<table>
<thead>
<tr>
<th>Bulletin Number</th>
<th>Bulletin Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3F200</td>
<td>Rev. 1</td>
</tr>
<tr>
<td>02F</td>
<td>Miniature In-line Filter</td>
</tr>
<tr>
<td>2F101H</td>
<td>Rev. 14</td>
</tr>
<tr>
<td>05F</td>
<td>Economy, Installation &amp; Service</td>
</tr>
<tr>
<td>2F101H</td>
<td>Rev. 14</td>
</tr>
<tr>
<td>06F</td>
<td>“B&amp;C” Compact, Installation &amp; Service</td>
</tr>
<tr>
<td>1F701B</td>
<td>——</td>
</tr>
<tr>
<td>06F / 07F</td>
<td>Filter with Adsorber Element, Installation &amp; Service</td>
</tr>
<tr>
<td>2F101H</td>
<td>Rev. 14</td>
</tr>
<tr>
<td>07F</td>
<td>“C” Standard, Installation &amp; Service</td>
</tr>
<tr>
<td>1F501D</td>
<td>Rev. 2</td>
</tr>
<tr>
<td>08F</td>
<td>Elements</td>
</tr>
<tr>
<td>1F800C</td>
<td>Rev. 6</td>
</tr>
<tr>
<td>09F</td>
<td>“B” Hi-Flow, Installation &amp; Service</td>
</tr>
<tr>
<td>1F501D</td>
<td>Rev. 2</td>
</tr>
<tr>
<td>14F</td>
<td>Miniature, 40 Micron Element</td>
</tr>
<tr>
<td>1M301</td>
<td>Rev. 4</td>
</tr>
<tr>
<td>14F</td>
<td>Miniature, Installation &amp; Service</td>
</tr>
<tr>
<td>1M105C</td>
<td>Rev. 1</td>
</tr>
<tr>
<td>8AF</td>
<td>Miniature, Installation &amp; Service</td>
</tr>
<tr>
<td>2F400</td>
<td>Rev. 1</td>
</tr>
<tr>
<td>35F and 43F</td>
<td>Large Ported, Installation &amp; Service</td>
</tr>
<tr>
<td>1F201F</td>
<td>Rev. 8</td>
</tr>
<tr>
<td>Auto Drain</td>
<td>Installation</td>
</tr>
<tr>
<td>1FL101H</td>
<td>Rev. 9</td>
</tr>
<tr>
<td>Bowl, Sight</td>
<td>Drain, Service</td>
</tr>
<tr>
<td>1F301C</td>
<td>Rev. 4</td>
</tr>
<tr>
<td>Drip Leg Drain</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>2F102C</td>
<td>Rev. 4</td>
</tr>
<tr>
<td>Electronic DPI</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>IS-F602</td>
<td>Rev. 3</td>
</tr>
<tr>
<td>F602 Hi-Flow</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>5FRL100</td>
<td>Rev. 5</td>
</tr>
<tr>
<td>Global P3 Air</td>
<td>Preparation Systems</td>
</tr>
<tr>
<td>P3Y-INC</td>
<td>Rev. 3</td>
</tr>
<tr>
<td>Global P3Y Hi-Flow</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>1FL301</td>
<td>Rev. 2</td>
</tr>
<tr>
<td>Mini Modular</td>
<td>Bowl Kits</td>
</tr>
<tr>
<td>2F300E</td>
<td>Rev. 9</td>
</tr>
<tr>
<td>P3N Hi-Flow</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>3F101</td>
<td>Rev. 1</td>
</tr>
<tr>
<td>PF602 Hi-Flow</td>
<td>Installation &amp; Service</td>
</tr>
<tr>
<td>1F107B</td>
<td>——</td>
</tr>
<tr>
<td>Prep-Air I</td>
<td>Auto Drain Installation &amp; Service</td>
</tr>
<tr>
<td>1F105C</td>
<td>Rev. 1</td>
</tr>
<tr>
<td>Prep-Air I</td>
<td>Filter Installation &amp; Service</td>
</tr>
<tr>
<td>Safety Guide</td>
<td>——</td>
</tr>
<tr>
<td>PDN Safety Guide</td>
<td></td>
</tr>
</tbody>
</table>

Visit www.pdnplu.com for additional instruction sheets.
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 Range: kPa PSIG bar

<table>
<thead>
<tr>
<th></th>
<th>PLASTIC BOWL</th>
<th>METAL BOWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>w/ Manual Drain</td>
<td>Minimum</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>1034</td>
</tr>
<tr>
<td>w/ Internal Auto Drain</td>
<td>Minimum</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>1034</td>
</tr>
<tr>
<td>w/ External Auto Drain</td>
<td>Minimum</td>
<td>345</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>1034</td>
</tr>
</tbody>
</table>

Maximum Recommended Pressure Drop: 10 PSIG (Element should be cleaned)

Operating Temperature Range:

Filters w/ Plastic Bowls
-29°C * to 49°C (-20°F to 120°F)

Filters w/ Metal Bowls
Manual Drains -29°C * to 74°C (-20°F to 165°F)
Automatic Drains -29°C * to 49°C (-20°F to 120°F)

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

Installation
1. Filter 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. Also new pipe or hose should be installed between the filter and equipment being protected.

2. The upstream pipe work must be clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flows from "IN" to "OUT" as marked on the filter.

5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump ("quiet zone") at the bottom of the bowl.

6. Verify that lock ring is installed properly. If it is not, install lock ring and turn clockwise until it clicks into place. (See Bowl Replacement for more details.)

ANSI Symbols

Operation
First Stage Filtration: Air enters at inlet port and flows through deflector (G) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (H) by the centrifugal action of the swirling air. They are then carried down the bowl by the force of gravity. The baffle (J) separates the lower portion of the bowl into a "quiet zone" (K) where the removed liquid and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

**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 Kopies of THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
Prep-Air® I Air Line Filter

Second Stage Filtration: After liquids and large particles are removed in the first stages of filtration, the air flows through element (C) where smaller particles are filtered out. The filtered air then passes downstream. Collected liquids and particles in the “quiet zone” (K) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (L) slightly until the liquid begins to drain.

Cleaning of Filter Element
1. Depress button on lock ring (A), turn counterclockwise and remove along with bowl assembly (B).
2. Remove the filter element (C) by turning it counterclockwise.
3. Clean the filter element (C) and bowl assembly (B) with MILD SOAP AND WATER ONLY! See CAUTION.
4. Reinstall the filter element (C) by turning it clockwise until it flexes slightly.
5. Reinstall the bowl assembly (B) and lock ring (A). Turn lock ring clockwise until it clicks into place.

![CAUTION](image)

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 hydro-carbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids, such as phosphate ester and di-ester types.

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

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

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

Bowl Conversion / Replacement
1. Depress button on lock ring (A), turn counterclockwise and remove along with bowl assembly (B).
2. Install new bowl assembly (B) and lock ring (A). Turn lock ring clockwise until it clicks into place.

WARNING: Conversion or replacement of an old metal bowl with a new plastic bowl will reduce the product pressure / temperature rating. Be certain that the circuit and environment does not exceed the lower ratings; and that rating labels elsewhere on the product are replaced with one describing the lower rating. Failure to do so may cause property damage, injury or death.

Bowl Guard Installation
1. Depress button on lock ring (A), turn counterclockwise and remove.
2. Filters with External Automatic Drains - Remove float. Screw drain out bottom of bowl assembly while holding adapter with a screwdriver from above.
3. Slip guard (F) over bowl.
4. Filters with External Automatic Drains - Screw drain into bottom of bowl assembly while holding adapter with a screwdriver from above. Reinstall float into bowl assembly.
5. Reinstall the bowl assembly (B) and lock ring (A). Turn lock ring clockwise until it clicks into place.

Internal Automatic Drain Conversion
1. Depress button on lock ring (A), turn counterclockwise and remove along with bowl assembly (B).
2. Unscrew nut (D) and remove manual drain assembly (E).
3. Install internal automatic drain in bowl and tighten nut (D) from below.
4. Reinstall the bowl assembly and lock ring. Turn lock ring clockwise until it clicks into place.

WARNING: Conversion of a filter from a manual drain to an automatic drain will reduce the product pressure / temperature rating. Be certain that the circuit and environment does not exceed the lower ratings; and that rating labels elsewhere on the product are replaced with one describing the lower rating. Failure to do so may cause property damage, injury or death.

Service Kits / Parts
External Automatic Drain Service Kit - 03332 0208
(Standard and Full Size Filters ONLY)

<table>
<thead>
<tr>
<th>Body Size</th>
<th>Port Size</th>
<th>Lock Ring</th>
<th>O-Ring</th>
<th>Deflector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compartment</td>
<td>1/8, 1/4</td>
<td>—</td>
<td>02709 200B</td>
<td>—</td>
</tr>
<tr>
<td>Standard</td>
<td>1/4, 1/4, 3/8, 1/2</td>
<td>03582 7502B</td>
<td>03454 7240B</td>
<td>03532 7002B</td>
</tr>
<tr>
<td>Full Size</td>
<td>3/4, 1</td>
<td>03586 7501B</td>
<td>03454 7247B</td>
<td>—</td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Compact Filter</th>
<th>Standard Filter</th>
<th>Full Size Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>03530</td>
<td>03532</td>
<td>03536</td>
</tr>
<tr>
<td></td>
<td>03531</td>
<td>03533</td>
<td>03534</td>
</tr>
<tr>
<td></td>
<td>03530 0400B</td>
<td>03532 0400B</td>
<td>03536 0400B</td>
</tr>
<tr>
<td></td>
<td>03530 0500B</td>
<td>03532 0500B</td>
<td>03536 0500B</td>
</tr>
<tr>
<td></td>
<td>03530 0400B</td>
<td>03532 0400B</td>
<td>03536 0400B</td>
</tr>
<tr>
<td></td>
<td>03530 7030B</td>
<td>03532 7030B</td>
<td>03536 7030B</td>
</tr>
<tr>
<td></td>
<td>03530 7040</td>
<td>03532 7040</td>
<td>03536 7040</td>
</tr>
<tr>
<td></td>
<td>03530 0100B</td>
<td>03532 0100B</td>
<td>03536 0100B</td>
</tr>
<tr>
<td></td>
<td>03530 0050B</td>
<td>03532 0050B</td>
<td>03536 0050B</td>
</tr>
<tr>
<td></td>
<td>03530 0400B</td>
<td>03532 0400B</td>
<td>03536 0400B</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>03532 0205B</td>
<td>03536 0205B</td>
</tr>
<tr>
<td></td>
<td>PS506P</td>
<td>PS506P</td>
<td>PS506P</td>
</tr>
<tr>
<td></td>
<td>PS512P</td>
<td>PS512P</td>
<td>PS512P</td>
</tr>
<tr>
<td></td>
<td>03530 0100B</td>
<td>03532 0100B</td>
<td>03536 0100B</td>
</tr>
<tr>
<td></td>
<td>03530 0050B</td>
<td>03532 0050B</td>
<td>03536 0050B</td>
</tr>
<tr>
<td></td>
<td>03530 0400B</td>
<td>03532 0400B</td>
<td>03536 0400B</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>03532 0205B</td>
<td>03536 0205B</td>
</tr>
<tr>
<td></td>
<td>PS506P</td>
<td>PS506P</td>
<td>PS506P</td>
</tr>
<tr>
<td></td>
<td>PS512P</td>
<td>PS512P</td>
<td>PS512P</td>
</tr>
<tr>
<td></td>
<td>03530 0100B</td>
<td>03532 0100B</td>
<td>03536 0100B</td>
</tr>
<tr>
<td></td>
<td>03530 0050B</td>
<td>03532 0050B</td>
<td>03536 0050B</td>
</tr>
<tr>
<td></td>
<td>03530 0400B</td>
<td>03532 0400B</td>
<td>03536 0400B</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>03532 0205B</td>
<td>03536 0205B</td>
</tr>
<tr>
<td></td>
<td>PS506P</td>
<td>PS506P</td>
<td>PS506P</td>
</tr>
<tr>
<td></td>
<td>PS512P</td>
<td>PS512P</td>
<td>PS512P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter</th>
<th>Compact Filter</th>
<th>Standard Filter</th>
<th>Full Size Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Micron</td>
<td>N/A</td>
<td>03532 7203</td>
<td>03536 7203</td>
</tr>
<tr>
<td>10 Micron</td>
<td>03530 7203</td>
<td>03532 7030B</td>
<td>03536 7030B</td>
</tr>
<tr>
<td>30 Micron</td>
<td>03530 7030B</td>
<td>03532 7040</td>
<td>03536 7040</td>
</tr>
<tr>
<td>40 Micron</td>
<td>03530 7040</td>
<td>03532 7040</td>
<td>03536 7040</td>
</tr>
<tr>
<td>Pipe Mounting Bracket</td>
<td>00902 0400B</td>
<td>00902 0400B</td>
<td>00906 0400B</td>
</tr>
</tbody>
</table>
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 Range:

<table>
<thead>
<tr>
<th></th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>345</td>
<td>50</td>
<td>3.45</td>
</tr>
<tr>
<td>Maximum</td>
<td>1034</td>
<td>150</td>
<td>10.34</td>
</tr>
</tbody>
</table>

Operating Temperature Range:
-29°C * to 49°C (-20°F to 120°F)

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

External Automatic Drain Conversion
1. Depress button on lock ring, turn counterclockwise and remove along with bowl assembly.
2. Unscrew nut and remove manual drain assembly.
3. Install the larger of the two o-rings (5/8" outside diameter) on the adapter and insert into bowl from above. If the bowl has a flat bottom, assemble the smaller o-ring (9/16" outside diameter) from below.
4. Screw drain into place on outside of bowl while holding adapter in place with a screw driver. Install float on drain stem.
5. Reinstall the bowl assembly and lock ring. Turn lock ring clockwise until it clicks into place.

**WARNING**: Conversion of a filter/coalescer from a manual drain to an automatic drain will reduce the product pressure / temperature rating. Be certain that the circuit and environment does not exceed the lower ratings; and that rating labels elsewhere on the product are replaced with one describing the lower rating. Failure to do so may cause property damage, injury or death.

6. Remove port protector from 1/4" female drain port. If desired, connect piping to drain port.
**Automatic Drain Service**

1. Remove nut on opposite end of drain from manual override. Remove bottom plug gasket (1) from nut and discard. Shake out disc spring (2) and inner valve assembly (3) and discard.
2. Remove nut on manual override end of drain. Remove bonnet gasket (4) and discard. Push override button out of nut. Remove and discard o-ring (5).
3. Remove diaphragm retainer using a spanner socket. If this tool is not available, insert a flat bladed screw driver into one of the slots and lightly tap it with a plastic mallet in the counterclockwise direction. Take care to avoid damage to the threads in the drain body.
4. Push diaphragm assembly (6) and diaphragm gasket (7) through from back side and discard.
5. Clean all retained parts with MILD SOAP AND WATER ONLY. See CAUTION at lower right.
6. Install diaphragm assembly (6), and diaphragm gasket (7). The sintered bronze plug should face the manual override end. Screw the diaphragm retainer into the body. Use a spanner socket to tighten the diaphragm retainer. If this tool is not available, insert a flat bladed screw driver into one of the slots and lightly tap it with a plastic mallet in the clockwise direction.
7. Install o-ring (5) onto override button and reinstall into nut. Install new bonnet gasket (4) onto nut and screw into drain body.
8. Insert inner valve assembly (3) into drain body making sure it is properly aligned with hole in diaphragm assembly (6). NOTE: This is easier if you push in the override button in first and can be verified by looking through the 1/4” drain hole.
9. Install disc spring (2) onto inner valve assembly (3). Install bottom plug gasket (1) onto nut and nut into drain body.

**Service Kits / Parts:**

External Automatic Drain Service Kit - 03332 0208
(Standard and Full Size Filters ONLY)

<table>
<thead>
<tr>
<th>Body Size</th>
<th>Port Size Inch</th>
<th>Lock Ring Assembly (8)</th>
<th>O-Ring (9)</th>
<th>Deflector (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact</td>
<td>1/8, 1/4</td>
<td>—</td>
<td>02709 7202B</td>
<td>—</td>
</tr>
<tr>
<td>Standard</td>
<td>1/4, 3/8, 1/2, 3/4, 1</td>
<td>03582 7502B, 03586 7501B</td>
<td>03454 7240B, 03454 7247B</td>
<td>—</td>
</tr>
<tr>
<td>Full Size</td>
<td></td>
<td></td>
<td></td>
<td>03532 7002B</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Model</th>
<th>Compact Filter</th>
<th>Standard Filter</th>
<th>Full Size Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowl Guards</td>
<td>03530, 03531</td>
<td>03532, 03533, 03534</td>
<td>03536, 03538</td>
</tr>
<tr>
<td>Bowl Kits w/Manual Drain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarbonate Metal</td>
<td>03530 0500B, 03530 0400B</td>
<td>03532 0500B, 03532 0400B</td>
<td>03536 0500B, 03536 0400B</td>
</tr>
<tr>
<td>Drains Auto Drain - External</td>
<td>N/A</td>
<td>03332 0205, 03332 0205</td>
<td>03332 0205</td>
</tr>
<tr>
<td>Auto Drain - Internal</td>
<td>PS506P</td>
<td>PS506P</td>
<td>PS506P</td>
</tr>
<tr>
<td>Manual Drain</td>
<td>PS512P</td>
<td>PS512P</td>
<td>PS512P</td>
</tr>
<tr>
<td>Elements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td>N/A</td>
<td>03532 7203, 03532 7203</td>
<td>03536 7203</td>
</tr>
<tr>
<td>10 Micron</td>
<td>03530 7203</td>
<td>03532 7203, 03532 7203</td>
<td>03536 7203</td>
</tr>
<tr>
<td>30 Micron</td>
<td>03530 7303B</td>
<td>03532 7303B, 03536 7303B</td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td>03530 7040</td>
<td>03532 7040, 03536 7040</td>
<td>03536 7040</td>
</tr>
<tr>
<td>Grade 6 Coalescing</td>
<td>N/A</td>
<td>03532 7021, 03536 7521</td>
<td></td>
</tr>
<tr>
<td>Pipe Mounting Bracket</td>
<td>00902 0400B</td>
<td>00902 0400B, 00906 0400B</td>
<td></td>
</tr>
</tbody>
</table>

**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 hydro-carbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids, such as phosphate ester and di-ester types.

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

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

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

- Polycarbonate Bowl: 10 to 150 PSIG (70 to 1030 kPa)
- Metal Bowl: 10 to 250 PSIG (70 to 1720 kPa)

Ambient Temperature Range:

- Polycarbonate Bowl: 32°F to 125°F (0°C to 52°C)
- Metal Bowl: 32°F to 175°F (0°C to 80°C)

ANSI Symbol

Filter w/Automatic Drain

Installation

To install the Auto Drain, SHUT OFF AIR SUPPLY and depressurize the unit.

1. Remove bowl by unscrewing bowl or collar, turning unlocking ring, or turn bayonet lock 1/8 turn.
2. Remove manual drain assembly from bowl. Be careful not to scratch or damage the inside surfaces of the bowl.
3. Clean or replace filter element. Clean bowl and all internal parts. See Polycarbonate bowl cleaning section.
4. Install Automatic Drain on inside of bowl (be sure O-ring is in place between drain and bowl).
5. Install retaining nut loosely - just to hold the drain in place.

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.

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

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
6. Replace bowl seal. Lightly lubricate seal to assist with retaining it in position. Use only mineral based oils or grease. Do NOT use synthetic oils such as esters, and Do NOT use silicones.

7. Reassemble bowl into body. If using a 06F or 11F collar, tighten collar from 28 to 32 in-lbs (3.2 to 3.6 Nm) torque. If using a 07F or 12F collar, tighten collar from 48 to 52 in-lbs (5.4 to 5.9 Nm) torque.

8. Apply system pressure and tighten retaining nut by fingers - DO NOT over tighten.

9. Check for air leaks around bowl joints, on top and bottom, plus discharge hole of drain. Repeat all steps (including shutoff and depressurization) if leaks occur.

**Parts Identification List**

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Automatic Drain</td>
</tr>
<tr>
<td>2</td>
<td>O-ring - see step 4 of Installation section</td>
</tr>
<tr>
<td>3</td>
<td>Retaining Nut</td>
</tr>
</tbody>
</table>

PS795 Automatic Drain with fluoroelastomer seals must be used with metal bowl.
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.

<table>
<thead>
<tr>
<th>Operating Pressure Minimum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>10</td>
<td>0.68</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700</td>
<td>250</td>
<td>17.0</td>
<td></td>
</tr>
</tbody>
</table>

Operating Temperature Maximum: 80°C (175°F)

Installation

1. The automatic drip leg drain is 1/4” or 1/2” NPT ported and should be installed vertically in the lowest areas of a pneumatic system.
2. It is suggested that a globe valve be installed in front of the drip leg drain so the unit can be serviced without shutting off all air lines.
3. The auto-drain is ported 1/8” NPT on the bottom to pipe away any liquid discharged.

Maintenance

The automatic drip-leg drain can be easily serviced without removal of entire unit. Tools are not required.
1. Before servicing, shut off air supply and depressurize the unit.
   a. Unscrew the body from the cap.
   b. To remove auto-drain, unscrew the insert nut.
   c. Thoroughly clean the interior of the body.
   d. Install automatic drain on inside of body (be sure o-ring is in place between drain and body).
   e. Thread knurled insert nut into position and tighten to 25-30 inch-pounds torque.
   f. Replace body to cap o-ring seal; lubricate seal to assist in retaining it in position. NOTE: Use only mineral base oils or grease. Do not use synthetic oils such as esters.
   g. Screw body onto the cap, engaging all threads to the shoulder stop.
   h. Turn on air supply and check for air leaks around body joints, on top and bottom, plus discharge hole of drain. Repeat all steps (including shutoff and depressurization) if leak is experienced.

Dimensions

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.50</td>
<td>63.5mm</td>
<td>.87</td>
</tr>
</tbody>
</table>
| 2.37| 60.2mm   | 22.1mm

Kits Available

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5506</td>
<td>Automatic Drain Kit</td>
</tr>
</tbody>
</table>

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.
- Maintenance, 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

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, testing, and testing, 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.
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.

Operation

1. Both free moisture and solids are removed automatically by the filter. There are no moving parts.
2. Manual drain filter must be drained regularly before the separated moisture and oil reaches the bottom of the lower baffle. Automatic drain models will collect and dump liquids automatically.

Maintenance

1. The filter element should be removed and replaced when the pressure differential across the filter unit exceeds 10 PSIG.
2. To service the filter element: SHUT OFF AIR SUPPLY and depressurize the unit.
   a. Unscrew threaded bowl.
   b. Unscrew lower filter retainer and remove filter element (and two gaskets if present).
   c. Clean all internal parts and bowl before reassembling. See polycarbonate bowl cleaning CAUTION.
   d. (Applies to units with filter post design). If filter is removed from body replace o-ring on filter post with o-ring found in kit; lubricate o-ring with grease included in kit. Screw filter post into body.
   e. Install new element (and two new gaskets if found in kit).
   f. Screw on lower filter retainer and tighten firmly.
   g. Replace bowl seal; lubricate seal to assist in retaining it in position. Use only mineral base oils or grease included in kit. DO NOT use synthetic oils such as esters, and DO NOT use silicones.
   h. Screw bowl into body.
   i. Apply pressure and check for leaks. If leaks occur, shut off air supply, depressurize the unit and correct leaks.

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.

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

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

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.
With Polycarbonate Bowl

Operating Pressure Maximum 1000 kPa 150 PSIG 10.3 bar
Operating Temperature Maximum: 52°C (125°F)

With Metal Bowl

Operating Pressure Maximum 1700 kPa 250 PSIG 17.0 bar
Operating Temperature Maximum: 80°C (175°F)

ANSI Symbol

Installation

1. The equipment to which the filter is attached should be internally cleaned to remove all traces of accumulated oil and dirt. Also, new pipe or hose should be installed between the filter and equipment being protected.

2. Blow all upstream pipe work clear of accumulated dirt and liquids.

3. A standard particle filter and a coalescing filter should be installed upstream of adsorber for best results.

4. Select a location as close as possible to the equipment being protected and upstream of any pressure regulator.

5. Install filter so that air flows in the direction of arrow on body.

6. Install filter vertically with the bowl drain mechanism at the bottom.

**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**

Poly carbonate 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, or 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.

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

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.

Adsorption techniques are **not effective** on: carbon monoxide, carbon dioxide, methane, ethane, ethylene or hydrogen. For a more complete list of vapors that can and cannot be adsorbed effectively by activated charcoal adsorbers consult the factory.
Operation and Service

1. Adsorber elements are designed to adsorb vaporous contaminants. The relative efficiency of an adsorber varies depending on the vapor to be adsorbed and the environmental temperature. At higher temperatures, adsorbers become less efficient.

2. Adsorber cartridges are not particle filters, per se, all particulates and aerosols should be removed prior to adsorbing vaporous contaminants. The initial pressure drop across an adsorber element (1.5 PSID maximum), therefore, should never increase. The presence of any liquids, aerosols, or particulate matter in an adsorber indicates that the effective life of the element has been exceeded and the element should be replaced and the system cleaned.

3. The most effective method of testing whether an element needs to be replaced or not is to smell the air coming from the adsorber. Offensive odors will be present well before oil levels become detectable.

4. To replace the adsorber element:
   a. **SHUT OFF THE AIR SUPPLY** and depressurize the unit.
   b. Unscrew the bowl from the filter body.
   c. Unscrew the adsorber element.
   d. If contaminants have migrated downstream from the prefilters: clean the adsorber bowl, the air lines from the prefilters to the adsorber, the prefilter bowls and replace the prefilter elements.
   e. Install the new adsorber element.
   f. Replace the bowl seal; lubricate the seal sparingly to assist in retaining it in position. Use only mineral based oils or grease. Do NOT use synthetic oils such as esters and Do NOT use silicones.
   g. Screw bowl into body.
   h. Apply pressure to the system and check for leaks. If leaks occur, shut off the air supply, depressurize the system and make adjustments necessary to eliminate leakage.

Replacement Adsorber Element Kits

<table>
<thead>
<tr>
<th>Model</th>
<th>Kit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>06F</td>
<td>PS156P</td>
</tr>
<tr>
<td>07F</td>
<td>PS256P</td>
</tr>
</tbody>
</table>
Pneumatic Division  
Richland, Michigan 49083  
269-629-5000

![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*:

<table>
<thead>
<tr>
<th>Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Bowl</td>
<td>1035</td>
<td>150</td>
<td>10.3</td>
</tr>
</tbody>
</table>

* When using with an Automatic Drain, minimum inlet pressure is 10 PSIG (0.1 bar & 69 kPa).

Maximum Ambient Temperature: 66°C (150°F)

ANSI Symbols

![Filter w/Manual Drain]

![Filter w/Automatic Drain]

Installation
1. Filter unit 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 could break off from the outlet port and lodge inside units which are located downstream, possibly causing malfunction.

2. Blow all upstream pipe work clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flow is in the direction of the arrow.

5. Install filter vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump ("quiet zone") at the bottom of the bowl (automatic drain models are recommended as standard equipment).

6. A drain line with 1/8" NPT connection may be attached to the drain port if desired. Drain line should be 1/4" tubing or larger, as short as possible, and crimp-free.

Operation
Both free moisture and solids are removed automatically by the filter. There are no moving parts.

Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the filter element. Automatic drain models will collect and dump the liquid automatically.

![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.

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

![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.
Maintenance Procedures

⚠ Caution: Shut off air supply and exhaust the pressure trapped within the filter bowl before servicing unit.

1. TO CLEAN OR REPLACE FILTER ELEMENT - Shut off air supply and reduce pressure in the unit to zero, remove the 8 screws from the filter housing, unscrew the filter support and remove filter element.

1a. IF THE UNIT HAS A RIGID FILTER ELEMENT - Remove and clean periodically by tapping on a hard surface, and blowing off with an air gun. Torque element to 50 ± 5 in. lb. when replacing element. Element should be cleaned/ replaced when the Differential Pressure Indicator is completely red.

2. IF THE UNIT HAS A MANUAL DRAIN, DRAIN THE UNIT ONCE EVERY 8 HOURS MINIMUM. If the unit is equipped with an automatic drain, clean the screen around the drain. Clean screen by blowing off with air gun.

3. When the bowl becomes dirty, clean with a dry clean cloth.

4. Before placing the unit in service, make sure that the bowl is properly reinstalled, and securely bolted in place.

Kits and Parts Available

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS618</td>
<td>Filter Element Kit (includes filter element and o-rings)</td>
</tr>
<tr>
<td>PS619</td>
<td>Differential Pressure Indicator (Standard)</td>
</tr>
<tr>
<td>PS620</td>
<td>Internal Drains: Automatic Mechanical Drain (Fluorocarbon seals with 1/8&quot; NPT stem)</td>
</tr>
</tbody>
</table>
Pneumatic Division
Richland, Michigan 49083
269-629-5000

FOR USE WITH FILTERS, LUBRICATORS AND FILTER / REGULATORS

⚠️ 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. Pressure and temperature ranges for bowls are given below. Specific units may differ; follow applicable ranges as specified for the units you are servicing. Consult the instruction sheet which came with the unit for more details.

Bowl Pressure & Ambient Temperature Ranges

**Polycarbonate Bowls:**
- 0 to 150 PSIG (0 to 1,030 kPa)
- 32°F to 125°F (0°C to 52°C)

**Metal Bowls:**
- 0 to 250 PSIG (0 to 1,720 kPa)
- 32°F to 175°F (0°C to 80°C)

Servicing Bowls & Sight Gauges

1. Turn off air supply and depressurize the unit before removing any parts.

⚠️ Caution: Be certain that pressure is relieved on both sides of any regulator in a system.

2. Lubricators with auto fill devices require oil system shut-off and disconnection. Filters with automatic drains require disconnection.

3. Unscrew bowl until its threads are completely disengaged.

4. Remove the old parts and clean the bowl and sight gauge, especially their respective sealing surfaces. Fit the large o-ring into the sight gauge groove such that the gripping nibs in the groove hold the o-ring in place. Then place the sight gauge in position and add the screws and their sealing o-rings. Secure gauge to bowl using 12 to 16 in-lbs (1.4 to 1.8 Nm) of torque.

5. Remove the body to bowl seal and thoroughly clean the sealing surface in the body. Also check for damage in the sealing area and threads. Replace the entire unit if this condition exists.

6. Place the new seal onto the end of the bowl or into the groove/ledge of the body. The choice of location depends on the design of the parts. If the bowl has a slight retaining ridge on the groove edge, put the new seal onto the bowl. If the body has a slight recess above the threads, put the seal into that groove, dry. If neither of these conditions are present, the seal should be placed dry onto the body ledge above the threads.

7. Lubricate the edge of the bowl where it will contact the seal before reinstalling.

Note: Use only mineral based oils or grease (a package is supplied with kits); do not use synthetic lubricants such as esters and do not use silicone lubricants.

8. Screw the bowl into the body until it reaches a positive stop; then reverse it about 1/8 turn. Metal bowls with sight gauges can be reversed about 3/4 turn to position the sight gauge as desired.

⚠️ Caution: Inlet pressure ratings for Polycarbonate bowls are less than those for metal bowls. If replacing a metal bowl with a Polycarbonate bowl, affix “Max Inlet” label provided over similar label on body.

9. Pressurize the assembled unit and check for leaks. If any occur, turn off the air supply, de-pressurize the system and fix the leak before resuming operation.

⚠️ 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.
Servicing Manual Drains

1. Removing Bowl and Old Drain
   a. Turn off air supply and de-pressurize the unit.
   
   *Caution: Be certain that pressure is relieved on both sides of any regulator in a system.*
   
   b. Unscrew threaded bowl.
   
   c. Remove manual drain assembly from bowl. Be careful not to scratch or damage the inside surface of the bowl.

2. Installing New Manual Drain
   
   Note: Clean the bowl before installing manual drain and reassembling the bowl to the body. See cleaning of bowls in the Safety: Transparent Bowls section.
   
   a. Installation of PS512 drain kit:
      Install manual drain body through the bowl opening with the threads protruding downwards and the o-ring seals on the inside of the bowl. Then assemble drain nut and tighten it from 10 to 15 in-lbs (1.1 to 1.7 Nm) of torque.
   
   b. Installation of PS513 drain kit:
      Install Push–N–Drain by pushing through the bowl opening so that the raised bead of the drain assembly seals on the inside of the bowl.

3. Installing bowl and Leak Testing:
   
   a. Screw the bowl into the body until it reaches a positive stop; then reverse it about 1/8 turn. Metal bowls with sight gauges can be reversed about 3/4 turn to position the sight gauge as desired.
   
   b. Apply system pressure; then check for air leaks. If leaks occur, shut off the air supply, depressurize the system and make necessary adjustments to eliminate leakage.

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

Service Kits Available

<table>
<thead>
<tr>
<th>Service Kit</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twist Drain Kit</td>
<td>PS512</td>
</tr>
<tr>
<td>Push–N–Drain</td>
<td>PS513</td>
</tr>
</tbody>
</table>

Safety: Transparent Bowls

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 hydro-carbons, ketones, esters, and certain alcohols. They should not be used in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester types. Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 (1030 kPa) pressure rating and a maximum temperature rating of 125°F (52°C).</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Operating Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Inlet</td>
<td>800</td>
<td>120</td>
<td>8</td>
</tr>
</tbody>
</table>

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

Safety: Transparent Bowls

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 hydro-carbons, ketones, esters, and certain alcohols. They should not be used in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester types.

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

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

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

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 (1030 kPa) pressure rating and a maximum temperature rating of 125°F (52°C).
**Servicing**

1. To remove the bowl assembly: SHUT OFF AIR SUPPLY and depressurize the unit.
2. Unscrew threaded bowl.
3. Replace the bowl gasket, lubricate gasket to assist in retaining it in position. Use only mineral base oils or grease. Do NOT use synthetic oils such as esters and do NOT use silicones.
4. To replace the lubricator bowl, fill to fill line on the bowl (DO NOT OVERFILL) with oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F – same as SAE No. 10 (petroleum base hydraulic oils are good examples). DO NOT USE OILS WITH ADHESIVES OR TACKY ADDITIVES. COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, SOAPS, OR DETERGENTS (automotive oils generally contain detergents) ARE NOT RECOMMENDED.
5. Screw bowl into body and tighten firmly.
6. Repressurize the unit.
Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation & Service Instructions:
1M105C
1/8" & 1/4" P3A-F Mini Modular Filter
(Screen Type)

ISSUED: November, 2003
Supersedes: January, 2000
Doc.# 1M105, ECN# 030539, Rev. 1

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.

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

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.

With Polycarbonate Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>830</td>
<td>120</td>
<td>8.3</td>
<td></td>
</tr>
</tbody>
</table>

Operating Temperature Maximum: 52°C (125°F)

Installation
1. The equipment to which the filter is attached should be internally cleaned to remove all traces of accumulated oil and dirt. Also, new pipe or hose should be installed between the filter and equipment being protected.
2. Blow all upstream pipe work clear of accumulated dirt and liquids.
3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.
4. Install filter so that air flows in the direction of arrow on body.
5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl (automatic drain models are recommended as standard equipment).

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
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.
Operation & Service

1. Both free moisture and solids are removed automatically by the filter. There are no moving parts.

2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the lower baffle. Automatic drain models will collect and dump liquids automatically.

3. The filter element should be removed and replaced when the pressure differential across the filter is 10 PSIG.

4. To remove the filter element: SHUT OFF AIR SUPPLY and depressurize the unit.
   a. Unscrew threaded bowl.
   b. Unscrew element assembly.
   c. Clean bowl and internal parts before cleaning reassembling. See polycarbonate bowl cleaning section.
   d. Attach clean element assembly and tighten firmly.
   e. Replace bowl gasket; lubricate gasket to assist in retaining it in position. Use only mineral base oils or grease. Do NOT use synthetic oils such as esters, and do NOT use silicones.
   f. Screw bowl into body and tighten firmly.

Kits Available

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3A-KA00EEN</td>
<td>Element Kit</td>
</tr>
<tr>
<td>P3A-KA00RFN</td>
<td>Filter Repair Kit</td>
</tr>
</tbody>
</table>
1. Lubricator should be installed with reasonable accessibility for installation of bypass disc to compensate for changes in air flow demands. Needle valve feed adjustment to regulate oil drop rate, and a venturi equipped with full-view sight glass for visual indication of oil drop rate, and air operated tools, motors, and other pneumatic equipment. Units are These mist lubricators are designed to deliver an atomized oil mist to air systems only.

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 Inlet Pressure: kPa PSIG bar
with Polycarbonate Bowl 1000 150 10.3
with Metal Bowl 1700 250 17.0

NOTE: The maximum recommended pressure drop for a particulate filter is 70 kPa (10 psig, 0.7 bar)

Ambient Temperature Range:
with Polycarbonate Bowl 0°C to 52°C (32°F to 125°F)
with Metal Bowl 0°C to 80°C (32°F to 175°F)

Symbols

Mist Lubricators (Figure 1)
Description
These mist lubricators are designed to deliver an atomized oil mist to air operated tools, motors, and other pneumatic equipment. Units are equipped with full-view sight glass for visual indication of oil drop rate, needle valve feed adjustment to regulate oil drop rate, and a venturi bypass disc to compensate for changes in air flow demands.

Installation of Lubricator
1. Lubricator 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 lubricator so that air flow is in the direction of arrow on body.
3. Installation should be upstream from, and as close as possible, to the device it is to lubricate (valve, cylinder, tool, etc.). Whenever possible, avoid locations that require air-borne oil to move in an upward direction to reach the device to be lubricated.
4. The installation of an individual lubricator for each air consuming device provides best assurances of proper lubrication.
5. In new installations, it is good practice to “wet down” the inside diameter of piping and/hose with oil before making final connections. Although your lubricator delivers oil to the line, pre-coating the inside diameter with oil helps insure that proper amounts of oil are delivered to the point of application.

Operation & Service of Lubricator

Warning: Before filling, inlet pressure must be eliminated and then de-pressurize system pressure.

1. FILLING - After de-pressurizing system, remove bowl to refill lubricator. Fill bowl to fill line indicated on the bowl with oil of 150 to 200 SSU at 100°F viscosity - same as SAE No. 10 (petroleum based hydraulic oils or spindle oils are good examples). DO NOT USE OILS WITH TACKY ADDITIVES, COMPOUND OILS CONTAINING SOLVENTS, GRAPHITE, SOAPS OR DETERGENTS. (Automotive oils generally contain detergents and are not recommended.
2. Replace the bowl and seat firmly. Excessive torque is not necessary. The lubricator is now ready for setting.
3. OIL DELIVERY ADJUSTMENT - To adjust oil delivery, turn the adjusting needle on top of the lubricator.

Leaner - Clockwise Richer - Counterclockwise

By counting the number of drops per minute in the sight dome, you can adjust lubricator to your required setting. Generally, one drop per minute downstream for every 10-15 SCFM flow is satisfactory. 25 drops per minute equals one ounce per hour - volume of oil passing through the sight dome.

NOTE: This is a constant density type lubricator which delivers a constant ratio of oil to air flow. Therefore, if air flow increases or decreases, oil delivery will be effected proportionately. ONLY IF DIFFERENT RATIO IS DESIRED SHOULD YOUR ADJUSTMENT KNOB SETTING BE CHANGED AFTER YOUR INITIAL SETTING.
Mist Lubricator & Particulate Filters Series

Service Kits - Lubricator

<table>
<thead>
<tr>
<th>Kit#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS420</td>
<td>Polycarbonate Bowl with Manual Drain - consists of items: 18 (open bottom), 15, 16, 17 &amp; 32</td>
</tr>
<tr>
<td>PS421</td>
<td>Polycarbonate Bowl without Drain - consists of items: 18 (closed bottom) &amp; 15</td>
</tr>
<tr>
<td>PS474</td>
<td>Drip Control (Polycarbonate)</td>
</tr>
<tr>
<td>PS475</td>
<td>Drip Control (Nylon)</td>
</tr>
</tbody>
</table>

Parts Identification List - Lubricator

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knob</td>
<td>11</td>
<td>Spring</td>
</tr>
<tr>
<td>2</td>
<td>Drip Control Body</td>
<td>12</td>
<td>Ball, Check</td>
</tr>
<tr>
<td>3</td>
<td>Needle</td>
<td>13</td>
<td>Body</td>
</tr>
<tr>
<td>4</td>
<td>O-ring</td>
<td>14</td>
<td>Tube</td>
</tr>
<tr>
<td>5</td>
<td>Drip Tube</td>
<td>15</td>
<td>O-ring (Body to Bowl)</td>
</tr>
<tr>
<td>6</td>
<td>Seal Plate</td>
<td>16</td>
<td>Twist Drain</td>
</tr>
<tr>
<td>7</td>
<td>O-ring</td>
<td>17</td>
<td>O-ring (Drain)</td>
</tr>
<tr>
<td>8</td>
<td>By-pass Plate</td>
<td>18</td>
<td>Bowl</td>
</tr>
<tr>
<td>9</td>
<td>By-pass</td>
<td>32</td>
<td>Twist Drain Knob</td>
</tr>
<tr>
<td>10</td>
<td>Ball, Check</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Particulate Filter (Figure 2)

Description

These air line filters are heavy-duty units used to remove airborne impurities from air supply lines by means of centrifugal force and filter element. Units are equipped with vane-type deflectors and drain valves. Deflector plate creates swirling action to the air stream assuring entrainment separation at all flow rates. Filter element with extra large surface assures fine filtration with low pressure drop. Turn manual drain clockwise to open and counterclockwise to close.

Installation of Filter

1. Filter 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. Tape 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.). Position unit vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump (“quiet zone”) at the bottom of the bowl.

Operation of the Filter

1. Both free moisture and solids are removed automatically by the filter.
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 exceeds 70 kPa (10 psig, 0.7 bar).

Service

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

Servicing Filter Element

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 from 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 on the bowl.
6. Screw bowl into the 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 dealer or your customer service representative.

Service Kits - Filter

<table>
<thead>
<tr>
<th>Kit#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS404</td>
<td>Polycarbonate Bowl with Manual Drain - consists of items: 19, 24, 26 &amp; 27</td>
</tr>
<tr>
<td>PS408</td>
<td>Polycarbonate Bowl with Automatic Drain - consists of items: 19, 24, 26, 28, 29, 30 &amp; 31</td>
</tr>
<tr>
<td>PS447B</td>
<td>Metal Bowl with Manual Drain - consists of items: 19, 24, 26 &amp; 27</td>
</tr>
<tr>
<td>PS451</td>
<td>Metal Bowl with Automatic Drain - consists of items: 19, 24, 26, 28, 29, 30 &amp; 31</td>
</tr>
<tr>
<td>PS403</td>
<td>5 Micrometer Element Kit - consists of items: 20, 21 &amp; 24</td>
</tr>
<tr>
<td>PS407</td>
<td>5 Micrometer Element Cartridge Kit - consists of items: 20, 21, 22, 23 &amp; 24</td>
</tr>
<tr>
<td>PS401</td>
<td>40 Micrometer Element Kit - consists of items: 20, 21 &amp; 24</td>
</tr>
</tbody>
</table>

Parts Identification List - Filter Units

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Bowl</td>
<td>20</td>
<td>Gasket</td>
</tr>
<tr>
<td>21</td>
<td>Filter Element</td>
<td>22</td>
<td>Filter Holder</td>
</tr>
<tr>
<td>23</td>
<td>Deflector</td>
<td>24</td>
<td>O-ring (body to bowl)</td>
</tr>
<tr>
<td>25</td>
<td>Body</td>
<td>26</td>
<td>O-ring (drain to bowl)</td>
</tr>
</tbody>
</table>

Safety: Transparent Bowls

**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.
## 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.

Adsorber Filters are not effective on: Carbon monoxide, carbon dioxide, methane, ethane, ethylene or hydrogen. For a complete list of vapors that can and cannot be adsorbed effectively by activated charcoal adsorbers consult the factory.

### Maximum Recommended Pressure Drop:

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Filter</td>
<td>70</td>
<td>10</td>
<td>0.7</td>
</tr>
</tbody>
</table>

### With Polycarbonate Bowl

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Pressure Maximum</td>
<td>1000 kPa (150 PSIG)</td>
</tr>
<tr>
<td>Operating Temperature Maximum</td>
<td>52°C (125°F)</td>
</tr>
<tr>
<td>Operating Temperature Minimum</td>
<td>0°C (32°F)</td>
</tr>
</tbody>
</table>

### With Metal Bowl

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Pressure Maximum</td>
<td>1700 kPa (250 PSIG)</td>
</tr>
<tr>
<td>Operating Temperature Maximum</td>
<td>80°C (175°F)</td>
</tr>
<tr>
<td>Operating Temperature Minimum</td>
<td>0°C (32°F)</td>
</tr>
</tbody>
</table>

### ANSI Symbols

- Filter w/Manual Drain
- Adsorber w/Manual Drain

### 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.

---

### 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.

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

---

### 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
Installation

1. The filter 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. Also, new pipe or hose should be installed between the filter and equipment being protected.

2. The upstream pipe work must be clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flows in the direction of arrow on body.

5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl.

Operation and Service

1. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the lower baffle.

2. The particulate filter element should be removed and replaced when pressure differential across the filter is 10 PSIG.

3. Adsorber elements are designed to adsorb vaporous contaminants. The relative efficiency of an adsorber varies depending on the vapor to be adsorbed and the environmental temperature. At higher temperatures, adsorbers become less efficient. Adsorber elements are not particle filters. All particles and aerosols should be removed prior to adsorbing vaporous contaminants. The initial pressure drop across an adsorber element (1.5 PSIG maximum) should never increase. The presence of any liquids, aerosols or particulate matter in an adsorber indicates that the effective life of the element has been exceeded and the element should be replaced and the system cleaned.

The most effective method of testing whether an element needs to be replaced is to smell the air coming from the adsorber. Offensive odors will be present well before oil levels become detectable.

4. The differential pressure indicator, located on top of the filter body, gives a visual indication of the pressure differential across the filter element. Change the filter element when half or more of the orange piston is above the retaining ring when air is flowing. For units without a differential pressure indicator, pressure differential gauges should be used to determine when the maximum recommended pressure differential has been reached.

5. Shut off air supply and depressurize the unit, before servicing.

6. After servicing, apply system pressure and check for air leaks. If leakage occurs, Do Not Operate — conduct servicing again.

Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Economy 1/4” &amp; 3/8”</th>
<th>Compact 1/4”, 3/8” &amp; 1/2”</th>
<th>Standard 1/2” &amp; 3/4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Kits*</td>
<td>PS902</td>
<td>PS702</td>
<td>PS802</td>
</tr>
<tr>
<td>5 Micron</td>
<td>PS901</td>
<td>PS701</td>
<td>PS801</td>
</tr>
<tr>
<td>Adsorber</td>
<td>PS931</td>
<td>PS731</td>
<td>PS831</td>
</tr>
<tr>
<td>Porous Bronze</td>
<td>PS988</td>
<td>PS788</td>
<td>PS888</td>
</tr>
<tr>
<td>DPI Repair Kit</td>
<td>PS781</td>
<td>PS781</td>
<td>PS781</td>
</tr>
</tbody>
</table>

*Element kits include body / bowl seal.
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.

Electrical Rating:
5 Amps - 12/24VDC, 125/250VAC

With Polycarbonate Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000</td>
<td>150</td>
<td>10.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Temperature Maximum</th>
<th>Operating Temperature Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>52°C (125°F)</td>
<td>0°C (32°F)</td>
</tr>
</tbody>
</table>

With Metal Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1700</td>
<td>250</td>
<td>17.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Temperature Maximum</th>
<th>Operating Temperature Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>80°C (175°F)</td>
<td>0°C (32°F)</td>
</tr>
</tbody>
</table>

Operation and Service

1. The particulate and coalescing filter element should be removed and replaced when pressure differential across the filter is 10 PSIG. Adsorber elements are not particle filters. All particles and aerosols should be removed prior to adsorbing vaporous contaminants. The initial pressure drop across an adsorber element (1.5 PSIG maximum) should never increase. The presence of any liquids, aerosols or particulate matter in an adsorber indicates that the effective life of the element has been exceeded and the element should be replaced and the system cleaned.

The most effective method of testing whether an element needs to be replaced is to smell the air coming from the adsorber. Offensive odors will be present well before oil levels become detectable.

3. If the electronic differential pressure indicator, located on top of the filter body is wired as normally open, it sends an electrical signal when the differential is greater than the specified range. If the electronic differential pressure indicator is wired as normally closed, there will be a signal until the differential exceeds the specified range. Change the filter element when this happens. For units without a differential pressure indicator, pressure differential gauges should be used to determine when the maximum recommended pressure differential has been reached.

4. Shut off air supply and depressurize the unit, before servicing.

5. After servicing, apply system pressure and check for air leaks. If leakage occurs, Do Not Operate — conduct servicing again.

Adsorber elements are not particle filters. All particles and aerosols should be removed prior to adsorbing vaporous contaminants. The initial pressure drop across an adsorber element (1.5 PSIG maximum) should never increase. The presence of any liquids, aerosols or particulate matter in an adsorber indicates that the effective life of the element has been exceeded and the element should be replaced and the system cleaned.

The most effective method of testing whether an element needs to be replaced is to smell the air coming from the adsorber. Offensive odors will be present well before oil levels become detectable.

3. If the electronic differential pressure indicator, located on top of the filter body is wired as normally open, it sends an electrical signal when the differential is greater than the specified range. If the electronic differential pressure indicator is wired as normally closed, there will be a signal until the differential exceeds the specified range. Change the filter element when this happens. For units without a differential pressure indicator, pressure differential gauges should be used to determine when the maximum recommended pressure differential has been reached.

4. Shut off air supply and depressurize the unit, before servicing.

5. After servicing, apply system pressure and check for air leaks. If leakage occurs, Do Not Operate — conduct servicing again.

**WARNING**

- 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.

**ADVERTISMENT**

- 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.

**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.

**ADVERTISMENT**

Extra copies of these instructions are available for inclusion in equipment/maintenance manuals that utilize these products. Contact your local representative.
**Wiring Code**

Pin 1: Common  
Pin 2: Normally Closed  
Pin 3: Normally Open

**Kits Available**

<table>
<thead>
<tr>
<th>Description</th>
<th>05F/15F 1/4&quot; &amp; 3/8&quot;</th>
<th>06F/11F 1/4&quot;, 3/8&quot; &amp; 1/2&quot;</th>
<th>07F/12F 3/8&quot;, 1/2&quot; &amp; 3/4&quot;</th>
<th>P3N 3/4&quot;, 1&quot; &amp; 1-1/2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Kits*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td>PS902</td>
<td>PS702</td>
<td>PS802</td>
<td>P3NKA00ESE</td>
</tr>
<tr>
<td>40 Micron</td>
<td>PS901</td>
<td>PS701</td>
<td>PS801</td>
<td>P3NKA00ESG</td>
</tr>
<tr>
<td>Coalescing Grade 6</td>
<td>PS924</td>
<td>PS724</td>
<td>PS824</td>
<td>P3NKA00ESC</td>
</tr>
<tr>
<td>Coalescing Grade 10</td>
<td>PS930</td>
<td>PS730</td>
<td>PS830</td>
<td>P3NKA00ES9</td>
</tr>
<tr>
<td>Adsorber</td>
<td>PS931</td>
<td>PS731</td>
<td>PS831</td>
<td>P3NKA00ESA</td>
</tr>
<tr>
<td>Porous Bronze</td>
<td>PS988</td>
<td>PS788</td>
<td>PS888</td>
<td>—</td>
</tr>
<tr>
<td>DPI Repair Kit</td>
<td>PS781</td>
<td>PS781</td>
<td>PS781</td>
<td>PS781</td>
</tr>
<tr>
<td>Electronic DPI Kit</td>
<td>PS764</td>
<td>PS764</td>
<td>PS764</td>
<td>PS764</td>
</tr>
</tbody>
</table>

*Element kits include body / bowl seal.
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.
Adsorber Filters are not effective on: Carbon monoxide, carbon dioxide, methane, ethane, ethylene or hydrogen. For a complete list of vapors that can and cannot be adsorbed effectively by activated charcoal adsorbers consult the factory.

Maximum Recommended Pressure Drop:

<table>
<thead>
<tr>
<th>Particulate Filter</th>
<th>70</th>
<th>10</th>
<th>0.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Pressure Maximum</td>
<td>1700</td>
<td>250</td>
<td>17.0</td>
</tr>
<tr>
<td>Operating Temperature Maximum</td>
<td>80°C (175°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Minimum</td>
<td>0°C (32°F)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANSI Symbols

Installation
1. The filter 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. Also, new pipe or hose should be installed between the filter and equipment being protected.

2. The upstream pipe work must be clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flows in the direction of arrow on body.

5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl.

Operation and Service
1. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the lower baffle.

2. The particulate filter element should be removed and replaced when pressure differential across the filter is 10 PSIG.

3. Adsorber elements are designed to adsorb vaporous contaminants. The relative efficiency of an adsorber varies depending on the vapor to be adsorbed and the environmental temperature. At higher temperatures, adsorbers become less efficient.

Adsorber elements are not particle filters. All particles and aerosols should be removed prior to adsorbing vaporous contaminants. The initial pressure drop across an adsorber element (1.5 PSIG maximum) should never increase. The presence of any liquids, aerosols or particulate matter in an adsorber indicates that the effective life of the element has been exceeded and the element should be replaced and the system cleaned.

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.

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

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.
Particulate, Adsorber & Coalescing Filter

The most effective method of testing whether an element needs to be replaced is to smell the air coming from the adsorber. Offensive odors will be present well before oil levels become detectable.

4. For Coalescing filter, a 5 micron pre-filter is recommended to protect the high efficiency filter and to prolong the element's life.

5. The differential pressure indicator, located on top of the filter body, gives a visual indication of the pressure differential across the filter element. Change the filter element when half or more of the orange piston is above the retaining ring when air is flowing. For units without a differential pressure indicator, pressure differential gauges should be used to determine when the maximum recommended pressure differential has been reached.

6. Shut off air supply and depressurize the unit, before servicing.

7. After servicing, apply system pressure and check for air leaks. If leakage occurs, Do Not Operate — conduct servicing again.

Service Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
<th>Contains Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Kits -</td>
<td></td>
<td>(5) Bowl Seal and (2) Element</td>
</tr>
<tr>
<td>5 Micron</td>
<td>P3NKA00ESE</td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td>P3NKA00E9G</td>
<td></td>
</tr>
<tr>
<td>Adsorber</td>
<td>P3NKA00E9A</td>
<td></td>
</tr>
<tr>
<td>25 Micron Porous Bronze</td>
<td>P3NKA00E9J</td>
<td></td>
</tr>
<tr>
<td>Coalescing / Element Grade 6</td>
<td>P3NKA00E9C</td>
<td></td>
</tr>
<tr>
<td>Coalescing / Element Grade 10</td>
<td>P3NKA00E9S</td>
<td></td>
</tr>
<tr>
<td>DPI Repair Kit</td>
<td>PS781</td>
<td>(6) DPI components (not all shown)</td>
</tr>
<tr>
<td>Auto Drain Kit</td>
<td>PS506</td>
<td>(7) Auto Drain Assembly</td>
</tr>
</tbody>
</table>

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.

Differential Pressure Indicator (DPI) Optional

Note: If both mating faces have an o-ring groove, units may need to be assembled with two seals. (One square and one round seal.)

Torque value for assembling units together, port blocks, and mounting brackets: 5 to 6 Nm (48 to 52 in.lb.)

M8 x 90 Bolt (4 Places)  M8 x 15 Bolt (4 Places)  M8 x 20 Bolt (4 Places)
Pneumatic Division
Richland, Michigan 49083
269-629-5000

⚠️ 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 and sight domes, 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 and sight domes 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.

The dr...
Automatic Electric Drain Valves

<table>
<thead>
<tr>
<th>Model Number Kit</th>
<th>Port Size NPT</th>
<th>Voltage</th>
<th>Operating Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDV3-G14BL</td>
<td>1/2&quot;</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>WDV3-G24BL</td>
<td>1/2&quot;</td>
<td>230 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>WDV3-G34BL</td>
<td>1/2&quot;</td>
<td>24 VDC</td>
<td>232 PSIG</td>
</tr>
</tbody>
</table>

Zero Air Loss Condensation Drain

<table>
<thead>
<tr>
<th>Model Number Kit</th>
<th>Port Size NPT</th>
<th>Voltage</th>
<th>Operating Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED3002N115-KL</td>
<td>1 x 3/8, 3/8</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>ED3004N115-KL</td>
<td>1 x 1/2, 3/8</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>ED3007N115-KL</td>
<td>2 x 1/2, 3/8</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>ED3030N115-KL</td>
<td>2 x 1/2, 3/8</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
<tr>
<td>ED3100N115-KL</td>
<td>2 x 1/2, 3/8</td>
<td>115 VAC</td>
<td>232 PSIG</td>
</tr>
</tbody>
</table>

DP3 Differential Pressure Gauge Installation Instructions on 3x / 4x Series Filters

1. Remove and discard the plastic cap, screws and O-rings from top of unit.
2. To install the new DP3 Differential Pressure Gauge, pry the cap out of the housing and separate the mounting block from the DP3 by removing the 2 screws under the cap. Make sure that air flow direction arrows on DP3 match flow arrows (same direction) on filter unit. Make sure O-Rings are properly seated on bottom of DP3, and attach DP3 to filter, using the special 60mm mounting screws (2 required) with flat ground on threads.

⚠️ CAUTION! Overtightening the screws may damage the Differential Pressure Gauge.

Larger Ported Particulate Filters 35F and 43F with Variations and Accessories

Automatic Mechanical Float Drain
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 Recommended Pressure Drop:

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Filter</td>
<td>70</td>
<td>10</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Operating Pressure Maximum

<table>
<thead>
<tr>
<th>Operating Pressure Maximum with Manual Drain</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2068</td>
<td>300</td>
<td>20.7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Pressure Maximum with Automatic Drain</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1207</td>
<td>175</td>
<td>12.0</td>
<td></td>
</tr>
</tbody>
</table>

* When using an Automatic Drain, minimum inlet pressure is 69 kPa (15 PSIG & 0 bar)

Operating Temperature Range:

<table>
<thead>
<tr>
<th>Drain Type</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Drain</td>
<td>0°C to 82°C (32°F to 180°F)</td>
</tr>
<tr>
<td>Automatic Drain</td>
<td>0°C to 49°C (32°F to 120°F)</td>
</tr>
</tbody>
</table>

Symbols

![Filter w/Manual Drain]

---

**WARNING**

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

---

**Installation**

1. Filter unit 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 could break off from the outlet port and lodge inside units which are located downstream, possibly causing malfunction.

2. Blow all upstream pipe work clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flow is in the direction of the arrow.

5. Install filter vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl (automatic drain models are recommended as standard equipment).

---

**Operation**

Both free moisture and solids are removed automatically by the filter. There are no moving parts.

The filter element should be changed when pressure differential across the filter is 69 kPa (10 PSIG). Pressure differential gauges should be used to determine when the maximum recommended pressure differential has been reached. (See Service Procedure section.)

**Caution:** DO NOT EXCEED THE RATED RECOMMENDED FLOWS. The minimum flow is ten percent of the normal rating.

Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the filter element. Automatic drain models will collect and dump the liquid automatically.

---

**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.
Service Procedure - (Refer to Figure 1)

⚠️ Caution: Shut off air supply and exhaust the pressure trapped within the filter bowl before servicing unit.

1. Unscrew threaded collar and remove the bowl from the body.

2. To install a new filter element, use the following procedure:
   a. Unscrew the lower baffle and remove filter element.
   b. This element can not be cleaned and should be replaced when a pressure differential across the filter unit becomes excessive.
   c. Clean all internal parts and bowl before reassembling.
   d. Install element.
   e. Attach lower baffle and tighten.
   f. Lubricate bowl seal to assist with retaining it in position.

⚠️ Caution: Use only mineral based oils or grease. Do not use synthetic oils such as esters and do not use silicones.

   g. Place new bowl seal into the groove in the body.

3. Place bowl into collar and position bowl against the body and tighten collar.

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

Service Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element (40 Micron)</td>
<td>EK602B/N</td>
</tr>
<tr>
<td>Element (5 Micron)</td>
<td>EK602VB/N</td>
</tr>
<tr>
<td>Bowl</td>
<td>PBK603B</td>
</tr>
<tr>
<td>Deflector</td>
<td>PRK602C</td>
</tr>
<tr>
<td>Auto Drain</td>
<td>PRK602MD</td>
</tr>
</tbody>
</table>

![PF602 Filter Unit with Twist Drain](Figure 1)

![PF602 Filter Unit with Automatic Drain](Figure 2)
**Installation and Service Instructions:**

**PS436**

**1/4” 02F**

**Particulate Filter**

**ISSUED:** March, 2006

**Supersedes:** None

**Doc.# 3F200, NPR# 060050, Rev. 1**

---

**ENGLISH**

**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**

**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.**

**Installation**

1. Refer to WARNINGS.
2. Install as close as possible to point where air is being used.
3. Install so that air flows into the body and out to the adapter.
4. Maximum pressure rating is 200 PSIG (14 bar). Temperature range is 32°F to 150°F (0°C to 65.5°C).

**Maintenance**

1. Service unit at least every 6 months.
2. Replace filter element periodically, or when pressure drop exceeds 10 PSIG.

**Repair Kits and Replacement Parts**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Kit</td>
<td>PS436</td>
</tr>
<tr>
<td>Repair Kits and</td>
<td></td>
</tr>
<tr>
<td>Replacement Parts</td>
<td></td>
</tr>
</tbody>
</table>

**FRENCH**

**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 auditive 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.

**AVERTISSEMENT**

**LA DEFAILLANCE, LE CHOIXERRONE OU L’USAGE NON CONFORME DES PRODUITS ET/OU SYSTÈMES ICI DÉCRITS, OU PRODUITS Y AFFERANT, POUVENT ENTRAINER LA MORT, DES BLESSURES AUX PERSONNES ET DES DOMMAGES MATÉRIELS.**

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 SUPPLÉMENTAIRES DE CES INSTRUCTIONS SONT DISPONIBLES POUR ACCOMPAGNER LES APPAREILS/MANUELS D’ENTRETIEN CORRESPONDANT A CES PRODUITS. CONTACTEZ VOTRE REPRÉSENTANT LOCAL.**

**Installation**

1. Lire L’AVERTISSEMENTS ci-haut avant l’installation.
2. Installer le dispositif aussi près que possible du point d’utilisation de l’air.
3. Installer le dispositif de manière à ce que l’air entre par le corps et sorte par l’adaptateur.
4. La pression maximale d’utilisation est de 14 bars (200 PSIG). La température d’utilisation se situe entre 0°C et 65,5°C (de 32°F à 150°F).

**Entretien**

1. Effectuer l’entretien du dispositif au moins tous les six mois.
2. Remplacer l’élément filtrant périodiquement ou lorsque la pression baisse de plus de 10 PSIG.

**Trousses de Réparation et Pièces de Rechange**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trousse de filtre</td>
<td>PS436</td>
</tr>
</tbody>
</table>
**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.

---

**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 única y responsable por la selección final de los productos y sistemas, y por garantizar que se cumpla con todas las especificaciones de seguridad y advertencias 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.

---

**Instalacion**

1. Remítase a la ADVERTENCIAS.
2. Efectúe la instalación lo más cerca posible del punto donde se está utilizando el aire.
3. Efectúe la instalación de modo que el aire circule dentro del cuerpo y fuera del adaptador.
4. La clasificación de presión máxima es de 14 bar (200 PSIG). El rango de temperatura es de 0°C a 65,5°C (32°F a 150°F).

**Mantenimiento**

1. De servicio a la unidad por lo menos cada seis meses.
2. Reemplace el elemento del filtro periódicamente, o cuando la caída de presión exceda 10 PSIG.

**Juegos de Reparacion y Repuestos**

Juego de filtros ................................................................. PS436

---

**ADAPTADOR**

**O-RING**

**ELEMENTO DEL FILTRO**

**DESVIADOR**

**CUERPO**
To avoid unpredictable system behaviour that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary), installation, servicing or conversion.
- Disconnect air supply and depressurise all lines connected to the 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 and 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 if the product does not operate properly, discontinue use.

Warning and specifications on the product should not be covered by, etc. If not possible, contact your local representative for replacement labels.

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.
ATTENZIONE

Per evitare comportamenti imprevedibili del sistema che possono portare alla perdita del fluido e alla danneggiazione del sistema:
- Scollegare l'alimentazione elettrica (se necessario) prima di installazione, manutenzione o conversione.
- Scollegare l'alimentazione dell'aria di tutte le condutture coinvolti al sistema prima di effettuare manutenzioni o interventi.
- Utilizzare il prodotto alla pressione, alla temperatura e alle altre condizioni specificate in queste istruzioni.
- Il mancato eseguire esercizi di calore in condizioni di alta umidità ambiente è più al di sotto del punto di congelamento.
- Effettuare le manutenzioni secondo le procedure specificate in queste istruzioni.
- Installazione, manutenzione e conversione di questi prodotti richiedono conoscenze e abilità specializzate. La manutenzione del prodotto deve essere eseguita da personal specializzato in tali attività.
- Non eseguire interventi di manutenzione o riparazione al prodotto se si conoscono le condizioni di funzionamento del sistema e la natura del fluido che viene utilizzato.
- Il prodotto deve essere installato, messo in servizio e gestito in conformità con le istruzioni e le regole di sicurezza applicabili.
- Il prodotto deve essere installato e messo in servizio in conformità con le normative locali di sicurezza e le indicazioni fornite con il prodotto.
- Utilizzare solo i componenti di ricambio autorizzati e forniti dal produttore per assicurare la sicurezza e la affidabilità del prodotto.
- Il prodotto deve essere usato in conformità con le specifiche di pressione, temperatura e condizioni di funzionamento specificate.
- Il prodotto deve essere installato e messo in servizio in conformità con le istruzioni e le regole di sicurezza applicabili.
- Il prodotto deve essere installato e messo in servizio in conformità con le normative locali di sicurezza e le indicazioni fornite con il prodotto.
- Utilizzare solo i componenti di ricambio autorizzati e forniti dal produttore per assicurare la sicurezza e la affidabilità del prodotto.
- Il prodotto deve essere usato in conformità con le specifiche di pressione, temperatura e condizioni di funzionamento specificate.
**WARNING!**

- Do not use oils with additives, compounds, oils containing solvents, etc.
- Ensure proper lubrication and cleaning procedures.
- Always wear protective equipment when handling these products.
- Keep out of reach of children.

---

**ADVERTENCIA**

- No utilice aceites con aditivos, compuestos, aceites con solventes, etc.
- Asegúrese de una lubricación y limpieza correctas.
- Siempre utilice equipos de protección adecuados al manipular estos productos.
- Manténgalos fuera del alcance de los niños.

---

**OBSERVERA!**

- Använd inte olja med tillsatser, kemiska föreningar, olja med lösningmedel, grafit, rengöringsmedel eller syntetoljor.
- Säkerhetsövervakning och rengöring är avsedd.
- Leta ut och isolera dessa produkter.
- Behåll alltid en oförutsett systembeteende som kan leda till person- och sakskada.

---

**ADVERTENCIA**

- No utilice aceites con aditivos, compuestos, aceites con solventes, etc.
- Asegúrese de una lubricación y limpieza correctas.
- Siempre utilice equipos de protección adecuados al manipular estos productos.
- Manténgalos fuera del alcance de los niños.

---

**ADVERTENCIA**

- Non utilizzare d’huiles avec des additifs, contenant des solvants, etc.
- Assicurarsi di un adeguato lubrificazione e pulizia.
- Usare sempre attrezzature di sicurezza adeguate quando si manipolano questi prodotti.
- Mantenere lontano da bambini.

---

**ADVERTENCIA**

- Não use óleos com aditivos, compostos, óleos com solventes, etc.
- Certifique-se de uma lubrificação e limpeza adequadas.
- Sempre use equipamentos de proteção adequados ao manipular estes produtos.
- Mantenha fora do alcance de crianças.

---

**ADVERTENCIA**

- Do not use oils with additives, compounds, oils containing solvents, etc.
- Ensure proper lubrication and cleaning procedures.
- Always wear protective equipment when handling these products.
- Keep out of reach of children.

---

**ADVERTENCIA**

- 強調しないと気付かない危険性があるので、十分に注意してください。
- 使用油脂時、添加剤、溶剤、合成油等は使用しないこと。
- 安全対策が十分に行われていることを確認してください。
- 子供に触れないでください。

---

**ADVERTENCIA**

- 非常に危険な液体であるため、十分に注意してください。
- 使用油脂時、添加剤、溶剤、合成油等は使用しないこと。
- 安全対策が十分に行われていることを確認してください。
- 子供に触れないでください。

---

**ADVERTENCIA**

- 非常に危険な液体であるため、十分に注意してください。
- 使用油脂時、添加剤、溶剤、合成油等は使用しないこと。
- 安全対策が十分に行われていることを確認してください。
- 子供に触れないでください。
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.
Installation

1. The filter 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. Also, new pipe or hose should be installed between the filter and equipment being protected.

2. The upstream pipe work must be clear of accumulated dirt and liquids.

3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.

4. Install filter so that air flows in the direction of arrow on body.

5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl.

Operation and Service

1. To service the filter, it is not necessary to remove the unit from the airline. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the lower baffle.

2. The particulate Filter Element should be removed and replaced when pressure differential across the filter is 10 PSIG.

3. Shut off air supply and depressurize the unit, before servicing.

4. Carefully remove Bowl by turning counterclockwise.

5. Remove Filter Element, Baffle, and Retainer.

6. Wipe parts, clean with soapy water or denatured alcohol, but do not use denatured alcohol on plastic bowl or sight gauge. If using compressed air to blow dry, be sure to wear appropriate eye protection.

7. After servicing, apply system pressure and check for air leaks. If leakage occurs, Do Not Operate — conduct servicing again.

Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Product Number</th>
<th>Bowl Type</th>
<th>Port Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarbonate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK602Y</td>
<td>B</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK605WY</td>
<td>W</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td>Aluminum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK602A</td>
<td>B</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK603A</td>
<td>E</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK605WA</td>
<td>W</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Aluminum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK603B</td>
<td>E</td>
<td>3/4&quot; thru 2-1/2&quot;</td>
</tr>
<tr>
<td>Zinc with Sight Gauge</td>
<td>BK605WB</td>
<td>W</td>
<td>3/4&quot; thru 2-1/2&quot;</td>
</tr>
<tr>
<td>Element Kits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Micron Bronze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drain Kits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual Piston  (Poly Bowl Only)</td>
<td>SA600Y7-1</td>
<td>All Sizes</td>
<td>All Sizes</td>
</tr>
<tr>
<td>Piston  (Poly Bowl Only)</td>
<td>RK602SY</td>
<td>B</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td>Piston  (Poly Bowl Only)</td>
<td>RK605SA</td>
<td>B</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>External Auto. (8 oz. Poly &amp; Metal)</td>
<td>SA602D</td>
<td>B</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>External Auto. (16 oz. Aluminum)</td>
<td>SA603D</td>
<td>E</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Internal Auto.</td>
<td>SA602MD</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>External Auto. (16 oz. Metal Bowl)</td>
<td>SA602D</td>
<td>W</td>
<td>3/4&quot; thru 2-1/2&quot;</td>
</tr>
<tr>
<td>External Auto. (32 oz. Aluminum)</td>
<td>SA603D</td>
<td>E</td>
<td>3/4&quot; thru 2-1/2&quot;</td>
</tr>
<tr>
<td>Internal Auto.</td>
<td>SA602MD</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Mounting Bracket Kits</td>
<td>SAF602-0571</td>
<td>1/4&quot;, 3/8&quot;</td>
<td></td>
</tr>
<tr>
<td>(2 per unit required)</td>
<td>SA200AW57</td>
<td>3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>(2 per unit required)</td>
<td>SA200CW57</td>
<td>3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>Repair Kits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deflector, Baffle Assy, Retaining Rod</td>
<td>RK602Y</td>
<td>1/4&quot;, 3/8&quot;</td>
<td></td>
</tr>
<tr>
<td>Deflector, Baffle Assy, Retaining Rod</td>
<td>RK602A</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Deflector, Baffle Assy, Retaining Rod</td>
<td>RK602B</td>
<td>3/4&quot;, 1&quot;</td>
<td></td>
</tr>
<tr>
<td>Deflector, Baffle Assy, Retaining Rod</td>
<td>RK602C</td>
<td>1-1/4&quot;, 1-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Deflector, Baffle Assy, Retaining Rod</td>
<td>RK602G</td>
<td>2&quot;, 2-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>External Auto Drain (Short Float 602)</td>
<td>RK602D</td>
<td>1/2&quot; thru 2-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>External Auto Drain (Tall Float 603)</td>
<td>RK603D</td>
<td>1/2&quot; thru 2-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Internal Auto Drain</td>
<td>RK602MD</td>
<td>1/4&quot; thru 2-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>Metal Bowl with Sight Gauge</td>
<td>RKB605WY</td>
<td>1/4&quot;, 3/8&quot;</td>
<td></td>
</tr>
<tr>
<td>Metal Bowl with Sight Gauge</td>
<td>RKB605WA</td>
<td>1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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.
Fixation - Mounting - Befestigung - Fijacion - Fissaggio

UK Disconnect all electrical supplies before attempting repair or maintenance. See ISO4414 for safety requirements covering the installation and use of pneumatic equipment.

FR Débranchez les connexions électriques avant réparation ou maintenance. Voir ISO4414 pour les règles de sécurité des installations et utilisation des équipements pneumatiques.


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.

WARNING

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

- Disconnect electrical supply (when necessary) before installation.
- Disconnect air supply and depressurize all air lines connected to this product (when necessary) before servicing.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Solution must withstand the maximum anticipated ambient temperature in before testing.
- Batteries containing perchloroethylene must be removed from the product prior to testing.
- Also, installation, servicing or connection of electrical or pneumatic components must be done by knowledgeable personnel who understand the installation and warning requirements of the application are met.

Do not exceed maximum primary pressure rating.

Product rupture can cause serious injury.

Do not exceed maximum primary pressure rating.

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HERIN 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 other information relative to our products. Further information on these products and systems is in the user’s product catalogue. Due to the limited nature of this document, it is recommended that a user’s product or system 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.

All installation, servicing or connection of electrical or pneumatic components must be performed by knowledgeable personnel who understand how the product does not operate properly, do not put into use.

“Testing and documentation of the products should not be certified by users, etc. If testing is not possible, contact your local representative or supplier.

This document and other information from the Company, its subsidiaries and authorized distributors are subject to change at any time without notice.

Association - Combination - Verbindung - Asociacion - Assemblaggio
**Filter Maintenance - Maintenance du filtre - Wartung - Mantenimiento - Manutenzione**

- Condensate drainage / Purge /Kondensatentleerung /Suavitamento condensati
- **Vaciado del condensado / odpouštění kondenzátu / spust kondensatu**

**Combnd start/stop function with acknowledgement**

**Lubricator Adjustment - Réglage du lubrificateur - Steuerung Regulacion - Regolazione**

- Oil adjusting screw
- Oil refilling plug

**Recommended Lubricants / Lubrifiants recommandés / Empfohlene Ölsorten**

- *For food industry applications: approved oil USDA-H1*

**Lubrication of airlines**

**High speed tools and systems**

- Air cylinders and valves

**Recommended lubricants**

- Manual/semi auto drain
- automatic

**Combined Soft Start & Dump Valve / Soft Start Valve / Vannes de mise en pression progressive et de purge**

**Ball Valve**

**Recommended lubricants**

- Manual/semi auto drain
- automatic

**Lubrication of airlines**

**Recommended lubricants**

- Manual/semi auto drain
- automatic

**Lubrication of airlines**

- Manual/semi auto drain
- automatic
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.


1.4. 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, keytones, esters or certain alcohols.
   • Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

PDNSG-1
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.


4.4. 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:
- 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.