

Pneumatic Division

Richland, Michigan USA

www.parker.com/pneumatics**REGULATORS**

Bulletin Number	Bulletin Description		
<input type="checkbox"/> 3R101	Rev. 2	058 Miniature, Installation & Service	
<input type="checkbox"/> 1R402F	Rev. 12	05R "D" Economy, Installation & Service	
<input type="checkbox"/> 2R101G	Rev. 15	05R Economy, Installation & Service	
<input type="checkbox"/> 2R101G	Rev. 15	06R "B&C" Compact, Installation & Service	
<input type="checkbox"/> 2R201	Rev. 3	06R "B&C" Compact, Regulator Tamperproof	
<input type="checkbox"/> 2R101G	Rev. 15	07R "C" Standard, Installation & Service	
<input type="checkbox"/> 2R201	Rev. 3	07R "C" Standard, Regulator Tamperproof	
<input type="checkbox"/> 2R101G	Rev. 15	08R "B" Installation & Service	
<input type="checkbox"/> 1R121	Rev. 1	08R Regulator, Installation & Service	
<input type="checkbox"/> 1R800D	Rev. 7	09R Hi-Flow Basic, Installation & Service	
<input type="checkbox"/> 1R801B	Rev. 5	09R Hi-Flow Pilot Operator, Installation & Service	
<input type="checkbox"/> 2R200C	Rev. 6	10R Pilot Controlled - Economy, Installation & Service	
<input type="checkbox"/> 2R200C	Rev. 6	11R "B" Pilot Controlled - Compact, Installation & Service	
<input type="checkbox"/> 2R200C	Rev. 6	12R "B" Pilot Controlled - Standard, Installation & Service	
<input type="checkbox"/> 1R200E	Rev. 7	13R "B" Hi-Flow, Installation & Service	
<input type="checkbox"/> 1R402F	Rev. 12	14R "C" Miniature, Installation & Service	
<input type="checkbox"/> 1R602	Rev. 7	14R "D" Miniature, Installation & Service	
<input type="checkbox"/> 1M102G	Rev. 2	20R "A" Miniature, Installation & Service	
<input type="checkbox"/> 3R101	Rev. 2	20R "C" Miniature, Water, Installation & Service	
<input type="checkbox"/> 1R402F	Rev. 12	P3ARN (8AR) "B" Miniature, Installation & Service	
<input type="checkbox"/> 1M106E	Rev. 6	P3AW (8AW) "B" Miniature, Installation & Service	
<input type="checkbox"/> 5FRL100	Rev. 5	Global P3 Air Preparation Systems	
<input type="checkbox"/> P3Y-INC	Rev. 3	Global P3Y Hi-Flow, Installation & Service	
<input type="checkbox"/> 2R300C	Rev. 8	P3N Regulator Installation & Service	
<input type="checkbox"/> 1R105B	Rev. 2	Prep-Air I Regulator Installation & Service	
<input type="checkbox"/> 1R106	Rev. 1	Prep-Air I Regulator Tamperproof Installation	
<input type="checkbox"/> IS-R119	Rev. 5	R119 Hi-Flow, Regulator, Installation & Service	
<input type="checkbox"/> IS-R119J	Rev. 2	R119 J Series, Remote Control Regulators	
<input type="checkbox"/> IS-R25R45	Rev. 3	R24, R25, R45, R46 Air / Water Miniature, Installation & Service	
<input type="checkbox"/> Safety Guide	—	PDN Safety Guide	



Visit www.pdnplu.com for additional instruction sheets.

⚠ 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.

Introduction

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

Application Limits

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

⚠ WARNING

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

	kPa	PSIG	bar
Operating Pressure Maximum	1700	250	17.0
Operating Temperature Range:	-23°C to 52°C (-10°F to 125°F)		

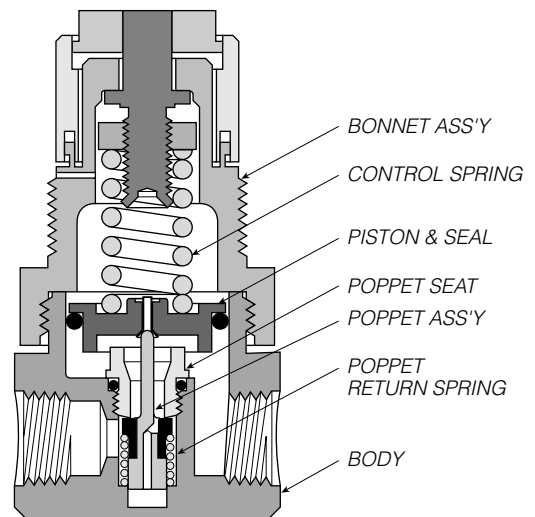
Installation

1. Install REGULATOR so that fluid flow is in direction of arrow. Installation must be upstream from devices it is to service (lubricator, valve, cylinder, or tool), and mounted closely to the other devices. Mounting may be in any position.
2. Gauge ports are located on both sides of the REGULATOR body for your convenience. It is necessary to install a gauge or socket pipe plugs into each port during installation. (Note: Miniature units use 1/8 NPT, and Economy units use 1/2 NPT).
3. For protection against rust, pipe scale, and other foreign matter, install a FILTER on the upstream (high pressure) sides as close to the REGULATOR as possible.

Operation & Service

1. BEFORE INSTALLING OR DISASSEMBLING REGULATOR FOR SERVICING, SHUT OFF FLUID SUPPLY PRESSURE TO REGULATOR.

2. To service the Regulator, disengage the yellow lock sleeve by pulling upward. Turn adjusting knob counterclockwise until compression is released from the pressure control spring. Remove bonnet assembly to service the piston area, the poppet assembly area, or both.
3. After servicing the Regulator, or upon installing the Regulator, turn on air supply. Then proceed to adjust the desired downstream pressure by turning adjusting knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of valve, cylinders, tools, etc. in the downstream line.
4. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSI to 60 PSI is best accomplished by dropping the secondary pressure to 50 PSI, then adjusting upward to 60 PSI.
5. When desired, secondary pressure settings can be reached by pushing the yellow locking sleeve down to lock the adjusting knob.



20R

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Kits Available

Description	Kit No.
Bonnet Assembly	L00715B
Control Springs	
5 to 125 PSI (Air Only)	P78648
1 to 15 PSI	P78659B
2 to 60 PSI	P78660B
1 to 30 PSI	P00411
Non-Relieving Piston Kit	
(1) Piston (Black)	PS411P
(1) Piston Seal	
Relieving Piston Kit	
(1) Piston (Black)	PS412BP
(1) Piston Seal	
Poppet Kit	PS414P
Gauges	
0 to 60 PSI (0 to 414 kPa)	K4520N14060
Panel Mounting Nut	P78652
Mounting Bracket	PS417BP

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- 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.
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Introduction

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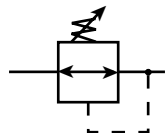
Application Limits

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

Maximum Operating Pressure:	kPa	PSIG	bar
Inlet Water Pressure	1030	150	10.3

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

ANSI Symbol



Adjustable; Non-Relieving

Installation

1. The regulator should be installed with reasonable accessibility for service whenever possible - a repair service kit is available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt, chips, and scale. 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 the unit, possibly causing malfunction.
2. Install regulator so that water flow is in the direction of arrow.
3. Installing a filter upstream of the regulator (as close to the unit as possible) will provide added protection against rust, pipe scale, and other foreign matter.

4. Fitting Assembly - For proper assembly, fittings must be installed *hand-tight and tightened by a wrench no more than 1-2 turns.*

⚠ Caution: Excessive turning of fitting with a wrench may result in permanent damage and render the regulator inoperative.

Service Procedures

⚠ Caution: Shut off water supply and relieve the water pressure trapped within the regulator.

NOTE: The low cost of these regulators makes replacement of the regulator seals uneconomical. If regulator shows signs of wear, discard and replace unit. However, if repairing is deemed necessary, see Service Kit section.

1. To service the regulator disengage the adjusting knob by pulling it upward. Then turn it counterclockwise until compression is released from the control spring. Unscrew bonnet assembly and replace items found in the service kit.

NOTE: Tighten seat to body from 5 to 7 in-lbs (.6 to .8 Nm) of torque.

2. After replacing items from the kit, attach the bonnet assembly and tighten it from 10 to 15 in-lbs (1.1 to 1.7 Nm) of torque.
3. Test for proper function by turning on water supply and slowly build up downstream pressure by turning adjusting knob clockwise. Check for any internal or external leakage.

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

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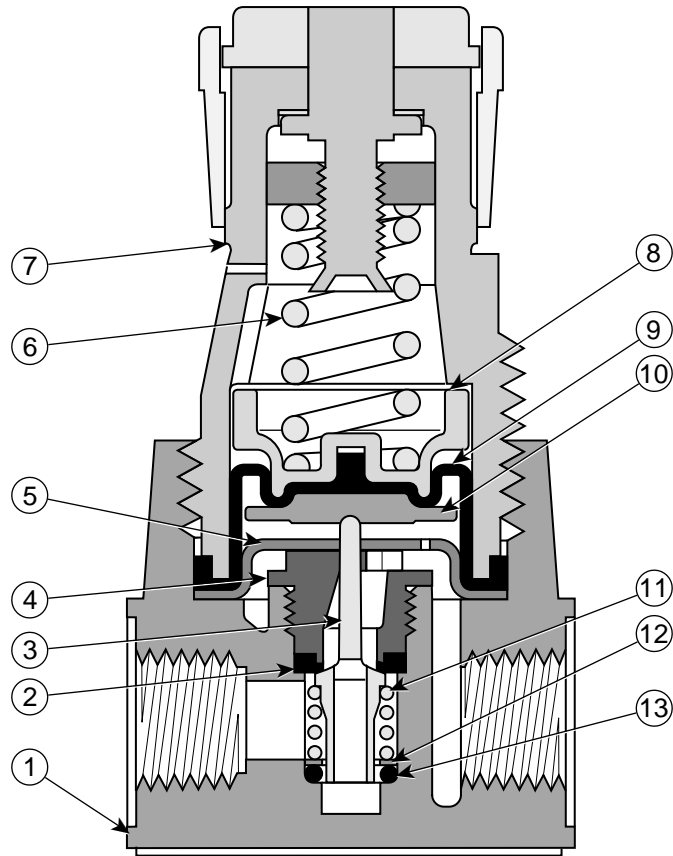
Service Kit Available

Service Kit for balanced units

(consists of items # 2, 3, 4, 9, 11, 12, & 13) PS470

Parts Identification List

Item #	Description
1	Body
2	Poppet Seal
3	Poppet Stem - balanced
4	Seat
5	Aspirator
6	Control Spring
7	Bonnet Assembly
8	Piston
9	Diaphragm
10	Thrust Plate
11	Return Spring
12	Washer - balanced units
13	O-ring - balanced units



Pneumatic Division
 Richland, Michigan 49083
 269-629-5000

Installation & Service Instructions:
 1R105B

Prep-Air® I Air Line Regulator

ISSUED: April, 2006

Supersedes: November, 2003

Doc.# 1R105, ECN# 060299, Rev. 2

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- 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.
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⚠ CAUTION

REGULATOR PRESSURE ADJUSTMENT - The working range of the 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.

Introduction

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Application Limits

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⚠ WARNING

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 Do not exceed maximum primary pressure rating.**

Operating Pressure Range: (Primary)

	kPa	PSIG	bar
Maximum	2069	300	20.69

Operating Pressure Range: (Secondary)

Spring:

50 PSIG

Minimum	34	5	0.34
Maximum	345	50	3.45

125 PSIG

Minimum	34	5	0.34
Maximum	862	125	8.62

250 PSIG

Minimum	34	5	0.34
Maximum	1724	250	17.24

Operating Temperature Range:

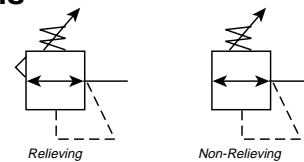
-40°C* to 74°C (-40°F to 165°F)

* Temperatures below 0°C (32°F) require moisture free air.

Installation

1. Regulator should be installed with reasonable accessibility for service whenever possible — repair service kits are available. Keep pipe or 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 the unit, possibly causing malfunction.
2. Install regulator so that air flows from “IN” to “OUT” as marked on the regulator. Installation must be upstream from devices it is to service (lubricator, valve, cylinder or tool), and mounted closely to these devices. 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 plug 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 closely to the regulator as possible.

ANSI Symbols



Operation

With the adjusting knob turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (J) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load

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Prep-Air® I Air Line Regulator

1R105B

causes the diaphragm (E) and the valve poppet assembly (J) to move downward allowing flow across the seat area (M) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (E) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (J) and the diaphragm (E) move upward until the area (M) is closed and the load of the spring (C) and pressure under the diaphragm (E) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (E). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (M) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (M).

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (E) to move upward against control spring (C), open vent hold (N), and vent the excess pressure to atmosphere through the hole in the bonnet (P). (This occurs in the relieving type regulator only.)

Regulator Spring Conversion

Turn the control knob (A) fully counterclockwise. Remove upstream air supply. Remove downstream air also for non-relieving type regulators.

Compact Regulators:

1. Turn bonnet (B) counterclockwise and remove along with spring (C).
2. Turn the control knob clockwise 2 1/2 turns (from fully counter-clockwise).
3. Screw the bonnet (B), with the new spring (C) inside, into the regulator base and tighten to 35-45 ft-lb.

Standard and Full Size Regulators:

1. Remove (6) screws (G), bonnet (B) and spring (C).
2. Turn the control knob clockwise 4 turns (from fully counterclockwise).
3. Place the bonnet (B), with the spring (C) inside, over the diaphragm and hold in place until the (6) screws (G) are reassembled. Tighten screws in progressive steps using a crisscross pattern. Final torque to be as follows:

Standard Regulators (1/4", 3/8" or 1/2" pipe) 45-55 in-lb
Full Size Regulators (3/4" or 1" pipe size) 65-75 in-lb

Service

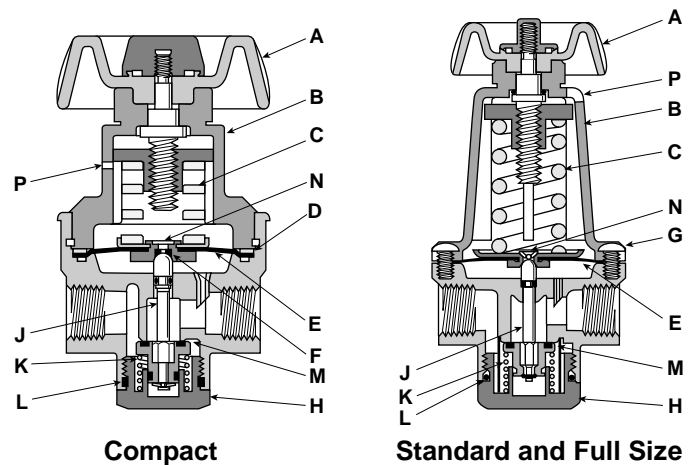
1. Turn the control knob (A) fully counterclockwise. Remove upstream air supply. Remove downstream air also for non-relieving type regulators.
2. **Compact Regulators** - Turn bonnet (B) counterclockwise and remove along with spring (C), washer (D) and diaphragm assembly (E). Discard diaphragm assembly and o-ring (F) (relieving type regulators only).
Standard and Full Size Regulators - Remove (6) screws (G), bonnet (B) and spring (C). Remove and discard diaphragm assembly (E) and o-ring (F) (relieving type regulators only).
3. Remove bottom plug (H) along with head and guide assembly (J) and spring (K). Discard head and guide assembly. Remove and discard o-ring (L) from bottom plug.
4. Clean retained parts with mild soap and water.
5. Lubricate new o-rings (F & L) and head and guide assembly (J) with Sunaplex 781.
6. Assemble o-ring (L) to bottom plug (H). Assemble head

and guide assembly (J), spring (K) and bottom plug back into the regulator base.

7. Assemble o-ring (F) into diaphragm assembly (E) (relieving type regulators only).
8. **Compact Regulators** - Place the diaphragm assembly (E), with the center plate facing out, into the regulator base making sure it is centered on the valve stem and seated into the recess provided. Place the washer (D) on top of the diaphragm. Turn the control knob clockwise 2 1/2 turns. Screw the bonnet (B), with the spring (C) inside, into the regulator base and tighten to 35-45 ft-lb.

Standard and Full Size Regulators - Place the diaphragm assembly (E) into position over the bolt holes and guide pins and make sure the center plate is facing outward. Turn the control knob clockwise 4 turns. Place the bonnet (B), with the spring (C) inside, over the diaphragm and hold in place until the (6) screws are reassembled. Tighten screws in progressive steps using a crisscross pattern. Final torque to be as follows:

Standard Regulators (1/4", 3/8" or 1/2" pipe) 45-55 in-lb
Full Size Regulators (3/4" or 1" pipe size) 65-75 in-lb



Service Kits

Model	Compact	Standard	Full Size
Relieving	03560 8000B	03562 8000B	03566 8000B
Non-Relieving	03560 8009B	03562 8009B	03566 8009B
Relieving High Pressure	—	03562 8010B	03566 8010B

Accessories

	Compact	Standard	Full Size
Control Springs (Color)			
5-50 PSIG (Blue)	03560 7021	03562 7021	03566 7021
2-125 PSIG (Black)	50640 0000	03562 7019	03566 7019
5-250 PSIG (Silver)	03560 7022	03562 7022	03566 7022
Gauges			
0-60 PSIG	K4520N14060	K4520N14060	K4520N14060
0-160 PSIG	K4520N14160	K4520N14160	K4520N14160
0-300 PSIG	K4520N14300	K4520N14300	K4520N14300
Mounting Brackets			
Pipe Mounting†	00902 0400B	00902 0400B	00906 0400B
Right Angle Mounting†	03562 0400B	03562 0400B	03562 0400B
Panel Mounting Nut	03562 0602B	03562 0602B	03562 0602B

† Panel Mount Nut included.

Pneumatic Division

Richland, Michigan 49083

269-629-5000

Installation Instruction:

1R106

ISSUED: November, 2003

Supersedes: April, 2003

Doc.# 1R106, ECN# 030539, Rev. 1

Installation Instructions:

#035600500 Tamperproof Option for Use with 3500 Series Regulators.

A. Removing Hand Wheel and Lock Knob Assembly:

1. Turn red lock knob in a counter clockwise direction until free of adjusting screw. This will free complete hand wheel and lock assembly.
2. Remove the hand wheel & lock knob assembly from the regulator.

B. Installing Tamperproof Option:

1. Select the small spacer for use with all 1/4" to 1/2" regulators and the larger spacer with 3/4" and 1" regulators.
2. Place steel spacer over the adjusting screw and flush with the top of the regulator bonnet.
3. Install plastic tamperproof device over adjusting screw threads by tapping gently with a hammer, wrench, etc. Make sure all threads are covered by the plastic cap and that it is free to rotate.

Properly installed, the plastic tamperproof device cannot be removed without destroying it. To re-adjust regulator, use pliers to crush the plastic shelf, remove steel insert from regulator adjusting screw, re-adjust regulator, and install new plastic tamperproof device.



WARNING

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Do not exceed maximum primary pressure rating.

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- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
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- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
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Introduction

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Application Limits

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Maximum Operating Pressure:

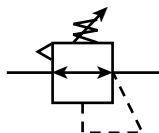
	kPa	PSIG	bar
Inlet Pressure	1720	250	17.2

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

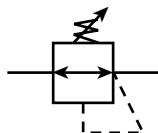
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Symbols



Relieving Regulator Adjustable



Non-Relieving Regulator Adjustable

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 air flow is in the direction of arrow. Installation must be upstream of and 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 AIR SUPPLY, TURN ADJUSTING HANDLE COUNTERCLOCKWISE UNTIL COMPRESSION IS RELEASED FROM PRESSURE CONTROL SPRING. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting 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).
 Use the hex nut, located on the adjusting screw, to lock the pressure setting.

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Service

To service regulator use the following procedure:

⚠ Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (The regulator may be serviced without removing it from the air line.)

1. To service piston or control springs, turn the adjusting handle counterclockwise until compression is released from pressure control spring.
 - a. To remove bonnet, remove retaining spring by lifting out and pulling on the exposed loop.
 - b. Clean and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from the service kits.
 - c. Lubricate the piston's o-ring (Item 17) with a mineral base oil or silicone grease. DO NOT use synthetic oils such as esters.
 - d. Install piston, piston's o-ring, control spring, and spring retainer (Item 12). Place bonnet into body, allowing the projecting notches on bonnet to mate with depressions in the body. Then feed retaining spring into the joint groove until it completely encircles the joint. See figure on page two.
2. To service poppet assembly:
 - a. Exhaust system air pressure as described above.
 - b. Remove cap (Item 1) by unscrewing it from body. Remove poppet assembly, lip seals, cap's o-ring (Item 4) and poppet return spring.
 - c. Clean and carefully inspect parts for wear and damage. If replacement is necessary, use new parts from a service kit. (See **Service Kits Available** section.)
 - d. Lubricate lip seals and sliding surfaces.
 - e. Re-install parts as shown in figure. Note orientation of open lips on lip seals (Items 3 & 7).
 - f. Lubricate cap's o-ring and install it in o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.
3. Turn on air supply and adjust to desired secondary pressure as described in the **Operation** section. Check for leaks. If leaks occur, shut off the air supply, depressurize the air system and make necessary adjustments to eliminate leakage.

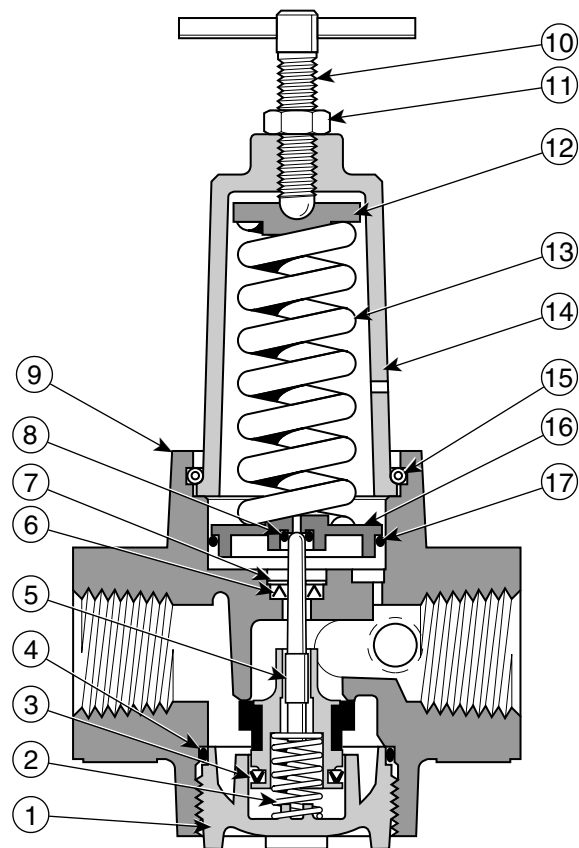
If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Service Kits Available

Body Service Kit (Balanced Poppet)		PS312B
Mounting Bracket Kit		PS309
Relieving Piston Kit		PS310
Non-Relieving Piston Kit		PS311
Gauges:		
Low Pressure		
0 to 410 kPa	(0 to 60 PSIG)	K4520N14060
Standard Pressure		
0 to 1100 kPa	(0 to 160 PSIG)	K4520N14160
High Pressure		
0 to 2070 kPa	(0 to 300 PSIG)	K4520N14300
Control Springs:		
7 to 410 kPa	(1 to 60 PSIG)	P78695B
21 to 860 kPa	(2 to 125 PSIG)	P78696B
34 to 1720 kPa	(5 to 250 PSIG)	P78697B

Parts Identification List

Item #	Description
1	Cap
2	Poppet Return Spring
3	Lip Seal - poppet assembly to cap
4	O-Ring - cap to body
5	Poppet Assembly
6	Lip Seal - poppet assembly to body
7	Retaining Ring
8	O-Ring - piston to poppet assembly
9	Body
10	Adjusting Screw Assembly
11	Hex Nut - used to lock adjusted pressure
12	Spring Retainer for control spring
13	Control Spring
14	Bonnet
15	Retaining Spring - attaches bonnet onto body
16	Piston
17	O-Ring - piston to body



**Figure: 08R Regulator
(Relieving Regulator Shown)**

⚠ 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.

Introduction

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

Application Limits

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

Maximum Operating Pressure:

	kPa	PSIG	bar
Inlet Pressure	1720	250	17.2

Ambient Temperature Range:

0°C to 80°C (32°F to 175°F)

⚠ WARNING

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

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 air flow is in the direction of arrow. Installation must be upstream of and 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. These air pilot regulators are designed to provide quick response and accurate pressure regulation from a remote installation. With pressure supplied to the regulator's inlet port and no pilot signal, the poppet assembly is closed. Increasing the pilot port pressure increases the regulator's secondary pressure.
2. Pressurizing the pilot port applies a load to the piston. This then causes the piston and valve poppet assembly to move downward, allowing flow to occur. Pressure in the downstream line offsets the load on the piston.
3. Creating a demand downstream of the unit results in a reduced pressure under the control piston. The load on the control piston now causes the poppet assembly to move downward allowing air to flow downstream.
4. Should downstream pressure exceed the desired regulated pressure, this excess pressure will cause the piston to move upward. This causes the valve poppet assembly to shut off air flow and the excess pressure is vented to the atmosphere. (This occurs with relieving type regulators only. Non-relieving units require secondary air demand in order to reduce excess secondary pressure.)

⚠ 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.

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

Service

⚠ CAUTION: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (The regulator may be serviced without removing it from the air line.)

Servicing Air Pilot Assembly:

- 1a. For Compact and Standard Units - Remove bonnet by turning it counterclockwise. Remove piston and seals. If the upper balancing seal is being serviced, remove the retaining ring and seal below it.
- 1b. For Hi-Flow Units - Remove bonnet by first removing the retaining spring. This is accomplished by lifting the end out and pulling on its exposed loop. Remove piston and seals. If the upper balancing seal is being serviced, remove the retaining ring and seal below it.
2. Clean and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Lubricate seals for the piston with a mineral based oil or silicone grease. DO NOT use synthetic oils such as esters.
4. Install pistons and seals (and upper balance seal and retaining ring if applicable). Orient lip seals (items 7, 12, or 16) as shown in figure.
- 5a. For Compact and Standard Units - Assemble bonnet to body by rotating it clockwise. Tighten bonnet from 5.6 to 8.5 N•m (50 to 75 in-lbs) of torque.
- 5b. For Hi-Flow Units - Place bonnet into body, allowing the projected notches on bonnet to mate with depressions in the body. Then feed retaining spring into joint groove until it completely encircles the joint.

Servicing Poppet Assembly:

1. Remove cap (item 1) by unscrewing it from body. Remove poppet assembly, lip seal, cap's o-ring (item 5) and poppet return spring.
2. Clean and carefully inspect parts for wear and damage. If replacement is necessary, use new parts from a service kit. (See **Service Kits Available** section.)
3. Lubricate lip seal and sliding surfaces.
4. Reinstall parts as shown in figure. Orient lip seal (items 3 or 15) as shown in figure of unit being serviced.
5. Lubricate cap's o-ring and install it in o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.

Turn on air supply and adjust to desired secondary pressure as described in the **Operation** section. Check for leaks. If leaks occur, shut off the air supply, depressurize the air system and make necessary adjustments to eliminate leakage.

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

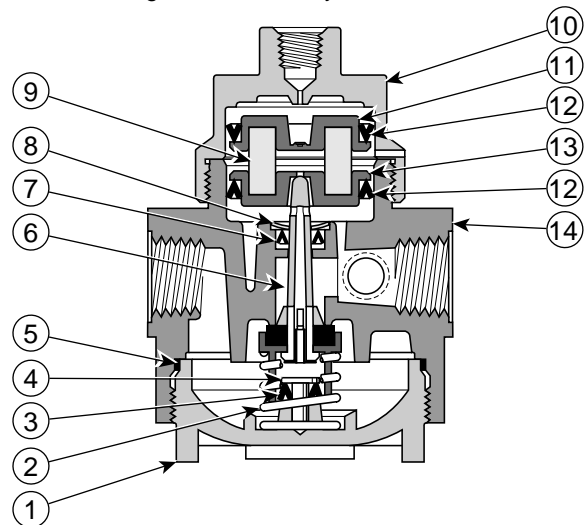
Service Kits Available

<u>Kit Description</u>	<u>Compact</u>	<u>Standard</u>	<u>Hi-Flow</u>
Mounting Bracket Kit*	PS109	PS209	PS309
Relieving Piston Kit	PS110	PS110	PS110
Non-Relieving Piston Kit	PS111	PS111	PS111
Poppet Kit	PS112	PS212	PS312
Regulator Cap & Seal Kit	PS116	PS210	N/A
Air Pilot Control Piston Kit	N/A	N/A	PS313

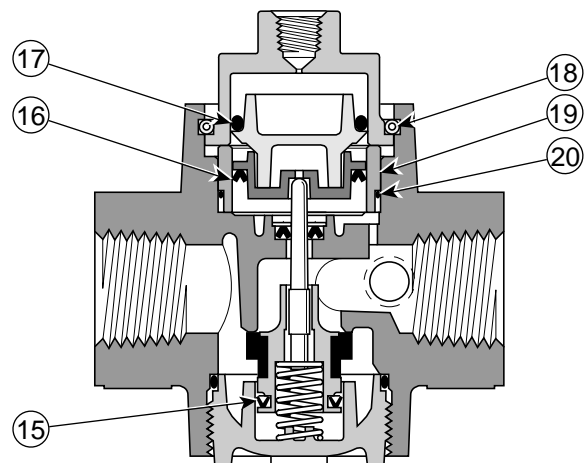
* Not supplied with units, must be ordered separately.

Parts Identification List

Item#	Description
1	Cap
2	Poppet Return Spring
3	Lip Seal - lower poppet to retainer (Compact & Standard Units)
4	Retainer for poppet's lower lip seal
5	Seal - cap to body
6	Poppet Assembly
7	Lip Seal - upper poppet to body
8	Retaining Ring
9	Spacer
10	Bonnet
11	Top Piston
12	Lip Seal for piston
13	Bottom Piston
14	Body
15	Lip Seal - lower poppet to cap (Hi-Flow Units)
16	Lip Seal - bottom piston to sleeve
17	O-ring - top piston to bonnet
18	Retaining Spring
19	Sleeve
20	O-ring - sleeve to body



**Figure 1: Compact & Standard Regulator Assemblies
(Compact Relieving Regulator Shown)**



**Figure 2: Hi-Flow Regulator Assembly
(Relieving Regulator Shown)**

⚠ WARNING

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- 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.

Safety Guide

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⚠ WARNING

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

Introduction

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

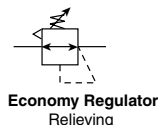
Application Limits

These products are intended for use in general purpose compressed air systems only. Compliance with the rated pressure and temperature is necessary.

Maximum Operating (Inlet) Pressure:	kPa	PSIG	bar
Mini Regulator (Plastic Body)	827	120	8.32
Economy Regulator (Metal Body)	1720	250	17.2

Ambient Temperature Range: 0°C to 52°C (32°F to 125°F)

Symbol



Installation

1. This unit 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 compounds 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 the unit, possibly causing malfunction.
2. Install unit so that air flow is in the direction of arrow. Installation must be upstream of and close to devices it is to service (valve, cylinder, tool etc.) Mounting of Regulators 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 plug into each port during installation.
4. To protect Regulator units against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

⚠ Caution: For proper assembly of units having plastic bodies, fittings must be installed hand-tight and then tightened by wrench 1/2 turn. To prevent leakage past threads, apply thread sealant to fitting. Prestolok fittings are recommended. Use of hard pipe is not recommended.

EXCESSIVE TURNING OF FITTINGS BY WRENCH MAY RESULT IN PERMANENT DAMAGE AND RENDER THE REGULATOR INOPERABLE.

Operation of Regulator

1. Before turning on air supply, turn adjusting handle counterclockwise until compression is released from control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting 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).

Service

⚠ Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling unit. (Units may be serviced without removing them from the air line.)

Servicing Regulator:

Note: See Figure 1 to aid with this procedure.

1. Unlock the adjusting knob by pulling upward (with the unit in an upright position.) Then turn adjusting knob counterclockwise until compression of the control spring has been removed.
2. Remove the bonnet from body. Then remove o-ring (3), piston, lip seal (5), and control spring (8) to service the bonnet subassembly. Unscrew seat (4) to service the poppet (13), return spring (1), and / or poppet seal (2), o-rings (16 & 18), and washer (17).
3. Clean old grease from unit and inspect seals for sign of wear (nicks, cuts, and scratches). Repair kits are available which contain the parts which are typically replaced.

⚠ WARNING

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4. Apply a light film of grease to all seals and sliding surfaces using the grease packet supplied with repair kit.

Note: Refer to Figure 1 to determine the correct position and orientation of the various parts during assembly.

5. Gently and firmly press vent seal into piston using a blunt instrument.
6. Install lip seal onto piston with the lips of the seal facing away from the support flange. Then insert control spring and piston assembly into bonnet.
7. Place balancing o-ring (18) and washer (17) into body's bore. Then insert poppet return spring and poppet assembly, followed by seat o-ring (16) and seat.
8. Tighten seat from 0.6 to 0.8 Nm (5 to 7 in-lbs). Tighten bonnet onto body from 5.6 to 7.3 Nm (50 to 65 in-lbs) of torque.
9. Make sure that the control spring is still uncompressed before turning on the air supply. Turn on air supply, then slowly adjust the knob clockwise to increase downstream pressure until the desired pressure has been reached.
10. 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).
11. When the desired secondary pressure setting has been reached, push the adjusting knob down to lock it.
12. Check for leaks. If leaks occur, shut off the air supply, exhaust system air pressure, and make necessary adjustments to eliminate leakage.

Parts Identification List

Item#	Description
1	Poppet Return Spring
2	O-ring - body to bonnet
3	Seat
4	Lip Seal - piston to bonnet
5	Piston (relieving shown)
6	Control Spring
7	Knob
8	Hex Nut
9	Adjusting Screw
10	Bonnet Assembly
11	Poppet (Mini Regulator) and Poppet Assembly (Economy Regulator)
12	Body
13	Vent Seal - poppet assembly to piston (relieving units) (Economy Regulator)
14	O-ring - seat to body (Economy Regulator)

Service Kits Available

The following service kits contain the appropriate seals and parts necessary for ordinary field service.

Description	Economy Regulator
Bonnet Assembly	L01369
Mounting Bracket Kit* (plastic ring)	PS417B
Mounting Bracket Kit* (aluminum ring)	PS466
Panel Mount Nuts* Plastic Metal	P78652 P01531
Piston & Poppet Kit - Unbalanced Non-Relieving	PS428
Piston & Poppet Kit - Unbalanced - Relieving	PS426
Poppet Kit - Unbalanced	PS454
Tamperproof Kit	P01265

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

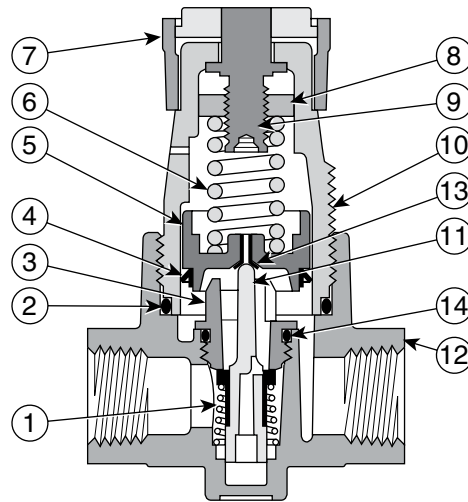


FIGURE 1: Economy Regulator - (Balanced, Relieving Unit Shown)

⚠ 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.

⚠ 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 diester 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.

⚠ WARNING

To avoid polycarbonate bowl rupture that can cause personal injury or property damage, do not exceed bowl pressure or temperature ratings. Polycarbonate bowls have a 150 PSIG pressure rating and a maximum temperature rating of 125°F.

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

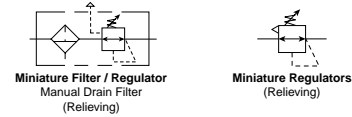
Follow these instructions when installing, operating, or servicing the product.

Application Limits

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

Maximum Operating (Inlet) Pressure:	kPa	PSIG	bar
Miniature Filter / Regulator (with Plastic Bowl)	1030	150	10.3
Miniature Filter / Regulator (with Metal Bowl)	1720	250	17.2
Miniature Regulator (Metal Body)	2000	300	20.0
Ambient Temperature Range: 0°C to 52°C (32°F to 125°F)			

Symbols



Installation

1. This unit 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 compounds 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 the unit, possibly causing malfunction.
2. Install unit so that air flow is in the direction of arrow. Installation must be upstream of and close to devices it is to service (valve, cylinder, tool etc.). Mounting of regulators may be in any position; mounting of filter/regulators must be vertical as shown in figure.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plug into each port during installation.
4. To protect regulator units 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 of Regulator

1. Before turning on air supply, turn adjusting handle counterclockwise until compression is released from control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting 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).

Operation of Filter / Regulator

1. Both free moisture and solids are removed automatically by the Filter / Regulator.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the element holder. Automatic drain models (pulse drain) will collect and dump liquids automatically. They are actuated when a pressure drop occurs within the filter.
3. The filter element should be removed and replaced when the pressure differential across the filter is excessive.

Service

⚠ Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling unit. (Units may be serviced without removing them from the air line.)

⚠ WARNING

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Servicing Regulator:

Note: See Figure 1, 2, & 3 to aid with this procedure.

1. Unlock the adjusting knob by pulling upward (with the unit in an upright position.) Then turn adjusting knob counterclockwise until compression of the control spring has been removed.
2. Remove the bonnet from body. Then remove o-ring (7), piston, lip seal (9), and control spring to service the bonnet subassembly. Unscrew seat (8) to service the poppet (17), return spring (5), and /or poppet seal (6).

Note: On filter / regulator units, the poppet assembly & poppet return spring may be accessed by removing filter element.

3. Clean old grease from unit and inspect seals for sign of wear (nicks, cuts, and scratches). Repair kits are available which contain the parts which are typically replaced.
4. Apply a light film of grease to all seals and sliding surfaces using the grease packet supplied with repair kit.

Note: Refer to Figures to determine the correct position and orientation of the various parts during assembly.

5. Install lip seal onto piston with the lips of the seal facing away from the support flange. Then insert control spring and piston assembly into bonnet.
6. Place poppet return spring and poppet assembly into bore, followed by poppet seal and seat.
7. Tighten seat to body from 0.9 to 1.1 Nm (8 to 10 in-lbs) of torque. Tighten bonnet onto body from 5.6 to 7.3 Nm (50 to 65 in-lbs) of torque.
8. Make sure that the control spring is still uncompressed before turning on the air supply. Turn on air supply, then slowly adjust the knob clockwise to increase downstream pressure until the desired pressure has been reached.
9. 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).
10. When the desired secondary pressure setting has been reached, push the adjusting knob down to lock it.
11. Check for leaks. If leaks occur, shut off the air supply, exhaust system air pressure, and make necessary adjustments to eliminate leakage.

Servicing Filter Element:

Note: See Figure 1 to aid with this procedure.

1. Unscrew threaded bowl and element holder. Then remove filter element, deflector, and gaskets.
2. Clean all internal parts, bowl, and body before re-assembling unit. See Polycarbonate bowl cleaning section.
3. Install deflector, filter element, and gaskets.
4. Attach element holder. Torque 0.9 to 1.4 Nm (8 to 12 in-lbs).
5. To assist with retaining bowl's o-ring while installing bowl, lubricate the o-ring (with a mineral based oil or grease). Then place it on the bowl.
6. Screw bowl into body until it is stopped by body; then back off bowl 1/8 turn.
7. Apply pressure to the system and check for leaks. If leaks occur, shut off the air supply, de-pressurize the system and make necessary adjustments to eliminate leakage.

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

Parts Identification List

Item#	Description
1	Bowl (Miniature Filter Regulator)
2	Filter Element (Miniature Filter Regulator)
3	Deflector (Miniature Filter Regulator)
4	O-ring (Miniature Filter Regulator) - bowl to body
5	Poppet Return Spring
6	Poppet Seal
7	O-ring - body to bonnet
8	Seat
9	Lip Seal - piston to bonnet
10	O-ring - piston to poppet (Miniature Regulator & Filter / Regulator relieving units)
11	Piston (relieving shown)
12	Control Spring
13	Knob
14	Hex Nut
15	Adjusting Screw
16	Bonnet
17	Poppet (Miniature Regulator & Filter / Regulator)
18	Body

- 19 Gasket (Miniature Filter Regulator) - deflector to body
- 20 Gasket (Miniature Filter Regulator) - element holder to filter element
- 21 Element Holder (Miniature Filter Regulator)
- 22 O-ring (14E) - body to drain
- 23 Twist Drain (Miniature Filter Regulator)
- 24 Twist Drain Knob

Service Kits Available

The following service kits contain the appropriate seals and parts necessary for ordinary field service.

Description	Miniature Filter / Regulator	Miniature Regulator
Adsorber	PS452	PS452
5 Micron Element Kit	PS403	N/A
40 Micron Element Kit	PS401	N/A
Metal Bowl w/Manual Drain	PS447B	N/A
Metal Bowl w/Automatic Drain	PS451B	N/A
Mounting Bracket Kit* (plastic ring)	PS417B	PS417B
Mounting Bracket Kit* (aluminum ring)	PS466	PS466
Panel Mount Nut - Metal*	P01531	P01531
Piston & Poppet Kit - Unbal. Rel.	PS426	PS426
Piston & Poppet Kit - Unbal. Non-Rel	PS428	PS428
Polycarbonate Bowl w/Manual Drain	PS404	N/A
Polycarbonate Bowl w/Automatic Drain	PS408B	N/A
Springs: 1-30 PSIG Range	P01175	P01175
1-60 PSIG Range	P01174	P01174
2-125 PSIG Range	P01173	P01173
1-15 PSIG Range	P01176	P01176
Twist Drain Knob	P05117	

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

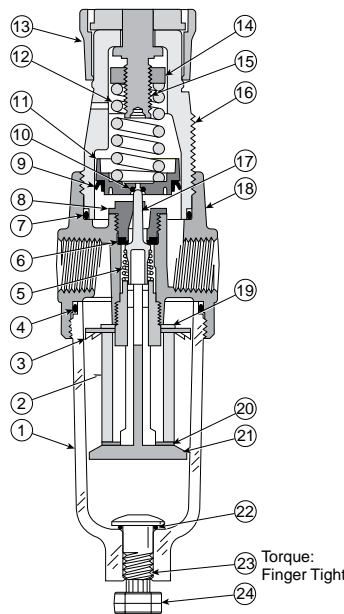


FIGURE 1: Miniature Filter / Regulator - Un-balanced, Relieving

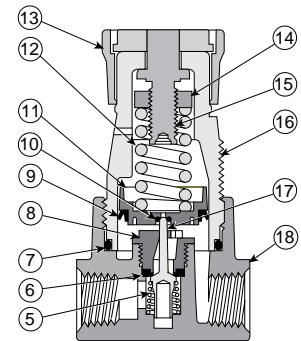


FIGURE 2: Miniature Regulator - Un-balanced, Relieving Unit Shown

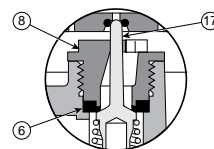


FIGURE 3: Detail of Poppet Seal

⚠ AVERTISSEMENT

Afin d'éviter un fonctionnement imprévu du système pouvant occasionner des blessures aux personnes et des dommages matériels :

- Débrancher l'alimentation électrique (si nécessaire) avant toute installation, entretien ou conversion.
- Débrancher l'alimentation en air et dépressuriser toutes les canalisations d'air connectées à cet appareil avant installation, entretien ou conversion.
- Utiliser l'appareil conformément aux normes de pression, température, et autres conditions spécifiées par le fabricant dans ces instructions.
- Le médium doit être exempt d'humidité si la température descend en dessous de 0°C.
- L'entretien doit se faire conformément aux procédures décrites ici.
- L'installation, l'entretien, et la conversion de ces appareils doivent être effectués par des personnels qualifiés, au fait des techniques pneumatiques.
- Après installation, entretien, ou conversion, les alimentations en air et en électricité (si nécessaire) seront connectées et l'appareil testé pour vérifier son fonctionnement correct et l'absence de fuites. Si l'appareil présente une fuite audible ou ne fonctionne pas correctement, ne pas l'utiliser.
- Les inscriptions concernant les avertissements et spécifications sur l'appareil ne devront pas être recouvertes de peinture, etc. Si le masquage est impossible, contactez votre représentant local pour des étiquettes de remplacement.

SECURITE – Cuves transparentes

⚠ ATTENTION:

Les bols en polycarbonates, étant durs et transparents, sont idéaux pour l'utilisation dans les filtres et lubrificateurs. Ils conviennent aux environnements industriels normaux, mais ne doivent pas être placés dans des endroits où ils pourraient être soumis à une exposition à la lumière directe du soleil, aux chocs, ou aux températures en-dehors de la plage normale d'utilisation. Ce plastique est, comme tout autre, susceptible d'être endommagé par l'action de certains produits chimiques. Les bols en polycarbonate ne doivent pas être exposés aux hydrocarbures chlorés, cétones, éthers, et certains alcools. Ils ne doivent pas être utilisés dans des systèmes pneumatiques dont les compresseurs sont lubrifiés par des fluides résistant au feu, tels que les esters et diesters de phosphate.

Les bols métalliques sont recommandés quand les conditions ambiantes et/ou celles du médium sont incompatibles avec les bols en polycarbonates. Les bols métalliques sont résistants à la plupart de ces solvants mais ne doivent pas être utilisés en milieu fortement acide ou basique, ou dans une atmosphère salée. Si de telles conditions existent, contactez le fabricant pour des recommandations spécifiques.

NETTOYEZ LES BOLS EN POLYCARBONATE UNIQUEMENT A L'EAU ET AU SAVON DOUX ! NE PAS utiliser d'agents nettoyants tels que l'acétone, le benzène, le tétrachlorure de carbone, l'essence, le toluène, etc., qui endommageraient ce plastique.

⚠ AVERTISSEMENT

Une rupture de l'appareil peut occasionner des blessures graves.
Ne pas utiliser ce régulateur pour du gaz en bouteille.
Ne pas dépasser la norme de pression primaire maximum.

Guide de sécurité

Pour obtenir de plus amples informations sur les directives à appliquer recommandées, prière de vous reporter à la section Guide de sécurité des catalogues de la Pneumatic Division ou de télécharger le Guide de sécurité de la Pneumatic Division sur le site: www.parker.com/safety

Introduction

Suivre ces instructions pendant l'installation, l'utilisation ou l'entretien du produit.

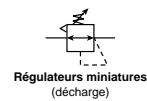
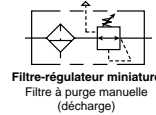
Limites d'utilisation

Ces produits sont construits pour utilisation uniquement dans les systèmes d'air comprimé pour service général.

Pression d'admission maximale de fonctionnement	kPa	psi	bar
Filtre-régulateur miniature (avec cuve en plastique)	1030	150	10,3
Filtre-régulateur miniature (avec cuve métallique)	1720	250	17,2
Régulateur miniature (corps métallique)	2000	300	20,0

Plage de température ambiante 0 °C à 52 °C (32 °F à 125 °F)

Symboles



Installation

1. Il faut installer cet appareil dans un endroit raisonnablement accessible pour faciliter l'entretien. Un kit de réparation est offert. Les tuyaux et tubes doivent être aussi courts que possible et ils doivent être propres et sans saleté ni copeaux à l'intérieur. Il faut utiliser modérément la pâte à joint et l'appliquer uniquement sur le tuyau, jamais dans l'orifice. Il ne faut pas utiliser de ruban de PTFE pour assurer l'étanchéité des connexions de tuyaux. Les pièces ont tendance à se fracturer et se loger à l'intérieur de l'appareil, ce qui peut causer un mauvais fonctionnement.
2. Installer l'appareil pour que l'air circule dans la direction de la flèche. L'installation doit être en amont et aussi proche que possible de l'appareil qu'il faut protéger (vanne, vérin, outil, etc.). Le régulateur peut être monté dans n'importe quelle position. Le filtre-régulateur doit être monté verticalement, comme montré sur l'illustration.
3. Pour être plus pratique, un orifice de manomètre se trouve de chaque côté du corps du régulateur. Pendant l'installation, il est nécessaire d'installer un manomètre ou un bouchon de tuyau dans chaque orifice.
4. Pour protéger le régulateur de la rouille, la calamine et autres matières étrangères, installer un filtre en amont du régulateur, aussi proche que possible de celui-ci.

Utilisation du régulateur

1. Avant de mettre le système sous pression, tourner la poignée de réglage dans le sens inverse des aiguilles d'une montre jusqu'à l'élimination de toute la compression du ressort de commande de pression. Mettre le système sous pression et tourner la poignée dans le sens des aiguilles d'une montre pour régler le régulateur à la pression secondaire désirée. Ceci permet à la pression de monter lentement, évitant le fonctionnement inattendu de la vanne, des vérins, des outils, etc. montés sur la conduite. Il n'est possible de faire le réglage de la pression secondaire que si le régulateur est soumis à la pression primaire.
2. Pour réduire la pression du système, il faut toujours faire le réglage à partir d'une pression plus basse que la valeur désirée. Par exemple, pour abaisser la pression secondaire de 5,5 à 4,1 bar (550 à 410 kPa ; 80 à 60 psi), il est préférable de faire tomber la pression secondaire à 3,5 bar (350 kPa ; 50 psi) et de la régler, en montant à 4,1 bar (410 kPa ; 60 psi).

Utilisation du filtre et régulateur

1. L'humidité libre et les solides sont éliminés automatiquement par le filtre et régulateur.
2. Il faut purger régulièrement les filtres à purge manuelle avant que la condensation et l'huile condensée atteignent le bas du support d'élément. Les modèles à purge automatique (purge à impulsions) captent et évacuent automatiquement les liquides. Ils sont actionnés par une chute de pression dans le filtre.

⚠ AVERTISSEMENT

LA DEFAILLANCE, LE CHOIX ERRONE OU L'USAGE NON CONFORME DES PRODUITS ET/OU SYSTEMES ICI DECRITS, OU PRODUITS Y AFFECTANT, PEUVENT ENTRAÎNER LA MORT, DES BLESSURES AUX PERSONNES ET DES DOMMAGES MATERIELS.

Ce document et autres informations de « The Company », ses filiales et distributeurs autorisés offre des options complémentaires d'utilisation du produit et/ou système pour des utilisateurs ayant l'expertise technique requise. Il est important que vous analysiez tous les aspects de l'usage prévu, y compris les conséquences de toute défaillance, et que vous passiez en revue les informations concernant les produits et systèmes dans le catalogue actuel des produits. En raison de la diversité des conditions de fonctionnement et d'utilisation de ces produits ou systèmes, l'utilisateur, et lui seul, selon ses propres analyses et tests, porte la responsabilité du choix final des produits et systèmes. Il est aussi de sa responsabilité pleine et entière de s'assurer que les produits soient utilisés conformément aux normes de sécurité et avertissements d'usage.

Les produits décrits ici, y compris, mais non exclusivement, les caractéristiques des produits, spécifications, aspects, disponibilité et prix, sont susceptibles de modification à tout moment et sans préavis par « The Company » et ses filiales.

DES EXEMPLAIRES SUPPLEMENTAIRES DE CES INSTRUCTIONS SONT DISPONIBLES POUR ACCOMPAGNER LES APPAREILS/MANUELS D'ENTRETIEN CORRESPONDANT A CES PRODUITS. CONTACTEZ VOTRE REPRESENTANT LOCAL.

3. Il faut remplacer l'élément filtrant quand la différence de pression dans le filtre est excessive.

Entretien

⚠ ATTENTION – COUPER L'ALIMENTATION D'AIR et évacuer la pression primaire et secondaire avant de démonter l'appareil. Il est possible de réparer ces appareils sans les déposer de la conduite d'air.

Intervention sur le régulateur

Remarque : Consulter les figures 1, 2 et 3 pour aider avec cette procédure.

1. Lever le bouton de réglage pour le débloquer (quand l'appareil est en position verticale). Tourner ensuite le bouton de réglage dans le sens inverse des aiguilles d'une montre jusqu'à l'élimination de toute la compression du ressort de commande.
2. Déposer le chapeau du corps. Déposer ensuite le joint torique (7), le piston, le joint à lèvres (9) et le ressort de commande pour réparer le sous-ensemble du chapeau. Dévisser le siège (8) pour atteindre le clapet (17), le ressort de rappel (5) et le siège du clapet (6).

Remarque : Sur les filtres-régulateurs, il est possible de déposer l'élément filtrant pour obtenir accès au clapet et au ressort de rappel du clapet.

3. Nettoyer l'ancienne graisse et vérifier s'il y a des signes d'usure sur les joints (entailles, coupures ou rayures). Des kits de réparation contenant les pièces typiquement remplacées sont offerts.
4. Appliquer une pellicule de graisse sur tous les joints et surfaces coulissantes, en utilisant le paquet de graisse fourni avec le kit de réparation.

Remarque : Pendant le remontage, consulter les illustrations pour déterminer la position et l'orientation des diverses pièces.

5. Installer le joint à lèvres sur le piston, les lèvres du joint à l'opposé de la bride de support. Insérer ensuite le ressort de commande et le piston dans le chapeau.
6. Mettre le ressort de rappel du clapet et le clapet dans l'alésage, puis le joint du clapet et le siège.
7. Serrer le siège dans le corps à un couple de 0,9 à 1,1 Nm (8 à 10 in-lb). Serrer le chapeau sur le corps à un couple de 5,6 à 7,3 Nm (50 à 65 in-lb).
8. Avant de mettre le système sous pression, vérifier que le ressort de commande n'est pas comprimé. Mettre le système sous pression et tourner le bouton dans le sens des aiguilles d'une montre pour faire monter la pression en aval jusqu'à la pression désirée.
9. Pour réduire la pression du système, il faut toujours faire le réglage à partir d'une pression plus basse que la valeur désirée. Par exemple, pour abaisser la pression secondaire de 5,5 à 4,1 bar (550 à 410 kPa ; 80 à 60 psi), il est préférable de faire tomber la pression secondaire à 3,5 bar (350 kPa ; 50 psi) et de la régler, en montant à 4,1 bar (410 kPa ; 60 psi).
10. Quand la pression secondaire désirée est atteinte, enfoncer le bouton de réglage pour le verrouiller.
11. Vérifier qu'il n'y a pas de fuites. S'il y a des fuites, couper l'alimentation d'air, faire tomber la pression du système et faire les réglages nécessaires pour éliminer les fuites.

Intervention sur l'élément filtrant

Remarque : Consulter la figure 1 pour aider avec cette procédure.

1. Dévisser la cuve filetée et le support d'élément. Déposer ensuite l'élément filtrant, le déflecteur et les joints.
2. Nettoyer toutes les pièces internes, la cuve et le corps avant de remonter l'appareil. Consulter la section de nettoyage de la cuve en polycarbonate.
3. Installer le déflecteur, l'élément filtrant et les joints.
4. Monter le support d'élément. Serrer à un couple de 0,9 à 1,4 Nm (8 à 12 in-lb).
5. Lubrifier le joint torique avec de l'huile minérale ou de la graisse pour faciliter l'installation du joint torique du dispositif de retenue pendant l'installation de la cuve. Le placer ensuite sur la cuve.
6. Visser la cuve à fond sur le corps et reculer la cuve d'un huitième de tour.
7. Mettre le système sous pression et vérifier qu'il n'y a pas de fuites. S'il y a des fuites, couper l'alimentation d'air, faire tomber la pression du système et faire les réglages nécessaires pour éliminer les fuites.

En cas de question sur l'intervention de l'appareil, contacter le distributeur local agréé ou le représentant technique.

Liste d'identification des pièces

N° de référence	Description
1	Cuve (filtre et régulateur miniature)
2	Elément filtrant (filtre-régulateur miniature)
3	Déflecteur (filtre-régulateur miniature)
4	Joint torique (filtre-régulateur miniature), entre la cuve et le corps
5	Ressort de rappel du clapet
6	Joint du clapet
7	Joint torique, entre le corps et le chapeau
8	Siège
9	Joint à lèvres, entre le piston et le chapeau

- 10 Joint torique, entre le piston et le clapet (dispositif d'évacuation du régulateur miniature et du filtre-régulateur)
- 11 Piston (avec évacuation montré)
- 12 Ressort de commande
- 13 Bouton
- 14 Ecrou six pans
- 15 Vis de réglage
- 16 Chapeau
- 17 Clapet (régulateur miniature et filtre-régulateur)
- 18 Corps
- 19 Joint (filtre-régulateur miniature), entre le déflecteur et le corps
- 20 Joint (filtre-régulateur miniature), entre le support d'élément et l'élément filtrant
- 21 Elément filtrant (filtre-régulateur miniature)
- 22 Joint torique (14E), entre le corps et la purge
- 23 Purge tournant (filtre-régulateur miniature)
- 24 Tordre le Bouton d'Egout

Kits d'intervention offerts

Les kit de réparation suivants contiennent les joints appropriés et les pièces nécessaires pour les réparations ordinaires sur place.

Description	Filtre-régulateur	Régulateur miniature
Elément absorbant	PS452	PS452
Kit d'élément de 5 microns	PS403	N/A
Kit d'élément de 40 microns	PS401	N/A
Cuve métallique avec purge manuelle	PS447B	N/A
Cuve métallique avec purge automatique	PS451B	N/A
Kit de patte de montage* (bague en plastique)	PS417B	PS417B
Kit de patte de montage* (bague en aluminium)	PS466	PS466
Ecrou métallique de montage sur le panneau*	P01531	P01531
Kit de piston et clapet, évacuation sans équilibre	PS426	PS426
Kit de piston et clapet, sans évacuation sans équilibre	PS428	PS428
Cuve en polycarbonate avec purge manuelle	PS404	N/A
Cuve en polycarbonate avec purge automatique	PS408B	N/A
Ressorts: Plage de 1 à 2,1 bar (1 à 30 psi)	P01175	P01175
Plage de 1 à 4,1 bar (1 à 60 psi)	P01174	P01174
Plage de 2 à 8,6 bar (2 à 125 psi)	P01173	P01173
Plage de 1 à 1,0 bar (1 à 15 psi)	P01176	P01176
Tordre le Bouton d'Egout	P05117	

*Serrer l'écrou de montage du panneau à un couple de 2,8 à 3,4 Nm (25 à 30 po/lb).

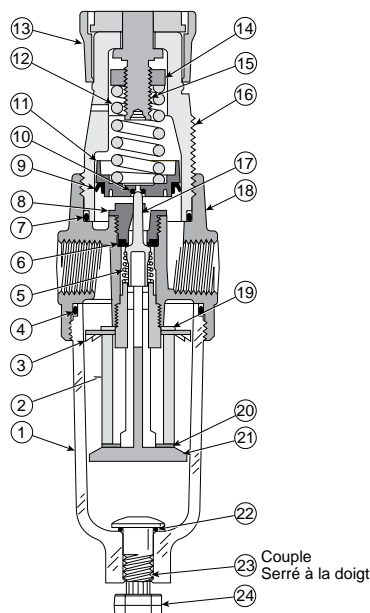


FIGURE 1 – Filtre et régulateur miniature, sans évacuation

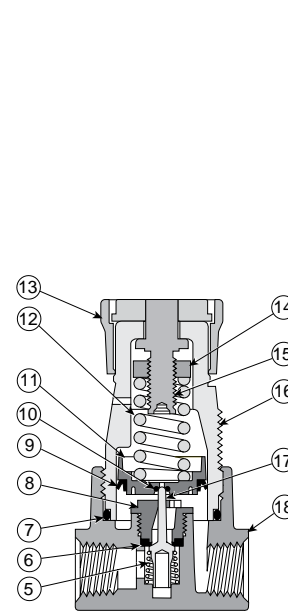


FIGURE 2 – Régulateur miniature, sans équilibre, avec dispositif d'évacuation montré

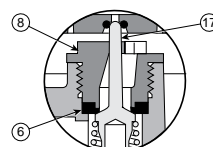


FIGURE 3 – Détail du joint de clapet

⚠ ADVERTENCIA

Para evitar un comportamiento impredecible del sistema que pueda ocasionar lesiones personales y daños a la propiedad:

- Antes de instalar, reparar o convertir, desconecte el suministro eléctrico (cuando sea necesario).
- Antes de instalar, reparar o convertir, desconecte el suministro de aire y despresurice todas las líneas de aire que están conectadas a este producto.
- Haga funcionar dentro de la presión, temperatura y demás condiciones especificadas por el fabricante y que se incluyen en estas instrucciones.
- El medio debe estar libre de humedad si la temperatura ambiente se encuentra por debajo del punto de congelación.
- Repare de acuerdo con los procedimientos que se incluyen en estas instrucciones.
- La instalación, reparación y conversión de estos productos debe ser realizada por personal competente que entienda la manera en que se deben aplicar los productos neumáticos.
- Después de la instalación, reparación y conversión, se debe conectar los suministros eléctricos y de aire (cuando sea necesario), y el producto se debe poner a prueba para determinar que funciona correctamente y no tiene pérdidas. Si se detecta una pérdida audible, o si el producto no funciona correctamente, no lo ponga en funcionamiento.
- Las advertencias y especificaciones que aparecen en el producto no deben estar cubiertas por pintura, etc. Si no resulta posible colocarlo con cinta adhesiva, póngase en contacto con su representante local para obtener etiquetas de repuesto.

La Seguridad: Las Tazas Transparentes

⚠ PRECAUCIÓN:

Las tazas de policarbonato, al ser transparentes y resistentes, son ideales para usar con Filtros y Lubricadores. Son aptas para usar en ambientes industriales normales, pero no se deben ubicar en zonas en donde queden expuestas a luz solar directa, un golpe de impacto, o una temperatura por fuera de su clasificación. Al igual que con la mayoría de los plásticos, ciertos productos químicos pueden ocasionar daños. No se debe exponer las tazas de policarbonato a los hidrocarburos clorinados, las cetonas, los ésteres y ciertos alcoholes. No se los debe usar en sistemas de aire en donde se lubrica los compresores de aire usando fluidos resistentes al fuego tal como los tipos de ester fosfato y di-ester.

Se recomienda el uso de tazas de metal cuando las condiciones ambientales y del medio no son compatibles con las tazas de policarbonato. Las tazas de metal son resistentes a la acción de la mayoría de esos solventes, pero no deben usarse cuando existe la presencia de ácidos o bases fuertes, ni en atmósferas cargadas de sal. Consulte con la fábrica por recomendaciones específicas para cuando existen estas condiciones.

PARA LIMPIAR LAS TAZAS DE POLICARBONATO, UTILICE SOLAMENTE UN JABÓN SUAVE Y AGUA. NO use agentes de limpieza tales como la acetona, el benceno, el tetracloruro de carbono, la gasolina o el tolueno, etc., que pueden dañar este plástico.

⚠ ADVERTENCIA

La ruptura del producto puede ocasionar lesiones graves.
 No conecte el regulador al gas embotellado.
 No exceda la clasificación de presión primaria máxima.

Guía sobre la seguridad

Para obtener información más completa acerca de los lineamientos recomendados acerca del uso, vea la sección Guía sobre la seguridad en los catálogos de la división neumática o puede bajar la Guía sobre la Seguridad de la División Neumática (Pneumatic Division Safety Guide) en www.parker.com/safety

Introducción

Observe las siguientes instrucciones al instalar, operar o dar servicio al producto.

Límites de aplicación

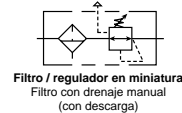
Estos productos han sido diseñados para usarse solamente en sistemas de aire comprimido para propósitos generales.

Máxima presión (de entrada) para funcionamiento kPa PSIG barras

Filtro / regulador en miniatura (con tazón plástico)	1030	150	10,3
Filtro / regulador en miniatura (con tazón de metal)	1720	250	17,2
Regulador en miniatura (cuerpo de metal)	2000	300	20,0

Rango de temperatura ambiental: 0°C a 52°C (32°F a 125°F)

Símbolos



Instalación

1. Siempre que sea posible, al instalar estas unidades se les debe colocar en lugares de fácil acceso, para poder darles servicio. Hay disponibles juegos de servicio para reparación. Se deben usar tuberías o conductos tan cortos como sea posible, manteniendo su interior limpio y sin desechos o astillas. Los compuestos para unir tuberías deben usarse moderadamente y se les debe aplicar a las tuberías macho solamente, nunca a los puertos hembra. No use cinta PTFE para sellar las juntas de tuberías ya que algunas veces pedazos de cinta tienden a separarse y fijarse dentro de las unidades provocando posiblemente mal funcionamiento.
2. Instale las unidades de manera que el flujo de aire ocurra en la dirección de las flechas. La instalación se debe hacer flujo arriba y cerca de los dispositivos que han de servir (válvulas, cilindros, herramientas, etc.). Los reguladores pueden montarse en cualquier posición; los filtros / reguladores deben montarse verticalmente tal y como se muestra en la figura.
3. Para su conveniencia, hay puertos para medidores en ambos lados de los cuerpos de los reguladores. Al hacer la instalación, es necesario colocar un medidor o un tapón de casquillo en cada uno de esos puertos.
4. Instale filtros en el lado flujo arriba (alta presión) tan cerca a los reguladores como sea posible para protegerlos contra el moho, las escamas de las tuberías y otros materiales extraños.

Funcionamiento de los reguladores

1. Antes de activar el suministro de aire, gire la manija para ajuste en contra de las agujas del reloj hasta liberar la compresión del muelle para control. Luego active el suministro de aire y ajuste el regulador a la presión secundaria deseada girando la manija en el sentido de las agujas del reloj. Con esto se permite que la presión se acumule lentamente, evitando todo funcionamiento inesperado de las válvulas, cilindros, herramientas, etc. unidas a la línea. Sólo se puede ajustar la presión secundaria deseada cuando hay presión principal aplicada al regulador.
2. Para disminuir la graduación de la presión del regulador, comience siempre con una presión menor que la graduación final deseada. Por ejemplo, para reducir la presión secundaria de 550 a 410 kPa (80 a 60 psig) lo mejor es reducir la presión secundaria a 350 kPa (50 psig), y luego aumentarla a 410 kPa (60 psig).

Funcionamiento de los filtros / reguladores

1. Los filtros / reguladores eliminan automáticamente tanto la humedad libre como los sólidos.
2. Se deben drenar regularmente los filtros con drenaje manual antes de que la humedad y el aceite desalojados lleguen a la parte baja del soporte

⚠ ADVERTENCIA

EL FALLO O LA SELECCIÓN INCORRECTA O EL USO INCORRECTO DE LOS PRODUCTOS Y/O SISTEMAS AQUÍ DESCRITOS U OTROS ARTÍCULOS RELACIONADOS PUEDE RESULTAR EN MUERTE, LESIONES PERSONALES Y DAÑO A LA PROPIEDAD.

Este documento y demás información de la compañía, sus subsidiarias y distribuidores autorizados ofrecen opciones de productos y sistemas para mayor investigación por parte de los usuarios que cuentan con conocimientos técnicos. Es importante que analice todos los aspectos de su aplicación, incluyendo las consecuencias de cualquier fallo y que revise la información concerniente al producto o los sistemas que se encuentran en el catálogo actual de productos. Debido a la variedad de condiciones de funcionamiento y aplicaciones para estos productos o sistemas, el usuario, mediante su propio análisis y pruebas, es únicamente responsable por la selección final de los productos y sistemas, y por garantizar que se cumpla con todos los requisitos de funcionamiento, seguridad y advertencia de la aplicación.

Los productos aquí descritos, incluyendo pero sin limitarse, a las características del producto, las especificaciones, los diseños, la disponibilidad y los precios, están sujetos a cambios por parte de la compañía y de sus subsidiarias en cualquier momento sin aviso.

SE PUEDE OBTENER COPIAS ADICIONALES DE ESTAS INSTRUCCIONES PARA INCLUIR CON EL EQUIPO / LOS MANUALES DE MANTENIMIENTO QUE UTILIZAN ESTOS PRODUCTOS. COMUNIQUESE CON SU REPRESENTANTE LOCAL.

del elemento. Los modelos con drenaje automático (drenaje por pulsos) recolectan y desechan los líquidos automáticamente. Se activan cuando hay una caída de presión dentro del filtro.

- Se deben quitar y reemplazar los elementos de los filtros cuando la presión diferencial a través de ellos sea excesiva.

Servicio

⚠ PRECAUCIÓN: Antes de desarmar la unidad, DESACTIVE EL SUMINISTRO DE AIRE y elimine la presión principal y secundaria. (Se puede dar servicio a las unidades sin quitarlas de la línea.)

Cómo dar servicio a los reguladores:

Nota: Para auxiliarse en este procedimiento, vea las figuras 1, 2 y 3.

- Destrabe la perilla de ajuste tirando de ella hacia arriba (con la unidad en posición vertical). Luego gire la perilla para ajuste en el sentido contrario a las agujas del reloj, hasta eliminar la compresión del muelle de control.
- Quite el bonete del cuerpo. Después quite el aro tórico (7), el pistón, el sello con labios (9) y el muelle para control para dar servicio al bonete. Desenrosque el asiento (8) para dar servicio al obturador (17), el muelle para retorno (5) y/o el sello del obturador (6).

Nota: En las unidades de filtros / reguladores, se puede obtener acceso al conjunto de obturador y al muelle para retorno del obturador quitando los elementos de los filtros.

- Quite la grasa vieja de la unidad y verifique que los sellos no estén desgastados (mellados, cortados o rayados). Se encuentran disponibles juegos para reparación que contienen las piezas de repuesto más comúnmente utilizadas.
- Coloque una película ligera de grasa en los sellos y las superficies deslizantes usando el paquete de grasa que se suministra con el juego para reparación.

Nota: Vea las figuras para averiguar la posición y orientación correctas de las piezas durante el ensamblaje.

- Coloque el sello con labios en el pistón con los labios del sello hacia afuera del borde para soporte. Luego introduzca en el bonete el conjunto de muelle para control y pistón.
- Coloque en el hueco el conjunto de muelle para retorno del obturador y el obturador, seguido del sello y el asiento del obturador.
- Apriete el asiento al cuerpo con una torsión de 0,9 a 1,1 Nm (8 a 10 libras pulgada). Apriete el bonete al cuerpo con una torsión de 5,6 a 7,3 Nm (50 a 65 libras pulgada).
- Antes de activar el suministro de aire asegúrese de que el muelle para control está todavía sin compresión. Active el suministro de aire, luego gire lentamente la perilla en el sentido de las agujas del reloj para aumentar la presión flujo abajo hasta alcanzar la deseada.
- Para disminuir la graduación de la presión del regulador, comience siempre con una presión menor que la graduación final deseada. Por ejemplo, para reducir la presión secundaria de 550 a 410 kPa (80 a 60 psig) lo mejor es reducir la presión secundaria a 350 kPa (50 psig), y luego aumentarla a 410 kPa (60 psig).
- Al alcanzar la presión secundaria deseada, presione la perilla para ajuste hacia abajo para fijarla.
- Verifique que no hay fugas. Si las hay, desactive el suministro de aire, saque la presión de aire del sistema y haga los ajustes necesarios para eliminarlas.

Cómo dar servicio al elemento del filtro:

Nota: Para auxiliarse en este procedimiento, vea la Figura 1.

- Desenrosque el tazón y el soporte del elemento. Después saque el elemento del filtro, el desviador y los empaques.
- Antes de ensamblar de nuevo la unidad, limpie las piezas internas y el cuerpo. Vea la sección acerca de la limpieza de los tazones de policarbonato.
- Coloque el desviador, el elemento del filtro y los empaques.
- Coloque el soporte del elemento. Aplique una torsión de 0,9 a 1,4 Nm (8 a 12 libras pulgada).
- Lubrique el aro tórico (con aceite o grasa de base mineral) para ayudar a retener el aro tórico del tazón durante el ensamblaje. Luego colóquelo en el tazón.
- Enrosque el tazón en el cuerpo hasta que haga contacto con él; luego regréselo 1/8 de revolución.
- Presurice el sistema y verifique que no tenga fugas. Si las hay, desactive el suministro de aire, saque la presión del sistema y haga los ajustes necesarios para eliminarlas.

Si tiene alguna pregunta acerca de cómo dar servicio a esta unidad, póngase en contacto con el concesionario autorizado de su localidad o con el representante de servicio al cliente.

Lista para Identificación de Piezas

Artículo #	Descripción
1	Tazón (filtro regulador en miniatura)
2	Elemento de filtro (filtro regulador en miniatura)
3	Desviador (filtro regulador en miniatura)
4	Aro tórico (filtro regulador en miniatura) - tazón a cuerpo
5	Muelle para retorno del obturador
6	Sello del obturador
7	Aro tórico - cuerpo a bonete

- Asiento
- Sello con labios - pistón a bonete
- Aro tórico - pistón a obturador (unidades con descarga, reguladores en miniatura y filtros reguladores en miniatura)
- Pistón (se muestra uno con descarga)
- Muelle para control
- Perilla
- Tuerca hexagonal
- Tornillo para ajuste
- Bonete
- Obturador (regulador y filtro regulador en miniatura)
- Cuerpo
- Empaque (filtro regulador en miniatura) - desviador a cuerpo
- Empaque (filtro regulador en miniatura) - soporte del elemento a elemento del filtro
- Soporte del elemento (filtro regulador en miniatura)
- Aro tórico (14E) - cuerpo a drenaje
- Drenaje de giro (filtro regulador en miniatura)
- Tuerza la Perilla del Desaguadero

Juegos para servicio disponibles.

Los siguientes juegos para servicio contienen los sellos apropiados y las piezas necesarias para dar servicio corriente en el campo.

Description	Filtros / reguladores en miniatura	Reguladores en miniatura
Extractor	PS452	PS452
Juego de elemento de 5 micrones	PS403	N/A
Juego de elemento de 40 micrones	PS401	N/A
Tazón de metal con drenaje manual	PS447B	N/A
Tazón de metal con drenaje automático	PS451B	N/A
Juego de soporte para montaje* (anillo plástico)	PS417B	PS417B
Juego de soporte para montaje* (anillo de aluminio)	PS466	PS466
Tuerca para montaje en tablero, de metal*	P01531	P01531
Juego de pistón y obturador, sin balance, con descarga.	PS426	PS426
Juego de pistón y obturador, sin balance, sin descarga	PS428	PS428
Tazón de policarbonato con drenaje manual	PS404	N/A
Tazón de policarbonato con drenaje automático	PS408B	N/A
Muelles: Rango de 1 a 30 PSIG	P01175	P01175
Rango de 1 a 60 PSIG	P01174	P01174
Rango de 2 a 125 PSIG	P01173	P01173
Rango de 1 a 15 PSIG	P01176	P01176
Tuerza la Perilla del Desaguadero	P05117	

*Apriete la tuerca de soporte del tablero de 2.8 a 3.4 Nm (Newtons por metro) (25 a 30 pulgadas por libra [63.5 cm. a 76.2 cm. por Kg.] del par de torsión.

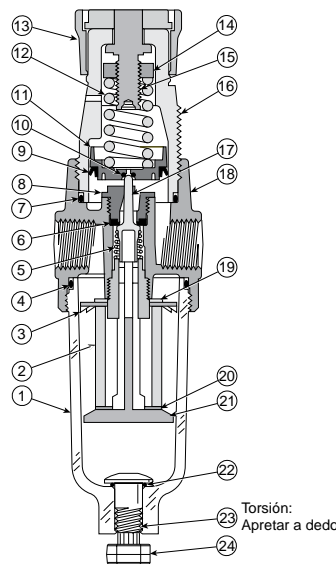


FIGURA 1: Filtro / regulador en miniatura - sin balance, con descarga

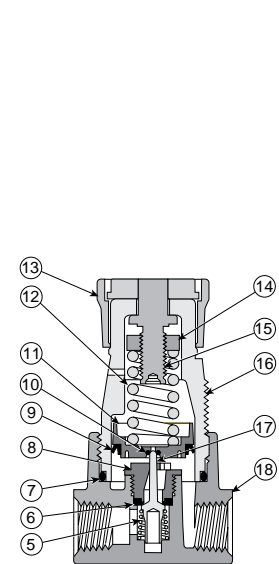


FIGURA 2: Regulador en miniatura - se muestra unidad sin balance, con descarga

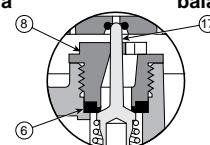


FIGURA 3: Detalle del sello del obturador

⚠ 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.

Introduction

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

Application Limits

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

Operating Pressure:

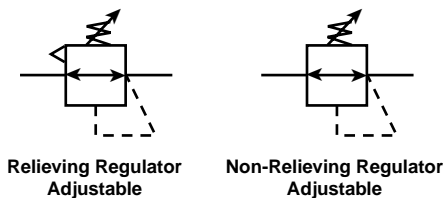
	kPa	PSIG	bar
Maximum Inlet Pressure	1720	250	17.2

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

⚠ WARNING

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

Symbols



Installation

1. This unit 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 unit so that air flow is in the direction of arrow. Installation must be upstream of and 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 air supply, turn the adjusting knob counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob 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 hex nut against the bonnet to lock the pressure setting.

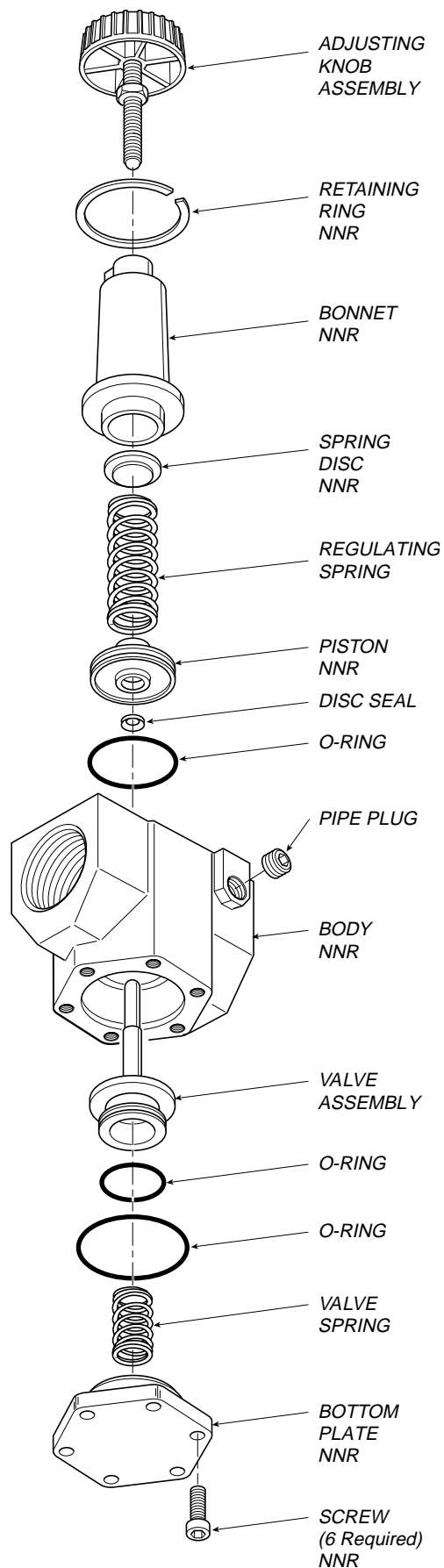
⚠ WARNING

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.



NNR = NOT NORMALLY REPLACED

Maintenance Procedures

⚠ CAUTION: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

1. The regulator can be disassembled for servicing without removal from line.
 2. TO DISASSEMBLE – Shut off air to regulator and vent air line on both sides of regulator. Turn adjusting screw counterclockwise to relieve compression on spring. Remove adjusting screw, retainer ring, bonnet, spring disc and regulating spring. Piston assembly and o-ring can now be removed. By removing screws from bottom plate, the bottom plate, the valve assembly, and the o-rings can be removed from bottom of regulator. When assembling relubricate o-rings with Parker O-Lube®. Replace valve assembly, valve spring and bottom plate. Insert piston assembly into body, place spring disc and bonnet in position, and install retaining ring.
- CAUTION:** Retainer ring **MUST** be fully seated in groove.
3. Occasionally disassemble and clean body and valve seat.
 4. IF UNIT WILL NOT REGULATE TO REQUIRED PRESSURE OR IF PRESSURE BECOMES EXCESSIVE—Disassemble, Clean and check, o-ring, valve stem and valve seat for wear or damage. Replace worn or damaged parts.
 5. IF UNIT LEAKS AT RELIEF PORT – Install proper repair kit as listed below.

Kits and Parts Available

Kit No.	Description
PS602	Regulating Springs: 10-125 PSI
PS603	Valve, Valve Spring, and Seal Kit
PS604	Nonrelieving Piston Kit (piston only)

Accessories

Kit No.	Description
PS605	Pipe Mounting Bracket

⚠ CAUTION

EXCEPT as otherwise specified by the manufacturer, this product is specifically designed for compressed air service only, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquid 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. Manufacturer's warranties are void in the event of misapplication, and manufacturer assumes no responsibility for any resulting loss.

The relief flow capacity of relieving type regulators is limited. Under some operating conditions, the secondary (outlet) pressure could increase above the initial setting. If overpressure conditions could cause malfunctions or failure of downstream equipment, additional external pressure relief devices of suitable capacity must be installed.

Before using with fluids other than air, or for nonindustrial applications, or for life support systems, consult manufacturer for written approval.

⚠ 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.
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Introduction

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Application Limits

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

Maximum Operating Pressure:

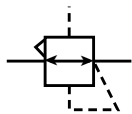
	kPa	PSIG	bar
Inlet Pressure	1720	250	17.2

Ambient Temperature Range: 0°C to 66°C (32°F to 150°F)

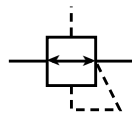
⚠ WARNING

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

Symbols



Air Pilot Regulator, Relieving



Air Pilot Regulator, Non-Relieving

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 air flow is in the direction of arrow. Installation must be upstream of and 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.

⚠ CAUTION

EXCEPT as otherwise specified by the manufacturer, this product is specifically designed for compressed air service only, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquid 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. Manufacturer's warranties are void in the event of misapplication, and manufacturer assumes no responsibility for any resulting loss.

The relief flow capacity of relieving type regulators is limited. Under some operating conditions, the secondary (outlet) pressure could increase above the initial setting. If overpressure conditions could cause malfunctions or failure of downstream equipment, additional external pressure relief devices of suitable capacity must be installed.

Before using with fluids other than air, or for nonindustrial applications, or for life support systems, consult manufacturer for written approval.

⚠ WARNING

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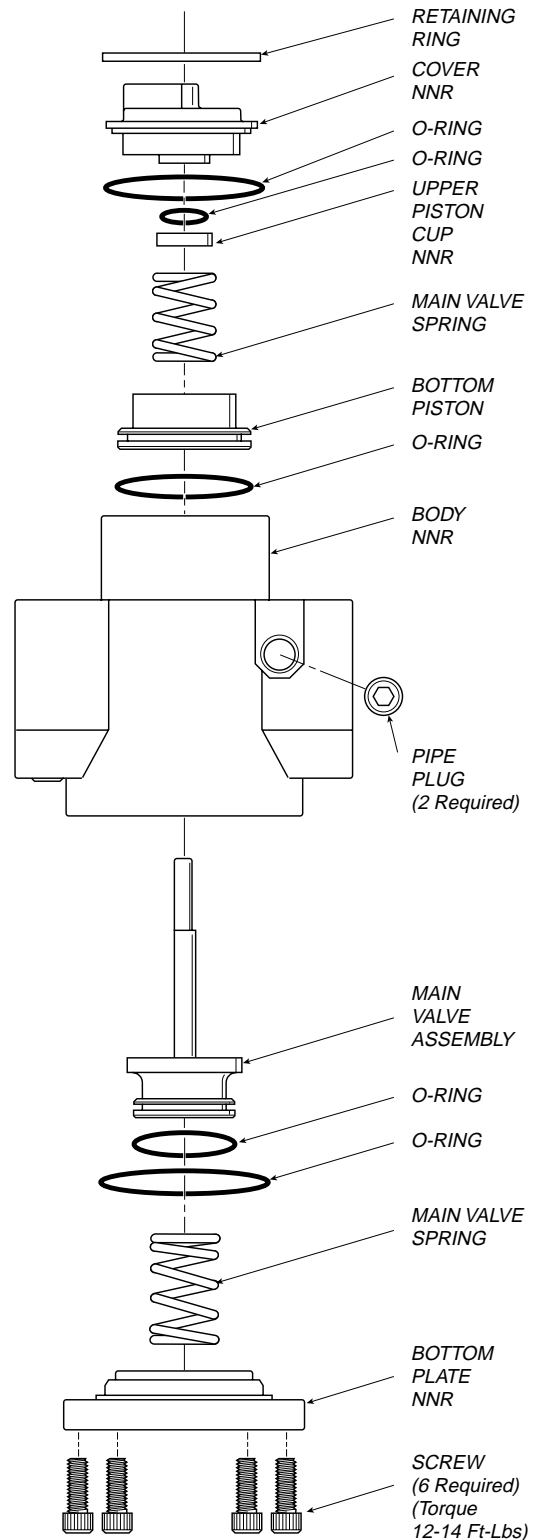
Operation

1. These air pilot regulators are designed to provide quick response and accurate pressure regulation from a remote installation. With pressure supplied to the regulator's inlet port and no pilot signal, the poppet assembly is closed. Increasing the pilot port pressure increases the regulator's secondary pressure.
2. Pressurizing the pilot port applies a load to the piston. This then causes the piston and valve poppet assembly to move downward, allowing flow to occur. Pressure in the downstream line offsets the load on the piston.
3. Creating a demand downstream of the unit results in a reduced pressure under the control piston. The load on the control piston now causes the poppet assembly to move downward allowing air to flow downstream.
4. Should downstream pressure exceed the desired regulated pressure, this excess pressure will cause the piston to move upward. This causes the valve poppet assembly to shut off air flow and the excess pressure is vented to the atmosphere. (This occurs with relieving type regulators only. Non-relieving units require secondary air demand in order to reduce excess secondary pressure.)

Maintenance Procedures

⚠ CAUTION: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (The regulator may be serviced without removing it from the air line.)

1. Remove bottom plate occasionally and clean body, valve seat, and main valve. Relubricate main valve o-ring with Parker O-Lube®. Grease whenever regulator is cleaned.
2. TO DISASSEMBLE – Shut off air and vent air lines on both sides of regulator. Remove retaining ring and lift cover and piston out of body. Remove bottom plate and pull out main valve.
3. TO ASSEMBLE – Relubricate all seals and sealing surfaces with Parker O-Lube® grease. Assemble main valve, main valve spring, and bottom plate. Insert piston into body and install cover and retaining ring. Ensure retaining ring is fully locked into retaining groove in body.
4. IF UNIT WILL NOT REGULATE TO REQUIRED PRESSURE, OR IF PRESSURE DROP BECOMES EXCESSIVE –
 - A. Check pilot air line for leaks, crimps, etc., and the pilot regulator for proper operation. If the pilot regulator is suspect, follow the maintenance instructions.
 - B. Remove bottom plate and main valve. Clean and check o-rings, valves and valve seats for wear and damage. Relubricate o-rings with Parker O-Lube®. If main valve is worn or damaged, install the proper repair kit.
5. IF UNIT LEAKS AT RELIEF HOLE – The cause may be a dirty or worn main valve seat, valve o-rings or piston o-ring. Install the proper repair kit listed below. A small, constant bleed of up to 5 scfh is normal.



NNR = NOT NORMALLY REPLACED

Kits and Parts Available

Kit No.	Description
PS623	Repair Kit – Bottom piston and seal
PS624	O-Ring Kit
PS622	Main Valve Assembly (Remote)
PS621	Main Valve Spring

THE FACTORY PACKS ALL MOVING SEALS WITH A HEAVY LUBRICATING GREASE. UNDER NORMAL CONDITIONS THIS WILL LAST THROUGH MILLIONS OF CYCLES. HOWEVER, POOR AIR QUALITY WILL CAUSE THE ORIGINAL LUBRICANT TO BE WASHED OUT IN A RELATIVELY SHORT TIME. PROPER LUBRICATION OF REGULATORS IS ABSOLUTELY ESSENTIAL.

⚠ 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

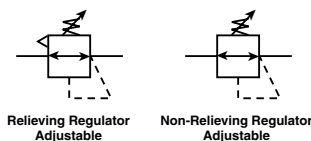
These products are intended for use in general purpose compressed air systems only.

Operating Pressure:

	kPa	psig	bar
Maximum Inlet Pressure	1720	250	17.2

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

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 air 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 air supply, turn the adjusting knob (Economy, Precision, Compact, Standard) counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob/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).

On Economy, Precision, Compact and Standard units, push the adjusting knob down to lock the pressure setting. And on the Hi-Flow unit, tighten the hex nut against the bonnet to lock setting.

Service

⚠ CAUTION:

SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob/handle counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

⚠ CAUTION:

Lubricate parts with a mineral based oil/grease or silicone grease. DO NOT use synthetic oils/greases such as esters.

⚠ WARNING

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A. Use the following procedure to service Economy, Precision, Compact and Standard units, see Figures 1 & 2:

1. Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.
2. Unscrew the threaded collar and remove the bonnet assembly. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Lubricate o-ring and lip seals with grease (supplied with kits).
4. Install diaphragm assembly into bonnet. Then install bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.

B. Servicing the Poppet Assembly-

1. Exhaust system air pressure as previously described. Then remove cap by unscrewing it from body. Next, remove poppet assembly, o-ring (Economy, Precision), cap's o-ring and poppet return spring.
2. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Lubricate o-ring (Economy, Precision) and sliding surfaces using grease supplied with service kit.
4. Turn on air supply and adjust to desired secondary pressure as described in the Operation section.

Turn on air pressure and 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.

- Ⓐ 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.

Service Kits Available

	Economy	Precision	Compact	Standard
Regulator (Standard) Repair Kit (Relieving)	PS908	PS907	PS708	PS808
Regulator (Reverse Flow) Repair Kit (Relieving)	N/A	N/A	PS708R	PS808R
Regulator (Standard) Repair Kit (Non-Relieving)	PS909	N/A	PS709	PS809
Regulator (Reverse Flow) Repair Kit (Non-Relieving)	N/A	N/A	PS709R	PS809R
Seat Insert Repair Kit (Standard)	N/A	N/A	PS713	PS813
Seat Insert Repair Kit (Reverse Flow)	N/A	N/A	PS813	N/A
Bonnet Assembly	PS915	N/A	PS715	PS715
Air Pilot Conversion (Non-Relieving)	PS944	N/A	PS744	PS744
Air Pilot Conversion (Relieving)	PS945	N/A	PS745	PS745
Mounting Bracket Kit	PS963	PS963	PS707	PS807
Relieving Piston Kit	N/A	N/A	N/A	N/A
Non-Relieving Piston Kit	N/A	N/A	N/A	N/A
Body Service Kit (Balanced Poppet)	N/A	N/A	N/A	N/A
Gauges: Low Pressure 0 to 410 kPa (0 to 60 psig)	K4515N14060		K4520N14060	
Standard Pressure 0 to 1100 kPa (0 to 160 psig)	K4515N14160		K4520N14160	
High Pressure 0 to 2070 kPa (0 to 300 psig)	K4515N14300		K4520N14300	

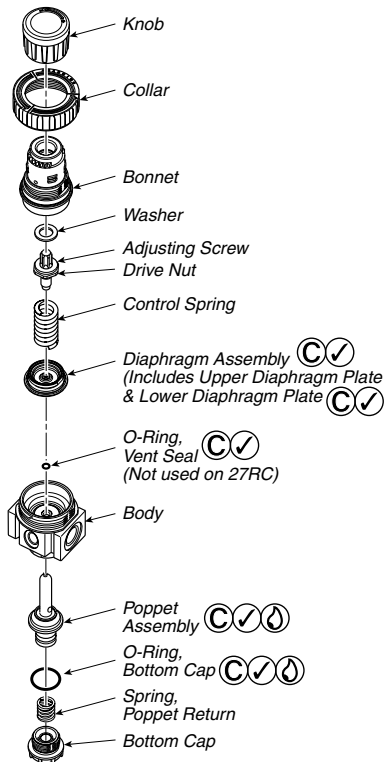


Figure 1: Economy & Precision

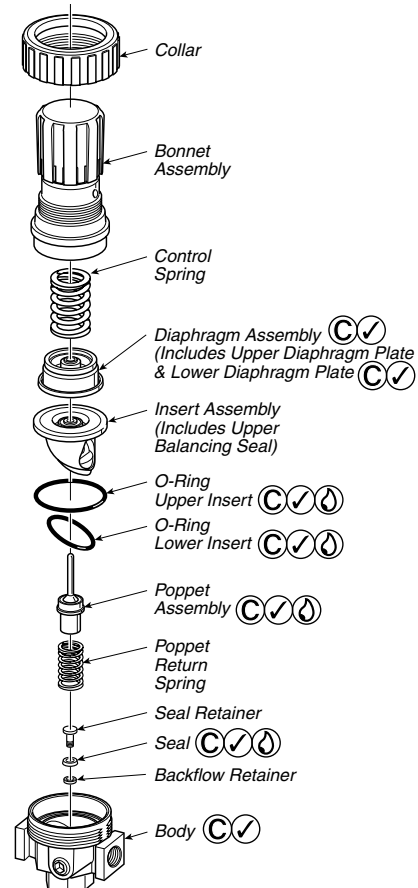


Figure 2: Compact & Standard

⚠ 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.

Introduction

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

Application Limits

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

Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	1720	250	17.2

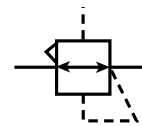
Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

Installation

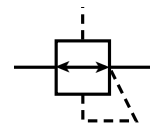
1. The regulator should be installed with reasonable accessibility for service whenever possible – repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (lubricator, valve, cylinder or tool). 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 socket pipe plug 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 closely to the regulator as possible.

Symbols



Relieving



Non-Relieving

Operation and Service

1. Before turning on the air supply, turn the adjusting knob on the master regulator until compression is released from the pressure control spring. Turn on air supply to the master regulator and the pilot controlled regulator. Adjust the downstream pressure by turning adjusting knob on the master regulator until the desired downstream pressure is obtained.
2. To decrease regulated pressure setting, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSIG to 60 PSIG is best accomplished by dropping the secondary pressure to 50 PSIG, then adjusting upward to 60 PSIG.

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3. To service the regulator piston, poppet assembly and seat insert (10R, 11R & 12R):

- A. Shut off air supply and depressurize the unit. Turn the adjusting knob on the master regulator until pilot pressure is relieved on the pilot controlled regulator.
- B. Unscrew the threaded collar and remove the bonnet assembly.
- C. Disassemble, clean and carefully inspect parts for wear or damage. If replacement is necessary, use parts from the service kits.
- D. Lubricate poppet bore, poppet stem, lower balancing seal, and all o-rings with grease found in kit.
- E. Lubricate bonnet bore with grease found in kit. Carefully install piston seals as shown in assembly drawing. The V side of each seal must be installed facing the end of the piston. Install vent seal if repairing a relieving regulator. Install piston assembly into bonnet.
- F. (10R) Install poppet assembly, cap's o-ring to o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.
(11R & 12R) Install poppet return spring, poppet assembly, o-rings, and seat insert.
- G. Assemble bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.

4. Turn on air pressure and 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.

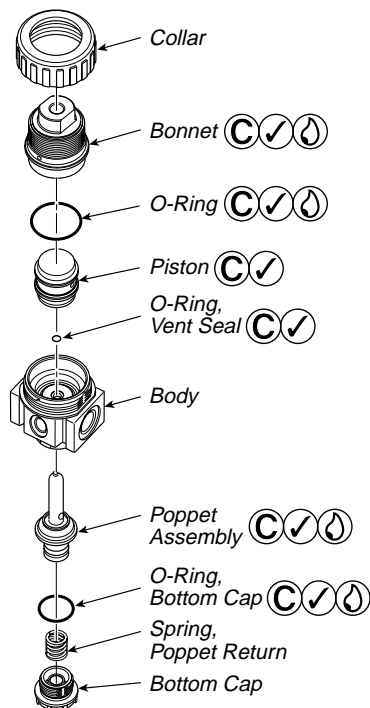


Figure 1:
10R Regulator

Service Kits Available

	Economy 10R	Compact 11R	Standard 12R
Regulator (Standard) Repair Kit (Relieving)	PS949	PS749	PS849
Regulator (Reverse Flow) Repair Kit (Relieving)		N/A	PS749R
PS849R			
Regulator (Standard) Repair Kit (Non-Relieving)	PS947	PS747	PS847
Regulator (Reverse Flow) Repair Kit (Non-Relieving)	N/A	PS747R	PS847R
Seat Insert Repair Kit (Standard)	N/A	PS713	PS813
Gauges:			
Low Pressure 0 to 410 kPa (0 to 60 psig)	K4515N18060	K4520N14060	K4520N14060
Standard Pressure 0 to 1100 kPa (0 to 160 psig)	K4515N18160	K4520N14160	K4520N14160
High Pressure 0 to 2070 kPa (0 to 300 psig)	N/A	K4520N14300	K4520N14300

- Ⓓ 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.

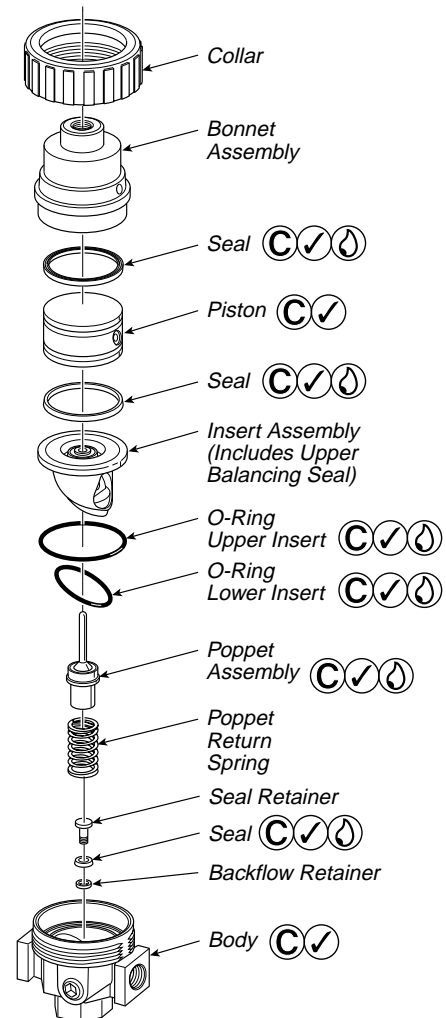


Figure 2:
11R & 12R Regulator

⚠ 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.

Introduction

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

Conversion Kit PS737

Conversion of 06 and 07 Series Regulators from standard knob type adjustment to Tamperproof Type Regulator.

Kit Consist Of:

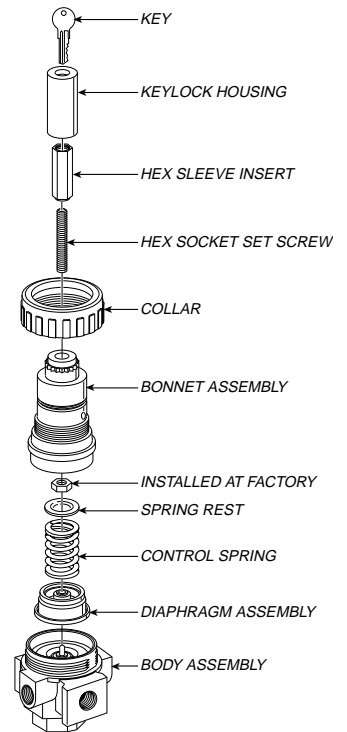
- 1- Bonnet Assembly (Hex Nut Installed)
- 1- Hex Socket Set Screw
- 1- Hex Sleeve Insert
- 1- Key Lock Housing
- 1- Removable Key
- 1- Spring Rest
- 1- Grease Tube
- Conversion Instructions

- A. Shut off air supply and depressurize the unit.
- B. Disengage adjusting knob by pulling upward. Turn adjusting knob counterclockwise until compression is released from the pressure control spring. Turning the knob counterclockwise does not vent downstream pressure on non-relieving regulators. Downstream pressure must be vented before servicing or conversion of the regulator.
- C. Unscrew the threaded collar and remove the bonnet assembly.
- D. Disassemble the diaphragm assembly and control spring.
- E. Apply grease to the male thread of the hex socket set screw and in the pocket of the spring rest.
- F. Install spring rest, control spring and diaphragm assembly into bonnet assembly.
- G. Assemble bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.
- H. Install hex socket set screw into bonnet assembly. Adjust set screw to the desired downstream pressure setting.
- I. Assemble hex sleeve insert over set screw by turning hex sleeve insert clockwise until hex sleeve insert bottoms on bonnet. Tighten hex sleeve insert to .8 to 1.0 Nm (7 to 9 ft. lbs.) torque. It may be

necessary to use a 3/16 hex wrench to prevent the set screw from turning while tightening the hex sleeve insert.

⚠ CAUTION: It is important to tighten the hex sleeve insert to .8 to 1.0 Nm (7 - 9 ft. lbs.) torque. Failure to tighten the hex sleeve insert properly will cause the pressure setting to be unstable during pulsating or vibration service. An improperly torqued hex sleeve insert may rotate during pulsed or vibration service causing the pressure to change resulting in injury.

- J. Slip key lock housing over insert. Do not turn key.
- K. Remove key. Downstream pressure is now set and tamperproof.



⚠ WARNING

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

⚠ WARNING

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- 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.
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Safety Guide

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Introduction

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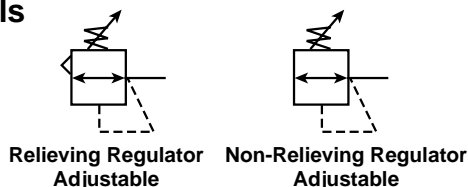
Application Limits

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

Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	1720	250	17.2
Ambient Temperature Range:	0°C to 80°C (32°F to 175°F)		

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 air 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. 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 air supply, turn the adjusting knob or "T" handle counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob/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).

Push the adjusting knob down to lock the pressure setting. On the "T" handle units, tighten the hex nut against the bonnet to lock setting.

Service

- ⚠ CAUTION:**
 SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob/handle counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

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⚠ CAUTION:

Lubricate parts with a mineral based oil/grease or silicone grease. DO NOT use synthetic oils/greases such as esters.

A. Use the following procedure to service bonnet assembly and components.

1. (Adjustable Regulator only) Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.
2. Disassemble and service as required. Refer to pictures for details.
3. Reassemble Unit. Refer to pictures for details.

B. Servicing the Poppet Assembly

1. (Adjustable Regulator only) Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.
2. Remove bottom cap:
 - a) Remove screw
 - b) Turn cap and pull down counter clockwise.
3. Disassemble parts and services as required. Refer to pictures for details.
4. Reassemble unit. Refer to pictures for details.

Turn on air pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

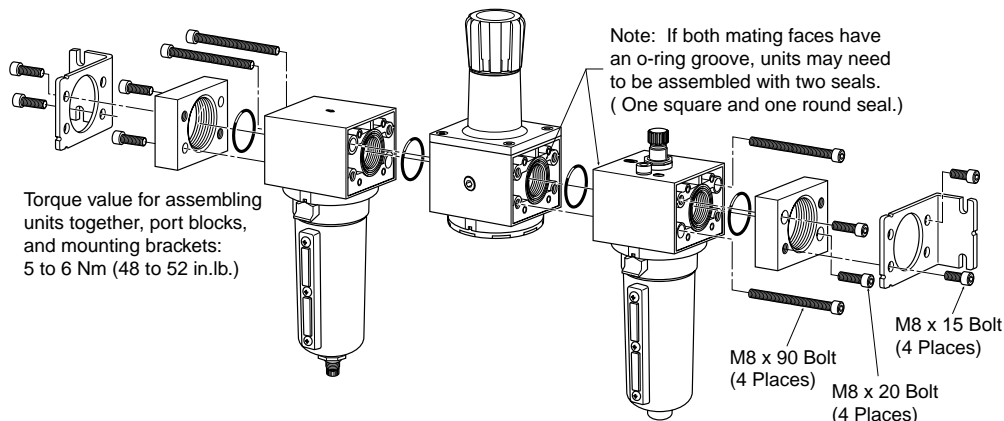
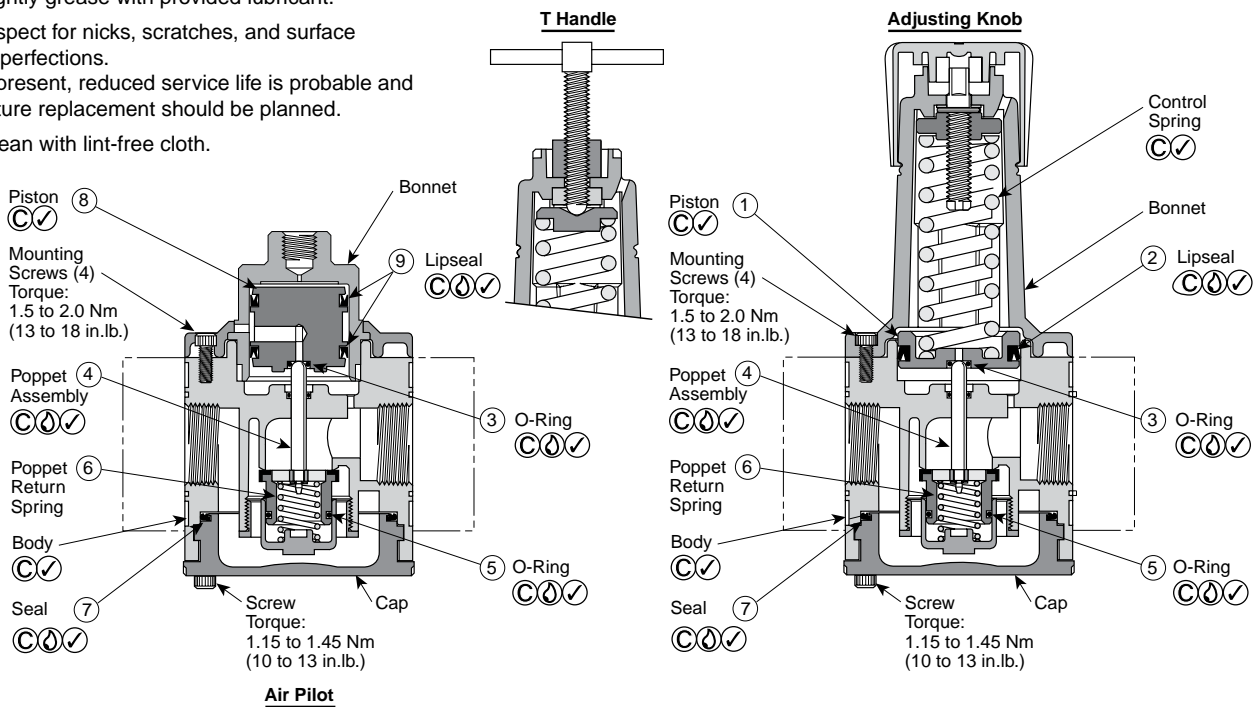
- Ⓐ Lightly grease with provided lubricant.
- Ⓑ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
- Ⓒ Clean with lint-free cloth.

Adjust to desired secondary pressure as described in the operation section.

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	Contains Items
Regulator (Standard)		(1) Piston, (2) Lipseal, (3) O-Ring, (4) Poppet Assembly, (5) O-Ring, (6) Poppet Return Spring, and (7) Seal
Repair Kit (Relieving)	P3NKA00RR	
Repair Kit (Non-Relieving)	P3NKA00RN	
Air Pilot Control Piston Kit	P3NKA00PD	(8) Piston, (9) Lipseal, (3) O-Ring
Mounting Bracket Kit	P3NKA00MW	Not Shown
Gauges:		
Low Pressure 0 to 410 kPa (0 to 60 PSIG)	K4520N14060	Not Shown
Standard Pressure 0 to 1100 kPa (0 to 160 PSIG)	K4520N14160	Not Shown
High Pressure 0 to 2070 kPa (0 to 300 PSIG)	K4520N14300	Not Shown



⚠ 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

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Introduction

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Application Limits

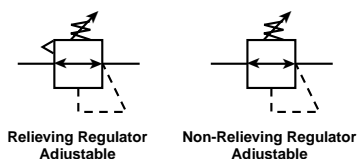
These products are intended for use in general purpose compressed media systems only.

Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	2068	300	21.0

Ambient Temperature Range: 4°C to 82°C (40°F to 180°F)

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, disengage the Adjusting Knob by pulling upward. Turn the Adjusting Knob counterclockwise until compression is released from the Control Spring. Then turn on media source and adjust regulator to desired secondary pressure by turning Adjusting Knob 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).

Push the Adjusting Knob down to lock the pressure setting.

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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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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.

Service

⚠ CAUTION:
SHUT OFF MEDIA SOURCE and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the Knob counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

⚠ CAUTION:
Lubricate parts with a mineral based oil / grease or silicone grease. DO NOT use synthetic oils / greases such as esters.

A. Servicing the Bonnet and Diaphragm assembly-

1. Disengage the Adjusting Knob by pulling upward. Turn Adjusting Knob counterclockwise until the compression is released from the Pressure Control Spring.
2. Unscrew the threaded Bonnet Assembly. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kits.
3. Lubricate O-ring and Lip Seals with grease (supplied with kits).
4. Install Diaphragm Assembly into Body. Then install Bonnet Assembly to Body and tighten to 4.5 to 5.6 Nm (40 to 50 in. lb.).

B. Servicing the Poppet Assembly-

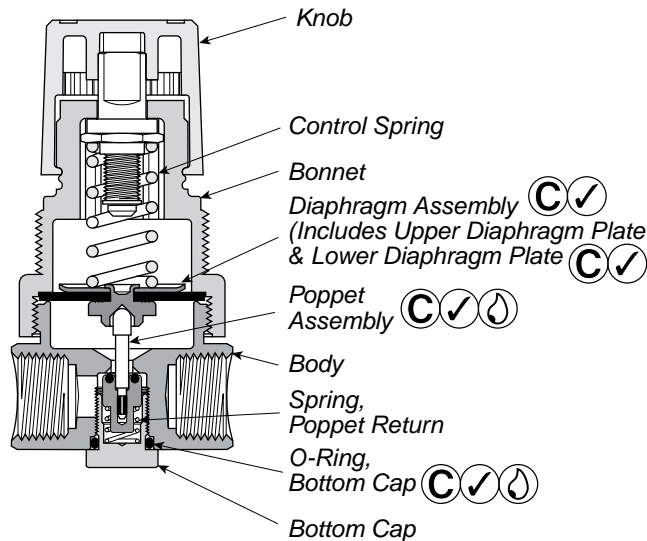
1. Exhaust system media pressure as previously described. Then remove Cap by unscrewing it from Body. Next, remove Bottom Cap, O-ring, Poppet Return Spring and Poppet Assembly, .
2. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kits.
3. Lubricate O-ring and sliding surfaces using grease supplied with service kit.
4. Install parts as shown.
5. Lubricate Bottom Cap O-ring and install it in o-ring groove on cap. Then screw cap into Body until the cap bottoms out in body. Tighten to 3.5 to 5.1 Nm (35 to 45 in. lb.).
6. Turn on media source and adjust to desired secondary pressure as described in the **Operation** section.

Turn on media pressure and 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

	20RC / 058 1/8" & 1/4"
Regulator Repair Kit (Relieving)	PRKR164Y
Regulator Repair Kit (Non-Relieving)	PRKR163Y
Spring Gauge & Knob Assembly	PCKR364Y
Panel Mount Nut	PR05X51
Mounting Bracket	PSA161X57



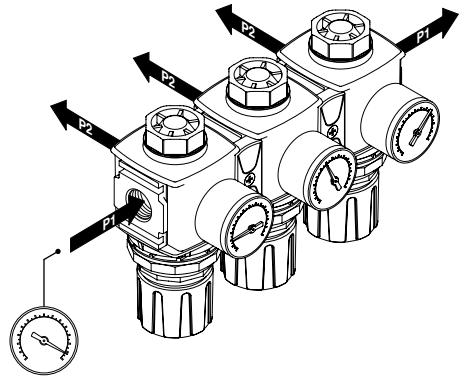
20RC / 058 Regulator

- Ⓒ 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.

UK Common Ported Regulators
CN 汇流型减压阀
FR Régulateurs à orifices communs

DE Regler mit allgemeinen Anschlüssen
IT Regolatori con porte comuni
JP マニホールドレギュレータ

KR 공통급기 레귤레이터
ES Reguladores de boca común
SE Sammanbyggda regulatorer

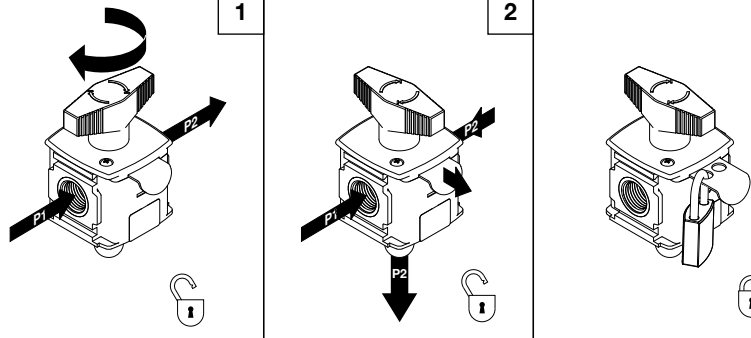


UK Safety Lockout Valves
CN 可锁定安全阀
FR Distributeurs verrouillables

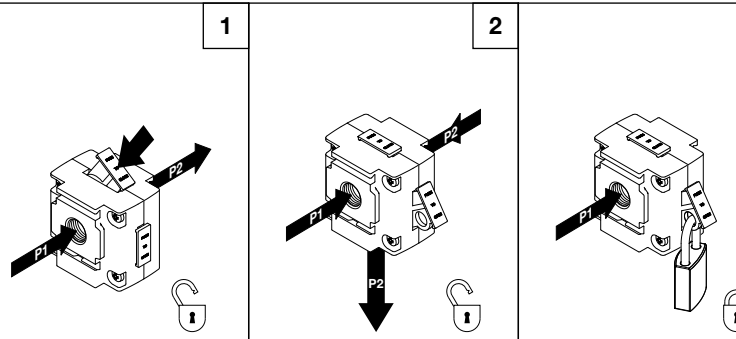
DE Sicherheitsabschaltventile
IT Valvole di bloccaggio di sicurezza
JP ロックアウトバルブ

KR 안전 잠알 배기밸브
ES Válvulas de bloqueo - seguridad
SE Säkerhetsavstängningsventiler

UK Ball Valve
CN 球阀
FR Vanne à boisseau
DE Kugelventil
IT Valvola a sfera
JP ボールバルブ式
KR 볼밸브
ES Válvula de bola
SE Kulventil



UK Slide Valve
CN 截止阀
FR Tiroir
DE Schieberventil
IT Valvola scorrevole
JP スライドバルブ式
KR 슬라이드밸브
ES Válvula de corredera
SE Slidventil



5FR100 Rev. E

Global Air Preparation System

EN130810

EN WARNING

To avoid unpredictable system behaviour that can cause personal injury and proper 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.
- Warning and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

EN WARNING

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EN 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 used where exposed 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 diester 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.

EN Safety Guide

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

EN WARNING

To avoid polycarbonate bowl rupture that can cause personal injury or property damage, do not exceed bowl pressure or temperature ratings. Polycarbonate bowls have a 150 PSIG (10 bar) pressure rating and a maximum temperature rating of 125°F (52°C).

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

CN 警告

为避免不可预测的系统运作而导致人身伤害和财产损失:

- 安装、维修和改动前必须断开电源供应;
- 安装、维修和改动前必须断开电源供应, 释放连接该产品的管路压力;
- 必须在厂商所指定的压力, 温度和其他使用说明书中注明的环境条件下操作使用;
- 在环境温度低于零下时介质必须是无油的;
- 根据使用说明书中厂商推荐的程序保养;
- 必须由气动专业人士来安装, 维护和改动产品;
- 安装、维修、改动后, 气源和电气需要连接, 并测试产品功能及是否有泄露。如果有可听到的泄漏声或操作不确, 不可投入使用;
- 产品上的警示和规范不能被油漆等覆盖。如果标签不清晰, 请联系相关负责人更换标签。

CN 警告

错误或者不正确地选择和用 错误或者不正确地选择和产品信息有可能会致死亡, 人身伤害和财产损失。

这个文件和另外的信息来自公司总部, 它是给分销商补充和授权产品或者系统的选项, 是给用户调查研究用的技术资料。分析你的所有应用, 包括任何一旦 发生错误的后果并在现有的产品目录中阅读相关产品或系统信息。对于您来说 都是非常必要的。由于操作环境和产品或系统的使用是多样性的, 用户通过 自己的分析和测试, 对最终产品和系统选择负有绝对责任, 并确保确保所有产 品的性能, 安全和应用时需要注意的问题都已满足。

这里提到的产品, 包括无限制性, 产品特性, 说明书, 设计, 实用性和 价格可由公司总部及其下属公司在没有通知的情况下改变。

CN 注意

碳酸聚酯水杯是透明坚固的, 是过滤器和油雾器的理想选择。适合一般工业环境应用, 但是不适用于那些阳光直射, 冲击和户外温差大的场合。因为含有大量塑料, 某些化学物质会损坏水杯。碳酸聚酯水杯不能暴露于碳化氢化合物, 酮, 酯和某些酒精。此类水杯不能应用于被防火型液体, 如, 碳酸盐酯和二酯类润滑油的压缩机的气动系统中。

在那些不适合碳酸聚酯水杯的环境中, 推荐使用金属水杯。金属水杯能抵抗大多数溶剂, 但是不能在强酸, 含盐的场所。对于特殊场合请咨询工厂。

碳, 汽油, 甲苯等清洁剂, 这会直接损害塑料。

CN 安全指南

更多完整的推荐应用指导信息, 请见气动样本中的安全指南部分或者可以在 气动部门安全指南网站上下载资料: www.parker.com/safety

CN 警告

为了 避免碳酸聚酯水杯破裂而导致的人身和财产损失, 不能使用超过水杯的 压力和温度范围。碳酸聚酯水杯最高承受 150 PSIG (10bar)压力和最高125°F (52°C)的温度

如需多份涉及这些产品维修/操作指南的使用说明书。请联系当地办事处。

FR MISE EN GARDE

Afin de prévenir tout comportement imprévisible du système pouvant entraîner des accidents et des dommages matériels :

- Débrancher l'alimentation électrique (s'il y a lieu) avant de procéder à l'installation, à l'entretien ou à la transformation.
- Débrancher l'approvisionnement en air et mettre hors pression toutes les conduites d'air de ce produit avant de procéder à l'installation, à l'entretien ou à la transformation.
- Faire fonctionner dans les conditions de pression, de température et autres qui sont indiquées dans ces instructions.
- Si la température ambiante est inférieure au point de congélation, le fluide doit être exempt d'humidité.
- Effectuer l'entretien conformément aux procédures qui sont indiquées dans ces instructions.
- L'installation, l'entretien et la transformation de ces produits doivent être effectués par des personnes familiarisées avec les produits pneumatiques.
- Après l'installation, l'entretien ou la transformation, rétablir l'alimentation électrique ainsi que l'approvisionnement en air (s'il y a lieu) et tester le produit afin de s'assurer qu'il fonctionne bien et qu'il n'y a pas de fuites. Si une fuite s'entend ou si le produit ne fonctionne pas correctement, ne pas le mettre en service.
- Les mises en garde et les indications portées sur le produit ne doivent pas être recouvertes par de la peinture, etc. Si le masquage n'est pas possible, contacter le représentant local pour obtenir des étiquettes de remplacement.
- Les mises en garde et les indications portées sur le produit ne doivent pas être recouvertes par de la peinture, etc. Si le masquage n'est pas possible, contacter le représentant local pour obtenir des étiquettes de remplacement.

FR MISE EN GARDE

LA NON OBSERVATION D'INSTRUCTIONS OU LA SÉLECTION IMPROPRE OU L'USAGE INAPPROPRIÉ DES PRODUITS ET/OU DES SYSTÈMES DÉCRITS AUX PRÉSENTES, OU ARTICLES CONNEXES, PEUVENT ENTRAÎNER LA MORT, DES PRÉJUDICES CORPORELS ET/OU DES DOMMAGES MATÉRIELS.

Le présent document et toute autre information provenant de la Société, de ses filiales et distributeurs agréés se réfèrent à des produits et/ou des systèmes pouvant faire l'objet de tests et de contrôles de la part d'utilisateurs compétents, possédant une expertise technique. Il est important que vous analysiez tous les aspects de votre application, notamment les conséquences d'une défaillance, et étudiez les informations concernant le produit ou les systèmes qui figurent dans le catalogue actuel. Compte tenu de la variété des conditions d'utilisation et des applications inhérentes à ces produits et/ou systèmes, l'utilisateur est, par le biais de ses propres analyses et tests, seul responsable de la sélection finale des produits et/ou systèmes et s'engage à ce que son application réponde à tous les critères relatifs aux performances, à la sécurité et aux mises en garde.

Les produits décrits aux présentes, y compris et sans limitation, les caractéristiques, les spécifications, les conceptions, la disponibilité et les prix, peuvent faire l'objet de modifications par la Société et ses filiales, à tout moment et sans préavis.

FR ATTENTION

Durs et transparents, les bols en polycarbonate sont parfaitement indiqués pour l'utilisation dans les filtres et les lubrificateurs. Ils sont compatibles avec les milieux industriels normaux mais ne doivent pas être placés dans des lieux où ils pourraient être exposés à la lumière directe du soleil, à des chocs ou à des températures situées en-dehors de leur plage d'utilisation nominale. Comme la plupart des plastiques, cette matière peut être endommagée par certains produits chimiques. Les bols en polycarbonate ne doivent pas être exposés aux hydrocarbures chlorés, aux cétones, aux éthers et à certains alcools. Ils ne doivent pas être utilisés dans des systèmes pneumatiques dont les compresseurs sont lubrifiés par des fluides résistants au feu tels que les esters et diesters de phosphate.

Les bols métalliques sont recommandés lorsque le milieu et/ou le fluide sont incompatibles avec les bols en polycarbonate. Les bols métalliques sont résistants à la plupart de ces solvants mais ne doivent pas être utilisés en milieu fortement acide ou basique, ou en atmosphère salée. Si de telles conditions prévalent, adressez-vous au fabricant afin d'obtenir des recommandations spécifiques.

NETTOYER LES BOLS EN POLYCARBONATE UNIQUEMENT À L'EAU ET AU SAVON DOUX ! NE PAS utiliser d'agents nettoyants tels que l'acétone, le benzène, le tétrahlorure de carbone, l'essence, le toluène, etc., qui endommageraient ce plastique.

FR Guide de sécurité

Pour obtenir de plus amples informations sur les directives à appliquer recommandées, prière de vous reporter à la section Guide de sécurité des catalogues de la Pneumatic Division ou de télécharger le Guide de sécurité de la Pneumatic Division sur le site : www.parker.com/safety

FR MISE EN GARDE

Pour éviter que le bol de polycarbonate se rompe et provoque des préjudices corporels ou des dommages matériels, ne pas dépasser les limites maximales de pression et de température, à savoir 150 PSIG (10 bar) et 125 °F (52°C).

DES EXEMPLAIRES DE CES INSTRUCTIONS SONT DISPONIBLES POUR INSERTION DANS LE MATÉRIEL OU LES MANUELS D'ENTRETIEN QUI UTILISENT CES PRODUITS. VEUILLEZ CONTACTER VOTRE REPRÉSENTANT LOCAL.

DE **⚠** **WARNUNG**

Als Schutz vor unvorhersehbarem Systemverhalten, das zu Verletzungen und Sachschäden führen kann, sind folgende Maßnahmen zu ergreifen:

- Vor Einbau, Servicearbeiten oder Umbau gegebenenfalls die Stromversorgung unterbrechen.
- Vor Einbau, Servicearbeiten oder Umbau die Druckluftversorgung unterbrechen und alle an das Produkt angeschlossenen Luftleitungen vom Druck befreien.
- Im Betrieb sind die vom Hersteller angegebenen Druck- und Temperaturbereiche und die übrigen in der Betriebsanleitung aufgeführten Betriebsbedingungen einzuhalten.
- Das Betriebsmedium muss bei Umgebungstemperaturen unter dem Gefrierpunkt absolut trocken sein.
- Servicearbeiten sind gemäß den in diesem Handbuch aufgeführten Vorgehensweisen durchzuführen.
- Einbau, Servicearbeiten und Umbau dieser Produkte dürfen nur von geschulten Mitarbeitern vorgenommen werden, die über gute Kenntnisse beim Einsatz von Pneumatikprodukten verfügen.
- Nach Einbau, Servicearbeiten oder Umbau ist die Strom- und Druckluftversorgung bei Bedarf wieder anzuschließen und das Produkt einer sorgfältigen Dichtigkeits- und Funktionsprüfung zu unterziehen. Wenn eine hörbare Undichtigkeit vorliegt oder das Produkt nicht einwandfrei funktioniert, darf es nicht in Betrieb genommen werden.
- Warnstoffe und technische Angaben auf dem Produkt dürfen nicht durch Farbe oder dgl. vordrückt sein. Wenn sich die Schilder nicht abdecken lassen, hält der Händler vor Ort neue Schilder bereit.

DE **⚠** **WARNUNG**

DURCH DAS VERSAGEN ODER DIE UNSACHGEMASSE AUSWAHL ODER VERWENDUNG DER HIER BESCHRIEBENEN PRODUKTE UND/ODER SYSTEME ODER DAMIT IN VERBINDUNG STEHENDER GERÄTE KANN ES ZU TODESFÄLLEN, VERLETZUNGEN UND SACHSCHÄDIGUNGEN KOMMEN.

Dieses Dokument und andere Informationen der Parker Hannifin Corporation, ihrer Niederlassungen und autorisierten Händler stellen Produkt- und/oder Systementwürfe dar, die durch einen Anwender mit entsprechenden technischen Kenntnissen vor dem Einsatz auf Eignung überprüft werden müssen. Es ist wichtig, dass alle Aspekte der Anwendung analysiert und die produkt- oder systemrelevanten Angaben dieses Produktdatensheets, die produkt- oder systemrelevanten Angaben dieses Produktdatensheets überprüft werden. Aufgrund der Vielfältigkeit von Betriebsbedingungen und Einsatzbereichen dieser Produkte oder Systeme ist der Anwender, in Form von eigenen Analysen und Tests, allein verantwortlich für die endgültige Auswahl des Produkts bzw. Systems. Er muss sicherstellen, dass alle Leistungsmerkmale, Sicherheits- und Warnhinweise für den jeweiligen Einsatzbereich erfüllt sind. Die hier beschriebenen Produkte, einschließlich aller Angaben zu Produktmerkmalen, Spezifikationen, Konstruktionen, Verfügbarkeit und Preisgestaltung, können jederzeit, ohne Ankündigung und uneingeschränkt von der Parker Hannifin Corp. und ihren Niederlassungen geändert werden.

DE **⚠** **BITTE BEACHTEN**

Transparente und robuste Behälter aus Polycarbonat eignen sich bestens für Filter und Schmiergeräte. Sie sind für den Einsatz unter normalen Industriebedingungen vorgesehen, sollten jedoch nicht direkter Sonneneinstrahlung oder Stößen ausgesetzt und nur innerhalb des angegebenen Temperaturbereichs benutzt werden. Wie alle Kunststoffteile können sie durch gewisse Chemikalien beschädigt werden. Behälter aus Polycarbonat sollten weder Chlorkohlenwasserstoffen noch Ketonen, Estern oder gewissen Alkoholen ausgesetzt werden. Sie sollten auch nicht in Druckluftsystemen eingesetzt werden, deren Kompressoren mit feuerfesten Flüssigkeiten wie z.B. Phosphatester oder Di-Ester geschmiert werden. Metallbehälter werden empfohlen, wenn Polycarbonatbehälter aufgrund der Umgebungsbedingungen und der verwendeten Medien nicht verwendet werden dürfen. Metallbehälter widerstehen den meisten dieser Lösungsmittel, sollten jedoch keinen starken Säuren oder Basen ausgesetzt oder in salzhaltigen Umgebungen eingesetzt werden. Setzen Sie sich bei Einsätzen unter diesen Umgebungsbedingungen bitte mit dem Hersteller in Verbindung. ZUR REINIGUNG VON POLYCARBONAT-BEHÄLTERN DÜRFEN AUSSCHLIESSLICH MILDE SEIFENLÖSUNGEN UND WASSER VERWENDET WERDEN! KEINE Reinigungsmittel wie Azeton.

DE **Sicherheitshinweise**

Ausführlichere Informationen über Richtlinien in Bezug auf die empfohlenen Einsatzbereiche siehe Sicherheitshinweise der Kataloge der Pneumatic Division, die hier auch heruntergeladen

DE **⚠** **WARNUNG**

Damit der Polycarbonatbehälter nicht platzt und Verletzungen oder Sachbeschädigungen verursacht, sind die Richtwerte für Behälterdruck und Temperatureinstellung nicht zu überschreiten. Polycarbonatbehälter sind für einen Nenndruck von 10 bar und eine Höchsttemperatur von

DES EXEMPLAIRES DE CES INSTRUCTIONS SONT DISPONIBLES POUR LES MENTIONNÉS DANS LE MANUEL D'UTILISATION. SI VOUS UTILISEZ CES PRODUITS, VEUILLEZ CONTACTER VOTRE REPRÉSENTANT LOCAL.

IT **⚠** **ATTENZIONE**

Per evitare comportamenti imprevedibili del sistema che possono provocare lesioni personali e danni alle cose:

- Scollegare l'alimentazione elettrica (se necessario) prima di installazione, manutenzione o conversione.
- Scollegare l'alimentazione dell'aria e depressurizzare tutte le condutture collegate al prodotto prima di installazione, manutenzione o conversione.
- Utilizzare il prodotto alla pressione, alla temperatura e alle altre condizioni specificate in queste istruzioni.
- Il mezzo deve essere privo di condensa se la temperatura ambiente è inferiore al punto di congelamento.
- Effettuare la manutenzione secondo le procedure specificate in queste istruzioni.
- Installazione, manutenzione e conversione di questi prodotti devono essere effettuate da personale competente relativamente al funzionamento dei prodotti pneumatici.
- Dopo installazione, manutenzione o conversione, ricollegare le alimentazioni dell'aria ed elettrica (se necessario) e verificare che il prodotto funzioni correttamente e non vi siano perdite. In caso di perdita o funzionamento anomalo del prodotto, non utilizzarlo.
- Le avvertenze e le specifiche sul prodotto non devono essere coperte da vernice ecc. Qualora siano illeggibili, contattare il proprio rappresentante locale per le targhette di ricambio.

IT **⚠** **ATTENZIONE**

LA SCELTA OPPURE L'UTILIZZO ERRATO DEI PRODOTTI E/O SISTEMI IVI DESCRITTI OPPURE DEGLI ARTICOLI CORRELATI PUÒ PROVOCARE GRAVI LESIONI PERSONALI, MORTE E DANNI ALLE COSE.

Il presente documento e altre informazioni fornite dall'azienda, relative affiliate e distributori autorizzati propongono opzioni di prodotto e/o sistemi il cui utilizzo deve essere valutato da utenti in possesso delle competenze tecniche necessarie. È importante analizzare ogni aspetto della propria applicazione, comprese le conseguenze in caso di questo, nonché valutare le informazioni relative al prodotto o sistema contenute nel presente catalogo di prodotti. In seguito alla varietà di condizioni di esercizio ed applicazioni per questi prodotti o sistemi, l'utente, con le proprie valutazioni ed i propri test, è l'unico responsabile della scelta finale di prodotti e sistemi nonché di accertarsi che tutti i requisiti di prestazioni, sicurezza e normativi dell'applicazione siano soddisfatti. I prodotti ivi descritti, inclusi ma non limitati a, caratteristiche dei prodotti, specifiche, design, disponibilità e prezzo, sono soggetti a mod-

IT **⚠** **ATTENZIONE**

Le vaschette in policarbonato, trasparenti e robuste, sono ideali per l'uso con filtri e lubrificatori. Sono indicate per l'uso in normali ambienti industriali, ma non devono essere collocate in aree esposte a luce solare diretta, urti o temperature al di fuori del range indicato. Come molte plastiche, alcune sostanze chimiche possono provocare danni. Le vaschette in policarbonato non devono essere esposte a idrocarburi, chetoni, esteri e determinati alcool. Non devono essere utilizzate in impianti pneumatici con compressori lubrificati con fluidi inghigni come esteri e diesteri di fosfat.

Qualora le condizioni ambientali e/o il mezzo non siano compatibili con le vaschette in policarbonato, si raccomanda l'uso di vaschette metalliche. Le vaschette metalliche resistono alla maggior parte di questi solventi, ma non devono essere utilizzate in presenza di acidi o basi forti oppure in ambienti estremamente salini. Consultare la fabbrica per le eventuali raccomandazioni specifiche.

PER LA PULIZIA DELLE VASCHETTE IN POLICARBONATO, UTILIZZARE

IT **Guida alla sicurezza**

Per informazioni più complete sulle linee guida di applicazione e raccomandate, consultare la sezione Guida alla sicurezza dei cataloghi Pneumatic Division o scaricare la guida all'indirizzo:

IT **⚠** **ATTENZIONE**

Per evitare la rottura delle vaschette in policarbonato e conseguenti lesioni personali o danni alle cose, non superare la pressione o la temperatura nominale della vaschetta. Le vaschette in policarbonato hanno una pressione nominale di 150 PSIG (10 bar) e una temperatura massima di 125°F (52°C).

ULTERIORI COPIE DI QUESTE ISTRUZIONI SONO DISPONIBILI A INTEGRAZIONE DEI MANUALI DI USO / MANUTENZIONE PER GLI UTENTI DI QUESTI PRODOTTI. CONTATTARE IL PROPRIO RAPPRESENTANTE LOCALE.

JP **⚠** **警告**

人が障害を負う危険が生じる、また物理的障害が起こりうる予想外のシステム障害を避けるために:

- ・機器の取り付け、取り扱いは交換前に電源を落としてください。
- ・機器の取り付け、取り扱いもしくはは交換前に全ラインの圧縮空気の供給を止め、ライン内の圧縮空気を排出してください。
- ・圧力、使用温度やコネクション等が説明書に記載されている範囲で機器を使用してください。
- ・外気が0度以下の場合、完全に乾燥した空気を供給してください。
- ・説明書の記載通りに機器の操作を行ってください。
- ・機器の取り付け、取り扱い、交換は空気圧機器の十分な知識と経験を持った人が行ってください。
- ・機器の取り付け、取り扱い、交換後に電源、圧縮空気を入れ機器が正しく動作するか、空気漏れがないかを確認してください。もし空気漏れが聞こえる場合や機器が適切に作動しない場合、電源、圧縮空気を止めてください。
- ・商品のラベルに記載された、警告や仕様が必要などによって消えないようにしてください。もしラベルが不十分な場合は、Parkerもしくは当社子会社にラベルを依頼してください。

JP **⚠** **警告**

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JP **⚠** **注意**

透明で頑丈なポリカーボネイト製ポウルはフィルタとルブリケータとの使用が理想です。プラスチックポウルは一般的な工業環境に適していますが、直射日光が当たる環境、強風、強い振動、使用範囲外の温度での使用は避けてください。多くのプラスチックと同じようにいくつかの化学物質はポウルの損傷させます。ポリカーボネイトポウルは塩素化炭化水素、ケトン、エステル、いくつかのアルコール物の環境では使用できません。ポウルにはホスファターゼステルやジュステルタイプの耐火性潤滑油を使用したコンプレッサからの供給エアを使用してください。

メタルポウルは温度、流体などがポリカーボネイト製ポウルでは使用できない場合に使用を奨励します。メタルポウルは大概の溶剤に耐性がありますが、強酸や塩での使用は避けてください。そのような環境がある場合当社までお問い合わせください。

ポリカーボネイトポウルの洗浄には中性石鹸や水を使用してください。アセトン、ベンゼン、炭素四塩化物、ガリウム、トルエン等の洗浄液の使用はしないでください。プラスチック不具合発生の可能性があります。

JP **注意事項**

より詳細な奨励されるアプリケーションの指針は当社カタログの注意事項をご参照ください。もしくは以下から空気圧機器注意事項がダウンロードできます。
www.parker.com/safety

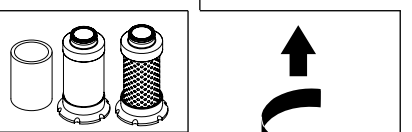
JP **⚠** **警告**

人が障害を負う、また物的損害の可能性があるポリカーボネイトポウルの破損を避ける為に、使用圧力範囲、使用温度範囲以上での使用はしないでください。ポリカーボネイトポウルの最高使用圧力は1MPa、最高使用温度は52°Cです。

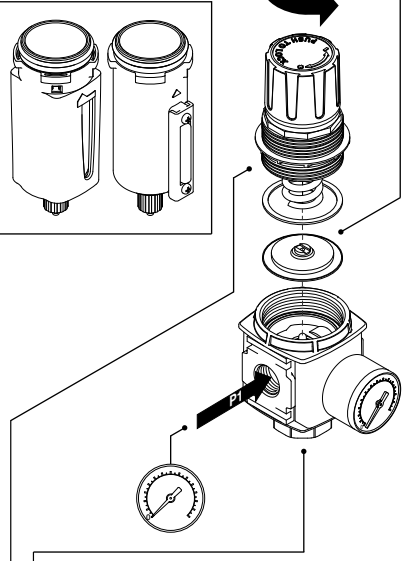
上記以外のメンテナンスマニュアルを含む説明書が必要な場合最寄のParker、そして当社の子会社や正規販売業者に連絡してください。

UK Filter Element Kits		DE Filtersätze		KR 필터 엘리먼트	
CN 滤芯维修包		IT Kit elementi filtranti		ES Juegos de elementos de filtro	
FR Kits élément filtrant		JP ボール/バルブ式		SE Filtrelementsatsjer	
	P31 Mini	P32 Compact	P33 Standard		
UK 5 micron Particle Filter					
CN 5微米颗粒过滤器					
FR 5 µm Filtré à particules					
DE 5 µm Partikelfilter					
IT Filtro antiparticolato					
UK 1 micron Coalescing Filter					
CN 1微米凝析过滤器					
FR 1 µm Filtre coalescent					
DE 1 µm Sinterfilter					
IT Filtro a coalescenza					
UK 0.01 micron Coalescing Filter					
CN 0.01微米凝析过滤器					
FR 0.01 µm Filtre coalescent					
DE 0.01 µm Sinterfilter					
IT Filtro a coalescenza					
UK Adsorber Filter					
CN 吸附式过滤器					
FR Filtre adsorbant					
DE Adsorberfilter					
IT Filtro ad assorbimento					
UK 5 micron Particle Filter					
CN 5微米颗粒过滤器					
FR 5 µm Filtré à particules					
DE 5 µm Partikelfilter					
IT Filtro antiparticolato					
UK 1 micron Coalescing Filter					
CN 1微米凝析过滤器					
FR 1 µm Filtre coalescent					
DE 1 µm Sinterfilter					
IT Filtro a coalescenza					
UK 0.01 micron Coalescing Filter					
CN 0.01微米凝析过滤器					
FR 0.01 µm Filtre coalescent					
DE 0.01 µm Sinterfilter					
IT Filtro a coalescenza					
UK Adsorber Filter					
CN 吸附式过滤器					
FR Filtre adsorbant					
DE Adsorberfilter					
IT Filtro ad assorbimento					

UK Regulator + Filter/Regulator Repair Kits		CN 调节阀+过滤器/调节阀维修包		KR 릴레이터 + 필터/릴레이터 리퍼킷	
FR Kits de réparation Régulateur + Filtre/Régulateur		DE Reparatursätze Regler + Filter/Regler		IT Kit di riparazione regolatore + filtro/regolatore	
JP レギュレータ+フィルタ/レギュレータリペアキット		ES Juegos de reparación de regulador y filtro/regulador		SE Regulator + repsats för filter/regulator	
	P31 Mini	P32 Compact	P33 Standard		
UK Relieving				UK Non-Relieving	
CN Décompression				CN Sans décompression	
FR Omît Entarfing				FR Ohne Entlftungung	
DE Con scarico				DE Senza scarico	
IT Con scarico				IT Senza scarico	
JP Con descarga				JP Sin descarga	
ES Con descarga				ES Sin descarga	
SE Avlastning				SE Ingen avlastning	
	P31 Mini	P32 Compact	P33 Standard		
		P32KA00RB		P31KA00RB	P31KA00RC
		P32KA00RB		P32KA00RB	P32KA00RC
		P33KA00RB		P33KA00RB	P33KA00RC

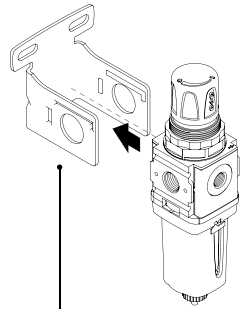


UK Bowl/Drain Kits		DE Behälter-/Entleerungssätze		KR 보울/드레인 키트	
CN 水杯/排水包		IT Kit vaschetta/drenaggio		ES Juegos de recipiente/drenaje	
FR Kits cuve/purge		JP ボウル/ドレンキット		SE Kär/drärningsatsjer	
	P31 Mini	P32 Compact	P33 Standard		
UK Plastic Bowl / Manual Drain					
CN 塑料水杯 / 手动排水					
FR Cuve en plastique / Enveloppe protectrice de cuve					
DE Kunststoffbehälter / Schalenenschutz					
IT Vaschetta in plastica / Protezione vaschetta					
UK Plastic Bowl / Bowl Guard					
CN 塑料水杯 / 水杯保护装置					
FR Cuve en plastique / Enveloppe protectrice de cuve					
DE Kunststoffbehälter / Schalenenschutz					
IT Vaschetta in plastica / Protezione vaschetta					
UK Metal Bowl / Slight Guard					
CN 金属水杯 / 带观测计					
FR Cuve en métal / Visualisation de niveau					
DE Metallbehälter / Schauglas					
IT Vaschetta metallica / Indicatore					
UK Metal Bowl / Slight Guard					
CN 金属水杯 / 带观测计					
FR Cuve en métal / Visualisation de niveau					
DE Metallbehälter / Schauglas					
IT Vaschetta metallica / Indicatore					
UK Plastic Bowl / Bowl Guard					
CN 塑料水杯 / 水杯保护装置					
FR Cuve en plastique / Enveloppe protectrice de cuve					
DE Kunststoffbehälter / Schalenenschutz					
IT Vaschetta in plastica / Protezione vaschetta					
UK Plastic Bowl / Bowl Guard					
CN 塑料水杯 / 水杯保护装置					
FR Cuve en plastique / Enveloppe protectrice de cuve					
DE Kunststoffbehälter / Schalenenschutz					
IT Vaschetta in plastica / Protezione vaschetta					
UK Metal Bowl / without Slight Guard					
CN 金属水杯 / 不带观测计					
FR Cuve en métal / Sans visualisation de niveau					
DE Metallbehälter / Ohne Schauglas					
IT Vaschetta metallica / Senza indicatore					
UK Metal Bowl / without Slight Gauge					
CN 金属水杯 / 不带观测计					
FR Cuve en métal / Sans visualisation de niveau					
DE Metallbehälter / Ohne Schauglas					
IT Vaschetta metallica / Senza indicatore					
UK Auto Drain					
CN 自动排水					
FR Purge automatique					
DE Automatische Entleerung					
IT Drenaggio automatico					
JP オートドレン					
UK Plastic Bowl / Bowl Guard					
CN 塑料水杯 / 水杯保护装置					
FR Cuve en plastique / Enveloppe protectrice de cuve					
DE Kunststoffbehälter / Schalenenschutz					
IT Vaschetta in plastica / Protezione vaschetta					
UK Metal Bowl / without Slight Gauge					
CN 金属水杯 / 不带观测计					
FR Cuve en métal / Sans visualisation de niveau					
DE Metallbehälter / Ohne Schauglas					
IT Vaschetta metallica / Senza indicatore					
UK Auto Drain					
CN 自动排水					
FR Purge automatique					
DE Automatische Entleerung					
IT Drenaggio automatico					
JP オートドレン					



UK Torque Values		JP 奨励トルク	
CN 扭矩值		KR 조임 토크	
FR Couples		ES Valores del par de torsión	
DE Drehmomentwerte		SE Åtdragningsmoment	
	P31 Mini	P32 Compact	P33 Standard
UK Bottom Plug			
CN 底部堵头			
FR Bouchon de fond			
DE Bodenstopfen			

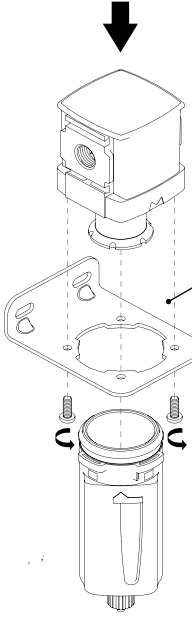
- UK** Individual Product Brackets **JP** 単体用ブラケット
CN 单个产品支架 **KR** 유니트 개별 취부 브라켓
FR Éléments de fixation pour produits isolés **ES** Sujeciones producto individual
IT Staffe separate **SE** Separata klammer
DE Spezielle Produkthalterungen



- P31 Mini**
UK Mounting Bracket
CN 安装支架
FR Console
DE Einbauhalterung
IT Staffa di montaggio
JP Cブラケット
KR C형 취부 브라켓
ES Sujeción de montaje
SE Monteringskonsol
P31KA00MW

- UK** L-Bracket
CN 角架
FR Equerre
DE Winkelhalterung
IT Staffa angolare
JP Lブラケット
KR L형 취부 브라켓
ES Sujeción angularada
SE Vinkelklamma

P32 Compact	P32KA00ML
P33 Standard	P33KA00ML



- UK** L-Bracket
CN 角架
FR Equerre
DE Winkelhalterung
IT Staffa angolare
JP Lブラケット
KR L형 취부 브라켓
ES Sujeción angularada
SE Vinkelklamma

P32 Compact	P32KA00ML	3.5 Nm (31 lbf-in)
P33 Standard	P33KA00ML	3.7 Nm (33 lbf-in)

P31 Mini

UK Body Connector **JP** 포트블록
CN 主体接头 **KR** 바디 컨넥터
FR Élément de liaison **ES** Conector de cuerpo
DE Gehäusestecker **SE** Husanslutning
IT Connettore del corpo

P31KA00CB

UK Port Connector
CN 接口接头
FR Raccord
DE Anschluss-Stutzen
IT Connettore per porta
JP 포트블록
KR 포트블럭
ES Conectores de bocas
SE Anslutningsport

P31KA00MT

0.9 - 1.4 Nm (8-12 lbf-in)

UK Torque **JP** 토크
CN 扭矩 **KR** 토르크
FR Couple **ES** Par
DE Drehmoment **SE** Moment
IT Coppia

P32 Compact + P33 Standard

UK Body Connector + Wall Mounting Bracket
CN 主体接头 + 墙壁安装支架
FR Élément de liaison + Équerre de fixation murale
DE Gehäusestecker und Wandhalterung
IT Connettore del corpo + staffa di montaggio a muro
JP ボディコネクタ+Tブラケット
KR 바디 컨넥터 + 취부 브라켓
ES Conector de cuerpo + Sujeción de muro
SE Husanslutning + väggfäste

P32 Compact **P32KA00MT**
P33 Standard **P32KA00MT**

UK Port Connector
CN 接口接头
FR Raccord
DE Anschluss-Stutzen
IT Connettore per porta
JP 포트블록
KR 포트블럭
ES Conectores de bocas
SE Anslutningsport

P32 Compact **P32KA00CB**
P33 Standard **P32KA00CB**

2.2 - 2.4 Nm (19-21 lbf-in)

UK Torque **JP** 토크
CN 扭矩 **KR** 토르크
FR Couple **ES** Par
DE Drehmoment **SE** Moment
IT Coppia

- UK** Regulator + Filter/Regulator Angle Bracket
CN 单个产品支架
FR Equerre pour Régulateur + Filtre/Régulateur
DE Winkelhalterung für Regler + Filter/Regler
IT Staffa angolare per regolatore + filtro/regolatore
JP 単体用ブラケット
KR 유니트 개별 취부 브라켓
ES Sujeción angularada Regulator + Filtro/Regulator
SE Regulator + vinkelkramma för filter/regulator

- UK** Panel Mounting Ring
CN 面板安装螺母
FR Écrou pour montage sur panneau
DE Schalttafel-Schraubring
IT Anello di montaggio su pannello
JP パネルマウントリング
KR 판넬 마운팅 너트
ES Aro de montaje en panel
SE Ring för panelmontering

	UK Plastic Nut CN 塑料螺母 FR Écrou en plastique DE Kunststoffmutter IT Dado in plastica JP プラスチックナット KR 플라스틱 너트 ES Tuerca plástica SE Plastmutter	UK Metal Nut CN 金属螺母 FR Écrou métallique DE Metallmutter IT Dado in metallo JP アルミニウムナット KR 네탈 너트 ES Tuerca metálica SE Metallmutter
P31 Mini	P31KA00MP	P31KA00MM
P32 Compact	P32KA00MP	P32KA00MM
P33 Standard	P33KA00MP	P33KA00MM

2.2 - 2.4 Nm (19-21 lbf-in)

UK Torque **JP** 토크
CN 扭矩 **KR** 토르크
FR Couple **ES** Par
DE Drehmoment **SE** Moment
IT Coppia

UK Manifold Block
CN 分气块
FR Bloc d'îlots
DE Sammelsystemeiste
IT Blocco manifold
JP マニホールドブロック
KR 매니폴드 블록
ES Bloque de manifold
SE Anslutningsblock

P32 Compact **P32KA00ML**
P33 Standard **P32KA00ML**

UK Body Connector + Wall Mounting Bracket
CN 主体接头 + 墙壁安装支架
FR Élément de liaison + Équerre de fixation murale
DE Gehäusestecker und Wandhalterung
IT Connettore del corpo + staffa di montaggio a muro
JP ボディコネクタ+Tブラケット
KR 바디 컨넥터 + 취부 브라켓
ES Conector de cuerpo + Sujeción de muro
SE Husanslutning + väggfäste

P32 Compact **P32KA00MT**
P33 Standard **P32KA00MT**

2.2 - 2.4 Nm (19-21 lbf-in)

UK Torque **JP** 토크
CN 扭矩 **KR** 토르크
FR Couple **ES** Par
DE Drehmoment **SE** Moment
IT Coppia

UK Port Connector
CN 接口接头
FR Raccord
DE Anschluss-Stutzen
IT Connettore per porta
JP 포트블록
KR 포트블럭
ES Conectores de bocas
SE Anslutningsport

P32 Compact **P32KA00CB**
P33 Standard **P32KA00CB**

UK Body Connector
CN 主体接头
FR Élément de liaison
DE Gehäusestecker
IT Connettore del corpo
JP 포트블록
KR 바디 컨넥터
ES Conector de cuerpo
SE Husanslutning

P32 Compact **P32KA00CB**
P33 Standard **P32KA00CB**

2.2 - 2.4 Nm (19-21 lbf-in)

UK Torque **JP** 토크
CN 扭矩 **KR** 토르크
FR Couple **ES** Par
DE Drehmoment **SE** Moment
IT Coppia

UK L-Bracket
CN 角架
FR Equerre
DE Winkelhalterung
IT Staffa angolare
JP Lブラケット
KR L형 취부 브라켓
ES Sujeción angularada
SE Vinkelklamma

P32 Compact **P32KA00ML**
P33 Standard **P32KA00ML**

UK Angle Bracket
CN 角架
FR Equerre
DE Winkelhalterung
IT Staffa angolare
JP 앵글브라켓
KR L형 취부 브라켓
ES Sujeción angularada
SE Vinkelklamma

P31 Mini **P31KA00MR**
P32 Compact **P32KA00MR**
P33 Standard **P33KA00MR**

⚠ 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.wattsfluidair.com

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.

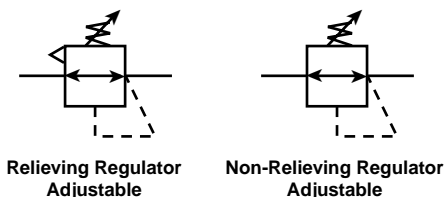
Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	1034	150	10.3

Ambient Temperature Range:

4°C to 52°C
 (40°F to 125°F)

Symbols



Installation

Before installing, blow out pipe line to remove all foreign matter. This unit has DRYSEAL pipe threads; use pipe compound or tape sparingly to male threads only. Install regulator in pipe line so that water will flow in direction of arrow stamped on body, install as near as possible to equipment serviced.

⚠ CAUTION: DO NOT OVERTIGHTEN FITTINGS.
60 lbs-in (6.8Nm) Maximum - R45 & R46
40 lbs-in (4.5Nm) Maximum - R24 & R25

Reduced Pressure Adjustment

To adjust reduced pressure settings, pull knob out and turn knob clockwise to increase pressure setting and counter-clockwise to lower setting. Push knob in to lock adjustment. For best adjustment, set pressure on the rise by turning knob clockwise. With relieving type regulators (air use only), the reduced pressure follows adjustment of the screw. With non-relieving regulators, adjustment for lower reduced pressure will not be obtained until the reduced pressure system is "bled-off", or until air flow (or water flow) starts.

Maintenance – Cleaning

Note: To clean, it is not necessary to remove regulator from line. Refer to drawing as guide in reassembly. If the supply is kept the regulator should provide long periods of uninterrupted service. Erratic regulator operation or loss of regulation is most always due to dirt in the poppet area. To clean, shut off air line pressure and disassemble the regulator. Refer to drawing as a guide to disassembly and subsequent reassembly. Clean parts with mild soap and water or denatured alcohol and blow out body with compressed air. When reassembling, make sure the seat is firmly in place. For R24, R25, tighten spring cage slightly more than hand tight (60 - 70 inch pounds torque). For R45 and R46, tighten spring cage to 150 inch pounds torque.

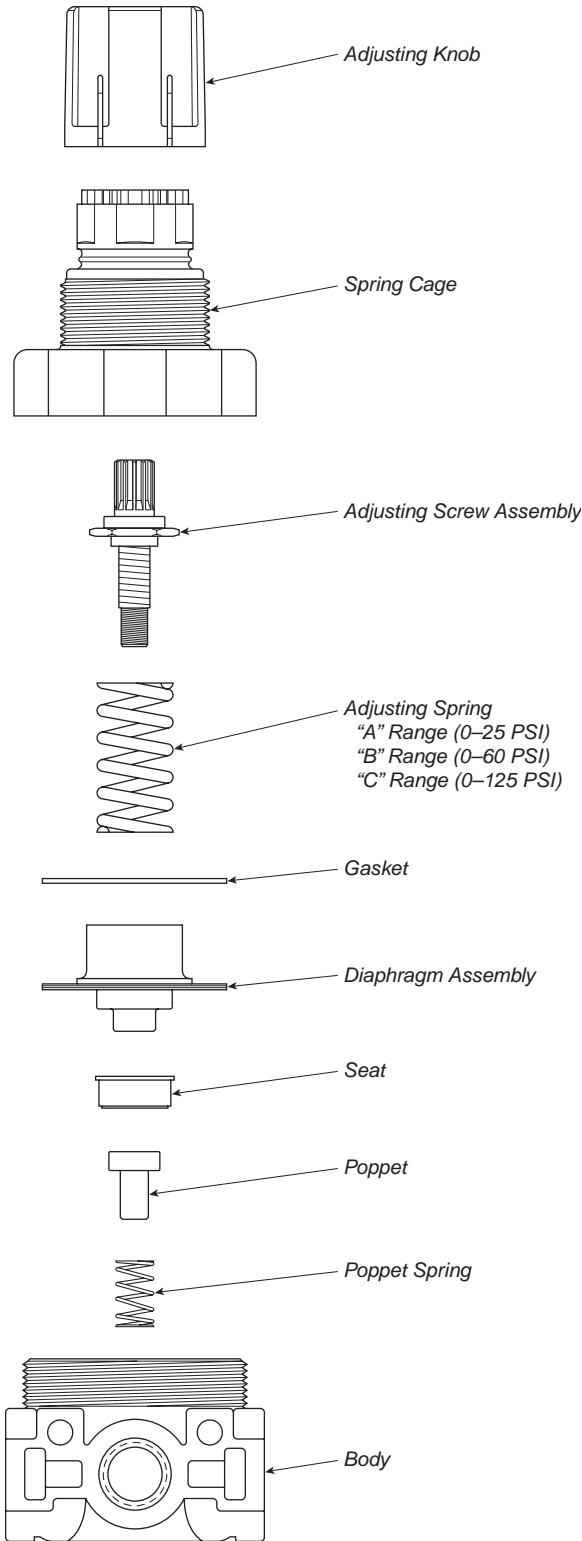
⚠ WARNING

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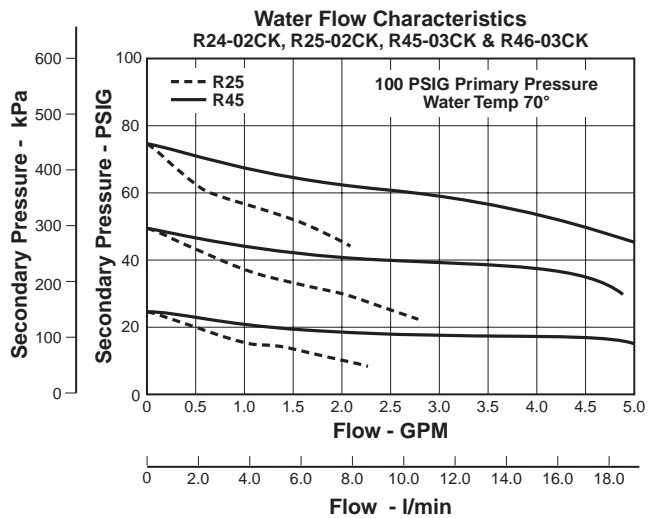
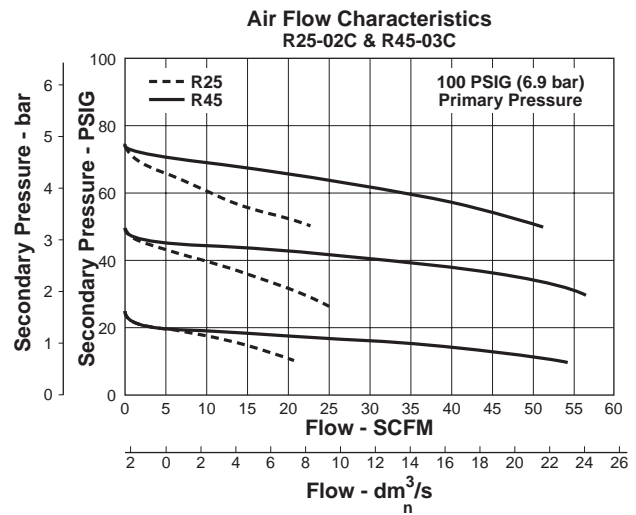


Service Kits / Parts Available

Description	R24	R25	R45	R46
Non-Relieving Repair Kit	RKR24KY	RKR25KY	RKR45KY	RKR46KY
Relieving Repair Kit	N/A	RKR25Y	RKR45Y	N/A
Spring Cage Repair Kit	CKR366Y	CKR364Y	CKR45Y	CKR45Y
Adjusting Knob	R35-0545P			

Accessories

Panel Mount Bracket and Nut	SA161X57
Panel Mount Nut	R05X51



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- 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.

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Introduction

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Application Limits

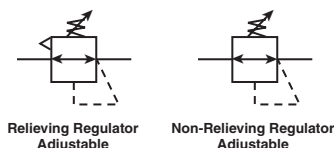
These products are intended for use in general purpose compressed media systems only.

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

- "A" Range = 1 – 25 PSI (1/4", 3/8", 1/2" Only)
- "B" Range = 2 – 60 PSI (1/4", 3/8", 1/2" Only)
- "C" Range = 2 – 125 PSI (ALL)
- "D" 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.**

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⚠ 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.

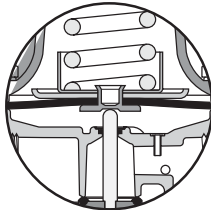
Note: After servicing unit, turn on air supply and adjust regulator to the desired downstream pressure. Check unit for leaks. If leakage occurs, do not operate - conduct repairs and retest.

A. Servicing the Bonnet and Diaphragm Assembly

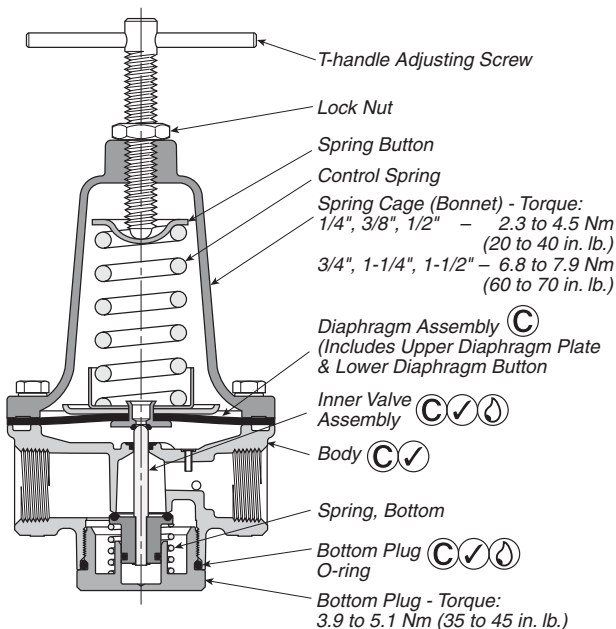
- Turn the T-handle counterclockwise until the compression is released from the Pressure Control Spring.
- Remove Bonnet Mounting Screws, Bonnet Assembly, Pressure Control Spring and Spring Button. Remove Diaphragm Assembly. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. 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.



R119 Regulator – Non-Relieving



R119 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.

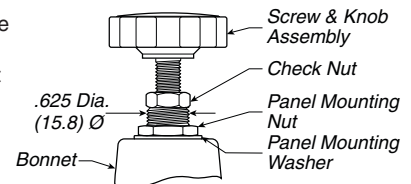
Service Kits Available

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	SA15Y57	1/4", 3/8"
	18A57	1/2"
	18B57	3/4" thru 1-1/2"
Panel Mount Conversion Kit	4202	1/4", 3/8"
	4204	1/2"
Knob & Hardware Only	PK16Y	1/4", 3/8", 1/2"
Regulator Repair Kit* (Relieving)	RK119Y	1/4", 3/8"
	RK119A	1/2"
	RK119A250	1/2" ("D" Range)
	RK119B	3/4", 1"
	RK119D	1-1/4", 1-1/2"
Regulator Repair Kit* (Non-Relieving)	RK118Y	1/4", 3/8"
	RK118A	1/2"
	RK118A250	1/2" ("D" Range)
	RK118B	3/4", 1"
	RK118D	1-1/4", 1-1/2"
Spring Cage Kit	RKC119Y	1/4", 3/8"
T-handle Kits	TK119A	1/2"
	TK119B	3/4" thru 1-1/2"
Check Valve Assembly for Reverse Flow Option	SAN263Y116-2	1/4", 3/8", 1/2", 3/4" thru 1-1/2"

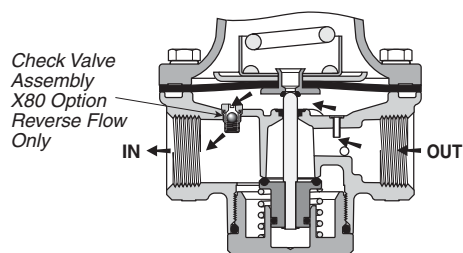
Accessories

Gauges	Pressure Range	Part Number
	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

Kits 4202 & 4204 include Bonnet. For Knob & Hardware only, order Kit Number PK16Y



R119 Regulator with Panel Mount Conversion Kit



R119 Regulator with X80 Option Reverse Flow Feature

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- 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.

Introduction

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Application Limits

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Operating Pressure:

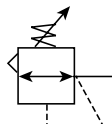
	kPa	PSIG	bar
Maximum Inlet Pressure	2068	300	21.0

Ambient Temperature Range: 4°C to 49°C
 (40°F to 120°F)

 **WARNING**

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

ANSI Symbols



Installation

Installation of the R119-J requires the use of an additional pilot regulator to control the reduced pressure output of the R119-J unit. A typical installation is shown on reverse side, where a Type R119, R10 or R384 regulator is used to furnish the pilot operating supply pressure. With the flexibility provided by this typical installation, the R119-J regulator may be used in a remote and inaccessible location while the pilot regulator can be placed in a convenient location to control operation of the R119-J regulator.

Either a rigid pipe or flexible tubing may be utilized to connect the R119-J unit to the pilot regulator.

Before installing, blow out pipe line to remove scale and other foreign matter. This unit has DRYSEAL pipe threads. Use pipe compound or tape sparingly to male threads only. Install regulator in pipe line so that air will flow from IN to OUT. Install as near as possible to equipment being supplied.

Connections R and L are normally for gauge use, but may be used for outlet purposes in certain applications. To ensure trouble-free performance, a filter (Type F602) should be installed upstream of the regulator.

Adjustment

Since the reduced or regulated pressure is controlled by the pilot regulator, an increase in pilot pressure into the R119-J unit will produce a corresponding increase in the regulated pressure from the R119-J regulator. All R119-J series regulators (excluding models with X71 option) are of the constant bleed design. The system pressure is internally "bled-off" permitting adjustment for lower reduced pressure settings without the necessity of waiting for the flow to start.

NOTE: A small internal constant bleed device permits accurate fine point setting capability. This constant air bleed may be audible and is a perfectly normal characteristic of the regulator.

Maintenance

If the main supply or pilot air supply are kept clean, the regulator should provide long periods of uninterrupted service. Erratic regulator operation, or loss of regulation, is most always due to dirt accumulating in the disc area. To remedy, clean the regulator as outlined below.

Cleaning

Depressurize, remove bottom plug, spring and disc. Clean parts with alcohol, wipe off seat and blow out body with compressed air. Reassemble parts as a unit and screw into regulator (disc bottom O-ring must be relubed prior to assembly). Before tightening bottom plug, make sure disc is in center hole in body.

See reverse side for Service Kits / Parts Available.

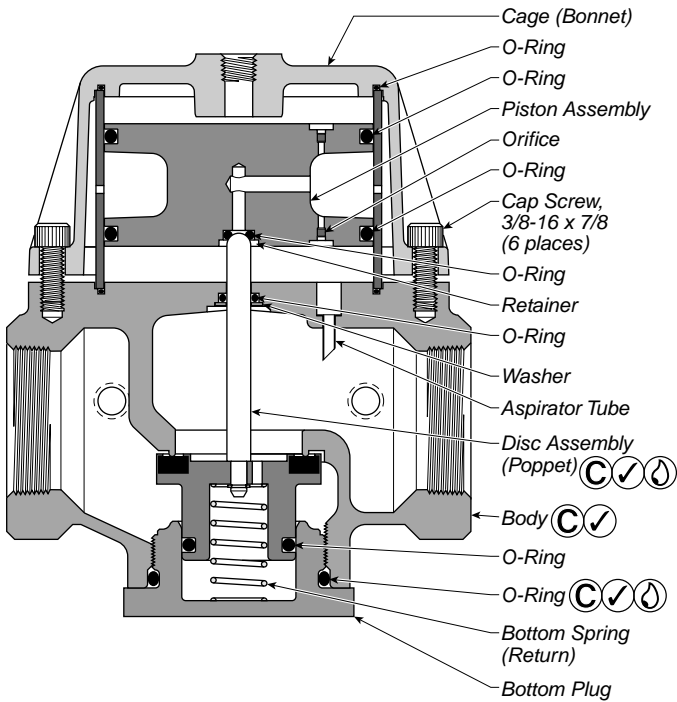
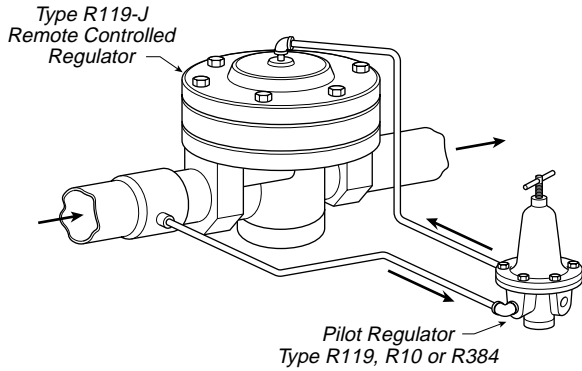
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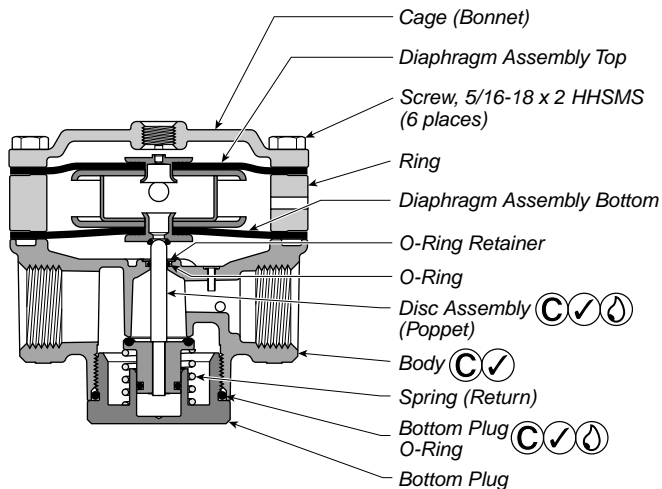
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- Ⓓ Lightly grease with provided lubricant.
- ✓ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
- Ⓒ Clean with lint-free cloth.



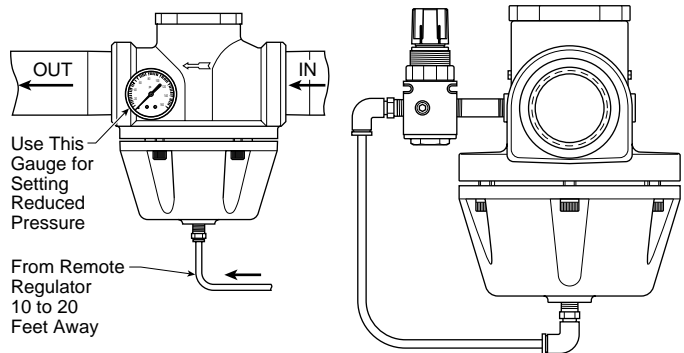
Service Kits / Parts Available

Description	Kit Number	Regulator Size
Regulator Repair Kit (Relieving) Includes: Diaphragm Assembly Top, Diaphragm Assembly Bottom, Disc Assembly, Bottom Plug Gasket	RK119X20Y RK119X20A RK119X20B RK119X20D	1/4", 3/8" 1/2" 3/4", 1" 1-1/4", 1-1/2"
Regulator Repair Kit (Non-Relieving) Includes: Diaphragm Assembly Top, Diaphragm Assembly Bottom, Disc Assembly, Bottom Plug Gasket	RK118X20Y RK118X20A RK118X20B RK118X20D	1/4", 3/8" 1/2" 3/4", 1" 1-1/4", 1-1/2"
2-1/2" Regulator Repair Kit Includes: Piston O-Rings, Cylinder O-Rings, Disc Assembly, Strainer, Bottom Plug Gasket	RK119G	2-1/2"

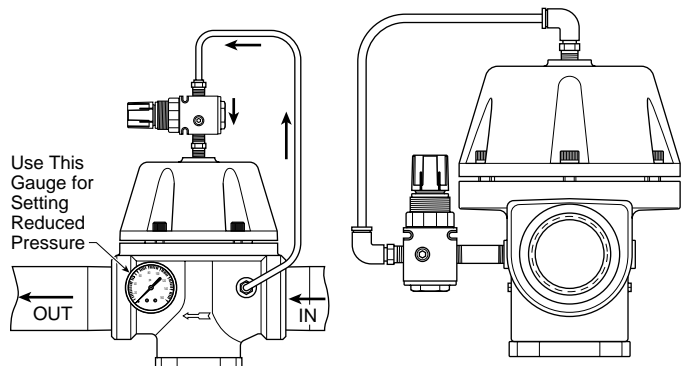
Accessories

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

Suggested Installation or Mounting for the 2" and 2-1/2" R119-16 and 20J



1. The top two are the best way of mounting for all applications.
2. For best results at low pressure, mount inverted as shown above.
3. Use a precision regulator, R216, R230, or R210 for low pressure.

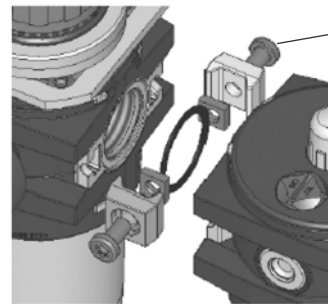


Fixation - Mounting - Befestigung - Fijacion - Fissaggio



- UK** Disconnect air & electrical supplies before attempting repair or maintenance See ISO4414 for safety requirements covering the installation and use of pneumatic equipment.
- FR** Débrancher les connexions pneumatiques et électriques avant réparation ou maintenance. Voir ISO4414 pour les règles de sécurité des installations et utilisation des équipements pneumatiques.
- DE** Bei Reparatur - oder Wartungsarbeiten sind alle pneumatischen und elektrischen Versorgungsleitungen zuvor vom Zylinder zu trennen. Siehe ISO4414 bzw. DIN 24 558 bezüglich Sicherheits-Anforderungen für den Bereich Installation und Gebrauch von Pneumatik-Komponenten.
- SE** Koppla ifrån luft och elektriska anslutningar innan reparation- eller underhållsarbeten påbörjas. Se ISO4414 för säkerhetsbestämmeiser täckande installation och användande av pneumatisk utrustning.
- ES** Desconectar las conexiones neumáticas y eléctricas antes de efectuar cualquier reparación o mantenimiento. Ver ISO4414 para reglas de seguridad de las instalaciones y utilización de equipos neumáticos.
- IT** Prima di eseguire interventi di manutenzione verificare che sia l'alimentazione elettrica che pneumatica siano disattivate. Attenersi alla normativa ISO4414 che regola l'installazione e l'uso di componenti pneumatici.

Coupling Kit
Kupplungssatz



P3YKA00CB

Association - Combination - Verbindung - Asociacion - Assemblaggio

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Réglage - Adjustment - Steuerung - Regulacion - Regolazione

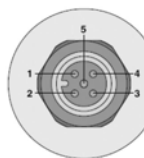
Service kits

Diaphragm kit - relieving type = **P3YKA00RR**

Diaphragm kit - non-relieving type = **P3YKA00RN**

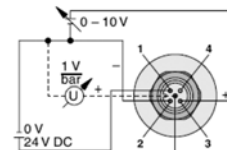


Connector M12 x 1



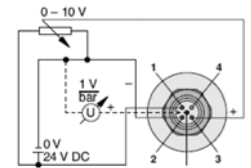
- Pin 1:** Power supply Plus +24 V DC ± 10% 0.15 A Residual ripple 10%
- Pin 2:** Power supply 0 V Reference and mass capacity for set value and actual value
- Pin 3:** Set value output 0-10 V
- Pin 4:** 0 V target signal (connected on board with pin 2 as standard)
- Pin 5:** Analog actual value output 0-10 V Tolerance ± 0.15 V

Analog voltage

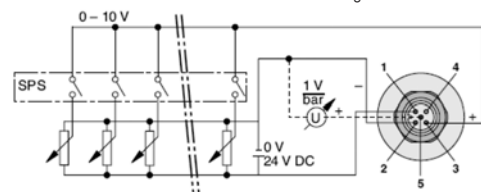


PLC in connection with several potentiometers

With a single potentiometer

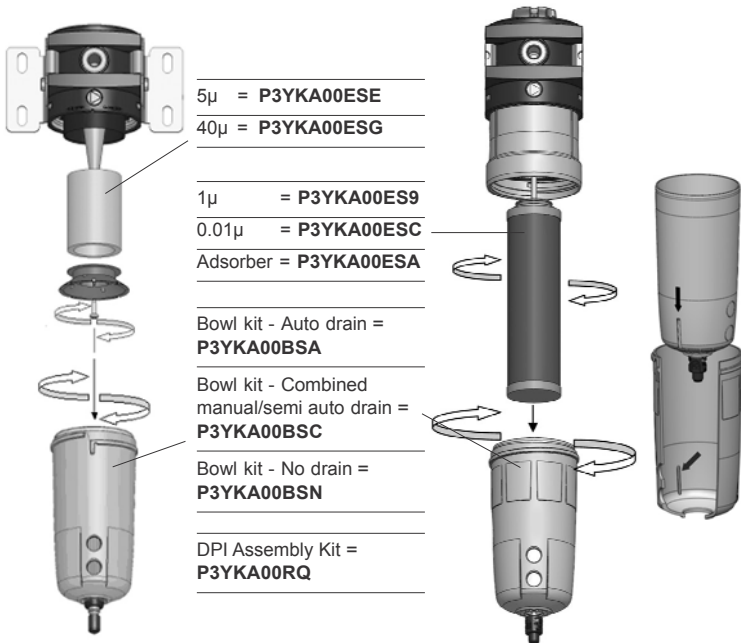


The resistance of the potentiometer should range between 500 Ω and 100 Ω

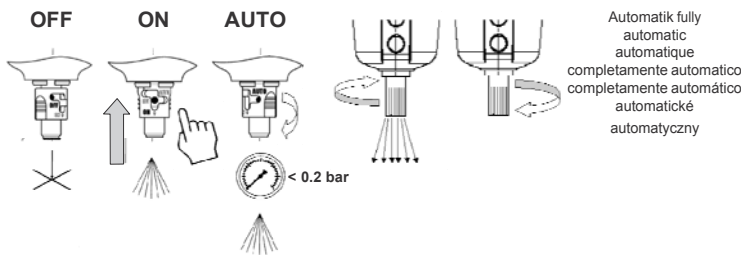


The total resistance of the potentiometer series should not be less than 500 Ω

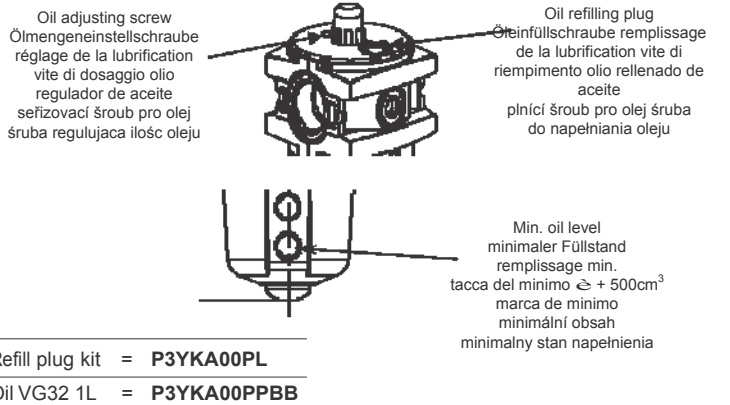
Filter Maintenance - Maintenance du filtre - Wartung - Mantenimiento - Manutenzione



Condensate drainage / Purge / Kondensatentleerung / Svuotamento condensati / Vaciado del condensado / odpouštění kondenzátu / spust kondensatu



Lubricator Adjustment - Réglage du lubrificateur - Steuerung Regulacion - Regolazione



Recommended Lubricants / Lubrifiants recommandés / Empfohlene Ölorten / Lubrificantii consigliati / Lubrificantes recomendados / Rekommenderade oljor för dimsmörjare

Lubrication of airlines

Oil Company	ISO Grade	Grade	ISO Grade	Grade
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Shell	Cassida Fluid HF*	32		
Klüberoil	4UH1*	32		

* For food industry applications : approved oil USDA-H1
 Do not use oils with additives, compounds oils containing solvents, graphite, detergents.
 The use of synthetic oils and antifreeze with a Glycol concentration of 100% can be used.

Combined Soft Start & Dump Valve / Soft Start Valve / Vannes de mise en pression progressive et de purge / Sanftanlauf + Abschalt-Ventile / Mjukstartventiler / Válvulas de arranque progresivo / Valvole Avviamento Progressivo

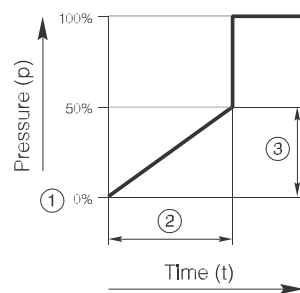
The allen key adjusts flow through the valve until the set point is reached, after which full pressure is achieved.

Le débit est réglable par la clé Allen, jusqu'à la valeur consigne qui déclenche le plein passage

Mjukstartsflödet kan justeras med insexnyckel. Vid uppnått omställningstryck öppnar sedan ventilen för fullt flöde.

Utilizar la Llave Allen para regular el caudal de la válvula hasta lograr la presión tarada - de esta forma se proporciona el flujo máximo de aire.

La chiave Allen regola il flusso attraverso la valvola fino al raggiungimento del valore impostato, quindi viene inserita la pressione totale.

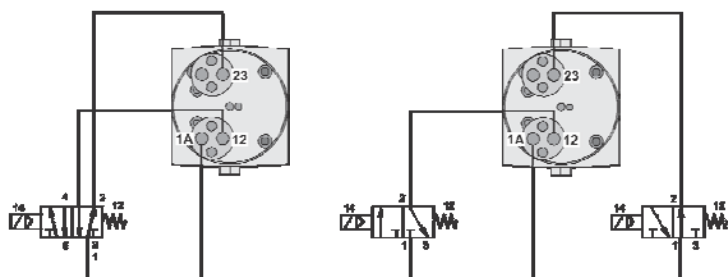


Soft start is 50% pressure dependant on P1

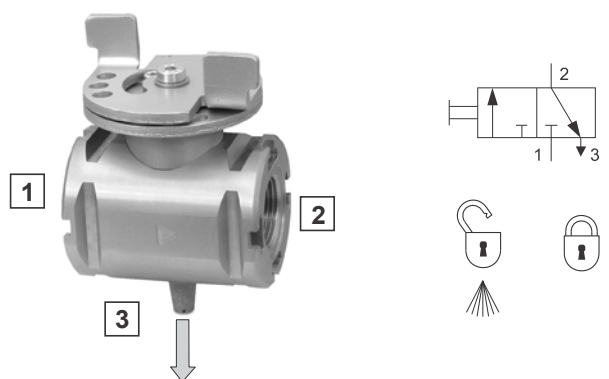
- Start signal
Démarrage
Start-Signal
Startsignal
Señal de arranque
Segnale di start
- Switching time delay
Signal temporisé
Schaltzeit-Verzögerung
Omställningstid
Tiempo de arranque
Ritardo commutazione
- Gradual pressure build up
Mise en pression progressive
Allmählicher Druckaufbau
Uppbyggnadstryck
Aumento gradual de la presión
Incremento graduale della pressione
- Operating pressure $p^2 (=p^1)$
Pression de fonctionnement $p^2 (=p^1)$
Betriebsdruck $p^2 (=p^1)$
Arbetsstryck $p^2 (=p^1)$
Presión de funcionamiento $p^2 (=p^1)$
Pressione di esercizio $p^2 (=p^1)$

Combined start/stop function

Combined start/stop function with acknowledgement



Ball Valve





Pneumatic Division
Richland, Michigan 49083
269-629-5000

PDNSG-1

Pneumatic Division Safety Guide

ISSUED: August 1, 2006

Supersedes: June 1, 2006

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 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 Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker 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 Parker 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 Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.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, ketones, 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.

Pneumatic Division Safety Guide

- 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:** Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.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 4.10.
- 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 Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.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.