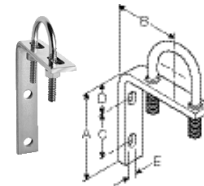


**L-Bracket  
P3NKA00MW**

For 1-1/2" BSPP Port Block with E02 fitting application,  
use **Mounting Bracket Kit P3NKA08MW**



**L-Bracket  
GRP-96-739**



**Wall Mounting Bracket  
U-Bolt Pipe Clamp  
GRP-95-734**

## Dimensions

Inches (mm)

Accessories		Used On	A	B	C	D	E	F	G	H	J	K	L	M
<b>L-Bracket with Plastic Panel Nut</b>	<b>GPA-95-011</b>	R16, P15, P16	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	<b>GRP-95-747</b>	RB3, RA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
<b>L-Bracket</b>	<b>GPA-95-012</b>	R16, P15, P16	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	<b>GRP-95-147</b>	RB3, RA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
	<b>GPA-95-956</b>	R26	3.00 (76.2)	2.06 (50.8)	—	0.55 (14.0)	3.50 (88.9)	4.05 (102.9)	1.88 (47.8)	—	—	—	—	—
	<b>GRP-96-739</b>	R08, R09	1.57 (40)	2.68 (68)	1.74 (44)	.97 (25)	1.19 (30)	—	—	—	—	—	—	—
	<b>GPA-96-606</b>	R18, R19	2.74 (69.5)	2.74 (69.5)	1.66 (42)	.43 (11)	.54 (14)	.28 (7.1)	1.57 (40)	1.00 (25)	2.0 (51)	—	—	—
	<b>GPA-96-607</b>	R28	3.33 (84.5)	3.00 (76)	1.88 (48)	.43 (11)	.56 (14)	2.40 (61)	1.94 (49)	1.00 (25)	2.40 (61)	—	—	—
	<b>P3NKA00MW</b>	R39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
<b>PS417B</b>	R03	1.80 (46)	2.37 (60)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)	
<b>Wall Mtg. Bracket Gauge Port Adapter</b>	<b>RRP-95-590</b>	P15, P16, R16, R21, R26, R30, R31, R40, R41	1.87 (47.5)	1.38 (35)	1.25 (31.7)	—	—	—	—	—	—	—	—	—
	<b>RRP-95-591</b>	RB3, RA3, R03	1.87 (47.5)	1.38 (35)	1.09 (27.6)	—	—	—	—	—	—	—	—	—
	<b>GRP-95-734</b>	For All Non- Modular Units Up to 1" N	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)	—	—	—	—	—	—	—

# Regulator Replacement Kits

Model	Self-relieving Diaphragm (Nitrile)	Non-relieving Diaphragm (Nitrile)	Valve Assembly Kit	Tamper Resistant Ring	Plastic Panel Nut	Aluminum Panel Nut
<b>R08, R09</b>	GRP-96-725B	GRP-96-726B	RRP-96-727	RPA-96-735	RPA-96-734	RPA-96-733
<b>R18, R19</b>	RRP-96-656B	RRP-96-657B	RRP-96-658	RRP-96-671	RRP-96-675B	RRP-96-673
<b>R28</b>	RRP-96-986	RRP-96-987	RRP-96-049	RRP-96-672	RRP-96-676	RRP-96-674
Model	Main Regulating Spring 0-30 PSIG	Main Regulating Spring 0-60 PSIG	Main Regulating Spring 0-125 PSIG	Main Regulating Spring 0-250 PSIG		
<b>R08, R09</b>	GRP-95-111	GRP-96-718	GRP-96-717B	N/A		
<b>R18, R19</b>	RRP-96-659B	RRP-96-660B	RRP-96-661B	RRP-96-662B		
<b>R28</b>	RRP-96-163	RRP-96-164	RRP-96-165	RRP-96-166		
<b>R39</b>	N/A	C10A1304	CA101308	CA101317		

Model Regulator	Self-relieving Piston	Non-relieving Piston	Self-relieving Diaphragm	Non-relieving Diaphragm	Repair Kit Self-relieving	Repair Kit Non-relieving	Valve Assembly Kit
<b>R03</b>	—	—	—	—	PS423	PS422	PS424B
<b>R16</b>	—	—	RRP-96-213	RRP-96-216	RRP-95-130	RRP-95-129	RRP-96-215
<b>R21</b>	—	—	—	—	RRP-95-151	—	—
<b>R26</b>	—	—	RRP-96-238	RRP-96-332	RRP-95-951	RRP-95-950	RRP-96-294
<b>R30</b>	—	RRP-95-451	—	—	—	—	RRP-95-159
<b>R31</b>	RRP-95-192	—	—	—	RRP-95-152	—	RRP-96-935
<b>R40</b>	—	RRP-95-451	—	—	RRP-95-161	RRP-95-162	—
<b>R41</b>	RRP-95-192	—	—	—	—	—	RRP-96-935

Model	Self-relieving Diaphragm	Non-relieving Diaphragm	Repair Kit Self-relieving	Repair Kit Non-relieving	Valve Assembly Kit	Fluorocarbon Diaphragm Self-relieving	Fluorocarbon Valve Assembly
<b>Precision Regulator P15 / P16</b>	PRP-95-960	—	PRP-95-004	PRP-95-053	PRP-95-959	PRP-95-073	PPA-95-067

	Pressure Spring 0-15 PSIG	Pressure Spring 0-30 PSIG	Pressure Spring 0-40 PSIG	Pressure Spring 0-50 PSIG	Pressure Spring 0-60 PSIG	Pressure Spring 0-125 PSIG	Pressure Spring 0-160 PSIG	Pressure Spring 0-180 PSIG	Pressure Spring 0-250 PSIG
<b>R16</b>	—	—	—	RRP-95-222	—	RRP-95-224	—	—	RRP-95-218
<b>R21</b>	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
<b>R26</b>	—	—	—	—	RRP-95-962	GRP-95-225	—	—	RRP-95-219
<b>R30</b>	—	—	—	—	—	RRP-95-226	—	RRP-95-220	—
<b>R31</b>	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
<b>R40</b>	—	—	—	—	—	RRP-95-226	—	RRP-95-220	—
<b>R41</b>	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
<b>P15 / P16</b>	RRP-95-233	RRP-95-916	—	RRP-95-222	—	RRP-95-224	—	—	—

# Lubricator Replacement Bowl Kits



Model	Manual Drain Kit	Plastic Bowl No Drain Port	Plastic Bowl / Bowl Guard Manual Drain	Plastic Bowl Petcock Drain	Metal Bowl / Sight Gauge Manual Drain
L03	—	PS421	—	—	—
L16	—	LRP-96-937	—	LRP-96-543	GRP-95-133
L08	—	—	LRP-96-736	—	GRP-96-714*
L17	—	LRP-96-937	—	LRP-96-543	GRP-95-133
L18	GRP-96-685	—	LRP-96-701	—	GRP-96-636
L26	—	LRP-95-938	LRP-95-967	LRP-95-958	GRP-95-931
L27	—	LRP-95-938	LRP-95-967	LRP-95-958	GRP-95-931
L28	GRP-96-685	—	LRP-96-702	—	GRP-96-644
L30	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L34	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L39	PS512	—	—	—	P3NKA00BSM
L40	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L50	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676

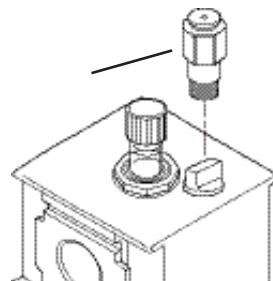
\*Metal bowl does not have sight gauge. \*\* No Drain.

D  
Accessories & Repair Kits

# Lubricator Replacement Kits

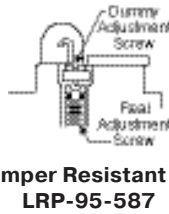
Model	Siphon Tube Assembly	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Force Fill Adapter	Fill Plug Kit (Fill Plug & O-ring)	Sight Dome Assembly
L08	LRP-96-731	GRP-96-710	GRP-96-711	N/A	LRP-96-730	LRP-96-301
L18	LRP-96-677	GRP-96-640	GRP-96-754	LRP-96-704	LRP-96-679	LRP-96-720
L28	LRP-96-781	GRP-96-654	GRP-96-755	LRP-96-704	LRP-96-679	LRP-96-720
L39	N/A	N/A	N/A	P3NKA00PK	P3NKA00PL	PS740

**Force Fill Adapter**  
(Optional – Replaces Fill Plug)



Suggested Lubricant  
Airline Oil F442001  
Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Accessories – Lubricators

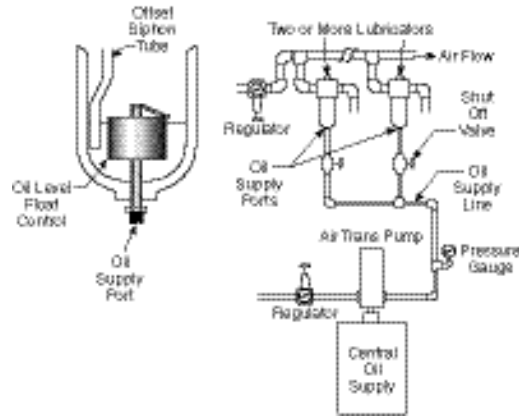


**F442 Oil**  
**F442001** - 1 Quart Bottle  
**F442002** - 1 Gallon  
**F442005** - 4 Gallon Case

## Auto-Fill™ Adapter Kits

These adapters provide automatic oil replenishing to several lubricators from a central oil supply. See schematic for installation. Pump, regulators, shut-off valves not included. Oil supply pressure must be a least 5 PSIG (0.3 bar) above compressed air pressure at lubricators, but no higher than 50 PSIG (3.4 bar) above. Oil pressure must be turned off when air pressure is turned off.

Order Part No. LRP-95-965 to adapt L26, L27, and No. LRP-95-698 for L30 and L34 series.

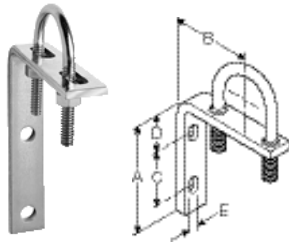


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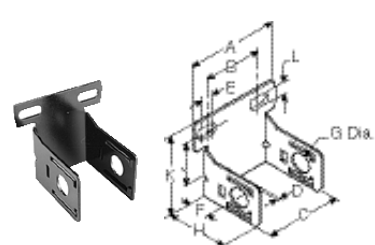
Accessories & Repair Kits

Accessories	Part Number	Used On
Force-Fill Adapter	GRP-96-394	L16 / L17, L26 / L27, L30, L31, L32, L34, L50
Tamper Resistant Kit	LRP-95-587	L16 / L17, L26 / L27, L30, L31, L32, L34, L40, L41, L42, L50
Oil	F442001 – 1 Quart Bottle	
	F442002 – 1 Gallon	
	F442005 – 4 Gallon Case	

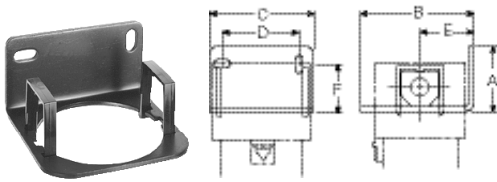
# Accessories – Lubricators



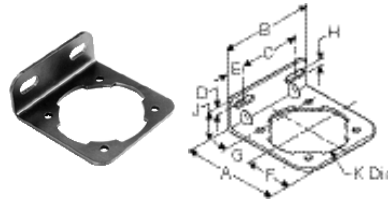
**Wall Mounting Bracket  
U-Bolt Pipe Clamp  
GRP-95-734**



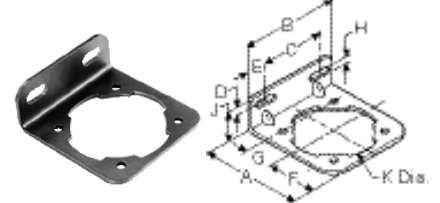
**C-Bracket  
GPA-97-010**



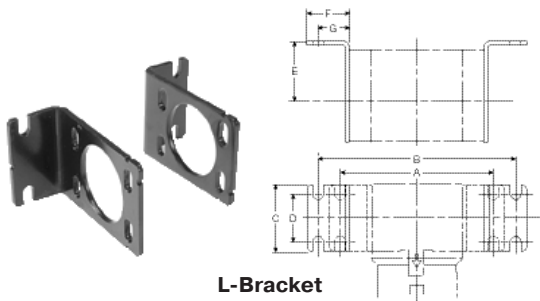
**L-Bracket  
GPA-95-016, GPA-95-946**



**L-Bracket  
GPA-96-604**

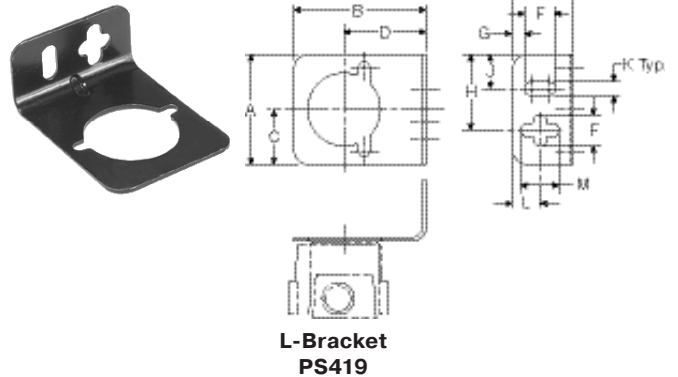


**L-Bracket  
GPA-96-605**



**L-Bracket  
P3NKA00MW**

For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA00BMW**



**L-Bracket  
PS419**

## Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
Wall Mounting Bracket	GRP-95-734	For All Non-Modular Units Up To 1" NPT	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)	—	—	—	—	—	—	—
C-Bracket	GPA-97-010	L08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
L-Bracket	GPA-95-016	L16 / L17	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	2.12 (54)	—	—	—	—	—	—
	GPA-95-946	L26 / L27	2.12 (53)	3.62 (91)	3.80 (96)	2.93 (74)	1.88 (47)	2.12 (54)	—	—	—	—	—	—
	GPA-96-604	L18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	GPA-96-605	L28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	P3NKA00MW	L39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS419	L03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)

# Filter / Regulators Replacement Repair Kits



Model	Plastic Bowl / Bowl Guard Manual Drain	Metal Bowl / Sight Gauge Manual Drain	Plastic Bowl / Bowl Guard Automatic Drain	Metal Bowl / Sight Gauge Automatic Drain	Plastic Bowl / Bowl Guard Closed Bottom
<b>B08</b>	GRP-96-712	GRP-96-714*	N/A	N/A	N/A
<b>B18</b>	GRP-96-634	GRP-96-636	GRP-96-635	GRP-96-637	GRP-96-638
<b>B28</b>	GRP-96-642	GRP-96-644	GRP-96-643	GRP-96-645	GRP-96-652
<b>B39</b>	N/A	P3NKA00BSM	N/A	P3NKA00BSA	N/A

\* Metal bowl does not have sight gauge.

\*\* 12 Series has Piston Style Drain.

Model	Filter Element 5 Micron	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Filter Retainer Element Baffle	Manual Drain
<b>B08</b>	FRP-96-729	GRP-96-710	GRP-96-711	N/A	N/A
<b>B18</b>	FRP-96-639	GRP-96-640	GRP-96-754	FRP-96-641	GRP-96-685
<b>B28</b>	FRP-96-653	GRP-96-654	GRP-96-755	FRP-96-283	GRP-96-685
<b>B39</b>	P3NKA00ESE	N/A	N/A	N/A	PS512

Model	Self-relieving Diaphragm (Nitrile)	Non-relieving Diaphragm (Nitrile)	Valve Assembly Kit	Valve Spring	Service Kit (Relieving)
<b>B08</b>	GRP-96-725	GRP-96-726	RRP-96-727	RRP-96-728	N/A
<b>B18</b>	RRP-96-656	RRP-96-657	RRP-96-658	N/A	N/A
<b>B28</b>	RRP-96-986	RRP-96-987	RRP-96-049	N/A	N/A

Model	Main Regulating Spring 0-30 PSIG	Main Regulating Spring 0-60 PSIG	Main Regulating Spring 0-125 PSIG	Main Regulating Spring 0-250 PSIG
<b>B08</b>	GRP-95-111	GRP-96-718	GRP-96-717	N/A
<b>B18</b>	RRP-96-659	RRP-96-660	RRP-96-661	RRP-96-662
<b>B28</b>	RRP-96-163	RRP-96-164	RRP-96-165	RRP-96-166
<b>B39</b>	N/A	C10A1304	CA101308	CA101317

Tamper Resistant Model	Aluminum Resistant Ring	Plastic Panel Nut	Manual Panel Nut
<b>B08</b>	RPA-95-735	RPA-96-733	RPA-96-734
<b>B18</b>	RRP-96-671	RRP-96-673	RRP-96-675
<b>B28</b>	RRP-96-672	RRP-96-674	RRP-96-676

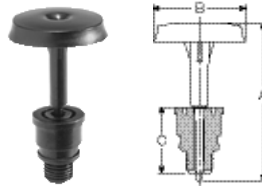
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Accessories & Repair Kits

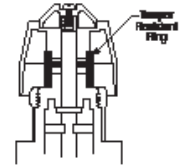
# Accessories Filter / Regulators



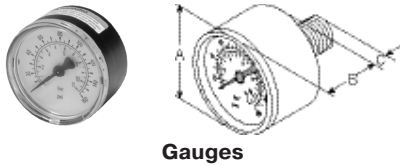
**Automatic Drain**  
GRP-95-973, GRP-95-981



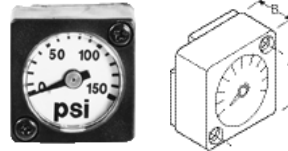
**Piston Drain**  
GRP-96-716



**Tamper Resistant Kit**  
RPA-95-006



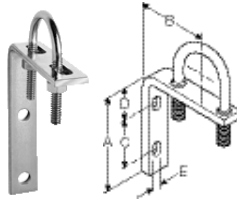
**Gauges**



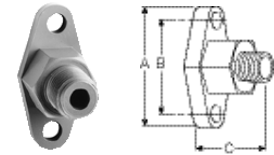
**Flush Mount Gauge**  
08 Series



**Digital Gauge**



**Wall Mounting Bracket**  
**U-Bolt Pipe Clamp**  
GRP-95-734



**Wall Mounting Bracket**  
-  
**Gauge Port Adapter**  
RRP-95-590

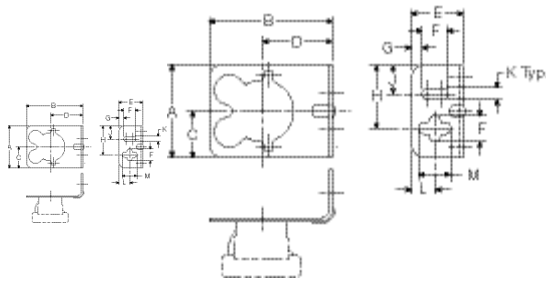
## Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E
Automatic Drains, Nitrile	GRP-95-973	B18, B28, CB6	2.93 (74.4)	1.47 (37.3)	1.17 (29.7)	—	—
Automatic Drains, Fluorocarbon	GRP-95-981	B18, B28, CB6					
Piston Drain	GRP-96-716	B08	1.70 (43)	.94 (24)	.68 (17)	—	—
Gauges, 1/8 Port, CBM	K4515N18030 (0 to 30 PSIG)	B03	1.64 (41.6)	1.09 (27.6)	.80 (20)	—	—
	K4515N18060 (0 to 60 PSIG)	B03, BB3, BA3					
	K4515N18160 (0 to 160 PSIG)						
Gauges, 1/4 Port, CBM	K4520N14030W (0 to 30 PSIG)	PC5, PC6	1.96 (49.8)	1.08 (27)	.91 (23)	—	—
	K4520N14060W (0 to 60 PSIG)	CB6, PC5, PC6					
	K4520N14160W (0 to 160 PSIG)						
	K4520N14300W (0 to 300 PSIG)						
Gauges, 5mm 2" Round 1/4 Center Back Mount	K4520N14030 (0 to 30 PSIG)	B18, B28	1.67 (50)	.94 (24)	.71 (18)	—	—
	K4520N14060 (0 to 60 PSIG)						
	K4520N14160 (0 to 300 PSIG)						
	K4520N14300 (0 to 20 bar)						
Flush Mount Series Gauges	K4511SCR150 (0 to 150 PSIG)	B08	1.06 (26.9)	.63 (16)	—	—	—
	K4511SCR060 (0 to 60 PSIG)						
	K4511SCR11B (0 to 11 bar)						
Round Digital Gauge, 1/4 Port	K4517N14160D (0 to 160 PSIG)	B18, B28	1-3/4" Diameter				
Tamper Resistant Kit	RPA-95-006	CB6, PC5, PC6	—	—	—	—	—
Wall Mtg. Bracket U-Bolt Pipe Clamp	GRP-95-734	For All Non-Modular Units Up to 1" NPT	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)
Wall Mtg. Bracket Gauge Port Adapter	RRP-95-590	CB6, PC5, PC6	1.87 (47.5)	1.36 (34.5)	1.06 (27)	—	—

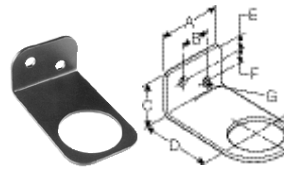
**D**

Accessories & Repair Kits

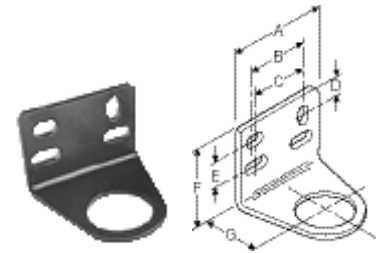
# Accessories – Filter / Regulators



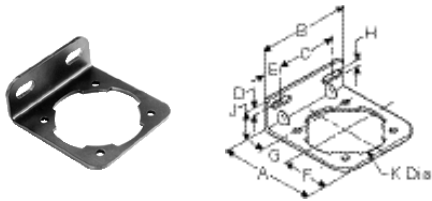
**L-Bracket  
PS417B  
(Includes Panel Mount Nut)**



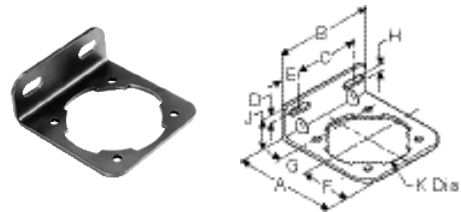
**L-Bracket  
GRP-95-147**



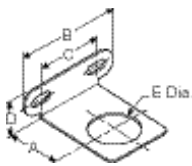
**L-Bracket  
GPA-95-011, GPA-95-012**



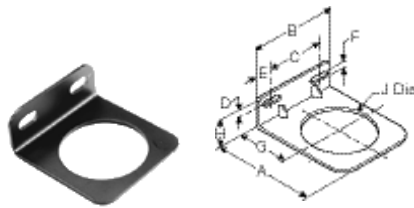
**Body L-Bracket  
GPA-96-604**



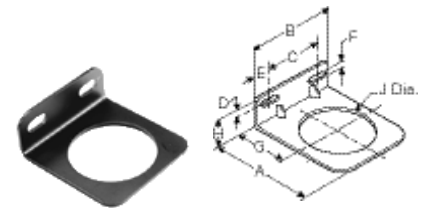
**Body L-Bracket  
GPA-96-605**



**L-Bracket  
GRP-96-739**



**Bonnet L-Bracket  
GPA-96-606**



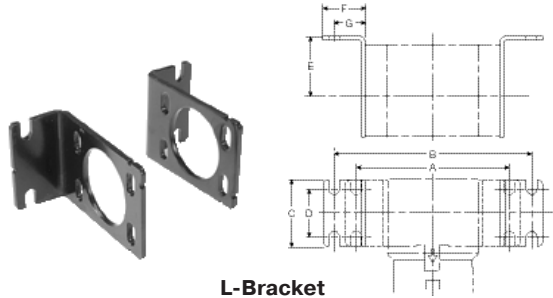
**Bonnet L-Bracket  
GPA-96-607**

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Accessories & Repair Kits

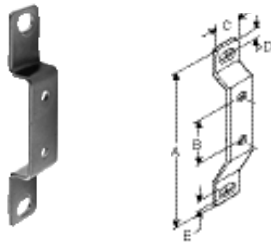


# Accessories – Filter / Regulators

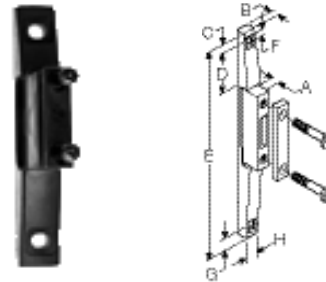


**L-Bracket  
P3NKA00MW**

For 1-1/2" BSPP Port Block with E02 fitting application,  
use **Mounting Bracket Kit P3NKA0BMW**



**T-Bracket  
GPA-96-602**

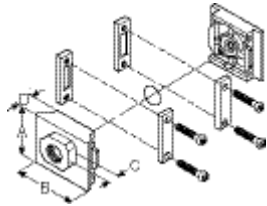


**T-Bracket  
GPA-96-737  
w/ Joiner**

## Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
L-Bracket with Plastic Panel Nut	GPA-95-011	CB6, PC5, PC6	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-747	BB3, BA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
L-Bracket	GPA-95-012	CB6, PC5, PC6	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-147	BB3, BA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
	GPA-96-606	B18	2.74 (69.5)	2.74 (69.5)	1.66 (42)	.43 (11)	.54 (14)	.28 (7.1)	1.57 (40)	1.00 (25)	2.0 (51)	—	—	—
	GPA-96-607	B28	3.33 (84.5)	3.00 (76)	1.88 (48)	.43 (11)	.56 (14)	2.40 (61)	1.94 (49)	1.00 (25)	2.40 (61)	—	—	—
	GRP-96-739	B08	1.57 (40)	2.68 (68)	1.74 (44)	.97 (25)	1.19 (30)	—	—	—	—	—	—	—
	P3NKA00MW	L39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS417B	B03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)
C-Bracket	GPA-96-604	B18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	GPA-96-605	B28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	GPA-97-010	B08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
T-Bracket	GPA-96-602	B18, B28	3.75 (95)	1.00 (25.4)	.76 (19.3)	.25 (6.3)	.28 (7.1)	—	—	—	—	—	—	—
T-Bracket w/ Joiner	GPA-96-737	B08	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—	—	—

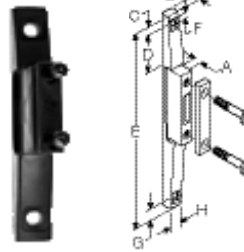
# Modular Accessories – 08 Series



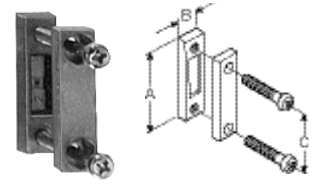
**End Block Set**



**End Block Set  
w/ T-Bracket**



**T-Bracket  
GPA-96-737  
w/ Joiner**



**Joiner Set  
GPA-96-738  
(O-ring not shown)**

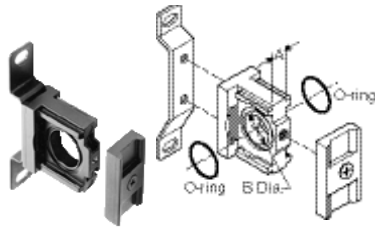
## Dimensions Inches (mm)

Accessories	Part Number	Pipe Size	A	B	C	D	E	F	G	H	J	K
<b>T-Bracket Joiner Set</b>	<b>GPA-96-737</b>	—	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—
<b>Joiner Set</b>	<b>GPA-96-738</b>	—	1.42 (36)	.39 (9.9)	.98 (26)	—	—	—	—	—	—	—
<b>End Block Set</b>	<b>GPA-97-018</b>	1/8 NPT	1.42 (36)	1.57 (40)	.53 (13.5)	.31 (8)	—	—	—	—	—	—
	<b>GPA-97-019</b>	1/4 NPT										
	<b>GPA-97-020</b>	3/8 NPT										
	<b>GPA-97-066</b>	G 1/8										
	<b>GPA-97-067</b>	G 1/4										
<b>GPA-97-065</b>	G 3/8											
<b>End Block Set With T-Brackets</b>	<b>GPA-97-025</b>	1/8 NPT	1.42 (36)	1.57 (40)	.53 (13.5)	.31 (8)	—	—	—	—	—	—
	<b>GPA-97-026</b>	1/4 NPT										
	<b>GPA-97-027</b>	3/8 NPT										
	<b>GPA-97-068</b>	G 1/8										
	<b>GPA-97-069</b>	G 1/4										
	<b>GPA-97-070</b>	G 3/8										

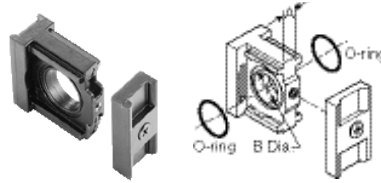
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Accessories & Repair Kits

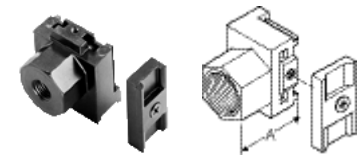
# Modular Accessories – 18 / 28 Series



T-Bracket w/ Joiner Set GPA-96-603



Joiner Set GPA-96-601



End Block

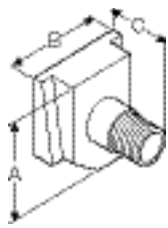
## Dimensions Inches (mm)

Accessories	Part Number	Pipe Size	A	B	C	D	E	F	G	H	J	K
T-Bracket w/ Joiner Set	GPA-96-603	—	.35 (8.9)	.87 (22.1)	—	—	—	—	—	—	—	—
Joiner Set	GPA-96-601	—	.35 (8.9)	.87 (22.1)	—	—	—	—	—	—	—	—
End Block	GPA-96-610	1/4 NPT	1.59 (40)	—	—	—	—	—	—	—	—	—
	GPA-96-611	3/8 NPT										
	GPA-96-612	1/2 NPT										
	GPA-96-613	3/4 NPT										
	GPA-96-620	G 1/4										
	GPA-96-621	G 3/8										
	GPA-96-622	G 1/2										
GPA-96-623	G 3/4											

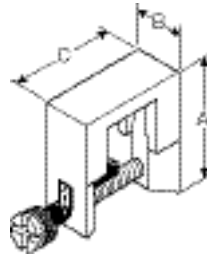
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Accessories & Repair Kits

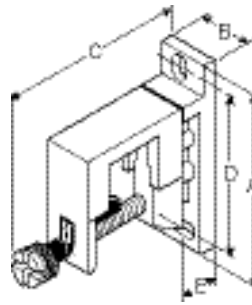
# Modular Accessories – 16 / 26 Series



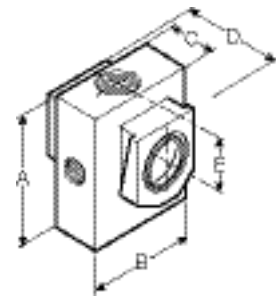
**Modular Pipe Adapter**  
GPA-95-035,  
GPA-95-036,  
GPA-95-037



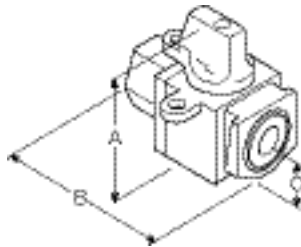
**Modular Sleeve**  
GPA-95-292



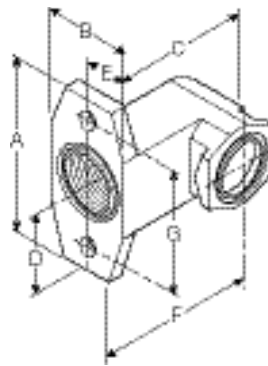
**Modular Sleeve with T-Bracket**  
GPA-95-969



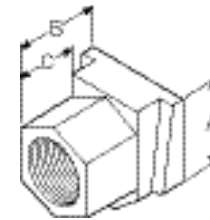
**Modular Manifold Block  
(3 Auxiliary Ports)**  
GPA-95-919



**Modular 3-Way Shut-off Valve**  
GPA-95-096,  
GPA-95-097,  
GPA-95-098



**Right-Angle Bracket**  
GPA-95-042



**Modular Connecting  
End Block Set**  
GPA-95-223, -224,  
-225, -320, -321








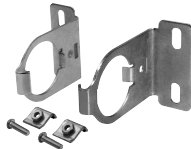
## Dimensions Inches (mm)

Accessories	Part Number	Pipe Size NPT	A	B	C	D	E	F	G
Modular Pipe Adapter	GPA-95-035	1/4	1.25	1.25	1.14	—	—	—	—
	GPA-95-036	3/8	(31.7)	(31.7)	(28.9)	—	—	—	—
	GPA-95-037	1/2	—	—	—	—	—	—	—
Modular Sleeve	GPA-95-292	—	2.15 (54.6)	0.82 (20.8)	1.92 (48.8)	—	—	—	—
Modular Sleeve With T-Bracket	GPA-95-969	—	3.60 (91.4)	.82 (20.8)	3.43 (87.1)	2.98 (75.7)	0.78 (19.8)	—	—
Modular Manifold Block (3 Auxiliary Ports)	GPA-95-919	1/4	2.30 (58.4)	2.00 (50.8)	0.72 (18.3)	1.57 (39.9)	0.98 (24.9)	—	—
Modular 3-Way Shut-off Valve	GPA-95-096	1/4	2.38	2.51	0.69	—	—	—	—
	GPA-95-097	3/8	(60.4)	(63.7)	(17.5)	—	—	—	—
	GPA-95-098	1/2	—	—	—	—	—	—	—
Modular Right Angle Bracket	GPA-95-042	—	2.75 (69.8)	1.25 (31.7)	2.38 (60.4)	1.00 (25.4)	0.63 (16.0)	1.75 (44.5)	2.00 (50.8)
Modular Connecting End Block Set	GPA-95-223	1/4	1.25	1.19	0.75	—	—	—	—
	GPA-95-224	3/8	(31.7)	(30.2)	(19.0)	—	—	—	—
	GPA-95-225	1/2	—	—	—	—	—	—	—
	GPA-95-320	3/4	—	—	—	—	—	—	—
	GPA-95-321	1	—	—	—	—	—	—	—

D

Accessories & Repair Kits

## Modular Accessories – 90 Series

Description	Connection	Weight kg (lb)	Part number		
0.01 micron element kit			<b>P3YKA00ESC</b>		
5 micron element kit			<b>P3YKA00ESE</b>		
Adsorber element kit			<b>P3YKA00ESA</b>		
Angle bracket + metal lock ring			<b>P3YKA00MS</b>		
Bowl kit with combined manual / semi-auto drain			<b>P3YKA00BSC</b>		
Bowl kit with auto drain			<b>P3YKA00BSA</b>		
Bowl kit			<b>P3YKA00BSN</b>		
Connector o-ring kit	Qty: 5		<b>P3YKA08CY</b>		
Differential pressure indicator kit			<b>P3YKA00RQ</b>		
Diaphragm kit (relieving type)			<b>P3YKA00RR</b>		
Diaphragm kit (non-relieving type)			<b>P3YKA00RN</b>		
Key lock (replacement)			<b>P3XKA00AS</b>		
Lubricator oil	F442001 - 1 Qt.	0.92 (2.03)	<b>F442001</b>		
	F442002 - 1 Gal		<b>F442002</b>		
Neck mounting bracket kit		3.75 (8.27)	<b>P3YKA00MS</b>		
P3Y connecting kit		0.05 (0.11)	<b>P3YKA00CB</b>		
Panel mounting nut (Aluminum)		0.70 (1.54)	<b>P3YKA00MM</b>		
Pressure gauge	0 to 10 bar (0 to 160 psig)	1/4"	0.06 (0.13)	<b>K4520N14160</b>	
	0 to 20 bar (0 to 300 psig)	1/4"	0.06 (0.13)	<b>K4520N14300</b>	
Refill plug			<b>P3YKA00PL</b>		
Wall mounting brackets		0.2 (0.44)	<b>P3YKA00CW</b>		

D

Accessories &amp; Repair Kits

# Notes

**D**

Accessories & Repair Kits



# Stainless Steel Compressed Air Treatment Products

**E**

Stainless Steel Products

<b>Particulate Filters .....</b>	<b>E3</b>
SF1 .....	E4
SF2 .....	E6
<b>Coalescing Filters .....</b>	<b>E9</b>
SM1 .....	E10
SM2 .....	E12
<b>Regulators .....</b>	<b>E15</b>
SR1 .....	E16
SR2 .....	E18
<b>Filter / Regulators .....</b>	<b>E21</b>
SB1 .....	E22
SB2 .....	E24
<b>Lubricators .....</b>	<b>E27</b>
SL2 .....	E28

# Notes

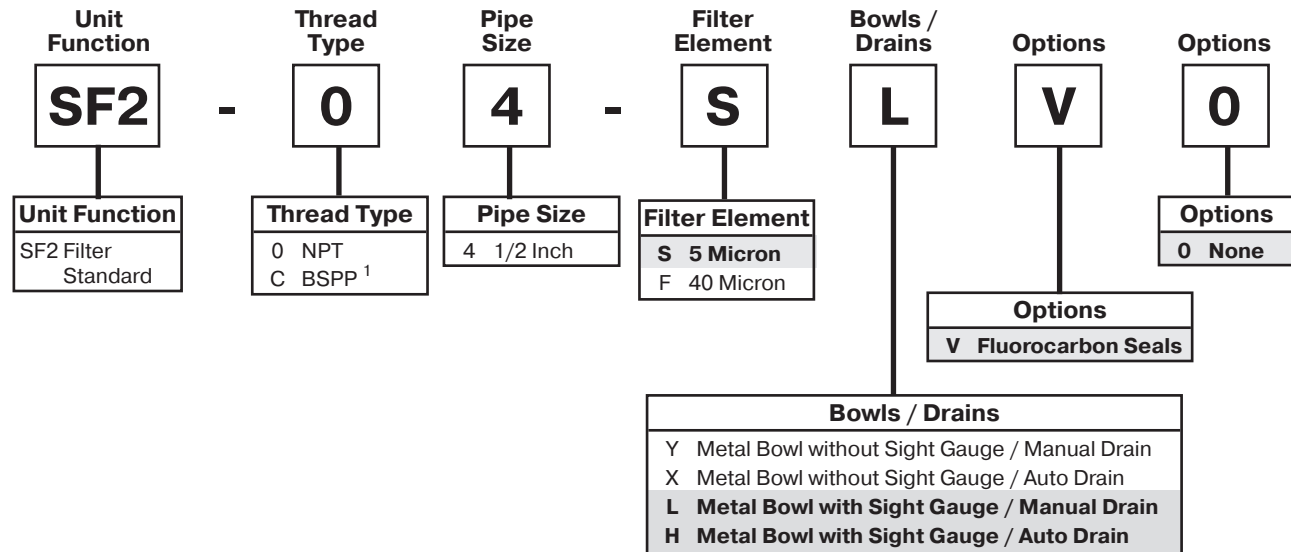
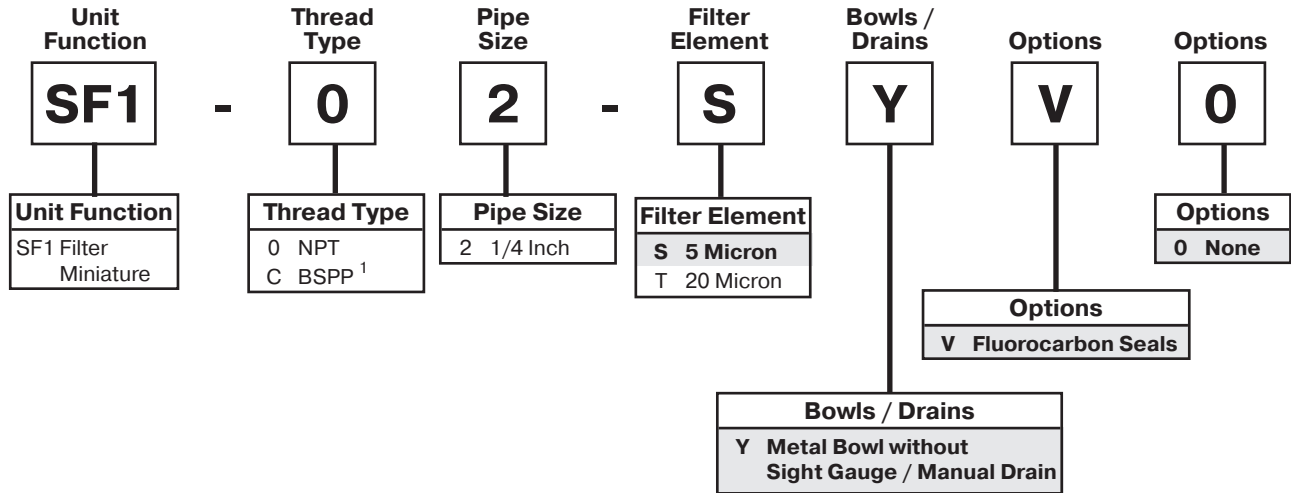


Stainless Steel Products



# Particulate Filter Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

**"SF" Series Filters, Type "A" 5 micron elements:** All Wilkerson Type "A" 5 micron elements **meet or exceed ISO Class 3** for maximum particle size and concentration of solid contaminants.

**NOTE:**All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

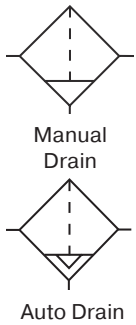
**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

**SF1 - 0 2 - S Y V 0**

**E**  
Stainless Steel Products

# Filter – Miniature SF1

= "Most Popular"

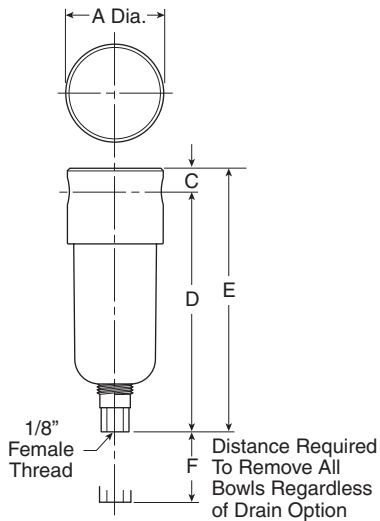


**SF1-02-SYV0**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Fluorocarbon Seals Standard
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/4" - 23 SCFM<sup>§</sup>

<sup>§</sup>SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.



## Specifications

Flow Capacity*	Port Size	5 Micron
	1/4	23 SCFM
Bowl Capacity		1.0 Ounce
Filter Rating		5 Micron
Port Threads		1/4 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –		10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)
Useful Retention**		0.4 Ounce
Weight		0.6 lb. (0.27 kg)

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

\* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.  
\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Deflector	Acetal
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Polyethylene
Seals	Fluorocarbon

## Dimensions

Models	Inches (mm)	A	C	D	E	F
Miniature Unit SF1-02-XXXX		1.57 (40)	0.31 (8)	3.69 (94)	4.00 (102)	1.58 (40)

= "Most Popular"

### SF1 Filter Kits & Accessories

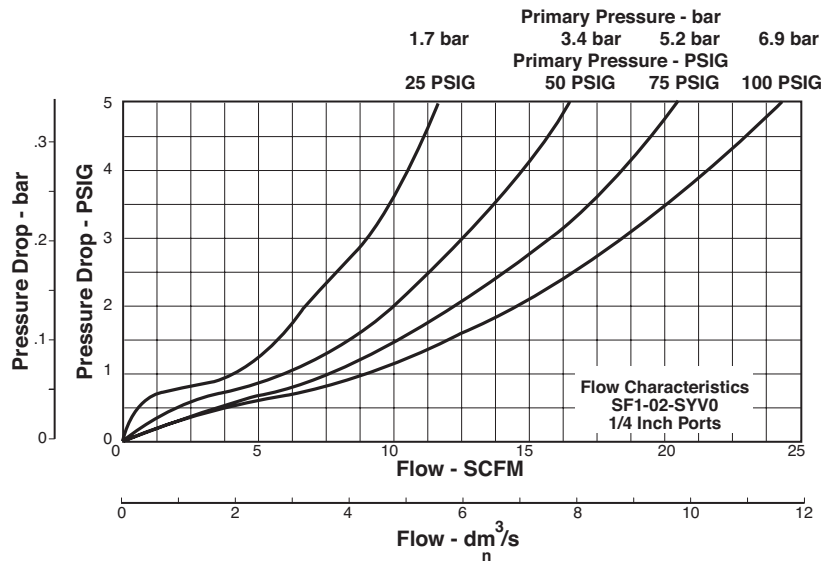
Filter Element Kits –

- Particulate (5 Micron) ..... SRP-96-001
- Particulate (20 Micron) ..... SRP-96-002

Manual Drain –

- Small (Old) ..... SRP-96-008
- Large (New) ..... SAP05481

Pipe Nipple – 1/4" 316 Stainless Steel..... SRP-96-009



E  
 Stainless Steel Products

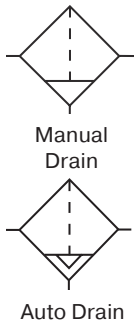
### Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/4	SF1-02-SYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter – Standard SF2

= "Most Popular"

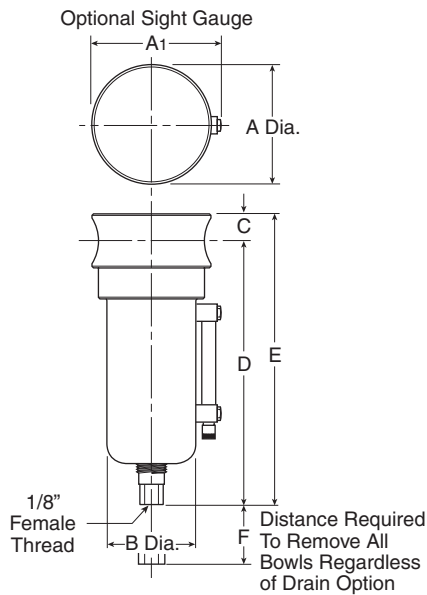


**SF2-04-SLV0**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/2" - 70 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.



## Specifications

Flow Capacity*	Port Size	5 Micron
	1/2	70 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		5 Micron
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Metal Bowl with Sight Gauge –		0 to 250 PSIG (0 to 17.2 bar) 0°F to 150°F (-18°C to 66°C)
Automatic Float Drain –		0 to 175 PSIG (0 to 12 bar) 32°F to 150°F (0°C to 66°C)

**Note:** Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention**	1.7 Ounce
Weight	1.9 lb. (0.85 kg)

\* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.

\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Deflector	Acetal
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Polyethylene
Seals	Fluorocarbon
Sight Gauge	Isoplast

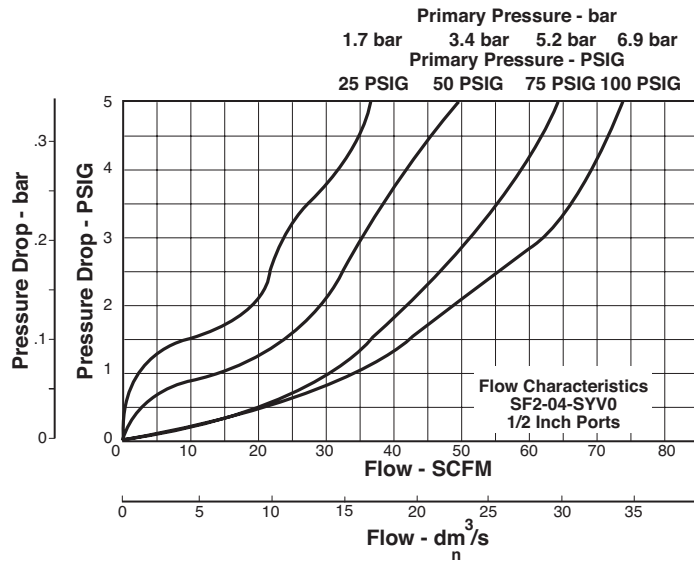
## Dimensions

Models	Inches (mm)	A	A1	B	C	D	E	F
Miniature Unit SF2-04-XXXX		2.38 (60)	2.50 (64)	1.75 (44)	0.56 (14)	5.00 (127)	5.56 (141)	2.12 (54)

= "Most Popular"

### SF2 Filter Kits & Accessories

- Drain Kit –
  - Automatic Drain ..... SRP-96-027
- Manual Drain –
  - Small (Old) ..... SRP-96-008
  - Large (New) ..... SAP05481
- Filter Element Kits –
  - Particulate (40 Micron) ..... SRP-96-024
  - Particulate (5 Micron) ..... SRP-96-023
- Liquid Level Sight Gauge Kit..... SRP-96-026
- Pipe Nipple – 1/2" 316 Stainless Steel .....SRP-96-010



### Ordering Information

Model Type	Port Size	Model Number	Model Number
Manual Drain	1/2	SF2-04-SLV0	—
Automatic Drain	1/2	—	SF2-04-SHV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



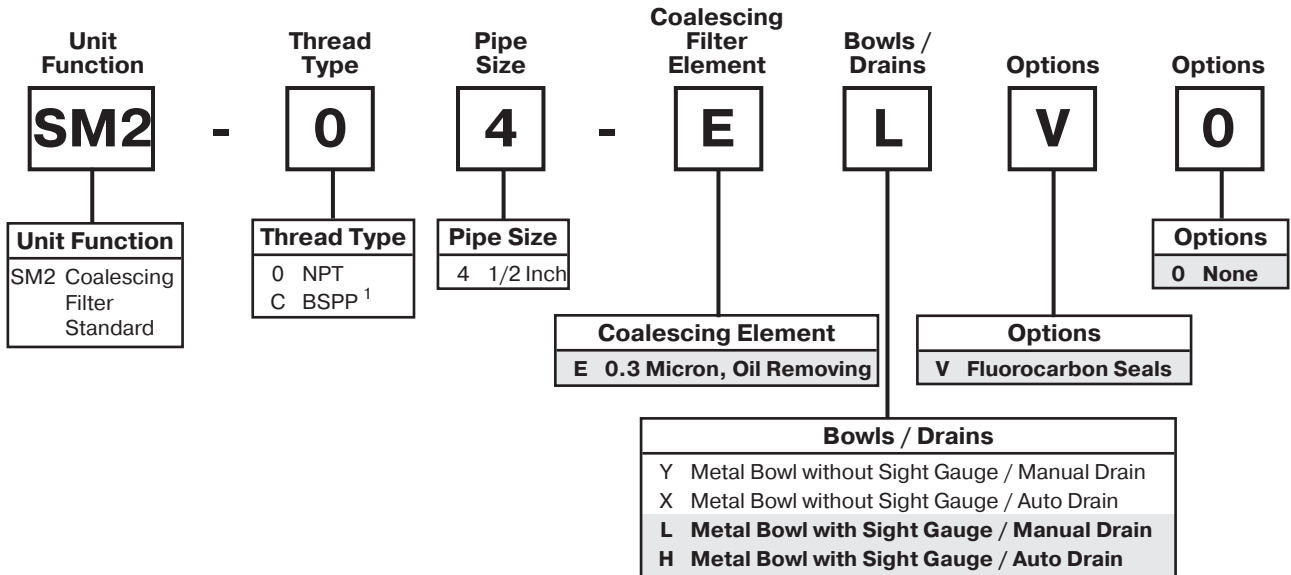
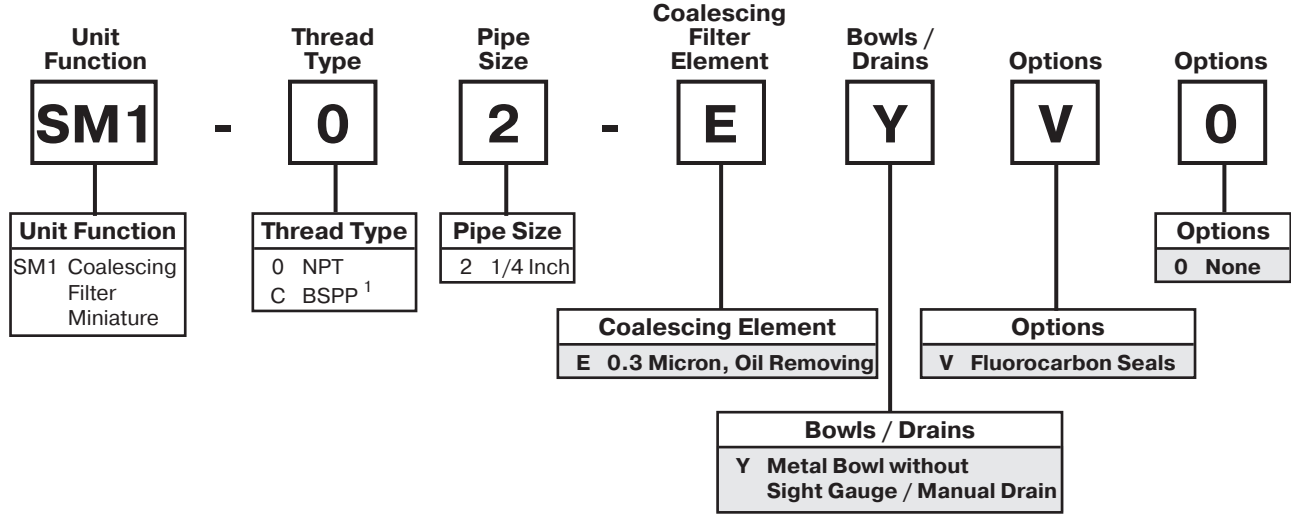
# Notes



Stainless Steel Products

# Coalescing Filter Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

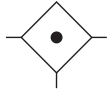
**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

**SM1 - 0 2 - E Y V 0**

**E**  
Stainless Steel Products

# Coalescing Filter – Miniature SM1

= "Most Popular"



**SM1-02-EYVO**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/4" - 16 SCFM<sup>§</sup>

<sup>§</sup>SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

## Specifications

Flow Capacity*	Port Size	0.3 Micron 16 SCFM
Bowl Capacity		1.0 Ounces
Filter Rating		0.3 Micron
Port Threads		1/4 Inch

### Pressure & Temperature Ratings –

Metal Bowl –	0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –	10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

Useful Retention**	0.4 Ounce
Weight	0.6 lb. (0.27 kg)

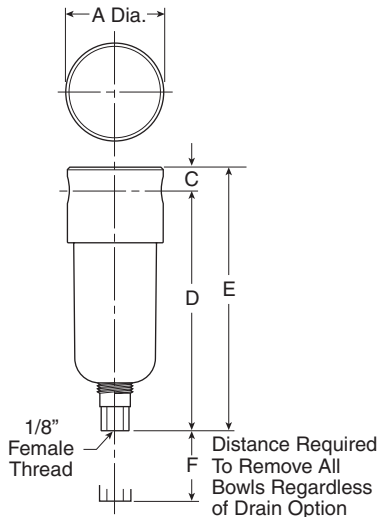
\* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.  
\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Drain (Manual)	316 Stainless Steel
Element Holder	Acetal
Filter Element	Borosilicate Fiber
Seals	Fluorocarbon



Stainless Steel Products



## Dimensions

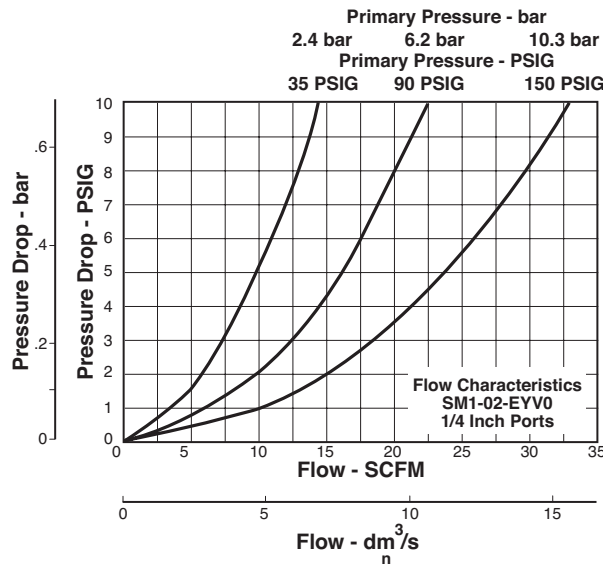
Models	Inches (mm)	A	C	D	E	F
Miniature Unit SM1-02-XXXX		1.57 (40)	0.31 (8)	3.69 (94)	4.00 (102)	1.58 (40)



= "Most Popular"

### SM1 Filter Kits & Accessories

- Filter Element Kits – 0.3 Micron ..... SRP-96-005
- Manual Drain –
  - Small (Old) ..... SRP-96-008
  - Large (New) ..... SAP05481
- Pipe Nipple – 1/4" 316 Stainless Steel..... SRP-96-009



Stainless Steel Products

### Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/4	SM1-02-EYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Coalescing Filter – Standard SM2

= "Most Popular"



**SM2-04-ELVO**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/2" - 45 SCFM<sup>§</sup>

<sup>§</sup>SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

## Specifications

Flow Capacity*	Port Size	0.3 Micron 46 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		0.01 Micron
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Metal Bowl with Sight Gauge –		0 to 250 PSIG (0 to 17.2 bar) 0°F to 150°F (-18°C to 66°C)
Automatic Float Drain –		0 to 175 PSIG (0 to 12 bar) 32°F to 150°F (0°C to 66°C)

**Note:** Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention**	1.7 Ounce
Weight	1.9 lb. (0.85 kg)

\* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.

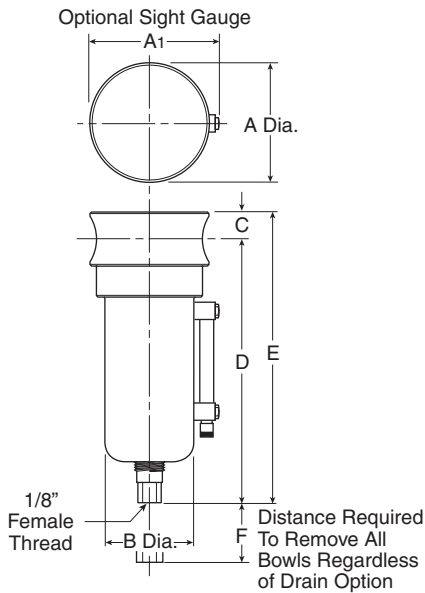
\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Borosilicate Fiber
Seals	Fluorocarbon
Sight Gauge	Isoplast



Stainless Steel Products



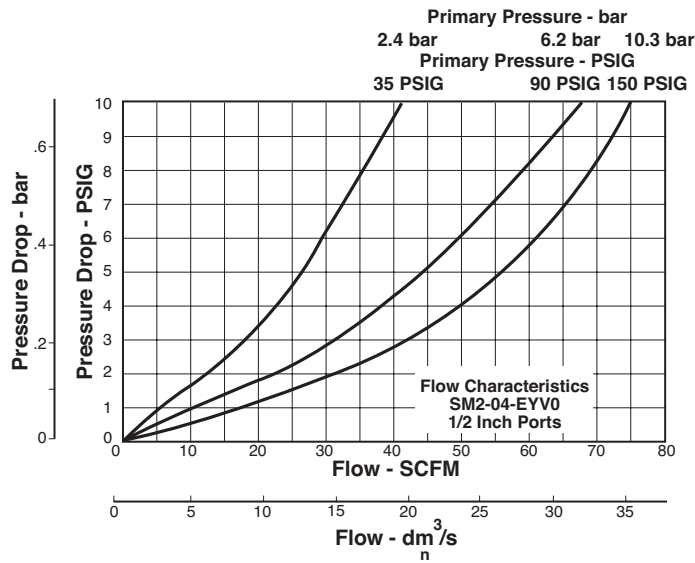
## Dimensions

Models	Inches (mm)	A	A1	B	C	D	E	F
Miniature Unit SM2-04-XXXX		2.38 (60)	2.50 (64)	1.75 (44)	0.56 (14)	5.00 (127)	5.56 (141)	2.12 (54)

= "Most Popular"

### SM2 Filter Kits & Accessories

- Drain Kit –
  - Automatic Drain ..... SRP-96-007
- Manual Drain –
  - Small (Old) ..... SRP-96-008
  - Large (New) ..... SAP05481
- Filter Element Kits – 0.01 Micron ..... SRP-96-006
- Liquid Level Sight Gauge Kit..... SRP-96-026
- Pipe Nipple – 1/2" 316 Stainless Steel .....SRP-96-010



Stainless Steel Products

### Ordering Information

Model Type	Port Size	Model Number	Model Number
Manual Drain	1/2	SM2-04-ELV0	—
Automatic Drain	1/2	—	SM2-04-EHV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

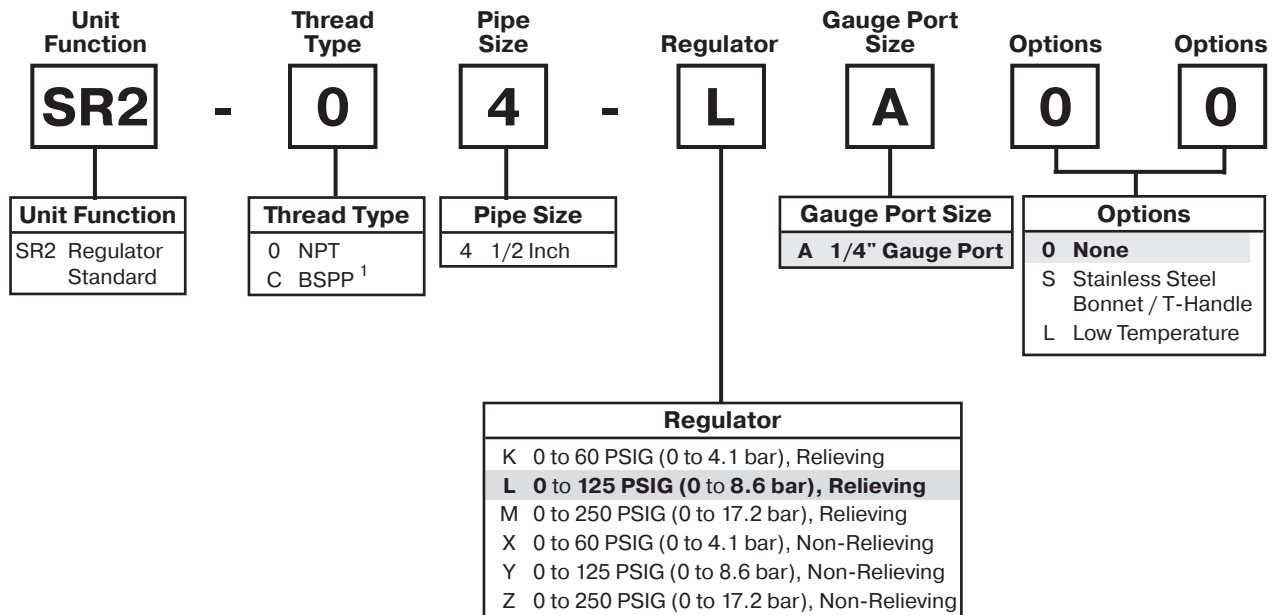
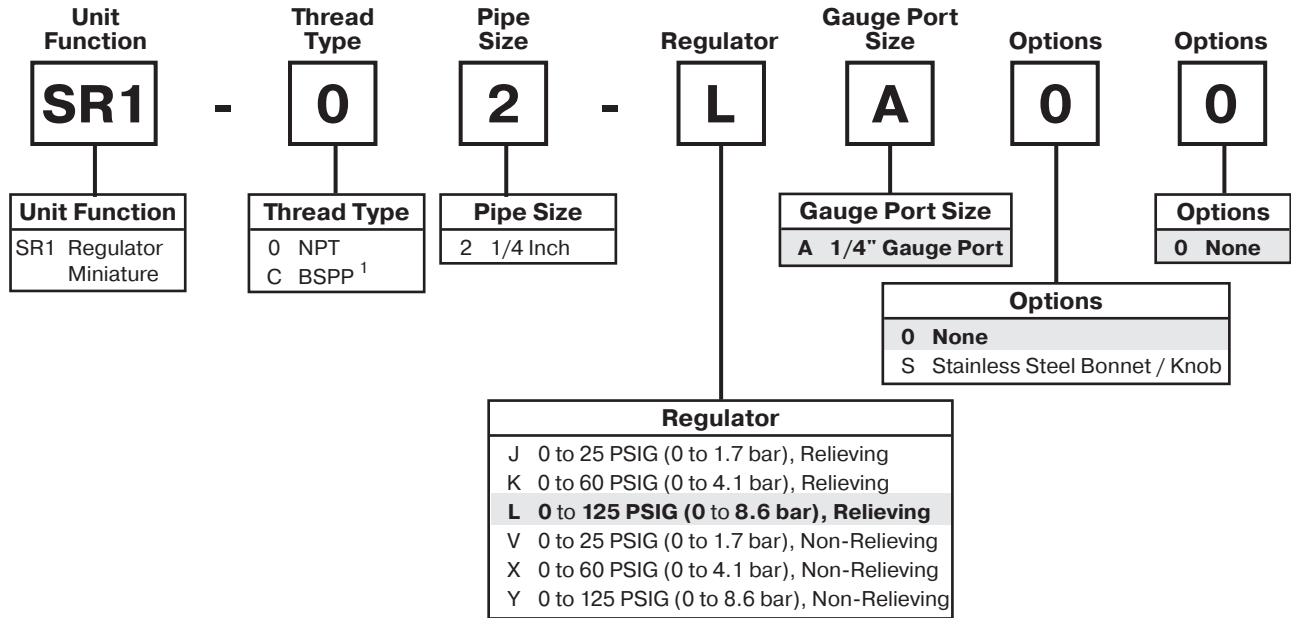
# Notes



Stainless Steel Products

# Regulator Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

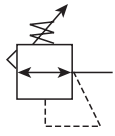
**Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:**

**SR1 - 0 2 - L A 0 0**

**E**  
Stainless Steel Products

# Regulator – Miniature

## SR1



SR1-02-LA00

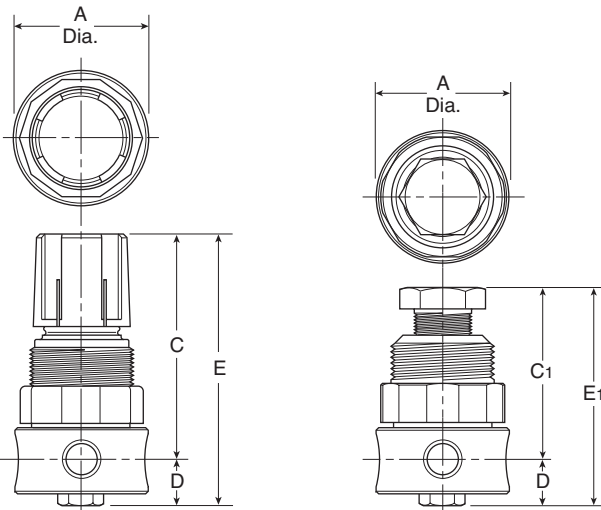


SR1-02-LAS0

### Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/4" – 12 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.



### Dimensions

Models	Inches (mm)	A	C	C <sub>1</sub>	D	E	E <sub>1</sub>
Miniature Unit SR1-02-XXXX		1.56 (40)	2.56 (65)	2.17 (55)	0.50 (13)	3.06 (78)	2.67 (68)

= "Most Popular"

### Specifications

Flow Capacity*	Port Size	12 SCFM
	1/4	
Gauge Port		1/4 Inch
Port Threads		1/4 Inch

Pressure & Temperature Ratings –		
SR1-02-LA00	300 PSIG Max (20.7 bar)	0°F to 150°F (-18°C to 66°C)
SR1-02-LAS0	300 PSIG Max (20.7 bar)	0°F to 180°F (-18°C to 82°C)

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

Weight	0.5 lb. (0.23 kg)
--------	-------------------

\* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

### Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Adjusting Knob (SR1-02-LAS0)	316 Stainless Steel
Adjusting Knob (SR1-02-LA00)	Polypropylene
Body	316 Stainless Steel
Bonnet (SR1-02-LAS0)	316 Stainless Steel
Bonnet (SR1-02-LA00)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

### CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



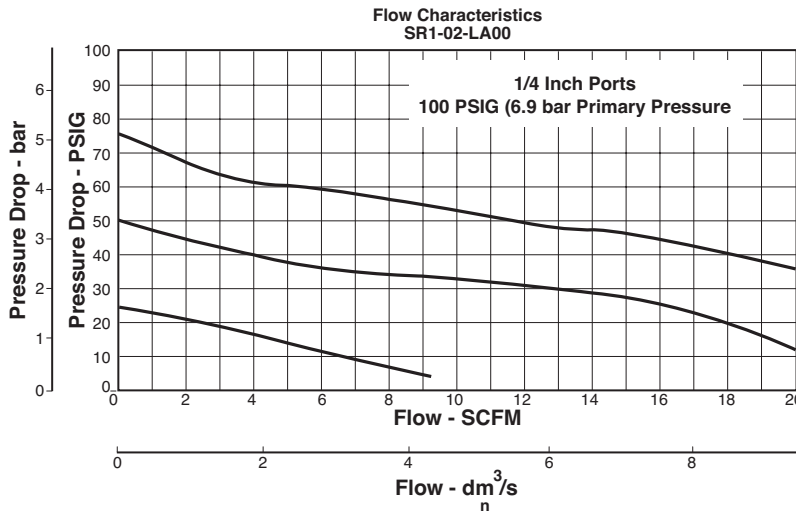
Stainless Steel Products

= "Most Popular"

### SR1 Regulator Kits & Accessories

- Bonnet Kit SR1-02-LA00 (Knob Included) .....SRP-96-017
- Bonnet Kit SR1-02-LAS0.....CKR354YSS
- Gauge (Stainless) –
  - 160 PSIG (0 to 1100 kPa), 1-1/2" Face..... K4515N14160SS
- Mounting Bracket (Stainless) ..... 161X57-SS
- Panel Mount Nut –
  - Stainless .....SRP-96-019
  - Plastic ..... R05X51-P
- Pipe Nipple –
  - 1/4" 316 Stainless Steel ..... SRP-96-009
- Service Kit –
  - Relieving .....SRP-96-013
  - Non-Relieving .....SRP-96-014
- Springs –
  - 0-25 PSIG Range..... SPR-375-2-SS
  - 0-60 PSIG Range ..... SPR-376-1-SS
  - 0-125 PSIG Range ..... SPR-377-1-SS

**Note:** Order pressure gauge and panel mount nut separately.  
**Note:** 1.25" dia. (32mm) hole required for panel mounting (order panel nut separately).



### Ordering Information

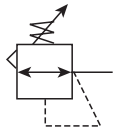
Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 25 PSIG (0 to 1.7 bar)	0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	SR1-02-LA00	SR1-02-JA00	SR1-02-KA00
Non-Relieving	1/4	SR1-02-YA00	SR1-02-VA00	SR1-02-XA00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



# Regulator – Standard SR2

 = "Most Popular"



**SR2-04-LA00**

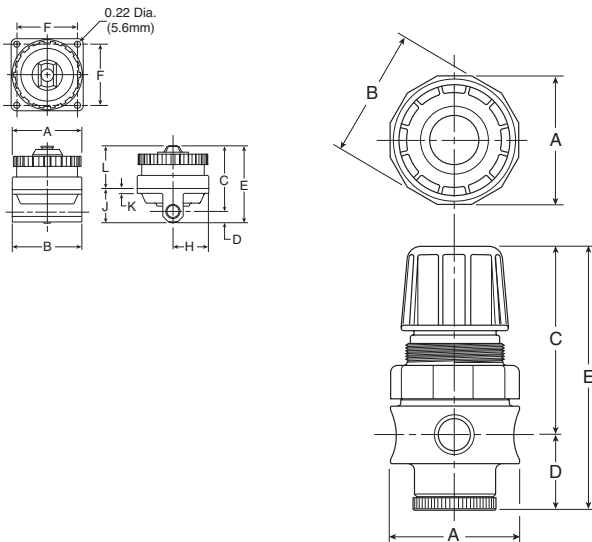


**SR2-04-LAS0**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- Low Temperature Version Available
- High Flow: 1/2" – 80 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.



## Dimensions

Models	Inches (mm)	A	A1	B	B1	C	C1	D	E	E1
Miniature Unit SR2-04-XXXX		2.36 (60)	3.36 (85)	2.43 (62)	2.35 (60)	3.59 (91)	4.70 (119)	1.38 (35)	4.97 (126)	6.08 (154)

## Specifications

Flow Capacity*	Port Size	80 SCFM
	1/2	

Gauge Port	1/4 Inch
------------	----------

Port Threads	1/2 Inch
--------------	----------

Pressure & Temperature Ratings –	
SR2-04-LA00 –	300 PSIG Max (20.7 bar) 0°F to 150°F (-18°C to 66°C)
SR2-04-LAS0 –	300 PSIG Max (20.7 bar) 0°F to 180°F (-18°C to 82°C)

**Option "L" Minimum Operating Temperature† --40°F (-40°C)**

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

Weight	1.79 lb. (0.81 kg)
--------	--------------------

\* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

† **Note:** "Low Temperature" option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.

## Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet / Tee Handle (SR2-04-LAS0)	316 Stainless Steel
Bonnet / Knob (SR2-04-LA00)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

## WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

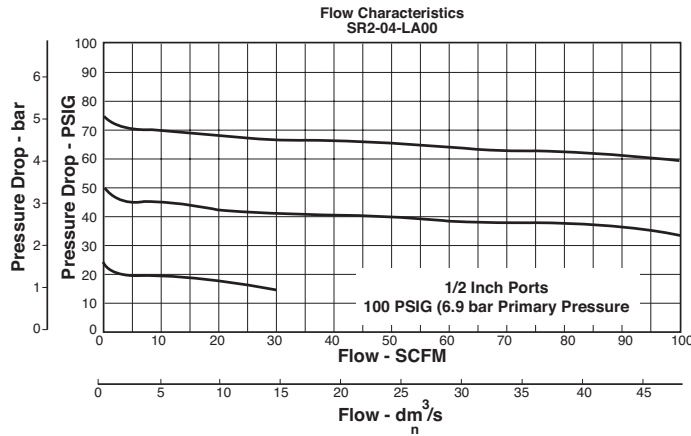


= "Most Popular"

### SR2 Regulator Kits & Accessories

- Bonnet Kit SR2-04-LA00 (Knob) .....SRP-96-018
- Bonnet Kit SR2-04-LAS0 (T-Handle)..... CKR11YSS
- Gauge (Stainless) –  
 160 PSIG (0 to 1100 kPa), 2" Face..... K4520N14160SS
- Mounting Bracket (Stainless) ..... R10Y57-SS
- Panel Mount Nut –  
 Stainless ..... SRP-96-020  
 Plastic .....R10X51-P
- Pipe Nipple –  
 1/2" 316 Stainless Steel.....SRP-96-010
- Service Kit –  
 Relieving .....SRP-96-011  
 Non-Relieving .....SRP-96-012
- Springs –  
 0-60 PSIG Range ..... SPR-388-1-SS  
 0-125 PSIG Range ..... SPR-389-1-SS  
 0-250 PSIG Range..... SPR-390-1-SS

**Note:** Order pressure gauge and panel mount nut separately.  
**Note:** 1.75" dia. (44.5 mm) hole required for panel mounting (order panel nut separately).



### Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 250 PSIG (0 to 17.2 bar)
Relieving	1/2	SR2-04-LA00	SR2-04-KA00	SR2-04-MA00
Non-Relieving	1/2	SR2-04-YA00	SR2-04-XA00	SR2-04-ZA00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



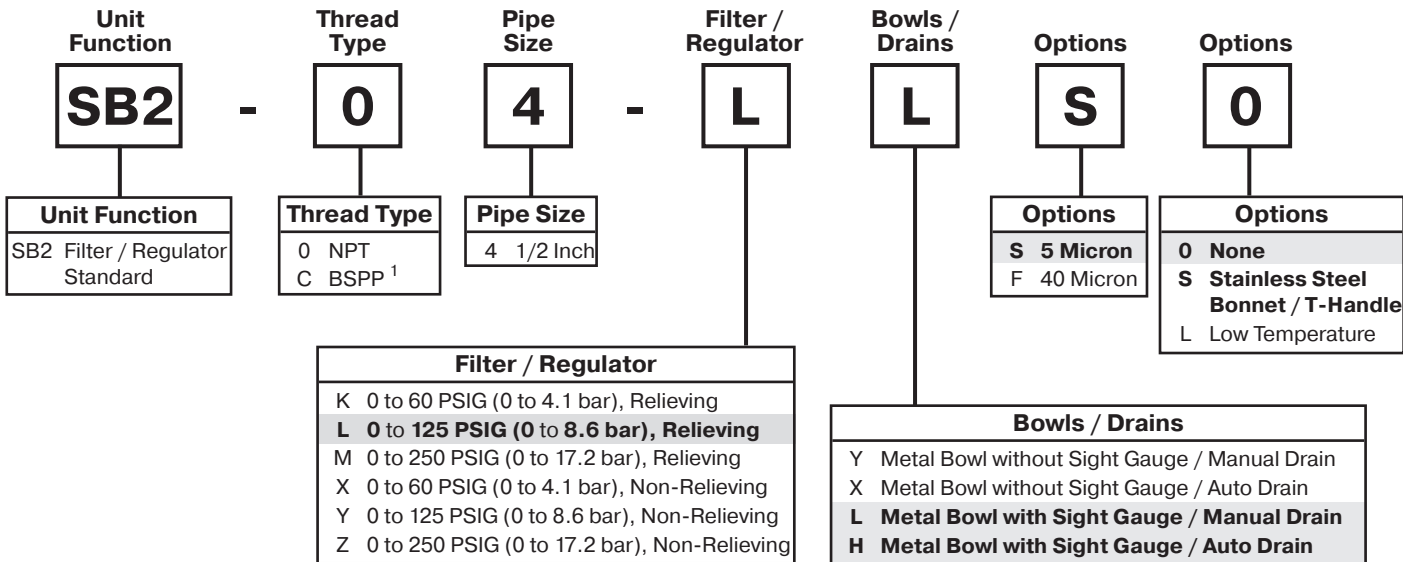
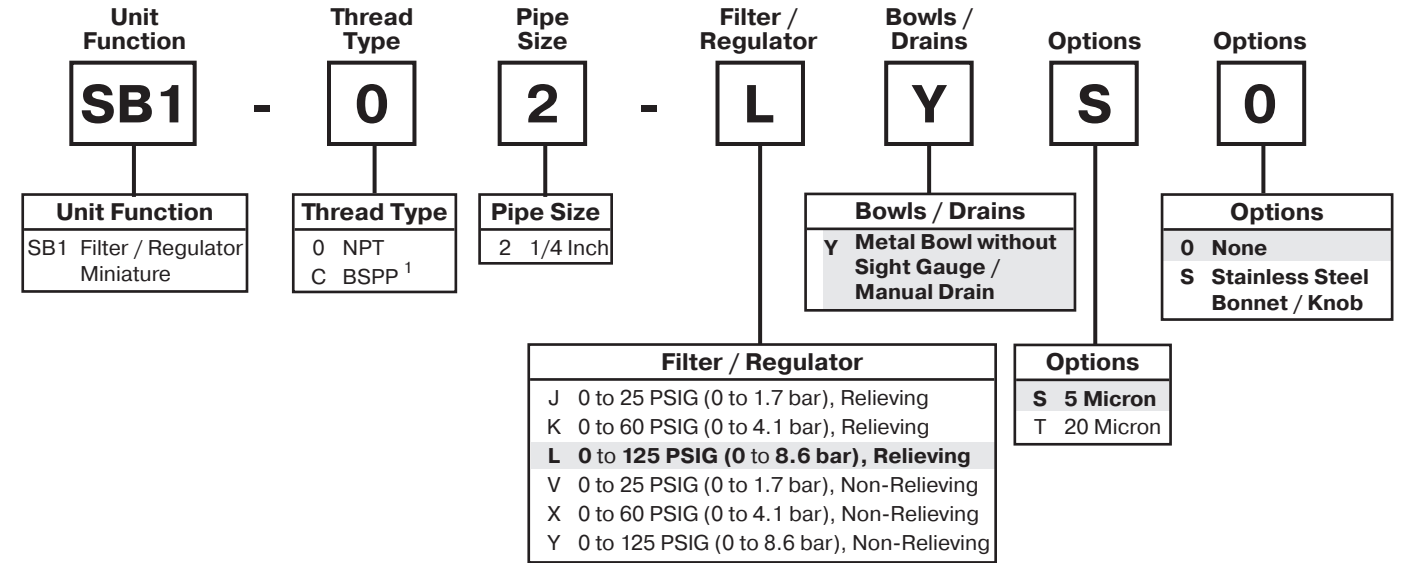
# Notes



Stainless Steel Products

# Filter / Regulator Numbering System

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<sup>1</sup> ISO, R228 (G Series)

"SB" Series Filters / Regulators, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

**NOTE:**All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

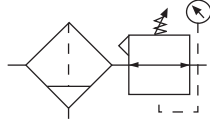
**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

**SB1 - 0 2 - L Y S 0**

Stainless Steel Products

# Filter / Regulator – Miniature SB1

= "Most Popular"



**SB1-02-LYS0**

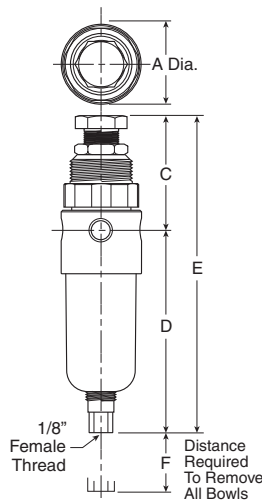
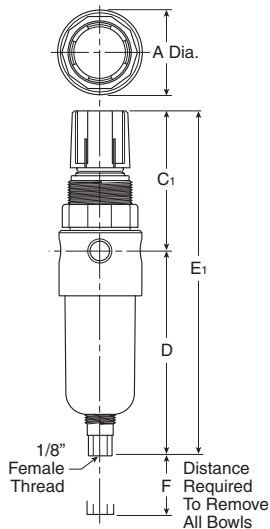


**SB1-02-LYSS**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- 1/8" Female Threaded Drain
- Meets NACE Specifications MR-01-75/ISO 15156.
- High Flow: 1/4" – 12 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.



## Dimensions

Models	Inches (mm)	A	C	C <sub>1</sub>	D	E	E <sub>1</sub>	F
Miniature Unit SB1-02-XXXX		1.56 (40)	2.17 (55)	2.63 (67)	3.63 (92)	5.80 (147)	6.26 (159)	1.58 (40)

## Specifications

Flow Capacity*	Port Size	5 Micron 12 SCFM
Bowl Capacity		1.0 Ounces
Filter Rating		5 Micron
Gauge Port		1/4 Inch
Port Threads		1/4 Inch

Pressure & Temperature Ratings –	
SB1-02-LYS0 –	300 PSIG Max (20.7 bar) 0°F to 150°F (-18°C to 66°C)
SB1-02-LYSS –	300 PSIG Max (20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –	10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

Useful Retention **	0.4 Ounce
Weight	0.8 lb. (0.36 kg)

\* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet (SB1-02-LYS0)	Acetal
Bonnet (SB1-02-LYSS)	316 Stainless Steel
Bottom Plug	316 Stainless Steel
Knob (SB1-02-LYS0)	Polypropylene
Knob (SB1-02-LYSS)	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

### WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



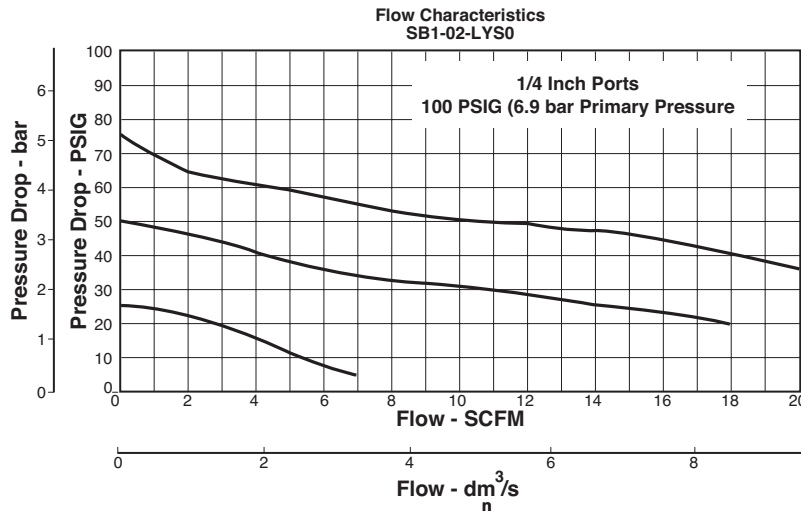
Stainless Steel Products

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### SB1 Regulator Kits & Accessories

- Bonnet Kit SB1-02-LYS0 (Knob Included) .....SRP-96-017
- Bonnet Kit SB1-02-LYSS (Knob Included) .....CKR354YSS
- Filter Element Kits –
  - Particulate (5 Micron) ..... SRP-96-001
  - Particulate (20 Micron) ..... SRP-96-002
- Gauge (Stainless) –
  - 160 PSIG (0 to 1100 kPa), 1-1/2" Face..... K4515N14160SS
- Manual Twist Drain (New) ..... SAP05481
- Manual Twist Drain (Old) ..... SRP-96-008
- Mounting Bracket (Stainless) ..... 161X57-SS
- Panel Mount Nut –
  - Stainless .....SRP-96-019
  - Plastic ..... R05X51-P
- Pipe Nipple –
  - 1/4" 316 Stainless Steel ..... SRP-96-009
- Service Kit –
  - Relieving .....SRP-96-015
  - Non-Relieving .....SRP-96-016
- Springs –
  - 0-25 PSIG Range..... SPR-375-2-SS
  - 0-60 PSIG Range ..... SPR-376-1-SS
  - 0-125 PSIG Range ..... SPR-377-1-SS

**Note:** Order pressure gauge and panel mount nut separately.  
**Note:** 1.25" dia. (32mm) hole required for panel mounting  
 (order panel nut separately).



### Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 25 PSIG (0 to 1.7 bar)	0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	SB1-02-LYS0	SB1-02-JYS0	SB1-02-KYS0
Non-Relieving	1/4	SB1-02-YYSO	SB1-02-VYS0	SB1-02-XYS0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Filter / Regulator – Standard SB2

= "Most Popular"



**SB2-04-LLS0**

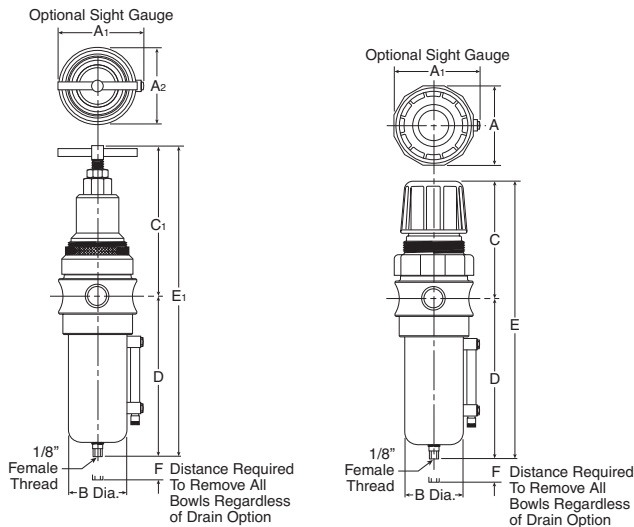


**SB2-04-LLSS**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- 1/8" Female Threaded Drain
- Meets NACE Specifications MR-01-75/ISO-15156
- Low Temperature Version Available
- High Flow: 1/2" – 72 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.



## Dimensions

Models	Inches (mm)	A	A1	A2	B	C	C1	D	E	E1	F
Miniature Unit SB2-04-XXXX		2.34 (60)	2.50 (64)	3.36 (85)	1.75 (44)	3.59 (91)	4.70 (119)	5.00 (127)	8.59 (218)	9.70 (246)	2.12 (54)

## Specifications

Flow Capacity*	Port Size	5 Micron
	1/2	72 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		5 Micron
Gauge Port		1/4 Inch
Port Threads		1/2 Inch

### Pressure & Temperature Ratings –

SB2-04-LLS0 (Metal Bowl with or without Sight Gauge)–  
300 PSIG Max. (20.7 bar)  
0°F to 150°F (-18°C to 66°C)

SB2-04-LLSS (Metal Bowl without Sight Gauge)–  
300 PSIG Max. (20.7 bar)  
0°F to 180°F (-18°C to 82°C)

SB2-04-LLSS (Metal Bowl with Sight Gauge)–  
300 PSIG Max. (20.7 bar)  
0°F to 150°F (-18°C to 66°C)

Automatic Float Drain –  
15 to 175 PSIG (1 to 12 bar)  
32°F to 150°F (0°C to 66°C)

**Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).**

Useful Retention **	1.7 Ounce
Weight	2.42 lb. (1.09 kg)

\* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet / Knob (SB2-04-LYS0)	Acetal
Bonnet / Tee Handle (SB2-04-LLSS)	316 Stainless Steel
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon
Sight Gauge	Isoplast

## ⚠ WARNING

**Product rupture can cause serious injury.  
Do not connect regulator to bottled gas.  
Do not exceed maximum primary pressure rating.**

## CAUTION:

**REGULATOR PRESSURE ADJUSTMENT** – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

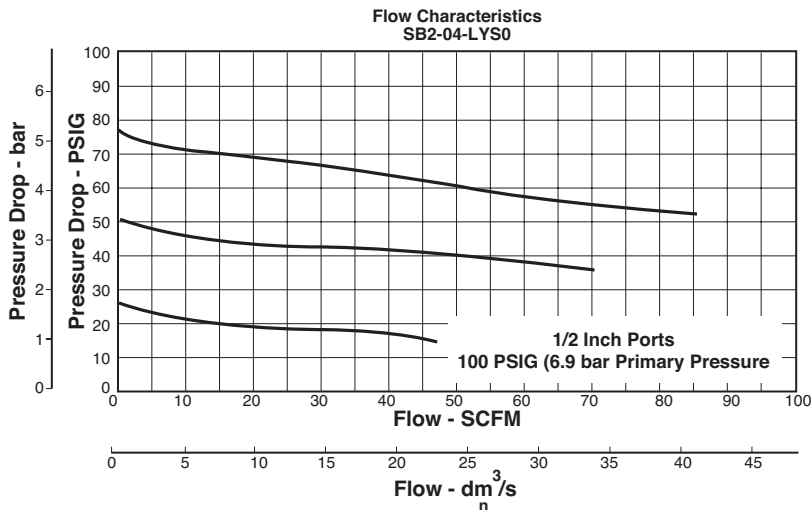
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

### SB2 Regulator Kits & Accessories

- Bonnet Kit SB2-04-LLS0 (Knob) .....SRP-96-018
- Bonnet Kit SB2-04-LLSS (T-Handle) ..... CKR11YSS
- Drain Kit –
  - Automatic Float Drain (New)..... SRP-96-27
  - Automatic Float Drain (Old) ..... SRP-96-007
  - Manual Twist Drain (New)..... SAP05481
  - Manual Twist Drain (Old) ..... SRP-96-008
- Filter Element Kits –
  - Particulate (5 Micron) ..... SRP-96-003
  - Particulate (40 Micron) ..... SRP-96-004
- Gauge (Stainless) –
  - 160 PSIG (0 to 1100 kPa), 2" Face..... K4520N14160SS
- Liquid Level Sight Gauge Kit..... SRP-96-026
- Mounting Bracket (Stainless) ..... R10Y57-SS
- Panel Mount Nut –
  - Stainless ..... SRP-96-020
  - Plastic .....R10X51-P
- Pipe Nipple –
  - 1/2" 316 Stainless Steel .....SRP-96-010
- Service Kit –
  - Relieving .....SRP-96-011
  - Non-Relieving .....SRP-96-012
- Springs –
  - 0-60 PSIG Range ..... SPR-388-1-SS
  - 0-125 PSIG Range ..... SPR-389-1-SS
  - 0-250 PSIG Range..... SPR-390-1-SS

**Note:** Order pressure gauge and panel mount nut separately.  
**Note:** 1.75" dia. (44.5 mm) hole required for panel mounting (order panel nut separately).



### Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 250 PSIG (0 to 17.2 bar)
Relieving	1/2	SB2-04-LLS0	SB2-04-KYS0	SB2-04-MYS0
Non-Relieving	1/2	SB2-04-YS0	SB2-04-XYS0	SB2-04-ZYS0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes

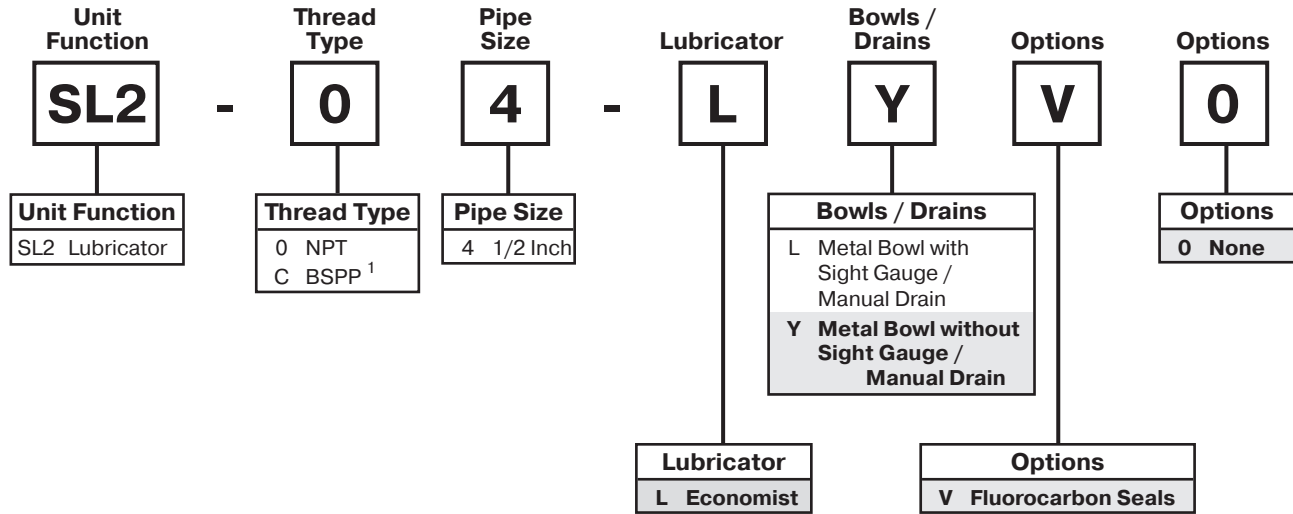


Stainless Steel Products



# Lubricator Numbering System

   = "Most Popular"



<sup>1</sup> ISO, R228 (G Series)

**Note:** When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

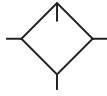
**SL2 - 0 2 - L L V 0**

**Suggested Lubricant**

Airline Oil F442001  
 Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

# Lubricator – Standard SL2

= "Most Popular"

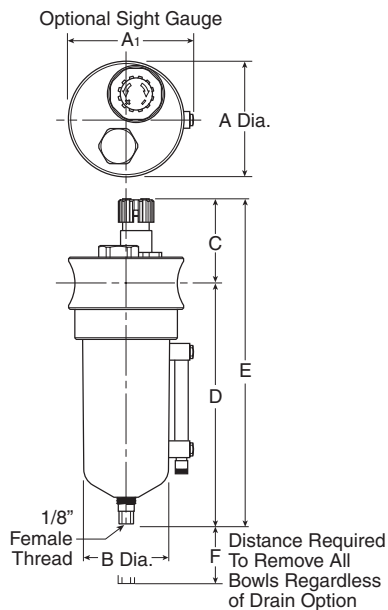


**SL2-04-LYV0**

## Features

- Stainless Steel Construction Handles Most Corrosive Environments
- 1/8" Female Threaded Drain
- Fillable Under Pressure
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/2" - 100 SCFM<sup>§</sup>

<sup>§</sup> SCFM = Standard cubic feet per minute at 90 PSIG inlet, and 5 PSIG pressure drop.



## Dimensions

Models	Inches (mm)	A	A1	B	C	D	E	F
Miniature Unit SL2-04-XXXX		2.36 (60)	2.52 (64)	1.73 (44)	2.17 (55)	5.46 (139)	7.62 (194)	3.50 (89)

## Specifications

Flow Capacity*	Port Size	100 SCFM
	1/2	
Bowl Capacity		4.0 Ounces
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –	0 to 300 PSIG (0 to 20.7 bar)	0°F to 150°F (-18°C to 66°C)
Metal Bowl with Sight Gauge –	0 to 250 PSIG (0 to 17.2 bar)	0°F to 150°F (-18°C to 66°C)
<b>Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).</b>		
Useful Retention **		4 Ounces
Weight		1.9 lb. (0.85 kg)

\* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.

\*\* Useful Retention refers to volume below the quiet zone baffle.

## Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Dip Tube	316 Stainless Steel
Drain	316 Stainless Steel
Fill Plug	316 Stainless Steel
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Isoplast

## Suggested Lubricant

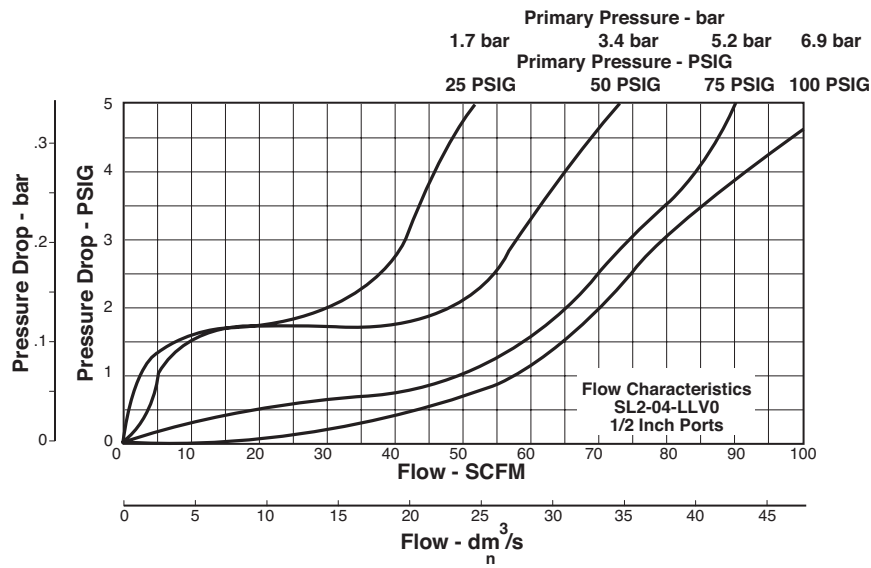
Airline Oil F442001

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F  
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

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### SL2 Filter Kits & Accessories

- Drain Kit –
  - Manual Twist Drain (New)..... SAP05481
  - Manual Twist Drain (Old) ..... SRP-96-008
- Liquid Level Sight and Gauge Kit ..... SRP-96-026
- Pipe Nipple – 1/2" 316 Stainless Steel .....SRP-96-010
- Sight Dome / Metering Screw Kit –
  - Old ..... SRP-96-025
  - New Style Nylon.....
- LRP-96-720.....



**W**  
Stainless Steel Products

### Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/2	SL2-04-LYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Notes



Stainless Steel Products



**Sources of Contamination ..... F2-F4**

**Purification Technologies ..... F5**

**Quality Standards ..... F6**

**Purity Levels ..... F7**

**Refrigeration Air Dryers –**

**SPE / DRD ..... F8-F11**

**Mini Disposable Inline Desiccant Dryer – DD10 ..... F12**

**Manual Desiccant Dryers ..... F13**

    X06..... F14-F15

    X03 / X04 ..... F16-F17

    X25..... F18

    X08..... F19

**Heatless Desiccant Air Dryers – TW ..... F21-F24**

**Automatic Electrical Drain Valve – WDV3-G ..... F25**

**Zero Air Loss Condensate Drain – ED ..... F26**

## Compressed air and its purification from generation to application

Compressed air is an essential power source that is widely used throughout industry. This safe, powerful and reliable utility can be the most important part of your production process. However, your compressed air will contain water, dirt, wear particles and even degraded lubricating oil which all mix together to form an unwanted condensate. This condensate often acidic, rapidly wears tools and pneumatic machinery, blocks valves and orifices causing high maintenance and costly air leaks. It also corrodes piping systems and can bring your production process to an extremely expensive standstill!

The quality of air required throughout a typical compressed air system can vary.

It is highly recommended that the compressed air is treated prior to entry into the distribution system as well as at each usage point or application.

This approach to system design provides the most cost effective solution to system purification as it not only removes the contamination already in the distribution system, it ensures that only the most critical areas receive air treated to the highest level.

In many instances the compressed air system will be supplying air to more than one application and although the purification equipment specified in the compressor room would remain unchanged, the point of use protection will vary depending upon the air quality requirements of each application.

In many cases this action alone is not enough, as modern production systems and processes demand an even higher level of air quality. Where required, "point of use" filtration, refrigeration or desiccant air dryers can provide the correct air quality, without the need for drying the complete compressed air installation, which can be both costly and totally unnecessary.

## Sources of contamination found in a compressed air system

Contaminants in a compressed air system can generally be attributed to the following:

The quality of air being drawn into the compressor  
Air compressors draw in a large volume of air from the surrounding atmosphere containing large numbers of airborne contaminants.

The type and operation of the air compressor  
The air compressor itself can also add contamination, from wear particles to coolants and lubricants.

Compressed air storage devices and distribution systems

The air receiver and system piping are designed to store and distribute the compressed air. As a consequence, they will also store the large amounts of contaminants drawn into the system. Additionally, piping and air receivers will also cool the moist compressed air forming condensate which causes damage and corrosion.

# Types of contamination found in a compressed air system

## Atmospheric Dirt

Atmospheric air in an industrial environment typically contains 183 million per yd<sup>3</sup> (140 million per m<sup>3</sup>) of dirt particles. 80% of these particles are less than 2 microns in size and are too small to be captured by the compressor intake filter, therefore passing directly into the compressed air system.

## Water Vapor, Condensed Water And Water Aerosols

Atmospheric air contains water vapor (water in a gaseous form). The ability of compressed air to hold water vapor is dependent upon its temperature. The higher the temperature, the more water vapor that can be held by the air. During compression, the air temperature is increased significantly, which allows it to easily retain the incoming moisture. After the compression stage, air is normally cooled to a usable temperature. This reduces the air's ability to retain water vapor, resulting in a proportion of the water vapor being condensed into liquid water which is removed by a condensate drain fitted to the compressor after-cooler. The air leaving the after-cooler is now 100% saturated with water vapor and any further cooling of the air will result in more water vapor condensing into liquid water. Condensation occurs at various stages throughout the system as the air is cooled further by the air receiver, piping and the expansion of valves, cylinders, tools and machinery. The condensed water and water aerosols cause corrosion to the storage and distribution system, damage production equipment and the end product. It also reduces production efficiency and increases maintenance costs. Water in any form must be removed to enable the system to run correctly and efficiently.

## Rust and Pipescale

Rust and pipescale can be found in air receivers and the piping of "wet systems" (systems without adequate purification equipment) or systems which were operated "wet" prior to purification being installed. Over time, this contamination breaks away to cause damage or blockage in production which can also contaminate final product and processes.

## Micro-Organisms

Bacteria and viruses will also be drawn into the compressed air system through the compressor intake and warm, moist air provides an ideal environment for the growth of micro-organisms. If only a few micro-organisms were to enter a clean environment, a sterile process or production system, enormous damage could be caused that not only diminishes product quality, but may even render a product entirely unfit for use and subject to recall.

## Liquid Oil And Oil Aerosols

Most air compressors use oil in the compression stage for sealing, lubrication and cooling. During operation, lubricating oil is carried over into the compressed air system as liquid oil and aerosols. This oil mixes with water vapor in the air and is often very acidic, causing damage to the compressed air storage and distribution system, production equipment and final product.

## Oil Vapor

In addition to dirt and water vapor, atmospheric air also contains oil in the form of unburned hydrocarbons. The unburned hydrocarbons drawn into the compressor intake as well as vaporized oil from the compression stage of a lubricated compressor will carry over into a compressed air system where it can cool and condense, causing the same contamination issues as liquid oil.

## Up to 99% of the total liquid contamination found in a compressed air system is water.

Oil is perceived to cause the most problems as it is seen emanating from open drain points and exhausting valves, however, in the majority of

instances, it is actually oily condensate (oil mixed with water) that is being observed.

## How much water can be found in a typical compressed air system?

The amount of water in a compressed air system is staggering. A small 100 SCFM (2.8m<sup>3</sup>/min) compressor and refrigeration dryer combination, operating for 4,000 hours in typical climatic conditions can produce approximately 2,200 gallons (8,328 liters) of liquid condensate per year.

If the compressor is oil lubricated with a typical 2ppm (2 mg/m<sup>3</sup>) oil carryover, then although the resulting condensate would visually resemble oil, oil would in fact account for less than 0.1% of the

overall volume and it is this resemblance to oil to which a false association is made.

The example above assumes uses a small compressor to highlight the large volume of condensate produced. If a compressed air system was operated in warmer, more humid climates, or with larger compressors installed, running for longer periods, the volume of condensate would increase significantly.

## Contamination and types of compressors

It is often believed that the level of compressed air purification equipment required in a system is dependent upon the type of compressor used. Contamination in a compressed air system originates from many sources and is not related solely to the compressor or it's lubricants. No

matter what compressor type is selected, adequate filtration and separation products will be required to remove the large volume of dirty contaminated water as well as the dirt, rust, pipescale and microbiological contamination in the system.

## Preventative maintenance provides you with the following benefits:

- Lowest operating costs
- Superior compressed air quality
- Continued protection of downstream equipment and processes
- Peace of mind

## Compressed air and it's purification

Having identified the different types of contamination that can be found within a

compressed air system, we can now examine the purification technologies available for it's removal.



## Particle and coalescing filters

Coalescing filters are probably the most important items of purification equipment in any compressed air system. They are designed to remove oil and water aerosols using mechanical filtration techniques and have the additional benefit of removing solid particulate to very low levels (as small as 0.01 micron in size). Installed in pairs, most users believe one to be an oil removal filter and the

other to be a particulate filter, when in fact, the pair of filters both perform the same function. The first filter, a general purpose filter is used to protect the high efficiency filter against bulk contamination. This "dual filter" installation ensures a continuous supply of high quality compressed air with low operational costs and minimal maintenance time.

## Bulk liquid removal high efficiency water separators

Used to protect filters in systems where excessive cooling takes place in distribution piping. Water Separators will remove in excess of 98% of bulk

liquid contamination through centrifugal separation techniques.

## Refrigeration dryers

Refrigeration dryers work by cooling the air, so are limited to positive pressure dewpoint ratings to prevent freezing of the condensed liquid. Ideal for general purpose applications, they typically provide pressure dewpoints of 38°F (3°C), 45°F (7°C) or 50°F (10°C) pdp. Air is reheated before it re-enters

the system to prevent piping from "sweating" in humid conditions. Refrigeration dryers are not suitable for installations where piping is installed in ambient temperatures below the dryer dewpoint i.e. systems with external piping.

## Adsorption (desiccant) dryers

Water vapor is water in a gaseous form and is removed from compressed air using a dryer, with dryer performance being measured as pressure dewpoint. Adsorption or desiccant dryers remove moisture by passing air over a regenerative adsorbent material which strips the moisture from the air. This type of dryer is extremely efficient and typical pressure dewpoint ratings are -40°F (-40°C) or -100°F (-70°C) pdp. This means that for water

vapor to condense into a liquid, the air temperature would have to drop below -40°F (-40°C) to -100°F (-70°C) respectively (the actual air temperature after an adsorption dryer is not the same as it's dewpoint).

Beneficially, a pressure dewpoint of -15°F (-26°C) or better will not only prevent corrosion, but will also inhibit the growth of microorganisms within the compressed air system.

## Important note regarding compressed air dryers

As adsorption and refrigeration dryers are designed to remove only water vapor and not water in a liquid form, they require the use of particulate

and coalescing filters, and possibly a bulk liquid separator to work efficiently.

# Compressed air quality standards – ISO 8573

ISO 8573 is the group of International standards relating to the quality of compressed air and consists of nine separate parts. Part 1 specifies the quality requirements of the compressed air and parts 2 - 9 specify the methods of testing for a range of contaminants.

ISO 8573.1 : 2010 is the primary document used from the ISO 8573 series and it is this document which allows the user to specify the air quality or purity required at key points in a compressed air system.

ISO8573-1 lists the main contaminants as Solid Particulate, Water and oil. The purity levels for each contaminant are shown in separate tables, however for ease of use, this document combines all three contaminants into one easy to use table.

ISO8573-1:2010 Class	Solid Particulate			Water		Oil	
	Maximum number of particles per m <sup>3</sup>			Concentration	Vapor	Liquid	Total oil (aerosol, liquid and vapor)
	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron	mg/m <sup>3</sup>	Pressure Dewpoint	g/m <sup>3</sup>	ppm (mg/m <sup>3</sup> )
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	–	≤ -94°F (-70°C)	–	0.008 (0.01)
2	≤ 400,000	≤ 6,000	≤ 100	–	≤ -40°F (-40°C)	–	0.08 (0.1)
3	–	≤ 90,000	≤ 1,000	–	≤ -4°F (-20°C)	–	0.83 (1)
4	–	–	≤ 10,000	–	≤ 37°F (3°C)	–	4.2 (5)
5	–	–	≤ 100,000	–	≤ 45°F (7°C)	–	–
6	–	–	–	≤ 5	≤ 50°F (10°C)	–	–
7	–	–	–	5 - 10	–	≤ 0.5	–
8	–	–	–	–	–	0.5 - 5	–
9	–	–	–	–	–	5 - 10	–
X	–	–	–	≤ 10	–	≤ 10	≤ 10

## Specifying Air Purity In Accordance With ISO 8573-1:2010

When specifying the purity of air required, the standard must always be referenced, followed by the purity class selected for each contaminant (a different purity class can be selected for each contaminant if required). An example of how to write an air quality specification is shown below:

Example:

### ISO 8573-1:2010 Class 1.2.1

ISO8573-1:2010 refers to the standard document and its revision, the three digits refer to the purity classifications selected for solid particulate, water and total oil. Selecting an air purity class of 1.2.1 would specify the following air quality when operating at the standard's reference conditions:

#### Class 1, Particulate

In each cubic meter of compressed air, the particulate count should not exceed 20,000 particles in the 0.1 - 0.5 micron size range, 400 particles in the 0.5 - 1 micron size range and 10 particles in the 1 - 5 micron size range.

#### Class 2, Water

A pressure dewpoint (PDP) of -40°F (-40°C) or better is required and no liquid water is allowed.

#### Class 1, Oil

In each cubic meter of compressed air, not more than 0.01mg of oil is allowed. This is a total level for liquid oil, oil aerosol and oil vapor.

## Cost Effective System Design

To achieve the stringent air quality levels required for today's modern production facilities, a careful approach to system design, commissioning and operation must be employed.

Treatment at one point alone is not enough and it is highly recommended that the compressed air is treated in the compressor room to a level that will provide general purpose air to the site and also protect the distribution piping.

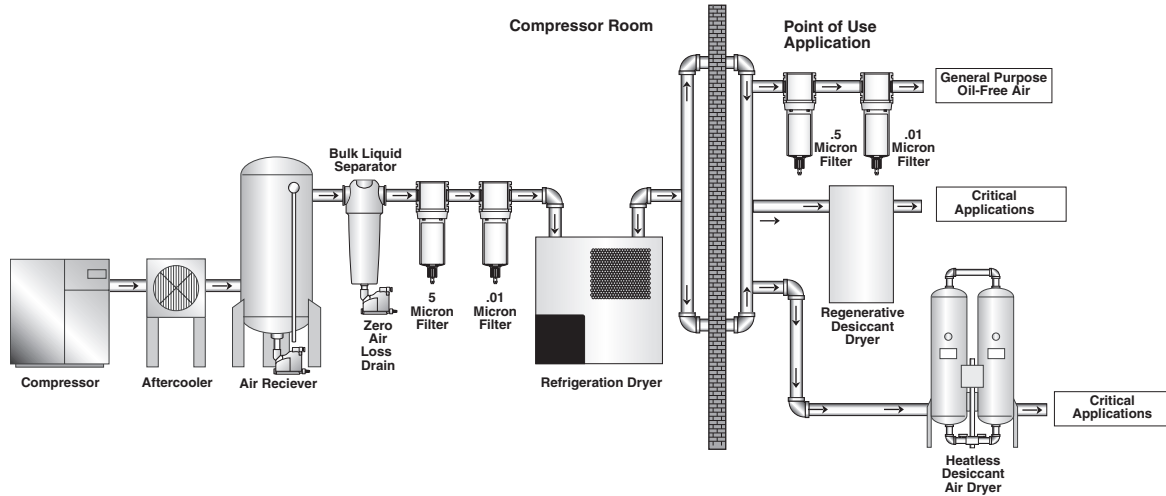
Point of use purification should also be employed, not only to remove any contamination remaining in the distribution system, but also with specific attention on the quality of air required by each application. This approach to system design ensures that air is not "over treated" and provides the most cost effective solution to high quality compressed air.

# General purpose oil free air

Bulk contamination is removed to an adequate level prior to the air entering the distribution system. Point of use particulate filter(s) are used for removal of contamination within the distribution system. Point of use adsorption dryer installed where lower dewpoints are required.

## Typical Applications

- Plant Automation
- Air Logistics
- Pneumatic Tools
- General Instrumentation
- Air Conveying
- Air Motors
- Temperature Control Systems
- Blow Guns
- Gauging Equipment
- Raw Material Mixing
- Sand / Bead Blasting

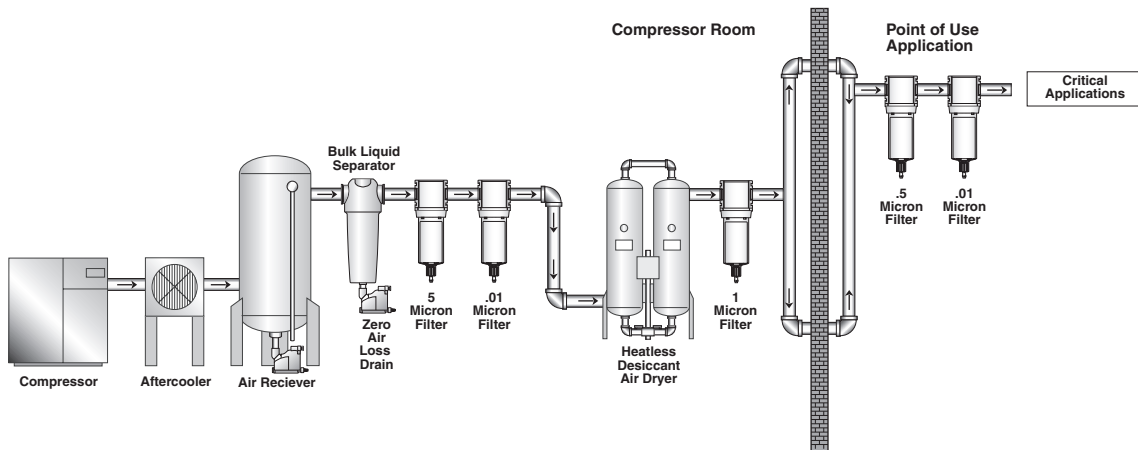


# High quality oil free air

Bulk contamination is removed to an adequate level prior to the air entering the distribution system. Point of use particulate filter(s) are used for removal of contamination within the distribution system. Adsorption dryers are used for critical applications where lower dewpoints are required.

## Typical Applications

- Blow Molding of Plastics e.g.. P.E.T. Bottles
- Film Processing
- Critical Instrumentation
- Advanced Pneumatics
- Air Blast Circuit Breakers
- Decompression Chambers
- Cosmetic Production
- Medical Air
- Dental Air
- Lasers and Optics
- Robotics
- Spray Painting
- Air Bearings
- Pipeline Purgig
- Measuring Equipment



# SPE010 - SPE0250



- “Plug & Play” design for easy installation and operation
- Small space saving design
- High reliability, easy to use and maintain
- All models equipped standard with a digital controller
  - controls integral timed drain
  - various warning and alarms
  - on/off indicator
- Drain has access from both sides
- Non cycling dryer

# DRD325 - DRD2400



☐  
=  
“Most Popular”

- Optimum dewpoint levels for highest system performance
- Advanced patented design solutions
- High reliability, easy to use and maintain
- Unique 4-in-1 SmartPack heat exchanger
- Integral drain
- Extremely low pressure drop design
- SmartControl energy saving function (cycling dryer)
- Excellent dewpoint performances
- Advanced compliant scroll compressor

Capacity SCFM @ 100 psig (m <sup>3</sup> /min @ 6.9 bar)	Primary voltage	Part number	Pipe size (NPT) ‡	Recommended filtration		
				Bulk separator	Pre-filter (5µ particulate)*†	Post-filter (.01µ coalescing w DPI)
10 (17)	115V/1 ph / 60 Hz	SPE010-A11516016TIU	1/2"	WSA-04-FM0	M18-04-BH00B *	M18-04-CH00B
15 (26)	115V/1 ph / 60 Hz	SPE015-A11516016TIU	1/2"	WSA-04-FM0	M18-04-BH00B *	M18-04-CH00B
25 (43)	115V/1 ph / 60 Hz	SPE025-A11516016TIU	1/2"	WSA-04-FM0	M18-04-BH00B *	M18-04-CH00B
35 (60)	115V/1 ph / 60 Hz	SPE035-A11516016TIU	3/4"	WSA-06-FM0	M28-06-BH00B *	M28-06-CH00B
50 (85)	115V/1 ph / 60 Hz	SPE050-A11516016TIU	3/4"	WSA-06-FM0	M28-06-BH00B *	M28-06-CH00B
75 (127)	115V/1 ph / 60 Hz	SPE075-A11516016TIU	1"	WSA-08-FM0	F90-08-SL00 †	M90-08-CL00
100 (170)	115V/1 ph / 60 Hz	SPE100-A11516016TIU	1"	WSA-08-FM0	F90-08-SL00 †	M90-08-CL00
125 (212)	115V/1 ph / 60 Hz	SPE125-A11516016TIU	1"	WS0-08-000B	F90-08-SL00 †	M90-08-CL00
150 (255)	115V/1 ph / 60 Hz	SPE150-A11516016TIU	1-1/2"	WS0-0B-000B	F35-0B-F00 †	M35-0B-F00
175 (297)	115V/1 ph / 60 Hz	SPE175-A11516016TIU	1-1/2"	WS0-0B-000B	F35-0B-F00 †	M35-0B-F00
175 (297)	230 V/1 ph / 60 Hz	SPE175-A23016016TIU	1-1/2"	WS0-0B-000B	F35-0B-F00 †	M35-0B-F00
200 (340)	230 V/1 ph / 60 Hz	SPE200-A23016014TIU	1-1/2"	WS0-0B-000B	F35-0B-F00 †	M35-0B-F00
250 (425)	230 V/1 ph / 60 Hz	SPE250-A23016014TIU	1-1/2"	WS0-0B-000B	F35-0B-F00 †	M35-0B-F00
325 (552)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD325-A23036014EI DRD325-A46036014EI	2" NPT-F	WS0-0C-000B	F35-0C-F00	M35-0C-F00
400 (680)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD400-A23036014EI DRD400-A46036014EI	2" NPT-F	WS0-0C-000B	F35-0C-F00	M35-0C-F00
500 (849)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD500-A23036014EI DRD500-A46036014EI	2" NPT-F	WS0-0C-000B	F35-0C-F00	M35-0C-F00
700 (1189)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD700-A23036014EI DRD700-A46036014EI	3" NPT-M	WS0-0E-000B	F43-0E-F00	M43-0E-F00
800 (1359)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD800-A23036014EI DRD800-A46036014EI	3" NPT-M	WS0-0E-000B	F43-0E-F00	M43-0E-F00
1000 (1700)	460V/3ph/60Hz	DRD1000-A46036014EI	3" NPT-M	WS0-0E-000B	F43-0E-F00	M43-0E-F00
1200 (2039)	460V/3ph/60Hz	DRD1200-A46036014EI	3" NPT-M	WS0-0E-000B	F43-0E-F00	M43-0E-F00
1600 (2718)	460V/3ph/60Hz	DRD1600-A46036014EI	4" Flg.	WWSA1000F	M55-0F-F00*	M55-0F-FS0
2000 (3400)	460V/3ph/60Hz	DRD2000-A46036014EI	6" Flg.	WWSA1800F	M55-0H-F00*	M55-0H-FS0
2400 (4078)	460V/3ph/60Hz	DRD2400-A46036014EI	6" Flg.	WWSA1800F	M55-0H-F00*	M55-0H-FS0

‡ SPE010-025 are 1/2" NPT compatible. SPE035-0250 are manufactured with BSPP-F ports, but come standard with BSP to NPT adapter.

\* 0.5µ coalescing

† 5 micron

The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains condensate which, when cooled, will turn into liquid water, causing extensive damage not only to the compressed air network, but also to the finished product.

DRD refrigeration dryers actively remove this condensate to achieve extremely dry compressed air.

Our SmartPack heat exchanger offers minimal pressure drops and class leading performance, and significantly increases the efficiency of the whole compressed air treatment process. The innovative SmartControl function automatically and continuously adjusts dryer operation to the effective working conditions, minimizing operating costs and maximizing performances.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.



## Smart Technology: The Benefits

### SmartPack Heat Exchanger Provides Less Than 2 PSI Pressure Drop

The SmartPack (patent pending) heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing.

The geometry of the heat exchanger has been designed in order to optimize its performances. In particular, large volumes allow low air velocity through the heat exchanger section, resulting in high exchange efficiency and low pressure drops. Pressure drops are further improved thanks to the absence of interconnecting pipes through the different sections of the heat exchanger and to a straight forward path of the compressed air flow with smooth and minimum changes of flow directions.

### Smart BMS Interface

Simple BMS interface includes:

- RS485 serial card provides direct communication to Modbus. Requires no gateway or A.N.I.
- Provides visualization of dewpoint, alarm conditions and service indication.
- Provides remote control of the dryer including on/off and alarm reset (depending on actual alarm)

### SmartDrain - Dual Mode Zero Air Loss Drain

The drainage chamber is integrated into the heat exchanger while the valve mechanism is fitted in an easily accessible drain niche. The SmartDrain continuously adjusts itself to the actual working conditions, ensuring zero air loss and a notable reduction in system power consumption.

An innovative control system continuously monitors for fault situations. If a fault does occur, an alarm is signaled and the drain switches to conventional timed solenoid drain operation. The dual mode circuitry ensures maximum reliability.

### Smart Control With SmartSave Cycling

The multifunction SmartControl provides a versatile platform for user interface and SmartSave Cycling (if enabled). The innovative SmartSave (patent pending).

Cycling Control continuously monitors the demand placed on the dryer. At conditions of low demand the refrigerant compressor is cycled off to save energy. A sophisticated algorithm continuously adapts the operation of the dryer for optimum energy efficiency while minimizing the dewpoint spikes common to traditional thermal mass dryers.

### Compliant Scroll Compressors

These units feature Compliant Scroll compressors, offering energy savings of 20 -30% when compared with piston compressors. The ability to tolerate liquid returns coupled with 50% less moving parts render them nearly indestructible and highly reliable. Low vibration levels increase overall refrigeration circuit.

= "Most Popular"

**Operating information**

Dryer Models	Dewpoint	Operating pressure		Operating temperature		Ambient maximum	Electrical supply	Thread	Noise level bB(A)	Refrigerant type
		Min	Max	Min	Max					
SPE010 - SPE050	ISO 8573-1 Class 5	29 psig (2 bar)	232 psig (16 bar)	41°F (5°C)	149°F (65°C)	122°F (50°C)	115V 1ph 60 Hz	NPT	<75	R134a
SPE075 - SPE0175			203 psig (14 bar)		230 1ph 60 Hz					
SPE0200 - SPE0250										

**Controller Functions**

Dryer Models	Power on indication	Visual fault indication	Compressed air temperature	Dryer service indicator	Fault relay power loss
SPE010-0250	X	X	X	X	X

**Quality Assurance / IP Rating / Pressure Vessel Approvals**

Development/Manufacture ISO 9001 / ISO 14001  
 Ingress Protection Rating IP22 Indoor Use Only

**Product Selection and Correction Factors**

Capacities are based upon: Ambient temperature - 100°F (38°C); inlet temperature - 100°F (38°C); and working pressure - 100 psig (7 bar g)

Minimum Drying Capacity = System flow x CFIT x CFATx CFMIP

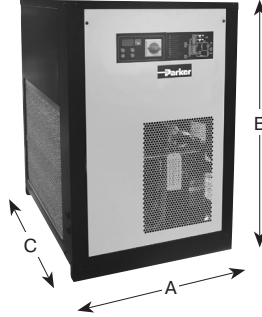
NOTE: Flowrate, temperatures, and pressure MUST be provided by customer.

Example: 50 scfm flowrate Inlet temperature - 100°F (38°C) = 1.0  
 Max ambient temperature - 110°F (43°C) = 1.08  
 Min inlet pressure - 80°F (27°C) = 1.09  
 50 (1.0) + 1.08 + 1.09 = 59, therefore, a larger 75 scfm dryer is required

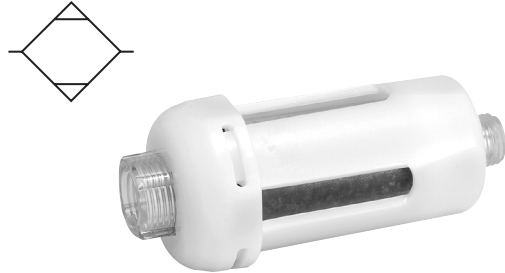
	SPE010 - SPE0250										DRD325 - DRD2400							
<b>CFIT - Correction factor minimum inlet temperature</b>																		
°F	90	95	100	110	120	130	140	149			90	100	110	120	130	140		
°C	32	35	38	43	49	54	60	65			32	38	43	49	54	60		
Factor	0.74	0.82	1.00	1.33	1.76	2.38	2.60	2.67			1.22	1.00	0.82	0.68	0.56	0.46		
<b>CFAT - Correction factor maximum ambient temperature</b>																		
°F	60	70	80	90	95	100	110	120	122		70	80	90	100	110	120	122	
°C	16	21	27	32	35	38	43	49	50		21	27	32	38	43	49	50	
Factor	0.93	0.93	0.93	0.93	0.96	1.00	1.08	1.16	1.18		1.22	1.15	1.05	1.00	0.94	0.79	0.71	
<b>CFMIP - Correction factor minimum inlet pressure</b>																		
psig	45	60	80	100	125	145	150	160	175	200	232	60	80	100	125	150	174	203
bar	3	4	6	7	9	10	10	11	12	14	16	3	6	7	9	10	12	14
Factor	1.40	1.17	1.09	1.00	0.88	0.83	0.82	0.81	0.79	0.75	0.71	0.83	0.93	1.00	1.07	1.12	1.15	1.18

Dimensions	Part number	A width	B height	C depth	Weight (kg)
	SPE010-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	53 (24)
	SPE015-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	53 (24)
	SPE025-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	55 (25)
	SPE035-A11516016TIU	13.0 (330)	22.8 (580)	21.7 (550)	77 (35)
	SPE050-A11516016TIU	13.0 (330)	22.8 (580)	21.7 (550)	79 (36)
	SPE075-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	101 (46)
	SPE0100-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	101 (46)
	SPE0125-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	104 (47)
	SPE0150-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	117 (53)
	SPE0175-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	121 (55)
	SPE0175-A23016016TIU	15.7 (400)	25.6 (650)	24.8 (630)	121 (55)
	SPE0200-A23016014TIU	17.7 (450)	33.1 (840)	30.7 (780)	176 (80)
SPE0250-A23016014TIU	17.7 (450)	33.1 (840)	30.7 (780)	176 (80)	

= "Most Popular"

Dimensions	Part number	A width	B height	C depth	Weight (kg)
 <p>Inches (mm)</p>	<b>DRD325-DRD2400</b>				
	<b>DRD325-A23036014EI</b>	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
	<b>DRD400-A23036014EI</b>	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
	<b>DRD500-A23036014EI</b>	28.0 (711)	42.0 (1067)	41.0 (1041)	342 (155)
	<b>DRD700-A23036014EI</b>	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
	<b>DRD800-A23036014EI</b>	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
	<b>DRD1000-A46036014EI</b>	32.0 (813)	52.0 (1321)	46.0 (1168)	551 (250)
	<b>DRD1200-A46036014EI</b>	40.0 (1016)	67.0 (1702)	43.0 (1092)	816 (370)
	<b>DRD1600-4A6036014EI</b>	40.0 (1016)	68.0 (1727)	71.0 (1803)	1279 (580)
	<b>DRD2000-A46036014EI</b>	40.0 (1016)	68.0 (1727)	71.0 (1803)	1477 (670)
<b>DRD2400-A46036014EI</b>	40.0 (1016)	68.0 (1727)	71.0 (1803)	1521 (690)	

# Mini Disposable Inline Desiccant Dryer DD10



Used at the point-of-use, this disposable, mini inline desiccant dryer removes all traces of water vapor, oil vapor and dirt. It is often used directly upstream of blow guns or spray guns as final protection for critical parts blow off and paint spraying. Install in either direction; it functions in both directions.

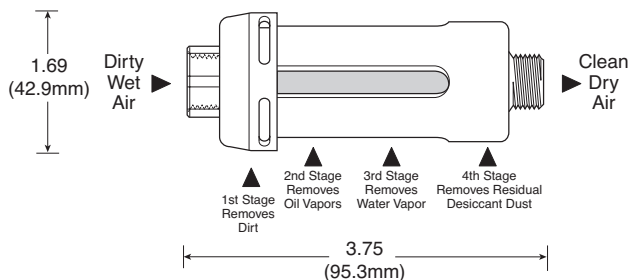
A 40 micron, porous bronze element removes fine dirt particles, an oil removing media removes oil vapor, and desiccant beads adsorb water vapor. The see-through housing shows desiccant color change from the original orange to a green color in the desiccant beads, which indicates that the dryer needs to be replaced.

## Features

- Polycarbonate Material Allows Clear Desiccant Visibility
- Disposable
- Used for Parts Blow Off
- Protection for Paint Guns Below the Filter / Dryer
- Non-toxic Desiccant Standard

Non-metallic material is highly resistant to chemicals.

See through housing shows color change when dryer needs replacement.



## Specifications

Maximum Pressure Rating	125 PSIG (0 to 8.6 bar)	
Maximum Temperature Rating	130°F (54°C)	
Maximum Flow Capacity	15 SCFM	
Port Size	NPT	1/4
Weight	lb. (g)	2.8 oz. (79.4)

## Materials of Construction

Housing	Polycarbonate
---------	---------------

## Installation

The DD10 is equipped with a 1/4" NPT (F) and (M) ports and can be installed in either direction. When installing the filter / dryer hand tighten to a leak proof seal. Do not use any mechanical means to hold the filter / dryer and do not over torque the threads.

## Operation

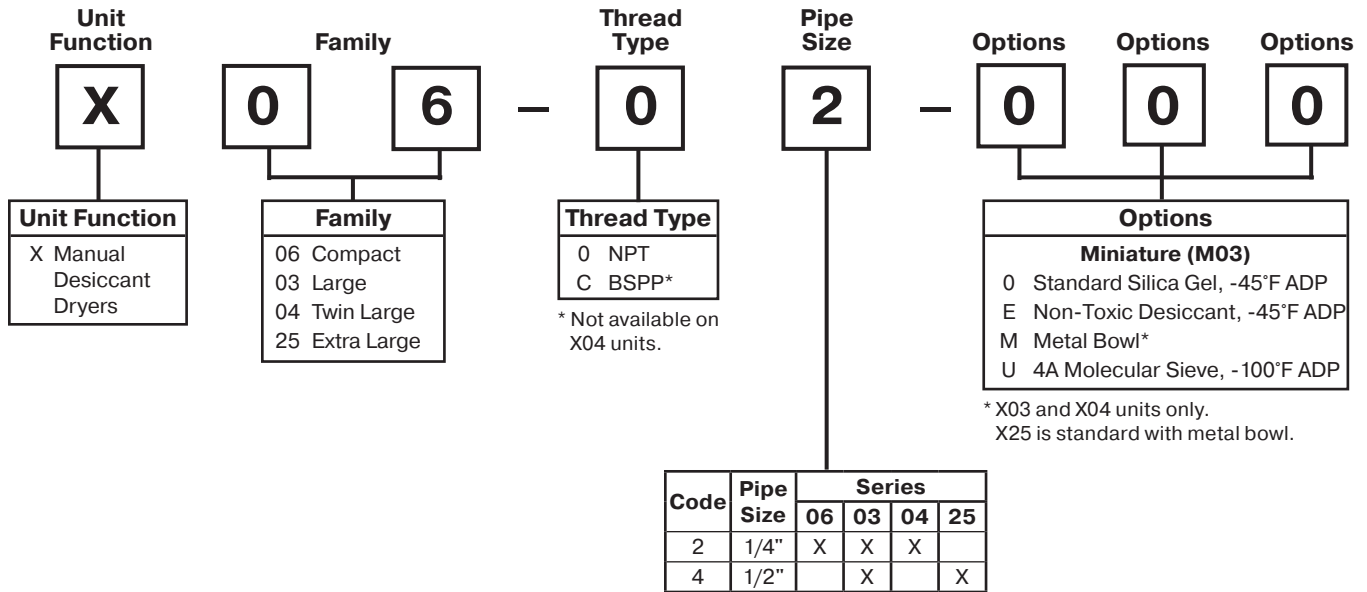
1. The unique feature of the filter / dryer design allows you to visually see when it is time to install a new DD10 by observing the color change from the original dark color to a complete light transparent color in the desiccant beads.
2. Do not attempt to clean the filter / dryer as the use of solvents, ketones, etc., will adversely affect the plastic housing.
3. Keep the hose free of snags. Extra tension on the filter / dryer assembly could break the unit at the connecting ports. To clear stuck hoses, grasp hose below the filter / dryer.

## Ordering Information

Model Type	Port Size	Model Number
DD10	1/4	DD10-02



# Manual Desiccant Dryer Numbering System

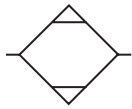


If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

**NOTE:** 000 in position 6, 7, and 8 signifies standard product.

# Desiccant Dryer X06

= "Most Popular"



**X06-02-000**

## Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System

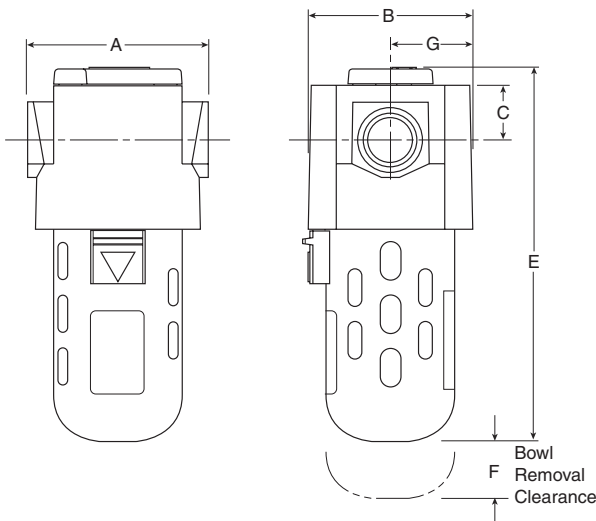
## Specifications

Atmospheric Dew Point*–		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*		5 SCFM (2.3 dm <sup>3</sup> /s)
Maximum Pressure		150 PSIG (10.3 bar)
Maximum Temperature		125°F (52°C)
Port Size	NPT / BSPP-G	1/4
Total Air Flow*	1/4	600 SCF (16.6 m <sup>3</sup> )
Total Minutes of Operation @ Continuous Air Flow		120 Minutes
Weight (with Desiccant)	lb. (kg)	1.13 (0.51)
Weight Desiccant Alone	lb. (kg)	0.25 (0.11)

\* With dry desiccant at 100 PSIG (7 bar) and 70°F (21°C), saturated inlet (100% RH).

## Materials of Construction

Body		Zinc
Bowls	Plastic	Polycarbonate
Bowl Guard		Steel
Seals		Fluorocarbon



## Dimensions

Models	Inches (mm)	A	B	C	E	F	G
Standard Unit X06-02-000		2.99 (75.9)	2.72 (69)	.90 (22.8)	6.41 (162.8)	1.50 (38)	1.36 (34.5)

= "Most Popular"

### Replacement Parts

- Bowl Guard ..... GRP-95-013
- Bowl O-ring ..... GRP-95-259
- Transparent Bowl..... DRP-96-459

### Replacement Desiccant Kits

#### Silica Gel (000) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X06
DRP-95-303	DRP-04-10B/001	1
	DRP-04-10B/005	5

#### Non Toxic Desiccant (E00) -40°F ADP

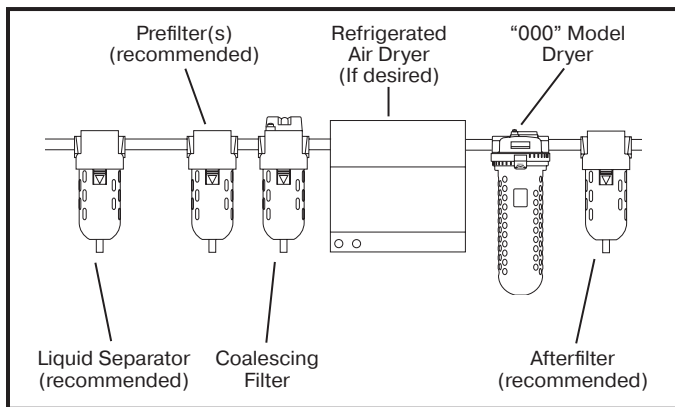
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X06
	DRP-04-447/001	1
	DRP-04-447/005	5

#### 4A Molecular Sieve (U00) -100°F ADP

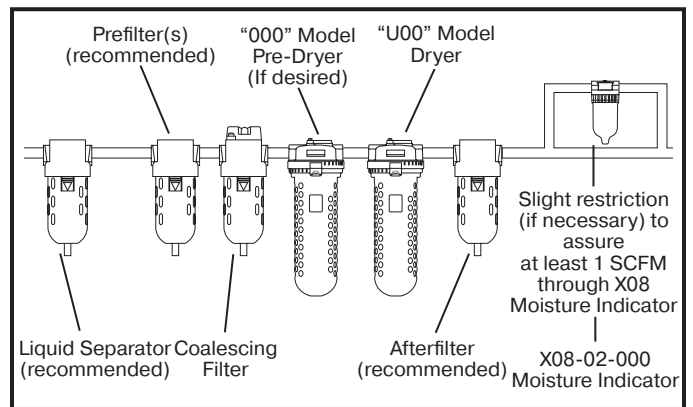
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X06
DRP-95-304	DRP-04-514/001	1
	DRP-04-514/005	5

### Typical Installation Arrangement

#### -45°F ADP Models:



#### -100°F ADP Models:



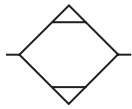
### Ordering Information

Model Type	Port Size	Polycarbonate Bowl
X06	1/4	X06-02-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Desiccant Dryer X03 / X04

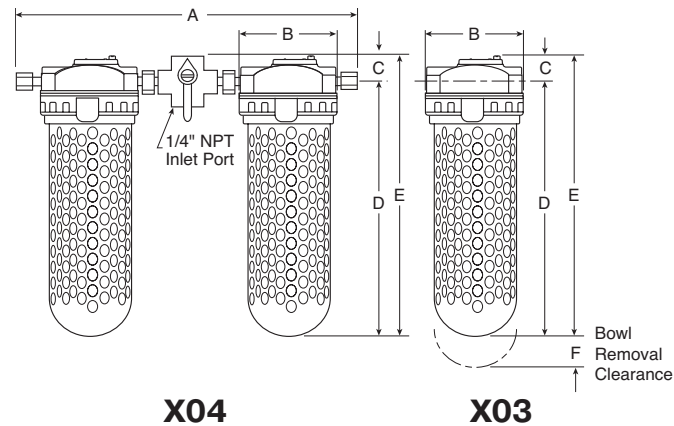
 = "Most Popular"



**X03-02-000**

## Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Twin Units Available for Double Service Life
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit X03-02-000		—	4.79 (121.6)	1.23 (31)	12.60 (320)	13.83 (351)	2.00 (50.8)
Metal Bowl X03-02-M00		—	4.79 (121.6)	1.23 (31)	11.37 (320)	10.00 (351)	2.00 (50.8)
Standard Twin Unit X04-02-000		14.42 (366)	4.79 (121.6)	1.23 (31)	11.71 (297.4)	12.65 (322)	2.00 (50.8)

## Specifications

Atmospheric Dew Point* –		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*	10 SCFM (4.7 dm <sup>3</sup> /s)	
Maximum Pressure	150 PSIG (10.3 bar)	
Maximum Temperature –		
X03 Transparent Bowl	125°F (52°C)	
X03 Metal Bowl	150°F (66°C)	
X04 Transparent Bowl	125°F (52°C)	
Port Size –		
X03	NPT / BSPP-G	1/4, 1/2
X04	NPT	1/4
Total Air Flow*	1/4	4,400 SCF (311 m <sup>3</sup> )
Total Minutes of Operation @		
Continuous Air Flow	X03	440 Minutes
	X04	880 Minutes
Weight (with Desiccant) lb. (kg) –		
X03 Transparent Bowl	7.4 (3.4)	
X03 Metal Bowl	6.8 (3.1)	
X04 Transparent Bowl	15.0 (6.8)	
Weight Desiccant Alone lb. (kg) –		
X03 Transparent Bowl	1.8 (0.8)	
X03 Metal Bowl	1.3 (0.6)	
X04 Transparent Bowl	3.6 (1.6)	

\* With dry desiccant at 100 PSIG (7 bar) and 70°F (21°C), saturated inlet (100% RH).

## Materials of Construction

Body	Zinc	
Bowls	Plastic Metal Bowl	Polycarbonate Aluminum
Bowl Guard	Steel	
Seals	Fluorocarbon	

= "Most Popular"

### Replacement Parts

Bowl Guard –	
X03 / X04 Transparent Bowl .....	GRP-95-810
Bowl O-ring .....	GRP-95-256
Clamp Ring .....	GRP-96-404
Moisture Indicator* –	
X03 Metal Bowl .....	DRP-95-623
Replacement Cap for Moisture Removal .....	GRP-95-020
Screen Assembly.....	DRP-96-434
Transparent Bowl –	
X03 / X04 .....	GRP-95-089
Tube Assembly with Screen –	
X03 / X04 Transparent Bowl .....	DRP-96-435
X03 Metal Bowl .....	DRP-96-451

\* The Moisture Indicator contains a weep orifice to provide an air sample to the moisture indicating paper. Air bleed from this indicator is necessary and normal.

### Replacement Desiccant Kits

#### Silica Gel (000) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X03
DRP-85-059	DRP-14-10B/002	1
	DRP-14-10B/008	4

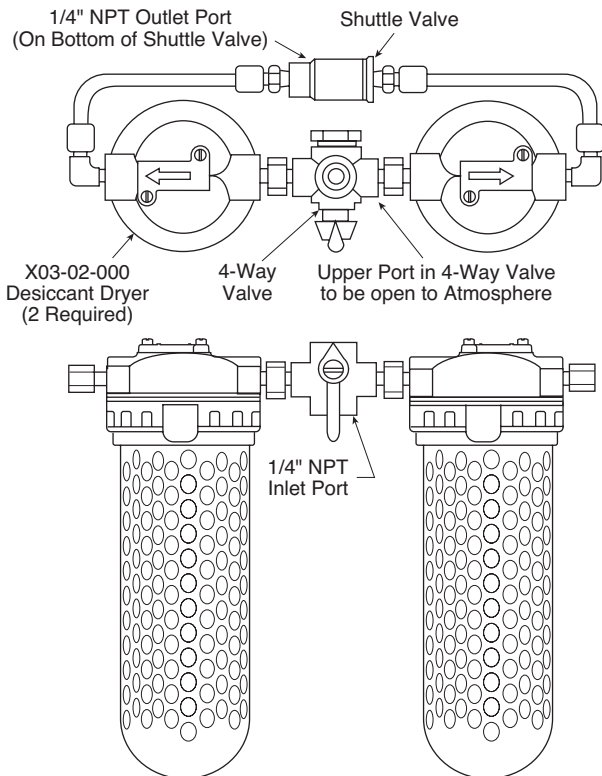
#### Non Toxic Desiccant (E00) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X03
	DRP-14-447/002	1
	DRP-14-447/008	4

#### 4A Molecular Sieve (U00) -100°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X03
DRP-85-060	DRP-14-514/002	1
	DRP-14-514/008	4

Note: Since X04 consists of two X03 dryers assembled together the amount of desiccant required for a total recharge is twice the amount listed above.



**X04-02-000**

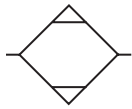
### Ordering Information

Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
<b>X03</b>	1/4	X03-02-000	X03-02-M00
<b>X04</b>	1/4	X04-02-000	X04-02-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

# Desiccant Dryer X25

= "Most Popular"



**X25-04-000**

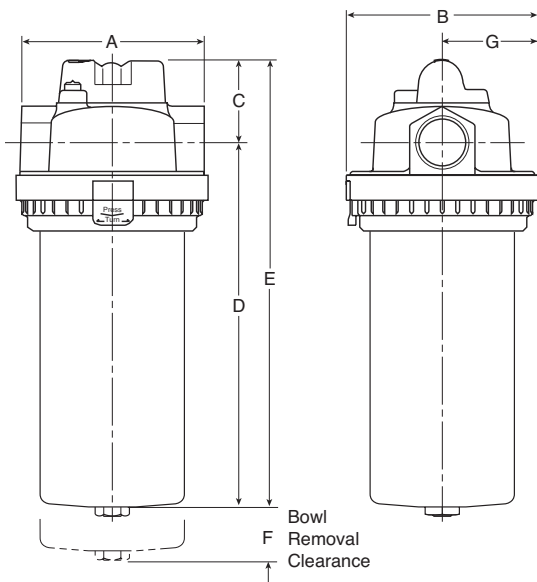
## Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System

## Ordering Information

Model Type	Port Size	Metal Bowl
<b>X25</b>	1/2	X25-04-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit X25-04-000		4.61 (117)	4.79 (121.6)	1.70 (43)	19.58 (497)	21.28 (540.5)	2.00 (50.8)	2.39 (60.8)

## Specifications

Atmospheric Dew Point*-		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*	25 SCFM (11.8 dm <sup>3</sup> /s)	
Maximum Pressure	150 PSIG (10.3 bar)	
Maximum Temperature	150°F (66°C)	
Port Size	NPT / BSPP-G	1/2
Total Air Flow*	11,000 SCF (311 m <sup>3</sup> )	
Total Minutes of Operation @ Continuous Air Flow		
		440 min.
Weight (with Desiccant)	lb. (kg)	11.23 (5.1)
Weight Desiccant Alone	lb. (kg)	4.4 (2.0)

\* With dry desiccant at 100 PSIG (7 bar) and 70°F 21°C, saturated inlet (100% RH).

## Materials of Construction

Body	Zinc	
Bowls	Metal Bowl	Aluminum
Bowl Guard	Aluminum	
Seals	Fluorocarbon	

## Replacement Parts

Bowl O-ring.....	GRP-95-256
Clamp Ring .....	GRP-96-404
Moisture Indicator* DRP-95-623	
Replacement Cap for Moisture Removal .....	GRP-95-020
Screen Assembly.....	DRP-96-434
Tube Assembly with Screen.....	DRP-95-622

\* The Moisture Indicator contains a weep orifice to provide an air sample to the moisture indicating paper. Air bleed from this indicator is necessary and normal.

## Replacement Desiccant Kits

### Silica Gel (000) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X25
DRP-85-280	DRP-14-10B/005	1
	DRP-14-10B/015	3

### Non Toxic Desiccant (E00) -40°F ADP

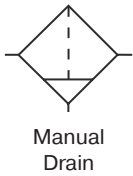
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X25
	DRP-14-447/005	1
	DRP-14-447/015	3

### 4A Molecular Sieve (U00) -1000F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X25
DRP-85-281	DRP-14-514/005	1
	DRP-14-514/015	3

# Moisture Indicator X08

= "Most Popular"



**X08-02-000**

## Specifications

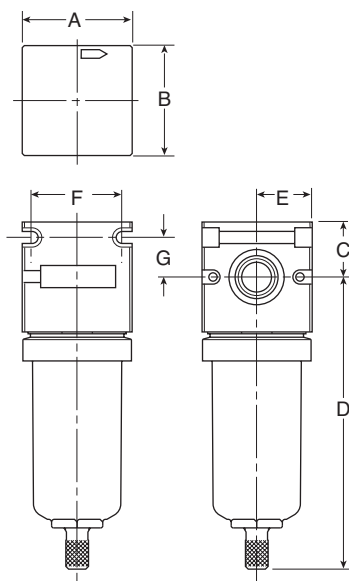
Maximum Supply Pressure	150 PSIG (10.3 bar)	
Operating Temperature	32° to 120°F (0° to 49°C)	
Port Size	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	0.34 (0.15)

## Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polyurethane
Seals	Nitrile	

## Features

- Transparent Plastic Bowl Standard
- Silica Gel Changes Color For Moisture Indication



## Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit X08-02-000		1.59 (40.5)	1.59 (40.5)	0.81 (20.6)	4.25 (107.9)	5.06 (128.5)	0.80 (20.2)	0.58 (14.7)	1.31 (33.3)

## What is adsorption drying?

Drying compressed air through adsorption represents a purely physical process in which water vapor (adsorbate) is bound to the drying medium (adsorbent) through binding forces of molecular adhesion. Adsorbents are solids in spherical and granular form which are permeated by an array of pores. The water vapor is deposited onto the internal and external surface of the adsorption medium, without the formation of chemical compounds taking place, therefore the adsorption medium does not have to be replenished but only periodically regenerated.

### Heatless

The layout of adsorption dryers with heatless regeneration is clear and simple. Compared with other adsorption dryer systems, pressure dewpoints down to -100°F (-73°C) can be achieved without additional effort.

Use in the higher pressure ranges and at low inlet temperatures causes the quantity of air needed for desorption to be reduced to an economical value.

At low operating pressure the demand for already dried compressed air for purposes of regeneration is increased. This increase causes a large proportion of the prepared compressed air to be no longer available for productive purposes.

Depending on the cycle, the quantity of air enclosed in the adsorber expands upon release at regular intervals with an emission noise level of about 90-95dB(A). Given suitable noise attenuation measures, a reduction of the noise emission level to the region of 10-15 dB(A) can be accomplished.

The use of adsorption dryers with heatless regeneration is preferred in the following applications:

- Capacity Range of Up to 800 SCFM
- Higher Pressure Ranges
- High Inlet Temperatures
- Installation in Explosion Proof Areas
- Use Under Ground Portable Applications
- Hazardous Locations (Pneumatic Controls)



# Heatless Desiccant Air Dryers TW Series

 = "Most Popular"


The TW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as pressure swing adsorption. Pressure dewpoints of  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) standard are attained by directing the flow of saturated compressed air over a bed of desiccant.

## Features

Allen-Bradley® PLC

- Two year dryer warranty (parts and labor)
- 4 line display
- NEMA 4X enclosure
- Selectable cycles

Switching Valves

- Five year switching valve warranty from manufacturer's defects (see warranty policy)

Factory Installed Filtration

- Single point connection for system integrity
- Differential pressure gauges for element condition
- Filter drains

Regulated Purge

- Factory set
- Optimum purge regardless of operating pressure
- Repressurization circuit

## Specifications

Inlet or Ambient Air Temperature	120°F (49°C) maximum 50°F (10°C) minimum inlet
Operating Pressure	80 PSIG (5.5 bar) minimum
Working Pressure	150 PSIG (10.5 bar) maximum
Pressure Drop At Rated Flow	Less than 5 PSI (0.34 bar)
Primary Voltage	120V/1ph/60Hz

## Heatless Desiccant Air Dryers, Filtration comes with Dryer unit as standard.

Part number	Capacity SCFM @ 100 psig	Approximate purge scfm	Dryer air port in/out (NPT)	Pre-filter	After-filter
TW41BN14NNN	40	6	1/2"	AAP015CFNI	AOP015CNFI
TW56BN14NNN	55	8	3/4"	AAP020DFNI	AOP020DNFI
TW76BN14NNN	75	11	3/4"	AAP025DNFI	AOP025DNMI
TW101BN14NNN	100	15	1"	AAP025ENFI	AOP025ENMI
TW131BN14NNN	130	20	1"	AAP025ENFI	AOP025ENMI
TW201BN14NNN	200	30	1-1/2"	AAP030GNFI	AOP030GNMI
TW251BN14NNN	250	38	1/1/2"	AAP035GNFI	AOP035GNMI
TW301BN14NNN	300	45	1-1/2"	AAP035GNFI	AOP035GNMI
TW401BN14NNN	400	60	2"	AAP040HNFI	AOP040HNMI
TW501BN14NNN	500	75	2"	AAP045INFI	AOP045INMI
TW601BN14NNN	600	90	2"	AAP045INFI	AOP045INMI
TW801BN14NNN	800	120	2"	AAP050INFI	AOP050INMI

## LED Din Connectors

- Easy to maintain and service
- Valve(s) may be serviced without opening electrical enclosure
- No hard wiring required
- Visual indication of valve activation
- Valve labeling



## Additional Features

- Separate tower pressure gauges
- OSHA approved mufflers with safety relief
- ASME/CRN vessels (TW101 and larger)
- Desiccant fill and drain ports
- Safety relief valves
- Stainless steel diffuser screens
- CycleLoc® demand control
- Control air line filter
- ETL listed (UL/CSA standards)
- LED din connector(s) all solenoid valves
- 120 VAC power (other options available - consult factory)
- Power cord with basic controller
- Power din connector with advanced controller
- Power On/Off switch with advanced controller
- Steel base TW1001 and larger

## Options

- PowerLoc Energy Demand Control (TW41 - TW801) optional
- All NEMA classifications
- Control air tubing - stainless steel
- Low ambient package (-20°F to +40°F air temperature)
- Instrumentation
- Locally mounted pressure and temperature gauges at inlet and outlet
- Pneumatic controls
- ASME B31.3 piping
- Corrosion allowance
- High pressure applications: 200 psig design & 250 psig design adders are available

## System Integrity

The TW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as Pressure Swing Adsorption. Pressure dewpoints ranging from -40°F (-40°C) are attained by directing the flow of saturated compressed air over a bed of desiccant.

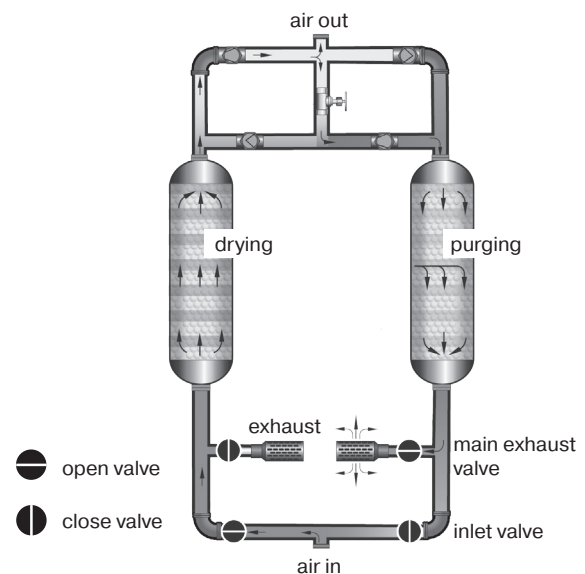
The most commonly used desiccant is activated alumina, a spherical shaped, hygroscopic material, selected for its consistent size, shape and extreme surface to mass ratio. This physically tough and chemically inert material is contained in two separate but identical pressure vessels commonly referred to as “dual” or “twin” towers.

As the saturated compressed air flows up through the “on-line” tower, its moisture content adheres to the surface of the desiccant. The dry compressed air is then discharged from the chamber into the distribution system.

An Allen-Bradley® PLC controller automatically cycles the flow of compressed air between the towers while the “on-line” tower is drying, the “off-line” tower is regenerating. Regeneration, sometimes referred to as purging, is the process by which moisture accumulated during the “on-line” cycle is stripped away during the “off-line” cycle. As dry low pressure purge air flows gently through the regenerating bed, it attracts the moisture that had accumulated on the surface of the desiccant during the drying cycle and exhausts it to the atmosphere.

To protect the desiccant bed from excess liquid, all TW Series Heatless Air Dryers are designed to work with the natural pull of gravity. By directing the saturated air into the bottom of the “on-line” tower and flowing up through the bed, liquid condensate caused by system upset, is kept away from the desiccant and remains at the bottom of the tower where it can be easily exhausted during the regeneration cycle. Counter flow purging ensures optimum performance by keeping the driest desiccant at the discharge end of the dryer.

Heatless dryers in general are the most reliable and least expensive of all desiccant type dryers. The Airtek TW Series Heatless Desiccant Air Dryers are more energy efficient than competitors thanks to standard features such as: variable cycle control, CycleLoc® and regulated purge flow.



### Basic Controller

(Standard on Models TW41 - TW801)

- Allen-Bradley® PLC
- Nema 4X enclosure
- LCD user interface
- Four line digital display features:
  - Tower drying indication
  - Tower regenerating indication
  - Run status
  - Time remaining in cycle
- Selectable cycle settings
- Programmable drain timer (drain on, time and test)
- Compressor demand via external dry contact (CycleLoc®)
- Power ON/OFF switch
- Step-through regeneration for maintenance
- Cycle counter
- Hours of operation



### Advanced Controller

(Optional on Models TW41 - 801)

- Allen-Bradley® PLC
- Powerloc® Energy Demand System
  - Energy savings percentage
  - Hours in power save
- Nema 4X enclosure
- 3.5" LCD user interface
- Dew point sensor input (-148°F to 68°F)
- Optional 4-20 mA output for remotely monitoring dew point
- Tower pressure sensors
- Inlet pressure and temperature sensors
- Compressor demand via external dry contact (CycleLoc®)
- Modbus/TCP communications via standard ethernet port
- Modbus RTU communications via optional RS232/485 port (Using external gateway device)
- SD card slot for accessing historical data and alarm information
- Selectable cycle settings
- Programmable drain timer (drain on, time and test)
- User selectable alarms with common alarm relay
  - High inlet temperature
  - Low inlet pressure
  - Tower failed to blow down (switch failure)
  - Tower failed to pressurize
  - High dew point
  - Sensor failure for all sensors
  - Switch failure
  - Inlet filter pressure
- Filter maintenance timer & alarm
- Clogged muffler maintenance and alarm
- Power ON/OFF switch
- Alarm log stores most recent alarms
- Flashes green when in energy savings mode
- Flashes red when an alarm is present
- Dry contact for common alarm



### PowerLoc® Energy Management System

(Optional on Models TW41 - 801)\*\*

Energy savings of up to 80% can be achieved with the proven PowerLoc® energy management system.

Regeneration requirements are dependent on flow, pressure and temperature. The PowerLoc® system allows the cost of drying compressed air to be matched exactly to your plant conditions.

PowerLoc® controls the drying cycle by continuously reacting to the loading under which the dryer is operating and minimizes the energy input required.

As dryers rarely operate at full rated capacity all of the time (eg. during shift work and periods of low demand), this energy management system can provide considerable savings.

The Advanced Controller is designed to accommodate Parker Airtek's PowerLoc Energy Management System. Flashes green when in energy saving mode.



### High Performance Components

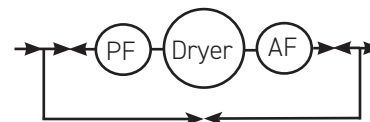
#### Poppet Valve

TW41 - TW801

- Stainless steel body
- Stainless steel internals
- PTFE seal
- Air activated, spring return
- Visual position indicator on exhaust valves
- ANSI Class VI shutoff
- Long service life
- Repair kits available
- 5 year valve warranty



### Filter Package Schematic



#### Package "B"

(Standard TW41 - TW801)

Includes dryer with factory installed pre-filter and after-filter with system bypass

**Flow correction factors**

= "Most Popular"

Capacities are based upon:

- Maximum inlet air or ambient air temperature 120°F (49°C)
- Maximum working pressure: 150 psig (10.5 bar g) standard units for high maximum working pressure are available
- Minimum operating pressure: 80 psig (5.5 bar g)

**Correction Factors**

To obtain drying capacity at new conditions: (nominal capacity) x C1 x C2

Temperature Correction Factor

Maximum inlet temperature (C1)	°F	90	95	100	105	110	115	120
	°C	32	35	38	41	43	46	49
	CF	1.17	1.15	1.00	0.87	0.76	0.66	0.58

Pressure Correction Factor

Minimum inlet pressure (C2)	psi g	80	90	100	110	120	130
	bar g	5.5	6.2	6.9	7.6	8.3	9.0
	CF	0.83	0.91	1.00	1.09	1.17	1.26

Flows are at 100 psig inlet pressure, 100°F inlet temperature, and 100°F ambient temperature.  
Weight includes desiccant dryer with basic controller FLA 2 amps, advanced controller FLA 3 amps.

**Heatless Desiccant Air Dryers**

TW Series	Part number	A (length)	B (width)	C (depth)	Weight lbs. (kg)
	<b>TW41BN14NNN</b>	49 (1245)	21 (533)	25 (635)	190 (86)
	<b>TW56BN14NNN</b>	65 (1651)	22 (559)	31 (787)	230 (104)
	<b>TW76BN14NNN</b>	80 (2032)	34 (864)	29 (737)	384 (174)
	<b>TW101BN14NNN</b>	79 (2007)	36 (914)	30 (762)	468 (212)
	<b>TW131BN14NNN</b>	79 (2007)	36 (914)	30 (762)	496 (225)
	<b>TW201BN14NNN</b>	81 (2057)	42 (1067)	34 (864)	692 (314)
	<b>TW251BN14NNN</b>	81 (2057)	45 (1143)	36 (914)	776 (352)
	<b>TW301BN14NNN</b>	81 (2057)	45 (1143)	36 (914)	796 (361)
	<b>TW401BN14NNN</b>	83 (2108)	48 (1219)	41 (1041)	1626 (738)
	<b>TW501BN14NNN</b>	83 (2108)	51 (1295)	43 (1092)	1735 (787)
	<b>TW601BN14NNN</b>	84 (2134)	50 (1270)	44 (1118)	1740 (789)
	<b>TW801BN14NNN</b>	88 (2235)	56 (1422)	45 (1143)	2120 (962)

**Repair and Service Kits**

Dryer model	Pre-filter	Pre-filter element	After-filter	After-filter element
TW41	AAP015CFNI	P015AA	AOP015CNFI	P015AO
TW56	AAP020DFNI	P020AA	AOP020DNFI	P020AO
TW76	AAP025DNFI	P025AA	AOP025DNMI	P025AO
TW101	AAP025ENFI	P025AA	AOP025ENMI	P025AO
TW131	AAP025ENFI	P025AA	AOP025ENMI	P025AO
TW201	AAP030GNFI	P030AA	AOP030GNMI	P030AO
TW251	AAP035GNFI	P035AA	AOP035GNMI	P035AO
TW301	AAP035GNFI	P035AA	AOP035GNMI	P035AO
TW401	AAP040HNFI	P040AA	AOP040HNMI	P040AO
TW501	AAP045INFI	P045AA	AOP045INMI	P045AO
TW601	AAP045INFI	P045AA	AOP045INMI	P045AO
TW801	AAP050INFI	P050AA	AOP050INMI	P050AO

# Automatic Electrical Drain Valve WDV3



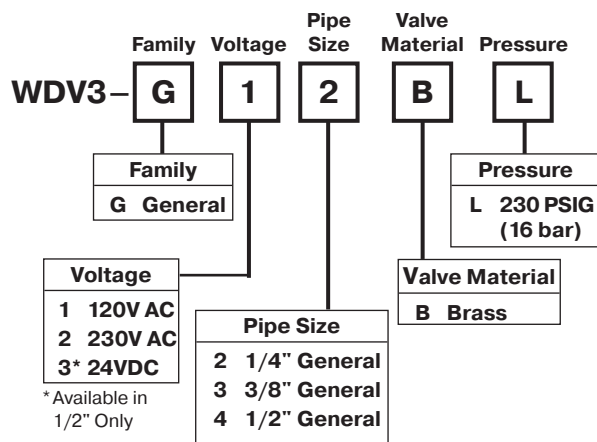
The WDV3 Electrical Drain is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The WDV3 offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide. The large orifice in the direct acting valve, combined with its sophisticated timer module ensure many years of trouble-free draining of condensate.

## Benefits

- Does Not Air-Lock During Operation
- Compressed Air Systems up to Any Size
- The Direct Acting Valve is Serviceable
- Suitable for All Types of Compressors
- TEST (Micro-Switch) Feature
- High Time Cycle Accuracy
- Large (4.5mm) Valve Orifice

## Ordering Information

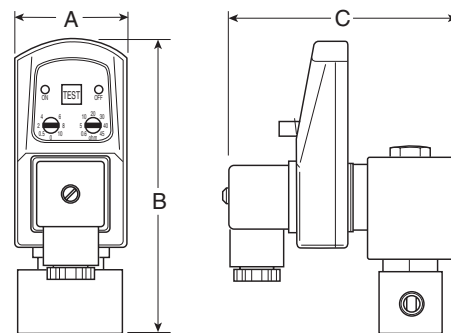


## Specifications

Operating Pressure	230 PSIG (15,9 bar)	
Ambient Operating Range Temperature:	34° to 130°F (1.1° to 54°C)	
Coil Insulation	Class H	340°F (171.1°C)
Voltages	AC	115, 230/50-60
Timer:	Open Time	.5 to 10 sec., Adjustable
	Cycle Time	.5 sec. to 45 min., Adjustable
Maximum Current Rating	4mA Max.	
Port Size	1/4, 3/8, 1/2 NPT	
Weight	1.8 lb. (0.8 kg)	

## Materials of Construction

Valve Body	Brass / Stainless Steel
Enclosure (NEMA 4)	ABS Plastic
Internal Parts	Brass / Stainless Steel
Sealing Material	FPM (Fluorocarbon)



## Model Selection and Dimensions

Model Number	A	B	C
<b>WDV3-G**BL</b>	1.73 (44)	4.53 (115)	3.46 (88)

# Zero Air Loss Condensate Drain ED



Zero air loss condensate drains are designed for economical removal of unwanted water, oil emulsions, and other liquids. These drains will only open when liquid is present and will not allow any compressed air to escape from the system.

## Specifications

Operating Pressure	232 PSIG (16 bar)
Ambient Operating Range Temperature:	35° to 140°F (1.6° to 60°C)
Voltages	NPT 115/50-60Hz Standard BSPP 230/50-60Hz & 24VDC Optional

## Zero Air Loss Condensate Drains

Port size (NPT)	Compressor Aftercooler (SCFM)*	Capacity Refrigeration Dryer (SCFM)**	Filter (SCFM)	Drain Capacity per Day (gal/liter)	Model Number	Service Kit
1 @ 3/8 (in), 1 @ 3/8 (out)	—	—	424	6 (22.7)	ED3002N115-K	SKED3000N115
1 @ 1/2 (in), 1 @ 3/8 (out)	141	282	1,413	13 (49.2)	ED3004N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	247	494	2,472	23 (87.1)	ED3007N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	1,059	2,119	10,594	100 (378.5)	ED3030N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	3,532	7,063	35,315	330 (1,249.2)	ED3100N115-K	SKED3000N115

\* Based on 100 PSI working pressure, air compressor inlet at 77°F (25°C) at 60% RH, air discharge temperature of 95°F (35°C) following the aftercooler, pressure dewpoint of 37°F (2.8°C) after the refrigerated dryer.

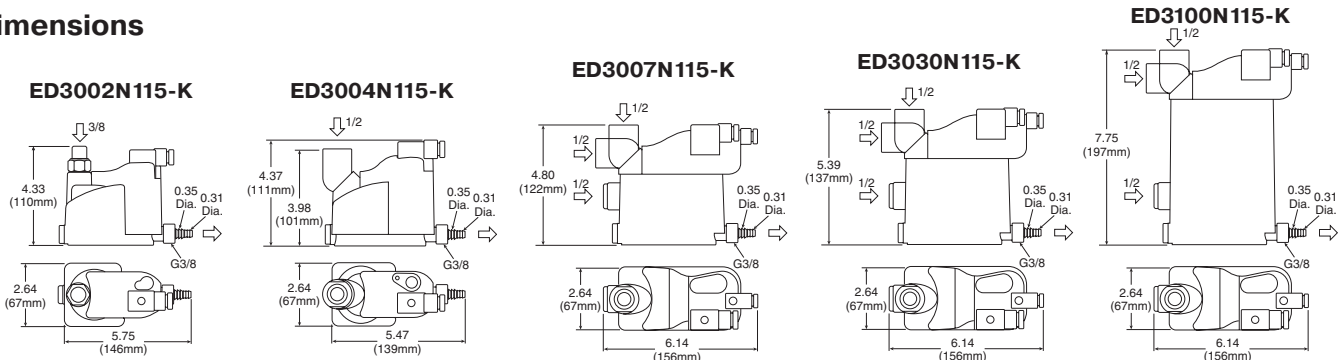
\*\* Condensate from aftercooler or refrigerated dryer to be drained upstream – only for residual oil content or small quantities of condensate.

Note: A 6 ft. line cord will be included with each drain.

## Where are Condensate Drains Used?

<b>Compressor with Aftercooler</b>	<b>Receiver Tank</b>	<b>Filter</b>	<b>Air Dryer</b>	<b>Drip Leg</b>
Removes the condensate that is collected after the air cools in the aftercooler	Removes the condensate that is collected when the air cools inside of the receiver tank	Removes the condensate that is collected in the filter bowl	Removes the condensate that is collected in the air dryer	Point-of-use applications: removes the condensate from compressed air pipes in a plant

## Dimensions



# Notes



# Airline Accessories

<b>Control Panel Products (Human / Machine Dialog) .....</b>	<b>G3</b>
<b>Sensing (Pneumatic Control Components) .....</b>	<b>G17</b>
<b>LV / EZ (Lockout Valves).....</b>	<b>G35</b>
<b>Integrated Fittings .....</b>	<b>G45</b>
<b>Accessories.....</b>	<b>G53</b>



# Notes

G

Airline Accessories



# Control Panel Products

Basic Features .....	G4-G5	Legend Plates, Specifications .....	G11
Push Button, Selector Switches with Bodies .....	G6	Mounting.....	G12
Push Buttons .....	G7	Visual Indicators 22mm (7/8") .....	G13
Selector Switches .....	G8	Foot Pedal Operated Switches .....	G14
Valve Bodies & Accessories .....	G9	Two-Hand Controls .....	G15-G16
Dimensions & Assembly .....	G10		

**G**  
Airline Accessories

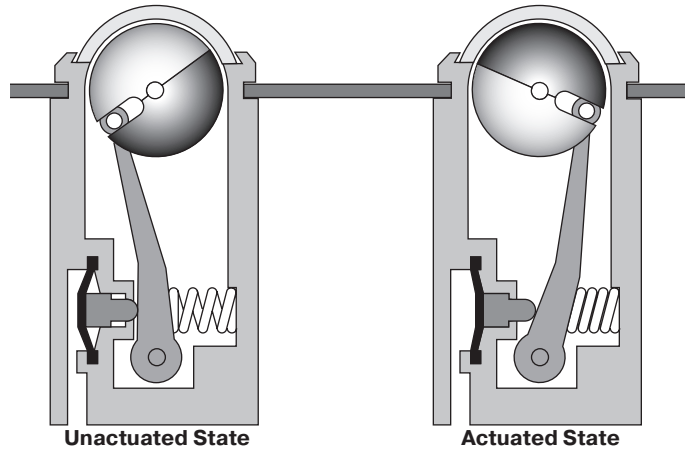
**BOLD ITEMS ARE MOST POPULAR.**

HUMAN-MACHINE DIALOG requires devices such as push buttons and selector switches to provide command inputs. A wide variety of these devices is available to meet most application needs. Both pneumatic and electrical switch bodies are available to match system technology. All of these devices use the 22 mm (7/8") mounting standard.



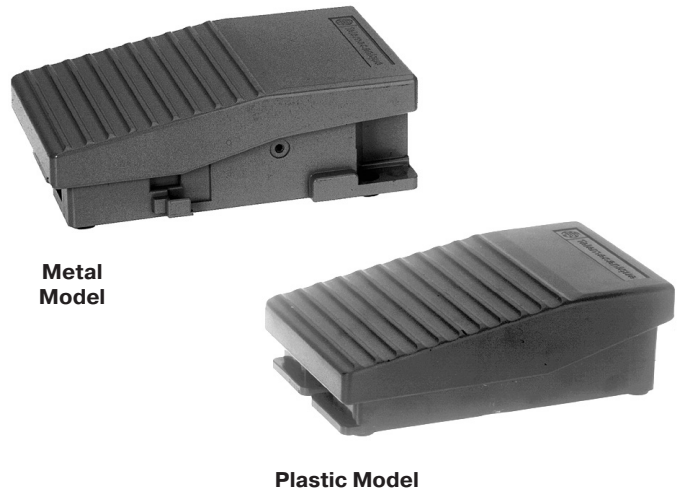
**Pneumatic Visual Indicators**

An indicator ball is rotated by a pneumatic input, changing the visible color. The ball sits behind a clear plastic window, providing a wide field of view. The visual indicators are available in five brightly colored Day-Glow paints for increased visibility. Like push buttons and selector switches, visual indicators use the 22mm (7/8") mounting standard.



**Foot Pedal Switches**

When the application requires the use of foot pedals, these devices can be used to initiate a cycle or a step within a cycle. A metal foot pedal is available with protective guard.



G

Airline Accessories

### Modular Pneumatic / Electric Push Buttons

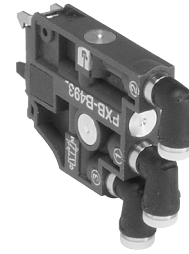
As with electrical contact switches, pneumatic valve modules can be mounted on a number of different operating heads.

- Pneumatic normally non passing (NNP) is equivalent to electrical normally open (N.O.).
- Pneumatic normally passing (NP) is equivalent to electrical normally closed (N.C.).

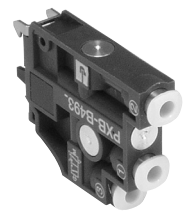
Note: Electrical switches can be stacked, but the rear connection on pneumatic switches prevents stacking. Therefore, when mixing electrical and pneumatic switch bodies on the same operator, the pneumatic switch must be mounted last.



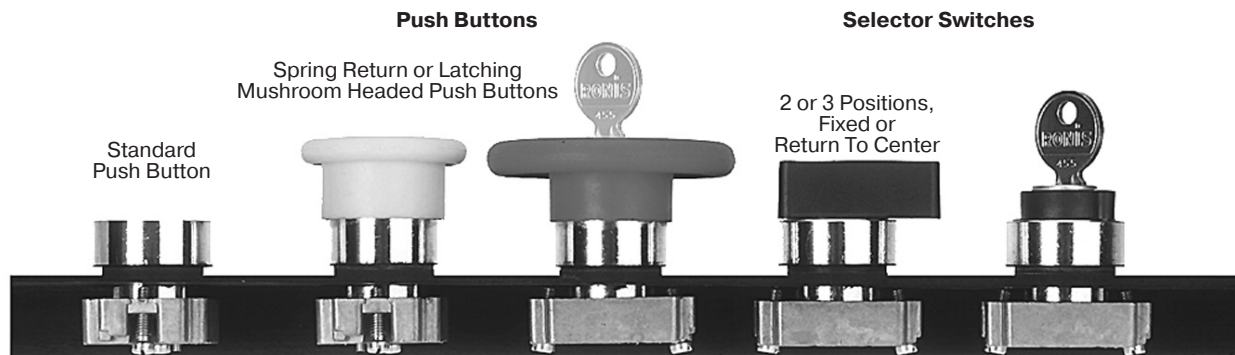
PXBB3911



PXBB4932



PXBB4931



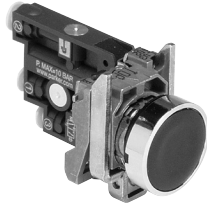
With 3/2 Valve Bodies 5/32" Instant Straight Connections

Flush Push Buttons

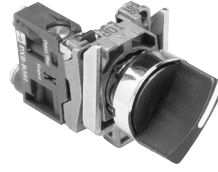
Selector Switches



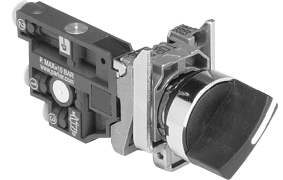
PXBB3111BA2



PXBB4131BA2



PXBB3111BD2



PXBB4131BD2

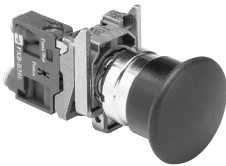
Part Number	Color	Function	Type of Switching*
PXBB3111BA2	Black	Spring Return	NNP
PXBB3111BA3	Green		
PXBB3111BA4	Red		
PXBB3251BA2	Black	Spring Return	NNP+NP
PXBB4131BA2	Black	Spring Return	Single Universal 3-Way
PXBB4131BA3	Green		
PXBB4131BA4	Red		
PXBB4231BA2	Black	Spring Return	Dual Universal 3-Way

\* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.  
 Note: Mount up to three valves on mounting ring.

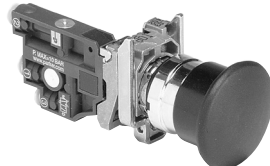
Part Number	Color	Function	Type of Switching*
PXBB3111BD2	Black	2 Maintained	NNP
PXBB3211BD2	Black	Positions with	NNP+NNP
PXBB3251BD2	Black	Std. Handle	NNP+NP
PXBB3211BD3	Black	3 Maintained Positions with Std. Handle	NNP+NNP
PXBB3251BD3	Black		NNP+NP
PXBB3211BJ5	Black	3 Positions, Spring Return to Center with Long Handle	NNP+NNP
PXBB4131BD2	Black	2 Maintained Positions with Std. Handle	Single Universal 3-Way
PXBB4231BD2	Black	2 Maintained Positions with Std. Handle	Dual Universal 3-Way
PXBB4231BD3	Black	3 Maintained Positions with Std. Handle	Dual Universal 3-Way
PXBB4231BJ5	Black	3 Maintained Positions with Long Handle	Dual Universal 3-Way

\* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Mushroom Head Push Buttons (40mm Diameter)



PXBB3111BC2



PXBB4131BC2

Part Number	Color	Function	Type of Switching*
PXBB3111BC2	Black	Spring Return	NNP
PXBB3111BT4	Red	Push-Pull	
PXBB3121BT4	Red	Push-Pull	NP
PXBB4131BC2	Black	Spring Return	Single Universal 3-Way
PXBB4131BT4	Red	Push-Pull	

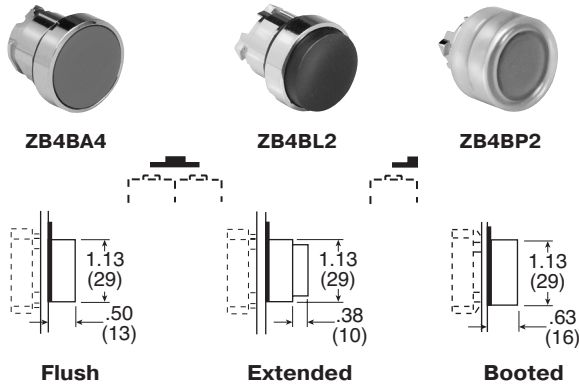
\* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Note: Mount up to three valves on mounting ring.

BOLD ITEMS ARE MOST POPULAR

For Use With PXBB Valve Bodies and ZBE Electrical Switch Bodies

Push Buttons



Plastic Head ZB5**	Metal Head ZB4*	Color	Function	Description
ZB5AA2	ZB4BA2	Black	Spring Return	Flush
ZB5AA3	ZB4BA3	Green		
ZB5AA4	ZB4BA4	Red		
—	ZB4BA5	Yellow		
—	ZB4BA6	Blue		
ZB5AL2	ZB4BL2	Black	Spring Return	Extended
ZB5AL3	ZB4BL3	Green		
ZB5AL4	ZB4BL4	Red		
—	ZB4BL5	Yellow		
—	ZB4BP2	Black	Spring Return	Booted
—	ZB4BP3	Green		
—	ZB4BP4	Red		

\* ZB4\*\*\* Model Numbers are Metal Head Operators

\*\* ZB5\*\*\* Model Numbers are Plastic Head Operators

Push / Push Buttons

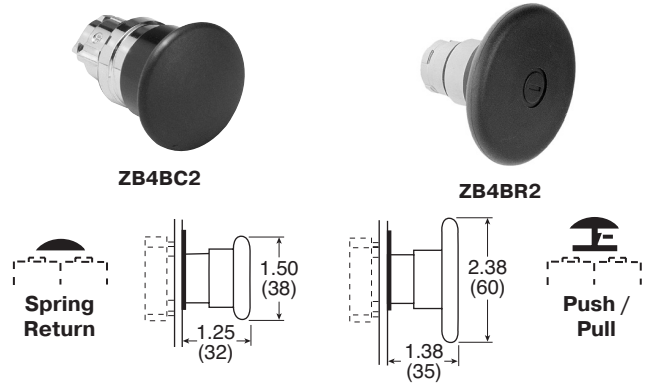


ZB4BH02

Part Number*	Color	Function	Description
ZB4BH02	Black	Detent 2-Position	Flush
ZB4BH03	Green		
ZB4BH04	Red		

\* ZB4\*\*\* Model Numbers are Metal Head Operators

Mushroom Head Push Buttons



Part Number*	Color	Function	Description
ZB4BC2	Black	Spring Return	Ø 40mm Head
ZB4BC3	Green		
ZB4BC4	Red		
ZB4BT2	Black	Latching Push-Pull	
ZB4BT3	Green		
ZB4BT84	Red		
ZB4BR2	Black	Spring Return	Ø 60mm Head
ZB4BR3	Green		
ZB4BR4	Red		

\* ZB4\*\*\* Model Numbers are Metal Head Operators

Mounting Accessories



ZB5AZ905

Part Number	Color	Description
ZB5AZ905	—	Plastic Head (ZB5) Mounting Nut Tightening Tool

BOLD ITEMS ARE MOST POPULAR

For Use With PXBB Variable Composition Switch Bodies

Selector Switches

Key Operated Selectors



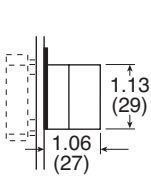
ZB4BD3



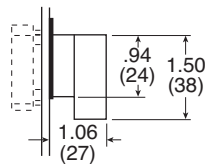
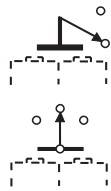
ZB4BJ3



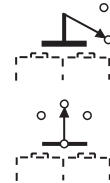
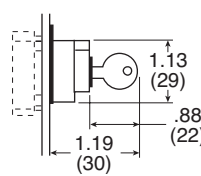
ZB4BG2



Standard Selector



Knob Lever



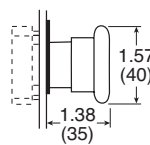
Standard Black Handle		
Part Number*	Description	Function
ZB4BD2	Maintained	2-Positions
ZB4BD4	Spring Return from Right to Left	
ZB4BD3	Maintained	3-Positions
ZB4BD5	Spring Return to Center from Left and Right	
ZB4BD7	Maintained Right Spring Return from Left to Center	3-Positions
ZB4BD8	Maintained Left Spring Return from Right to Center	3-Positions
Long Black Handle		
ZB4BJ2	Maintained	2-Positions
ZB4BJ4	Spring Return from Right to Left	
ZB4BJ3	Maintained	3-Positions
ZB4BJ5	Spring Return to Center from Left and Right	

\* ZB4\*\*\* Model Numbers are Metal Head Operators

Key Operated		
Part Number*	Key Withdrawal	Function
ZB4BG2	Left	2 Maintained
ZB4BG4	Left and Right	Positions
ZB4BG3	Center	3 Maintained
ZB4BG5	Left and Right	Positions
ZB4BG7	Center	3 Positions 2 Spring Return to Center

\* ZB4\*\*\* Model Numbers are Metal Head Operators

Mushroom Head Push Buttons with Key Select



ZB4BS944

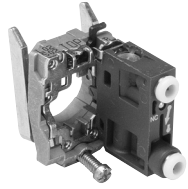
Part Number*	Color	Function	Description
ZB4BS844	Red	Latching Turn to Release	Ø 40mm Head
ZB4BS944	Red	Key Latching	

\* ZB4\*\*\*\* Model Numbers are Metal Head Operators

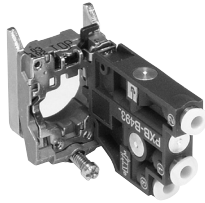
BOLD ITEMS ARE MOST POPULAR

For Use With 22mm (7/8") Metal Operating Heads 5/32" Instant Connections

# 3/2 Valve Bodies with Mounting Ring



PXBB3111B



PXBB4131B

Part Number	Connections	Function	Type of Switching*
PXBB3111B	5/32" Instant	3/2	NNP
PXBB3121B	5/32" Instant	3/2	NP
PXBB4131B	5/32" Instant	3/2	Universal 3-Way

Note: • Mount up to 3 valves on mounting ring for push buttons.  
 • Mount up to 2 valves on mounting ring for selector switches,  
 Valves **cannot** be mounted in center position.

## Specifications

Air Quality –	Standard Shop Air, Lubricated or Dry	40 µm Filtration
Flow –	PXBB3 •	Cv=.08
	PXBB4 •	Cv=.18
Materials –	Body	Polyamide
	Operating Head	Zinc Alloy & Plastic
Operating Positions	All Positions	
Operating Pressure –	PXBB3 •	15 to 115 PSIG (1 to 9 bar)
	PXBB4 •	15 to 145 PSIG (1 to 10 bar)
Ports	5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature –	Operating	5°F to 140°F (-15°C to +60°C)

## Additional Valve Bodies



PXBB3911



PXBB4932



PXBB4931

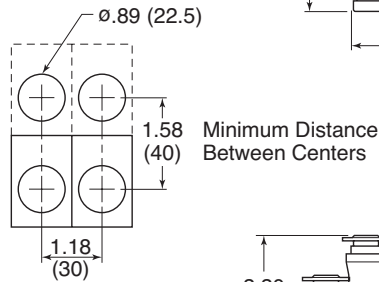
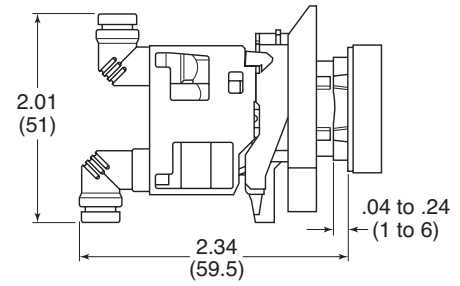
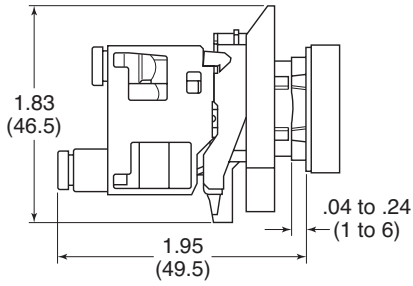
Part Number	Connections	Function	Type of Switching*
PXBB3911	5/32" Instant Straight	3/2	NNP
PXBB3912	5/32" Instant Swivel		
PXBB3921	5/32" Instant Straight	3/2	NP
PXBB3922	5/32" Instant Swivel		
PXBB4931	5/32" Instant Straight	3/2	Universal 3-Way
PXBB4932	5/32" Instant Swivel		

BOLD ITEMS ARE MOST POPULAR

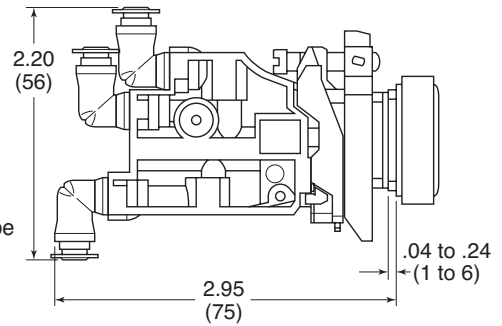
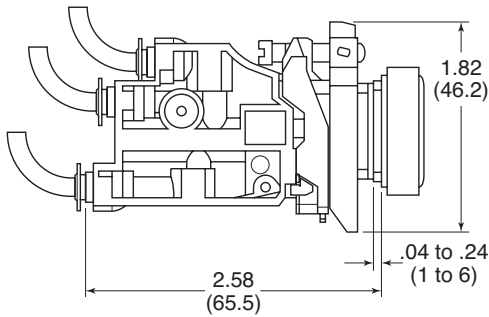


# Dimensions

## PXB-B3 Dimensions



## PXB-B4 Dimensions

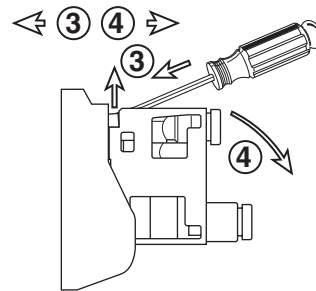
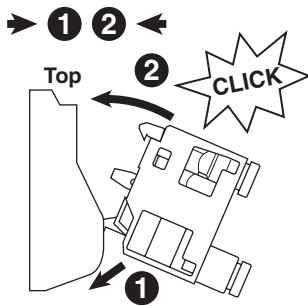


### Tube Bending Radius For PXBB3 and PXBB4

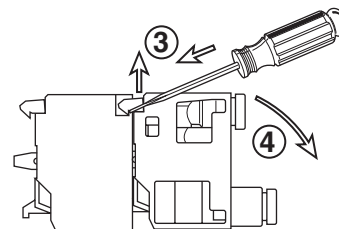
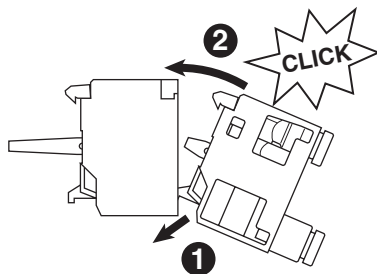
- 4 mm O.D. x 2 mm I.D. Tube = Minimum 0.39 (10) Radius
- 4 mm O.D. x 2.7 mm I.D. Tube = Minimum 0.59 (15) Radius

## Assembly

### Assembling PXB Valves On Mounting Block



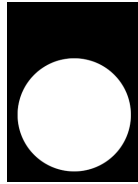
### Assembling PXB Valves On the Back of the Electrical Contact



For Push Buttons and Visual Indicators

# Legend Plates

for PXBB  
Devices  
(22mm)



ZBY••••

Part Number	Description
<b>Without Text For Customer Engraving</b>	
ZBY2101	Black / Red Background (White Letters)
ZBY4101	Yellow / White Background (Black Letters)
<b>With Text For Push Buttons</b>	
ZBY2303	Start
ZBY2304	Stop
ZBY2305	Forward
ZBY2306	Reverse
ZBY2307	Up
ZBY2308	Down
ZBY2309	Right
ZBY2310	Left
ZBY2311	On
ZBY2312	Off
ZBY2313	Open
ZBY2314	Close
ZBY2321	Inch
ZBY2323	Reset
ZBY2326	Power On
ZBY2327	Slow
ZBY2328	Fast
ZBY2330	Emergency Stop
ZBY2334	Run
<b>With Text For 2-Position Selectors</b>	
ZBY2367	Off On
<b>With Text For 3-Position Selectors</b>	
ZBY2387	Hand Off Auto

## Blank Legend Plates for Inscription

<b>For PXBB Devices (2 lines of 11 characters maximum)</b> Please indicate the required text when ordering. (Allow 3 weeks for delivery)	
Part Number	Description
ZBY2002	Black Background / White Letters



## For 22mm Visual Indicators Only

<b>2 lines of 11 characters maximum</b> Please indicate the required text when ordering. (Allow 3 weeks for delivery)	
Part Number	Description
ZB2BY2002	Black Background / White Letters

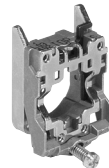
## Accessories



ZBE101

<b>Electrical Switch Bodies</b> When combined with pneumatic valves, these contact blocks allow different forms of power to be provided from a single push button. Can be mounted with both types of valves PXBB3 / PXBB4.	
<b>Electrical Specification: 240V, 10Amp</b>	
Part Number	Type of Contact
ZBE101	 Normally Open (NO)
ZBE102	 Normally Closed (NC)

Note: Plastic Mounting Ring ZB5AZ009 to be used with ZB5 Plastic Operating Heads.  
Metal Mounting Ring ZB4BZ009 to be used with ZB4 Metal Operating Heads.



Metal: ZB4BZ009



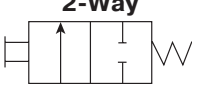
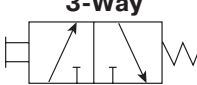

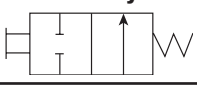
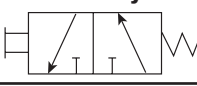

Plastic: ZB5AZ009

<b>Mounting Ring for Valve Bodies, Switch Bodies and Operating Heads</b> To make up a complete push button with one to three switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.	
Part Number	Description
ZB4BZ009	Metal Mounting Ring
ZB5AZ009	Plastic Mounting Ring
To make up a complete selector switch with one or two switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.	
Part Number	Description
ZB4BZ009	Metal Mounting Ring
ZB5AZ009	Plastic Mounting Ring

**Note:** To release push button from mounting ring, pull lever on top of mounting ring up and remove push button operator. To assemble push button operator to mounting ring, align arrows and snap into place.






**BOLD ITEMS ARE MOST POPULAR**

# Functionality Explanation

Fluid Power		Universal Description	Electrical	
Function	Symbol		Function	Symbol
Normally Closed (N.C.)	 	Normally Non-Passing (NNP)	Normally Open (N.O.)	
Normally Open (N.O.)	 	Normally Passing (NP)	Normally Closed (N.C.)	

**Type of Switching:** Universal 3-Way: Valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

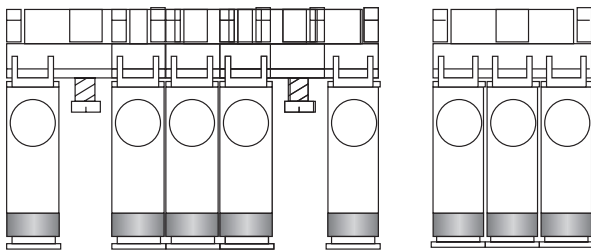


- NNP: Normally Non-Passing. 
- NP: Normally Passing. 
- NNP + NNP: Double Switch Body, Both Normally Non-Passing. 
- NNP + NP: Normally Non passing and Normally-Passing. 
- NP + NP: Both Normally Passing. 

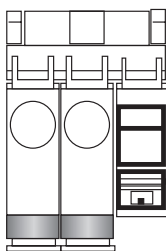
## Combination of Output Devices On a Single Mounting Block

Up to 3 output devices (valves or electrical contacts) can be mounted side by side on 1 mounting block.

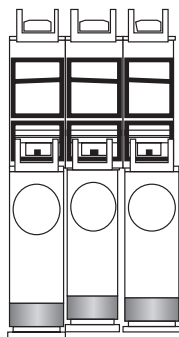
**Note:** The central position can only be activated by push button heads.



Electrical Contacts and Valves can be Combined Either Side by Side, or by Mounting the Valve on the Back of the Electrical Contact.

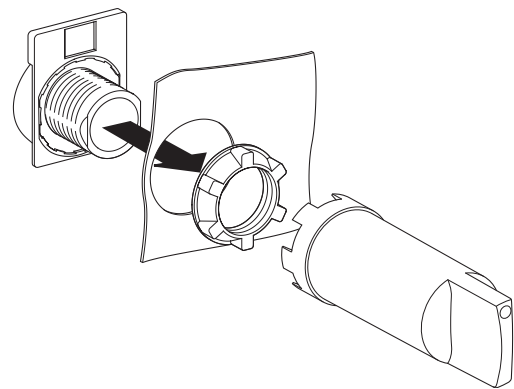


Side by Side Combination

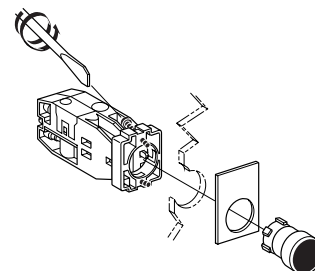


Combination by Mounting Valves On the Back of the Electrical Contact

## Assembling Output Devices and Heads On ZB5 Series Mounting Block



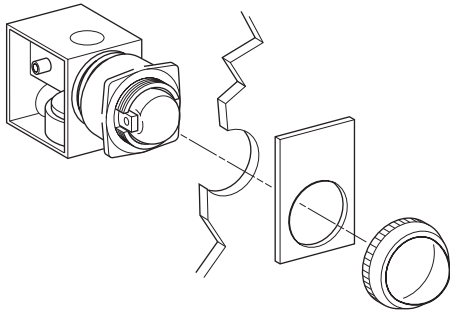
## Mounting



# With 5/32" Instant Connections 22mm Visual Indicators



PXVF131



Mounting

## Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz	
Mushroom Head	1 million Operations 300,000 Operations
Operating Positions	All Positions
Operating Pressure	15 to 115 PSIG (1 to 8 bar)
Ports –	
Standard	5/32" Instant for Semi- Rigid Nylon or Polyurethane Tube
10-32 UNF Available	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

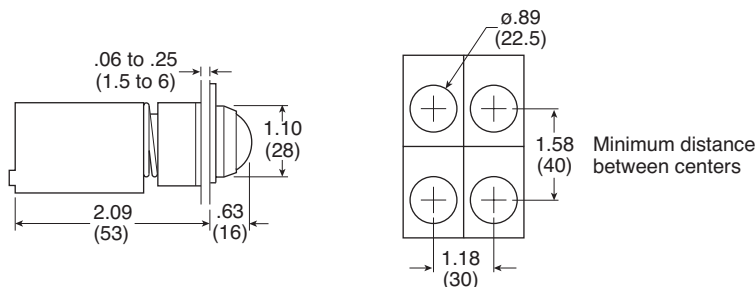
Black Plastic Bezel		
Part Number "ON" Indicator	Part Number "OFF" Indicator	Color
PXVF131	PXVF1213	Green
PXVF141	PXVF1214	Red
PXVF151	PXVF1215	Yellow
PXVF161	PXVF1216	Blue
PXVF111	PXVF1211	White

**Notes:**

- The Pneumatic Indicators are black in one position and colored in the other. The colored position corresponds either to the presence of a pressure ("ON" Indicator) or the absence of pressure ("OFF" Indicator).
- For Legend Plates, see page G11.

## Dimensions

PXVF1 . . .



Standard Duty 1/6" I.D. Valves with 5/32" Instant Connections

Protective Guard



PXPEM510

Part Number	Function	Material	Type of Switching*
PXPEM510	High resistance protective guard, with interlock mechanism to prevent accidental operation by a falling object.	Metal	NNP

Foot Switches Without Protective Guard



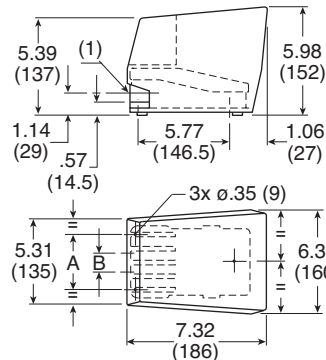
PXPEA110

Part Number	Function	Material	Type of Switching*
PXPEA110	Spring Return	Plastic	NNP
PXPEM110	Spring Return	Metal	NNP

**CAUTION:**  
 This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.

Dimensions

PXPEM510



- (1) 2 mounting ports for adaptors for conduit fittings
- (2) 7° operating angle

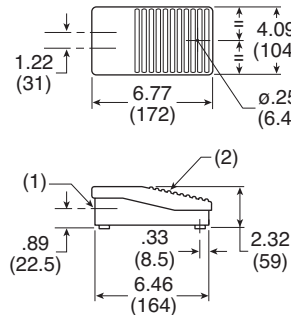
	inch	mm
a	3.53	940
b	1.22	31

**Notes:** These Foot Pedal Operators come assembled with switch PXBB 1921 (Normally Passing). With the pedal in the unoperated position, the switch is in the actuated non-passing position. With the pedal actuated, the switch is in the unactuated Normally Passing position.

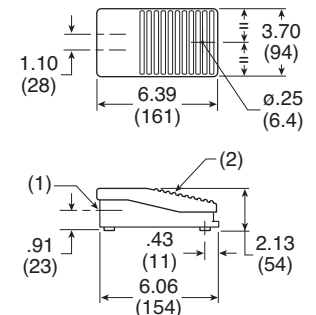
Units will accept all switch bodies shown earlier in this Section, but care must be taken in selecting switch type.

Dimensions

PXPEM110



PXPEA110



- (1) .825" diameter thru hole
- (2) 6° operating angle

G

Airline Accessories

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow at 90 PSI (6 bar) in SCFM (l/mn ANR)	1.8 (50)
Materials – Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Nominal Bore Ø in Inches (mm)	1/16" (1.5)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz.....	1 million Operations

Operating Positions	All Positions
Operating Pressure	15 to 115 PSIG (1 to 8 bar)
Ports –	5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
Temperature – Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

\* NNP: Normally Non-Passing.

# Two-Hand Control Enclosure

## Features

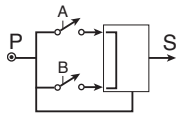
- The Pre-assembled Two-Hand Control Enclosure Occupies Both Hands of an Operator by Requiring Nearly Simultaneous Operation of Two Push buttons
- Poppet – Snap-acting (No Spools)
- Same Air as in Cylinders – Filtration: 40 Micron
- No Lubrication Required



PXP-C111-A

Part Number	Connections
PXP-C111-A	5/32" Instant

## Operation



- Output "S" will appear only if "A" and "B" are simultaneously operated (within .5 seconds or less of each other).
- If the operator actuates only one push button, either "A" or "B", or if both "A" and "B" are actuated but at an interval greater than .5 seconds, output "S" will not appear.
- Output "S" is regenerated by supply "P". Output "S" will therefore disappear if supply "P" is cut off.
- Output "S" will disappear if either "A" or "B" is released.
- If output "S" disappears for any reason, "A" and "B" must be nearly simultaneously actuated to again provide output "S".
- Since output "S" is regenerated it appears sharply, at full force (snap-acting), and is quickly exhausted upon deactivation. In addition the module is not affected by the length or diameter of tubing used for output "S".

## Specifications

Operating Pressure	40 to 120 PSI (3 to 8 bar)
Permissible Fluids –	Air or neutral gas 40 micron filtration, lubricated or dry
Flow at 90 PSI (6 bar)	7 SCFM (200 l/mn ANR)
Operating Temperature	-5°F to 140°F (-15°C to 60°C) Below 40°F (5°C), an air dryer is required
Storage Temperature	-40°F to 160°F (-40°C to 70°C)
Number of operations with dry air at 90 PSI (6 bar), 68°F (20°C), frequency 1 Hz	1 Million Operations
Vibration resistance –	Conforms to section 19-2 of bureau Véritas regulations (November 1987)
Materials –	
Body	Glass Filled Nylon
Operating Head	Zinc Alloy and Plastic
Connections	5/32" instant

## Mounting

### Approvals:

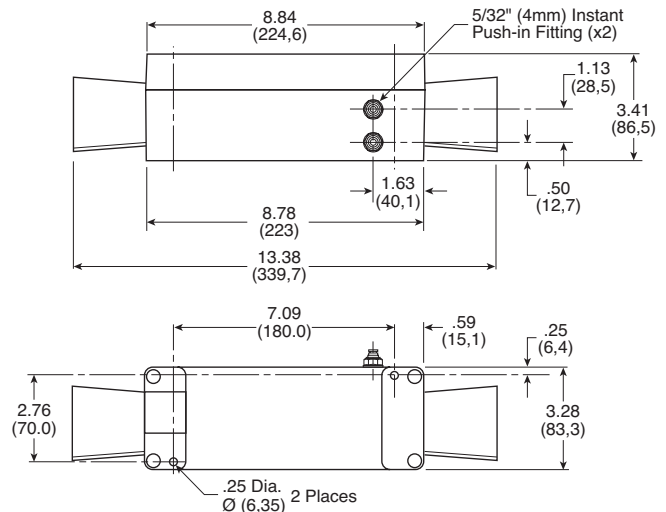
- In accordance with European Standard EN 574 - September 1996
- Conforms to the model that has obtained CE Type Test Certificate No. 02526 520 4631 0397

### WARNING

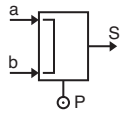
These devices should **NOT** be used in any application involving rotary clutch presses. Two hand control modules do not of themselves insure the safety of any machine. Users and original equipment manufacturers are responsible for making sure that installations meet all relevant safety regulations.

## Dimensions

Inches (mm)



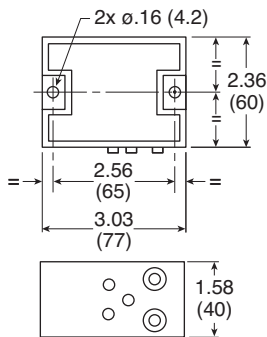
# Two-Hand Control Module



PXPA11

Part Number	Connections
PXPA11	5/32" Instant

## Dimensions



PXPA11

## Specifications

Air Quality –	Standard Shop Air, Lubricated or Dry, 40µm Filtration
Flow at 90 PSI (6 bar) in SCFM (l/mn ANR)	7 (200)
Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Nominal Bore Ø in Inches (mm)	7/64" (2.5)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz	1 million Operations
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports –	
5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature –	
Operating	32°F to 122°F (0°C to 50°C)
Storage	-22°F to 140°F (-30°C to 60°C)
Vibration resistance –	
Conforms to section 19-2 of bureau Veritas regulations (November 1987)	

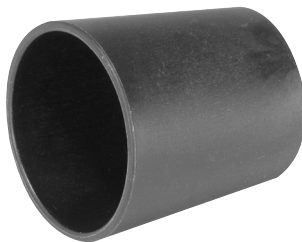
**⚠ WARNING**

**These devices should NOT be used in any application involving rotary clutch presses. Two hand control modules do not of themselves insure the safety of any machine. Users and original equipment manufacturers are responsible for making sure that installations meet all relevant safety regulations.**

**Notes:** These two-hand control modules provide an output signal upon nearly concurrent operation of two push buttons.

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# Two-Hand Control Module Guard



PPRL15

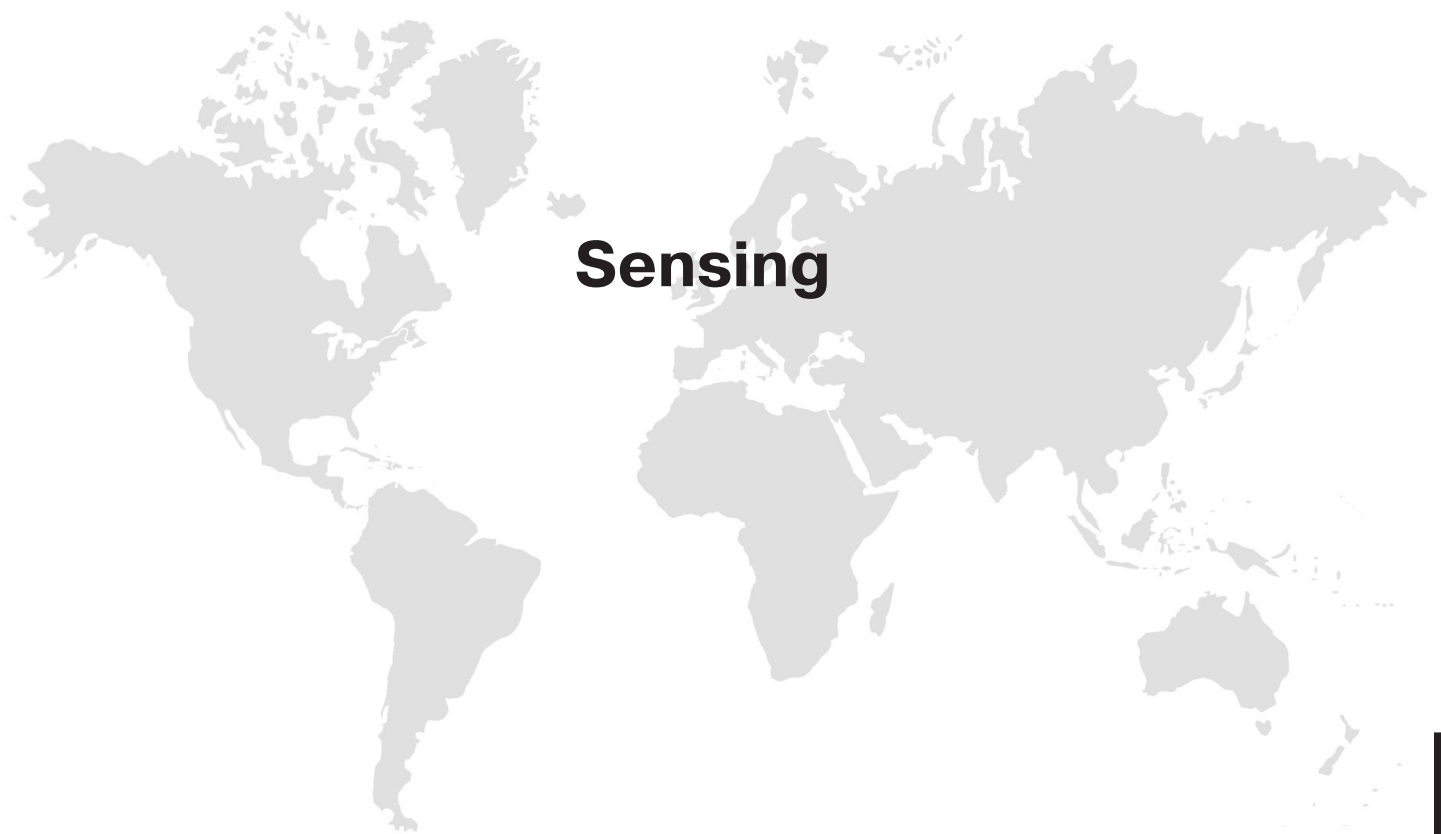
Part Number	Base Component
PPRL15	PXPC111

# Two Hand Repair Parts

Part Number	Quantity Required	Description
PXPA11	1	Control Module
PXBB3111B	2	Valve Body & Mounting Ring
ZB4BR*	2	Push Button
PPRL15	2	Control Module Guard

\* 2 = Black, 3 = Green, 4 = Red

Airline Accessories



Basic Features – Pneumatic Sensors ..... G18

Limit Switches

- 3/2 Miniature Limit Switches.....G19-G20
- 3/2 Compact Limit Switches .....G21-G22
- K Series – Standard Duty Limit Switches ..... G23-G26
- J Series – Heavy Duty Limit Switches ..... G27-G29

PWBA Blocking Valves.....G30-G31

Threshold Sensors ..... G32-G34

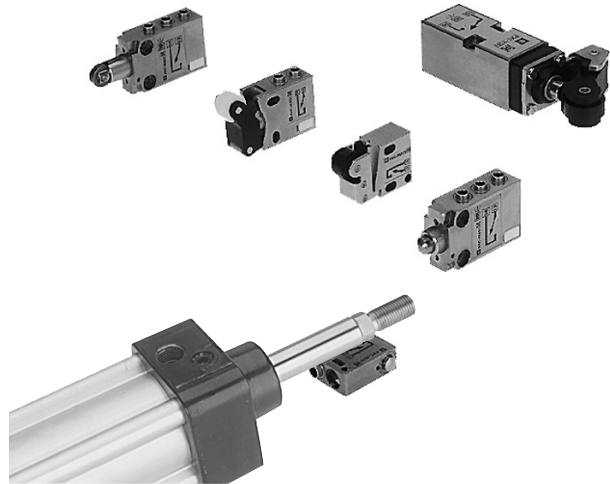


# Pneumatic Sensors

To achieve the sensing or feedback function, pneumatic sensors can be:

- Limit Switches in a Variety of Sizes and Configurations
- Pressure Switches with Many Adjustable Ranges
- Components Designed Specifically for Pneumatic Technology using Pressure Variation, Air Bleed or Blocking for Detection.

A wide variety of pneumatic sensor are available to suit any application requirement.



## Pneumatic Limit Switches

Pneumatic limit switches are non-passing (NNP) or passing (NP) when actuated by a moving part. The various operating levers, bore dimensions and functions are given below.

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Airline Accessories

Interchangeable with an Electrical Microswitch



1/16" Bore

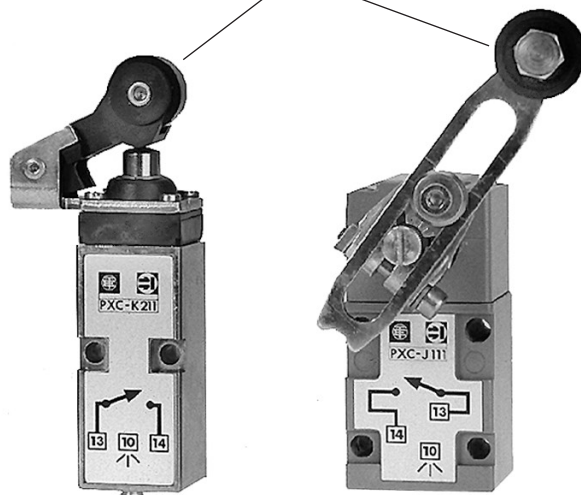
1/16" Bore

7/64" Bore



Normally Non-Passing (NNP) Models

Multiple Operating Heads



1/8" Bore  
Connectable Exhaust

1/8" Bore  
Connectable Exhaust



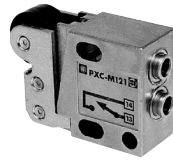
NNP or NP, as Required

# Direct Acting Limit Switches

## 1/16" I.D. Internal Orifice



PXCM111



PXCM121

Part Number	Connection	Actuator	Type of Switching*
PXCM111	5/32" Instant	Steel Plunger Operating Levers Available (See Below)	NNP
PXCM115	10-32 UNF		
PXCM121	5/32" Instant	Plastic Roller	NNP
PXCM125	10-32 UNF		

## 7/64" I.D. Internal Orifice



PXCM521

Part Number	Connection	Actuator	Type of Switching*
PXCM521	5/32" Instant	Plastic Roller	NNP

### Specifications

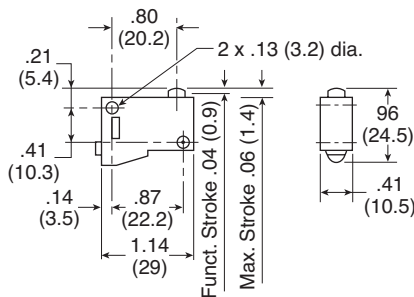
Air Quality –	Standard Shop Air, Lubricated or Dry, 40µm Filtration
Flow SCFM (NI/min) –	
PXCM111	2.2 (60)
PXCM121	3.0 (85)
PXCM521	8.8 (250)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximum Operating Frequency	5 Hz
Nominal Bore Ø –	
PXCM111, PXCM121	1/16" (1.5 mm)
PXCM521	7/64" (2.5 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports –	
5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
10-32 UNF Available	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

### Operator Specifications

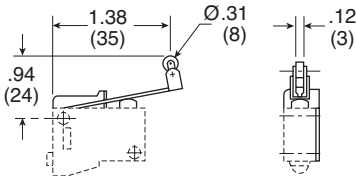
	PXCM111	PXCM121	PXCM521
<b>Differential Travel at 90 PSI (6 bar)</b>	.006" (0.15 mm)	.012" (0.3 mm)	.020" (0.5 mm)
<b>Maximum Travel (B) at 90 PSIG (6 bar)</b>	.055" (1.4 mm)	.126" (3.2 mm)	.228" (5.8 mm)
<b>Minimum Pre-Travel (A) at 90 PSIG (6 bar)</b>	.035" (0.9 mm)	.079" (2 mm)	.087" (2.2 mm)
<b>Minimum Operating Force at 90 PSI (6 bar)</b>	2.5 lb (11 N)	1.0 lb (4.5 N)	1.6 lb (7 N)
<b>Operating Diagram</b>			

### Dimensions

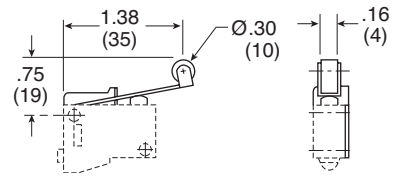
PXCM111



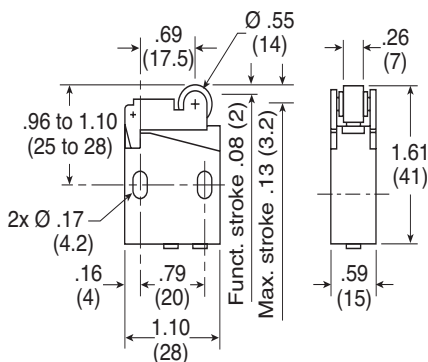
PXCZ12



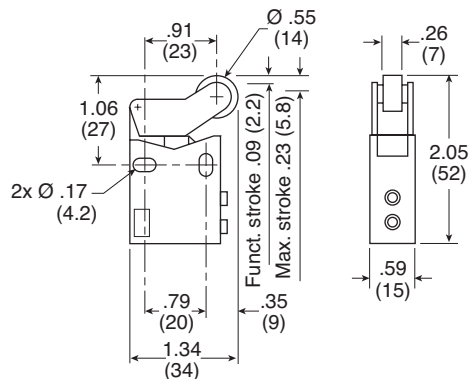
PXCZ11



PXCM121, PXCM131



PXCM521



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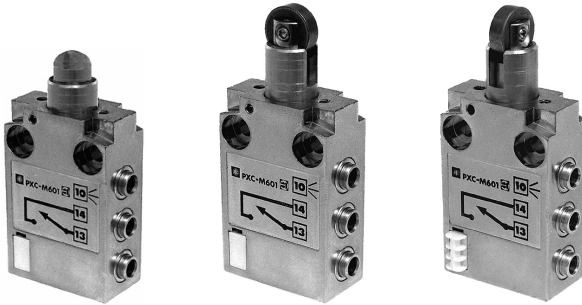
Airline Accessories

# Pilot Operated Compact Limit Switches

5/32" Instant Connections

Pipeable Exhaust Port

7/64" I.D. Internal Orifice



PXCM601A110

PXCM601A102

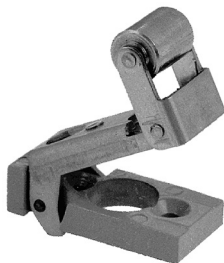
PXCM601A103

Part Number	Actuator	Type of Switching*
PXCM601A110	Steel Plunger Operating Levers Available (See Below)	NNP
PXCM601A102	Steel Roller Plunger	
PXCM601A103	90° Steel Roller Plunger	

## Specifications

Air Quality –	Standard Shop Air, Lubricated or Dry, 40µm Filtration
Flow SCFM (NI/min)	8.8 (250)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	7/64" (2.5 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1	Hz10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports –	
	5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

## Actuators For Steel Plunger



XCMZ24

Use with PXCM601A110

Part Number	Actuator
XCMZ24	90° Stainless Steel Roller Lever, One Way Trip

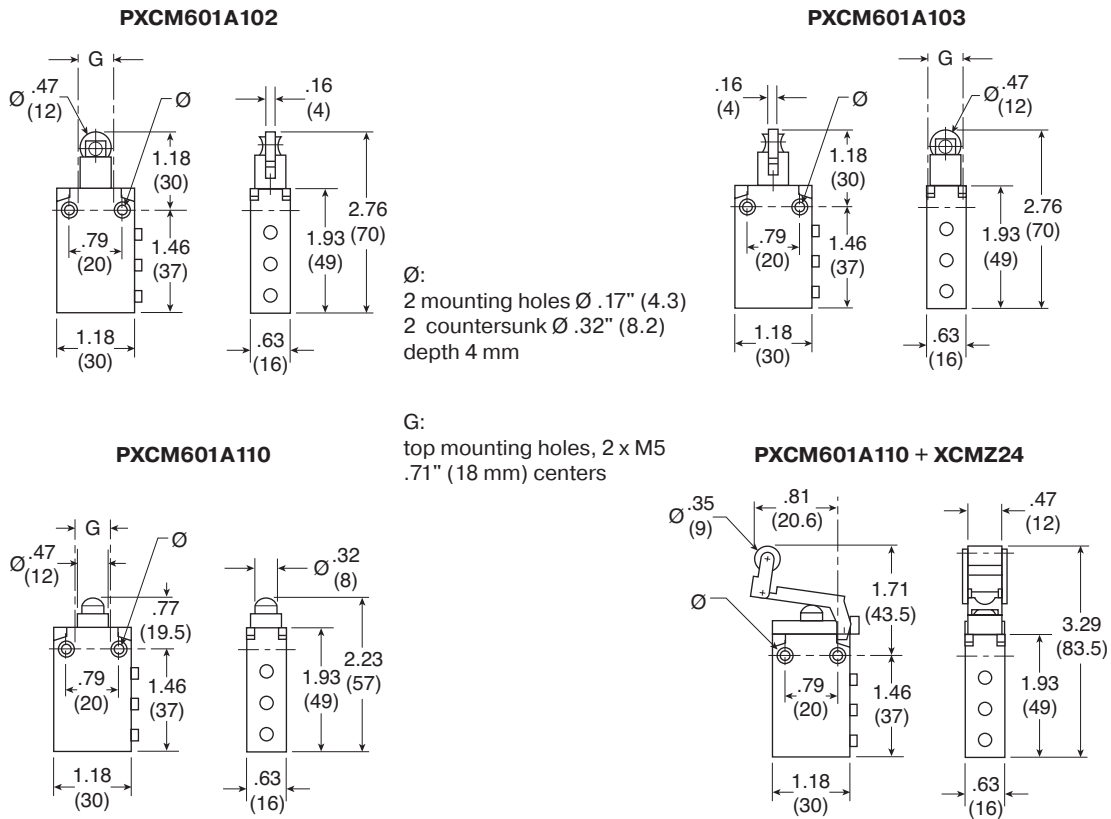
\* NNP: Normally Non-Passing.

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Airline Accessories

### Operator Specifications

	PXCM601A110	PXCM601A102	PXCM601A103	PXCM601A110 + XCMZ24
<b>Differential Travel at 90 PSI (6 bar)</b>	.012" (0.3 mm)	.008" (0.2 mm)	.020" (0.5 mm)	.047" (1.2 mm) (A)
<b>Maximum Travel (B) at 90 PSIG (6 bar)</b>	.197" (5 mm)	.197" (5 mm)	.197" (5 mm)	—
<b>Minimum Pre-Travel (A) at 90 PSIG (6 bar)</b>	.066" (1.7 mm)	.066" (1.7 mm)	.066" (1.7 mm)	.370" (9.4 mm) (A)
<b>Minimum Operating Force at 90 PSI (6 bar)</b>	5.4 lbf (24 N)	5.2 lbf (23 N)	5.2 lbf (23)	4.3 lbf (19)
<b>Operating Diagram</b>				<p><b>A = cam travel</b></p>

### Dimensions



G

Airline Accessories

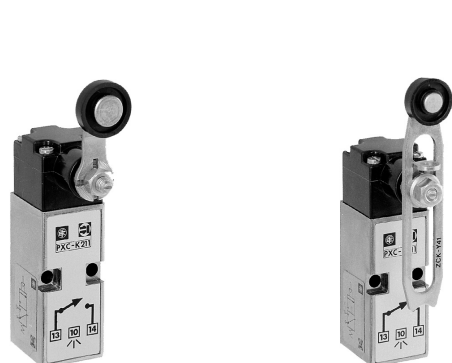
# Limit Switches

**Plunger Operated**  
 5/32" Instant Connections  
 Pipeable Exhaust Port  
 1/8" I.D. Internal Orifice

**Roller Operated**  
 5/32" Instant Connections  
 Pipeable Exhaust Port  
 1/8" I.D. Internal Orifice



PXCK21101    PXCK21102    PXCK21121    PXCK21106



PXCK2110031    PXCK2110041

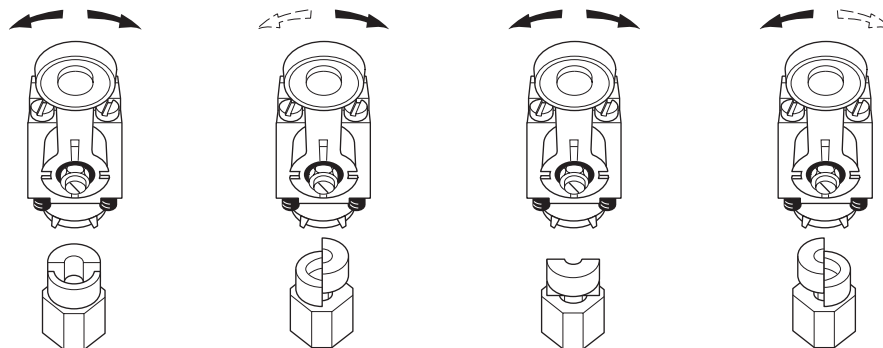
Complete Assemblies		
Part Number	Actuator	Type of Switching*
PXCK21101	Steel Plunger	NNP
PXCK22101		NP
PXCK21102	Steel Roller Plunger	NNP
PXCK22102		NP
PXCK21121	Plastic Roller Plunger	NNP
PXCK22121		NP
PXCK21106	Cats Whisker	NNP
PXCK22106		NP

With Die Cast Rotary Operating Head and Operating Lever - Complete Assemblies		
Part Number	Actuator	Type of Switching*
PXCK2110031	Fixed Delrin Roller Lever Multi-Function Head Actuates: - From Right and Left - From Right - From Left	NNP
PXCK2210031		NP
PXCK2110041		Adjustable Delrin Roller Lever Multi-Function Head Actuates: - From Right and Left - From Right - From Left
PXCK2210041	NP	

NNP: Normally Non-Passing

NP: Normally Passing

## Field Conversion of Rotary Operating Head



## Separate Pneumatic Switch Bodies



PXCK211

Part Number	Actuator	Type of Switching*
PXCK211	For Use with ZCK Series Operating Heads	NNP
PXCK221		NP

## Operating Heads For Use With PXCK Switch Bodies



ZCKG00

Part Number	Actuator	Description
<b>Rotary Operated</b>		
ZCKG00	—	Die Cast Zinc
<b>Plunger Operated</b>		
ZCKD02	Roller Plunger	Plunger Operated
ZCKD06	Whisker	
ZCKD10	Rod Plunger	
ZCKD21	Delrin Roller Lever On Plunger	
ZCKD23	Steel Roller Lever On Plunger	

## Pneumatic Switch Bodies with Rotary Heads



PXCK21100

Part Number	Actuator	Type of Switching*
PXCK21100	Multi-Function Head Actuates: - From Right and Left - From Right - From Left	NNP
PXCK22100		NP

## Operating Levers for Rotary Heads



ZCKY81



ZCKY91

For Use With Rotary Head ZCKG00		
Part Number	Actuator	Description
ZCKY51	Steel 1/8" Square	Rod Levers
ZCKY52	Fiberglass 1/8" Dia. Round	
ZCKY81	Plastic Spring Rod Lever	
ZCKY91	Metal Spring Rod Lever	
ZCKY11	Delrin Roller Lever	Roller Levers
ZCKY13	Steel Roller Lever	
ZCKY41	Adjust. Delrin Roller Lever	
ZCKY43	Adjust. Steel Roller Lever	

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Airline Accessories

### Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow SCFM (NI/min)	7.4 (210)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	1/8" (3 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)

Ports – 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

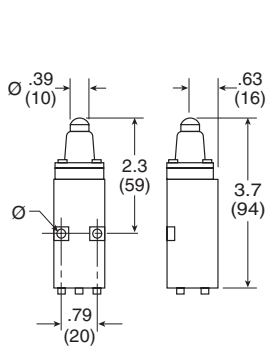
### Operator Specifications

	PXCK2••01	PXCK2••02	PXCK2••03	PXCK2••06	PXCK2••00 + Actuator
Differential Angle	—	—	—	12°	3°
Differential Travel	.008" (0.2 mm)	.008" (0.2 mm)	.008" (0.2 mm)		
Maximum Angle of Travel	—	—	—	—	80°
Maximum Travel (B) at 90 PSIG (6 bar)	.020" (0.5 mm)	.020" (0.5 mm)	.020" (0.5 mm)	—	—
Minimum Pre-Travel (A) at 90 PSIG (6 bar)	.087" (2.2 mm)	.087" (2.2 mm)	.102" (2.6 mm)	—	—
Minimum Operating Force at 90 PSI (6 bar)	3.6 lbf (16N)	4.5 lbf (20N)	3.4 lbf (15N)	—	—
Minimum Operating Torque at 90 PSI (6 bar)	—	—	—	17.0 oz in (120mNm)	29.8 oz in (210mNm)
Operating Angle	—	—	—	35°	31° (Minimum Lever Travel Including Pre-Travel Required For Operation)
Operating Diagram					

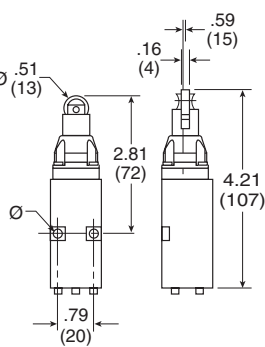


**Dimensions**

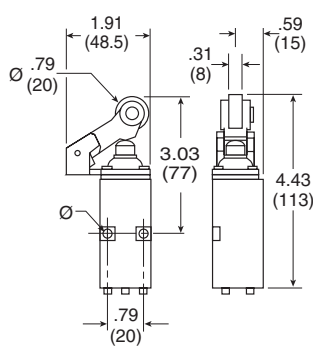
**PXCK21101, PXCK22101**



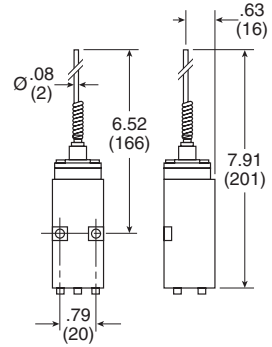
**PXCK21102, PXCK22102**



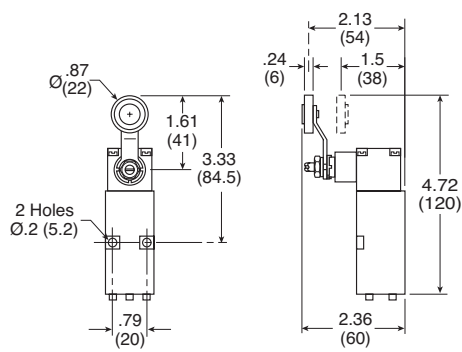
**PXCK21121, PXCK22121**



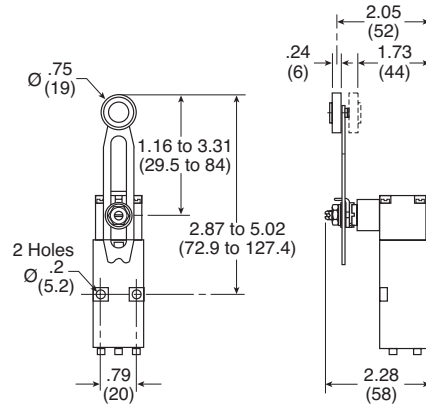
**PXCK21106, PXCK22106**



**PXCK2110531, PXCK2210531**

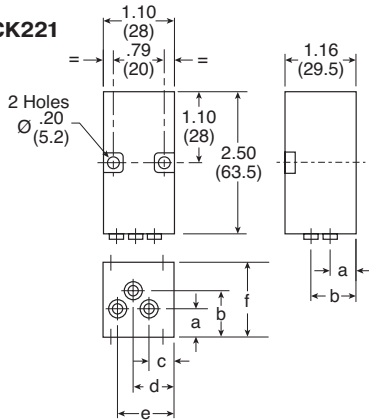


**PXCK2110541, PXCK2210541**



**Pneumatic Switch Bodies**

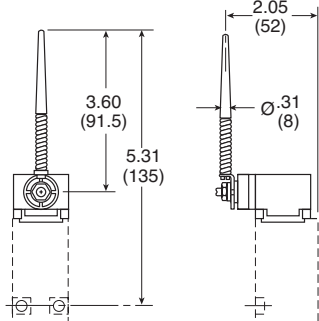
**PXCK211, PXCK221**



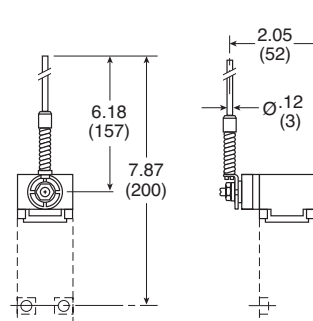
	inch	mm
a	.39	10
b	.77	19.5
c	.35	9
d	.61	15.5
e	.87	22
r	1.66	29.5

**Rotary Heads with Operating Levers**

**ZCKY81**



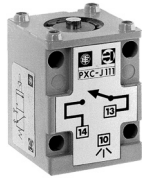
**ZCKY91**



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Airline Accessories

## Switch Bodies Only



PXCJ117

Part Number	Type of Switching*
PXCJ117	NNP
PXCJ127	NP

## Switch Bodies with Rotary Head



PXCJ11701

Part Number	Direction of Actuation	Type of Switching*
PXCJ11701	Right & Left, Spring Return	NNP
PXCJ11705	Right or Left, Spring Return	
PXCJ12701	Right & Left, Spring Return	NP
PXCJ12705	Right or Left, Spring Return	

## Operating Levers for Rotary Heads



ZC2JY11



ZC2JY31



ZC2JY81



ZC2JY91

Die Cast Zinc. For Use With PXCJ Switch Bodies		
Part Number	Operator	Description
ZC2JY11	Delrin Roller	Spring Return
ZC2JY13	Steel Roller	
ZC2JY21	Offset Delrin Roller	
ZC2JY81	Plastic Spring Rod	
ZC2JY91	Metal Spring Rod	
ZC2JY31	Delrin Roller	Adjustable Roller
ZC2JY41	Offset Delrin Roller	
ZC2JY51		Rod Lever
ZC2JY71	Single Track, Delrin Roller	Fork Lever
ZC2JY61	Double Track, Delrin Rollers	

NNP: Normally Non-Passing

NP: Normally Passing

## Top Plunger & Rotary Operating Heads



ZC2JE70



ZC2JE01

Die Cast Zinc. For Use With PXCJ Switch Bodies		
Top Plunger Type		
Part Number	Operation	Description
ZC2JE61	Top Push	Spring Return
ZC2JE62	Top Roller Push	
ZC2JE63	Side Push	
ZC2JE70	Cat's Whisker	
<b>Rotary Type</b>		
ZC2JE01	From Left & Right	Spring Return
ZC2JE02	Counterclockwise From Right	
ZC2JE03	Clockwise From Left	
ZC2JE05	From Left or Right	
ZC2JE09	Maintained Positions	

### Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow SCFM (NI/min)	7.4 (210)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	1/8" (3 mm)

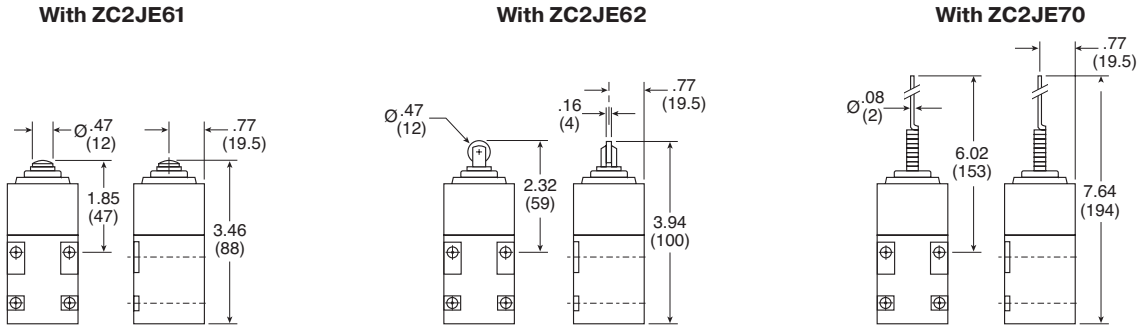
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports	1/8" NPT
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

	ZC2JE61	ZC2JE62	ZC2JE70	ZC2JE01	ZC2JE05
<b>Differential Angle</b>	—	5°	5°	2°	2°
<b>Differential Travel at 90 PSI (6 bar)</b>	.008" (0.2 mm)	—	—	—	—
<b>Maximum Angle of Travel</b>	—	—	—	75°	75°
<b>Maximum Travel (B) at 90 PSIG (6 bar)</b>	228" (5.8 mm)	—	—	—	—
<b>Minimum Pre-Travel (A) at 90 PSIG (6 bar)</b>	.059" (1.5 mm)	—	—	—	—
<b>Minimum Operating Force at 90 PSI (6 bar)</b>	3.6 lbf (16N)	—	—	—	—
<b>Minimum Operating Torque at 90 PSI (6 bar)</b>	7.1 oz in (50Nm)	35.4 oz in (250Nm)	35.4 oz in (250Nm)	35.4 oz in (250Nm)	—
<b>Operating Angle</b> (Minimum Lever Travel Including Pre-Travel Required For Operation)	—	23°	23°	12°	12°
<b>Operating Diagram</b>					

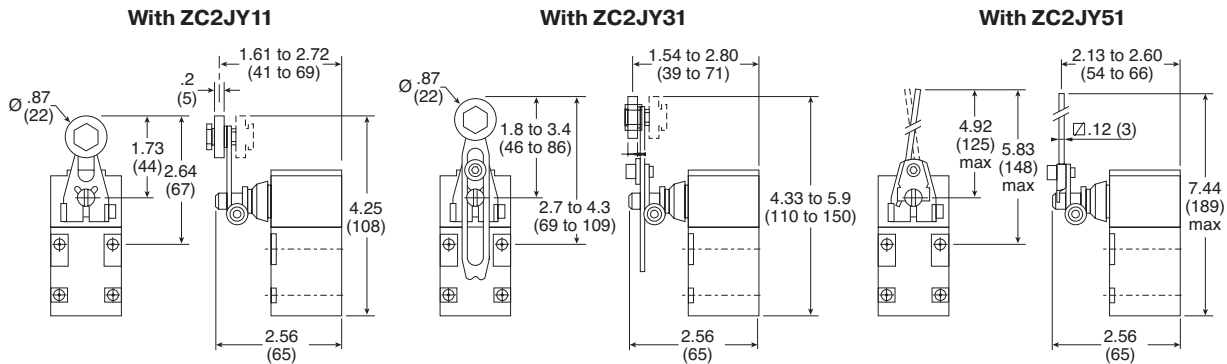
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Airline Accessories

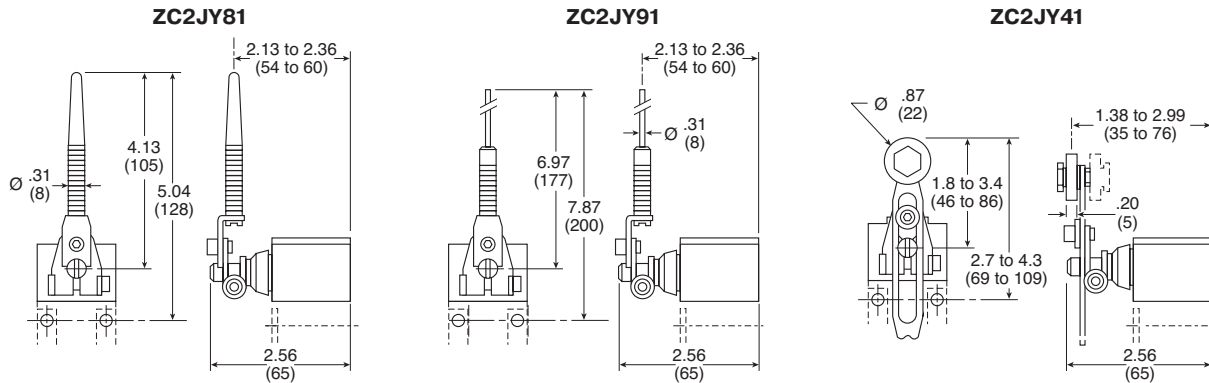
### Switch Body With Plunger Heads



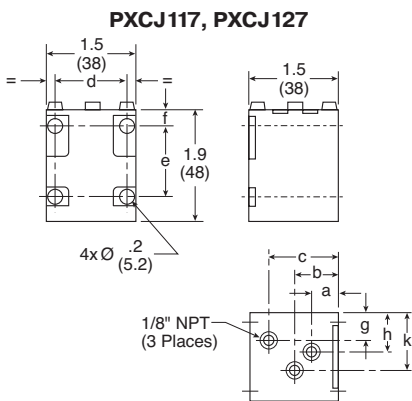
### Switch Body With Rotary Heads and Operating Levers



### Rotary Heads With Operating Levers



### Pneumatic Switch Bodies

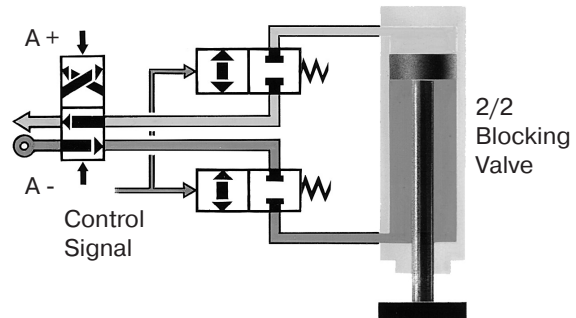
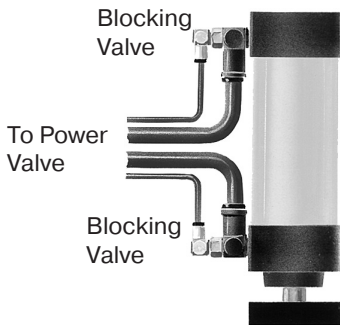
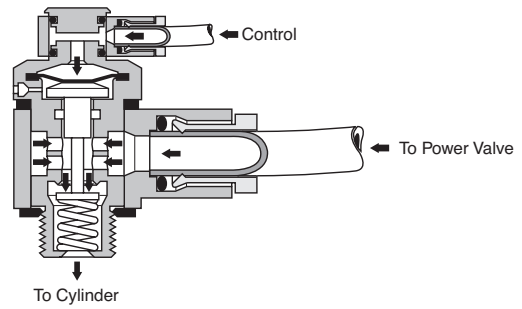


	inch	mm
a	.47	12
b	.75	19
c	1.16	29.5
d	1.14 to 1.18	29 to 30
e	1.18	30
f	.28	7
g	.43	11
h	.51	13
k	.94	24

# Blocking Valves

The blocking valve is a single acting spring return 2/2 valve in a fitting format. The device requires a pneumatic pilot signal to open, which allows free flow of air, gas or liquid to pass. As long as a pilot signal is present, the device will remain open. When the pilot signal is removed, the internal spring will close the blocking valve, bubble tight. The blocking valve is oil serviceable and rated to 150 PSI.

These devices have two primary design uses: (1) to prevent unwanted gravity induced motion in cylinders during shut down procedures or during periods of lost supply pressure and (2) freezing the cylinder position by using a blocking valve at each end of the cylinder. Application needs such as tool or work piece protection, horizontal indexing or inspection stops are often satisfied by these devices.



## PWBA General Characteristics

<b>Operating Pressure</b>	0 to 150 PSI
<b>Permissible Fluids</b>	Air or neutral gas, 50 µm filtration, lubricated or not
<b>Operating Temperature</b>	5° to 140°F (-15° to 60°C)
<b>Storage Temperature</b>	-40° to 160°F (-40° to 70°C)
<b>Flow</b>	See page G31
<b>Mechanical Life</b>	10 Million
<b>Maximum Operating Frequency</b>	10Hz
<b>Material:</b> Body	Zinc alloy
Mounting Screw	Brass
<b>Maximum Mounting Torque:</b> 10-32 UNF and M5	88 inch pounds
1/8"	70 inch pounds
1/4"	105 inch pounds
3/8"	265 inch pounds
1/2"	310 inch pounds
<b>Adjustment</b>	N/A
<b>Adjustment Locking</b>	N/A

## Piloting and De-Piloting Pressure

Blocking Valve Sizes	Pilot with Operating Pressure of:			
	30 PSI	60 PSI	90 PSI	120 PSI
1/8" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
1/4" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
3/8" BSP or NPT	35 PSI	40 PSI	45 PSI	50 PSI
1/2" BSP or NPT	45 PSI	50 PSI	55 PSI	60 PSI
Blocking Valve Sizes	Depilot with Operating Pressure of:			
	30 PSI	60 PSI	90 PSI	120 PSI
1/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/4" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
3/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/2" BSP or NPT	25 PSI	30 PSI	34 PSI	40 PSI

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Airline Accessories

For Cylinder Mounting  
(Can also be mounted in Threshold Sensor Banjo)

**With Instant Tube Fittings**



PWBA3469

Symbol	Connection for Pilot	BSP			NPT			
		Cylinder Port Thread (Male)	Connection for Tube	Catalog Number	Connection for Pilot	Cylinder Port Thread (Male)	Connection for Tube	Catalog Number
	4mm Tube	1/8"	6mm	PWBA1468	5/32" Tube	1/8"	1/4"	PWBA3468
		1/4"	6mm	PWBA1469		1/4"	1/4"	PWBA3469
		1/4"	8mm	PWBA1489				
		3/8"	8mm	PWBA1483				
		3/8"	10mm	PWBA1493				
		1/2"	12mm	PWBA1412				

**With Threaded Connections and Tube Pilot Port**



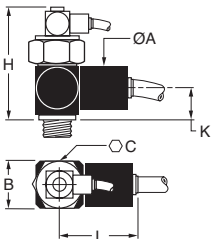
PWBA3833

Symbol	Connection for Pilot	BSP			NPT			
		Cylinder Port Thread (Male)	Connection from Valve (Female)	Catalog Number	Connection for Pilot	Cylinder Port Thread (Male)	Connection from Valve (Female)	Catalog Number
	4mm Tube	1/8"	1/4"	PWBA1898	5/32" * Tube	1/8"	1/8"	PWBA3888
		1/4"	1/4"	PWBA1899		1/4"	1/4"	PWBA3899
		3/8"	3/8"	PWBA1833		3/8"	3/8"	PWBA3833
	M5 Female	1/2"	1/2"	PWBA1822	5/32" * Tube	1/2"	1/2"	PWBA3822

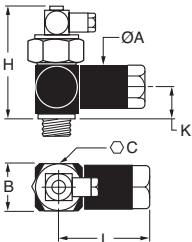
\* Instant fitting

**With Threaded Connections and Threaded Pilot Port**

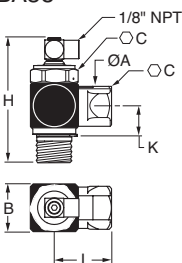
PWBA14/34



PWBA18/38



PWBA38



Connection for Pilot	NPT		
	Cylinder Port Thread (Male)	Connection from Valve	Catalog Number
1/8" pipe	1/8"	1/8"	PWBA38887
	1/4"	1/4"	PWBA38997
	3/8"	3/8"	PWBA38337
	1/2"	1/2"	PWBA38227

**Dimensions: Inches (mm)**

	Flow*	ØA	B	C	K	H	L
PWBA1468/3468	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.54" (39)
PWBA1469/3469 PWBA1489	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.54" (39)
PWBA1483 PWBA1493/3493	45.9	1.06" (27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	1.98" (50)
PWBA1412/3412	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.59" (66)
PWBA1898/3888	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.71" (43.5)
PWBA1899/3899	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.71" (43.5)
PWBA1833/3833	45.9	1.06" (27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	2.18" (55)
PWBA1822/3822	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.47" (63)
PWBA38887	14.8	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38997	19.4	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38337	45.9	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)
PWBA38227	81.2	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)

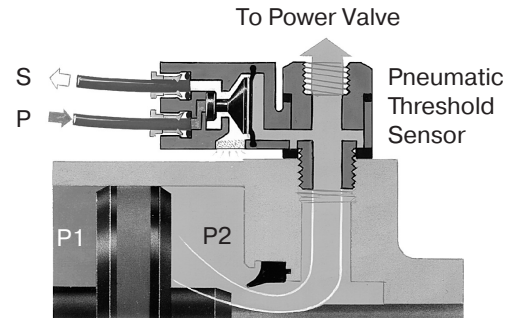
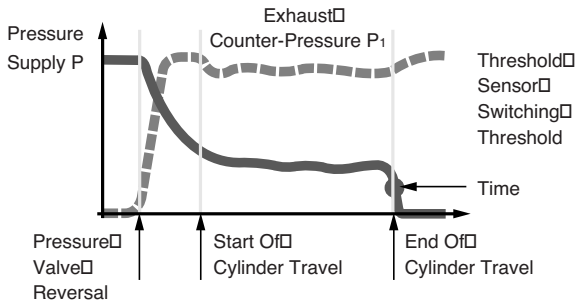
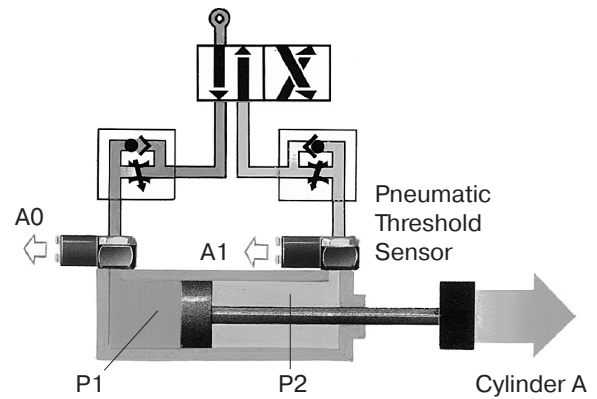
\*SCFM at 90 PSI

# Threshold Sensors – PWS

## General Description

The plug-in threshold sensors provide feedback information on pneumatic cylinder status in one of three possible outputs . . . pneumatic, electric, or electronic. Mounted into the cylinder port, these devices monitor the back pressure of the cylinder's exhaust. When the cylinder's piston stops, the back pressure rapidly drops and the threshold sensor provides the desired output. Ideal for variable stroke applications such as robotics where other sensor type devices such as limit switches are impractical, these devices provide a signal whenever the cylinder stops motion.

The threshold sensor consists of two complementary sub assemblies (1) the banjo fitting and (2) the plug-in sensor element. In all cases, the sensor is easily plugged into the banjo fitting and locked in place with a spring clip. The banjo fitting is designed to accept (piggy backed) other functional fittings such as flow controls or blocking valves. Simply select the sensor based on the type feedback signal that best fits the application.



## PWS General Characteristics

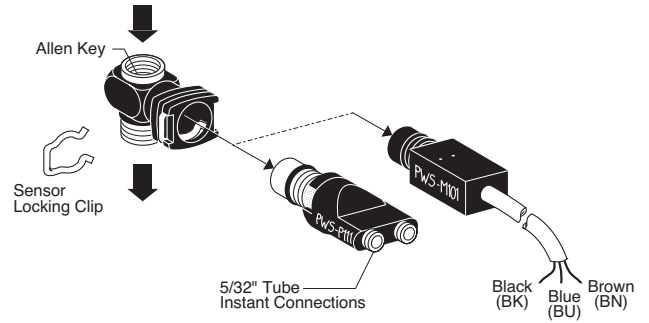
<b>Operating Pressure</b>	0 to 150 PSI
<b>Permissible Fluids</b>	Air or neutral gas, 50 µm filtration, lubricated or not
<b>Operating Temperature</b>	5° to 140°F (-15° to 60°C)
<b>Storage Temperature</b>	-40° to 160°F (-40° to 70°C)
<b>Flow</b>	N/A
<b>Mechanical Life</b>	10 Million
<b>Maximum Operating Frequency</b>	10Hz
<b>Material:</b> Body	Thermoplastic
<b>Mounting Screw</b>	Brass
<b>Maximum Mounting Torque:</b> 10-32 UNF and M5	88 inch pounds
1/8"	70 inch pounds
1/4"	105 inch pounds
3/8"	265 inch pounds
1/2"	310 inch pounds
<b>Adjustment</b>	N/A
<b>Adjustment Locking</b>	N/A

## Piloting and De-Piloting Pressure

Threshold Sensors	Pilot with Operating Pressure of 90 PSI	Depilot with Operating Pressure of 90 PSI
PWSP111	64 PSI	6 PSI
PWSM1012	15 PSI	9 PSI
PWSE101 and PWSE111	10 PSI	7 PSI

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Airline Accessories



**Model Selection**

Banjo Sockets (with Sensor Clip)		
Port Size	Model Number	Wrench
10-32	<b>PWSB1557</b>	5/16" Hex
1/8"	<b>PWSB1887</b>	3/16" Allen
1/4"	<b>PWSB1997</b>	5/16" Allen
3/8"	<b>PWSB1337</b>	3/8" Allen
1/2"	<b>PWSB1227</b>	1/2" Allen

Plug-in Sensors		
Output	Model Number	Connection
Pneumatic	<b>PWSP111</b>	5/32" push-in
Electrical	<b>PWSM1012</b>	3-wire cable (6 ft)

**Mounting**

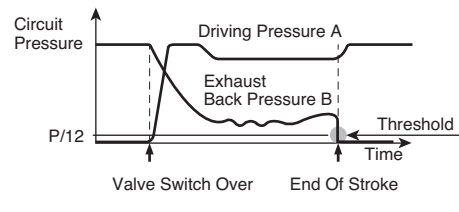
Banjo fittings in 10-32 to 1/2" pipe sizes are designed to be installed directly into actuator ports (up to 5" bore cylinders). The banjo fitting can accommodate other functional fittings and components such as right angle flow control valves or blocking valves. Banjo fittings screw into actuators using an Allen wrench or 5/16" hex head wrench for 10-32 size. Electrical or pneumatic feedback element snaps into place using a locking clip.

**Operation**

Pneumatic sensors have a continuous pressure signal applied to the sensor device. Electrical sensors have a continuous electrical signal applied to the sensor device. The threshold sensor assembly mounted directly into the cylinder Port provides an output signal S, which can be pneumatic or electrical, when the falling back pressure in the exhausting chamber of the cylinder reaches the operating threshold (approximately 6-9 PSIG). (The device is a normally passing device. The output is only on when there is nearly zero pressure at the cylinder.)

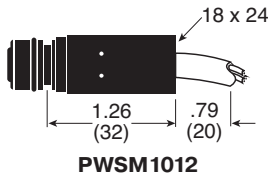
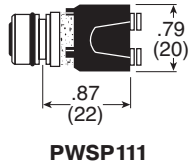
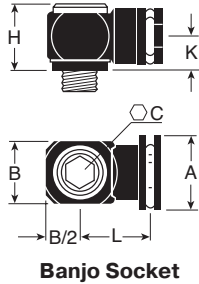
**Application**

The threshold sensor provides electrical or pneumatic feedback information on pneumatic (air) cylinder status. These devices monitor the back pressure of the cylinder's exhausting chamber. When the cylinder stops, the back pressure drops and the threshold sensor provides the desired output. Ideal for variable stroke applications. The banjo fitting and the feedback element are two separate subassemblies, giving the user flexibility between electrical and pneumatic outputs as feedback.





**Dimensions**



Model	A	B	C	H	K	L
PWSB1557	.98 (25)	.43 (11)	5/16" Hex	.79 (20)	.40 (10)	.67 (17)
PWSB1887	.98" (25)	.63 (16)	3/16" Allen	.71 (18)	.40 (10)	.79 (20)
PWSB1997	.98 (25)	.83 (21)	5/16" Allen	.71 (18)	.40 (10)	.87 (22)
PWSB1337	.98 (25)	1.10 (28)	3/8" Allen	.79 (20)	.47 (12)	.98 (25)
PWSB1227	.98 (25)	1.30 (33)	1/2" Allen	.93 (24)	.55 (14)	1.02 (26)

inches  
(mm)

**Specifications**

Operating Pressure	0 to 150 PSIG (0 to 10 bar)
Temperature Range	5°F to 140°F (-15°C to 60°C)

**CAUTION:** If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.

Maximum Operating Frequency	10 Hz
Pilot Pressure (PWSP111)	>64 PSIG (4.4 bar)
Threshold Pressure	6 to 9 PSIG (.4 to .6 bar)
Output Flow Rate (PWSP111)	3 SCFM at 90 PSIG
Current Rating (PWSM1012) –	5 VA, 250 VAC 5W, 48 VAC

Materials –	
Body	Thermoplastic
Mounting Screw & Threads	Brass

Life Expectancy –  
10 million cycles with dry air at 90 PSIG, 68°F, and 1 Hz operating frequency

Voltage Range (PWSM1012) –	12 - 240 VAC 12 - 48 VDC
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Airline Accessories

Universal Description	Electrical		Fluid Power		
	Function	Symbol	Function	Symbol	
Normally Non-Passing (NNP)	Normally Open (N.O.)		Normally Closed (N.C.)	2-Way 	3-Way 
Normally Passing (NP)	Normally Closed (N.C.)		Normally Open (N.O.)		



# LV & EZ Series

“LV” & “EZ” Series ..... G36

“LV” Series

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“EZ” Series


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- Flow ..... G43
- “LV” & “EZ” Series Accessories ..... G43


**G**  
Airline Accessories

**Bold Items are Most Popular.**

# Parker is protecting your most valuable assets...

 <p>Standard 190.147</p>	<ul style="list-style-type: none"> <li>• This applies to the servicing and maintenance of a machine or equipment.</li> <li>• Any new, replacement, repair, or renovation to a machine must include an energy isolation device that can accept a lock out device.</li> <li>• Lock out devices should not be used for any other purposes</li> <li>• Verification of energy isolation is required</li> </ul>
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 <p>Standard Z244</p>	<ul style="list-style-type: none"> <li>• This applies to all machines</li> <li>• Lockout / tagout is the primary method of hazardous energy control</li> <li>• Machines shall be designed, manufactured, supplied, and installed with energy isolating devices</li> </ul>
--	---

	<ul style="list-style-type: none"> <li>• B11.0 applies to a broad range of machines, B11.TR6 is specific to machine tools, and B155.1 is specific to packaging and converting machines</li> <li>• Energy isolating device shall:             <ul style="list-style-type: none"> <li>– Be capable of being locked in the OFF position only</li> <li>– Be easy to operate</li> <li>– Have an exhaust port equal or greater than its supply port</li> <li>– Have a pressure indicator that is visible to an operator to verify line is relieved of pressure</li> </ul> </li> </ul>
--	---

## ...By offering the best in pneumatic safety for machine maintenance:

G Airline Accessories



**Traditional Ball Valve**

- Not a dedicated energy isolation device ✗
- Not a full exhaust port ✗
- No verification of line exhaust ✗
- Can be locked ON ✗
- Not easily identifiable ✗



**Wilkerson Solution**

- ✓ Dedicated energy isolation device
- ✓ Full exhaust port
- ✓ Verification of line exhaust
- ✓ Only lockable in OFF position
- ✓ Easily identifiable

# LV Series

## Features

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines. In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment.

- Used for compliance with OSHA 29 CFR part 1910
- 1/4" to 2" pipe sizes. NPT or BSPP
- Yellow cast aluminum body with red handle or stainless steel (NACE MR0175 / ISO 15156)
- Inline or surface mountable
- Built in port for pressure verification to meet ANSI B11 and PMMI B155 requirements
- Fluorocarbon slipper seals for easy shifting, even after long periods of inactivity



## Material Specifications

Description	LV	LVSS
Body:	Cast aluminum alloy	Stainless steel
Handle:	Plastic	Stainless steel
Spool:	Aluminum	Stainless steel
Seals:	Carboxylated nitrile	Fluorocarbon
Detent spring:	Stainless steel	316 Stainless steel
Grease:	Magnalube G <sup>†</sup>	Magnalube G <sup>†</sup>

<sup>†</sup> Trademark Magnalube

## Operating Information

Operating pressure:	LV	LVSS
Compact	15 to 145 PSIG	–
Standard	15 to 300 PSIG	15 to 300 PSIG
High flow	15 to 300 PSIG	–
Operating temperature:	40°F to 175°F	30°F to 175°F
Operating media:	Clean, dry, compressed air (5 micron)	

## Applications

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines (see Figure 1). In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment. Prior to servicing, the red handle is pressed inward, blocking pressure and relieving all downstream air pressure. A padlock is installed through the locking hasp, Preventing accidental actuation during the maintenance procedure. Following maintenance, the padlock is removed and the red handle is pulled outward, returning air pressure to the system.

(For complete Lockout / Tagout procedures, consult OSHA Standard 29 CFR Part 1910 in U.S. Federal Register/Vol. 54 No. 169, Friday, September 1, 1989 / Page 36644.)

## Mounting

Valves can be inline mounted or surface mounted using the two mounting holes provided in the valve body. Mount valves in plain view with the handle oriented for accessibility.

## Placement of Lockout Device

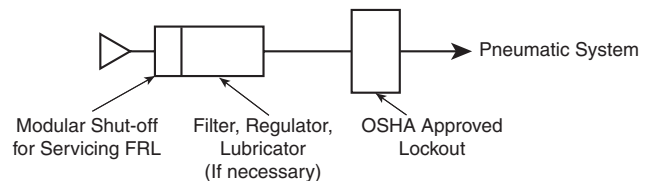




Figure 1.


**Compact**

	Port in / out	Port exhaust	Wt (lb)	Part number *
	1/4	3/8	0.9	<b>LV2N3B</b>
	3/8	3/8	0.9	<b>LV3N3B</b>

**Standard**


	Port in / out	Port exhaust	Wt (lb)	Part number *
	3/8	3/4	2.0	<b>LV3N6B</b>
	1/2	3/4	2.0	<b>LV4N6B</b>
	3/4	3/4	2.0	<b>LV6N6B</b>
	3/4	1-1/4	3.2	<b>LV6NAB</b>
	1	1-1/4	3.2	<b>LV8NAB</b>
	1-1/4	1-1/4	3.2	<b>LVANAB</b>

**High Flow**

	Port in / out	Port exhaust	Wt (lb)	Part number *
	1-1/2	2	8.2	<b>LVBNCB</b>
	2	2	8.2	<b>LVCNCB</b>

\* For BSPP ports, change 4th digit from "N" to "B"

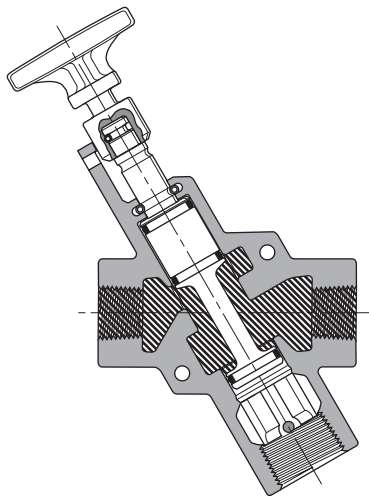
**Stainless Steel**

	Port in / out	Port exhaust	Wt (lb)	Part number *
	1/4	1/4	3.8	<b>LV2N2BSS</b>
	3/8	1/2	6.0	<b>LV3N4BSS</b>
	1/2	1/2	6.0	<b>LV4N4BSS</b>
	3/4	1	13	<b>LV6N8BSS</b>
	1	1	13	<b>LV8N8BSS</b>
	1-1/2	2	35	<b>LVBNCBSS</b>
	2	2	35	<b>LVCNCBSS</b>

**Operation**

*Normal Machine Operation – Valve Open*

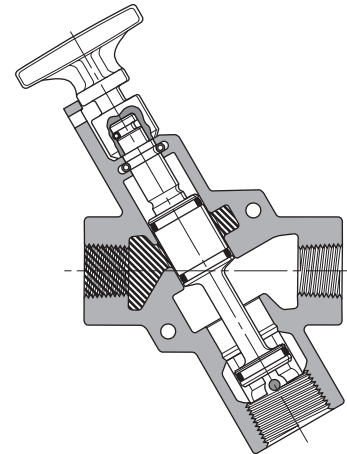
With the handle pulled outward. Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.



**LV Series Shown Open**

*Lockout Operation – Valve Closed*

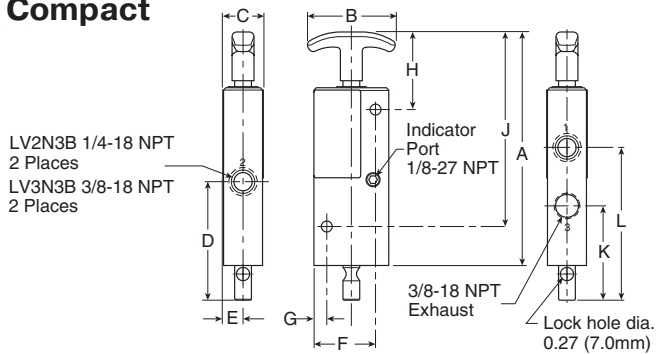
With the handle pushed inward. Inlet Port 1 is blocked. Outlet Port 2 is open to Exhaust Port 3.



**LV Series Shown Closed**

### LV Dimensions

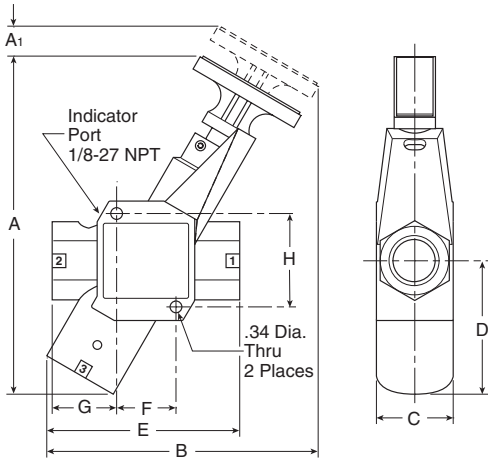
#### Compact



Compact LV Series, 3/8" Exhaust Ports Inches (mm)

<b>A</b> 6.50 (165)	<b>B</b> 2.25 (57)	<b>C</b> 1.05 (27)	<b>D</b> 3.04 (77)	<b>E</b> .51 (13)	<b>F</b> 1.58 (40)
<b>G</b> .33 (8)	<b>H</b> 1.99 (51)	<b>J</b> 4.99 (127)	<b>K</b> 2.42 (62)	<b>L</b> 3.92 (100)	

#### Standard



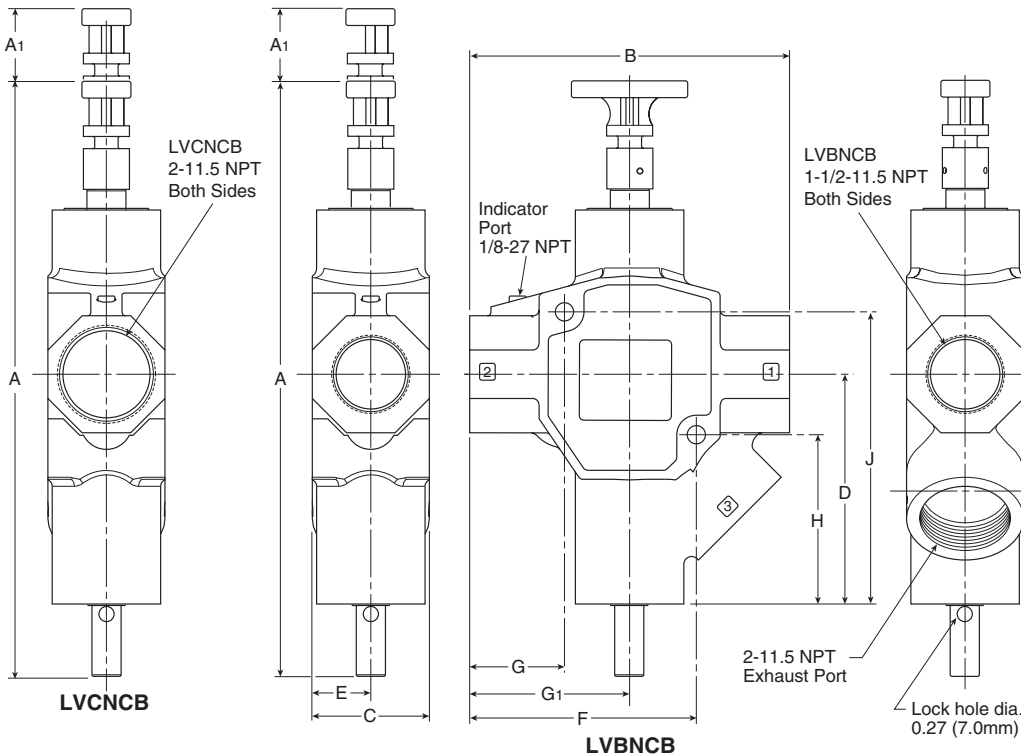
Standard LV Series, 3/4" Exhaust Port Inches (mm)

<b>A</b> 8.32 (211)	<b>A1</b> 0.64 (16)	<b>B</b> 6.60 (168)	<b>C</b> 2.00 (51)	<b>D</b> 3.06 (78)	<b>E</b> 4.24 (108)
<b>F</b> 1.32 (111)	<b>G</b> 1.56 (40)	<b>H</b> 2.21 (56)			

Standard LV Series, 1-1/4" Exhaust Port Inches (mm)

<b>A</b> 9.91 (252)	<b>A1</b> 0.85 (22)	<b>B</b> 7.95 (202)	<b>C</b> 2.25 (57)	<b>D</b> 3.91 (99)	<b>E</b> 5.65 (144)
<b>F</b> 1.74 (44)	<b>G</b> 1.89 (48)	<b>H</b> 2.74 (70)			

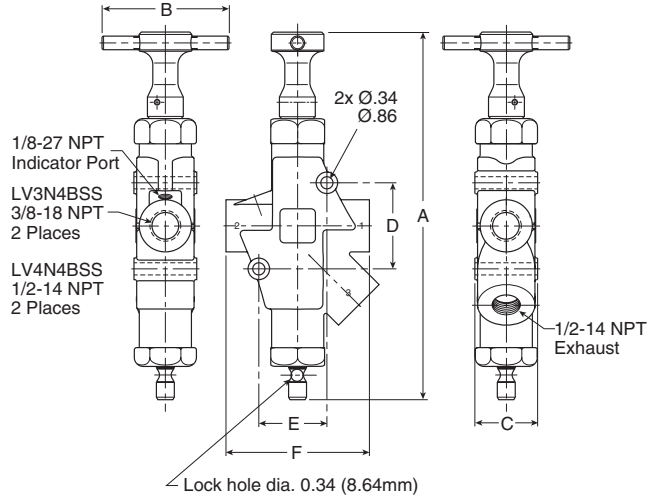
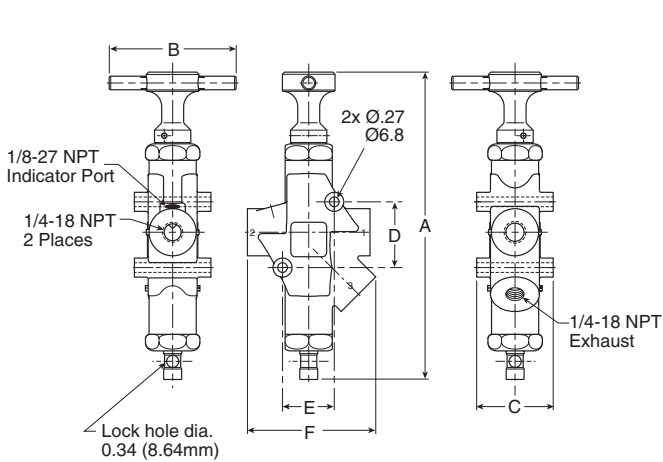
#### High Flow



High Flow LV Series, 2" Exhaust Ports Inches (mm)

<b>A</b> 14.82 (376)	<b>A1</b> 1.87 (47)
<b>B</b> 8.20 (208)	<b>C</b> 3.00 (76)
<b>D</b> 5.89 (150)	<b>E</b> 1.50 (38)
<b>F</b> 5.81 (148)	<b>G</b> 2.43 (62)
<b>G1</b> 4.10 (104)	<b>H</b> 4.34 (110)
<b>J</b> 7.49 (190)	

### Stainless Steel Dimensions

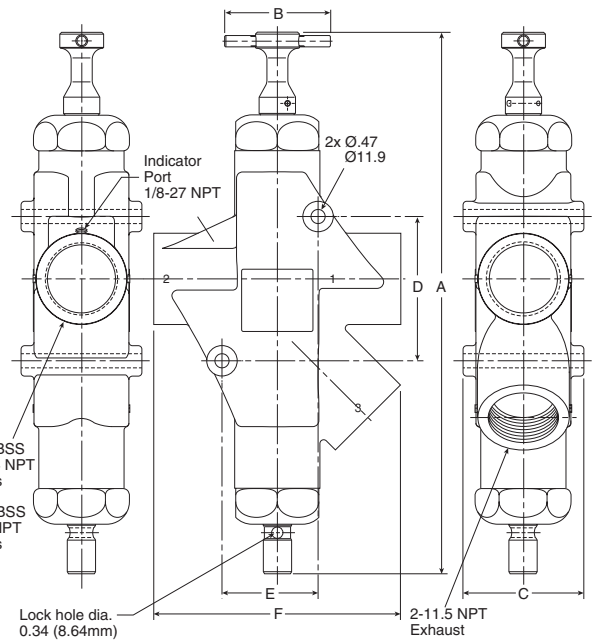
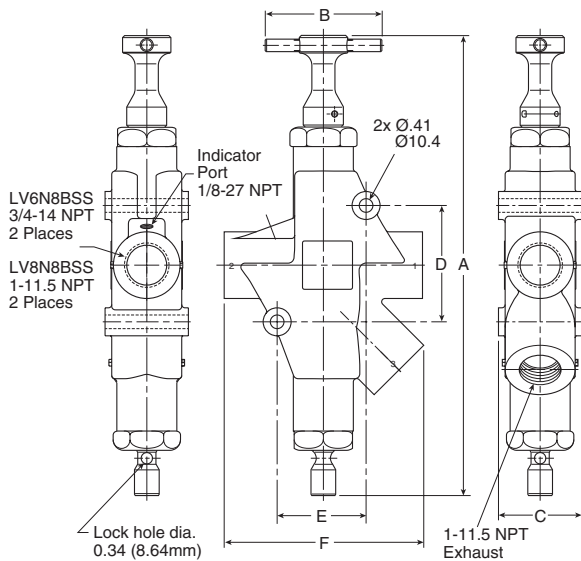


**Stainless Steel LV Series, 1/4" Exhaust Port**  
inches (mm)

A	B	C	D	E	F
8.47 (215)	3.50 (89)	2.11 (54)	1.81 (46)	1.43 (36)	3.54 (90)

**Stainless Steel LV Series, 1/2" Exhaust Port**  
inches (mm)

A	B	C	D	E	F
10.24 (260)	3.50 (89)	1.75 (45)	2.40 (61)	1.90 (48)	4.00 (102)



**Stainless Steel LV Series, 1" Exhaust Port**  
inches (mm)

A	B	C	D	E	F
13.80 (351)	3.50 (89)	2.50 (64)	3.49 (89)	2.67 (68)	5.99 (152)

**Stainless Steel LV Series, 2" Exhaust Port**  
inches (mm)

A	B	C	D	E	F
17.92 (455)	3.50 (89)	4.00 (102)	4.77 (121)	3.18 (81)	8.16 (207)

G

Airline Accessories

# EZ Series

## Features

- Combines lockout and soft-start functions in a single unit
- Used in systems for compliance with OSHA standard 29 CFR part 1910
- 3/8 Inch to 1-1/4 inch pipe sizes
- Cv's from 3.7 To 13.7
- 3/4 and 1-1/4 inch: exhaust ports available
- Exhaust port threaded for installation of silencer or line for remote exhausting
- Inline or surface mountable
- Yellow cast aluminum body with red handle. Blue dot on body indicates EZ Series valve
- Fluorocarbon slipper seals for easy shifting, even after long periods of inactivity

## Material Specifications

Description	EZ
Body:	Cast aluminum alloy
Handle:	Plastic
Spool:	Aluminum
Seals:	Carboxylated nitrile
Detent spring:	Stainless steel
Grease:	Magnalube G <sup>†</sup>

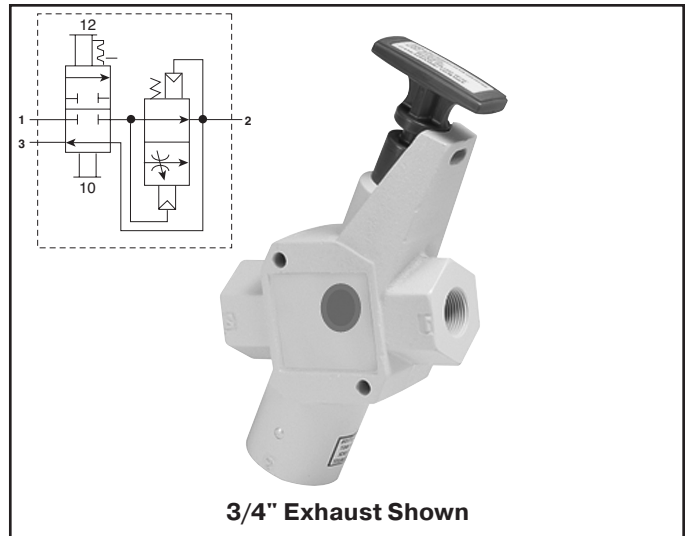
<sup>†</sup> Trademark Magnalube

## Applications

EZ valves are installed in pneumatic drop legs, or individual pneumatic control lines (see Figure 1). In accordance with OSHA procedures, EZ valves are used during maintenance and service procedures of pneumatically (air) operated equipment. Prior to servicing, the red handle is pressed inward, blocking pressure and relieving all downstream air pressure. A padlock is installed through the locking hasp, preventing accidental actuation during the maintenance procedure. Following maintenance, the padlock is removed and the red handle is pulled outward, gradually returning air pressure to the system. (For complete Lockout / Tagout procedures, consult OSHA Standard 29 CFR Part 1910 in U.S. Federal Register/Vol. 54 No. 169, Friday, September 1, 1989 / Page 36644.)

## Mounting

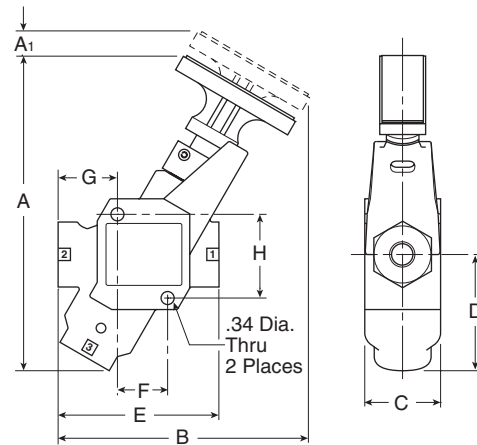
Valves can be inline mounted or surface mounted using the two 11/32" mounting holes provided in the valve body. Mount valves in plain view with the handle oriented for accessibility.



## Operating Information

Operating pressure:	15 to 300 PSIG
Operating temperature:	40°F to 175°F
Operating media:	Clean, dry, compressed air (5 micron)

## EZ Dimensions



### EZ Series, 3/4" Exhaust Port Inches (mm)


A	A1	B	C	D	E
8.32 (211)	0.64 (16)	6.60 (168)	2.00 (51)	3.06 (78)	4.24 (108)
F	G	H			
1.32 (111)	1.56 (40)	2.21 (56)			

### EZ Series, 1-1/4" Exhaust Port Inches (mm)

A	A1	B	C	D	E
9.91 (252)	0.85 (22)	7.95 (202)	2.25 (57)	3.91 (99)	5.65 (144)
F	G	H			
1.74 (44)	1.89 (48)	2.74 (70)			



**EZ Series**

	Port in / out	Port exhaust	Wt (lb)	Part Number *
	3/8	3/4	2.1	<b>EZ03NB6</b>
	1/2	3/4	2.1	<b>EZ04NB6</b>
	3/4	3/4	2.1	<b>EZ06NB6</b>
	3/4	1-1/4	3.2	<b>EZ06NBA</b>
	1	1-1/4	3.2	<b>EZ08NBA</b>
	1-1/4	1-1/4	3.2	<b>EZ0ANBA</b>

\* For BSPP ports, change 5th digit from "N" to "B"

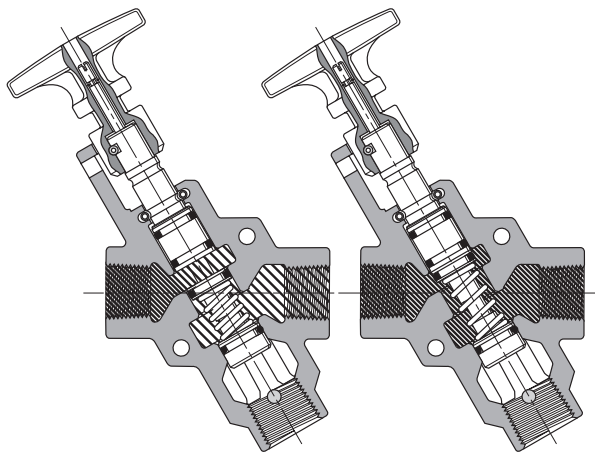
**Operation**

*Normal Machine Operation – Valve Open*

When the red handle is pulled outward, the adjustable needle valve (accessed through the top of the handle) setting determines the rate of pressure buildup. When downstream pressure reaches the full flow described in the specifications below, Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.

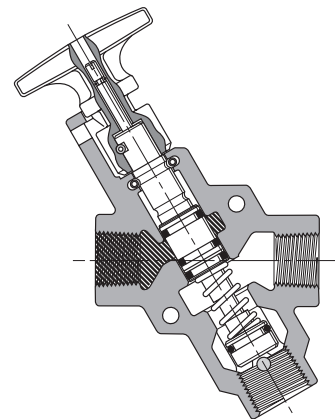
*Lockout Operation – Valve Closed*

When the red handle is pushed inward, the Inlet Port 1 is blocked. Downstream air is exhausted through Exhaust Port 3.



**Open  
Pressure Building Up**

**Open  
Full Flow**



**Closed**

G

Airline Accessories

**Flow**

Compact LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV2N3B	1/4	41.8	3/8	40.7
LV3N3B	3/8	60.7	3/8	60.7

Standard LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV3N6B	3/8	107.7	3/4	81.1
LV4N6B	1/2	161.4	3/4	90.9
LV6N6B	3/4	187.7	3/4	93.2
LV6NAB	3/4	297.7	1-1/4	204
LV8NAB	1	375	1-1/4	216
LVANAB	1-1/4	436.4	1-1/4	221

High FLOW LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LVBNCB	1-1/2	761.4	2	1156
LVCNCB	2	918.2	2	1186

EZ Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
EZ03NB6	3/8	136.4	3/4	181
EZ04NB6	1/2	161.4	3/4	189
EZ06NB6	3/4	181.9	3/4	216
EZ06NBA	3/4	272.7	1-1/4	248
EZ08NBA	1	311.4	1-1/4	273
EZOANBA	1-1/4	368.2	1-1/4	291

Stainless LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV2N2BSS	1/4	48.6	1/4	47.2
LV3N4BSS	3/8	131.6	1/2	142
LV4N4BSS	1/2	124.8	1/2	142
LV6N8BSS	3/4	325	1	386
LV8N8BSS	1	325	1	386
LVBNCBSS	1-1/2	889	2	1023
LVCNCBSS	2	889	2	1023

NOTE: Exhaust flow rates calculated using inlet pressure 100 psig (6.7 bar), pressure drop 5 psi (0.34 bar), air temp 68°F (20°C), and 36% relative humidity.

**LV / EZ Accessories**

**Corrosion resistant mufflers for harsh environments**

Port Size	Construction	Threads*	Dimensions In. (mm)		Part Number
			Width	Length	
1/4	Stainless steel	Male	0.56 (14.2)	1.75 (44.5)	<b>5500A2004</b>
1/2	Stainless steel	Male	0.87 (22.1)	2.75 (69.7)	<b>5500A4004</b>
1	Stainless steel	Male	1.31 (33.3)	3.87 (98.3)	<b>5500A6004</b>
2	Nickel plated	Male	2.37 (60.2)	5.50 (139.7)	<b>5500A9004</b>

\* NPT threads only

**High Flow Silencers**

Part Number *	ES25MC	ES37MC	ES50MC	ES75MC	ES100MC	ES125MC	ES150MC	ES200MC
<b>Pipe size</b>	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
<b>Flow (scfm)</b>	129	219	549	893	1013	1486	1580	1580
<b>Hex In. (mm)</b>	0.63 (16)	1.00 (25)	1.00 (25)	1.62 (41)	1.62 (41)	—	—	2.99 (76)
<b>Length In. (mm)</b>	1.85 (47)	3.31 (84)	3.31 (84)	4.56 (116)	4.56 (116)	5.69 (145)	5.69 (145)	7.68 (195)

\* NPT ports standard, for BSPT ports, add a "B" after the "S"

**Pop-up Pressure Indicator**



**Brass** – Part # 988A30 – Can be used on all LV or EZ series to provide visual verification of line exhaust



**Stainless** – Part# 1155H30 – Can be used on SS LV series to provide visual verification of line exhaust

**Pressure Switch**

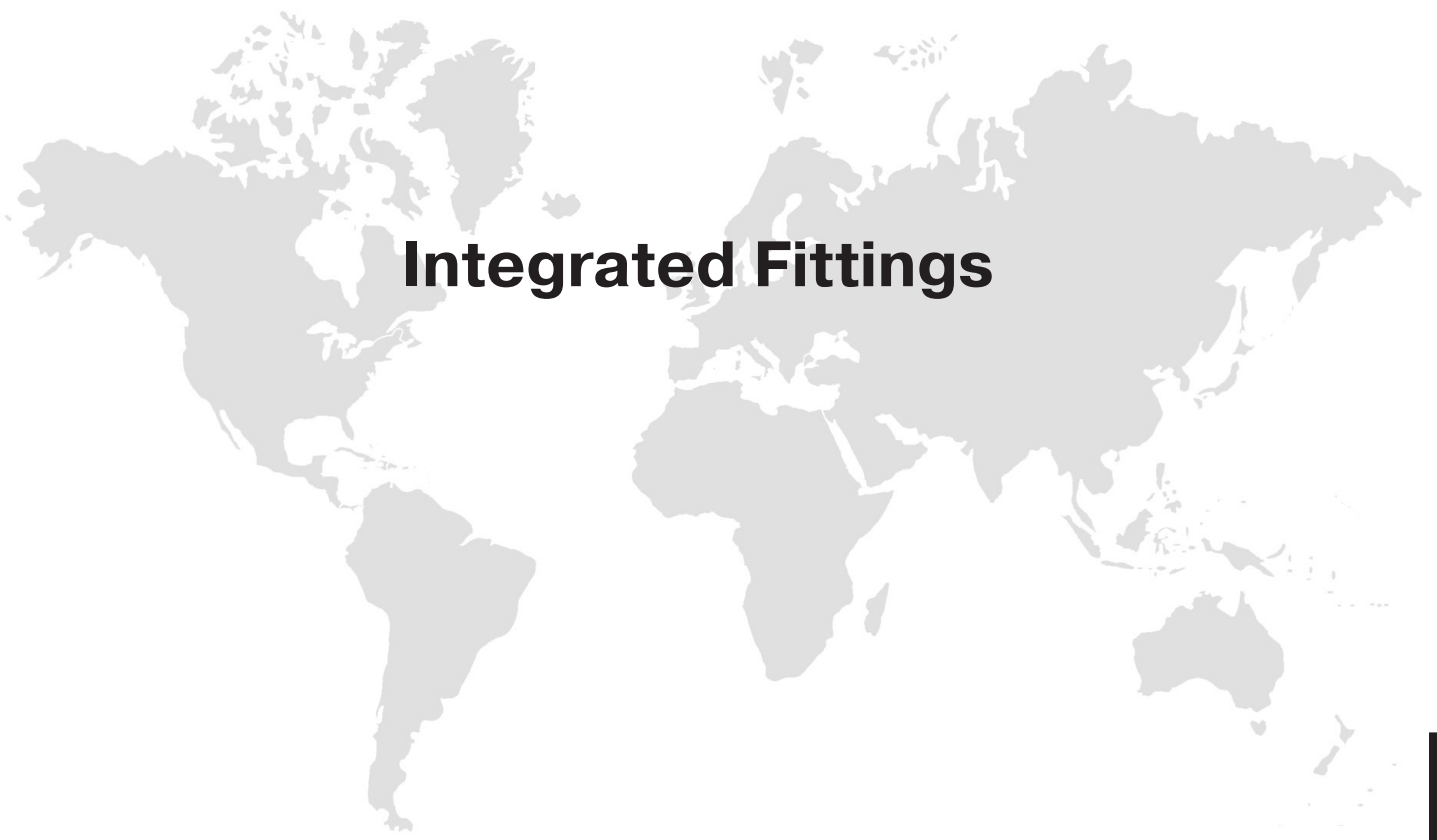


- Part # PPS1-2C3-RHM (DIN 9.4mm connector)
- Part # PPS1-2C3-RWL (18" leads)
- Signal verification of line exhaust
- Field adjustable set point

# Notes

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Airline Accessories



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Miniature Flow Control Valves ..... G48  
In-line Flow Control Valves ..... G49-G50  
Compact Metal Flow Control Valves..... G51  
Check Valves ..... G52

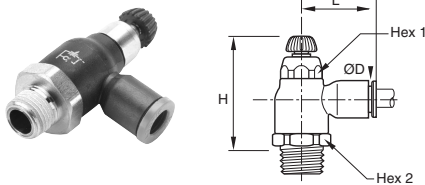
**G**  
Airline Accessories

<b>Compact Flow Control Valves</b>	<b>FCC731</b> Meter Out  Page G47	<b>FCCB731</b> Bi-Directional Flow Control  Page G47	<b>FCKC731</b> Knobless Meter Out Flow Control  Page G47	<b>Miniature Flow Control Valves</b>	<b>FCM731</b> Meter Out Flow Control  Page G48
	<b>FC832</b> Flow Control  Page G49	<b>FCB832</b> Bi-directional Flow Control  Page G49	<b>337 Series</b> Micrometer Flow Control Valves  Page G50		<b>337 Series</b> Micrometer Flow Control Valves - BSPP  Page G50
<b>338 Series</b> Bi-directional Flow Control Valves - BSPP  Page G50	<b>3250 Series</b> Flow Control Valves  Page G50	<b>3250 Series</b> Flow Control Valves - BSPP  Page G50	<b>3250 Series</b> Flow Control Valves  Page G50	<b>3250 Series</b> Flow Control Valves - BSPP  Page G50	
<b>Compact Metal Flow Control Valves</b>	<b>3251 Series</b> Right Angle Flow Control Valves  Page G51	<b>Check Valves</b>	<b>339 Series</b> Check Valve  Page G52	<b>339 Series</b> Check Valve - BSPP  Page G52	<b>3047 Series</b> Check Valve  Page G52

# Compact Flow Control Valves

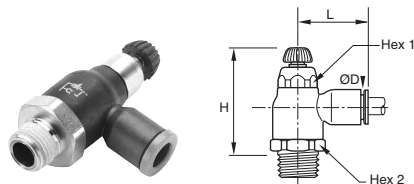


Compact flow control regulators ensure excellent performance of flow and are perfectly suited for reduced spaces due to their small size. The sensitivity of the adjustment screw provides very precise air flow control and regulation. A locking nut guarantees stability of adjustment against vibration tampering of the flow setting.



## FCC731 Compact Meter Out

Part No.	Tube Size (In)	NPT	Hex 1 (In)	Hex 2 (In)	H Open	H Closed	L
FCC731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-5/32-4	5/32	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-6-4	3/8	1/4	0.91	0.67	2.03	1.71	1.22
FCC731-6-6	3/8	3/8	0.91	0.67	2.03	1.71	1.22



## FCCB731 Compact Bi-Directional Flow Control

Part No.	Tube Size (In)	NPT	Hex 1 (In)	Hex 2 (In)	H Open	H Closed	L
FCCB731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85

## Materials Of Construction

Body (Depending upon the Model):	• Glass reinforced nylon 6.6 • Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Base:	Nickel-plated brass

## Nomenclature

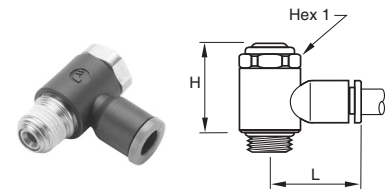
Example: FCC731-4-2	Attribute:
FC	Flow control
C	Compact
7	Right angle
3	Nylon body
1	Tube x Pipe
4	1/4 Tube O.D.
2	1/8 Pipe thread

## Applicable Tube

Tube O.D.	1/8, 5/32, 1/4, 3/8
Tube O.D. (mm)	4, 6, 8, 10, 12

## Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



## FCKC731 Knobless Meter Out Flow Control

Part No.	Tube Size (In)	NPT / UNF	Hex 1 (mm)	H	L
FCKC731-2-0	1/8	10-32		0.69	0.65
FCKC731-2-2	1/8	1/8	13	0.79	0.75
FCKC731-5/32-0	5/32	10-32		0.69	0.65
FCKC731-5/32-2	5/32	1/8	13	0.79	0.75
FCKC731-4-0	1/4	10-32		0.69	0.77
FCKC731-4-2	1/4	1/8	13	0.79	0.85
FCKC731-4-4	1/4	1/4	17	1.04	0.89
FCKC731-5-2	5/16	1/8	13	0.79	1.02
FCKC731-5-4	5/16	1/4	17	1.04	1.06
FCKC731-6-4	3/8	1/4	17	1.04	1.14
FCKC731-6-6	3/8	3/8	20	1.14	1.36

# Miniature Flow Control Valves



The miniature flow control regulator is especially adapted for all very small sized pneumatic applications (micro-pneumatic in particular). They are specifically designed for use with small bore cylinders (pancake / flat cylinders). Miniature flow control regulators are available in meter out, meter in and bi-directional versions.

## Materials of Construction

Body (Depending upon the Model):	• Glass reinforced nylon 6.6 • Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Base:	Nickel-plated brass

## Nomenclature

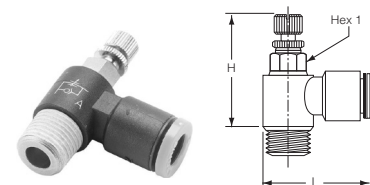
Example: FCM731-4-2	Attribute:
<b>FC</b>	Flow control
<b>M</b>	Miniature
<b>7</b>	Right angle
<b>3</b>	Nylon body
<b>1</b>	Tube x pipe
<b>4</b>	1/4 Tube O.D.
<b>2</b>	1/8 Pipe thread

## Applicable Tube

Tube O.D.	1/8, 5/32, 1/4
Tube O.D. (mm)	3, 4, 6, 8

## Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



## FCM731 Miniature Meter Out Flow Control

Part No.	Tube Size (In)	NPT	Hex 1 mm	H Open	H Closed	L
FCM731-2-0	1/8	10-32	6	1.14	0.91	0.67
FCM731-2-2	1/8	1/8	7	1.41	1.26	0.69
FCM731-5/32-0	5/32	10-32	6	1.02	0.93	0.67
FCM731-5/32-2	5/32	1/8	7	1.16	1.06	0.71
FCM731-4-0	1/4	10-32	6	1.02	0.93	0.73
FCM731-4-2	1/4	1/8	7	1.16	1.06	0.75
FCM731-4-4	1/4	1/4	8	1.28	1.18	0.77

# In-Line Flow Control Valves



In-line flow controls are unidirectional flow control valves. Intake air flows freely through the flow control; exhaust air is metered out through a specially designed adjustment screw. An arrow on the body of the valve indicates the direction of controlled flow. They can be easily added to existing circuitry. Simply splice it into the cylinder port line.

They can be used individually or they may be stacked together using two joining clips.

## Materials of Construction

Body:	Glass reinforced nylon 6.6
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Tailpiece:	Nickel-plated brass

## Nomenclature

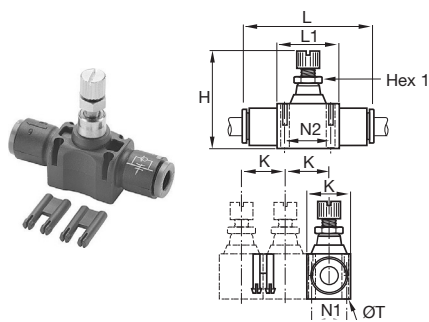
Example: FCMS731-5/32-2	Attribute:
<b>FC</b>	Flow control
<b>M</b>	Miniature
<b>8</b>	In-line
<b>3</b>	Nylon body
<b>2</b>	Tube x pipe
<b>4</b>	1/4 Tube O.D.

## Applicable Tube

Tube O.D.	5/32, 1/4, 5/16, 3/8, 1/2
Tube O.D. (mm)	4, 6, 8, 10, 12

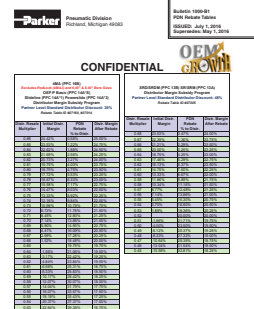
## Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



### FC832 In-Line Flow Control

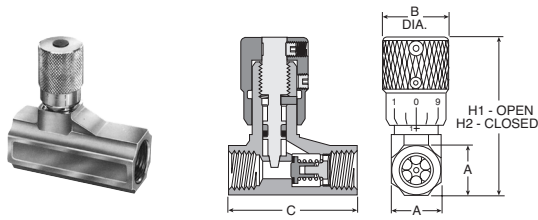
Part No.	Tube Size (In)	Hex 1 mm	H Closed	H Open	K	L	L1	N1	N2	T
FC832-5/32	5/32	5	1.15	1.31	0.47	1.52	0.59	0.31	0.43	0.09
FC832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FC832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13
FC832-6	3/8	14	2.03	2.38	0.94	2.87	1.29	0.62	1.01	1.60
FC832-8	1/2	14	2.24	2.63	1.09	3.35	1.37	0.78	1.07	0.16



### FCB832 In-Line Bi-directional Flow Control

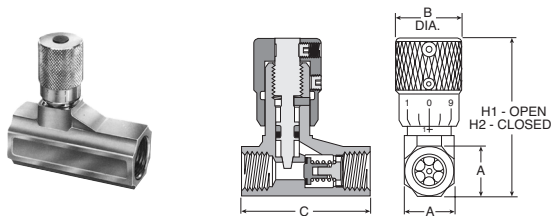
Part No.	Tube Size (In)	Hex 1 mm	H Closed	H Open	K	L	L1	N1	N2	T
FCB832-5/32	5/32	5	1.15	1.31	0.47	1.52	0.59	0.31	0.43	0.09
FCB832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FCB832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13





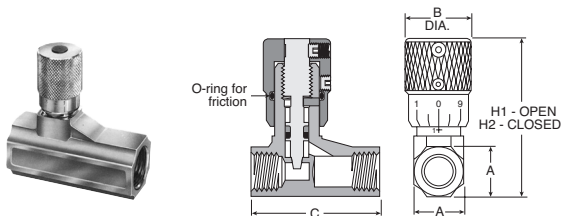
**337 Micrometer Flow Control Valves**

Part No.	Port Size	A	B	C	H1	H2
00337 1000	1/8"	9/16"	0.75	1.47	2.03	1.81
00337 1001	1/4"	11/16"	0.75	1.47	2.28	2.03
00337 1002	3/8"	7/8"	0.88	2.31	2.84	2.53
00337 1003	1/2"	1-3/16"	1.06	3.25	3.62	3.22
00337 1004	3/4"	1-3/8"	1.06	3.25	3.72	3.31



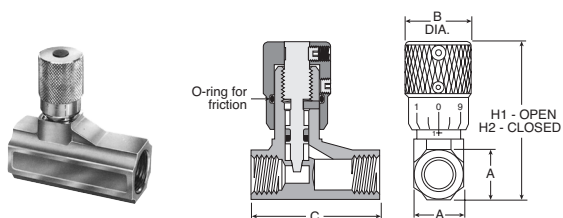
**337 Micrometer Flow Control Valves - BSPP**

Part No.	Port Size	A	B	C	H1	H2
00337G1000	1/8"	9/16"	0.75	1.47	2.03	1.81
00337G1001	1/4"	11/16"	0.75	1.47	2.28	2.03



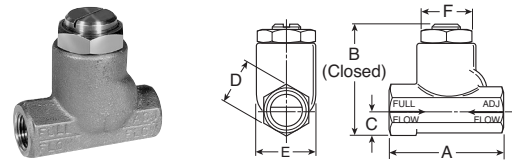
**338 Bi-directional Flow Control Valves**

Part No.	Port Size	A	B	C	H1	H2
00338 1100	1/8"	9/16"	0.75	1.47	2.03	1.81
00338 1101	1/4"	11/16"	0.75	1.47	2.28	2.03
00338 1102	3/8"	7/8"	0.88	2.31	2.84	2.53
00338 1103	1/2"	1-3/16"	1.06	3.25	3.62	3.22
00338 1104	3/4"	1-3/8"	1.06	3.25	3.72	3.31



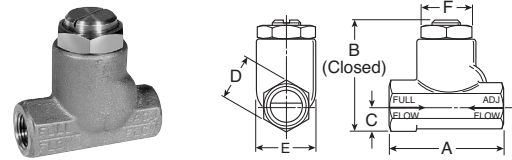
**338 Bi-directional Flow Control Valves - BSPP**

Part No.	Port Size	A	B	C	H1	H2
00338G1100	1/8"	9/16"	0.75	1.47	2.03	1.81
00338G1101	1/4"	11/16"	0.75	1.47	2.28	2.03



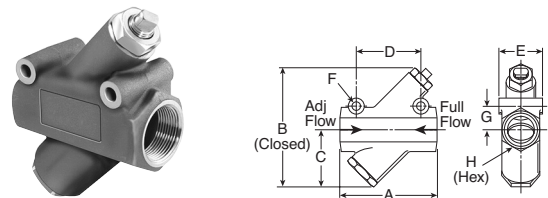
**3250 Flow Control Valves**

Part No.	Port Size	A	B	C	D	E	F
03250 0119	1/8"	1.75	1.56	0.37	0.62	0.81	0.68
03250 0219	1/4"	2.33	1.97	0.44	0.75	1.09	0.94
03250 0319	3/8"	2.66	2.44	0.56	1.00	1.38	1.19
03250 0419	1/2"	3.11	3.06	0.75	1.25	1.63	1.38
03250 0519	3/4"	3.56	3.69	0.88	1.50	2.00	1.75



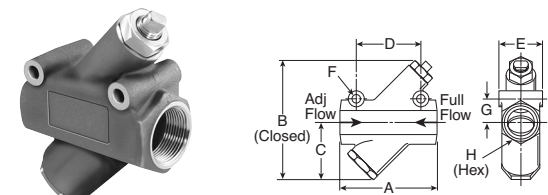
**3250 Flow Control Valves - BSPP**

Part No.	Port Size	A	B	C	D	E	F
3250G0119	1/8"	1.75	1.56	0.37	0.62	0.81	0.68
3250G0219	1/4"	2.33	1.97	0.44	0.75	1.09	0.94
3250G0319	3/8"	2.66	2.44	0.56	1.00	1.38	1.19
3250G0419	1/2"	3.11	3.06	0.75	1.25	1.63	1.38
3250G0519	3/4"	3.56	3.69	0.88	1.50	2.00	1.75



**3250 Flow Control Valves**

Part No.	Port Size	A	B	C	D	E	F	G	H
3250G1000	1"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
3250G1250	1-1/4"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
3250G1500	1-1/2"	5.88	8.00	3.75	3.50	2.50	.39	1.50	2.38



**3250 Flow Control Valves - BSPP**

Part No.	Port Size	A	B	C	D	E	F	G	H
03250 1000	1"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
03250 1250	1-1/4"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
03250 1500	1-1/2"	5.88	8.00	3.75	3.50	2.50	.39	1.50	2.38

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Airline Accessories

# Compact Metal Flow Control Valves



Metal flow control regulators are suited for use in severe conditions (temperatures, sparks, abrasion, etc). The screw and locking nut have been designed for easy manipulation, by hand. Adjustment can be made with a screwdriver and locking by use of a wrench.

## Materials of Construction

Body:	Treated Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Tailpiece:	Nickel-plated brass

## Nomenclature

Example: FCMS731-5/32-2	Attribute:
FC	Flow control
7	Right angle
0	Brass body
1	Tube x pipe
4	1/4 Tube O.D.
2	1/8 Pipe thread

## Applicable Tube

Tube O.D.	1/8, 5/32, 1/4, 3/8
Tube O.D. (mm)	4, 6, 8, 10, 12, 14

## Specifications

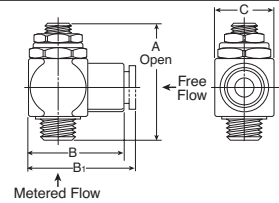
Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



Shown with Threaded Inlet



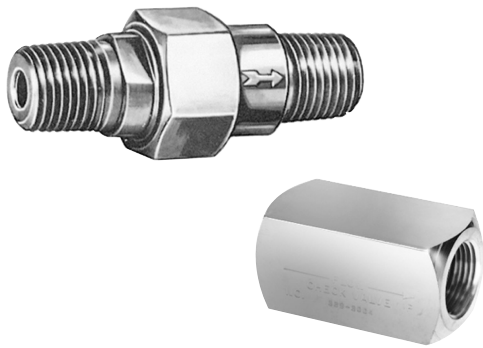
Shown with Prestolok Inlet Fitting



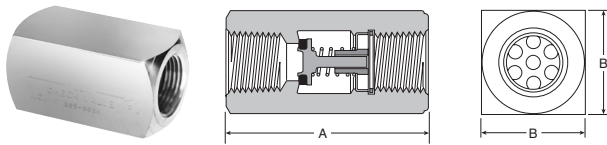
Model Number	Thread (NPT) Male	Thread (NPT) Female	A mm	B mm	C mm	Weight kg.	Cv	
							Adjusted Flow	Free Flow
03251 0125	1/8	1/8	44	30	17	0.9	0.26	0.20
03251 0250	1/4	1/4	51	36	23	2.0	0.75	0.68
03251 0375	3/8	3/8	58	43	27	3.2	0.84	0.72
03251 0500	1/2	1/2	68	53	32	5.0	1.64	1.41
<b>With Prestolok Fittings</b>								
03251 1215	1/8	5/32	44	30	17	0.9	0.19	0.16
03251 1225	1/8	1/4	44	30	17	0.9	0.28	0.22
03251 2525	1/4	1/4	51	36	23	2.0	0.51	0.44
03251 2538	1/4	3/8	51	36	23	2.0	0.62	0.53
03251 3838	3/8	3/8	58	43	27	3.2	0.78	0.65

**CAUTION:** If it is possible that the ambient temperature may fall below freezing, the medium must be moisture-free to prevent internal damage or unpredictable behavior.

# Check Valves

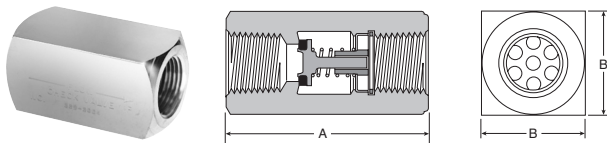


These in-line check valves allows air to pass in one direction while blocking flow in the other direction. Their extreme compactness and light weight make them suitable as a safety item in compressed air circuits. The body of the fitting contains an arrow to indicate the direction of flow.



## 339 Check Valve

Part No.	Port Size	A	B
00339 3000	1/8"	1.22	0.56
00339 3001	1/4"	1.34	0.69
00339 3002	3/8"	2.00	0.88
00339 3003	1/2"	2.56	1.19
00339 3004	3/4"	2.66	1.38



## 339 Check Valve - BSPP

Part No.	Port Size	A	B
00339G3000	1/8"	1.22	0.56
00339G3001	1/4"	1.34	0.69
00339G3002	3/8"	2.00	0.88
00339G3003	1/2"	2.56	1.19
00339G3004	3/4"	2.66	1.38

## Materials of Construction

Body:	<ul style="list-style-type: none"> <li>32PLCK: Nylon/nickel plated brass</li> <li>68PLCK: Nylon body with nickel-plated brass base</li> <li>VC: Acetal</li> </ul>
Gripping Ring:	Stainless Steel
O-Ring:	<ul style="list-style-type: none"> <li>Nitrile (32PLCK &amp; 68PLCK)</li> <li>EPDM (VC)</li> </ul>

## Nomenclature

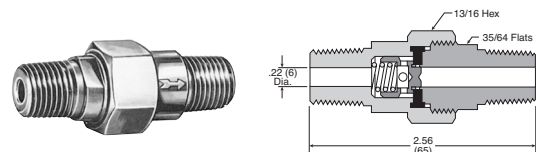
Example: W68PLCK-4-2	Attribute:	Example: A4VC4-MG	Attribute:
<b>W</b>	White thread sealant	<b>A</b>	Acetal
<b>68</b>	Tube x Pipe	<b>4</b>	1/4 Tube O.D.
<b>PL</b>	Prestolok	<b>VC</b>	Valve, Check
<b>CK</b>	Check Valve	<b>4</b>	1/4 Tube O.D.
<b>4</b>	1/4 Tube O.D.	<b>MG</b>	Metal gripping ring
<b>2</b>	1/8 Pipe thread		

## Applicable Tube

Tube O.D.	<ul style="list-style-type: none"> <li>PLCK: 5/32, 1/4, 5/16, 3/8</li> <li>VC: 1/4, 5/16, 3/8</li> </ul>
Tube O.D. (mm)	PLCK: 4, 6, 8, 10, 12

## Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	34°F to 150°F
Cracking Pressure:	<ul style="list-style-type: none"> <li>PLCK: 7 PSI</li> <li>VC: 1/3 PSI</li> </ul>
Working Fluid:	Compressed air



## 3047 Check Valve

Model Number	Pipe Thread
03047 0099	1/4"



# Accessories

Tank Valves & Air Chucks .....	G54	Muffler-Reclassifier ECS .....	G59
EM Series Exhaust Mufflers.....	G55	Automatic Drip Leg Drain & Relief Valve .....	G60
Muffler / Flow Controls .....	G55	Relief Valves - Diaphragm Type .....	G61
Breather Vents.....	G56	Shuttle Valves & Quick Exhaust .....	G62-G64
ES Series Silencer .....	G56	AirGuard Protection System .....	G65-G66
ASN Air Line Silencer.....	G57	Drain Valves.....	G67-G68
P6M Air Line Silencer .....	G58	Safety Blow Guns.....	G69-G71

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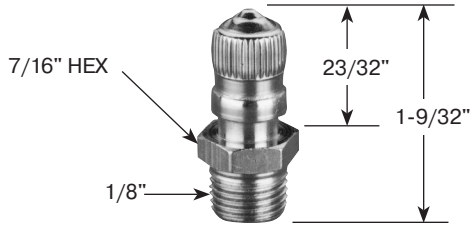
Airline Accessories

## Tank Valves

For tanks, steel barrels, compressors and other pneumatic containers where a dependable automatic air valve is needed. Equipped with standard valve core and sealing cap. Maximum operating pressure is 185 PSIG. Temperature range is -40°F to 220°F.

### Model No. 09166 0060

Has a 1/8" pipe thread at bottom for minimum protrusion. N/P finish, dome shaped cap. Packed 25 to a box.



## Air Chucks

For regular airlines.

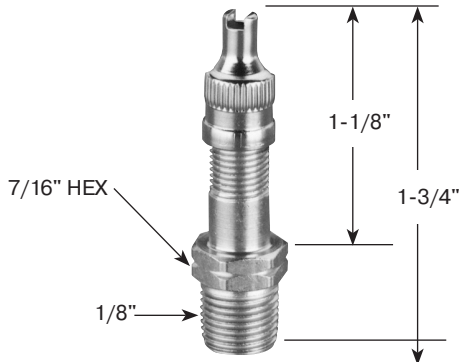
### Model No. 05499 0000

Ball-foot air chuck, 1/4" female port. Packed 10 to a box.



### Model No. 00645 0060

A 1/8" pipe thread at bottom permits maximum protrusion. N/P finish, screwdriver type cap. Packed 25 to a box.



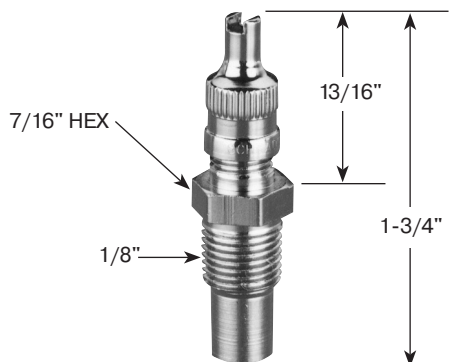
### Model No. 06739 0000

Ball-foot air chuck with clip. Fits standard valve mouth. Saves holding on by hand. Has 1/4" port for connecting to hose. Packed 10 to a box.



### Model No. 01468 0006

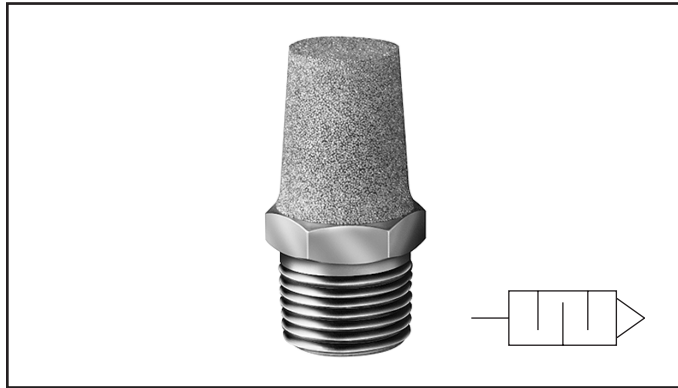
Has a 1/8" pipe thread part way up the stem which allows for minimum protrusion. N/P finish, has screwdriver type cap. Packed 25 to a box.



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Airline Accessories

# EM Series – Sintered Bronze Muffler / Filters



## General Description

Muffler / filters effectively reduce air exhaust noises to an industry accepted level with minimum flow restriction. They protect valves, impact wrenches, screw drivers and other air tools by preventing dirt and other foreign matter from entering the system. Non-corrosive. Can be cleaned with many common solvents.

### Specifications

**Maximum Operating Pressure** .....250 PSIG (Air)

**Operating Temperature** ..... 0° to 300°F\*

\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
EM12	1/8"	1.00	7/16"
EM25	1/4"	1.32	9/16"
EM37	3/8"	1.54	11/16"
EM50	1/2"	1.85	7/8"
EM75	3/4"	2.29	1-1/6"
EM100	1"	2.91	1-5/16"
EM125	1-1/4"	3.25	1-11/16"
EM150	1-1/2"	3.69	2"

# Muffler / Flow Controls



## General Description

Muffler / flow controls provide an acceptable exhaust noise level and effectively meter exhaust. Installed in valve exhaust ports, they control cylinder piston speeds throughout a wide range. The adjusting screw cannot be accidentally blown out, can be locked to maintain setting. Brass and bronze construction. Clean with commonly used solvents.

### Specifications

**Maximum Operating Pressure** .....250 PSIG (Air)

**Operating Temperature** ..... 0° to 300°F\*

\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
04502 0002	1/8"	1.15	9/16"
04504 0004	1/4"	1.42	1/2"
04506 0060	3/8"	1.49	11/16"
04508 0080	1/2"	1.77	7/8"
04512 0012	3/4"	1.98	1-1/16"
04516 0016	1"	2.15	1-5/16"

# Breather Vents



**NOTE:** Breather vents should not be used as exhaust mufflers.

## General Description

These low silhouette versions of the muffler / filter are useful where space is a problem and / or to prevent contamination. Use for vacuum relief or pressure equalization in gear boxes, oil tanks, reservoirs, etc. Non-corrosive.

## Specifications

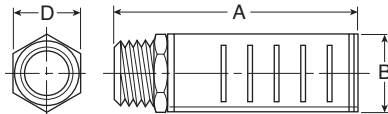
**Maximum Operating Pressure** ..... 150 PSIG (Air)

**Operating Temperature** ..... 0° to 300°F\*

\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
04702 0002	1/8"	0.44	7/16"
04704 0004	1/4"	0.63	9/16"
04706 0006	3/8"	0.75	11/16"
04708 0008	1/2"	0.88	7/8"
04712 0012	3/4"	1.00	1-1/16"
04716 0016	1"	1.31	1-5/16"
04720 0020	1-1/4"	1.41	1-11/16"
04724 0024	1-1/2"	1.50	2"

# ES Series – Silencer



## General Description

The silencer is designed to give superior performance in noise control with a minimum effect on air efficiency. "Trimline" design allows location in the tightest places without extra plumbing and fittings. Fits directly into the exhaust port of more than 90% of present commercial valves. Slotted body permits rapid discharge of air without undesirable back pressure. Unique nylon screen element resists dirt buildup or clogging.

## Specifications

**Maximum Operating Pressure** ..... 250 PSIG (Air)

**Operating Temperature** ..... 0° to 300°F\*

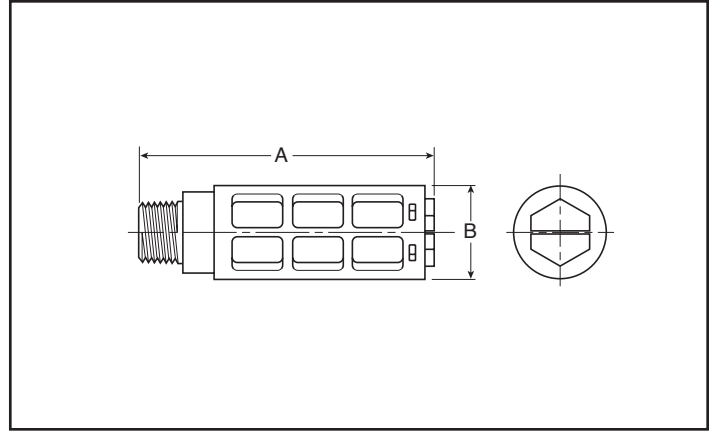
\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Numbers		Pipe Thread	Flow SCFM @ 100 PSIG Inlet	Dimensions		
NPTF	BSPT (R)			A	B	D
ES12MC	ESB12MC	1/8"	115	1.85	0.81	0.63
ES25MC	ESB25MC	1/4"	129	1.85	0.81	0.63
ES37MC	ESB37MC	3/8"	219	3.31	1.26	1.00
ES50MC	ESB50MC	1/2"	549	3.31	1.26	1.00
ES75MC	ESB75MC	3/4"	893	4.56	2.01	1.62
ES100MC	ESB100MC	1"	1,013	4.56	2.01	1.62
ES125MC	ESB125MC	1-1/4"	1,486	5.69	2.88	—
ES150MC	ESB150MC	1-1/2"	1,580	5.69	2.88	—

G

Airline Accessories

# ASN Series – Air Line Silencer



## Features

- Compact
- Lightweight
- Easy to Install
- Excellent Noise Reduction
- Protects Components from Contamination
- NPT and BSPT Threads Available

Part Number		Thread Size	A (mm)	B (mm)	Maximum Flow (SCFM) 100 PSIG Inlet	Sound Pressure Level (dBA)	
NPT	BSPT					20 PSIG Inlet	100 PSIG Inlet
<b>AS-5</b>		M5	0.43 (11)	0.32 (8)	15	69	79
<b>ASN-6</b>	<b>AS-6</b>	1/8"	1.57 (40)	0.63 (16)	51	69	81
<b>ASN-8</b>	<b>AS-8</b>	1/4"	2.56 (65)	0.83 (21)	124	67	84
<b>ASN-10</b>	<b>AS-10</b>	3/8"	3.35 (85)	0.98 (25)	247	83	98
<b>ASN-15</b>	<b>AS-15</b>	1/2"	3.74 (95)	1.18 (30)	370	69	96

## Application

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The "Trimline" design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.

## Specifications

**Pressure Rating** .....0 to 150 PSIG  
(0 to 10 bar, 0 to 1034 kPa)

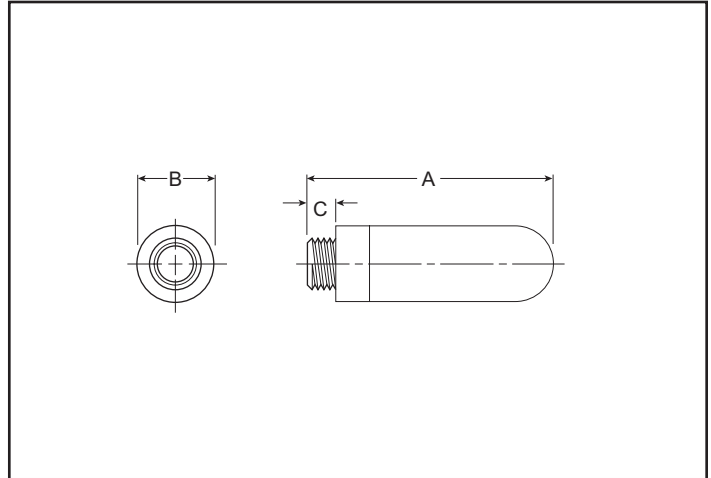
**Temperature Rating** ..... 14°F to 140°F (-10°C to 60°C)

**Body** ..... Acetal (Plastic)

**Element** ..... Polyethylene



# P6M Series – Air Line Silencer



## Features

- All Plastic Ultra Light Weight Versions
- High Noise Level Reduction
- Low Back Pressure Generation

## Application

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The “Trimline” design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.

Part Number	Port Thread	A	Diameter B	C	Weight (grams)
<b>P6M-PAC5</b>	M5	0.91 (23)	0.26 (6,5)	0.16 (4)	0.01
<b>P6M-PAB1</b>	G1/8	1.14 (29)	0.55 (14)	0.24 (6)	0.02
<b>P6M-PAB2</b>	G1/4	1.34 (34)	0.67 (17)	0.24 (6)	0.04
<b>P6M-PAB3</b>	G3/8	2.36 (60)	0.98 (25)	0.35 (9)	0.06
<b>P6M-PAB4</b>	G1/2	2.52 (64)	0.98 (25)	0.43 (11)	0.10
<b>P6M-PAB6</b>	G3/4	5.51 (140)	1.50 (38)	0.55 (14)	0.50
<b>P6M-PAB8</b>	G1	6.30 (160)	1.89 (48)	0.79 (20)	0.62

## Specifications

**Pressure Rating** ..... 0 to 246 PSIG  
(0 to 17 bar, 0 to 1700 kPa)

### Temperature Rating

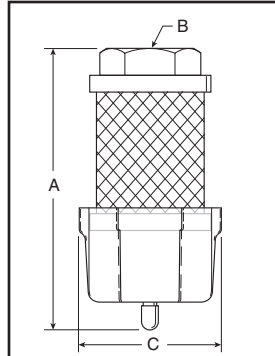
**Plastic** ..... 14°F to 176 °F (-10°C to 80°C)  
**Metal** ..... 14°F to 165 °F (-10°C to 74°C)

**Efficiency** ..... 92%



Airline Accessories

# ECS Series – Air Line Muffler / Reclassifier



Dimensions:

Model	A	B	C
ECS3	5.30 (135 mm)	1/2" NPT	2.51 (65 mm)
ECS5	7.30 (185 mm)	1" NPT	2.51 (65 mm)

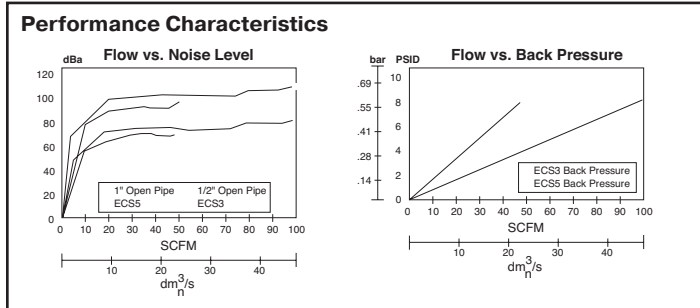
## Operation

Compressor oils and lubricating oils are exhausted from valves, cylinders and air motors into the ECS. Oil aerosols are “coalesced” into larger droplets and gravity pulls them into the attached drain sump. The sump can then be drained manually or by using a 1/4” ID plastic tube drain. The air flowing into the ECS is also muffled or silenced as it enters the inside of the ECS and passes through the filter media into the atmosphere.

## Proven Technology

The ECS units are constructed from the same materials that go into our oil removal coalescing filter elements. The seamless design insures media uniformity and strength. This proven technology provides high coalescing efficiency with low pressure drop.

The filter media is supported by cylindrical perforated steel retainers both inside and out. These retainers, fully plated for excellent corrosion resistance, give the ECS units high rupture strength in either flow direction. These filters can also be used as high efficiency inlet or bypass filters for vacuum pumps, or breather elements to protect the air above critical process liquids.



## Features

The ECS (Muffler-Reclassifier) eliminates unwanted oil mist and reduces exhaust noise from pneumatic valves, cylinders and air motors.

- 99.97% Oil Removal Efficiencies
- 25 dBA Noise Attenuation
- 1/2” NPT and 1” NPT
- Disposable Units
- Continuous or Plugged Drain Option
- Metal Retained Construction
- Fast Exhaust Time

## Improve Overall Plant Environment

Exhaust oil mist and noise pollution have a direct impact on worker productivity.

Oil aerosol mist from lubricators and compressors is pervasive and enters the industrial plant environment through the exhaust ports of valves, cylinders and air motors. This rapidly expanding exhaust also produces sudden and excessive noise.

The ECS (Muffler-Reclassifier) is 99.97% efficient at removing the oil aerosols. The ECS also acts as a silencer to lower the dBA levels below O.S.H.A. requirements.

The result is a cleaner, quieter environment which equates to greater work productivity and safety.

## ECS3 / ECS5

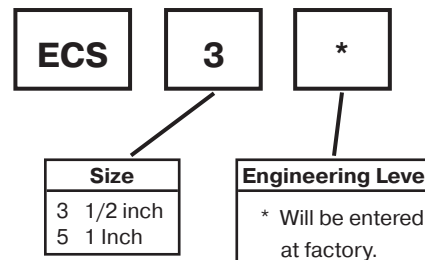
The ECS solves two problems inherent in compressed air exhaust from valves, cylinders and air motors - oil mist removal and noise abatement.

The ECS will improve your industrial plant environment, thereby improving worker productivity.

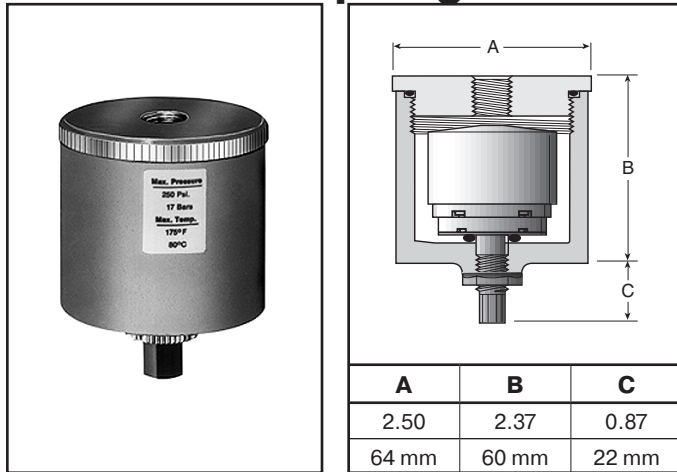
## Specifications

- Maximum Operating Temperature ..... 125°F (52°C)
- Maximum Line Pressure ..... 100 PSIG (6.8 bar)

## Ordering Information



## Automatic Drip Leg Drain



### Features

- Auto Drain Ported 1/8" to Pipe Away Liquid.
- Drain has Manual Override
- Easily Serviced without Tool
- 20-250 PSIG Range
- Compact Size

### Specifications

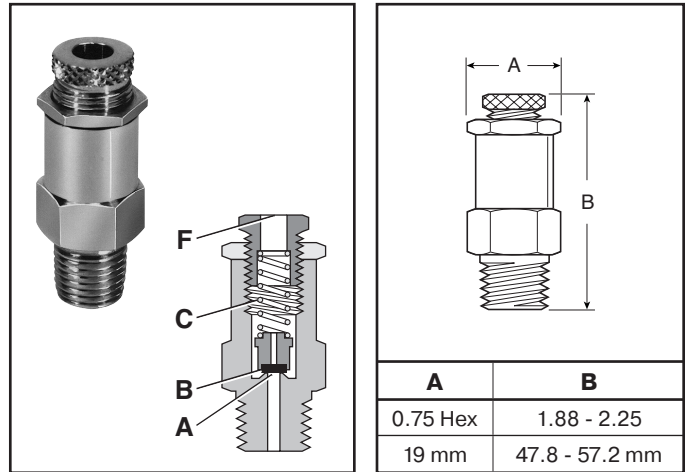
<b>Housing &amp; Cap</b> .....	Aluminum
<b>Port Threads</b> .....	1/4" - 1/2" Top 1/8" Drain
<b>Pressure and Temperature Ratings:</b>	
<b>Metal Bowl</b> .....	20 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
<b>Seals</b> .....	Buna N

### Ordering Information

Consists of Drip Leg Drain Housing WITH Auto Drain.

Model No.	Size
06D1NA	1/4"
06D3NA	1/2"

## Relief Valve



### Features

- Large Relief Capacity (70.39 SCFM @ 150 PSI when fully opened) in a Compact Size
- Lightweight Aluminum Construction with Resilient Seat

### Application

The RV01A1N Pop Off Relief Valve is designed to protect against excessive pressure buildup in a pneumatic circuit or system.

### Operation\*

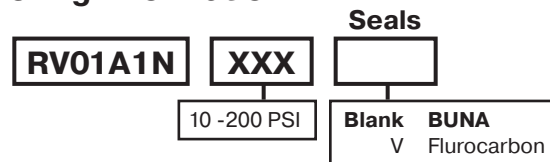
With the relief valve mounted in a reservoir or system, the force of system pressure at (A) is offset by the force of spring (C) acting on poppet seat (B). At pressures lower than the setting, the poppet seat (B) is held against the body at (A) effecting a seal. As pressure approaches set point, the poppet begins to vent until set point is reached, at which time the poppet seat (B) lifts off the body at (A) allowing the excess pressure to vent to atmosphere at (F). When the excess pressure has been vented, the spring (C) acts on the poppet seat (B) forcing it to seat on the body at (A), sealing off the flow of air.

### Specification

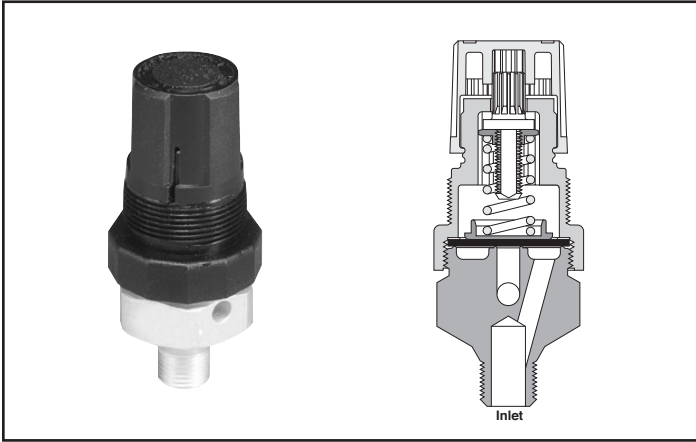
<b>Body &amp; Adjusting Screw</b> .....	Aluminum
<b>Locking Nut</b> .....	Steel
<b>Seat</b> .....	Nitrile
<b>Spring</b> .....	Steel
<b>Poppet</b> .....	Plastic
<b>Operating Temperature</b> .....	32°F to 200°F (0°C to 93°C)
<b>Port Threads</b> .....	1/4 Inch Male
<b>Relief Range</b> .....	10 to 200 PSIG (.7 to 14 bar) with standard spring.

\* Ref: 1RV100B Installation & Service Instructions

### Ordering Information



# 130 Relief Valve



## Features

- Compact, Sensitive Diaphragm-type Relief Valve
- Push-pull, Locking Knob
- Knob and Top Work the Same as a Miniature Regulator
- 130 has Lightweight Aluminum Construction
- 134 has a brass body, captured exhaust and is an Inline Type with 3 Inlet Ports and 1 Outlet Port

## Applications

- Designed to Protect Against Excessive Pressure Buildup in a Pneumatic Circuit or System
- For Use where Gradual Proportional Relief is Required

## Operation

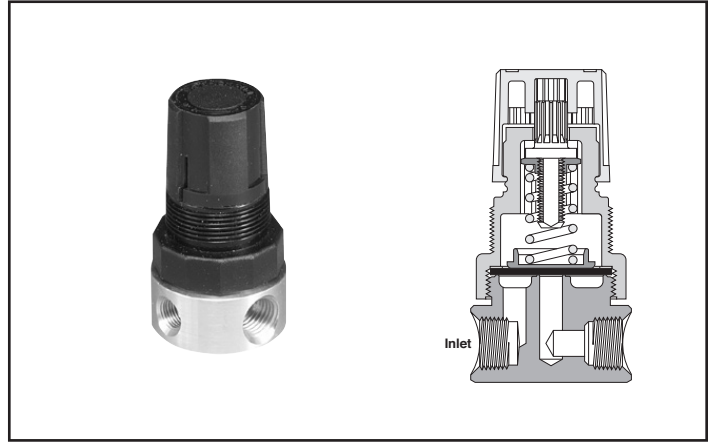
- Turn relief valve knob clockwise for maximum pressure.
- Set pressure going into relief valve at desired pressure.
- Turn relief valve knob counter-clockwise until exhaust starts to bleed.
- Turn relief valve knob clockwise until exhaust stops bleeding. Push to lock knob.

## Ordering Information

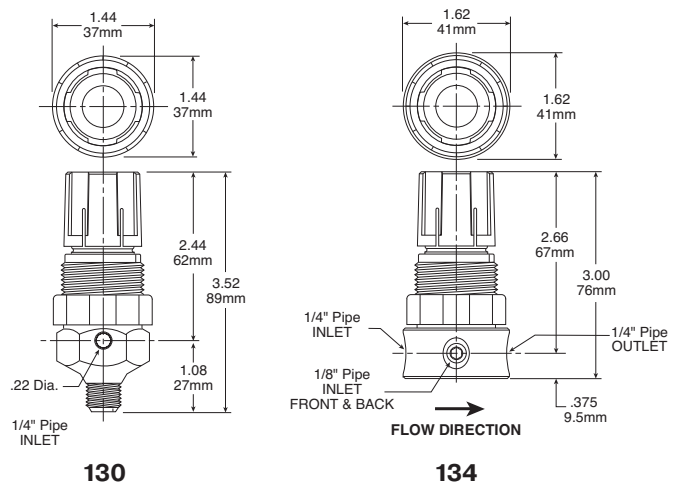
Relief Valve	Spring Range			
	0-15 PSIG	0-25 PSIG	0-50 PSIG	0-100 PSIG
130	130-02AA	130-02A	130-02B	130-02C
	130-02AAP*	130-02AP*	130-02BP*	130-02CP*
134	134-02AA	134-02A	134-02B	134-02C
	134-02AAP*	134-02AP*	134-02BP*	134-02CP*

\* Panel mount nut included.

# 134 Relief Valve



## Dimensions



## Relief Valve Kits

- Bonnet Assembly Kit** ..... PCKR364Y
- Panel Mount Nut** ..... PR05X51

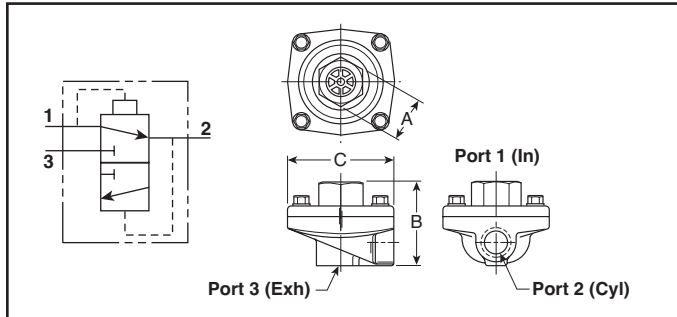
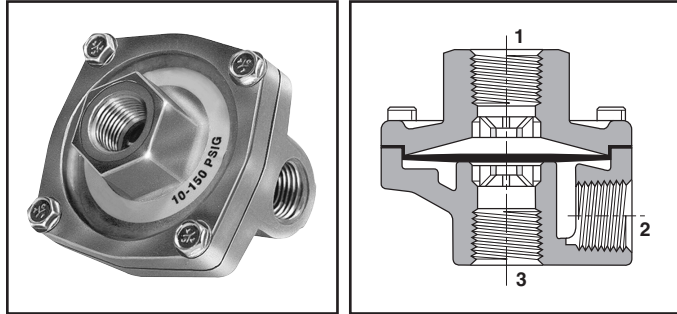
## Specifications

- Relief Range** ..... 0 to 100 PSIG (0 to 6.9 bar)
- Maximum Inlet Pressure** ..... 300 PSIG (20.7 bar)
- Operating Temperature** ..... 40°F to 120°F (4°C to 49°C)
- Port Threads:**
- 130** ..... 1/4" Pipe Male Only
- 134** ..... Inlet Port – Two 1/8" & One 1/4" Pipe Outlet Port – 1/4" Pipe

## Materials of Construction

- Adjusting Knob** ..... Polypropylene
- Adjusting Screw** ..... Zinc-plated Steel
- Body** ..... Aluminum (130); Brass (134)
- Diaphragm / Disc** ..... Buna-N
- Nut** ..... Chromated Steel
- Spring Cage** ..... Acetal
- Spring** ..... Zinc-plated Steel

# Quick Exhaust & Shuttle Valves



## Valve Specifications

### Operating Pressure (Air)

#### Maximum:

- 150 PSIG
- 200 PSIG for Model No. 0R37TB (PTFE diaphragm)

#### Minimum:

- 3 PSIG
- 50 PSIG for Model No. 0R37TB (PTFE diaphragm)

### Operating Temperature:

- Urethane: 0°F to 180°F\* (-18°C to 80°C)
- Nitrile: 0°F to 180°F\* (-18°C to 80°C)
- Fluorocarbon: 0°F to 400°F\* (-18°C to 205°C)
- PTFE: 0°F to 500°F\* (-18°C to 260°C)

\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

## Component Materials

- Body Material** ..... Die cast aluminum
- Static Seals** ..... Nitrile standard with urethane (Others see below)
- Diaphragm**..... Standard – Urethane  
Optional – Fluorocarbon, PTFE, or Nitrile (Depending on size)

## General Information

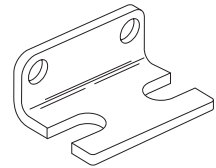
Quick exhaust valves provide rapid exhaust of control air when placed between control valve and actuator. They can also be used as shuttle valves. Diaphragm materials are available in urethane, Nitrile, Fluorocarbon, and PTFE to meet a wide variety of operating conditions.

## Mounting Bracket Kit –

### No. 036408100

(Including body screws)

For “0R12” and “0R25” sizes with 7/8” “A” Dimension.



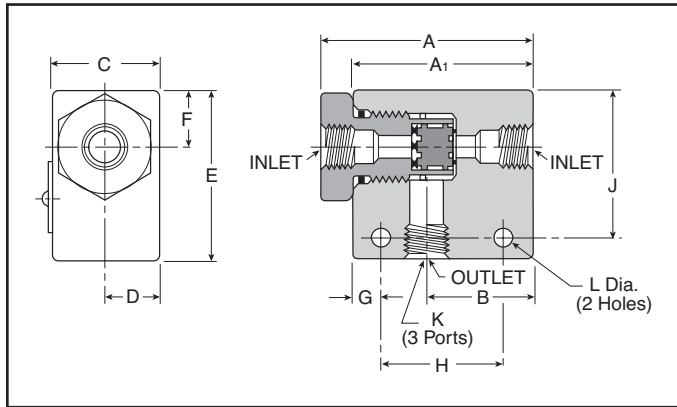
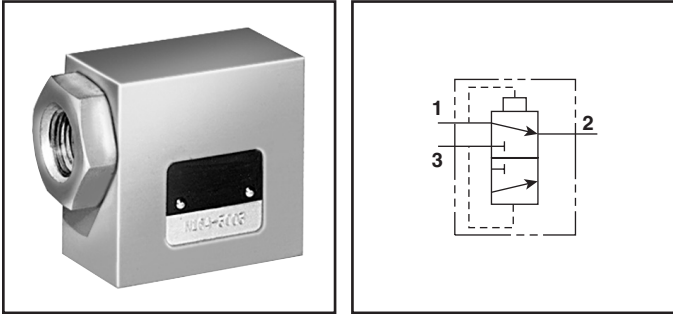
## Model Selection, Performance Data and Dimensions

Port			Flow (SCFM†)	Model Number		A	B	C	Service Kit No.
1	2	3		NPTF	BSPG “G”				
<b>STANDARD URETHANE DIAPHRAGMS (Nitrile static seals)</b>									
1/4"	1/4"	3/8"	150	<b>0R25NB</b>	0RB25NB	1" Hex	2.06	2.44	033400105
	3/8"	3/8"	240	<b>0R25PB</b>	—	1" Hex	2.06	2.44	033400105
3/8"	3/8"	3/8"	240	<b>0R37B</b>	0RB37B	1" Hex	2.06	2.44	033400105
1/2"	1/2"	1/2"	450	<b>0R50B</b>	0RB50B	1-1/2" Hex	2.88	3.38	034750109
3/4"	3/4"	3/4"	550	<b>0R75B</b>	0RB75B	1-1/2" Hex	2.88	3.38	034750109
<b>NITRILE DIAPHRAGMS (Nitrile static seals)</b>									
1/8"	1/8"	1/8"	70	<b>0R12B</b>	0RB12B	7/8" Sq.	1.75	1.88	036408000
	1/8"	1/4"	70	<b>0R12NB</b>	0RB12NB	7/8" Sq.	1.75	1.88	036408000
1/4"	1/4"	1/4"	90	<b>0R25B</b>	0RB25B	7/8" Sq.	1.75	1.88	036408000
	1/4"	3/8"	90	0R25NFB	0RB25NFB	1" Hex	2.06	2.44	033408000
3/8"	3/8"	3/8"	240	0R37FB	0RB37FB	1" Hex	2.06	2.44	033408000
3/4"	3/4"	3/4"	550	0R75FB	0RB75FB	1-1/2" Hex	2.88	3.38	034759000
<b>FLUOROCARBON DIAPHRAGMS for extended temperature operation (Fluorocarbon static seals)</b>									
1/8"	1/8"	1/8"	70	0R12VB	0RB12VB	7/8" Sq.	1.75	1.88	036508000
	1/8"	1/4"	70	0R12NVB	0RB12NVB	7/8" Sq.	1.75	1.88	036508000
1/4"	1/4"	1/4"	90	0R25VB	0RB25VB	7/8" Sq.	1.75	1.88	036508000
3/8"	3/8"	3/8"	240	0R37VB	0RB37VB	1" Hex	2.06	2.44	033400319
1/2"	1/2"	1/2"	450	0R50VB	0RB50VB	1-1/2" Hex	2.88	3.38	034750120
3/4"	3/4"	3/4"	550	0R75VB	0RB75VB	1-1/2" Hex	2.88	3.38	034750120
<b>PTFE DIAPHRAGMS for higher pressure and temperature (Fibre static seals)</b>									
3/8"	3/8"	3/8"	240	0R37TB	0RB37TB	1" Hex	2.06	2.44	033400504

† At 100 PSIG inlet pressure with full pressure drop.

**BOLD ITEMS ARE MOST POPULAR.**

# Shuttle Valve



## General Information

Shuttle valves determine a single pneumatic output from two separate inputs. If pressure is applied to both ports simultaneously, the valve will select the port with the higher pressure.

## Valve Specifications

**Maximum Operating Pressure** .....200 PSIG Maximum  
3 PSIG Minimum: Differential Pressure

**Operating Temperature** .....0° to 160°F\*

\* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

## Component Materials

**Body Material** ..... Aluminum  
**Internal Components** ..... Aluminum  
**Seals** ..... Nitrile

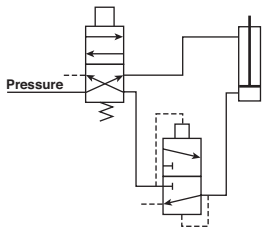
## Model Selection and Dimensions

Model Number	Port Size	Dimensions											
		A	A1	B	C	D	E	F	G	H	J	K	L
<b>N164 1001</b>	1/8"	N/A	1.62	0.81	0.62	0.31	1.00	0.281	0.312	1.00	0.75	1/8 - 27	0.219
<b>N164 2003</b>	1/4"	2.50	2.12	1.25	1.25	0.62	2.00	0.67	0.265	1.25	1.35	1/4 - 18	0.219
<b>N164 3003</b>	3/8"	2.50	2.12	1.25	1.25	0.62	2.00	0.67	0.265	1.25	1.35	3/8 - 16	0.219

## Performance Data – Flow

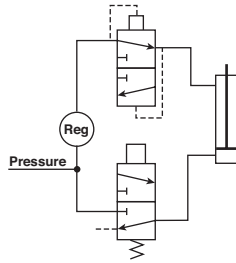
Model Number	Port Size	Flow (Cv)
<b>N164 1001</b>	1/8"	0.32
<b>N164 2003</b>	1/4"	1.65
<b>N164 3003</b>	3/8"	2.02

## Typical “Quick Exhaust Valve” Applications



### Rapid Retraction – Double Acting Cylinder

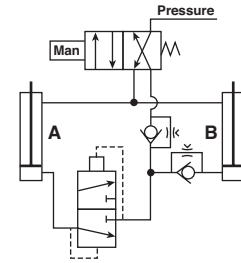
In this circuit, air is exhausted through a Quick Exhaust Valve that is **close coupled** to the cap end of the cylinder. Because the Quick Exhaust Valve has a greater exhaust capacity than the four-way Control Valve, increased cylinder speed can be accomplished with a smaller and less expensive control valve.



### Dual Pressure Actuation of Double Acting Cylinder

This circuit utilizes a Quick Exhaust Valve and a three-way Control Valve to permit rapid extension of the cylinder at a high pressure. Under life.

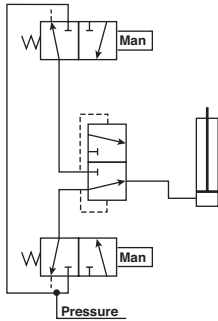
**NOTE:** Line pressure must be 3 or 4 times greater than rod end pressure. Effective working pressure is the differential between the cap and rod end.



### Bi-Directional Control of Two Double Acting Cylinders

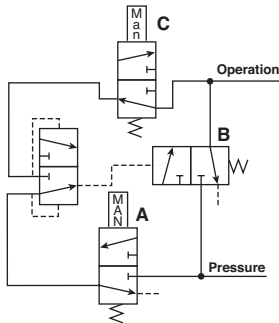
This circuit provides maximum control with a minimum of valving. A large four-way Control Valve is not needed to permit the rapid retraction of Cylinder A, as the Quick Exhaust Valve performs this function. The extension of Cylinders A and B and retraction of Cylinder B are controlled by Speed Control Valves.

## Typical “Shuttle Valve” Applications



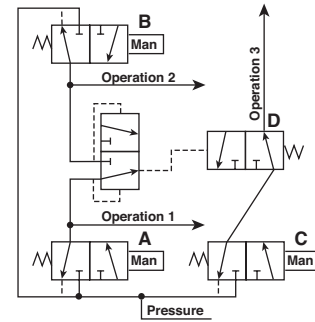
### “OR” Circuit

The most common application of the Shuttle Valve is the “OR” Circuit. Here a cylinder or other work device can be actuated by either control valve. The valves can be manually or electrically actuated and located in any position.



### Memory Circuit

This circuit enables continuous operation once initiated. Pressure is delivered to the circuit when Valve A is actuated. This allows pressure to pass through the shuttle valve actuating Valve B. Pressure then flows through Valve B and also the other side of the shuttle valve which holds Valve B open for continuous operation. To unlock the circuit, Valve C must be opened to exhaust the circuit and allow Valve B to return to its normally closed position.



### Interlock

This circuit prevents the occurrence of a specific operation while one or another operation takes place. When either Valve A or B is actuated to perform operation 1 or 2, Valve D is shifted to the closed position and prevents operation 3 from occurring.

# AirGuard Protection System

Airfuse - protection of personnel, machinery and equipment



## Product Features:

- Maintenance Friendly: Repair possible while plant is still operating
- Economic: Competitive pricing
- Complies with EU Standard: EN 983 - § 5.3.4.3.2.
- Reliable and Tamperproof: No adjustment necessary
- Complies with ISO Standard: 4414 - § 5.4.5.11.1
- Complies with MSHA Regulation: 30CFR 56.13021, 57.13021 and 57.1730
- Lightweight: Compact size.
- Compatible with all Pneumatic Systems
- Can be used as a Flow Blocker
- TUV Approval: No. 01-02-0145
- EU Registered Utility: Model No. 0025 73 525
- Complies with OSHA Regulation Standard: 29CFR 1926.302 (Partial)

## Protect your most important assets: your employees and their equipment!

The AirGuard offers simple but efficient protection of a broken compressed-air hose. The air supply is immediately shut off by the AirGuard, should the volume of air exceed a set value. This "value" is factory preset and is set to allow normal air consumption when using air tools.

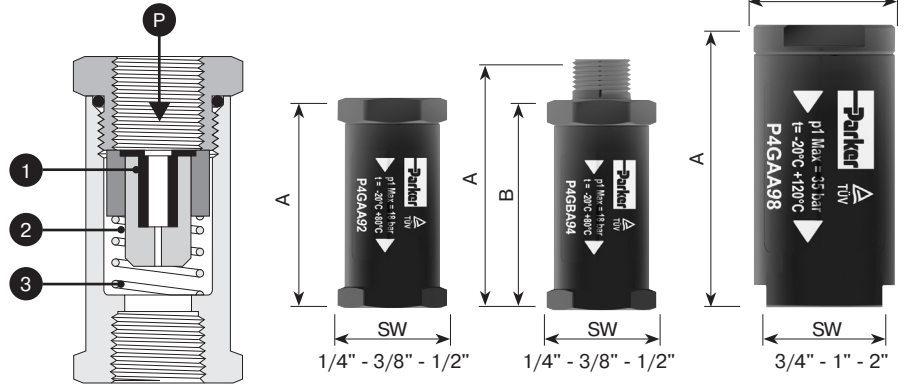
Should the air consumption exceeds the set value, e.g. the air line is severed, then the internal piston instantly shuts off the main flow. An integral bleed hole allows some air to flow through. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.



# AirGuard Protection System

## Function:

(P) is the inlet. Air passes the piston (1) and continues through the seat (3). The air flow, passing the piston, is slowed down by means of length wise grooves on the outer side of the piston. If the flow is too high, the air cannot pass the piston quickly enough, and the piston is forced against the spring (2) and towards the seat. The maximum flow is shown in the graph. If the value indicated is exceeded e.g. if the hose suddenly breaks - the air supply is automatically shut of. An integral bleed hole allows some air to flow though. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.



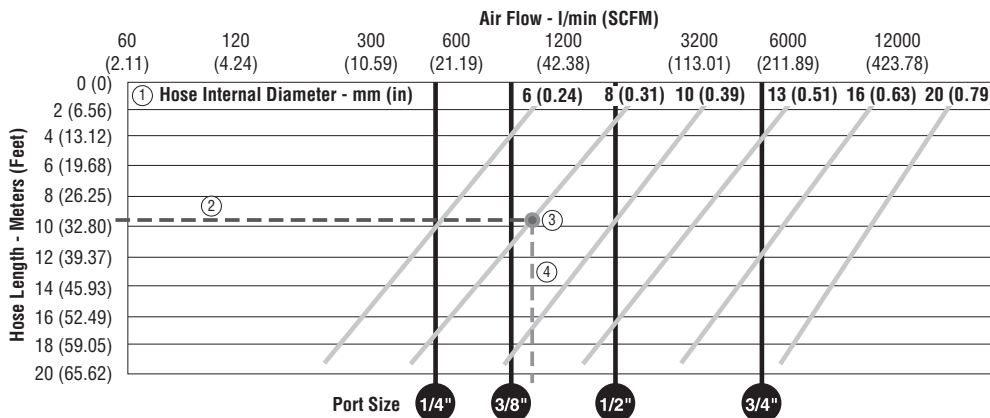
## Weight and Dimensions metric (imperial)

Thread Connection	Dimensions mm (inch)			Weight g (oz.)	Max. Inlet Pressure	Temp. Range	Material	P1 Inlet Thread	P2 Outlet Thread	Part Number NPT	Part Number BSP
	A	B	SW								
1/4"	48 (1.89)	-	22 (.87)	30 (1.06)	(18 bar) 255 PSIG	-20°C to 80°C (-4°F to 176°F)	Housing: Aluminum Piston: Polyacetal	Female	Female	P4GAA92	P4GAA12*
1/4"	58 (2.28)	49 (1.93)	22 (.87)	36 (1.27)				Male	Female	P4GBA92	P4GBA12*
3/8"	59 (2.32)	-	28 (1.10)	58 (2.05)				Female	Female	P4GAA93	P4GAA13*
3/8"	71 (2.80)	59 (2.32)	28 (1.10)	62 (2.19)				Male	Female	P4GBA93	P4GBA13*
1/2"	65 (2.56)	-	31 (1.22)	78 (2.75)				Female	Female	P4GAA94	P4GAA14*
1/2"	80 (3.15)	65 (2.56)	31 (1.22)	85 (3.00)				Male	Female	P4GBA94	P4GBA14*
3/4"	76 (2.99)	-	30/36* (1.18/1.42*)	107 (3.77)	(35 bar) 500 PSIG	-20°C to 120°C (-4°F to 248°F)	Housing: Aluminum Piston: Aluminum	Female	Female	P4GAA96	P4GAA16*
1"	100 (3.94)	-	41/50* (1.61/1.97*)	300 (10.58)				Female	Female	P4GAA98	P4GAA18*
2"	130 (5.12)	-	70/80* (2.76/3.15*)	775 (27.34)				Female	Female	P4GAA9C	P4GAA1C*
								Female	Female	P4GAA9C	P4GAA1C*

\* Note: BSP Threads Available Upon Request.

## How to Select the Optimal Size of an AirGuard

Information based on an inlet pressure of 7 bar (100 PSIG)



- Determine the internal diameter of the hose, tube or pipe being used ① (see specification Hose-internal Diameter in yellow box, yellow diagonal line).
- Determine the length of the hose, tube or pipe ② (Hose length in meters).
- Define the intersection of point a and b, and mark a vertical line downwards. ③ ④ In the example the red/green dot and the green dashed line).
- The next vertical black line, left of the intersection line ④ (example: green dashed) tells the correct AirGuard size (in inches).
- Important: Every flow value to the right of the respective vertical line (black) would activate the AirGuard in case of a bursting hose, pipe or tube. All AirGuard sizes right of the intersection line (green) are too big and will not close up.
- Example: Which air fuse should be used for a hose, pipe or tube bearing 8 mm inner diameter and 10 meters of length - follow the 10 meter line (red ②) to the intersection point (red/green dot ③). Now the next left black line marks the correct size.
- Result: The correct size in our example is the AirGuard 3/8"

# Automatic Electrical Drain Valve WDV3



## Specifications

- Operating Pressure**..... 230 PSIG (15,9 bar)
- Ambient Operating Range Temperature** ..... 34° to 130°F (1.1° to 54°C)
- Coil Insulation**  
Class H ..... 340°F (171.1°C)
- Voltages**  
AC ..... 115, 230/50-60
- Timer:**  
Open Time ..... .5 to 10 sec., Adjustable  
Cycle Time ..... .5 sec. to 45 min., Adjustable
- Maximum Current Rating** ..... 4mA Max.
- Port Size** ..... 1/4, 3/8, 1/2 NPT
- Weight** ..... 1.8 lb. (0.8 kg)

The WDV3 Electrical Drain is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The WDV3 offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide. The large orifice in the direct acting valve, combined with its sophisticated timer module ensure many years of trouble-free draining of condensate.

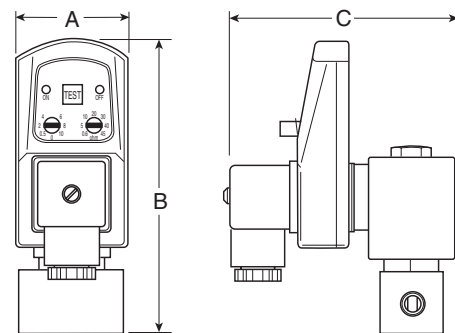
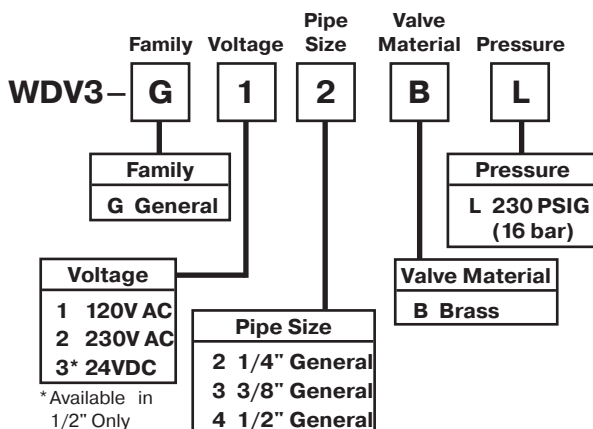
## Materials of Construction

- Valve Body**..... Brass / Stainless Steel
- Enclosure (NEMA 4)** ..... ABS Plastic
- Internal Parts** ..... Brass / Stainless Steel
- Sealing Material** ..... FPM (Fluorocarbon)

## Benefits

- Does Not Air-Lock During Operation
- Compressed Air Systems Up to Any Size
- Also Available In Stainless Steel
- The Direct Acting Valve Is Serviceable
- Suitable for All Types of Compressors
- TEST (Micro-Switch) Feature
- High Time Cycle Accuracy
- Large (4.5mm) Valve Orifice

## Ordering Information



## Model Selection and Dimensions

Model Number	A	B	C
WDV3-G**BL	1.73 (44)	4.53 (115)	3.46 (88)

# Zero Air Loss Condensate Drain – ED



Zero air loss condensate drains are designed for economical removal of unwanted water, oil emulsions, and other liquids. These drains will only open when liquid is present and will not allow any compressed air to escape from the system.

## Specifications

- Operating Pressure** .....232 PSIG (16 bar)
- Ambient Operating Range Temperature** .....35° to 140°F (1.6° to 60°C)
- Voltages**
  - NPT ..... 115/50-60Hz Standard
  - BSPP .....230/50-60Hz & 24VDC Optional

## Zero Air Loss Condensate Drains

Port Size (NPT)	Compressor Aftercooler (SCFM)*	Capacity Refrigeration Dryer (SCFM)**	Filter (SCFM)	Drain Capacity Per Day (Gal/Liter)	Model Number	Service Kit †
3/8	—	—	424	6 (22.7)	ED3002N115-K	SKED3000N115
1 x 1/2, 1/8	141	282	1,413	13 (49.2)	ED3004N115-K	SKED3000N115
2 x 1/2, 1/8	247	494	2,472	23 (87.1)	ED3007N115-K	SKED3000N115
2 x 1/2, 1/8	1,059	2,119	10,594	100 (378.5)	ED3030N115-K	SKED3000N115
2 x 1/2, 1/8	3,532	7,063	35,315	330 (1,249.2)	ED3100N115-K	SKED3000N115

\* Based on 100 PSI working pressure, air compressor inlet at 77°F (25°C) at 60% RH, air discharge temperature of 95°F (35°C) following the aftercooler, pressure dewpoint of 37°F (2.8°C) after the refrigerated dryer.

\*\* Condensate from aftercooler or refrigerated dryer to be drained upstream – only for residual oil content or small quantities of condensate.

† —

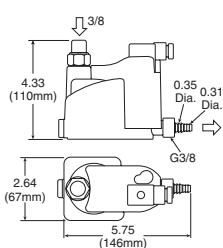
Note: A 6 ft. line cord will be included with each drain.

## Where are condensate drains used?

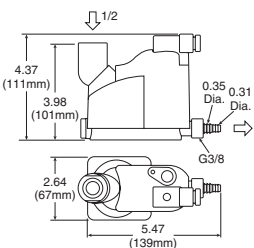
<b>Compressor with Aftercooler</b>	<b>Receiver Tank</b>	<b>Filter</b>	<b>Air Dryer</b>	<b>Drip Leg</b>
Removes the condensate that is collected after the air cools in the aftercooler	Removes the condensate that is collected when the air cools inside of the receiver tank	Removes the condensate that is collected in the filter bowl	Removes the condensate that is collected in the air dryer	Point-of-use applications: removes the condensate from compressed air pipes in a plant

## Dimensions

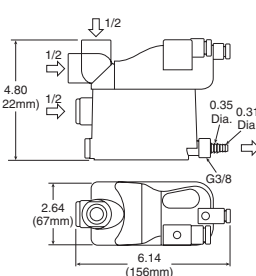
ED3002N115-K



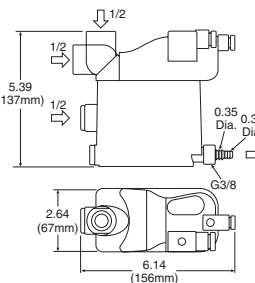
ED3004N115-K



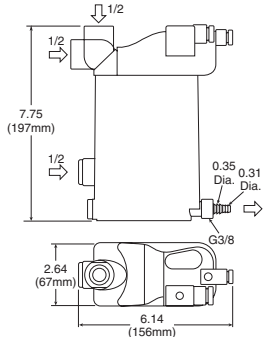
ED3007N115-K



ED3030N115-K



ED3100N115-K



**O.S.H.A. Certification** — All safety blow guns conform to the requirements of Compressed Air Standards as currently described in the U.S. Bureau of Labor Standards, paragraph 1910.242, when pressurized at the inlet to a maximum of 100 PSIG. Conform to current O.S.H.A. Directive No. 100-1.

## Brass Nozzle Blow Guns

Contoured lever or button control both provide a natural, comfortable grip even when used with gloves. Finger guard and hang-up hook for finger protection and quick safe storage. Die cast zinc body, painted finish.

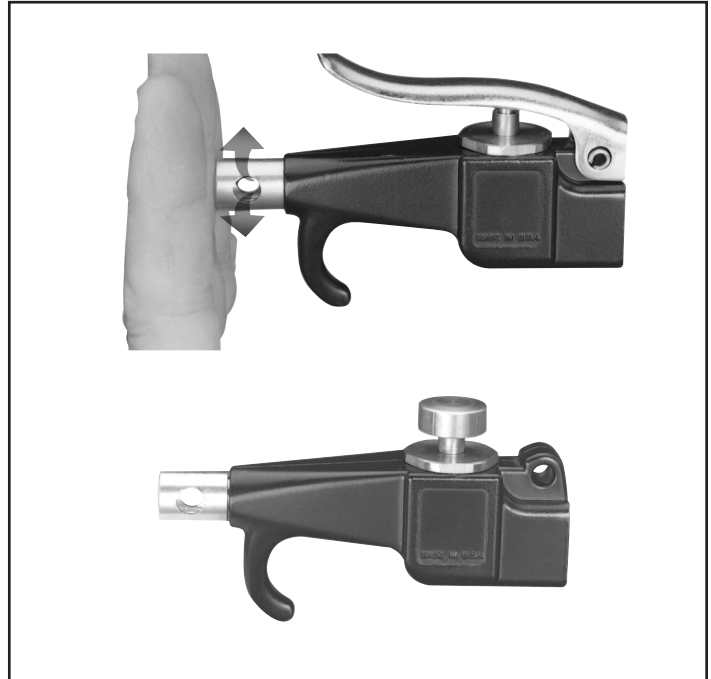
### Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 0010	1/4"	20

### Button Operated

Part Number	Inlet Port	SCFM Rating*
00470 0010	1/4"	20

\*Based on 100 PSIG inlet pressure.



## Vortec FLO-GAIN Blow Guns

A quiet Vortec FLO-GAIN nozzle is combined with a high performance blow gun. Compressed air attains sonic velocity through an adjustable slot and attaches to the exterior surface of the cone shaped nozzle. Settings are shown on a micrometer dial. Sound level of 80 dBA with 80 PSIG inlet. Finger guard and hang-up hook offers desirable finger protection and quick secure storage. Die cast zinc body, painted finish.

### Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 0900	1/4"	70+

### Button Operated

Part Number	Inlet Port	SCFM Rating*
00470 0900	1/4"	70+

\*Based on 100 PSIG inlet pressure.



G  
Airline Accessories

## Self-Regulating Blow Gun

Designed with integral self-regulating pressure reducing valve for automatic shut-off when nozzle is blocked. Prevents air pressure buildup over 30 PSIG in compliance with U.S. Dept. of Labor standards.

Air shield aids in protecting the operator against blow back of flying chips of dirt. Designed to operate at less than 90 dBA to comply with government regulations. Die cast zinc body, painted finish.

**May be used with nozzle extensions on page G69.**

### Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 2900	1/4"	10

### Performance Data

Inlet Pressure	Blocked Pressure	Sound Level
70 PSIG	17.0 PSIG	79 dBA
100 PSIG	21.0 PSIG	83 dBA
175 PSIG	28.0 PSIG	87 dBA

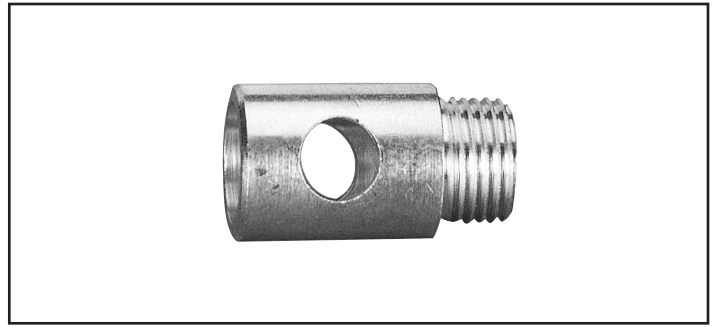
\*Based on 100 PSIG inlet pressure.



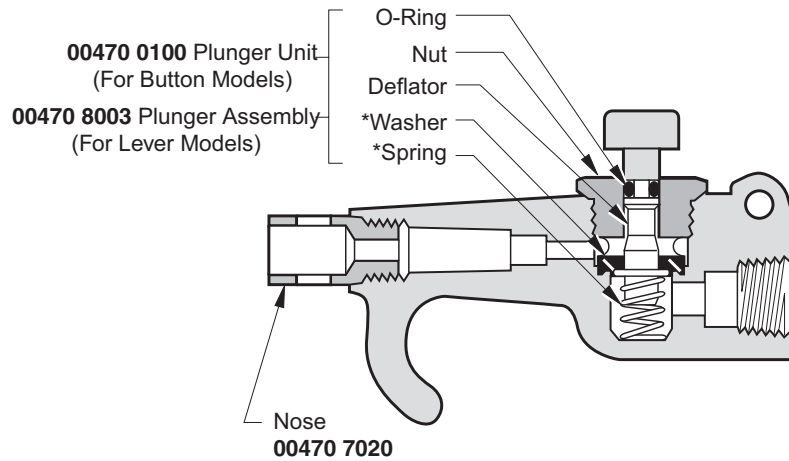
# Brass Nozzle

## Model No. 00470 7020

General purpose nozzles are supplied as standard on 00470 0010, 00475 0010 and 07184 1000 blow guns. Conform to the requirements of the Williams Steiger Occupational Safety and Health Act of 1970, paragraph 1910.242 when fitted with blow guns pressurized at the inlet to a maximum of 100 PSIG. Conform to O.S.H.A. Directive 100-1.



## 470 and 475 Series Blow Guns



\* Contained in Service Kit No. 00470 0090

# Notes

G

Airline Accessories



# Safety Guidelines



# Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

## WARNING:

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS (“PRODUCTS”) CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:**

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

## 1. GENERAL INSTRUCTIONS

- 1.1. Scope:** This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters pressure Regulators and Lubricators), Vacuum products and related accessory components.
- 1.2. Fail-Safe:** Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.
- 1.3 Relevant International Standards:** For a good guide to the application of a broad spectrum of pneumatic fluid power devices see: ISO 4414:1998, Pneumatic Fluid Power – General Rules Relating to Systems. See [www.iso.org](http://www.iso.org) for ordering information.
- 1.4. Distribution:** Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Wilkerson valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Wilkerson publications for the products considered or selected.
- 1.5. User Responsibility:** Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Wilkerson and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:
  - Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
  - Assuring that all user's performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
  - Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
  - Assuring compliance with all applicable government and industry standards.
- 1.6. Safety Devices:** Safety devices should not be removed, or defeated.
- 1.7. Warning Labels:** Warning labels should not be removed, painted over or otherwise obscured.
- 1.8. Additional Questions:** Call the appropriate Wilkerson technical service department if you have any questions or require any additional information. See the Wilkerson publication for the product being considered or used, or call 269-629-2550, or go to [www.wilkersoncorp.com](http://www.wilkersoncorp.com), for telephone numbers of the appropriate technical service department.

## 2. PRODUCT SELECTION INSTRUCTIONS

- 2.1. Flow Rate:** The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.
- 2.2. Pressure Rating:** Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.
- 2.3. Temperature Rating:** Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.
- 2.4. Environment:** Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.
- 2.5. Lubrication and Compressor Carryover:** Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.
- 2.6. Polycarbonate Bowls and Sight Glasses:** To avoid potential polycarbonate bowl failures:
  - Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
  - Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
  - Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.
- 2.7. Chemical Compatibility:** For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

- 2.8. Product Rupture:** Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
  - Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
  - Consult product labeling or product literature for pressure rating limitations.

### 3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

- 3.1. Component Inspection:** Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.
- 3.2. Installation Instructions:** Wilkerson published Installation Instructions must be followed for installation of Wilkerson valves, FRLs and vacuum components. These instructions are provided with every Wilkerson valve or FRL sold, or by calling 269-629-2550, or at [www.wilkersoncorp.com](http://www.wilkersoncorp.com).
- 3.3. Air Supply:** The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

### 4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

- 4.1. Maintenance:** Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.9.
- 4.2. Installation and Service Instructions:** Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Wilkerson valve and FRL sold, or are available by calling 269-629-2550, or by accessing the Wilkerson web site at [www.wilkersoncorp.com](http://www.wilkersoncorp.com).
- 4.3. Lockout / Tagout Procedures:** Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – (Lockout / Tagout)
- 4.4. Visual Inspection:** Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
  - Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
  - Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
  - Any observed improper system or component function: Immediately shut down the system and correct malfunction.
  - Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.
- Caution: Leak detection solutions should be rinsed off after use.**
- 4.5. Routine Maintenance Issues:**
- Remove excessive dirt, grime and clutter from work areas.
  - Make sure all required guards and shields are in place.
- 4.6. Functional Test:** Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.
- 4.7. Service or Replacement Intervals:** It is the user's responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
  - Government and / or industrial standards.
  - When failures could result in unacceptable down time, equipment damage or personal injury risk.
- 4.8. Servicing or Replacing of any Worn or Damaged Parts:** To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – Lockout / Tagout).
  - Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
  - Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
  - Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
  - After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
  - Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.
- 4.9. Putting Serviced System Back into Operation:** Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.

## Warning: Use Limitations

Wilkerson's warranties are void, and Wilkerson assumes no responsibility for any resulting cost, loss, injury or any other damages whatsoever, with respect to any plastic bowl unit for which a bowl guard is standard equipment if the unit is placed in service without the bowl guard and, except as otherwise specified in writing by Wilkerson, with respect to any Wilkerson products which are used in other than compressed air service. Specific warnings with respect to these and other use limitations appear elsewhere in this catalog.

**Wilkerson maintains a policy of ongoing product development and improvement. We therefore reserve the right to change dimensions specification and design without notice.**

**Do not place plastic bowl unit in service without bowl guard installed.**

Plastic bowl units are sold only with bowl guards with the exception to miniature units (C04, F00, L00, & M00). To minimize the danger of flying fragments in the event of plastic bowl failure, the bowl guards should not be removed. If the unit is in service without the bowl guard installed, manufacturer's warranties are void, and the manufacturer assumes no responsibility for any resulting loss.

**If the unit has been in service and does not have a bowl guard, order one and install before placing back in service.**

## Caution

Certain compressor oils, chemicals, household cleaners, solvents, paints and fumes will attack plastic bowls and can cause bowl failure. Do not use near these materials. When bowl becomes dirty replace bowl or wipe only with a clean, dry cloth. Reinstall bowl guard or buy and install a bowl guard. Immediately replace any crazed, cracked, damaged or deteriorated plastic bowl with a bowl or a new plastic bowl and bowl guard.

## Caution

Except as otherwise specified by the manufacturer, this product is specifically designed for compressed air service, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquids or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to the unit or result in a combustible condition or hazardous external leakage. Before using with fluids other than air, or for non-industrial applications, or for life support systems, consult Wilkerson Operations for written approval.

## Caution

### Suggested Lubricant

Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

## Some of the Materials that will Attack Polycarbonate Plastic Bowls

Acetaldehyde	Chloroform	Milk of Lime (CaOH)
Acetic acid (conc.)	Cresol	Nitric Acid (conc.)
Acetone	Cyclohexanol	Nitrobenzene
Acrylonitrile	Cyclohexanone	Nitrocellulose Lacquer
Ammonia	Cyclohexene	Phenol
Ammonium Fluoride	Dimethyl Formamide	Phosphorous Hydroxy Chloride
Ammonium Hydroxide	Diozane	Perchloroethylene
Ammonium Sulfide	Ethgane tetrachloride	Phosphorous
Anaerobic adhesives	Ethyl Acetate	Propionic Acid
Trichloride and Sealants	Ethyl Ether	Pyridine
Antifreeze	Ethylamine	Sodium Hydroxide
Benzene	Ethylene Chlorohydrin	Sodium Sulfide
Benzoic Acid	Ethylene Dichloride	Styrene
Benzyl Alcohol	Ethylene Glycol	Sulfuric Acid (conc.)
Brake Fluids	Formic Acid (conc.)	Sulphural Chloride
Bromobenzene	Freon (Refrig. & Propell.)	Tetrahydronaphthalene
Butyric Acid	Gasoline (High Aromatic)	Tiophene
Carbolic Acid	Hydrazine	Toluene
Carbon Disulfide	Hydrochloric Acid (conc.)	Turpentine
Carbon Tetrachloride	Lacquer Thinner	Xylene & Others
Caustic Potash Solution	Methyl Alcohol	
Caustic Soda Solution	Methylene Chloride	
Chlorobenzene	Methylene Salicylate	

## Trade Names of some Compressor Oils, Rubber Compounds and other Materials that will Attack Polycarbonate Plastic Bowls.

Atlas "Perma-Guard"	National Compound #N11
Buna N	"Nylock" VC-3
Cellulube #150 and #220	Parco #1306 Neoprene
Crylex #5 cement	*Permabond 910
*Eastman 910	Petron PD287
Garlock #98403 (polyurethane)	Prestone
Haskel #568-023	Pydraul AC
Hilgard Co.'s hil phene	Sears Regular Motor Oil
Houghton & Co. oil #1120, #1130 & #1055	Sinclair oil "Lily White"
Houtosafe 1000	Stauffer Chemical FYRQUEL #150
Kano Kroil	Stillman #SR 269-75 (polyurethane)
Keystone penetrating oil #2	Stillman #SR 513-70 (neoprene)
*Loctite 271	Tannergas
*Loctite 290	Telar
*Loctite 601	Tenneco anderol #495 & #500 oils
*Loctite Teflon-Sealant	Titon
Marvel Mystery Oil	*Vibra-tite
Minn. Rubber 366Y	Zerex
*When in raw liquid form.	

**We cannot possibly list all harmful substances, so check with Mobay or the General Electric office for further information on polycarbonate plastic.**

**The trade names "EconOmist" and "Flow-Guide" are registered at the United States Patent Office.**

**"Auto-Fill", "Dial-Air", "Flex-Drain", "Mainliner" and "Whirl-Flo" are tradenames of Wilkerson.**

**Claims and Shortages:** ..... Risk of loss passes to buyer when goods are delivered to the carrier. Inspect all shipments for damage at time of receipt. Claims should be filed by the consignee against the carrier.

**Changes:** Wilkerson maintains a policy of ongoing product development and improvement. We therefore reserve the right to change dimensions, specifications and design without notice.



# Offer of Sale

**PARKER-HANNIFIN CORPORATION**  
**OFFER OF SALE**

**1. Definitions.** As used herein, the following terms have the meanings indicated.

Buyer:	means any customer receiving a Quote for Products.
Goods:	means any tangible part, system or component to be supplied by Seller.
Products:	means the Goods, Services and/or Software as described in a Quote.
Quote:	means the offer or proposal made by Seller to Buyer for the supply of Products.
Seller:	means Parker-Hannifin Corporation, including all divisions and businesses thereof.
Services:	means any services to be provided by Seller.
Software:	means any software related to the Goods, whether embedded or separately downloaded.
Terms:	means the terms and conditions of this Offer of Sale.

**2. Terms.** All sales of Products by Seller are expressly conditioned upon, and will be governed by the acceptance of, these Terms. These Terms are incorporated into any Quote provided by Seller to Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic data interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms or conditions of purchase. No modification to these Terms will be binding on Seller unless agreed to in writing and signed by an authorized representative of Seller.

**3. Price; Payment.** The Products set forth in the Quote are offered for sale at the prices indicated in the Quote. Unless otherwise specifically stated in the Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices at any time to adjust for any raw material price fluctuations. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2020). All sales are contingent upon credit approval and full payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law.

**4. Shipment; Delivery; Title and Risk of Loss.** All delivery dates are approximate, and Seller is not responsible for damages resulting from any delay. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the carrier at Seller's facility. Unless otherwise agreed prior to shipment and for domestic delivery locations only, Seller will select and arrange, at Buyer's sole expense, the carrier and means of delivery. When Seller selects and

arranges the carrier and means of delivery, freight and insurance costs for shipment to the designated delivery location will be prepaid by Seller and added as a separate line item to the invoice. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions. Buyer shall not return or repackage any Products without the prior written authorization from Seller, and any return shall be at the sole cost and expense of Buyer.

**5. Warranty.** The warranty for the Products is as follows: (i) Goods are warranted against defects in material or workmanship for a period of twelve (12) months from the date of delivery or 2,000 hours of use, whichever occurs first; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the date of completion of the Services; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **EXEMPTION CLAUSE; DISCLAIMER OF WARRANTY, CONDITIONS, REPRESENTATIONS; THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY, CONDITION, AND REPRESENTATION, PERTAINING TO PRODUCTS. SELLER DISCLAIMS ALL OTHER WARRANTIES, CONDITIONS, AND REPRESENTATIONS, WHETHER STATUTORY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE RELATING TO DESIGN, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED. UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER, THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".**

**6. Claims; Commencement of Actions.** Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

**7. LIMITATION OF LIABILITY.** IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCT, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. **IN NO EVENT IS SELLER LIABLE FOR**

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**ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING ANY LOSS OF REVENUE OR PROFITS, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS.**

**8. Confidential Information.** Buyer acknowledges and agrees that any technical, commercial, or other confidential information of Seller, including, without limitation, pricing, technical drawings or prints and/or part lists, which has been or will be disclosed, delivered or made available, whether directly or indirectly, to Buyer ("Confidential Information"), has been and will be received in confidence and will remain the property of Seller. Buyer further agrees that it will not use Seller's Confidential Information for any purpose other than for the benefit of Seller.

**9. Loss to Buyer's Property.** Any tools, patterns, materials, equipment or information furnished by Buyer or which are or become Buyer's property ("Buyer's Property"), will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using Buyer's Property. Furthermore, Seller shall not be responsible for any loss or damage to Buyer's Property while it is in Seller's possession or control.

**10. Special Tooling.** "Special Tooling" includes but is not limited to tools, jigs, fixtures and associated manufacturing equipment acquired or necessary to manufacture Goods. Seller may impose a tooling charge for any Special Tooling. Such Special Tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in the Special Tooling, even if such Special Tooling has been specially converted or adapted for manufacture of Goods for Buyer and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property owned by Seller in its sole discretion at any time.

**11. Security Interest.** To secure payment of all sums due from Buyer, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect Seller's security interest.

**12. User Responsibility.** Buyer, through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and any technical information provided with the Quote or the Products, such as Seller's instructions, guides and specifications. If Seller provides options of or for Products based upon data or specifications provided by Buyer, Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event Buyer is not the end-user

of the Products, Buyer will ensure such end-user complies with this paragraph.

**13. Use of Products, Indemnity by Buyer.** Buyer shall comply with all instructions, guides and specifications provided by Seller with the Quote or the Products. **Unauthorized Uses.** If Buyer uses or resells the Products in any way prohibited by Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-compliance is at Buyer's sole risk. Further, Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, arising out of or in connection with: (a) improper selection, design, specification, application, or any misuse of Products; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, tools, equipment, plans, drawings, designs, specifications or other information or things furnished by Buyer; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods not provided by Seller, or opening, modifying, deconstructing, tampering with or repackaging the Products; or (e) Buyer's failure to comply with these Terms. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.

**14. Cancellations and Changes.** Buyer may not cancel or modify, including but not limited to movement of delivery dates for the Products, any order for any reason except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage and any additional expense. Seller, at any time, may change features, specifications, designs and availability of Products.

**15. Limitation on Assignment.** Buyer may not assign its rights or obligations without the prior written consent of Seller.

**16. Force Majeure.** Seller is not liable for delay or failure to perform any of its obligations by reason of events or circumstances beyond its reasonable control. Such circumstances include without limitation: accidents, labor disputes or stoppages, government acts or orders, acts of nature, pandemics, epidemics, other widespread illness, or public health emergency, delays or failures in delivery from carriers or suppliers, shortages of materials, war (whether declared or not) or the serious threat of same, riots, rebellions, acts of terrorism, fire or any reason whether similar to the foregoing or otherwise. Seller will resume performance as soon as practicable after the event of force majeure has been removed. All delivery dates affected by force majeure shall be tolled for the duration of such force majeure and rescheduled for mutually agreed dates as soon as practicable after the force majeure condition ceases to exist. Force majeure shall not include financial distress, insolvency, bankruptcy, or other similar conditions affecting one of the parties, affiliates and/or sub-contractors.

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**17. Waiver and Severability.** Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice either party's right to enforce that provision in the future. Invalidation of any provision of these Terms shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

**18. Termination.** Seller may terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms, (b) becomes or is deemed insolvent, (c) appoints or has appointed a trustee, receiver or custodian for all or any part of Buyer's property, (d) files a petition for relief in bankruptcy on its own behalf, or one is filed against Buyer by a third party, (e) makes an assignment for the benefit of creditors; or (f) dissolves its business or liquidates all or a majority of its assets.

**19. Ownership of Software.** Seller retains ownership of all Software supplied to Buyer hereunder. In no event shall Buyer obtain any greater right in and to the Software than a right in the nature of a license limited to the use thereof and subject to compliance with any other terms provided with the Software.

**20. Indemnity for Infringement of Intellectual Property Rights.** Seller is not liable for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights ("Intellectual Property Rights") except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third party claim that one or more of the Products sold hereunder infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by Seller to Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products sold hereunder is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products so as to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer; or (ii) directed to any Products provided hereunder for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products provided hereunder. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for claims of infringement of Intellectual Property Rights.

**21. Governing Law.** These Terms and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of

Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

**22. Entire Agreement.** These Terms, along with the terms set forth in the main body of any Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale and purchase. In the event of a conflict between any term set forth in the main body of a Quote and these Terms, the terms set forth in the main body of the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. These Terms may not be modified unless in writing and signed by an authorized representative of Seller.

**23. Compliance with Laws.** Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer acknowledges that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Products from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws. Buyer agrees to promptly and reliably provide Seller all requested information or documents, including end-user statements and other written assurances, concerning Buyer's ongoing compliance with Export Laws.





# WILKERSON®

**Pneumatic Division**

8676 E. M89  
P.O. Box 901  
Richland, MI 49083 USA  
[www.wilkerSONcorp.com](http://www.wilkerSONcorp.com)

**Applications Engineering**

Ph: (269) 629-2550 Option #3  
[pdnapps@parker.com](mailto:pdnapps@parker.com)

**Customer Support**

Ph: (269) 629-2550 Option #1  
[wilkerSON\\_sales@parker.com](mailto:wilkerSON_sales@parker.com)