

# WILKERSON®

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Installation & Service Instructions  
83-861-000

Precision Air Pressure Regulator  
Type PC6B Filter / Regulator

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## ⚠ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

## INSTALLATION

Install the Filter/Regulator as close as possible to the application. The inlet port is marked with an arrow cast into the body to indicate the direction of flow. Gauge ports (1/4") are provided in either side of the body for installation of a gauge or use as an additional outlet port. Plug unused port(s). System piping should be same size as regulator porting. In systems with a cyclic demand, the regulator should be located upstream of cycling device.

## ⚠ WARNING

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

## OPERATION

Maximum pressure rating is 150 psig (10 bar) for transparent plastic bowls, and 200 psig (14 bar) for metal bowls. Temperature range is 32°F to 125°F (0°C to 52°C) for transparent plastic bowls, and 32°F to 150°F (0°C to 65.5°C) for metal bowls.

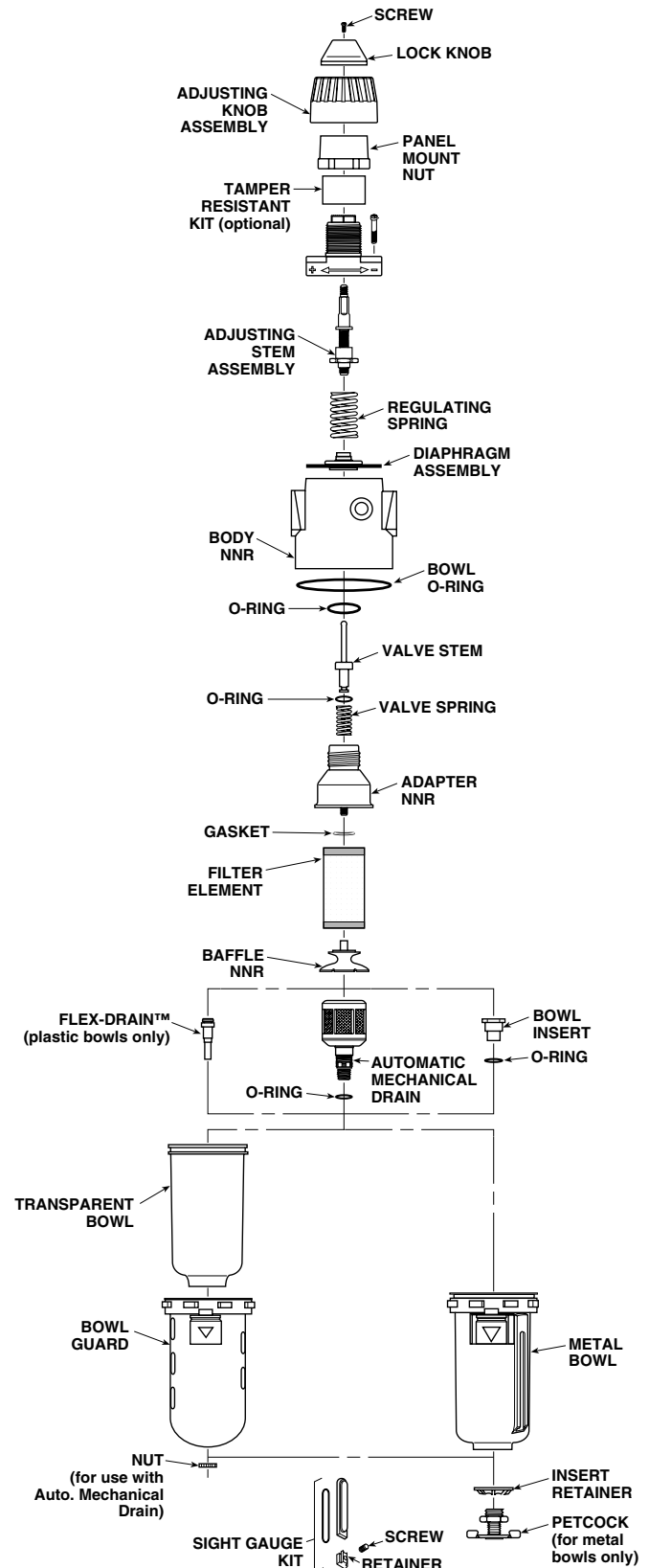
Before turning on the supply air pressure, turn the adjusting knob counterclockwise until there is no load on the regulating spring. Turn on the supply air pressure and then turn the adjusting knob clockwise until the desired secondary pressure is reached. To avoid minor readjustment after making a change in pressure setting, always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired and then increase to the desired pressure.

**SEE REVERSE SIDE FOR LIST OF MATERIALS  
UNSUITABLE FOR USE WITH POLYCARBONATE BOWLS**

## MAINTENANCE

1. The regulator can be disassembled for servicing without removal from line.
2. **DEPRESSURIZE UNIT BEFORE REMOVING GUARD AND/OR BOWL.**
3. **TO DISASSEMBLE:** shut off air to the filter/regulator and vent air line on both sides of unit. Turn adjusting screw counterclockwise to relieve spring compression. Remove knob, cover cap, screw cover, and spring. Diaphragm assembly can now be removed.
4. To remove valve from bottom of unit, remove bowl. Remove baffle and filter element exposing hex nut on adapter assembly. Remove adapter assembly, valve and spring.

(continued on reverse side)



NNR = NOT NORMALLY REPLACED

- If unit is equipped with plastic bowl, inspect daily to detect crazing, cracking, damage, or other deterioration. Immediately replace any crazed, cracked, damaged, or deteriorated bowl with a metal bowl or a new plastic bowl and metal bowl guard.
- Replace or clean the filter element periodically by removing from filter, tapping on surface, and blowing off with air blow gun.
- If unit is equipped with a manual petcock, drain bowl at least once per work shift.
- If unit is equipped with a float, clean the bowl each time the element is cleaned or changed by turning the bowl upside down and tapping onto tabletop. Blow clean with blow gun.
- If unit will not regulate to required pressure, or if pressure becomes excessive, follow instructions (see step 4) for removal of valve. Remove valve and spring (Clean and check valve stem and valve seat for wear or damage and replace if required.)
- Before placing unit in service, make sure that bowl and bowl guard are reinstalled and securely locked in place.

#### REPAIR KITS AND REPLACEMENT PARTS

SELF-RELIEVING REPAIR KIT (includes self-relieving diaphragm assembly, valve stem, valve spring, filter element, and bowl o-ring) .....	PRP-95-025
Regulating Springs:	
0-30 psi .....	RRP-95-916
0-50 psi .....	RRP-95-222
0-125 psi .....	RRP-95-224
Self-Relieving Diaphragm Kit .....	PRP-95-960
Valve Assembly (valve stem, valve spring) .....	PRP-95-959
Filter Element Assembly (includes element and bowl o-ring) .....	FRP-95-160
Transparent Plastic Bowl Assemblies:	
with Flex-Drain™ .....	FRP-95-017
with bowl guard, Automatic Mechanical Drain .....	FRP-95-015
with bowl guard, Flex-Drain™ .....	GRP-95-014
Bowl O-Ring Kit (10 per kit) .....	GRP-95-009
Bowl Guard Kit .....	GRP-95-013
Metal Bowl Assemblies:	
with metal petcock .....	PRP-95-070
with Sight Gauge, metal petcock (for units with "G" in model no) .....	PRP-95-071
with Automatic Mechanical Drain and Viton® seals .....	PRP-96-006
Drains:	
Automatic Drain Kit (includes o-ring, nut) .....	GRP-95-973
Automatic Mechanical Drain with Viton® seals .....	GRP-95-981
Brass Petcock (for metal bowls) .....	GRP-95-182
Flex-Drain™ Kit (for plastic bowls) .....	FRP-95-610
Adjusting Knob Kit .....	RRP-95-023

NOTE: All bowl kits include bowl o-ring

#### ACCESSORIES

Wall Mounting Bracket with Panel Mount Nut .....	GRP-95-011
Wall Mounting Bracket .....	GRP-95-012
Panel Mount Nut .....	GPA-95-032
Tamper Resistant Kit .....	RPA-95-006
Viton Valve Assembly .....	PPA-95-067
Gauges:	
0-30 psig .....	K4520N18030
0-60 psig .....	K4520N14060
0-120 psig .....	K4520N14160

#### WARNING: IF YOUR UNIT HAS A PLASTIC BOWL

- DO NOT** use plastic bowl units without a metal bowl guard installed. Plastic bowl units are sold only with metal bowl guards to minimize the danger of flying fragments in the event of bowl failure.
- DO NOT** install the unit where it will be subjected to temperatures higher than 125°F (52°C).
- DO NOT** install the unit where it will be subjected to pressure higher than 150 psig (10 bar).
- CAUTION:** Certain compressor oils, household cleaners, chemicals, solvents, paints and fumes will attack plastic bowls and can cause plastic-bowl failure. See manufacturer's list below. Do not use near these materials.

### CAUTION

Polycarbonate bowls, being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, nor temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls should not be exposed to chlorinated hydrocarbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphate ester and di-ester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

**TO CLEAN POLYCARBONATE BOWLS USE MILD SOAP AND WATER ONLY! DO NOT** use cleansing agents such as acetone, benzene, carbon tetrachloride, gasoline, toluene, etc., which are damaging to this plastic.

Bowl guards are recommended for added protection of polycarbonate bowls where chemical attack may occur.

#### SOME OF THE MATERIALS THAT WILL ATTACK POLYCARBONATE PLASTIC BOWLS

Acetaldehyde	Chlorobenzene	Methylene chloride
Acetic acid (conc.)	Chloroform	Methylene salicylate
Acetone	Cresol	Milk of lime (CaOH)
Acrylonitrile	Cyclohexanol	Nitric acid (conc.)
Ammonia	Cyclohexanone	Nitrobenzene
Ammonium fluoride	Cyclohexene	Nitrocellulose lacquer
Ammonium hydroxide	Dimethyl formamide	Phenol
Ammonium sulfide	Dioxane	Phosphorous hydroxy chloride
Anaerobic adhesives & sealants	Ethane tetrachloride	Phosphorous trichloride
Antifreeze	Ethyl acetate	Propionic acid
Benzene	Ethyl ether	Pyridine
Benzoic acid	Ethylamine	Sodium hydroxide
Benzyl alcohol	Ethylene chlorohydrin	Sodium sulfide
Brake fluids	Ethylene dichloride	Styrene
Bromobenzene	Ethylene glycol	Sulfuric acid (conc.)
Butyric acid	Formic acid (conc.)	Sulphural chloride
Carbolic acid	Freon (refrigerant & propellant)	Tetrahydronaphthalene
Carbon disulfide	Gasoline (high aromatic)	Thiophene
Carbon tetrachloride	Hydrazine	Toluene
Caustic potash solution	Hydrochloric acid (conc.)	Turpentine
Caustic soda solution	Lacquer thinner	Perchlorethylene and others
	Methyl alcohol	

#### TRADE NAMES OF SOME COMPRESSOR OILS, RUBBER COMPOUNDS AND OTHER MATERIAL THAT WILL ATTACK POLYCARBONATE PLASTIC BOWLS.

Atlas Perma Guard	Parco #1306 Neoprene
Buna N	* Permabond 910
Cellulube #150 and #220	Petron PD287
Crylex #5 cement	Prestone
*Eastman 910	Pydraul AC
Garlock #98403 (polyurethane)	Sears Regular Motor Oil
Haskel #568-023	Sinclair oil "Lily White"
Hilgard Co's hi-l-phene	Some Loctite Compounds
Houghton & Co oil #1120 #1130 and #1055	Stauffer Chemical FYRQUEL #150
Houtosafe 1000	Stillman #269-75 (polyurethane)
Kano Kroil	Stillman #SR-513-70 (neoprene)
Keystone penetrating oil #2	Tannergas
* Loctite 271	Telar
* Loctite 290	Tenneco anderol #495 & #500 oils
* Loctite 601	Titon
* Loctite Teflon-Sealant	* Vivra-tite
Marvel Mystery Oil	Zerex
Minn Rubber 366Y	
National Compound #N11	
*Nylock VC 3	

\* When in raw liquid form

**WE CANNOT POSSIBLY LIST ALL HARMFUL SUBSTANCES, CHECK WITH A MOBAY CHEMICAL OR GENERAL ELECTRIC OFFICE FOR FURTHER INFORMATION ON POLYCARBONATE PLASTIC.**

### 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.**

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