

WILKERSON®

Richland, Michigan 49083
269-629-5000

Installation & Service Instructions
IS-R120

R120, 1/4", 3/8", 1/2", 3/4", 1",
1-1/4", 1-1/2" Series Regulators

ISSUED: July, 2015

Doc. #ISR120, EN #140731, REV -

⚠ 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.

⚠ WARNING

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

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the **Pneumatic Division Safety Guide** at: www.parker.com/safety

Introduction

Follow these instructions when installing, operating, or servicing the product.

Application Limits

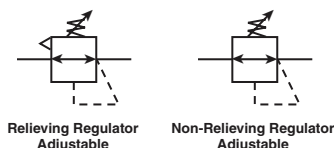
These products are intended for use in general purpose compressed media systems only.

Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	2068	300	21.0

Ambient Temperature Range: 40°F to 125°F (4°C to 52°C)

Symbols



Installation

1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep

pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that media flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.
4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation

1. Before turning on the media source turn the T-handle counterclockwise until compression is released from the Control Spring. Then turn on media source and adjust regulator to desired secondary pressure by turning T-handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.
2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG). Tighten the Locking Nut on the T-handle to lock the pressure setting.

Reduced Pressure Spring Ranges

- "M" Range = 1 – 25 PSI (1/4", 3/8", 1/2" Only)
- "L" Range = 2 – 60 PSI (1/4", 3/8", 1/2" Only)
- "Standard" Range = 2 – 125 PSI (ALL)
- "H" Range = 5 – 250 PSI (ALL)

Service

- ⚠ **Caution: Disconnect or shut off air supply and exhaust the primary and secondary pressures before servicing unit. Turning the T-handle counterclockwise does not vent downstream pressure on non-relieving regulators. Downstream pressure must be vented before servicing regulator.**

⚠ 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 systems 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.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.

⚠ Caution: Grease packets are supplied with kits for lubrication of seals. Use only mineral based grease or oils. Do not use synthetic oils such as esters. Do not use silicones.

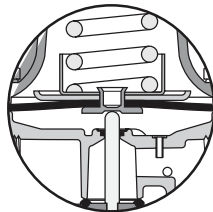
Note: After servicing unit, turn on air supply and adjust regulator to the desired downstream pressure. Check unit for leaks. If leakage occurs, do not operate - conduct repairs and retest.

A. Servicing the Bonnet and Diaphragm Assembly

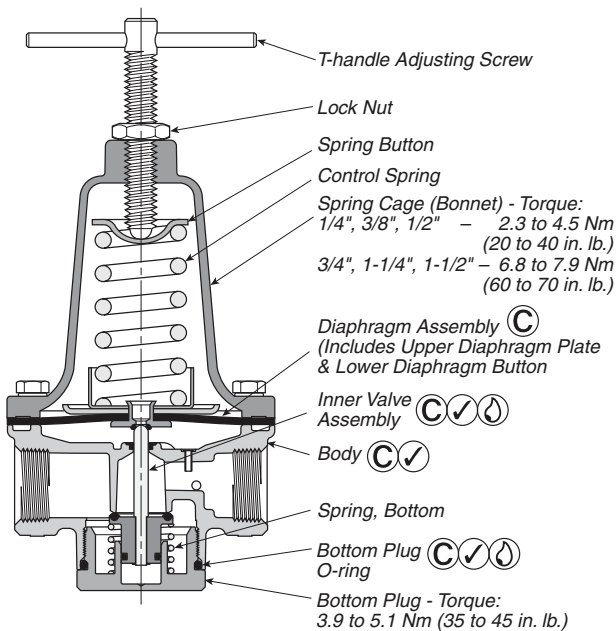
- Turn the T-handle counterclockwise until the compression is released from the Pressure Control Spring.
- Remove Bonnet Mounting Screws, Bonnet Assembly, Pressure Control Spring and Spring Button. Remove Diaphragm Assembly. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. Wipe parts, clean with soapy water or denatured alcohol. If using compressed air to blow dry, be sure to wear appropriate eye protection. If replacement is necessary, use parts from service kits.
- Install Diaphragm Assembly, Pressure Control Spring, Spring Button as shown below. Then, install Bonnet Assembly to Body with Mounting Screws and tighten in an alternating or star pattern to the following torque specifications:
 1/4", 3/8", 1/2" 2.3 to 4.5 Nm (20 to 40 in. lb.)
 3/4", 1-1/4", 1-1/2" 6.8 to 7.9 Nm (60 to 70 in. lb.)

B. Servicing the Poppet Assembly

- Exhaust system media pressure as previously described. Then remove Bottom Plug by unscrewing it from Body. Next, remove Bottom Plug, O-ring, Bottom Spring and Inner Valve Assembly.
- Next, disassemble, clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kits.
- Lubricate O-ring and sliding surfaces using grease supplied with service kit.
- Install parts as shown.



R120 Regulator – Non-Relieving



R120 Regulator – Relieving

- Lightly grease with provided lubricant.
- Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
- Clean with lint-free cloth.

- Lubricate Bottom Plug O-ring and install it in o-ring groove on Bottom Plug. Be sure Inner Valve Stem fits into center area of Diaphragm Assembly before installing Bottom Plug. Then screw Bottom Plug into Body until it bottoms out in body. Tighten to 3.5 to 5.1 Nm (35 to 45 in. lb.).
- Turn on media source and adjust to desired secondary pressure as described in the Operation section. Check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

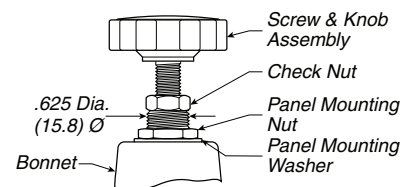
If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Service Kits Available

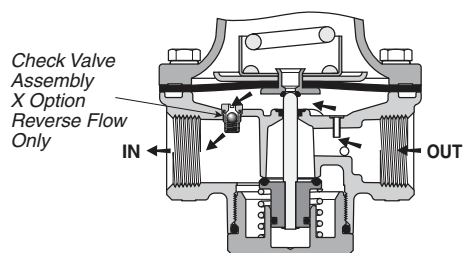
Description	Kit Number	Regulator Size
Bottom Plug Only	118Y2	1/4", 3/8"
	118A2	1/2"
	119B2-2	3/4" thru 1-1/2"
Bottom Plug O-ring Only	118Y102	1/4", 3/8"
	118A101	1/2"
	118B101	3/4" thru 1-1/2"
Mounting Bracket Kit	WSA15Y57	1/4", 3/8"
	W18A57	1/2"
	W18B57	3/4" thru 1-1/2"
Panel Mount Conversion Kit	W4202	1/4", 3/8"
	W4204	1/2"
Knob & Hardware Only	WPK16Y	1/4", 3/8", 1/2"
Regulator Repair Kit* (Relieving)	WRK119Y	1/4", 3/8"
	WRK119A	1/2"
	WRK119A250	1/2" ("H" Range)
	WRK119B	3/4", 1"
Regulator Repair Kit* (Non-Relieving)	WRK119D	1-1/4", 1-1/2"
	WRK118Y	1/4", 3/8"
	WRK118A	1/2"
	WRK118B	3/4", 1"
Spring Cage Kit	WRK118D	1-1/4", 1-1/2"
	WRKC119Y	1/4", 3/8"
T-handle Kits	WTK119A	1/2"
	WTK119B	3/4" thru 1-1/2"
Check Valve Assembly for Reverse Flow Option	WSAN263Y116-2	1/4", 3/8", 1/2", 3/4" thru 1-1/2"

Accessories

Gauges	0 to 60 PSI (0 to 4 bar)	K4520N14060
	0 to 160 PSI (0 to 11 bar)	K4520N14160
	0 to 300 PSI (0 to 20 bar)	K4520N14300



R120 Regulator with Panel Mount Conversion Kit



R120 Regulator with X Option Reverse Flow Feature