Parker Global
Air Preparation System
Catalog 0750-2 US

ENGINEERING YOUR SUCCESS.
DECLARATION OF COMPLIANCE (ROHS)

European Directive 2002/95/EC - RoHS (Restriction of use of certain Hazardous Substances in electrical and electronic equipment), restricts the use of the 6 substances below in the manufacture of specified electrical equipment.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEAD:</td>
<td>Product containing lead and its compounds (except for application of lead as an alloying element by weight in steel up to 0.35%, in aluminum up to 0.4% and in copper alloys up to 4% and in Circuit Board solder) must not exceed 0.1% by weight.</td>
</tr>
<tr>
<td>MERCURY:</td>
<td>The concentration level must not exceed 0.1% by weight.</td>
</tr>
<tr>
<td>CADMIUM:</td>
<td>The concentration level must not exceed 0.01% by weight.</td>
</tr>
<tr>
<td>HEXAVALENT CHROMIUM:</td>
<td>This is a corrosive protective finish used on our product line. Where this finish is utilized the Chromate solution is Hexavalent (Chrome 6) free.</td>
</tr>
<tr>
<td>POLYBROMINATED BIPHENYLS (PBB):</td>
<td>The concentration level must not exceed 0.1% by weight. This substance is not known to be in any of our products.</td>
</tr>
<tr>
<td>POLYBROMINATED DIPHENYL ETHERS (PBDE):</td>
<td>The concentration level must not exceed 0.1% by weight. This substance is not known to be in any of our products.</td>
</tr>
</tbody>
</table>

This information applies to product sold on or after 1st July, 2006

WARNING

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

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# Global Air Preparation System

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Parker Global Air Preparation System

Global.
Economical.
Modular.

Performance you need, wherever you need it.

The comprehensive Global Air Preparation System is available in three body sizes with either BSPP, BSPT, or NPT to accommodate thread type requirements.

Full featured filters, regulators, filter/regulators, and lubricators are available with a wide range of standard options to meet air preparation needs.

Individual units can easily be assembled into various combinations, utilizing patented modular lightweight body connectors.

www.parker.com/globalfrl
Comprehensive Offering

Filters
- 5µ particulate, 1.0µ and 0.01µ coalescing, and adsorber available as standard
- Transparent or metal bowl with manual or auto float drains standard

Regulators
- Available as stand alone, common port and electronic proportional
- Both relieving and non-relieving versions available

Filter / Regulators
- Compact design for space savings
- Available with all the same standard options as the filters and regulators

Lubricators
- Proportional oil delivery over a wide range of air flows
- Fill under pressure

Combinations
- Compact design for space savings
- Easily assembled
- Many configurations available

Accessories
- Solenoid operated soft start, quick dump, and soft start/quick dump valves
- Manifold blocks
- Shut-off valves (both slide and ball type)
- Repair kits, gauges, etc.
Together we can power your application with clean, dry air

Fast cycle times, high product quality, and low downtime all require a clean, dry pneumatic system to function properly. Parker has what it takes to make sure pneumatic systems perform at their best.

Clean, dry pneumatic systems with Parker Global Air Preparation

As air is compressed to 7 bar (100 psig) and higher, the relative humidity quickly reaches 100% RH and air temperatures can reach between 110°C and 200°C (230°F and 392°F). For every 11°C (20°F) that the air cools after leaving the heat of the compressor, 50% of the moisture condenses into liquid into the system. The excess moisture condenses and collects in the receiver tank and distribution lines. This condensate must be removed.

Bulk liquid separators remove condensed liquids after the aftercooler, receiver, or anywhere within the distribution system.

Particulate filters are used for the removal of solid particle contaminants down to 5 micron, as well as the removal of condensed liquids.

Coalescing filters are designed to remove water and oil aerosols (not vapor) and particulate from air streams down to 0.01 micron in size.

Installed in pairs, Particulate and Coalescing filters ensure a continuous supply of high quality air.

Key
- Particulate
- Oil
- Water
- Oil Vapor
- Water Vapor
Refrigeration and desiccant dryers lower the air’s dew point by removing water vapor, providing appropriately dry air for the downstream application.

Hydrocarbon and oil vapors are removed using filters utilizing activated carbon. Airborne hydrocarbons are often left over from the compressor oils.

### Stages

<table>
<thead>
<tr>
<th>Stages</th>
<th>Function</th>
<th>Application</th>
<th>Description</th>
<th>Parker Global Air Preparation Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Air Compressor</td>
<td>All pneumatic systems</td>
<td>Air leaving the compressor room at 93°C (200°F) releases 95% of its moisture into the piping system when it cools to 38°C (100°F)</td>
<td>Customer supplied</td>
</tr>
<tr>
<td>2</td>
<td>Bulk Liquid Removal</td>
<td>Basic pneumatic systems</td>
<td>Removes bulk liquid contamination and protects filters where excess cooling takes place in the distribution piping</td>
<td>P3TF Bulk Liquid Separator</td>
</tr>
<tr>
<td>3</td>
<td>Particulate Filtration</td>
<td>Basic pneumatic systems</td>
<td>Removes solid particulates down to 5 micron, and the separation of bulk contaminants.</td>
<td>P31, P32, P33 Particulate Filter</td>
</tr>
<tr>
<td>4</td>
<td>Coalescing Filtration</td>
<td>Systems requiring highest quality air.</td>
<td>Removes liquid aerosols and submicron particulates (not vapor) down to 0.01 micron.</td>
<td>P31, P32, P33 Coalescing Filter</td>
</tr>
<tr>
<td>5</td>
<td>Air Dryers</td>
<td>Systems requiring air with reduced moisture content</td>
<td>Removes water vapor from air stream. Dew point reduced down to 4°C (40°F) (refrigeration) or -40°C (-40°F) (desiccant).</td>
<td>PDRD Refrigeration Dryer P3TJ Regenerative Desiccant Dryer</td>
</tr>
<tr>
<td>6</td>
<td>Hydrocarbon Removal</td>
<td>Systems requiring highest quality air for critical applications</td>
<td>Removal of odors and trace vapors for critical applications.</td>
<td>P31, P32, P33 Activated Carbon (Adsorber) Filter</td>
</tr>
</tbody>
</table>

---

**Clean Dry Air**
A completely modular air preparation system

Filter

Quick release bayonet-type integral bowl and bowl guard assembly

Bowl guard with multiple viewing slots

Manual drain with pipe-away, auto drain available

Pressur gauge

Electronic Proportional Regulator

- Electro-Pneumatic regulator
- Integrated systems control
- Accurate output pressure
- Micro parameter settings
- Selectable I/O parameters
- Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65
Common Port Manifold Regulators

- Multiple output pressures (P2, P3, P4, etc.) with common inlet (P1)
- Available in two sizes P31 and P32
- Balanced valve design for accurate pressure regulation
- Outlet pressure ports in front and rear of unit.
- Four spring ranges available
Air Preparation

P31 Mini Series

40mm body width
1/4" Ported

Flows up to: $\text{dm}^3/\text{s}$ (SCFM)
- Filter: 12 (25)
- Coalescer: 2 (4.2)
- Regulator: 30 (64)
- Filter/Regulator: 14 (30)
- Lubricator: 13 (28)

Features:
- Space saving integral gauge
- Manifold style regulators available
- OSHA compliant shut-off valves
- Soft-Start & Quick Dump valves
- Electronic Proportional Regulator

P32 Compact Series

60mm body width
1/4", 3/8", & 1/2" Ported

Flows up to: $\text{dm}^3/\text{s}$ (SCFM)
- Filter: 38 (80)
- Coalescer: 11 (23)
- Regulator: 67 (142)
- Filter/Regulator: 64 (136)
- Lubricator: 47 (100)

Features:
- Manifold style regulators available
- OSHA Compliant shut-off valves
- Soft-Start & Quick Dump valves
- Electronic Proportional Regulator

P33 Standard Series

73mm body width
1/2" & 3/4" Ported

Flows up to: $\text{dm}^3/\text{s}$ (SCFM)
- Filter: 48 (102)
- Coalescer: 20 (42)
- Regulator: 100 (212)
- Filter/Regulator: 98 (208)
- Lubricator: 68 (144)

Features:
- OSHA Compliant shut-off valves
- Soft-Start & Quick Dump valves (Utilizes P32 size only)
- Electronic proportional regulator (Utilizes P32 size only)
Valves and Actuators

Mini Series Complimentary Products

The P31 Mini Series FRL’s and accessories are well matched for use with these Parker valves and actuators.

<table>
<thead>
<tr>
<th>Isys Micro</th>
<th>Moduflex Size 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP-P</td>
<td>P1D</td>
</tr>
<tr>
<td>P1A</td>
<td></td>
</tr>
</tbody>
</table>

Compact Series Complimentary Products

The P32 Series FRL’s & accessories are well matched for use with these Parker valves and actuators.

<table>
<thead>
<tr>
<th>Isys Micro</th>
<th>Isys HA / HB</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP-P</td>
<td>P1D</td>
</tr>
</tbody>
</table>

Standard Series Complimentary Products

The P33 Series FRL’s & accessories are well matched for use with these Parker valves and actuators.

<table>
<thead>
<tr>
<th>Isys Size 1</th>
<th>Isys HA / HB</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1D</td>
<td>OSP-P</td>
</tr>
</tbody>
</table>

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/globalfrl
Complete Pneumatic System

Pressure Regulation

Accurate pressure regulation is important to control forces, speeds, torque, dispensing, processes, etc. Parker has a global solution to all of your pressure regulation needs, with support around the world.

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
<th>Parker Global Air Preparation Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>For pneumatic systems requiring single pressure regulation.</td>
<td>P31R, P32R, P33R</td>
</tr>
<tr>
<td>Common Port Manifold</td>
<td>For pneumatic systems requiring multiple pressures for different parts of the system, yet still having a common inlet supply.</td>
<td>P31H, P32H</td>
</tr>
<tr>
<td>Electronic Proportional</td>
<td>For pneumatic systems requiring an electronic to pneumatic proportional control signal. Also allows pressure regulation to be integrated into your control systems.</td>
<td>P31P, P32P fits Compact &amp; Standard</td>
</tr>
</tbody>
</table>

Accessories

Today’s sophisticated pneumatic systems need more than just FRL’s. Often times peripheral accessory products are needed to complete your pneumatic system. Parker has what is needed to ensure safe and reliable start-ups, shut-downs, and lockouts, etc.

<table>
<thead>
<tr>
<th>Function</th>
<th>Ball Valve</th>
<th>Slide Valve</th>
<th>Soft Start / Quick Dump</th>
<th>Soft Start</th>
<th>Quick Dump</th>
<th>Manifold Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Start Function</td>
<td>❌</td>
<td>❌</td>
<td>✅</td>
<td>✅</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Quick Dump Function</td>
<td>Slow Exhaust</td>
<td>Slow Exhaust</td>
<td>✅</td>
<td>❌</td>
<td>✅</td>
<td>❌</td>
</tr>
<tr>
<td>Operation</td>
<td>Manual Twist</td>
<td>Manual Slide</td>
<td>Solenoid or Air Pilot</td>
<td>Solenoid, Air Pilot, or Internal Air Pilot</td>
<td>Solenoid or Air Pilot</td>
<td>N/A</td>
</tr>
<tr>
<td>Placement</td>
<td>Before or after FRL or stand alone</td>
<td>Before or after FRL or stand alone</td>
<td>After FRL</td>
<td>After FRL</td>
<td>After FRL</td>
<td>Anywhere within FRL or stand alone</td>
</tr>
</tbody>
</table>
FRL to Valve: The chart below contains recommendations for the correct selection of Global Air Preparation units to suit the number and size of valves in a typical application.

<table>
<thead>
<tr>
<th>Number of valves that would actuate at once</th>
<th>P31 Mini Series</th>
<th>P32 Compact Series</th>
<th>P33 Standard Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<td>4</td>
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<td></td>
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<tr>
<td>15</td>
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<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Moduflex 1
Isys Micro
HB / Viking Xtreme
Moduflex 2
HA / Global ISO

See Larger Parker FRL Offering

Actuator to FRL: The chart below contains recommendations for the correct selection of Global Air Preparation units suitable for each cylinder size. If you have a tube length over 2 m, choose one tube size larger than the chart. The table is based on a Maximum cylinder speed of 0.5m/s.

<table>
<thead>
<tr>
<th>Cyl Ø mm</th>
<th>Cylinder bore size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyl Ø inches</td>
<td>5 (5/16)</td>
</tr>
<tr>
<td>Tube Ø mm</td>
<td>4 (5/32)</td>
</tr>
<tr>
<td>Tube Ø inches</td>
<td>5/32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of cylinders actuating at once</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
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<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

P31 Mini Series
P32 Compact Series
P33 Standard Series

See Larger Parker FRL Offering

Note: Data listed above is simply a guideline for a typical application only. Proper sizing and correct flow requirements must be taken into account.
## Popular Combinations

**Filter + Regulator + Lubricator Combinations + Poly bowl**
- 5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets
- Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig), 1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight</th>
<th>Pulse Drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>13</td>
<td>27</td>
<td>P31CB92GEMN5LNW</td>
<td>0.46 kg (1.01 lbs)</td>
<td>P31CB92GEBN5LNW</td>
</tr>
</tbody>
</table>

**Filter/Regulator + Lubricator Combinations + Poly bowl**
- 5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets
- Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig), 1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight</th>
<th>Pulse Drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>14</td>
<td>28</td>
<td>P31CA92GEMN5LNW</td>
<td>0.35 kg (0.77 lbs)</td>
<td>P31CA92GEBN5LNW</td>
</tr>
</tbody>
</table>

### Filter / Regulator coding
(Use with codes: A M)

**Filter coding**
- (use with combo codes: B F G). For multiple filters, repeat as needed

**Regulator coding**
- (use with combo code: B)

**Lubricator coding**
- (use with combo codes: A B)

**Assembly configuration**

---

**P 3 1**

<table>
<thead>
<tr>
<th>Combination</th>
<th>Thread type</th>
<th>Element</th>
<th>Relief / Adjustment</th>
<th>Lubricator type</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/V + Combination</td>
<td>BSPP</td>
<td>5µ Element</td>
<td>Non-rising knob</td>
<td>Oil mist standard sight dome</td>
<td>No bracket</td>
</tr>
<tr>
<td>Combination + B/V</td>
<td>BSPT</td>
<td>0.01µ Element</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Combination</td>
<td>NPT</td>
<td>1µ Element</td>
<td></td>
<td></td>
<td>Port blocks</td>
</tr>
<tr>
<td>Shut off + Combination</td>
<td></td>
<td>Adsorber</td>
<td></td>
<td></td>
<td>C*</td>
</tr>
<tr>
<td>Combination + Shut off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&amp; wall brkt</td>
</tr>
</tbody>
</table>

**Combination type**
- F/R+L
- F+Fc+Fa
- Fc1 = 1µ
- Fc = 0.01µ
- Fa = Adsorber

**Bowl type**
- Poly bowl with bowl guard
- Metal bowl without sight gauge

**Note:** All bowl types are the same for each component

**Example:** If a “G” is specified for a F+L, both units would get a poly bowl with bowl guard.

---

**Port size**

<table>
<thead>
<tr>
<th>F/R+L</th>
<th>F+Fc+Fa</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fc1</td>
<td>1µ</td>
<td>C</td>
</tr>
<tr>
<td>Fa</td>
<td>Adsorber</td>
<td>A</td>
</tr>
</tbody>
</table>

---

**Drain type**

<table>
<thead>
<tr>
<th>Manual drain</th>
<th>Pulse drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>B</td>
</tr>
</tbody>
</table>

---

**Adjustment range**

- With square gauge
  - psig | bar
  - 30 = 1 | 2 = V
  - 60 = 3 | 4 = S
  - 125 = 5 | 8 = T

- Without gauge†
  - psig | bar
  - 30 = Y | 2 = Y
  - 60 = L | 4 = L
  - 125 = N | 8 = N

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
† Order round gauges separately - see page 31.

---

**For 3/8” Port Blocks please order separately. See Kits section.**
### Popular Combinations

**Filter + Regulator + Lubricator Combinations + Poly bowl**
5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets
Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig),
1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight</th>
<th>Auto Drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>20</td>
<td>42</td>
<td>P32CB92GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB92GEANGLNW</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>32</td>
<td>68</td>
<td>P32CB93GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB93GEANGLNW</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>40</td>
<td>85</td>
<td>P32CB94GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB94GEANGLNW</td>
</tr>
</tbody>
</table>

**Filter/Regulator + Lubricator Combinations + Poly bowl**
5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets
Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig),
1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight</th>
<th>Auto Drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>22</td>
<td>45</td>
<td>P32CA92GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA92GEANGLNW</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>33</td>
<td>70</td>
<td>P32CA93GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA93GEANGLNW</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43</td>
<td>90</td>
<td>P32CA94GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA94GEANGLNW</td>
</tr>
</tbody>
</table>

### Filter / Regulator coding
(Use with codes: A M)

<table>
<thead>
<tr>
<th>Filter coding (use with combo codes: B F G). For multiple filters, repeat as needed</th>
<th>Regulator coding (use with combo code: B)</th>
<th>Lubricator coding (use with combo codes: A B)</th>
<th>Assembly configuration</th>
</tr>
</thead>
</table>

### Example:
If a “G” is specified for a F+L, both units would get a poly bowl with bowl guard.

---

### Combination type

- **Combination type**: F = 5µ
  - Fc1 = 1µ
  - Fa = Adsorber

### Notes:
- All bowl types are the same for each component.
- Example: If a “G” is specified for a F+L, both units would get a poly bowl with bowl guard.
## Popular Combinations

**Filter + Regulator + Lubricator Combinations + Poly bowl**

5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets

Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig),
1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight (kg)</th>
<th>Auto Drain</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>43</td>
<td>P33CB94GEMGLNW</td>
<td>1.84 (4.06)</td>
<td>P33CB94GEANGLNW</td>
<td>1.84 (4.06)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>52</td>
<td>P33CB96GEMGLNW</td>
<td>1.84 (4.06)</td>
<td>P33CB96GEANGLNW</td>
<td>1.84 (4.06)</td>
</tr>
</tbody>
</table>

**Filter/Regulator + Lubricator Combinations + Poly bowl**

5 micron element, 8 bar (116 psig) Regulator + Gauge and Wall Mounting Brackets

Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig),
1 bar (14.5 psig) pressure drop.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual Drain</th>
<th>Weight (kg)</th>
<th>Auto Drain</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52</td>
<td>P33CA94GEMGLNW</td>
<td>1.51 (3.33)</td>
<td>P33CA94GEANGLNW</td>
<td>1.51 (3.33)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71</td>
<td>P33CA96GEMGLNW</td>
<td>1.51 (3.33)</td>
<td>P33CA96GEANGLNW</td>
<td>1.51 (3.33)</td>
</tr>
</tbody>
</table>

**Filter / Regulator coding**

(Use with combo codes: A M)

**Filter coding**

(Use with combo code: B F G). For multiple filters, repeat as needed

**Regulator coding**

(Use with combo code: B)

**Lubricator coding**

(Use with combo codes: A B)

**Assembly configuration**

**Port size**

Flow (dm³/s) | Manual Drain | Weight | Auto Drain | Weight
---|---|---|---|---
1/2" | 43 | P33CB94GEMGLNW | 1.84 (4.06) | P33CB94GEANGLNW | 1.84 (4.06) |
3/4" | 52 | P33CB96GEMGLNW | 1.84 (4.06) | P33CB96GEANGLNW | 1.84 (4.06) |

**Filter**

Element

- 0.01µ Element: C
- 0.01µ Element with dpi: D
- 5µ Element: E
- 5µ Element with dpi: F
- 1µ Element: G
- 1µ Element with dpi: H
- Adsorber: A

**Regulator**

Non-rising knob: N

**Lubricator**

Oil mist standard sight dome: L

**Drain type**

- Auto drain: A
- Manual drain: M

**Thread type**

- BSPP: 1
- BSPT: 2
- NPT: 9

**Combination type**

- F/R+L: A
- F+Fc+Fa: G
- F+Fc: F
- F+Fc1+Fc: Q

**Combination**

- B/V + Combination: Q
- Combination + B/V: X
- Combination: C
- Shut off + Combination: Y
- Combination + Shut off: Z

**Bowl type**

- Poly bowl with bowl guard: G
- Metal bowl without sight gauge: M
- Metal bowl with sight gauge: S

*Not available when using lubricator.

**Example:** If a "G" is specified for a F+L, both units would get a poly bowl with bowl guard.

---

**Note:** All bowl types are the same for each component.
Popular Combination Dimensions  mm (inches)

**P31C**

<table>
<thead>
<tr>
<th>4mm (5/32&quot;)</th>
<th>I.D. Tube</th>
<th>Barb fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 (3.15)</td>
<td>77 (3.03)</td>
<td>41 (1.61)</td>
</tr>
<tr>
<td>35 (1.38)</td>
<td>35 (1.38)</td>
<td>35 (1.38)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>32.5 Bowl removal clearance</th>
</tr>
</thead>
</table>

**P32C**

<table>
<thead>
<tr>
<th>4.8 mm (.19)</th>
<th>I.D. Tube</th>
<th>Barb fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>129 (5.08)</td>
<td>115 (4.53)</td>
<td>47.1 (1.85)</td>
</tr>
<tr>
<td>50 (1.97)</td>
<td>100 (3.94)</td>
<td></td>
</tr>
<tr>
<td>100 (3.94)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bowl removal clearance. (Manual and Auto Drain.)</th>
</tr>
</thead>
</table>

**P33C**

<table>
<thead>
<tr>
<th>4.8 mm (.19)</th>
<th>I.D. Tube</th>
<th>Barb fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>155 (6.1)</td>
<td>120 (4.72)</td>
<td>47.1 (1.85)</td>
</tr>
<tr>
<td>50 (1.97)</td>
<td>100 (3.94)</td>
<td></td>
</tr>
<tr>
<td>100 (3.94)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bowl removal clearance. (Manual and Auto Drain.)</th>
</tr>
</thead>
</table>

Manual and Auto Drain.
Mini Particulate Filter - P31

Symbols

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- One hand operation for easy element cartridge removal
- Positive bayonet latch to ensure correct & safe fitting

Options:

<table>
<thead>
<tr>
<th>P 3 1 F</th>
<th>Thread type</th>
<th>Port size</th>
<th>Bowl type</th>
<th>Drain type</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>BSPP</td>
<td>1/4</td>
<td>Poly bowl with bowl guard</td>
<td>Pulse drain</td>
<td>No bracket</td>
</tr>
<tr>
<td></td>
<td>BSPT</td>
<td>2</td>
<td>Metal bowl without sight gauge</td>
<td>Manual drain</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>NPT</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Engr. level</td>
<td>* * Will be entered at factory</td>
<td>* *</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P31F*92EGMN</td>
<td>12 (25)</td>
<td>10 (150)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - Pulse drain</td>
<td>P31F*92EBN</td>
<td>12 (25)</td>
<td>10 (150)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P31F*92EMMN</td>
<td>12 (25)</td>
<td>17 (250)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - Pulse drain</td>
<td>P31F*92EMBN</td>
<td>12 (25)</td>
<td>17 (250)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 (4.9 psig) pressure drop.

* Engineering Level will be entered at factory.
## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Capacity*</td>
<td>1/4</td>
</tr>
<tr>
<td></td>
<td>12 dm³/s (25 scfm)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Plastic Bowl -10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl -10°C to 65.5°C (14°F to 150°F)</td>
</tr>
<tr>
<td>Max. Supply Pressure</td>
<td>Plastic Bowl 10 bar (150 psig)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl 17 bar (250 psig)</td>
</tr>
<tr>
<td>Standard Filtration</td>
<td>Plastic Bowl 5 Micron</td>
</tr>
<tr>
<td>Useful Retention†</td>
<td>12 cm³ (0.4 US oz.)</td>
</tr>
<tr>
<td>Port Size</td>
<td>BSPP / BSPT / NPT 1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.11 kg (0.24 lbs)</td>
</tr>
</tbody>
</table>

* Inlet pressure 6.3 bar (91.3 psig). Pressure drop 0.34 bar (4.9 psig).
† Useful retention refers to volume below the quiet zone baffle.

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

## Materials of Construction

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Body Cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bowl</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Bowl Guard</td>
<td>Nylon</td>
</tr>
<tr>
<td>Element Retainer</td>
<td>Acetal</td>
</tr>
<tr>
<td>Baffle</td>
<td>Acetal</td>
</tr>
<tr>
<td>Filter Element</td>
<td>Sintered Polyethylene</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
</tbody>
</table>

## Dimensions mm (inches)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body diameter</td>
<td>42.7 (1.65)</td>
</tr>
<tr>
<td>Body height</td>
<td>116.3 (4.58)</td>
</tr>
<tr>
<td>Bowl diameter</td>
<td>21.3 (0.84)</td>
</tr>
<tr>
<td>Bowl height</td>
<td>18.3 (0.72)</td>
</tr>
<tr>
<td>I.D. Tube</td>
<td>40 (1.58)</td>
</tr>
<tr>
<td>Barb fitting</td>
<td>33.3 (1.31)</td>
</tr>
</tbody>
</table>

## Flow Charts

### 1/4 Filter

![Flow Chart](chart.png)

- Primary Pressure - bar: 1.6, 4.0, 6.3, 10
- Primary Pressure - psig: 23.2, 58, 91.4, 145
- Flow - dm³/s: 0 to 10, 20, 30, 40
- Flow - (scfm): 0 to 30, 40, 50, 60

## Repair and Service Kits

<table>
<thead>
<tr>
<th>Kit Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic bowl / Bowl guard manual drain</td>
<td>P31KA00BGM</td>
</tr>
<tr>
<td>Metal bowl / w/o sight gauge manual drain</td>
<td>P31KA00BMM</td>
</tr>
<tr>
<td>Plastic bowl / Bowl guard pulse drain</td>
<td>P31KA00BGB</td>
</tr>
<tr>
<td>Metal bowl / w/o sight gauge pulse drain</td>
<td>P31KA00BMB</td>
</tr>
<tr>
<td>5µ particle filter element</td>
<td>P31KA00ESE</td>
</tr>
<tr>
<td>C-Bracket (fits to body)</td>
<td>P31KA00MW</td>
</tr>
<tr>
<td>T-Bracket with body connector</td>
<td>P31KA00MT</td>
</tr>
<tr>
<td>Body connector</td>
<td>P31KA00CB</td>
</tr>
</tbody>
</table>
## Global Air Preparation System

### Compact Particulate Filter - P32

#### Symbols

- Manual drain
- Auto drain

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting

#### Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow† dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P32F*92EGMN</td>
<td>18 (38)</td>
<td>10 (150)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - Auto drain</td>
<td>P32F<em>92EG</em>N</td>
<td>18 (38)</td>
<td>10 (150)</td>
<td>182 (7.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P32F*92ESMN</td>
<td>18 (38)</td>
<td>17 (250)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - Auto drain</td>
<td>P32F<em>92ES</em>N</td>
<td>18 (38)</td>
<td>17 (250)</td>
<td>182 (7.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P32F*93EGMN</td>
<td>30 (64)</td>
<td>10 (150)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P32F*93ESMN</td>
<td>30 (64)</td>
<td>17 (250)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Metal bowl - Auto drain</td>
<td>P32F<em>93ES</em>N</td>
<td>30 (64)</td>
<td>17 (250)</td>
<td>182 (7.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P32F*94EGMN</td>
<td>38 (80)</td>
<td>10 (150)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - Auto drain</td>
<td>P32F<em>94EG</em>N</td>
<td>38 (80)</td>
<td>10 (150)</td>
<td>182 (7.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P32F*94ESMN</td>
<td>38 (80)</td>
<td>17 (250)</td>
<td>188 (7.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - Auto drain</td>
<td>P32F<em>94ES</em>N</td>
<td>38 (80)</td>
<td>17 (250)</td>
<td>182 (7.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 (4.9 psig) pressure drop.

* Engineering Level will be entered at factory.
Specifications

Flow Capacity* 1/4 18 dm³/s (38 scfm) 3/8 30 dm³/s (64 scfm) 1/2 38 dm³/s (80 scfm)

Operating Temperature Plastic Bowl -25°C to 52°C (-13°F to 125°F) Metal Bowl -25°C to 65.5°C (-13°F to 150°F)

Max. Supply Plastic Bowl 10 bar (150 psig) Metal Bowl 17 bar (250 psig)

Standard Filtration Plastic Bowl 5 Micron Metal Bowl 5 Micron

Useful Retention† 51 cm³ (1.7 US oz.)

Port Size BSPP / BSPT / NPT 1/4, 3/8, 1/2

Weight 0.28 kg (0.62 lbs)

* Inlet pressure 6.3 bar (91.3 psig). Pressure drop 0.34 bar (4.9 psig).
† Useful retention refers to volume below the quiet zone baffle.

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

Materials of Construction

Body Aluminum
Body Cap ABS
Bowls Plastic Bowl Polycarbonate Metal Bowl Aluminum

Bowl Guard Nylon
Deflector Polypropylene
Element Retainer / Baffle Acetal
Filter Element Sintered Polyethylene
Seals Nitrile
Sight Gauge Metal Bowl Polycarbonate

Dimensions mm (inches)

Flow Charts

1/4 Filter

Pressure Drop - bar
Pressure Drop - (psig)
0 2 4 6 5 3 1 7
21.6 23.2 58 6.3 91.4 145

Primary Pressure - bar
Primary Pressure - psig
Flow - dm³/s
Flow - (scfm)
0 50 10 20 30 40 50 60

3/8 Filter

Pressure Drop - bar
Pressure Drop - (psig)
0 2 4 6 5 3 1 7
21.6 23.2 58 6.3 91.4 145

Primary Pressure - bar
Primary Pressure - psig
Flow - dm³/s
Flow - (scfm)
0 50 10 20 30 40 50 60

1/2 Filter

Pressure Drop - bar
Pressure Drop - (psig)
0 2 4 6 5 3 1 7
21.6 23.2 58 6.3 91.4 145

Primary Pressure - bar
Primary Pressure - psig
Flow - dm³/s
Flow - (scfm)
0 50 10 20 30 40 50 60

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P32KA00BGM
Metal bowl / Sight gauge manual drain P32KA00BSM
Auto drain P32KA00DA
5µ particle filter element P32KA00ESE
L-Bracket (fits to body) P32KA00ML
T-Bracket (fits to body connector) P32KA00MB
T-Bracket with body connector P32KA00MT
Body connector P32KA00CB
Differential pressure indicator (replacement) P32KA00RQ
# Global Air Preparation System

## Standard Particulate Filter - P33

![Filter Image]

### Symbols

- Manual drain
- Auto drain

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting

### Options:

<table>
<thead>
<tr>
<th>P 3 3 F</th>
<th>Engr. level</th>
<th>Thread type</th>
<th>Port size</th>
<th>Bowl type</th>
<th>Drain type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>* Will be entered at factory</td>
<td>BSPP</td>
<td>1/2</td>
<td>Poly bowl with bowl guard</td>
<td>Manual drain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BSPT</td>
<td>3/4</td>
<td>Metal bowl without sight gauge</td>
<td>Auto drain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NPT</td>
<td>3/4</td>
<td>Metal bowl with sight gauge</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ (dm³/s scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P33F*94EGMN</td>
<td>40 (85)</td>
<td>10 (150)</td>
<td>213 (8.4)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - Auto drain</td>
<td>P33F*94EGN</td>
<td>40 (85)</td>
<td>10 (150)</td>
<td>207 (8.2)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P33F*94ESMN</td>
<td>40 (85)</td>
<td>17 (250)</td>
<td>213 (8.4)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - Auto drain</td>
<td>P33F*94ESN</td>
<td>40 (85)</td>
<td>17 (250)</td>
<td>207 (8.2)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - Manual drain</td>
<td>P33F*96EGMN</td>
<td>48 (102)</td>
<td>10 (150)</td>
<td>213 (8.4)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - Auto drain</td>
<td>P33F*96EGN</td>
<td>48 (102)</td>
<td>10 (150)</td>
<td>207 (8.2)</td>
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<td>3/4&quot;</td>
<td>Metal bowl - Manual drain</td>
<td>P33F*96ESMN</td>
<td>48 (102)</td>
<td>17 (250)</td>
<td>213 (8.4)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
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<tr>
<td>3/4&quot;</td>
<td>Metal bowl - Auto drain</td>
<td>P33F*96ESN</td>
<td>48 (102)</td>
<td>17 (250)</td>
<td>207 (8.2)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 (4.9 psig) pressure drop.

* Engineering Level will be entered at factory.
Global Air Preparation System

Specifications

Flow Capacity*  
1/2  40 dm³/s (85 scfm)  
3/4  48 dm³/s (102 scfm)

Operating Plastic Bowl -25°C to 52°C (-13°F to 125°F)  
Temperature Metal Bowl -25°C to 65.5°C (-13°F to 150°F)

Max. Supply Plastic Bowl 10 bar (150 psig)  
Pressure Metal Bowl 17 bar (250 psig)

Standard Filtration 5 Micron

Useful Retention† 85 cm³ (2.8 US oz.)

Port Size BSPP / BSPT / NPT 1/2, 3/4

Weight 0.46 kg (1.01 lbs)

* Inlet pressure 6.3 bar (91.3 psig). Pressure drop 0.34 bar (4.9 psig).
† Useful retention refers to volume below the quiet zone baffle.

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

Materials of Construction

Body Aluminum
Body Cap ABS
Bowls Plastic Bowl Polycarbonate  
Metal Bowl Aluminum

Bowl Guard Nylon
Deflector Polypropylene
Element Retainer / Baffle Acetal
Filter Element Sintered Polyethylene
Seals Nitrile
Sight Gauge Metal Bowl Polycarbonate

Dimensions mm (inches)

Use 10mm or 3/8” Flex Tubing

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P33KA00BGM
Metal bowl / Sight gauge manual drain P33KA00BSM
Auto drain P32KA00DA
5µ particle filter element P33KA00ESE
L-Bracket (fits to body) P33KA00ML
T-Bracket (fits to body connector) P32KA00MB
T-Bracket with body connector P33KA00MT
Body connector P32KA00CB
Differential pressure indicator (replacement) P32KA00RQ
Mini Coalescing and Adsorber Filters - P31

- Integral 1/4\* ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

Note: To optimize the life of coalescing element, it is advisable to install a P31F pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of an Adsorber it is advisable to install a P31 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.

Options:

<table>
<thead>
<tr>
<th>P 3 1 F</th>
<th>*</th>
<th>Thread type</th>
<th>Port size</th>
<th>Bowl type</th>
<th>Drain type</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. level</td>
<td>*</td>
<td>BSPP 1</td>
<td>1/4 2</td>
<td>Poly bowl with bowl guard G</td>
<td>Pulse drain B</td>
<td>No bracket N</td>
</tr>
<tr>
<td>* Will be entered at factory</td>
<td>Thread type BSPT 2</td>
<td></td>
<td></td>
<td>Metal bowl without sight gauge M</td>
<td>Manual drain M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thread type NPT 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>Engr. level</td>
<td>Bowl type</td>
<td>Drain type</td>
<td>Mounting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Poly bowl - 0.01 micron - Manual drain</td>
<td>* Engineering Level will be entered at factory</td>
<td>Poly bowl with bowl guard G</td>
<td>Pulse drain B</td>
<td>No bracket N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Poly bowl - 0.01 micron - Pulse drain</td>
<td></td>
<td>Metal bowl without sight gauge M</td>
<td>Manual drain M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Metal bowl - 0.01 micron - Manual drain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Metal bowl - 0.01 micron - Pulse drain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code (^1)</th>
<th>Flow(^2) dm(^3)/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; Poly bowl - 0.01 micron - Manual drain</td>
<td>P31F*92CGMN</td>
<td>2 (4.2)</td>
<td>10 (150)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Poly bowl - 0.01 micron - Pulse drain</td>
<td>P31F*92CGBN</td>
<td>2 (4.2)</td>
<td>10 (150)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Metal bowl - 0.01 micron - Manual drain</td>
<td>P31F*92CMMN</td>
<td>2 (4.2)</td>
<td>17 (250)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Metal bowl - 0.01 micron - Pulse drain</td>
<td>P31F*92CMBN</td>
<td>2 (4.2)</td>
<td>17 (250)</td>
<td>116.3 (4.58)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Standard part numbers shown in bold. For other models refer to Options chart above.
\(^2\) Flow with 6.3 bar (91.3 psig) inlet pressure and 0.2 (3 psig) pressure drop.
**Specifications**

<table>
<thead>
<tr>
<th>Flow Capacity</th>
<th>dm³/s</th>
<th>SCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Micron Coalescing</td>
<td>Energy Efficient Flow*</td>
<td>3.8 (8)</td>
</tr>
<tr>
<td></td>
<td>Maximum Flow**</td>
<td>6 (13)</td>
</tr>
<tr>
<td>0.01 Micron Coalescing</td>
<td>Energy Efficient Flow*</td>
<td>2 (4.2)</td>
</tr>
<tr>
<td></td>
<td>Maximum Flow**</td>
<td>3.8 (8)</td>
</tr>
<tr>
<td>Activated Carbon Adsorber</td>
<td>Rated Flow*</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Plastic Bowl</td>
<td>-10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl</td>
<td>-10°C to 65.5°C (14°F to 150°F)</td>
</tr>
<tr>
<td>Max. Supply Pressure</td>
<td>Plastic Bowl</td>
<td>10 bar (150 psig)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl</td>
<td>17 bar (250 psig)</td>
</tr>
<tr>
<td>Standard Filtration</td>
<td>1.0 and 0.01 Micron</td>
<td></td>
</tr>
<tr>
<td>Adsorber</td>
<td>Max. oil carryover (ppm w/w)</td>
<td>0.003 @ 21°C (70°F)</td>
</tr>
<tr>
<td>Useful Retention</td>
<td>12 cm³ (0.4 US oz.)</td>
<td></td>
</tr>
<tr>
<td>Port Size</td>
<td>BSPP / BSPT / NPT</td>
<td>1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.11 kg (0.24 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

* Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.2 bar (3 psig), Saturated Element.
** Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.4 bar (6 psig), Saturated Element.
† Useful retention refers to volume below the quiet zone baffle.

**Materials of Construction**

- **Body**: Aluminum
- **Body Cap**: ABS
- **Bowl**: Plastic Bowl - Polycarbonate, Metal Bowl - Aluminum
- **Filter Element**: 1.0 and .01 Micron - Borosilicate Cloth
- **Adsorber**: Activated Carbon
- **Seals**: Nitrile

**Dimensions mm (inches)**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>mm</th>
<th>Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body height</td>
<td>116.3</td>
<td>4.58</td>
</tr>
<tr>
<td>Body width</td>
<td>42.7</td>
<td>1.68</td>
</tr>
<tr>
<td>Body depth</td>
<td>21.3</td>
<td>0.84</td>
</tr>
<tr>
<td>Bowl removal clearance</td>
<td>18.3</td>
<td>0.72</td>
</tr>
<tr>
<td>Port size</td>
<td>116.3</td>
<td>4.58</td>
</tr>
<tr>
<td>Barb fitting</td>
<td>40.0</td>
<td>1.58</td>
</tr>
<tr>
<td>I.D. Tube</td>
<td>23.3</td>
<td>0.91</td>
</tr>
<tr>
<td>4mm (5/32&quot;)</td>
<td>6.3</td>
<td>0.25</td>
</tr>
</tbody>
</table>

**Flow Charts**

- **P31 - 1.0 micron flow**
- **P31 - 0.01 micron flow**

**Repair and Service Kits**

- Plastic bowl / Bowl guard manual drain: P31KA00BGM
- Metal bowl / w/o sight gauge manual drain: P31KA00BMM
- Plastic bowl / Bowl guard pulse drain: P31KA00BGB
- Metal bowl / w/o sight gauge pulse drain: P31KA00BMB
- 1µ coalescing filter element: P31KA00ES9
- 0.01µ coalescing filter element: P31KA00ESC
- Activated carbon adsorber filter element: P31KA00ESA
- C-Bracket (fits to body): P31KA00MW
- T-Bracket with body connector: P31KA00MT
- Body connector: P31KA00CB
Order
Poly
P32F*94DSAN
P32F*94DSMN
Poly
Poly
P32F*94DGMN
P32F*94DGAN
Metal
Poly
P32F*92DGAN
Metal
P32F*92DSMN
P32F*93DSAN
P32F*93DGMN
P32F*92DSAN
P32F*93DSMN

‡
†

Flow
Options:
Compact Coalescing and Adsorber Filter - P32

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on Coalescing Filters
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

Note: To optimize the life of coalescing element, it is advisable to install a P32F pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of an Adsorber it is advisable to install a P32 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.

Options:

**P 3 2 F**

<table>
<thead>
<tr>
<th>Engr. level</th>
<th>Thread type</th>
<th>Port size</th>
<th>Bowl type</th>
<th>Mounting</th>
<th>Drain type</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Will be entered at factory</td>
<td>BSPP 1</td>
<td>1/4</td>
<td>Poly bowl with bowl guard</td>
<td>No bracket</td>
<td>Manual drain</td>
</tr>
<tr>
<td>*</td>
<td>BSPT 2</td>
<td>3/8</td>
<td>Metal bowl without sight gauge</td>
<td></td>
<td>Auto drain</td>
</tr>
<tr>
<td>*</td>
<td>NPT 9</td>
<td>1/2</td>
<td>Metal bowl with sight gauge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Flow² dm³/s (scfm)</th>
<th>Max. bar (psi)</th>
<th>Height (inches)</th>
<th>Width (inches)</th>
<th>Depth (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01µ Element</td>
<td>C</td>
<td>10 (150)</td>
<td>209 (8.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>0.01µ Element with dpi</td>
<td>D</td>
<td>10 (150)</td>
<td>209 (8.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1µ Element</td>
<td>9</td>
<td>10 (150)</td>
<td>209 (8.2)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1µ Element with dpi</td>
<td>Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adsorber</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

---

1 Standard part numbers shown in bold. For other models refer to Options chart above.
2 Flow with 6.3 bar (91.3 psig) inlet pressure and 0.2 (3 psig) pressure drop.
**Specifications**

Flow Capacity

<table>
<thead>
<tr>
<th>Flow Capacity</th>
<th>Flow Capacity</th>
<th>SCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Micron Coalescing</td>
<td>Energy Efficient Flow</td>
<td>17 (36)</td>
</tr>
<tr>
<td></td>
<td>Maximum Flow</td>
<td>27 (57)</td>
</tr>
<tr>
<td>0.01 Micron Coalescing</td>
<td>Energy Efficient Flow</td>
<td>11 (23)</td>
</tr>
<tr>
<td></td>
<td>Maximum Flow</td>
<td>28 (38)</td>
</tr>
<tr>
<td>Activated Carbon Adsorber</td>
<td>Rated Flow</td>
<td>27 (57)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Plastic Bowl</td>
<td>-25°C to 52°C (-13°F to 125°F)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl</td>
<td>-25°C to 65.5°C (-13°F to 150°F)</td>
</tr>
<tr>
<td>Max. Supply Pressure</td>
<td>Plastic Bowl</td>
<td>10 bar (150 psig)</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl</td>
<td>17 bar (250 psig)</td>
</tr>
<tr>
<td>Standard Filtration</td>
<td>1.0 and 0.01 Micron</td>
<td></td>
</tr>
<tr>
<td>Adsorber</td>
<td>Max. oil carryover (ppm w/w) 0.003 @ 21°C (70°F)</td>
<td></td>
</tr>
<tr>
<td>Useful Retention†</td>
<td>51 cm³ (1.7 US oz.)</td>
<td></td>
</tr>
<tr>
<td>Port Size</td>
<td>BSPP / BSPT / NPT</td>
<td>1/4, 3/8, 1/2</td>
</tr>
<tr>
<td>Weight</td>
<td>0.32 kg (0.71 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

* Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.2 bar (3 psig), Saturated Element.

** Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.4 bar (6 psig), Saturated Element.

† Useful retention refers to volume below the quiet zone baffle.

**Dimensions mm (inches)**

- Manual Drain
  - 60 (2.36) DPI
  - 48 (1.9) L.D. Tube Barb fitting
  - Bowl removal clearance (Manual and Auto Drain)
  - Use 10mm or 3/8" Flex Tubing

- Automatic Drain
  - 60 (2.36)
  - 30 (1.18)

**Flow Charts**

**P32 - 1.0 micron flow**

- Primary Pressure - bar: 2.0, 4.0, 6.3
- Primary Pressure - psig: 29, 58, 91.4
- Flow - dm³/s: 0, 5, 10, 15, 20, 25, 30
- Pressure Drop - bar: 0.1, 0.2, 0.3, 0.4, 0.5
- Pressure Drop - (psig): 0, 2.0, 2.9

**P32 - 0.01 micron flow**

- Primary Pressure - bar: 2.0, 4.0, 6.3
- Primary Pressure - psig: 29, 58, 91.4
- Flow - dm³/s: 0, 5, 10, 15, 20, 25
- Pressure Drop - bar: 0.1, 0.2, 0.3, 0.4
- Pressure Drop - (psig): 0, 2.0, 2.9

**Materials of Construction**

- Body: Aluminum
- Body Cap: ABS
- Bowls: Plastic Bowl, Metal Bowl
- Filter Element: 1.0 and .01 Micron Borosilicate Cloth
- Adsorber: Activated Carbon
- Seals: Nitrile
- Sight Gauge: Metal Bowl

**Repair and Service Kits**

- Plastic bowl / Bowl guard manual drain: P32KA00BGM
- Metal bowl / Sight gauge manual drain: P32KA00BSM
- Auto drain: P32KA00DA
- 1µ coalescing filter element: P32KA00ES9
- 0.01µ coalescing filter element: P32KA00ESC
- Activated carbon adsorber filter element: P32KA00ESA
- L-Bracket (fits to body): P32KA00ML
- T-Bracket (fits to body connector): P32KA00MB
- T-Bracket with body connector: P32KA00MT
- Body connector: P32KA00CB
- Differential pressure indicator (replacement): P32KA00RQ
Standard Coalescing and Adsorber Filter - P33

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on Coalescing Filters
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

Note: To optimize the life of coalescing element, it is advisable to install a P33F pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of an Adsorber it is advisable to install a P33 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - 0.01 Micron, Manual drain</td>
<td>P33F94DGGMN</td>
<td>20 (42)</td>
<td>10 (150)</td>
<td>235 (9.3)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - 0.01 Micron, Auto drain</td>
<td>P33F94DGAN</td>
<td>20 (42)</td>
<td>10 (150)</td>
<td>229 (9.0)</td>
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</tr>
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<td>Metal bowl - 0.01 Micron, Manual drain</td>
<td>P33F94DSMN</td>
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<td>17 (250)</td>
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</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.2 (3 psig) pressure drop.

* Engineering Level will be entered at factory.

Options:
- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on Coalescing Filters
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

Note: To optimize the life of coalescing element, it is advisable to install a P33F pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of an Adsorber it is advisable to install a P33 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
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<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.2 (3 psig) pressure drop.
Catalog 0750-2 US
Global Air Preparation System

Specifications

Flow Capacity  
1.0 Micron Coalescing  
Energy Efficient Flow*  32 (68)  
Maximum Flow**  44 (93)  
0.01 Micron Coalescing  
Energy Efficient Flow*  20 (42)  
Maximum Flow**  34 (72)  
Activated Carbon Adsorber  
Rated Flow*  44 (93)  
Maximum Flow**  34 (72)  

Flow Charts

** Saturated Element.

Materials of Construction

Body  Aluminum  
Body Cap  ABS  
Bowls  Plastic Bowl  Polycarbonate  
Plastic Bowl  Metal Bowl  
Filter Element  1.0 and .01 Micron  Borosilicate Cloth  
Adsorber  Activated Carbon  
Seals  Nitrile  
Sight Gauge  Metal Bowl  Polycarbonate  

Repair and Service Kits

Plastic bowl / Bowl guard manual drain  P33KA00BGM  
Metal bowl / Sight gauge manual drain  P33KA00BSM  
Auto drain  P32KA00DA  
1µ coalescing filter element  P33KA00ES9  
0.01µ coalescing filter element  P33KA00ESC  
Activated carbon adsorber filter element  P33KA00ESA  
L-Bracket (fits to body)  P33KA00ML  
T-Bracket (fits to body connector)  P32KA00MB  
T-Bracket with body connector  P32KA00MT  
Body connector  P32KA00CB  
Differential pressure indicator (replacement)  P32KA00RQ  

Dimensions mm (inches)

Manual Drain  
Automatic Drain  

Use 10mm or 3/8” Flex Tubing

4.8 mm (.19) I.D. Tube Barb fitting

Parker Hannifin Corporation  
Pneumatic Division  
Richland, Michigan  
www.parker.com/globalfrl

---

* Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.2 bar (3 psig), Saturated Element.  
** Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.4 bar (6 psig), Saturated Element.  
† Useful retention refers to volume below the quiet zone baffle.
Mini Regulator - P31

Symbols

- Self relieving regulator with gauge
- Non relieving regulator

Options:

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & Non-relieving types
- Non-rising knob

<table>
<thead>
<tr>
<th>Engr. level</th>
<th>Thread type</th>
<th>Port size</th>
<th>Adjustment range</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>BSPP 1</td>
<td>1/4</td>
<td>With square gauge</td>
</tr>
<tr>
<td>*</td>
<td>BSPT 2</td>
<td></td>
<td>psig bar</td>
</tr>
<tr>
<td>*</td>
<td>NPT 9</td>
<td></td>
<td>30* = 1 2* = V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60 = 3 4 = S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>125 = 5 8 = T</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Without gauge†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>psig bar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30 = Y 2 = Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60 = L 4 = L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>125 = N 8 = N</td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>P31R*92BNNP</td>
<td>30 (64)</td>
<td>20 (300)</td>
<td>100.1 (3.94)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) + gauge</td>
<td>P31R*92BN5P</td>
<td>30 (64)</td>
<td>20 (300)</td>
<td>100.1 (3.94)</td>
<td>40 (1.58)</td>
<td>64.3 (2.53)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.
Global Air Preparation System

Specifications

Flow Capacity* 1/4 30 dm³/s (64 scfm)
Operating Temperature -20°C to 65.5°C (-4°F to 150°F)
Max. Supply Pressure 20 bar (300 psig)
Adjusting Range Pressure 0-2 bar (30 psig)
0-4 bar (60 psig)
0-8 bar (125 psig)

Port Size BSPP / BSPT / NPT 1/4
Gauge Port (2 ea.)** BSPP / BSPT / NPT 1/8
Weight 0.17 kg (0.37 lbs)

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).
** Non-gauge option only.

Materials of Construction

Body Aluminum
Adjustment Knob Acetal
Body Cap ABS
Bonnet PBT
Diaphragm Assembly Brass / Nitrile
Bottom Plug 33% Glass-Filled Nylon
Valve Assembly Brass / Nitrile
Springs Steel
Seals Nitrile
Panel Nut Acetal

Dimensions mm (inches)

Flow Charts

1/4 Regulator

Flow - dm³/s

Table: Regulatory Pressure Adjustment

Pregnancy: Adjustments of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

CAUTION:

WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.
Global Air Preparation System

Mini Common - P1 Regulator - P31

Symbols

- Self relieving regulator with gauge
- Non relieving regulator

Options:

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31H*</td>
<td>1/4&quot; 8 bar (125 psig) Relieving</td>
</tr>
</tbody>
</table>

Flow\[\text{Max. flow (inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.)}]

Order Code: P31H*92BNP

- Manifold style regulator with line pressure on both sides.
- Pressure output is at front or rear.
- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob

* Engineering Level will be entered at factory.

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

‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3) psig set pressure and 1 bar (14.5 psig) pressure drop.
Catalog 0750-2 US

Global Air Preparation System

Specifications

Flow Capacity* 1/4 18 dm³/s (38 scfm)
Operating Temperature -20°C to 65.5°C (-4°F to 150°F)
Max. Supply Pressure 20 bar (300 psig)
Adjusting Range Pressure 0-2 bar (30 psig)
0-4 bar (60 psig)
0-8 bar (125 psig)
P1 Port Size (Inlet / Outlet) BSPP / BSPT / NPT 1/4
P2 Regulated Ports (2 ea.) BSPP / BSPT / NPT 1/8
Weight 0.30 kg (0.66 lbs)

NOTE: * Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

Materials of Construction

Body Zinc
Adjustment Knob Acetal
Body Cap ABS
Bonnet 33% Glass-filled PBT
Diaphragm Assembly Brass / Nitrile
Bottom Plug 33% Glass-filled Nylon
Valve Assembly Brass / Nitrile

Flow Charts

1/4 Common Regulator

WARNING

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

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions mm (inches)

Repair and Service Kits

Regulator repair kit - Relieving P31KA00RB
Regulator repair kit - Non-relieving P31KA00RC
Panel mount nut - Aluminum P31KA00MM
Panel mount nut - Plastic P31KA00MP
Angle Bracket (uses panel mount threads) P31KA00MR
T-Bracket with body connector P31KA00MT
Body connector P31KA00CB

Gauges

1.00" Round 1/8" center back mount

0-60 psig / 0-4 bar K4510N18060
0-160 psig / 0-11 bar K4510N18160

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

NOTE: 31.7 mm (1.25 in.) hole required for panel nut mounting.
Global Air Preparation System

Compact Regulator – P32

Symbols

Self relieving regulator with gauge
Non relieving regulator

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig), 0-17 bar (0-250 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob

Options:

P 3 2 R

* Engr. level
* Will be entered at factory

Thread type
- BSPP 1
- BSPT 2
- NPT 9

Port size
- 1/4" 2
- 3/8" 3
- 1/2" 4

Relief
- Relieving B
- Non relieving N
- Reverse flow / relieving R

Mounting
- Plastic panel mount P

Adjustment range
With round gauge
- 2 bar; 30 psig; 0.2 MPa Z
- 4 bar; 60 psig; 0.4 MPa M
- 8 bar; 125 psig; 0.8 MPa G
- 17 bar; 250 psig; 1.7 MPa J
Without gauge
- 2 bar; 30 psig; 0.2 MPa Y
- 4 bar; 60 psig; 0.4 MPa L
- 8 bar; 125 psig; 0.8 MPa N
- 17 bar; 250 psig; 1.7 MPa H

Order Code

Port size Description Order Code† Flow‡ dm³/s (scfm) Max. bar (psig) Height mm (inches) Width mm (inches) Depth mm (inches)
1/4" 8 bar (125 psig) Relieving P32R"92BNNP 41 (81) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)
1/4" 8 bar (125 psig) Relieving + Gauge P32R"92BNGP 41 (81) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)
3/8" 8 bar (125 psig) Relieving P32R"93BNNP 65 (138) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)
3/8" 8 bar (125 psig) Relieving + Gauge P32R"93BNGP 65 (138) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)
1/2" 8 bar (125 psig) Relieving P32R"94BNNP 67 (142) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)
1/2" 8 bar (125 psig) Relieving + Gauge P32R"94BNGP 67 (142) 20 (300) 136 (5.4) 60 (2.36) 60 (2.36)

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.
Global Air Preparation System

Specifications

Flow Capacity*
- 1/4: 41 dm³/s (81 scfm)
- 3/8: 65 dm³/s (138 scfm)
- 1/2: 67 dm³/s (142 scfm)

Operating Temperature: -25°C to 65.5°C (-13°F to 150°F)

Max. Supply Pressure: 20 bar (300 psig)

Adjusting Range Pressure
- 0-2 bar (30 psig)
- 0-4 bar (60 psig)
- 0-8 bar (125 psig)
- 0-17 bar (250 psig)

Port Size: BSPP / BSPT / NPT
- 1/4, 3/8, 1/2

Gauge Port (2 ea.): BSPP / BSPT / NPT
- 1/4

Weight: 0.41 kg (0.90 lbs)

* Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig)

Materials of Construction

Body: Aluminum
Adjustment Knob: Acetal
Body Cap: ABS
Bonnet: 33% Glass-filled nylon
Diaphragm Assembly: Nitrile / Zinc
Diaphragm: 33% Glass-filled Nylon
Bottom Plug: Brass / Nitrile
Valve Assembly: Stainless Steel
Springs: Main Regulating Valve: Steel S.S.
Seals: Nitrile
Panel Nut: Acetal

Dimensions: mm (inches)

![Diagram](image)

NOTE: 51 mm (2.00 in.) hole required for panel nut mounting.

WARNING

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

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Flow Charts

1/4 Regulator

![Diagram](image)

3/8 Regulator

![Diagram](image)

1/2 Regulator

![Diagram](image)

Repair and Service Kits

- Regulator repair kit - Relieving: P32KA00RB
- Regulator repair kit - Non-relieving: P32KA00RC
- Panel mount nut - Aluminum: P32KA00MM
- Panel mount nut - Plastic: P32KA00MP
- Angle Bracket (uses panel mount threads): P32KA00MR
- T-Bracket with body connector: P32KA00MT
- T-Bracket: P32KA00MB
- Body connector: P32KA00CB

Gauges

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

- 0-30 psig / 0-2 bar / 0-0.2 MPa: K4520N14030
- 0-60 psig / 0-4 bar / 0-0.4 MPa: K4520N14060
- 0-160 psig / 0-11 bar / 0-1.1 MPa: K4520N14160
- 0-300 psig / 0-20 bar / 0-2 MPa: K4520N14300

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

Compact Common P1 Regulator - P32

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving</td>
<td>P32H*92BNP</td>
<td>28 (59)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) Relieving</td>
<td>P32H*93BNP</td>
<td>28 (59)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
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<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving</td>
<td>P32H*94BNP</td>
<td>28 (59)</td>
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<td>60 (2.36)</td>
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</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3) psig set pressure and 1 bar (14.5 psig) pressure drop.
### Specifications

<table>
<thead>
<tr>
<th>Flow Capacity*</th>
<th>1/4</th>
<th>28 dm³/s (59 scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/8</td>
<td>28 dm³/s (59 scfm)</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>28 dm³/s (59 scfm)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>-25°C to 65.5°C (-13°F to 150°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Supply Pressure</td>
<td>20 bar (300 psig)</td>
</tr>
<tr>
<td>Adjusting Range Pressure</td>
<td>0-2 bar (30 psig)</td>
</tr>
<tr>
<td></td>
<td>0-4 bar (60 psig)</td>
</tr>
<tr>
<td></td>
<td>0-8 bar (125 psig)</td>
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<tr>
<td></td>
<td>0-17 bar (250 psig)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port Size</th>
<th>BSPP / BSPT / NPT</th>
<th>1/4, 3/8, 1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauge Port (2 ea.)</td>
<td>BSPP / BSPT / NPT</td>
<td>1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.50 kg (1.10 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

### Flow Charts

**P32 Series**

#### Flow Capacity

<table>
<thead>
<tr>
<th>Flow - dm³/s (scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
</tr>
<tr>
<td>3/8</td>
</tr>
<tr>
<td>1/2</td>
</tr>
</tbody>
</table>

#### Operating Temperature

<table>
<thead>
<tr>
<th>Temperature</th>
<th>-25°C to 65.5°C (-13°F to 150°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Supply Pressure</td>
<td>20 bar (300 psig)</td>
</tr>
</tbody>
</table>

#### Adjusting Range Pressure

<table>
<thead>
<tr>
<th>Pressure</th>
<th>0-2 bar (30 psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-4 bar (60 psig)</td>
</tr>
<tr>
<td></td>
<td>0-8 bar (125 psig)</td>
</tr>
<tr>
<td></td>
<td>0-17 bar (250 psig)</td>
</tr>
</tbody>
</table>

### Materials of Construction

<table>
<thead>
<tr>
<th>Body</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment Knob</td>
<td>Acetal</td>
</tr>
<tr>
<td>Body Cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bonnet</td>
<td>33% Glass-filled nylon</td>
</tr>
<tr>
<td>Diaphragm Assembly</td>
<td>Nitrile / Zinc</td>
</tr>
<tr>
<td>Bottom Plug</td>
<td>33% Glass-filled Nylon</td>
</tr>
<tr>
<td>Valve Assembly</td>
<td>Brass / Nitrile</td>
</tr>
<tr>
<td>Springs</td>
<td>Main Regulating Steel</td>
</tr>
<tr>
<td></td>
<td>Valve S.S.</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Panel Nut</td>
<td>Acetal</td>
</tr>
</tbody>
</table>

### Dimensions mm (inches)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>60 (2.36)</th>
<th>65 (2.57)</th>
<th>136 (5.34)</th>
<th>60 (2.36)</th>
</tr>
</thead>
</table>

#### WARNING

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

#### CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

### Repair and Service Kits

<table>
<thead>
<tr>
<th>Kit Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator repair kit - Relieving</td>
<td>P32KA00RB</td>
</tr>
<tr>
<td>Regulator repair kit - Non-relieving</td>
<td>P32KA00RC</td>
</tr>
<tr>
<td>Panel mount nut - Aluminum</td>
<td>P32KA00MM</td>
</tr>
<tr>
<td>Panel mount nut - Plastic</td>
<td>P32KA00MP</td>
</tr>
<tr>
<td>Angle Bracket (uses panel mount threads)</td>
<td>P32KA00MR</td>
</tr>
<tr>
<td>T-Bracket with body connector</td>
<td>P32KA00MT</td>
</tr>
<tr>
<td>T-Bracket</td>
<td>P32KA00MB</td>
</tr>
<tr>
<td>Body connector</td>
<td>P32KA00CB</td>
</tr>
</tbody>
</table>

### Gauges

<table>
<thead>
<tr>
<th>Pressure</th>
<th>K4520N14030</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30 psig / 0-2 bar / 0-0.2 MPa</td>
<td>K4520N14030</td>
</tr>
<tr>
<td>0-60 psig / 0-4 bar / 0-0.4 MPa</td>
<td>K4520N14060</td>
</tr>
<tr>
<td>0-160 psig / 0-11 bar / 0-1.1 MPa</td>
<td>K4520N14160</td>
</tr>
<tr>
<td>0-300 psig / 0-20 bar / 0-2 MPa</td>
<td>K4520N14300</td>
</tr>
</tbody>
</table>

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

Standard Regulator - P33

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving</td>
<td>P33R*94BNNP</td>
<td>100 (212)</td>
<td>20 (300)</td>
<td>149 (5.9)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving + Gauge</td>
<td>P33R*94BNGP</td>
<td>100 (212)</td>
<td>20 (300)</td>
<td>149 (5.9)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving</td>
<td>P33R*96BNNP</td>
<td>100 (212)</td>
<td>20 (300)</td>
<td>149 (5.9)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving + Gauge</td>
<td>P33R*96BNGP</td>
<td>100 (212)</td>
<td>20 (300)</td>
<td>149 (5.9)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.

Symbols

- Self relieving regulator with gauge
- Non relieving regulator

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psi), 0-17 bar (0-250 psi)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob

Port size Description
1/2" 8 bar (125 psig) Relieving
1/2" 8 bar (125 psig) Relieving + Gauge
3/4" 8 bar (125 psig) Relieving
3/4" 8 bar (125 psig) Relieving + Gauge
Catalog 0750-2 US
Global Air Preparation System

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>1/2</th>
<th>3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Capacity*</td>
<td>100 dm³/s (212 scfm)</td>
<td>100 dm³/s (212 scfm)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-25°C to 65.5°C (-13°F to 150°F)</td>
<td></td>
</tr>
<tr>
<td>Max. Supply Pressure</td>
<td>20 bar (300 psig)</td>
<td></td>
</tr>
<tr>
<td>Adjusting Range Pressure</td>
<td>0-2 bar (30 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-4 bar (60 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-8 bar (125 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-17 bar (250 psig)</td>
<td></td>
</tr>
<tr>
<td>Port Size</td>
<td>BSPP / BSPT / NPT</td>
<td>1/2, 3/4</td>
</tr>
<tr>
<td>Gauge Port (ea.)</td>
<td>BSPP / BSPT / NPT</td>
<td>1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.62 kg (1.37 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

Materials of Construction

- Body: Aluminum
- Adjustment Knob: Acetal
- Body Cap: ABS
- Bonnet: 33% Glass-filled Nylon
- Diaphragm Assembly: Nitrile / Zinc
- Valve Assembly: Brass / Nitrile / Acetal
- Springs: Main Regulating Steel / S.S.
- Seals: Nitrile
- Panel Nut: Acetal

Dimensions mm (inches)

NOTE: 61 mm (2.40 in.) hole required for panel nut mounting.

CAUTION:
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

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

Flow Charts

1/2 Regulator

3/4 Regulator

Repair and Service Kits

- Regulator repair kit - Relieving: P33KA00RB
- Regulator repair kit - Non-relieving: P33KA00RC
- Panel mount nut - Aluminum: P33KA00MM
- Panel mount nut - Plastic: P33KA00MP
- Angle Bracket (uses panel mount threads): P33KA00MR
- T-Bracket with body connector: P32KA00MT
- T-Bracket: P32KA00MB
- Body connector: P32KA00CB

Gauges

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

- 0-30 psig / 0-2 bar / 0-0.2 MPa: K4520N14030
- 0-60 psig / 0-4 bar / 0-0.4 MPa: K4520N14060
- 0-160 psig / 0-11 bar / 0-1.1 MPa: K4520N14160
- 0-300 psig / 0-20 bar / 0-2 MPa: K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
Mini Filter / Regulator - P31

Options:

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting

Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig)

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>P31E*92EGMBN5P</td>
<td>14 (30)</td>
<td>10 (150)</td>
<td>164.1 (6.46)</td>
<td>40 (1.58)</td>
<td>64 (2.53)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Pulse drain</td>
<td>P31E*92EBBN5P</td>
<td>14 (30)</td>
<td>10 (150)</td>
<td>164.1 (6.46)</td>
<td>40 (1.58)</td>
<td>64 (2.53)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>P31E*92EMBBN5P</td>
<td>14 (30)</td>
<td>17 (250)</td>
<td>164.1 (6.46)</td>
<td>40 (1.58)</td>
<td>64 (2.53)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Pulse drain</td>
<td>P31E*92EMBBN5P</td>
<td>14 (30)</td>
<td>17 (250)</td>
<td>164.1 (6.46)</td>
<td>40 (1.58)</td>
<td>64 (2.53)</td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3) psig set pressure and 1 bar (14.5 psig) pressure drop.
Global Air Preparation System

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Capacity*</td>
<td>1/4</td>
</tr>
<tr>
<td></td>
<td>14 dm³/s (30.0 scfm)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Plastic Bowl</td>
</tr>
<tr>
<td></td>
<td>-10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td>Temperature</td>
<td>Metal Bowl</td>
</tr>
<tr>
<td></td>
<td>-10°C to 65.5°C (14°F to 150°F)</td>
</tr>
<tr>
<td>Max. Supply</td>
<td>Plastic Bowl</td>
</tr>
<tr>
<td></td>
<td>10 bar (150 psig)</td>
</tr>
<tr>
<td>Pressure</td>
<td>Metal Bowl</td>
</tr>
<tr>
<td></td>
<td>17 bar (250 psig)</td>
</tr>
<tr>
<td>Standard Filtration</td>
<td>5 Micron</td>
</tr>
<tr>
<td>Useful Retention</td>
<td>12 cm³ (0.4 US oz.)</td>
</tr>
<tr>
<td>Adjusting Range Pressure</td>
<td>0-2 bar (30 psig)</td>
</tr>
<tr>
<td></td>
<td>0-4 bar (60 psig)</td>
</tr>
<tr>
<td></td>
<td>0-8 bar (125 psig)</td>
</tr>
<tr>
<td>Pipe Size</td>
<td>BSPP / BSPT / NPT 1/4</td>
</tr>
<tr>
<td>Gauge Port (2 ea.)**</td>
<td>BSPP / BSPT / NPT 1/8</td>
</tr>
<tr>
<td>Weight</td>
<td>0.19 kg (0.42 lbs)</td>
</tr>
</tbody>
</table>

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).
** Non-gauge option only.

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

Materials of Construction

<table>
<thead>
<tr>
<th>Material</th>
<th>Body</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aluminum</td>
</tr>
<tr>
<td>Adjustment Knob</td>
<td>Acetal</td>
</tr>
<tr>
<td>Body Cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bonnet</td>
<td>PBT</td>
</tr>
<tr>
<td>Bowl</td>
<td>Plastic Bowl</td>
</tr>
<tr>
<td></td>
<td>Metal Bowl</td>
</tr>
<tr>
<td>Bowl Guard</td>
<td>Nylon</td>
</tr>
<tr>
<td>Filter Element</td>
<td>Polyethylene</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Springs</td>
<td>Steel</td>
</tr>
<tr>
<td>Valve Assembly</td>
<td>Brass / Nitrile</td>
</tr>
<tr>
<td>Diaphragm Assembly</td>
<td>Brass / Nitrile</td>
</tr>
<tr>
<td>Panel Nut</td>
<td>Acetal</td>
</tr>
</tbody>
</table>

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

Dimensions mm (inches)

![Diagram of regulator and diaphragm](image)

Note:
Flush-mounted gauge kits will not fit units originally purchased with threaded gauge ports.

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

Flow Charts

1/4 Filter/Regulator

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>Secondary Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow - scfm</td>
<td>0  1  2  3  4  5  6  7  8  9  10</td>
</tr>
<tr>
<td>0  1  2  3  4  5  6  7  8  9  10</td>
<td></td>
</tr>
</tbody>
</table>

Repair and Service Kits

- Plastic bowl / Bowl guard manual drain: P31KA00BGM
- Metal bowl / w/o sight gauge manual drain: P31KA00BMMP
- Plastic bowl / Bowl guard pulse drain: P31KA00BGB
- Metal bowl / w/o sight gauge pulse drain: P31KA00BMMP
- 5µ particle filter element: P31KA00ESE
- Regulator repair kit - Relieving: P31KA00RB
- Regulator repair kit - Non-relieving: P31KA00RC
- Panel mount nut - Aluminum: P31KA00MM
- Panel mount nut - Plastic: P31KA00MP
- Angle Bracket (uses panel mount threads): P31KA00MR
- C-Bracket (fits to body): P31KA00MW
- T-Bracket with body connector: P31KA00MT
- Body connector: P31KA00CB

Gauges

Square flush mount gauge

- 0-4 bar: K4511SCR04B
- 0-10 bar: K4511SCR11B
- 0-60 psig: K4511SCR060
- 0-150 psig: K4511SCR150

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
**Compact Filter / Regulator - P32**

**Symbols**

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar (0-60 psig), 0-8 bar (0-125 psig), 0-17 bar (0-250 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation

**Options:**

**P 3 2 E**

- **Thread type**
  - BSPP
  - BSPT
  - NPT

- **Port size**
  - 1/4" 2
  - 3/8" 3
  - 1/2" 4

- **Drain type**
  - Manual drain M
  - Auto drain A

- **Element**
  - 5µ Element E

- **Relief**
  - Relieving B
  - Non relieving N

- **Bowl type**
  - Poly bowl with bowl guard G
  - Metal bowl without sight gauge M
  - Metal bowl with sight gauge S

- **Mounting**
  - Plastic panel mount nut P

* Engineering Level will be entered at factory.

### Order Codes

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow²</th>
<th>Max. bar (psig)</th>
<th>Height (inches)</th>
<th>Width (inches)</th>
<th>Depth (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>42 (89)</td>
<td>10 (150)</td>
<td>254 (10.0)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Auto drain</td>
<td>42 (89)</td>
<td>10 (150)</td>
<td>248 (9.76)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>42 (89)</td>
<td>17 (250)</td>
<td>249 (9.66)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Auto drain</td>
<td>42 (89)</td>
<td>17 (250)</td>
<td>254 (10.0)</td>
<td>60 (2.36)</td>
<td>95 (3.74)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>58 (123)</td>
<td>10 (150)</td>
<td>254 (10.0)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Auto drain</td>
<td>58 (123)</td>
<td>10 (150)</td>
<td>248 (9.76)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>58 (123)</td>
<td>17 (250)</td>
<td>245 (9.66)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Auto drain</td>
<td>58 (123)</td>
<td>17 (250)</td>
<td>254 (10.0)</td>
<td>60 (2.36)</td>
<td>95 (3.74)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>64 (136)</td>
<td>10 (150)</td>
<td>249 (9.66)</td>
<td>60 (2.36)</td>
<td>95 (3.74)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Auto drain</td>
<td>64 (136)</td>
<td>10 (150)</td>
<td>248 (9.76)</td>
<td>60 (2.36)</td>
<td>95 (3.74)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>64 (136)</td>
<td>17 (250)</td>
<td>245 (9.66)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Auto drain</td>
<td>64 (136)</td>
<td>17 (250)</td>
<td>254 (10.0)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
</tbody>
</table>

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

**Notes:**

- *Will be entered at factory.
- 1/2" bar, 30 psig; 0.2 MPa Z
- 4 bar; 60 psig; 0.4 MPa M
- 8 bar; 125 psig; 0.8 MPa G
- 17 bar; 250 psig; 1.7 MPa H*

*Not available with poly bowl with bowl guard.

**Flow²**

Flow in dm³/s (scfm) at 70 psig (4.9 bar).

 filament text
Specifications

Flow Capacity* 1/4 42 dm³/s (89 scfm)  
3/8 58 dm³/s (123 scfm)  
1/2 64 dm³/s (136 scfm)  

Operating Temperature Plastic Bowl -25°C to 52°C (-13°F to 125°F)  
Metal Bowl -25°C to 65.5°C (-13°F to 150°F)  

Max. Supply Plastic Bowl 10 bar (150 psig)  
Metal Bowl 17 bar (250 psig)  

Pressure Metal Bowl  

Standard Filtration 5 Micron  

Useful Retention1 51 cm³ (1.7 US oz)  

Adjusting Range Pressure 0-2 bar (30 psig)  
0-4 bar (60 psig)  
0-8 bar (125 psig)  
0-17 bar (250 psig)  

Port Size BSPP / BSPT / NPT 1/4, 3/8, 1/2  

Gauge Port (2 ea.) BSPP / BSPT / NPT 1/4  

Weight 0.53 kg (1.17 lbs)  

Materials of Construction

Body Aluminum  
Adjustment Knob Acetal  
Body Cap ABS  
Element Retainer / Baffle Acetal  
Bowl Plastic Bowl Polycarbonate  
Metal Bowl Zinc  
Bowl Guard Nylon  
Filter Element Sintered Polyethylene  
Seals Nitrile  
Springs Main Regulating / Valve Steel / S.S.  
Valve Assembly Brass / Nitrile  
Diaphragm Assembly Nitrile / Zinc  
Panel Nut Acetal  
Sight Gauge Metal Bowl Polycarbonate  

Dimensions mm (inches)

Flow Charts

1/4 Filter/Regulator

3/8 Filter/Regulator

1/2 Filter/Regulator

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P32KA00BGM  
Auto drain P32KA00DA  
5µ particle filter element P32KA00ESE  
Regulator repair kit - Relieving P32KA00RB  
Regulator repair kit - Non-relieving P32KA00RC  
Panel mount nut - Aluminum P32KA00MM  
Panel mount nut - Plastic P32KA00MP  
Angle Bracket (fits to panel mount threads) P32KA00MR  
T-Bracket (fits to body connector) P32KA00MB  
T-Bracket with body connector P32KA00MT  
Body connector P32KA00CB

Gauges

0-30 psig / 0-2 bar / 0-0.2 MPa K4520N14030  
0-60 psig / 0-4 bar / 0-0.4 MPa K4520N14060  
0-160 psig / 0-11 bar / 0-1.1 MPa K4520N14160  
0-300 psig / 0-20 bar / 0-2 MPa K4520N14300  

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

WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.
### Standard Filter / Regulator - P33

#### Options:
- **Thread type**: BSPP 1, BSPT 2, NPT 9
- **Port size**: 1/2 4, 3/4 6
- **Drain type**: Manual drain M, Auto drain A
- **Bowl type**: Poly bowl with bowl guard G, Metal bowl without sight gauge M, Metal bowl with sight gauge S
- **Element**: 5µ Element E
- **Engr. level**: * Will be entered at factory
- **Relief**: Relieving B, Non relieving N
- **Adjustment range**:
  - With round gauge:
    - 2 bar; 30 psig: 0.2 MPa Z
    - 4 bar; 60 psig: 0.4 MPa M
    - 8 bar; 125 psig: 0.8 MPa G
    - 17 bar; 250 psig: 1.7 MPa J*
  - Without gauge:
    - 2 bar; 30 psig: 0.2 MPa Y
    - 4 bar; 60 psig: 0.4 MPa L
    - 8 bar; 125 psig: 0.8 MPa N
    - 17 bar; 250 psig: 1.7 MPa H*

*Engineering Level will be entered at factory.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow² (dm³/s (scfm))</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>P33E*94EGMBNGP</td>
<td>90 (191)</td>
<td>10 (150)</td>
<td>291 (11.44)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Auto drain</td>
<td>P33E*94EGABNGP</td>
<td>90 (191)</td>
<td>10 (150)</td>
<td>285 (11.22)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>P33E*94ESMBNGP</td>
<td>90 (191)</td>
<td>17 (250)</td>
<td>282 (11.0)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Auto drain</td>
<td>P33E*94ESABNGP</td>
<td>90 (191)</td>
<td>17 (250)</td>
<td>291 (11.44)</td>
<td>73 (2.9)</td>
<td>108 (4.27)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Manual drain</td>
<td>P33E*96EGMBNGP</td>
<td>98 (208)</td>
<td>10 (150)</td>
<td>282 (11.0)</td>
<td>73 (2.9)</td>
<td>108 (4.27)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving - Poly bowl - Auto drain</td>
<td>P33E*96EGABNGP</td>
<td>98 (208)</td>
<td>10 (150)</td>
<td>285 (11.22)</td>
<td>73 (2.9)</td>
<td>108 (4.27)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Manual drain</td>
<td>P33E*96ESMBNGP</td>
<td>98 (208)</td>
<td>17 (250)</td>
<td>291 (11.44)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) Relieving - Metal bowl - Auto drain</td>
<td>P33E*96ESABNGP</td>
<td>98 (208)</td>
<td>17 (250)</td>
<td>282 (11.0)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
</tbody>
</table>

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

‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.

---

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar (0-60 psig), 0-8 bar (0-125 psig), 0-17 bar (0-250 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
Global Air Preparation System

Specifications

| Flow Capacity* | 1/2 | 90 dm³/s (191 scfm) |
| 3/4 | 98 dm³/s (208 scfm) |
| Operating Temperature | Plastic Bowl | -25°C to 52°C (-13°F to 125°F) |
| Metal Bowl | -25°C to 65.5°C (-13°F to 150°F) |
| Supply Pressure | Plastic Bowl | 10 bar (150 psig) |
| Metal Bowl | 17 bar (250 psig) |
| Standard Filtration | 5 Micron |
| Useful Retention | 85 cm³ (2.8 US oz.) |
| Adjusting Range Pressure | 0-2 bar (30 psig) |
| 0-4 bar (60 psig) |
| 0-8 bar (125 psig) |
| 0-17 bar (250 psig) |
| Port Size | BSPP / BSPT / NPT | 1/2, 3/4 |
| Gauge Port (2 ea.) | BSPP / BSPT / NPT | 1/4 |
| Weight | 0.85 kg (1.87 lbs) |

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).
† Useful retention refers to volume below the quiet zone baffle.

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

Materials of Construction

| Body | Aluminum |
| Adjustment Knob | Acetal |
| Body Cap | ABS |
| Element Retainer / Baffle | Acetal |
| Bowls | Plastic Bowl |
| Metal Bowl | Polycarbonate |
| Filter Element | Sintered Polyethylene |
| Seals | Nitrile |
| Springs | Main Regulating / Valve Steel / S.S. |
| Valve Assembly | Brass / Nitrile |
| Diaphragm Assembly | Nitrile / Zinc |
| Panel Nut | Acetal |
| Sight Gauge | Metal Bowl |
| Sight Gauge | Polycarbonate |

Dimensions mm (inches)

Repair and Service Kits

Plastic bowl / Bowl guard manual drain | P33KA00BGM |
Metal bowl / Sight gauge manual drain | P33KA00BSM |
Auto drain | P32KA00DA |
5µ particle filter element | P33KA00ESE |
Regulator repair kit - Relieving | P33KA00RB |
Regulator repair kit - Non-relieving | P33KA00RC |
Panel mount nut - Aluminum | P33KA00MM |
Panel mount nut - Plastic | P33KA00MP |
Angle Bracket (fits to panel mount threads) | P33KA00MR |
T-Bracket (fits to body connector) | P32KA00MB |
T-Bracket with body connector | P32KA00MT |
Body connector | P32KA00CB |

Gauges

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

| Pressure | 0-30 psig / 0-2 bar / 0-0.2 MPa |
| 0-60 psig / 0-4 bar / 0-0.4 MPa |
| 0-160 psig / 0-11 bar / 0-1.1 MPa |
| 0-300 psig / 0-20 bar / 0-2 MPa |

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

WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.
Mini Lubricator - P31

Symbols

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment

Options:

<table>
<thead>
<tr>
<th>P31L</th>
<th>Engr. level</th>
<th>Thread type</th>
<th>Port size</th>
<th>Bowl type</th>
<th>Drain type</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>*Will be entered at factory</td>
<td>BSPP 1</td>
<td>1/4</td>
<td>Poly bowl with bowl guard</td>
<td>No drain; closed end</td>
<td>No bracket</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BSPT 2</td>
<td></td>
<td>Metal bowl without sight gauge</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NPT 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height (mm) (inches)</th>
<th>Width (mm) (inches)</th>
<th>Depth (mm) (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31L*92LGNN</td>
<td>13 (28)</td>
<td>10 (150)</td>
<td>147.5 (5.80)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
<tr>
<td>P31L*92LMNN</td>
<td>13 (28)</td>
<td>17 (250)</td>
<td>147.5 (5.80)</td>
<td>40 (1.58)</td>
<td>42.7 (1.68)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 bar (4.9 psig) pressure drop.

* Engineering Level will be entered at factory.
**Catalog 0750-2 US**

**Global Air Preparation System**

**P31 Series**

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Capacity*</td>
<td>1/4</td>
</tr>
<tr>
<td>13 dm³/s (28 scfm)</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td>-10°C to 65.5°C (14°F to 150°F)</td>
<td></td>
</tr>
<tr>
<td>Max. Supply Pressure</td>
<td>Plastic Bowl 10 bar (150 psig)</td>
</tr>
<tr>
<td>Metal Bowl 17 bar (250 psig)</td>
<td></td>
</tr>
<tr>
<td>Useable Retention</td>
<td>18 cm³ (0.6 US oz.)</td>
</tr>
<tr>
<td>Port Size BSPP / BSPT / NPT</td>
<td>1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.13 kg (0.29 lbs)</td>
</tr>
<tr>
<td>* Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.34 bar (4.9 psig).</td>
<td></td>
</tr>
</tbody>
</table>

### Flow Charts

#### 1/4 Lubricator

[Flow Chart Image]

- **Primary Pressure - bar**: 1.6, 4.0, 6.3, 10
- **Primary Pressure - psig**: 23.2, 91.4, 145
- **Flow - dm³/s**: 0, 5, 10, 15, 20, 25
- **Pressure Drop - bar**: 0, 0.1, 0.2, 0.3, 0.4
- **Pressure Drop - psig**: 0, 0.5, 1.6, 23.2, 91.4

### Materials of Construction

- **Body**: Aluminum
- **Body Cap**: ABS
- **Bowl**: Plastic Bowl, Polycarbonate
- **Metal Bowl**: Aluminum
- **Seals**: Nitrile
- **Sight Dome**: Polycarbonate
- **Suggested Lubricant**: ISO / ASTM VG32
- **Pick-up Filter**: Sintered Bronze

### Dimensions mm (inches)

![Dimensions Image]

- **Port Size**: BSPP / BSPT / NPT 1/4
- **Weight**: 0.13 kg (0.29 lbs)

### Repair and Service Kits

<table>
<thead>
<tr>
<th>Kit Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic bowl / Bowl guard no drain</td>
<td>P31KA00BGN</td>
</tr>
<tr>
<td>Drip control assembly</td>
<td>P32KA00PG</td>
</tr>
<tr>
<td>Fill plug</td>
<td>P31KA00PL</td>
</tr>
<tr>
<td>C-Bracket (fits to body)</td>
<td>P31KA00MW</td>
</tr>
<tr>
<td>T-Bracket with body connector</td>
<td>P31KA00MT</td>
</tr>
<tr>
<td>Body connector</td>
<td>P31KA00CB</td>
</tr>
</tbody>
</table>

### Suggested Lubricant

**F442 Oil**

Petroleum based oil of 100 to 200 SUS viscosity at 38°C (100°F) and an aniline point greater than 93°C (200°F) (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
## Compact Lubricator - P32

**Options:**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡ dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - No drain</td>
<td>P32L*92LGNN</td>
<td>18 (38)</td>
<td>10 (150)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - No drain</td>
<td>P32L*92LSNN</td>
<td>18 (38)</td>
<td>17 (250)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Poly bowl - No drain</td>
<td>P32L*93LGNN</td>
<td>32 (68)</td>
<td>10 (150)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Metal bowl - No drain</td>
<td>P32L*93LSNN</td>
<td>32 (68)</td>
<td>17 (250)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - No drain</td>
<td>P32L*94LGNN</td>
<td>47 (100)</td>
<td>10 (150)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - No drain</td>
<td>P32L*94LSNN</td>
<td>47 (100)</td>
<td>17 (250)</td>
<td>211 (8.30)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 bar (4.9 psig) pressure drop.

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment
- Fill from top under system pressure

---

**Symbols**

1. Lubricator with drain

* Engineering Level will be entered at factory.
Specifications

Flow Capacity*  
1/4  18 dm³/s (38 scfm)  
3/8  32 dm³/s (68 scfm)  
1/2  47 dm³/s (100 scfm)

Operating Pressure  
Plastic Bowl -10°C to 52°C (14°F to 125°F)  
Metal Bowl -10°C to 65.5°C (14°F to 150°F)

Max. Supply Pressure  
Plastic Bowl  10 bar (150 psig)  
Metal Bowl  17 bar (250 psig)

Useful Retention  
Plastic Bowl  121 cm³ (4.09 US oz.)

Port Size  
BSPP / BSPT / NPT  1/4, 3/8, 1/2

Weight  
0.31 kg (0.68 lbs)

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

Materials of Construction

Body  Aluminum  
Body Cap  ABS  
Bowls  Plastic Bowl  Polycarbonate  
        Metal Bowl  Aluminum

Seals  Nitrile

Sight Dome  Polycarbonate

Sight Gauge  Metal Bowl  Polycarbonate

Suggested Lubricant  ISO / ASTM VG32

Pick-up Filter  Sintered Bronze

Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 (2.36)</td>
<td>30 (1.18)</td>
</tr>
<tr>
<td>60 (2.36)</td>
<td>61 (2.40)</td>
</tr>
</tbody>
</table>

Flow Charts

1/4 Lubricator

3/8 Lubricator

1/2 Lubricator

Repair and Service Kits

Plastic bowl / Bowl guard no drain  P32KA00BGN
Drip control assembly  P32KA00PG
Fill plug  P32KA00PL
L-Bracket (fits to body)  P32KA00ML
T-Bracket (fits to body connector)  P32KA00MB
T-Bracket with body connector  P32KA00MT
Body connector  P32KA00CB

Suggested Lubricant  F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 38°C (100°F) and an aniline point greater than 93°C (200°F) (DO NOT USE OILS WITH ADDITIVES, COMPOUND OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Global Air Preparation System

Standard Lubricator - P33

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow‡</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - No drain</td>
<td>P33L*94LGNN</td>
<td>48 (102)</td>
<td>10 (150)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - No drain</td>
<td>P33L*94LSNN</td>
<td>48 (102)</td>
<td>17 (250)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
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</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - No drain</td>
<td>P33L*96LGNN</td>
<td>68 (144)</td>
<td>10 (150)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - No drain</td>
<td>P33L*96LSNN</td>
<td>68 (144)</td>
<td>17 (250)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
</tr>
</tbody>
</table>

† Standard part numbers shown in bold. For other models refer to Options chart above.
‡ Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 bar (4.9 psig) pressure drop.

* Engineering Level will be entered at factory.

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip rachet control for precise oil drip rate adjustment
- Fill from top under system pressure

Notes:

- * Will be entered at factory.
- Engr. level
- BSPP 1
- BSPT 2
- NPT 9
- Poly bowl with bowl guard G
- Metal bowl with sight gauge S
- No drain; closed end N

* Engineering Level will be entered at factory.
Catalog 0750-2 US
Global Air Preparation System

Specifications

<table>
<thead>
<tr>
<th>Flow Capacity*</th>
<th>1/2</th>
<th>48 dm³/s (102 scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/4</td>
<td>68 dm³/s (144 scfm)</td>
</tr>
</tbody>
</table>

- Operating Temperature: Plastic Bowl -10°C to 52°C (14°F to 125°F)
- Metal Bowl -10°C to 65.5°C (14°F to 150°F)
- Max. Supply Pressure: Plastic Bowl 10 bar (150 psig)
- Metal Bowl 17 bar (250 psig)
- Useable Retention: 181 cm³ (6.1 US oz.)
- Port Size: BSPP / BSPT / NPT 1/2, 3/4
- Weight: 0.47 kg (1.04 lbs)

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

Materials of Construction

- Body: Aluminum
- Body Cap: ABS
- Bowls: Plastic Bowl Polycarbonate, Metal Bowl Aluminum
- Seals: Nitrile
- Sight Dome: Polycarbonate
- Sight Gauge: Metal Bowl Polycarbonate
- Suggested Lubricant: ISO / ASTM VG32
- Pick-up Filter: Sintered Bronze

Dimensions mm (inches)

- 3/4

Repair and Service Kits

| Plastic bowl / Bowl guard no drain | P33KA00BGN |
| Drip control assembly              | P32KA00PG  |
| Fill plug                          | P32KA00PL  |
| L-Bracket (fits to body)           | P33KA00ML  |
| T-Bracket (fits to body connector) | P32KA00MB  |
| T-Bracket with body connector      | P32KA00MT  |
| Body connector                     | P32KA00CB  |

Suggested Lubricant

F442 Oil
Petroleum based oil of 100 to 200 SUS viscosity at 38°C (100°F) and an aniline point greater than 93°C (200°F)
(Do not use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils.)
Proportional Regulators

Global Air Preparation System

Order Key

- Very fast response times
- Accurate output pressure
- Micro parameter settings
- Selectable I/O parameters
- Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65
- P31P flows to 19 dm³/s (40 scfm)
- P32P flows to 57 dm³/s (120 scfm)

P31P Series
Bottom exhaust

P32P Series
Bottom exhaust

Body size

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Mini (1/4&quot;)</td>
<td>1</td>
</tr>
<tr>
<td>Global Compact (1/2&quot;)</td>
<td>2</td>
</tr>
</tbody>
</table>

Thread type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSPP</td>
<td>1</td>
</tr>
<tr>
<td>BSPT</td>
<td>2</td>
</tr>
<tr>
<td>NPT</td>
<td>9</td>
</tr>
</tbody>
</table>

Port size

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Mini (1/4&quot;)</td>
<td>2</td>
</tr>
<tr>
<td>Global Compact (1/2&quot;)</td>
<td>4</td>
</tr>
</tbody>
</table>

Pressure range

- 0 - 2 bar (0-29 psig)
- 0 - 10 bar (0-145 psig)

Power supply

- 24 volts

Control signal

- 0-10 V†

Output signal

- Digital, PNP          D
- PNP or 0-10V          P
- NPN or 0-10V          N
- 4-20mA fixed          M

† Factory setting is 0-10 V control signal. 4-20 mA control signal available via parameter 4 on keypad.

Input connector

- M12 (4 pin)           1

Port size

- Global Mini (1/4") | 2                   |
- Global Compact (1/2") | 4               |

Thread type

- BSPP  | 1                    |
- BSPT  | 2                    |
- NPT   | 9                    |

Version

- Bottom ported exhaust (NC) A
- Bottom ported forced exhaust (NO)* E

* When the supply voltage is lost the unit will automatically exhaust the regulated pressure to 0 bar (atmospheric pressure)

Note:

- * Engineering Level will be entered at factory.
- When the supply voltage is lost the unit will automatically exhaust the regulated pressure to 0 bar (atmospheric pressure)
- Factory setting is 0-10 V control signal. 4-20mA control signal available via parameter 4 on keypad.
- On all analog outputs the F.S. value can be adjusted by means of parameter 8.

P31P Mounting brackets

Order Code | Description
- P3HKA00ML | L-Bracket mounting kit
- P3HKA00MC | Foot bracket mounting kit

P32P Mounting brackets

Order Code | Description
- P3KKA00ML | L-Bracket mounting kit
- P3KKA00MC | Foot bracket mounting kit

Cables

Order Code | Description
- CB-M12-4P-2M | 2 mtr. cable with moulded straight M12x1 connector

Note:

- These brackets fit both Proportional Regulators and Combined Soft Start & Dump Valves.
Global Air Preparation System

Technical Information

Working medium
Compressed air or inert gases, filtered to 40µ.

Supply pressure
Max. Operating Pressure:
2 bar unit: 3 bar (43.5 psig)
10 bar unit: 10.5 bar (152 psig)
Min. Operating Pressure: P2 Pressure + 0.5 bar (7.3 psig)

Pressure control range
Available in three pressure ranges, 0-2 bar (0-29 psig), 0-7 bar (0-101.5 psig) or 0-10 bar (0-145 psig). Pressure range can be changed through the software at all times.

Temperature range
0°C up to +50°C (32°F up to 122°F)

Weights:
P31P = 0.291 kg (0.64 lbs)
P32P = 0.645 kg (1.42 lbs)

Air consumption
No consumption in stable regulated situation.

Display
The regulator is provided with a digital display, indicating the output pressure, either in bar or psig.

The factory setting is as indicated on the label, can be changed through software at all times (parameter 19)

Supply voltage
24 VDC +/- 10%

Power consumption
Max. 1.1W with unloaded signal outputs

Control signals
The electronic pressure regulator can be externally controlled through an analogue control signal of either 0-10V or 4-20mA, (parameter 4).

Output signals
As soon as the output pressure is within the signal band a signal is given of 24VDC, PNP Ri = 1 kOhm
Outside the signal band this connection is 0V.

Connections
(In case of output signal (Option D)
Central M12 connector 4-pole
The electrical connections are as follows:

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24 V Supply</td>
<td>Brown</td>
</tr>
<tr>
<td>2</td>
<td>0 to 10 V Control Signal Ri = 100k Ω</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>0 V (GND) Supply</td>
<td>Blue</td>
</tr>
<tr>
<td>4</td>
<td>24 V Alarm Output Signal</td>
<td>Black</td>
</tr>
</tbody>
</table>

Schematic

[Diagram showing electrical connections and pressure control system]
Technical information

Dead band
The dead band is preset at 1.3% of Full Scale*, adjustable via parameter 13.

Accuracy
Linearity: = < 0.3% of Full Scale.*

Proportional band
The proportional band is preset at 10% of Full Scale.*

Fail safe operation
- If the P31P / P32P unit has an “O” or “A” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to the fail safe mode. The last known output pressure is maintained at approximately the same level depending upon air consumption. The digital display indicates the last known pressure setting.
  - When the supply voltage is reinstated to the correct level, the valve moves from the fail safe mode and the output pressure immediately follows the control signal requirement. The display indicates the actual output pressure.
  - Note: In the event of loss of both power and inlet pressure the unit will exhaust downstream pressure.
- If the P31P / P32P unit has an “E” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to “Forced Exhaust Mode” and will automatically exhaust the downstream (regulated) pressure.
  - When the supply voltage is reinstated to the correct level the unit will return to normal operation and follows the control signal requirement. The display indicates the actual pressure.

Full exhaust
Complete exhaust of the regulator is defined as P2 ≤ 1% Full Scale
* Full scale (F.S.)
For 2 bar (29 psig) versions this will be 2 bar (29 psig), for the 10 bar (145 psig) version full scale will be 10 bar (145 psig).

Degree of protection
IP65

EU conformity
CE: standard
EMC: according to directive 89/336/EEC
The new pressure regulator is in accordance with:
EN 61000-6-1:2001
EN 61000-6-2:2001
EN 61000-6-3:2001
EN 61000-6-4:2001

These standards ensure that this unit meets the highest level of EMC protection.

Mounting position
Preferably vertical, with the cable gland on top.

Materials: P31P & P32P
- Magnet Core .........................................................Steel
- Solenoid Valve Poppet ............................................. FPM
- Solenoid Valve Housing .................................Techno Polymer
- Regulator Body (P31P & P32P versions) .................Aluminium
- Regulator Top Housing ...........................................Nylon
- Valve Head ...............................................................Brass & NBR
- Remaining Seals ......................................................NBR

Advanced functionality

Pilot valve protection
When the required output pressure can not be achieved because of a lack of input pressure the unit will open fully and will display NoP. Approximately every 10 seconds the unit will retry. The output pressure will then be approximately equal to the inlet pressure. As soon as the input pressure is back on the required level, the normal control function follows.

Safety exhaust
Should the control signal fall below 0.1 volts the valve will automatically dump downstream system pressure.

Input protection
The unit has built-in protection against failure and burnout resulting from incorrect input value, typically:
The 24VDC supply is incorrectly connected to the setpoint input, the display will show ‘OL’, as an overload indication. The unit will need to be rewired and when correctly connected will operate normally.
The overload indicator ‘OL’ will also appear should the wrong input value be applied or the wrong input value be programmed: 4 - 20mA instead of 0 - 10V. To correct this a different set point value should be input or the unit reprogrammed to correct the set point value acceptance. (via parameter 4).

Response time

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>P31P</th>
<th>P32P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>25 msecs</td>
<td>35 msecs</td>
</tr>
<tr>
<td>1</td>
<td>55 msecs</td>
<td>135 msecs</td>
</tr>
<tr>
<td>2</td>
<td>70 msecs</td>
<td>85 msecs</td>
</tr>
<tr>
<td>3</td>
<td>80 msecs</td>
<td>225 msecs</td>
</tr>
</tbody>
</table>

To fill volume of: 100cm³ - P31P 330cm³ - P32P connected to the outlet of the regulator.

Settings
The regulator is pre-set at the factory. If required, adjustments can be made.

Flow Charts

P31P Regulator 1/4" Ports

P32P Regulator 1/2" Ports
How to change parameters
Pressing the Accept key “acc” for more than 3 seconds, will activate parameter change mode. The user can then select the parameters by pressing up or down key. (display will show Pxx). When parameter number is correct, pressing accept again will enter parameter number.(display will show parameter value).
Pressing the up or down key will change the parameter itself. (display will flash indicating parameter editing mode). Pressing the accept key will accept the new parameter value. (all digits will flash whilst being accepted).
After releasing all keys, the next parameter number will be presented on the display. (you may step to the next parameter).
When no key is pressed, after 3 seconds the display will show the actual output pressure.

Back to Factory Setting
After start up. (Power is on)
Entering this value in parameter 0 will store the calibrated factory data into the working parameters.
(DefaultValue data is used)

| Parameter Number 0 – Reset Back to Factory Settings |

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>Pxx</td>
<td>P00</td>
<td>000</td>
<td>003</td>
<td>003</td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 0.</td>
<td>Displays current parameter value.</td>
<td>Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
</tbody>
</table>

Set Control Signal
The unit is factory set for 0-10 V control signal. If 4-20 mA control signal is required, change parameter 4.

| Parameter Number 4 – Set Control Signal in Volts or Milliamps |

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>Pxx</td>
<td>P04</td>
<td>001</td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 4.</td>
<td>Displays current parameter value. 1 = V 0 = mA</td>
<td>Edits parameter.</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
</tbody>
</table>

When the unit is initially powered up allow approximately 10 seconds for the unit to “boot-up” before changing parameter settings.
Only parameter numbers 0, 4, 6, 8, 9, 14, 18, 20, 12, 13 and 21 are accessible to edit. All other parameters are fixed.
Manual mode:
When keys DOWN and UP are pressed during startup, (connecting to the 24V power supply) manual mode is activated. This means that the user is able to in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.
Set Output Signal

Parameter 6 is used to set the type of output signal to your PLC. This parameter is used as follows:

Output Signal option “0” = Digital Output – PNP
- Factory set at “0” Non Adjustable

Output Signal option “P” = Digital PNP or Analog 1-10V
- Factory set at “1” for Analog Signal
- Convert to Digital PNP by changing parameter to “0” setting

Output Signal option “N” = Digital NPN or Analog 1-10V
- Factory set at “1” Analog Signal
- Convert to Digital NPN by changing parameter to “0”

Output Signal option “M” = Analog 4-20 mA
- Factory set at “2” Non Adjustable

---

Parameter Number 6 – Set Output Signal

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P×x</td>
<td>P06</td>
<td>001</td>
<td>###</td>
<td>P07</td>
</tr>
<tr>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td>Flashing Decimal (Value 0, 1 or 2)</td>
<td>Flashing</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 6.</td>
<td>Displays current parameter value. 1 = m factory default for P3H with analog options</td>
<td>Edits parameter. 0 = digital (NPN or PNP) 1 = analog 0..10V 2 = analog 4..20 mA</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sequences to next parameter.</td>
</tr>
</tbody>
</table>

Adjust Span Analog Output Signal

Set value is a % of Full Analog range. As an example for a 0-10V output signal, the original factory setting of 100% will give you an adjustment of 0-10V. If you reset Parameter 8 to 50%, the new output range would be 0-5V or 50% of the full range.

In the event that the output signal is too low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale.

Note that all values are nominal and that an actual measurement may be required to ensure signal strength.

Parameter Number 8 – Adjust Span Analog Output Signal

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P×x</td>
<td>PO8</td>
<td>100</td>
<td>###</td>
<td>PO9</td>
</tr>
<tr>
<td></td>
<td>Flashing Decimal (For 2 bar versions value = 92)</td>
<td></td>
<td>Flashing Decimal (Value between 0 and 130)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sequences to next parameter.</td>
</tr>
</tbody>
</table>
Adjust Digital Display
If necessary, adjustments can be made to the digital display when using an external pressure sensor.

| Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration) |
|-----------------------------|-------------------|------------------|------------------|------------------|-------------------|
| Step | 1 | 2 | 3 | 4 | 5 |
| Press | ACC | ▼ or ▲ | ACC | ▼ or ▲ | ACC |
| Until Display Reads | P × × | P0 9 | # # # | # # # | # # # | P 1 0 |
| Description | Accesses changeable parameters. | Accesses parameter no. 9. | Displays current digital display | Use up or down arrows and accept to adjust the display value if using an external pressure sensor. | Accepts and saves new parameter setting. | Sequences to next parameter. |

Set Pressure Scale
Units with NPT port threads are supplied with a factory set psig pressure scale. Use parameter 14 to change scale to bar.

| Parameter Number 14 – Set Pressure Scale in psig or bar |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|
| Step | 1 | 2 | 3 | 4 | 5 |
| Press | ACC | ▼ or ▲ | ACC | ▼ or ▲ | ACC |
| Until Display Reads | P × × | P 1 4 | 0 0 1 | 0 0 0 | 0 0 0 | P 1 5 |
### Global Air Preparation System

#### Proportional Regulators

#### Set Pressure Correction

Pressure correction allows the user to set a Maximum pressure as a percentage of secondary pressure F.S.

**Example:** If F.S. is 10 bar, set parameter 19 to 50 for Maximum preset pressure of 5 bar.

Pressure correction also affects the Minimum preset pressure in parameter 18.

**Example:** If F.S. is 10 bar and parameter 18 is set to a value of 100 (1 bar), and parameter 19 is set to 50%, then the actual Minimum preset pressure seen is 0.5 bar.

### Parameter Number 19 – Set Maximum Preset Pressure

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Press</strong></td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Until Display Reads</strong></td>
<td>P × x</td>
<td>P 19</td>
<td>100.</td>
<td># # #</td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flashing Decimal (value between 0 and 100)</td>
<td></td>
<td>Flashing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 19.</td>
<td>Displays current parameter value. Incremental value is: 2 bar unit: x 2 mbar x % P19 10 bar unit: x 10 mbar x % P19</td>
<td>Edits parameter.</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sequences to next parameter.</td>
</tr>
</tbody>
</table>
Behavior Control
The regulation speed of the pressure regulator can be modified by means of one parameter. (P 20)
The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

Parameter Number 20 – Set Behavior Control

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P xx</td>
<td>P20</td>
<td>003.</td>
<td># # #</td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flashing Decimal</td>
<td>(value between 0 and 5)</td>
<td>Flashing</td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 20.</td>
<td>Displays current parameter value.</td>
<td>Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
</tbody>
</table>

* When the value 0 is entered, you are able to create your own custom settings true parameters 12, 13 and 21.

Fine Settings
Set Proportional Band
Proportional band is used for setting the reaction sensitivity of the regulator. The displayed value is X 10 mbar and has a range between 50 (0.5 bar) and 250 (2.5 bar).

Parameter Number 12 – Set Proportional Band (P20 Must be Set to 0)

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
<td>▼ or ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P xx</td>
<td>P12</td>
<td>100.</td>
<td># # #</td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flashing Decimal</td>
<td>(value between 50 and 250)</td>
<td>Flashing</td>
</tr>
</tbody>
</table>
## Set Deadband

Deadband is the Minimum limit of accuracy at which the regulator is set for normal operation. The displayed value is X \(10\) mbar and has a range between 4 (40 mbar) and 40 (400 mbar).

<table>
<thead>
<tr>
<th><strong>Parameter Number 13 – Set Deadband (P20 Must be Set to 0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step</strong></td>
</tr>
<tr>
<td>Press</td>
</tr>
<tr>
<td>3-6 seconds</td>
</tr>
<tr>
<td>Until Display Reads</td>
</tr>
<tr>
<td>Description</td>
</tr>
</tbody>
</table>

## Proportional Effect

<table>
<thead>
<tr>
<th><strong>Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step</strong></td>
</tr>
<tr>
<td>Press</td>
</tr>
<tr>
<td>3-6 seconds</td>
</tr>
<tr>
<td>Until Display Reads</td>
</tr>
</tbody>
</table>

## Parameter Number 39 – Displays Current Software Version

| **Step** | 1 | 2 | 3 |
| Press | ![acc] | ![or] | ![acc] |
| 3-6 seconds | | | |
| Until Display Reads | ![Pxx] | ![P39] | ![###] |
| Description | Accesses changeable parameters. | Accesses parameter no. 39. | Displays current parameter value. XXX = current software version |
Parker Global Series Combined Soft Start / Dump Valves, provide for the safe introduction of pressure to machines or systems. Soft Start / Dump Valves when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up. To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained. The valve will automatically dump when the holding signal is removed.

### Options:

<table>
<thead>
<tr>
<th>Body size</th>
<th>Port size</th>
<th>Pilot type</th>
<th>Actuator interface</th>
<th>Solenoid type only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini (1/4&quot;)</td>
<td>Mini (1/4&quot;)</td>
<td>External Air Pilot</td>
<td>15mm</td>
<td>C</td>
</tr>
<tr>
<td>Compact (1/2&quot;)</td>
<td>Compact (1/2&quot;)</td>
<td>Solenoid Pilot</td>
<td>30mm (P31 series only)</td>
<td>C</td>
</tr>
</tbody>
</table>

###符号

- 模块化设计具有1/4”或1/2”整数接口（NPT, BSPP & BSPT）
- 提供安全的引进压力
- 三通的2位置功能自动将下游的压力在失去信号时排出
- 可调的软启动
- 稳定或外部信号
- 高流量和排气能力
- 包含消声器

*工程水平将被工厂输入。

###紧凑型组合软启式降压阀

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow†</th>
<th>Max. bar (psi)</th>
<th>Height (inches)</th>
<th>Width (inches)</th>
<th>Depth (inches)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>120VAC Solenoid &amp; cable plug</td>
<td>P31T*92SGNC1FN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37kg (0.8lbs)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>24VDC Solenoid &amp; cable plug</td>
<td>P31T*92SGNC2CN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>166† (6.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.41kg (0.9lbs)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot operated</td>
<td>P31T*92PPN</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37kg (0.8lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>120VAC 30mm coil &amp; cable plug incl.</td>
<td>P32T*94SCNA3GN</td>
<td>46 (97)</td>
<td>10 (150)</td>
<td>162.5† (6.3)</td>
<td>88 (3.4)</td>
<td>57.2 (2.2)</td>
<td>0.87kg (1.9lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>24VDC 30mm coil &amp; cable plug incl.</td>
<td>P32T*94SCNA2CN</td>
<td>46 (97)</td>
<td>10 (150)</td>
<td>227.5† (8.9)</td>
<td>88 (3.4)</td>
<td>57.2 (2.2)</td>
<td>0.91kg (2.0lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot operated</td>
<td>P32T*94PPN</td>
<td>46 (97)</td>
<td>17 (250)</td>
<td>162.5† (6.3)</td>
<td>75 (2.9)</td>
<td>57.2 (2.2)</td>
<td>0.87kg (1.9lbs)</td>
</tr>
</tbody>
</table>

† 包括消声器。包括6.3 bar (91.3 psig)内径和1 bar (14.5 psig)压力降。

† 标准零件号以粗体显示。有关其他型号的选项，请参考上述选项图。
Catalog 0750-2 US
Global Air Preparation System

Technical Information

Fluid: Compressed air
Max. pressure Solenoid operated: 10 bar (150 psig)
Max. pressure Air Pilot operated: 17 bar (250 psig)
Min. operating pressure: 3 bar (44 psig)
Temperature Max.* Solenoid operated: -10°C to 50°C (14°F to 122°F)
Temperature Max.* Air Pilot operated: -20°C to 80°C (-4°F to 176°F)
Air Pilot port: 1/8"
Exhaust port: P31T - 1/4” / P32T - 1/2”

Typical flow with 6.3 bar inlet pressure and 1 bar pressure drop:
P31T 17 dm³/s (36 scfm)
P32T 48 dm³/s (101 scfm)

* Air supply must be dry enough to avoid ice formation at temperatures below +2°C
Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

Flow characteristics

1/4 Soft Start & Dump Valve

1/2 Soft Start & Dump Valve

Material Specification

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

Description	 Order code	 Order code
L-Bracket mounting kit	 P3HKA00ML	 P3KKA00ML
Foot bracket mounting kit	 P3HKA00MC	 P3KKA00MC

Note:
For solenoid operators and cable plugs (connectors) see pages 68 to 69.

Dimensions mm (inches)

For mounting brackets see page 52
Remote operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.

To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained. The valve will automatically dump when the holding signal is removed.

## Symbols

- Modular design with 1/4" or 1/2" integral ports (NPT, BSPP & BSPT)
- Provides for the safe introduction of pressure
- The 3-way, 2-position function automatically dumps downstream pressure on the loss of pilot signal
- Solenoid or air pilot options
- High flow & exhaust capability
- Silencer included

## Options:

- **Body size**: Mini (1/4") or Compact (1/2")
- **Port size**: Mini (1/4") or Compact (1/2")
- **Pilot type**: External Air Pilot or Solenoid Pilot
- **Actuator interface**: 15mm solenoid (P31 series only) or 30mm solenoid
- **Thread Type**: BSPP (G), BSPT, NPT

### Remote operated dump valve

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code‡</th>
<th>Flow dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height (inches)</th>
<th>Width (inches)</th>
<th>Depth (inches)</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>120VAC Solenoid &amp; cable plug</td>
<td>P31D*92SNGC1FN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37 (0.8)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>24VDC Solenoid &amp; cable plug</td>
<td>P31D*92SNGC2CN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>166 (6.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.41 (0.9)</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot operated</td>
<td>P31D*92PPN</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37 (0.8)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>120VAC 30mm coil &amp; cable plug incl.</td>
<td>P32D*94SNGA3GN</td>
<td>51 (108)</td>
<td>10 (150)</td>
<td>162.5 (6.3)</td>
<td>75 (2.9)</td>
<td>57.2 (2.2)</td>
<td>0.69 (1.5)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>24VDC 30mm coil &amp; cable plug incl.</td>
<td>P32D*94SNGA2CN</td>
<td>51 (108)</td>
<td>10 (150)</td>
<td>227.5 (8.9)</td>
<td>75 (2.9)</td>
<td>57.2 (2.2)</td>
<td>0.91 (2.0)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot operated</td>
<td>P32D*94PPN</td>
<td>51 (108)</td>
<td>17 (250)</td>
<td>162.5 (6.3)</td>
<td>75 (2.9)</td>
<td>57.2 (2.2)</td>
<td>0.87 (1.9)</td>
</tr>
</tbody>
</table>

‡ Includes exhaust silencer
† Standard part numbers shown in bold. For other models refer to Options chart above.
Global Air Preparation System

Technical Information

Fluid: Compressed air
Max. pressure Solenoid operated: 10 bar (150 psig)
Max. pressure Air Pilot operated: 17 bar (250 psig)
Min. operating pressure: 3 bar (44 psig)
Temperature Max.* Solenoid operated: -10°C to 50°C (14°F to 122°F)
Temperature Max.* Air Pilot operated: -20°C to 80°C (-4°F to 176°F)
Air Pilot port: 1/8"
Exhaust port: P31D - 1/4" / P32D - 1/2"
Typical flow with 6.3 bar inlet pressure and 1 bar pressure drop:
P31D 17 dm³/s (36 scfm)
P32D 51 dm³/s (108 scfm)

Material Specification

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

Description Order code Order code
L-Bracket mounting kit P3HKA00ML P3KKA00ML
Foot bracket mounting kit P3HKA00MC P3KKA00MC

Note:
For solenoid operators and cable plugs (connectors) see pages 68 to 69.

Flow characteristics

1/4 Remote Dump Valve

1/2 Remote Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)

Flow characteristics

Dimensions mm (inches)

P31D

P32D

For mounting brackets see page 52
Parker Global Series Soft Start Valves, provide for the safe introduction of pressure to machines or systems. Soft Start Valves, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.

**Note:** Soft Start Valves must be installed downstream of a 3/2 valve with exhaust capability

### Options:

- **Body size**
  - Mini (1/4")
  - Compact (1/2")

- **Port size**
  - Mini (1/4")
  - Compact (1/2")

- **Pilot type**
  - External Air Pilot
  - Internal Air Pilot

- **Actuator interface**
  - Internal Pilot
  - 15mm solenoid (P31 series only)
  - 30mm solenoid
  - Threaded air pilot

- **Solenoid type only**
  - 24VDC non locking manual override
  - 120VAC non locking manual override

* Engineering Level will be entered at factory.

### Soft start valve

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order Code†</th>
<th>Flow (\text{dm}^3/\text{s} \text{ (scfm)})</th>
<th>Max. bar (psig)</th>
<th>Height (\text{mm} \text{ (inches)})</th>
<th>Width (\text{mm} \text{ (inches)})</th>
<th>Depth (\text{mm} \text{ (inches)})</th>
<th>Weight</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>120VAC Solenoid &amp; cable plug</td>
<td>P31S*92SGNC1FN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37kg (0.8lbs)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>24VDC Solenoid &amp; cable plug</td>
<td>P31S*92SGNC2CN</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>166.0 (6.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.41kg (0.9lbs)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Internal air pilot operated</td>
<td>P31S*92YDN</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37kg (0.8lbs)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot (1/8&quot; threaded)</td>
<td>P31S*92PPN</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>115.6 (4.5)</td>
<td>57 (2.2)</td>
<td>40 (1.5)</td>
<td>0.37kg (0.8lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>120VAC 30mm coil &amp; cable plug incl.</td>
<td>P32S*94SCNA3GN</td>
<td>48 (101)</td>
<td>10 (150)</td>
<td>162.5 (6.3)</td>
<td>88 (3.4)</td>
<td>57.2 (2.28)</td>
<td>0.87kg (1.5lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>24VDC 30mm coil &amp; cable plug</td>
<td>P32S*94SCNA2CN</td>
<td>48 (101)</td>
<td>10 (150)</td>
<td>227.5 (8.9)</td>
<td>88 (3.4)</td>
<td>57.2 (2.28)</td>
<td>0.90kg (2.0lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Internal air pilot operated</td>
<td>P32S*94Y0N</td>
<td>48 (101)</td>
<td>17 (250)</td>
<td>162.5 (6.3)</td>
<td>75 (2.9)</td>
<td>57.2 (2.28)</td>
<td>0.90kg (2.0lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot (1/8 threaded)</td>
<td>P32S*94PPN</td>
<td>48 (101)</td>
<td>17 (250)</td>
<td>162.5 (6.3)</td>
<td>75 (2.9)</td>
<td>57.2 (2.28)</td>
<td>0.87kg (1.5lbs)</td>
<td></td>
</tr>
</tbody>
</table>

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

Fluid: Compressed air
Max. pressure Solenoid operated: 10 bar (150 psig)
Max. pressure Air Pilot operated: 17 bar (250 psig)
Min. operating pressure: 3 bar (44 psig)
Temperature Max.* Solenoid operated: -10°C to 50°C (14°F to 122°F)
Temperature Max.* Air Pilot operated: -20°C to 80°C (-4°F to 176°F)
Air Pilot port: 1/8"
Typical flow with 6.3 bar inlet pressure and 1 bar pressure drop: 17 dm³/s (36 scfm)

Flow characteristics

1/4 Soft Start Valve

![Diagram of 1/4 Soft Start Valve]

1/2 Soft Start Valve

![Diagram of 1/2 Soft Start Valve]

Material Specification

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

Description Order code Order code
L-Bracket mounting kit P3HKA00ML P3KKA00ML
Foot bracket mounting kit P3HKA00MC P3KKA00MC

Note:
For solenoid operators and cable plugs (connectors) see pages 68 to 69.

Dimensions mm (inches)

P31S

![Dimensions of P31S]

P32S

![Dimensions of P32S]

For mounting brackets see page 52
### Solenoid Operator - CNOMO

#### Technical data - Solenoid operators, coil combinations

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td>P2FC6449</td>
<td>0.065</td>
</tr>
<tr>
<td>24VDC</td>
<td>PS2982B49P</td>
<td>0.038</td>
</tr>
<tr>
<td>115VAC 50Hz / 120VAC 60Hz</td>
<td>PS2982B53P</td>
<td>0.038</td>
</tr>
</tbody>
</table>

#### Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavourable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the Maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All connectors/cable plugs EN175301-803 with LED’s include this type of circuit protection.

#### Materials

- **Pilot Valve**
  - Body: Polyamide
  - Armature tube: Brass
  - Plunger & core: Corrosion resistant Cr-Ni steel
  - Seals: Fluorocarbon
  - Screws: Stainless steel

- **Coil**
  - Encapsulation material: Thermoplastic as standard Duroplast for M12 connection

### Spare solenoid operators

#### Base Solenoid pilot operator CNOMO NC

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Duty</td>
<td>P2FP23N4B</td>
<td>0.065</td>
</tr>
<tr>
<td>No Override</td>
<td>P2FP23N4A</td>
<td>0.065</td>
</tr>
</tbody>
</table>

**Note:** Solenoid pilot operators are fitted to the Global range. Order the above part numbers for spares. The operators are supplied with mounting screws and interface ‘O’ rings. Coils and connectors must be ordered separately.

### Solenoid coils with M12 connection

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24VDC</td>
<td>P2FC6449</td>
<td>0.065</td>
</tr>
</tbody>
</table>

### Solenoid coils with Din A or Industrial B connection

<table>
<thead>
<tr>
<th>Voltage</th>
<th>22mm x 30mm Order code</th>
<th>30mm x 30mm Order code</th>
<th>Weight (Kg)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td>P2FCB449</td>
<td>P2FCA449</td>
<td>0.093</td>
<td>0.105</td>
</tr>
<tr>
<td>Alternative</td>
<td>P2FCB453</td>
<td>P2FCA453</td>
<td>0.093</td>
<td>0.105</td>
</tr>
</tbody>
</table>
Solenoid connectors / Cable plugs EN175301-803

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code 15mm Form C ISO15217</th>
<th>Order code 22mm Form B Industrial</th>
<th>Order code 30mm Form A DIN 43650A</th>
</tr>
</thead>
<tbody>
<tr>
<td>With standard screw</td>
<td>PS2932BP</td>
<td>PS2429BP</td>
<td>PS2028BP</td>
</tr>
<tr>
<td>Standard IP65 without flying lead</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With LED and protection 24VAC/DC</td>
<td>PS294679BP</td>
<td>PS243079BP</td>
<td>PS203279BP</td>
</tr>
<tr>
<td>With LED and protection 110VAC</td>
<td>PS294683BP</td>
<td>PS243083BP</td>
<td>PS203283BP</td>
</tr>
<tr>
<td>With cable</td>
<td>PS2932JBP</td>
<td>PS2429JBP</td>
<td>PS2028JBP</td>
</tr>
<tr>
<td>Standard with 2m cable IP65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24VAC/DC, 2m cable LED and protection IP65</td>
<td>PS2946J79BP</td>
<td>PS2430J79BP</td>
<td>PS2032J79BP</td>
</tr>
<tr>
<td>110VAC/DC, 2m cable LED and protection IP65</td>
<td>PS2946J83BP</td>
<td>PS2430J83BP</td>
<td>PS2032J83BP</td>
</tr>
</tbody>
</table>

Solenoid coil Dimensions mm (inches)

<table>
<thead>
<tr>
<th>15mm</th>
<th>22 x 30mm</th>
<th>30 x 30mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 (1.59)</td>
<td>31 (1.22)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>22.5 (1.00)</td>
<td>41 (1.61)</td>
<td>31 (1.22)</td>
</tr>
<tr>
<td>23.65 (0.93)</td>
<td>30 (1.18)</td>
<td>22 (0.87)</td>
</tr>
<tr>
<td>40 (1.57)</td>
<td>60 (2.36)</td>
<td></td>
</tr>
<tr>
<td>32 (1.26)</td>
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<td>30 (1.18)</td>
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Electrical schematics

<table>
<thead>
<tr>
<th>15mm ISO 15217 Cable plugs</th>
<th>22mm Form B Industrial Cable plugs</th>
<th>30mm DIN 43650A Cable plugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS2932BP</td>
<td>PS2429BP</td>
<td>PS2028BP</td>
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<tr>
<td>PS294679BP</td>
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<tr>
<td>PS294683BP</td>
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<tr>
<td>PS2932JBP</td>
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<tr>
<td>PS2946J79BP</td>
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<td>PS2946J83BP</td>
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<tr>
<td>PS2946J83BP</td>
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</tbody>
</table>

Cable plug Dimensions mm (inches)

<table>
<thead>
<tr>
<th>15mm ISO 15217 Cable plugs</th>
<th>22mm Form B Industrial Cable plugs</th>
<th>30mm DIN 43650A Cable plugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS2932BP</td>
<td>PS2429BP</td>
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<td>PS294683BP</td>
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<tr>
<td>PS2932JBP</td>
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<tr>
<td>PS2946J79BP</td>
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<td></td>
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<td></td>
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<tr>
<td>PS2946J83BP</td>
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<td></td>
</tr>
</tbody>
</table>

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/globalfrl
Safety Lockout Valves

Features
- The Safety Lockout valve is a manually operated, slide-type, 2-position, 3-way valve. In the closed position, downstream air pressure is exhausted to atmosphere.
- The valve slide can be locked in the closed position with a customer supplied padlock.
- The Safety Lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).
- Left to right flow — orange slide
- Right to left — yellow slide

Ordering Information

<table>
<thead>
<tr>
<th>Model type</th>
<th>Port size</th>
<th>Thread type</th>
<th>Flow dm³/s (scfm)</th>
<th>Safety Lockout Valve Flow from left to right</th>
<th>Safety Lockout Valve Flow from right to left</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>1/4&quot;</td>
<td>NPT</td>
<td>47.2 (100)</td>
<td>P31V*92LSAN</td>
<td>—</td>
</tr>
<tr>
<td>P32</td>
<td>1/4&quot;</td>
<td>NPT</td>
<td>66.5 (141)</td>
<td>P32V*92LSAN</td>
<td>P32V*92LSBN</td>
</tr>
<tr>
<td></td>
<td>3/8&quot;</td>
<td>NPT</td>
<td>101.9 (216)</td>
<td>P32V*93LSAN</td>
<td>P32V*93LSBN</td>
</tr>
<tr>
<td></td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>128.4 (272)</td>
<td>P32V*94LSAN</td>
<td>P32V*94LSBN</td>
</tr>
<tr>
<td>P33</td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>136.9 (290)</td>
<td>P33V*94LSAN</td>
<td>P33V*94LSBN</td>
</tr>
<tr>
<td></td>
<td>3/4&quot;</td>
<td>NPT</td>
<td>141.6 (300)</td>
<td>P33V*96LSAN</td>
<td>P33V*96LSBN</td>
</tr>
</tbody>
</table>

For thread type: BSPP 1 BSPT 2 NPT 9

* Engineering Level will be entered at factory.

Materials of Construction

- Body: Zinc
- Blade: Acetal
- Seals: Nitrile

Specifications

- Operating temperature:
  - P31: -10°C to 65.5°C (14°F to 150°F)
  - P32/P33: -25°C to 65.5°C (-13°F to 150°F)
- Max. supply pressure: 10 bar (150 psig)
- Port size: BSPP / BSPT / NPT 1/4, 3/8, 1/2, 3/4
- Weight:
  - P31: 0.30 kg (0.66 lbs)
  - P32: 0.34 kg (0.74 lbs)
  - P33: 0.41 kg (0.90 lbs)

Dimensions mm (inches)
Modular Ball Valves

Features

The Modular Ball Valves provide shut off line pressure with a non-sticking 90° turn handle to prevent unauthorised adjustment. When the inlet pressure is turned off the downstream air pressure vents through the exhaust port. The padlock slide may be assembled on either side. It is recommended that this is assembled after mounting.

Note: This padlock slide is a permanent assembly and may not be removed later.

Ordering Information

<table>
<thead>
<tr>
<th>Model type</th>
<th>Port size</th>
<th>Thread type</th>
<th>Flow dm³/s (scfm)</th>
<th>Modular Ball Valve Flow from left to right</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>1/4&quot;</td>
<td>NPT</td>
<td>20 (42.4)</td>
<td>P31V92LBNN</td>
</tr>
<tr>
<td>P32</td>
<td>3/8&quot;</td>
<td>NPT</td>
<td>90 (190.7)</td>
<td>P32V93LBNN</td>
</tr>
<tr>
<td></td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>122 (258.5)</td>
<td>P32V94LBNN</td>
</tr>
<tr>
<td>P33</td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>265 (561.5)</td>
<td>P33V94LBNN</td>
</tr>
<tr>
<td></td>
<td>3/4&quot;</td>
<td>NPT</td>
<td>320 (678)</td>
<td>P33V96LBNN</td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

For thread type: BSPP 1
BSPT 2
NPT 9

Specifications

- Operating temperature: -20°C to 80°C (-4°F to 176°F)
- Max. supply pressure: 17 bar (250 psig)
- Port size: BSPP / BSPT / NPT 1/4, 3/8, 1/2, 3/4
- Weight:
  - P31: 0.19 kg (0.41 lbs)
  - P32: 0.47 kg (1.00 lbs)
  - P33: 0.80 kg (1.70 lbs)

Materials of Construction

- Body: Aluminum
- Seals: PTFE
- Ball:
  - P31: Brass
  - P32 / P33: Chrome plated brass

Dimensions mm (inches)

P31

P32

P33
Global Air Preparation System

Manifold Blocks

Features
- Available in 1/4" or 3/4" threaded inlet / outlet ports
- Two additional top and bottom auxiliary ports standard
- Can be mounted anywhere in the FRL system
- Includes one pipe plug

Ordering Information

<table>
<thead>
<tr>
<th>Model type</th>
<th>In / Out port size</th>
<th>Auxiliary port size top</th>
<th>Auxiliary port size bottom</th>
<th>Thread type</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>NPT</td>
<td>P31M*92022N</td>
</tr>
<tr>
<td>P32</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>P32M*94024N</td>
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<tr>
<td>P33</td>
<td>3/4&quot;</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>NPT</td>
<td>P33M*96024N</td>
</tr>
</tbody>
</table>

* Engineering Level will be entered at factory.

For thread type: BSPP 1
BSPT 2
NPT 9

Materials of Construction

Body Aluminum

Note:
P33 unit used for both P32 & P33 series

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-40°C to 65.5°C (-40°F to 150°F)</td>
</tr>
<tr>
<td>Max. supply pressure</td>
<td>20.7 bar (300 psig)</td>
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<tr>
<td>Weight</td>
<td>P31: 0.19 kg (0.26 lbs)</td>
</tr>
<tr>
<td></td>
<td>P33: 0.34 kg (0.42 lbs)</td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

P31

P32

P33
Global Air Preparation System

Accessories - P31 Series

C-Bracket
(Fits to filter and lubricator body)
P31KA00MW

T-Bracket w/ Body Connector
(O-ring not shown)
P31KA00MT

Body Connector
(O-ring not shown)
P31KA00CB

Port Block Kit
(O-ring not shown)

<table>
<thead>
<tr>
<th>Size</th>
<th>P31KA91CP</th>
<th>P31KA92CP</th>
<th>P31KA93CP</th>
<th>P31KA11CP</th>
<th>P31KA12CP</th>
<th>P31KA13CP</th>
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</thead>
<tbody>
<tr>
<td>NPT</td>
<td>1/8</td>
<td>1/4</td>
<td>3/8</td>
<td>1/8</td>
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<td>BSPT</td>
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<td>1/8 BSPT</td>
<td>1/4 BSPT</td>
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</table>

Port Block Kit w/ T-Bracket
(O-ring not shown)

<table>
<thead>
<tr>
<th>Size</th>
<th>P31KA91CN</th>
<th>P31KA92CN</th>
<th>P31KA93CN</th>
<th>P31KA11CN</th>
<th>P31KA12CN</th>
<th>P31KA13CN</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT</td>
<td>1/8</td>
<td>1/4</td>
<td>3/8</td>
<td>1/8</td>
<td>1/4</td>
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<tr>
<td>BSPT</td>
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<td>1/8 BSPT</td>
<td>1/4 BSPT</td>
<td>3/8 BSPT</td>
</tr>
</tbody>
</table>

Angle Bracket
(Fits to regulator and filter/regulator body)
P31KA00MR
Global Air Preparation System

Accessories - P32 Series

T-Bracket w/ Body Connector
P32KA00MT

Body Connector
P32KA00CB

Port Block Kit
1/4 NPT ............... P32KA92CP
3/8 NPT ............... P32KA93CP
1/2 NPT ............... P32KA94CP
3/4 NPT ............... P32KA96CP
1/4 BSPP .......... P32KA12CP
3/8 BSPP .......... P32KA13CP
1/2 BSPP .......... P32KA14CP
3/4 BSPP .......... P32KA16CP

Angle Bracket
(Fits to regulator and filter/regulator bonnet)
P32KA00MR

L-Bracket
(Fits to filter and lubricator body)
P32KA00ML

T-Bracket
(fits to body connector or port block)
P32KA00MB
Global Air Preparation System

Accessories - P33 Series

T-Bracket w/ Body Connector
P32KA00MT

Body Connector
P32KA00CB

Port Block Kit
1/4 NPT............. P32KA92CP
3/8 NPT............. P32KA93CP
1/2 NPT............. P32KA94CP
3/4 NPT............. P32KA96CP
1/4 BSPP........... P32KA12CP
3/8 BSPP........... P32KA13CP
1/2 BSPP........... P32KA14CP
3/4 BSPP........... P32KA16CP

Angle Bracket
(Fits to regulator and filter/regulator bonnet)
P33KA00MR

L-Bracket
(Fits to filter and lubricator body)
P33KA00ML

T-Bracket
(fits to body connector or port block)
P32KA00MB
## Kits

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
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<td>P31</td>
<td>Panel Mount Nut (Plastic)</td>
<td>P31KA00MP</td>
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<td>P32KA00MP</td>
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<td>P33KA00MP</td>
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<tr>
<td>P31</td>
<td>Panel Mount Nut (Aluminum)</td>
<td>P31KA00MM</td>
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<td>P32KA00MM</td>
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<td>5µ Element Kit</td>
<td>P31KA00ESE</td>
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<td>1µ Element Kit</td>
<td>P31KA00ES9</td>
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<td>P32KA00ES9</td>
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<tr>
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<td></td>
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<td>0.01µ Element Kit</td>
<td>P31KA00ESC</td>
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<td>P32KA00ESC</td>
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<td>Adsorber Element Kit</td>
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<td>P32 / P33</td>
<td>Auto Drain Kit</td>
<td>P32KA00DA</td>
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<tr>
<td>P32 / P33</td>
<td>Differential Pressure Indicator Kit</td>
<td>P32KA00RQ</td>
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<tr>
<td>P31</td>
<td>Fill Plug Kit</td>
<td>P31KA00PL</td>
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<td>P32KA00PL</td>
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<tr>
<td>P31 / P32 / P33</td>
<td>Drip Control Assembly Kit</td>
<td>P32KA00PG</td>
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## Global Air Preparation System

### Kits

<table>
<thead>
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<th>Series</th>
<th>Description</th>
<th>Order Code</th>
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<tbody>
<tr>
<td>P31</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Manual Drain</td>
<td>P31KA00BGM</td>
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<tr>
<td>P32</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Pulse Drain</td>
<td>P31KA00BGB</td>
</tr>
<tr>
<td>P33</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Auto Drain</td>
<td>P32KA00BGA</td>
</tr>
<tr>
<td>P31</td>
<td>Metal Bowl w/o Sight Gauge &amp; Manual Drain</td>
<td>P31KA00BMM</td>
</tr>
<tr>
<td>P32</td>
<td>Metal Bowl w/o Sight Gauge &amp; Pulse Drain</td>
<td>P31KA00BMN</td>
</tr>
<tr>
<td>P33</td>
<td>Metal Bowl w/o Sight Gauge &amp; Auto Drain</td>
<td>P32KA00BSA</td>
</tr>
<tr>
<td>P31</td>
<td>Lubricator - Plastic Bowl w/ Bowl Guard No Drain</td>
<td>P31KA00BGN</td>
</tr>
<tr>
<td>P32</td>
<td>Lubricator - Metal Bowl w/o Sight Gauge No Drain</td>
<td>P31KA00BMN</td>
</tr>
<tr>
<td>P33</td>
<td>Lubricator - Metal Bowl w/ Sight Gauge No Drain</td>
<td>P32KA00BSN</td>
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## Global Air Preparation System

### Kits

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Connection</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>Regulator - Relieving Repair Kit</td>
<td></td>
<td>P31KA00RB</td>
</tr>
<tr>
<td>P32</td>
<td>Regulator - Non Relieving Repair Kit</td>
<td></td>
<td>P32KA00RC</td>
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<td>P33</td>
<td>Regulator - Non Relieving Repair Kit</td>
<td></td>
<td>P33KA00RC</td>
</tr>
<tr>
<td>P31</td>
<td>Regulator - Main Adjusting Spring 0-2 bar (0-30 psig) Kit</td>
<td></td>
<td>P31KA00PR</td>
</tr>
<tr>
<td>P32</td>
<td>Regulator - Main Adjusting Spring 0-4.1 bar (0-60 psig) Kit</td>
<td></td>
<td>P32KA00PS</td>
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<tr>
<td>P33</td>
<td>Regulator - Main Adjusting Spring 0-8.6 bar (0-125 psig) Kit</td>
<td></td>
<td>P33KA00PS</td>
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<tr>
<td>P31</td>
<td>Regulator - Main Adjusting Spring 0-17 bar (0-250 psig) Kit</td>
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<td>P32KA00PV</td>
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<tr>
<td></td>
<td>Square Flush Mounting Gauge Kit</td>
<td>0-4 bar</td>
<td>K4511SCR04B</td>
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<td></td>
<td></td>
<td>0-10 bar</td>
<td>K4511SCR11B</td>
</tr>
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<td></td>
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<td>0-60 psig</td>
<td>K4511SCR060</td>
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<td>0-150 psig</td>
<td>K4511SCR150</td>
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<td>P31</td>
<td>1&quot; Round Gauge</td>
<td>0-60 psig / 0-4.1 bar 1/8&quot;</td>
<td>K4510N18060</td>
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<td>0-160 psig / 0-10 bar 1/8&quot;</td>
<td>K4510N18160</td>
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<tr>
<td>P31</td>
<td>40mm Round Gauge</td>
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<td>0-60 psig / 0-4.1 bar 1/8&quot;</td>
<td>K4515N18060</td>
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<td></td>
<td></td>
<td>0-160 psig / 0-10 bar 1/8&quot;</td>
<td>K4515N18160</td>
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<tr>
<td>P32 / P33</td>
<td>50mm Round Gauge</td>
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<td>K4520N14030</td>
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<td></td>
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<td>0-60 psig / 0-4.1 bar 1/4&quot;</td>
<td>K4520N14060</td>
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<td></td>
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<td></td>
<td></td>
<td>0-300 psig / 0-20 bar 1/4&quot;</td>
<td>K4520N14300</td>
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<tr>
<td>P31</td>
<td>Body Connector O-ring (Spares kit) (Pack of 4)</td>
<td></td>
<td>P31KA02CY</td>
</tr>
<tr>
<td>P32 / P33</td>
<td></td>
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<td>P32KA04CY</td>
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</tbody>
</table>
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 Gauges: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight gauges 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 gauges in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

**WARNING:**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS (“PRODUCTS”) CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.
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.
1. Terms and Conditions. Seller’s willingness to offer Products, or accept an order for Products, to or from Buyer is expressly conditioned on Buyer’s assent to these Terms and Conditions and to the terms and conditions found on-line at www.parker.com/saleterms/. Seller objects to any contrary or additional term or condition of Buyer’s order which is utilized in the manufacture of the Products, even if such apparatus to Products delivered hereunder for which the designs are specified in whole or part by Buyer becomes aware of such discovery, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller will at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Buyer shall indemnify, defend, and hold Seller harmless for any default or delay in performance if any damages resulting from federal or local legislation, price increases from its suppliers, or any change in the rate, charge, or classification of any carrier. The parties stated on the reverse side or preceding pages of this document are not included, unless specified by Seller, all prices are F.O.B. Seller’s facility, and payment is due 30 days from the date of invoice. After 30 days, Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law.

2. Price Adjustments; Payments. Prices stated on the reverse side or preceding pages of this document are valid for 30 days. After 30 days, Seller may charge prices to reflect any increase in its costs resulting from state, federal or local legislation, price increases from its suppliers, or any change in the rate, charge, or classification of any carrier. The prices charged for Seller’s products are based upon the limited warranty stated above, and upon the following disclaimers. DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRIS THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HERETUDE. SELLER DISCLAIMS ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

5. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days after receipt of the Products, and will not be allowed unless Buyer gives written notice within 60 days after delivery or, in the case of an alleged breach of warranty, within 30 days after the date within the warranty period on which the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for any amount due to Buyer) must be commenced within thirteen months from the date of the tender of delivery to Buyer or 2,000 hours of normal use, whichever occurs first. This warranty is made only to Buyer and does not extend to anyone to whom Products are sold after purchased from Seller. No claims for shortages will be allowed unless Buyer gives written notice within 60 days after delivery or, in the case of an alleged breach of warranty, within 30 days after the date within the warranty period on which the defect is or should have been discovered by Buyer.

6. LIMITATION OF LIABILITY. UNCON STOPED, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE; NO OTHER REMEDY WILL BE AVAILABLE TO BUYER FOR ANY INDEMNITY, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OF ANY NATURE INCURRED WITHOUT SELLER’S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLECTED, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER’S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.

9. System options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems. Such Properties. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer’s property, may be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer placing an order for the items which were manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller’s possession or control. Special Tooling. A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such tooling costs and remaining Seller property notwithstanding payment of any charges paid by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specifically designed or adapted for such manufacture and notwithstanding payment of any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.
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