The concentration level must not exceed 0.1% by weight. This Polybrominated Biphenyls (PBB):

- Cadmium: The concentration level must not exceed 0.01% by volume
- Mercury: The concentration level must not exceed 0.1% by volume
- Hexavalent Chromium:
  - This is a corrosive protective finish used on our product line. Where this finish is utilized the Chromate solution is Hexavalent (Chrome 6) free.
- Polybrominated Biphenyls (PBB):
  - The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.
- Polybrominated Diphenyl Esters (PBDE):
  - The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.

Global Air Preparation products supplied by Parker Hannifin have been designed and manufactured in accordance with “sound engineering practice”, as defined by Article 3 of Pressure Equipment Directive 97/23/EC.

Global Air Preparation product range is in compliance with REACH to ensure continued compliance additions to the list of SVHC (Substance of Very High Concern) are reviewed periodically.

Global Air Preparation product range has been third party Shock & Vibration tested independently in accordance to EN 61373 : 1999, Category 2.

Failure or Improper selection or Improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled “Offer of Sale”.

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## Parker Global Air Preparation System

- **Introduction** ......................................................... 4-13
- **Atex Declaration** .................................................. 14
- **Shock & Vibration** ............................................... 15
- **Combinations**
  - P31 Mini Series .................................................. 16
  - P32 Compact Series ............................................. 17
  - P33 Standard Series ............................................ 18
- **Dimensions** .......................................................... 19
- **Filters**
  - P31 Mini Series .................................................. 20-21
  - P32 Compact Series ............................................. 22-23
  - P33 Standard Series ............................................ 24-25
- **Coalescing & Adsorber Filters**
  - P31 Mini Series .................................................. 26-27
  - P32 Compact Series ............................................. 28-29
  - P33 Standard Series ............................................ 30-31
- **Regulators**
  - P31 Mini Series .................................................. 32-33
  - P31 Mini Common Port Regulator Series .............. 34-35
  - P32 Compact Series ............................................. 36-37
  - P32 Compact Semi-Precision Regulator Series ...... 38-39
  - P32 Compact Common Port Regulator Series ....... 40-41
  - P33 Standard Series ............................................ 42-43
- **Filter / Regulators**
  - P31 Mini Series .................................................. 44-45
  - P32 Compact Series ............................................. 46-47
  - P32 Compact Semi-Precision Series ................... 48-49
  - P33 Standard Series ............................................ 50-51
- **Lubricators**
  - P31 Mini Series .................................................. 52-53
  - P32 Compact Series ............................................. 54-55
  - P33 Standard Series ............................................ 56-57
- **Proportional Regulators**
  - P31 Mini Series & P32 Compact Series ............... 58-67
- **Dump Valve** .......................................................... 68-69
- **Soft Start Valve** ................................................ 70-71
- **Combined Soft Start / Dump Valve** .................... 72-73
- **Solenoid Operators** ............................................. 74-75
- **Global Products Fitted with Pressure Sensor** ....... 77
- **Redundant Safety Exhaust Valve** ......................... 78-81
- **Ball Valve / Lockout Valve** ................................ 82
- **Manifold Blocks** ................................................ 83
- **Pressure Sensors** ................................................ 84-85
- **Kits & Accessories**
  - P31 Mini Series .................................................. 86
  - P32 Compact Series ............................................. 87
  - P33 Standard Series ............................................ 88
  - Kits ................................................................. 89-91
  - Pressure Switch PPS1 ......................................... 92-93
- **Safety Guide** ...................................................... 94-95

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**Introduction**

The Parker Global Air Preparation System is designed for high-performance pneumatic applications, ensuring reliable and efficient air preparation. This guide covers various components and systems, including filters, regulators, and accessories, to provide a comprehensive solution for your pneumatic needs.

**Combinations**

The system offers a wide range of combinations to meet different industrial requirements. Key components include:

- **P31 Mini Series**
- **P32 Compact Series**
- **P33 Standard Series**

These series are engineered to deliver superior performance in demanding environments.

**Filters**

Effective filtration is crucial for maintaining system integrity and extending component life. The filter range includes:

- **P31 Mini Series**
- **P32 Compact Series**
- **P33 Standard Series**

**Regulators**

Proper pressure regulation is essential for ensuring efficient operation and safety. Regulator options include:

- **P31 Mini Series**
- **P31 Mini Common Port Regulator Series**
- **P32 Compact Series**
- **P32 Compact Semi-Precision Regulator Series**
- **P32 Compact Common Port Regulator Series**
- **P33 Standard Series**

**Filter / Regulators**

Combining filters with regulators offers a streamlined approach to air preparation, ensuring clean and regulated air supply.

- **P31 Mini Series**
- **P32 Compact Series**
- **P32 Compact Semi-Precision Series**
- **P33 Standard Series**

**Lubricators**

Lubricators are vital for protecting against component damage due to insufficient lubrication. Available options include:

- **P31 Mini Series**
- **P32 Compact Series**
- **P33 Standard Series**

**Proportional Regulators**

For applications requiring precise pressure control, proportional regulators offer the necessary accuracy.

- **P31 Mini Series & P32 Compact Series**

**Dump Valve**

Emergency dumping of air is necessary in certain scenarios to prevent damage or accidents.

**Soft Start Valve**

Soft start valves are used to control the rate at which air is admitted to the system, minimizing shock.

**Combined Soft Start / Dump Valve**

Combining soft start and dump valve functions in a single component simplifies system control.

**Solenoid Operators**

Solenoid operators are used to control pneumatic systems through remote or automatic activation.

**Kits & Accessories**

Accessories and kits provide additional functionality and ease of installation.

- **P31 Mini Series**
- **P32 Compact Series**
- **P33 Standard Series**
- **Kits**

**Pressure Switch PPS1**

Pressure switches, like PPS1, are used to monitor and control pressure levels within the system.

**Safety Guide**

A comprehensive safety guide is provided to ensure safe operation and maintenance of the Parker Global Air Preparation System.
Parker Global Air Preparation System

Global. Modular.

Performance you need, wherever you need it.

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

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

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
- Ball style lockout / shutoff valve
- 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

1. 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).

2. For every 1°C (2°F) that the air cools after leaving the heat of the compressor, 50% of the moisture condenses into liquid into the system.

3. The excess moisture condenses and collects in the receiver tank and distribution lines. This condensate must be removed.

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

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

Key
- Particulate
- Oil
- Water
- Oil Vapor
- Water Vapor

Note: Water and oil, in vapor form, pass through general purpose particulate filters.

This type of filter should be used as a prefilter for the coalescing (oil removal) filter.

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

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

Refrigeration, membrane 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. These airborne hydrocarbons are often left over from the compressor oils.

<table>
<thead>
<tr>
<th>Stages</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
<td>Air Compressor</td>
<td>Bulk Liquid Removal</td>
<td>Particulate Filtration</td>
<td>Coalescing Filtration</td>
<td>Air Dryers</td>
<td>Hydrocarbon Removal</td>
<td></td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>All pneumatic systems</td>
<td>Basic pneumatic systems</td>
<td>Basic pneumatic systems</td>
<td>Systems requiring highest quality air</td>
<td>Systems requiring highest quality air with reduced moisture content</td>
<td>Systems requiring highest quality air for critical applications</td>
<td></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Air leaving the compressor room at 93ºC (200ºF) releases 95% of its moisture into the piping system when it cools to 38ºC (100ºF)</td>
<td>Removes bulk liquid contamination and protects filters where excess cooling takes place in the distribution piping</td>
<td>Removes solid particulates down to 5 micron, and the separation of bulk contaminants.</td>
<td>Removes liquid aerosols and submicron particulates (not vapor) down to 0.01 micron.</td>
<td>Removes water vapor from air stream. Dew point reduced down to -40ºC membrane and -70ºC desiccant.</td>
<td>Removal of odors and trace vapors for critical applications.</td>
<td></td>
</tr>
</tbody>
</table>
A completely modular air preparation system

Easy to adjust non-rising knob with snap-lock, preventing accidental change of set pressure

Quick release bayonet-type integral bowl and bowl guard assembly

Manual drain with pipe-away, auto drain available

Filter / Regulator

Ball Valve

Padlock slide

Pressure gauge

Bowl guard with multiple viewing slots
Introduction

Soft Start / Dump Valve

2-piece Patented modular body connector US Patent number 5,383,689

Coalescing Filter

NPT or BSPP porting available

Aluminum body
Air Preparation

P31 Mini Series

40mm body width
1/4" Ported

Flows up to: dm³/s (SCFM)
- Filter: 12 (25)
- Coalescer: 3.6 (7.5)
- Regulator: 32 (68)
- Filter/Regulator: 10 (22)
- Lubricator: 19 (40)

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: dm³/s (SCFM)
- Filter: 39 (82)
- Coalescer: 17 (36)
- Regulator: 78 (165)
- Filter/Regulator: 64 (136)
- Lubricator: 42 (90)

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: dm³/s (SCFM)
- Filter: 40 (85)
- Coalescer: 34 (72)
- Regulator: 111 (233)
- Filter/Regulator: 108 (230)
- Lubricator: 71 (150)

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.

Compact Series Complimentary Products

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

Standard Series Complimentary Products

The P33 Series FRL's & accessories are well matched for use with these Parker valves and actuators.
Complete Pneumatic System

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.
- Multiple spring ranges available

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

Semi Precision Regulator and Filter/Regulator

- Available in P32 compact series
- Fine adjustment sensitivity
- Good repeatability and minimal pressure drop
- Good flow capacity
- Light gray knob for easy identification

Optional Tamperproof Kits

- One facilitates the permanent tamperproofing of the Regulator and Filter/Regulator units
- Hinged black part clamps over control knob and is locked in place after sliding yellow cover over it
- Other allows for removable lockout/tagout tamperproofing
  - Four pad lock location holes tagout
  - Hinged locking clamp secures over existing knob via yellow cover which is slid over into place

Additional Options (Consult factory for availability)

- T-Handle (P32 only)
- Preset and Tamperproof
- Preset
- Pressure Limiter
# Application Guide

**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>
</tr>
<tr>
<td>3</td>
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<td>5</td>
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<td>9</td>
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<td>10</td>
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<tr>
<td>11</td>
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<tr>
<td>12</td>
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<td>13</td>
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<tr>
<td>14</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 0.5 m/s.

<table>
<thead>
<tr>
<th>Cyl Ø mm</th>
<th>Cyl Ø inches</th>
<th>Cylinder bore size</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (5/16)</td>
<td>10 (7/16)</td>
<td>16 (9/16)</td>
</tr>
<tr>
<td>20 (3/4)</td>
<td>25 (1)</td>
<td>28 (1-1/8)</td>
</tr>
<tr>
<td>32 (1-1/4)</td>
<td>40 (1-1/2)</td>
<td>45 (1-3/4)</td>
</tr>
<tr>
<td>50 (2)</td>
<td>63 (2-1/2)</td>
<td>75 (3)</td>
</tr>
<tr>
<td>80 (3-1/4)</td>
<td>100 (4)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tube Ø mm</th>
<th>Tube Ø inches</th>
<th>Tube diameter external</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 (1/4)</td>
<td>6 (1/4)</td>
<td>6 (1/4)</td>
</tr>
<tr>
<td>6 (1/4)</td>
<td>6 (1/4)</td>
<td>6 (1/4)</td>
</tr>
<tr>
<td>8 (5/16)</td>
<td>8 (5/16)</td>
<td>8 (5/16)</td>
</tr>
<tr>
<td>8 (5/16)</td>
<td>8 (5/16)</td>
<td>8 (5/16)</td>
</tr>
<tr>
<td>10 (3/8)</td>
<td>10 (3/8)</td>
<td>10 (3/8)</td>
</tr>
<tr>
<td>10 (3/8)</td>
<td>10 (3/8)</td>
<td>10 (3/8)</td>
</tr>
<tr>
<td>12 (1/2)</td>
<td>12 (1/2)</td>
<td>12 (1/2)</td>
</tr>
</tbody>
</table>

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

We, Parker Hannifin Manufacturing Austria GmbH
Badener Straße 12
2700 Wiener Neustadt
Austria

Product | Series | Category
--- | --- | ---
Filter* | P31FB, P32FB, P33FA | for zone 1, 21
Regulator | P31RB, P32RB, P33RA | for zone 1, 21
Filter regulator* | P31EB, P32EB, P33EA | for zone 1, 21
Lubricator* | P31LB, P32LB, P33LA | for zone 1, 21
Ball Valve & Slide Valve | P31VB, P32VB, P33VB | for zone 1, 21
Manifold | P31MA, P32MA, P33MA | for zone 1, 21

For non-fitted solenoid product
- Soft start & Dump Valve | P31TA, P32TA | for zone 1, 21
- Soft Start Valve | P31SA, P32SA | for zone 1, 21
- Dump Valve | P31DA, P32DA | for zone 1, 21

*Filter, Filter Regulator and Lubricator – This evaluation applies to products fitted with metal bowls only.

Following Ignition Hazard Assessments performed on the non-electrical products listed above, in accordance with the requirements of EN 13463-1:2009, it was considered that the equipment does not contain its own source of ignition, and therefore is not within the scope of directive 94/9/EC.

The products can be used in a Group II Category 2 environment assuming that the ATEX Directive and the following conditions are complied with:

- Installation and maintenance of the product must be undertaken by qualified personnel.
- Do not mount the products in an area where impact may occur.
- Filters must be used to limit the introduction of particles and to capture particles generated in service.
- Supply air quality must be within ISO 8573-1:2010 Class 1.4.2.
- Maximum working temperature to be as stated on product label.
- WARNING – pulsating pressure and/or a closed circuit can generate heat.
- Deposits of dust on the product must not exceed 5mm thickness.
  Refer to technical file for surface areas of plastics.
  The unit must be earthed via the compressed air supply line.
- The unit must not come into contact with liquid solvents, acids or alkalis
  Refer to technical file for chemicals known to be incompatible.
  Product cleaning must be undertaken using a method complying with the specifications of the ATEX zone, preferably by using mild soap and water or antistatic products.
- Regulators, Filter Regulators:
  Do not use Regulators or Filter Regulators within systems that can create vibration within the Regulator/Filter Regulator unit.
- Solenoid Operated Valves:
  Are suitable for use in an ATEX environment, (Group II Category 2) providing ATEX approved solenoids are fitted.
- Technical file available on request.

Approved by:

Engineering Manager – Air Preparation EMEA
Validated for transport applications

As you would expect from a member of the Rail Industry Association, Global air preparation meets the test specification standards enabling the Global series to be used as a validated product in a variety of rail applications.

CEI/ICE 61373 1999-1 Category 2 (BS EN 61373:1999)

Recommended mounting / fixation method for use in transportation applications.

- The use of a port block kit and T-bracket should be used at all times (angle / L-brackets should not be used in rail applications)
- Additional security is recommended with the use of “vibration proof adhesive” on the wall mounting screws to the port / connector block
- Inlet (P1) and Outlet (P2) ports should always have a T-Bracket fixation to eliminate product cantilever stress
- ‘L’ brackets should not be used in the use for rail service

Position of T-Brackets for multiple units

For illustration purposes only
**Popular Combinations:** Inlet pressure 10 bar (145 psig), Secondary pressure 6.3 bar (91.3 psig), 1 bar (14.5 psig) pressure drop.

### Filter + Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</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 dm³/s</td>
<td>27 (scfm)</td>
<td>P31CB12GEMNTLNW</td>
<td>0.46 kg (1.01 lbs)</td>
<td>P31CB12GEBNTLNW</td>
</tr>
</tbody>
</table>

### Filter/Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</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 dm³/s</td>
<td>28 (scfm)</td>
<td>P31CA12GEMNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
<td>P31CA12GEBNTLNW</td>
</tr>
</tbody>
</table>

### Ball Valve + Filter/Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</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 dm³/s</td>
<td>28 (scfm)</td>
<td>P31QA12GEMNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
<td>P31QA12GEBNTLNW</td>
</tr>
</tbody>
</table>

### Ball Valve + Filter/Regulator Combinations + Poly bowl
5 micron element, 8 bar Regulator + Gauge and Wall Mounting Brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</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 dm³/s</td>
<td>28 (scfm)</td>
<td>P31QN12GEMNTLNW</td>
<td>0.4 kg (0.88 lbs)</td>
<td>P31QN12GEBNTLNW</td>
</tr>
</tbody>
</table>

---

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

### Filter + Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight Manual</th>
<th>Auto drain</th>
<th>Weight Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>20 dm³/s</td>
<td>P32CB12GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB12GEANGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>32 dm³/s</td>
<td>P32CB13GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB13GEANGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>40 dm³/s</td>
<td>P32CB14GEMNGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
<td>P32CB14GEANGLNW</td>
<td>1.29 kg (2.84 lbs)</td>
</tr>
</tbody>
</table>

### Filter/Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight Manual</th>
<th>Auto drain</th>
<th>Weight Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>22 dm³/s</td>
<td>P32CA12GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA12GEANGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s</td>
<td>P32CA13GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA13GEANGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s</td>
<td>P32CA14GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32CA14GEANGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
</tr>
</tbody>
</table>

### Ball Valve + Filter/Regulator + Lubricator Combinations, Poly bowl
5 micron element, 8 bar (116 psig) regulator + gauge and Wall Mounting Brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight Manual</th>
<th>Auto drain</th>
<th>Weight Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s</td>
<td>P32QA13GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32QA13GEANGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s</td>
<td>P32QA14GEMNGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
<td>P32QA14GEANGLNW</td>
<td>1.03 kg (2.27 lbs)</td>
</tr>
</tbody>
</table>

### Ball Valve + Filter/Regulator Combinations + Poly bowl
5 micron element, 8 bar Regulator + Gauge and Wall Mounting Brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight Manual</th>
<th>Auto drain</th>
<th>Weight Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s</td>
<td>P32QN13GEMNGW</td>
<td>1.1 kg (2.42 lbs)</td>
<td>P32QN13GEANW</td>
<td>1.1 kg (2.42 lbs)</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s</td>
<td>P32QN14GEMNGW</td>
<td>1.1 kg (2.42 lbs)</td>
<td>P32QN14GEANW</td>
<td>1.1 kg (2.42 lbs)</td>
</tr>
</tbody>
</table>

---

### P 3 2

<table>
<thead>
<tr>
<th>Combination</th>
<th>Thread type</th>
<th>Port size</th>
<th>Drain type</th>
<th>Adjustment range</th>
<th>Add only for options with Lubricator</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>BSPP</td>
<td>1/4</td>
<td>A</td>
<td>0-2 bar, 0-30 psi, 0.2 MPa</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>NPT</td>
<td>3/8</td>
<td>Z</td>
<td>4 bar, 60 psi, 0.4 MPa</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2</td>
<td>M</td>
<td>8 bar, 125 psi, 0.8 MPa</td>
<td></td>
</tr>
</tbody>
</table>

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

**Filter + Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s</td>
<td>90 (scfm)</td>
<td>P33CB14GEMGLNW 1.84 kg (4.06 lbs)</td>
<td>P33CB14GEANGLNW 1.84 kg (4.06 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33CB16GEMGLNW 1.84 kg (4.06 lbs)</td>
<td>P33CB16GEANGLNW 1.84 kg (4.06 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Filter/Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33CA14GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33CA14GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71 dm³/s</td>
<td>150 (scfm)</td>
<td>P33CA16GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33CA16GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Ball Valve + Filter/Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33QA14GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33QA14GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71 dm³/s</td>
<td>150 (scfm)</td>
<td>P33QA16GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33QA16GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Ball Valve + Filter/Regulator Combinations + Poly bowl**
5 micron element, 8 bar Regulator + Gauge and Wall Mounting Brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33QN14GEMGW 1.7 kg (3.75 lbs)</td>
<td>P33QN14GEANGW 1.7 kg (3.75 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71 dm³/s</td>
<td>150 (scfm)</td>
<td>P33QN16GEMGW 1.7 kg (3.75 lbs)</td>
<td>P33QN16GEANGW 1.7 kg (3.75 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Combination type**
- F+R+L
- F+R+L
- F+R

**Thread type**
- BSPP
- NPT

**Port size**
- 1/2" (4)
- 3/4" (6)

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

**Adjustment range**
- With round gauge
  - 0-2 bar; 0-30 psi; 0.2 MPa (Z)
  - 4 bar; 60 psi; 0.4 MPa (M)
  - 8 bar; 125 psi; 0.8 MPa (G)

**Bowl type**
- Poly bowl with bowl guard (G)
- Metal bowl with sight glass (S)

**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.

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**Parker Hannifin Corporation**
Pneumatic Division - Europe

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106x627

**Filter/Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33CB14GEMGLNW 1.84 kg (4.06 lbs)</td>
<td>P33CB14GEANGLNW 1.84 kg (4.06 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33CB16GEMGLNW 1.84 kg (4.06 lbs)</td>
<td>P33CB16GEANGLNW 1.84 kg (4.06 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Ball Valve + Filter/Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33CA14GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33CA14GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71 dm³/s</td>
<td>150 (scfm)</td>
<td>P33CA16GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33CA16GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Ball Valve + Filter/Regulator Combinations + Poly bowl**
5 micron element, 8 bar Regulator + Gauge and Wall Mounting Brackets

<table>
<thead>
<tr>
<th>Port size</th>
<th>Flow</th>
<th>Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52 dm³/s</td>
<td>110 (scfm)</td>
<td>P33QA14GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33QA14GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71 dm³/s</td>
<td>150 (scfm)</td>
<td>P33QA16GEMGLNW 1.51 kg (3.33 lbs)</td>
<td>P33QA16GEANGLNW 1.51 kg (3.33 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

**Combination type**
- F+R+L
- F+R+L
- F+R

**Thread type**
- BSPP
- NPT

**Port size**
- 1/2" (4)
- 3/4" (6)

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

**Adjustment range**
- With round gauge
  - 0-2 bar; 0-30 psi; 0.2 MPa (Z)
  - 4 bar; 60 psi; 0.4 MPa (M)
  - 8 bar; 125 psi; 0.8 MPa (G)

**Bowl type**
- Poly bowl with bowl guard (G)
- Metal bowl with sight glass (S)

**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.
Popular Combination Dimensions

**P31C**

<table>
<thead>
<tr>
<th>P31C</th>
<th>mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>3.15</td>
</tr>
<tr>
<td>60</td>
<td>2.36</td>
</tr>
<tr>
<td>50</td>
<td>2.00</td>
</tr>
<tr>
<td>40</td>
<td>1.57</td>
</tr>
<tr>
<td>35</td>
<td>1.38</td>
</tr>
<tr>
<td>30</td>
<td>1.18</td>
</tr>
<tr>
<td>25.5</td>
<td>1.01</td>
</tr>
<tr>
<td>20</td>
<td>0.79</td>
</tr>
<tr>
<td>15</td>
<td>0.59</td>
</tr>
<tr>
<td>10</td>
<td>0.39</td>
</tr>
<tr>
<td>5</td>
<td>0.20</td>
</tr>
<tr>
<td>I.D. Tube Barb fitting</td>
<td>4mm (5/32&quot;)</td>
</tr>
<tr>
<td>Bowl Removal Clearance</td>
<td></td>
</tr>
</tbody>
</table>

**P32C**

<table>
<thead>
<tr>
<th>P32C</th>
<th>mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>129</td>
<td>5.08</td>
</tr>
<tr>
<td>100</td>
<td>3.94</td>
</tr>
<tr>
<td>90</td>
<td>3.54</td>
</tr>
<tr>
<td>50</td>
<td>2.00</td>
</tr>
<tr>
<td>40</td>
<td>1.57</td>
</tr>
<tr>
<td>35</td>
<td>1.38</td>
</tr>
<tr>
<td>30</td>
<td>1.18</td>
</tr>
<tr>
<td>25.5</td>
<td>1.01</td>
</tr>
<tr>
<td>20</td>
<td>0.79</td>
</tr>
<tr>
<td>15</td>
<td>0.59</td>
</tr>
<tr>
<td>10</td>
<td>0.39</td>
</tr>
<tr>
<td>5</td>
<td>0.20</td>
</tr>
<tr>
<td>I.D. Tube Barb fitting</td>
<td>4mm (5/32&quot;)</td>
</tr>
<tr>
<td>Bowl Removal Clearance</td>
<td>Manual and Auto Drain.</td>
</tr>
</tbody>
</table>

**P33C**

<table>
<thead>
<tr>
<th>P33C</th>
<th>mm (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>155</td>
<td>6.10</td>
</tr>
<tr>
<td>120</td>
<td>4.72</td>
</tr>
<tr>
<td>110.1</td>
<td>4.33</td>
</tr>
<tr>
<td>98.1</td>
<td>3.86</td>
</tr>
<tr>
<td>80</td>
<td>3.15</td>
</tr>
<tr>
<td>77.5</td>
<td>3.05</td>
</tr>
<tr>
<td>70</td>
<td>2.76</td>
</tr>
<tr>
<td>60</td>
<td>2.36</td>
</tr>
<tr>
<td>50</td>
<td>2.00</td>
</tr>
<tr>
<td>40</td>
<td>1.57</td>
</tr>
<tr>
<td>35</td>
<td>1.38</td>
</tr>
<tr>
<td>30</td>
<td>1.18</td>
</tr>
<tr>
<td>25.5</td>
<td>1.01</td>
</tr>
<tr>
<td>20</td>
<td>0.79</td>
</tr>
<tr>
<td>15</td>
<td>0.59</td>
</tr>
<tr>
<td>10</td>
<td>0.39</td>
</tr>
<tr>
<td>5</td>
<td>0.20</td>
</tr>
<tr>
<td>I.D. Tube Barb fitting</td>
<td>4.8 mm (.19&quot;)</td>
</tr>
<tr>
<td>Bowl Removal Clearance</td>
<td>Manual and Auto Drain.</td>
</tr>
</tbody>
</table>
Mini Particulate Filter - P31

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

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow(^\ddagger) 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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - manual drain</td>
<td>12 (25)</td>
<td>10 (150)</td>
<td>124.8 (4.91)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12EGMN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - pulse drain</td>
<td>12 (25)</td>
<td>10 (150)</td>
<td>119.6 (4.71)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12EGBN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - manual drain</td>
<td>12 (25)</td>
<td>17 (250)</td>
<td>124.8 (4.91)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12EMMN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - pulse drain</td>
<td>12 (25)</td>
<td>17 (250)</td>
<td>119.6 (4.71)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12EMBN</td>
</tr>
</tbody>
</table>

\(^\ddagger\) Flow with 6.3 bar (91.3 psig) inlet pressure and 0.34 (4.9 psig) pressure drop.

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

---

Symbols

- Manual drain
- Pulse drain
**Specifications**

Flow capacity* 1/4 12 dm³/s (25 scfm)

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)

Standard filtration 5 micron

Useful retention† 12 cm³ (0.4 US oz.)

Port size BSPP / NPT 1/4

Weight 0.11 kg (0.24 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)

**Material Specifications**

Body Aluminum
Body cap ABS
Bowl Polycarbonate
Bowl guard Nylon
Element retainer Acetal
Baffle Acetal
Filter element Sintered polyethylene
Seals Nitrile

**Flow Charts**

1/4 Filter

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>Pressure Drop - bar</th>
<th>Primary Pressure - bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1.8</td>
</tr>
<tr>
<td>1</td>
<td>0.1</td>
<td>2.2</td>
</tr>
<tr>
<td>2</td>
<td>0.1</td>
<td>3.0</td>
</tr>
<tr>
<td>3</td>
<td>0.2</td>
<td>4.0</td>
</tr>
<tr>
<td>4</td>
<td>0.2</td>
<td>5.3</td>
</tr>
<tr>
<td>5</td>
<td>0.3</td>
<td>6.3</td>
</tr>
<tr>
<td>6</td>
<td>0.3</td>
<td>7.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow - scfm</th>
<th>Pressure Drop - (psig)</th>
<th>Primary Pressure - psig</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>23.2</td>
</tr>
<tr>
<td>0.1</td>
<td>0.5</td>
<td>48</td>
</tr>
<tr>
<td>0.2</td>
<td>0.6</td>
<td>91.4</td>
</tr>
<tr>
<td>0.3</td>
<td>0.7</td>
<td>145</td>
</tr>
</tbody>
</table>

**Dimensions** mm (inches)

- 40 (1.58)
- 22.4 (0.84)
- 124.8 (4.91)
- 119.6 (4.71)
- 60 (2.36)
- 20 (0.79)
- 19.1 (0.75)
- 30 (1.18)

**Repair and Service Kits**

Plastic bowl / Bowl guard manual drain P31KB00BGM
Metal bowl / w/o sight gauge manual drain P31KB00BMM
Plastic bowl / Bowl guard pulse drain P31KB00BGB
Metal bowl / w/o sight gauge pulse drain P31KB00BMB
5µ particle filter element P31KA00ESE
C-bracket (fits to body) P31KA00MW
T-bracket with body connector P31KA00MT
Body connector P31KA00CB
## Compact Particulate Filter - P32

**Symbols**

- **Manual drain**
- **Auto drain**

- Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
- 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:

**Basic series**
Global modular compact particulate filter

**Thread type**

- **BSPP**
- **NPT**

**Port size**

- 1/4" (2)
- 3/8" (3)
- 1/2" (4)

**Element**

- **Sp Element**

**Mounting**

- **N** No bracket

**Drain type**

- **M** Manual drain
- **A** Auto drain

**Bowl type**

- **G** Poly bowl with bowl guard
- **S** Metal bowl with sight gauge

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Part number‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - manual drain</td>
<td>24 (50)</td>
<td>10 (150)</td>
<td>190.3 (7.49)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12EGMN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - auto drain</td>
<td>24 (50)</td>
<td>10 (150)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12EGAN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - manual drain</td>
<td>24 (50)</td>
<td>17 (250)</td>
<td>190.3 (7.49)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12ESMN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - auto drain</td>
<td>24 (50)</td>
<td>17 (250)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12ESAN</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Poly bowl - manual drain</td>
<td>37 (78)</td>
<td>10 (150)</td>
<td>190.3 (7.49)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB13EGMN</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Poly bowl - auto drain</td>
<td>37 (78)</td>
<td>10 (150)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB13EGAN</td>
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<td>Metal bowl - manual drain</td>
<td>37 (78)</td>
<td>17 (250)</td>
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<td>Metal bowl - auto drain</td>
<td>37 (78)</td>
<td>17 (250)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB13ESAN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - manual drain</td>
<td>39 (82)</td>
<td>10 (150)</td>
<td>190.3 (7.49)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB14EGMN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - auto drain</td>
<td>39 (82)</td>
<td>10 (150)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB14EGAN</td>
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<td>60 (2.36)</td>
<td>P32FB14ESAN</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.
Specifications

Flow capacity* 1/4 24 dm³/s (50 scfm)
3/8 37 dm³/s (78 scfm)
1/2 39 dm³/s (82 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 pressure
Plastic bowl 10 bar (150 psig)
Metal bowl 17 bar (250 psig)

Standard filtration 5 micron
Useful retention† 51 cm³ (1.7 US oz.)

Flow capacity
- 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)

Material Specifications

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 Nylon

Dimensions mm (inches)

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P32KB00BGM
Metal bowl / Sight gauge manual drain P32KB00BSM
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
Standard Particulate Filter - P33

Symbols

- Integral 1/2" or 3/4" ports (NPT & BSPP)
- 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>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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - manual drain</td>
<td>40 (85)</td>
<td>10 (150)</td>
<td>213 (8.39)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14EGMN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - auto drain</td>
<td>40 (85)</td>
<td>10 (150)</td>
<td>207 (8.15)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
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<tr>
<td>1/2&quot;</td>
<td>Metal bowl - manual drain</td>
<td>40 (85)</td>
<td>17 (250)</td>
<td>213 (8.39)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14ESMN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - auto drain</td>
<td>40 (85)</td>
<td>17 (250)</td>
<td>207 (8.15)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14ESAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - manual drain</td>
<td>48 (102)</td>
<td>10 (150)</td>
<td>213 (8.39)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16EGMN</td>
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<tr>
<td>3/4&quot;</td>
<td>Poly bowl - auto drain</td>
<td>48 (102)</td>
<td>10 (150)</td>
<td>207 (8.15)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16EGAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - manual drain</td>
<td>48 (102)</td>
<td>17 (250)</td>
<td>213 (8.39)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16ESMN</td>
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<tr>
<td>3/4&quot;</td>
<td>Metal bowl - auto drain</td>
<td>48 (102)</td>
<td>17 (250)</td>
<td>207 (8.15)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16ESAN</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.
**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>1/2</th>
<th>3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow capacity</td>
<td>40 dm³/s (85 scfm)</td>
<td>48 dm³/s (102 scfm)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>Plastic bowl -25°C to 52°C (-13°F to 125°F)</td>
<td>Metal bowl -25°C to 65.5°C (-13°F to 150°F)</td>
</tr>
<tr>
<td>Max. supply pressure</td>
<td>Plastic bowl 10 bar (150 psig)</td>
<td>Metal bowl 17 bar (250 psig)</td>
</tr>
<tr>
<td>Standard filtration</td>
<td>5 micron</td>
<td></td>
</tr>
<tr>
<td>Useful retention†</td>
<td>85 cm³ (2.8 US oz.)</td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT 1/2, 3/4</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.46 kg (1.01 lbs)</td>
<td></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.

**Flow Charts**

**1/2 Filter**

**3/4 Filter**

**Material Specifications**

- **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)**

- Manual Drain: 73 (2.87), 36 (1.42), 213 (8.39), 207 (8.15)
- Automatic Drain: 36 (1.42), 207 (8.15)

**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

**Air Quality**

Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)
**Mini Coalescing and Adsorber Filters - P31**

- Integral 1/4" ports (NPT & BSPP)
- 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 and 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:**

1. **P31FB**
   - Thread type
     - BSPP 1
     - NPT 9
   - Port size
     - 1/4 2
   - Element
     - 0.01µ Element C
     - 0.01µ Element with DPI D
     - 1µ Element E
     - 1µ Element with DPI Q
   - Bowl type
     - Poly bowl with bowl guard G
     - Metal bowl without sight gauge M
   - Mounting
     - N No bracket
   - Drain type
     - Pulse drain B
     - Manual drain M

**Port size** | **Description** | **Flow** | **Max. bar (psig)** | **Height (inches)** | **Width (inches)** | **Depth (inches)** | **Part number**
---|---|---|---|---|---|---|---
1/4" | Poly bowl - 0.01 micron - manual drain | 3.6 (7.6) | 10 (150) | 136.9 (5.39) | 40 (1.58) | 40 (1.58) | P31FB12DGMN
1/4" | Poly bowl - 0.01 micron - pulse drain | 3.6 (7.6) | 10 (150) | 131.7 (5.19) | 40 (1.58) | 40 (1.58) | P31FB12DGBN
1/4" | Metal bowl - 0.01 micron - manual drain | 3.6 (7.6) | 10 (150) | 136.9 (5.39) | 40 (1.58) | 40 (1.58) | P31FB12DMMN
1/4" | Metal bowl - 0.01 micron - pulse drain | 3.6 (7.6) | 10 (150) | 131.7 (5.19) | 40 (1.58) | 40 (1.58) | P31FB12DMBN

† 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.
Specifications

Flow capacity
- 1.0 micron coalescing: 5.5 dm³/s (12 scfm)
- 0.01 micron coalescing: 3.6 dm³/s (7.5 scfm)
- Activated carbon adsorber: 6 dm³/s (12.7 scfm)

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: 10 bar (150 psig)

Standard filtration
- 1.0 and 0.01 micron

Adsorber Max. oil carryover (ppm w/w): 0.003 @ 21°C (70°F)

Useful retention†: 12 cm³ (0.4 US oz.)

Port size: BSPP / NPT 1/4

Weight: 0.11 kg (0.24 lbs)

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

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

§ Without pressure indicator (DPI) – max. pressure for metal bowl version is 17 bar (250 psig).

Material Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Plastic bowl</th>
<th>Metal bowl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Polycarbonate</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Body cap</td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td>Bowl</td>
<td>Plastic bowl</td>
<td>Metal bowl</td>
</tr>
<tr>
<td>Filter element</td>
<td>Borosilicate cloth</td>
<td>Activated carbon</td>
</tr>
<tr>
<td>Adsorber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

Repair and Service Kits

Plastic bowl / Bowl guard manual drain: P31KB00BGM
Metal bowl / w/o sight gauge manual drain: P31KB00BMM
Plastic bowl / Bowl guard pulse drain: P31KB00BGB
Metal bowl / w/o sight gauge pulse drain: P31KB00BMB
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
Differential pressure indicator (replacement): P31KB00RQ
Compact Coalescing and Adsorber Filter - P32

- Integral 1/4”, 3/8” or 1/2” ports (NPT & BSPP)
- 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:

![P32 Series Diagram]

- **P32FB**
- **Thread type**
  - BSPP 1
  - NPT 9
- **Port size**
  - 1/4” 2
  - 3/8” 3
  - 1/2” 4
- **Drain type**
  - M Manual drain
  - A Auto drain
- **Bowl type**
  - G Poly bowl with bowl guard
  - S Metal bowl with sight gauge
- **Element**
  - 0.01µ Element C
  - 0.01µ Element with DPI D
  - 1µ Element 9
  - 1µ Element with DPI Q
  - Adsorber A

Bold items are most common.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4”</td>
<td>Poly bowl - 0.01 micron, manual drain</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>212.3 (8.36)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12DGMN</td>
</tr>
<tr>
<td>1/4”</td>
<td>Poly bowl - 0.01 micron, auto drain</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>206.3 (8.12)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12DGAN</td>
</tr>
<tr>
<td>1/4”</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>212.3 (8.36)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB12DSMN</td>
</tr>
<tr>
<td>1/4”</td>
<td>Metal bowl - 0.01 micron, auto drain</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>206.3 (8.12)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
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</tr>
<tr>
<td>3/8”</td>
<td>Poly bowl - 0.01 micron, manual drain</td>
<td>17 (36)</td>
<td>10 (150)</td>
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<td>60 (2.36)</td>
<td>60 (2.36)</td>
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<td>10 (150)</td>
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<td>60 (2.36)</td>
<td>P32FB13DGAN</td>
</tr>
<tr>
<td>3/8”</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
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<td>17 (250)</td>
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<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB14DSAN</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.
**Specifications**

<table>
<thead>
<tr>
<th>Flow capacity</th>
<th>25 dm³/s (53 scfm)</th>
<th>17 dm³/s (36 scfm)</th>
<th>40 dm³/s (85 scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-25°C to 52°C (-13°F to 125°F)</td>
<td>-25°C to 65.5°C (-13°F to 150°F)</td>
<td></td>
</tr>
<tr>
<td>Max. supply</td>
<td>Plastic bowl</td>
<td>Metal bowl</td>
<td>Metal bowl</td>
</tr>
<tr>
<td>pressure</td>
<td>10 bar (150 psig)</td>
<td>17 bar (250 psig)</td>
<td></td>
</tr>
<tr>
<td>Standard filtration</td>
<td>1.0 and 0.01 micron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adsorber</td>
<td>Max. oil carryover (ppm w/w) 0.003 @ 21°C (70°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useless retention†</td>
<td>51 cm³ (1.7 US oz.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT 1/4, 3/8, 1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.32 kg (0.71 lbs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

**Dimensions** mm (inches)

<table>
<thead>
<tr>
<th>Manual Drain</th>
<th>Automatic Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
</tr>
<tr>
<td>30 (1.18)</td>
<td>46.3 (1.80)</td>
</tr>
<tr>
<td>80 (3.15)</td>
<td>206.3 (8.12)</td>
</tr>
<tr>
<td>50 (2.00)</td>
<td>44.3 (1.75)</td>
</tr>
<tr>
<td>4mm (5/32) I.D. barb fitting</td>
<td>53 (2.1)</td>
</tr>
</tbody>
</table>

**Flow Charts**

**P32 - 1.0 micron flow**

**P32 - 0.01 micron flow**

**Material Specifications**

<table>
<thead>
<tr>
<th>Body</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bowls</td>
<td>Plastic bowl</td>
</tr>
<tr>
<td></td>
<td>Metal bowl</td>
</tr>
<tr>
<td>Filter element</td>
<td>1.0 and .01 micron Borosilicate cloth</td>
</tr>
<tr>
<td>Adsorber</td>
<td>Activated carbon</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Sight gauge</td>
<td>Metal bowl</td>
</tr>
<tr>
<td></td>
<td>Polycarbonate</td>
</tr>
</tbody>
</table>

**Repair and Service Kits**

| Plastic bowl / Bowl guard manual drain | P32KB00BGM |
| Metal bowl / Sight gauge manual drain | P32KB00BSM |
| Auto drain                              | P32KA00DA  |
| 1μ coalescing filter element            | P32KA00ES9 |
| 0.01μ coalescing filter element         | P32KA00ESC |
| Activated carbon adsorber filter element| P32KA00ESA |
| L-bracket (fits 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)
- 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 a 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.

Symbols:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚫</td>
<td>Integral 1/2&quot; or 3/4&quot; ports (NPT &amp; BSPP)</td>
</tr>
<tr>
<td>⚫</td>
<td>Removes liquid aerosols and sub micron particles</td>
</tr>
<tr>
<td>⚫</td>
<td>Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control</td>
</tr>
<tr>
<td>⚫</td>
<td>Differential Pressure Indicator (DPI) standard on Coalescing Filters</td>
</tr>
<tr>
<td>⚫</td>
<td>Positive bayonet latch to ensure correct &amp; safe fitting</td>
</tr>
<tr>
<td>⚫</td>
<td>Adsorbing activated carbon element removes oil vapors and most hydrocarbons</td>
</tr>
</tbody>
</table>

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow(^1) (\text{dm}^3/\text{s} (\text{scfm}))</th>
<th>Max. (\text{bar} (\text{psig}))</th>
<th>Height (\text{mm (inches)})</th>
<th>Width (\text{mm (inches)})</th>
<th>Depth (\text{mm (inches)})</th>
<th>Part number(^*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - 0.01 micron, manual drain</td>
<td>32 (68)</td>
<td>10 (150)</td>
<td>235 (9.25)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14DGAN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - 0.01 micron, automatic drain</td>
<td>32 (68)</td>
<td>10 (150)</td>
<td>229 (9.02)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14DGAMN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
<td>32 (68)</td>
<td>17 (250)</td>
<td>235 (9.25)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA14DSAN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - 0.01 micron, automatic drain</td>
<td>32 (68)</td>
<td>17 (250)</td>
<td>229 (9.02)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16DGAMN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - 0.01 micron, manual drain</td>
<td>32 (68)</td>
<td>10 (150)</td>
<td>235 (9.25)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16DGAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - 0.01 micron, automatic drain</td>
<td>32 (68)</td>
<td>10 (150)</td>
<td>229 (9.02)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16DSAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
<td>32 (68)</td>
<td>17 (250)</td>
<td>235 (9.25)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16DSMAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - 0.01 micron, automatic drain</td>
<td>32 (68)</td>
<td>17 (250)</td>
<td>229 (9.02)</td>
<td>73 (2.87)</td>
<td>73 (2.87)</td>
<td>P33FA16DSMAN</td>
</tr>
</tbody>
</table>

\(^1\) 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.
Specifications

Flow capacity
- 1.0 micron coalescing: 32 dm³/s (68 scfm)
- 0.01 micron coalescing: 20 dm³/s (42 scfm)
- Activated carbon adsorber: 34 dm³/s (72 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 pressure
- Plastic bowl: 10 bar (150 psig)
- Metal bowl: 17 bar (250 psig)

Standard filtration: 1.0 and 0.01 micron

Useful retention¹: 85 cm³ (2.8 US oz.)

Port size: BSPP / NPT 1/2, 3/4

Weight: 0.50 kg (1.10 lbs)

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

¹ Useful retention refers to volume below the quiet zone baffle.

Flow Charts

P33 - 1.0 micron flow

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>Pressure Drop - bar</th>
<th>Pressure Drop - (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0.2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>0.5</td>
<td>7.5</td>
</tr>
<tr>
<td>6</td>
<td>0.8</td>
<td>11.9</td>
</tr>
<tr>
<td>8</td>
<td>1.1</td>
<td>15.6</td>
</tr>
<tr>
<td>10</td>
<td>1.4</td>
<td>19.3</td>
</tr>
</tbody>
</table>

P33 - 0.01 micron flow

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>Pressure Drop - bar</th>
<th>Pressure Drop - (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0.2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>0.5</td>
<td>7.5</td>
</tr>
<tr>
<td>6</td>
<td>0.8</td>
<td>11.9</td>
</tr>
<tr>
<td>8</td>
<td>1.1</td>
<td>15.6</td>
</tr>
<tr>
<td>10</td>
<td>1.4</td>
<td>19.3</td>
</tr>
</tbody>
</table>

Material Specifications

Body: Aluminum
Body cap: ABS
Bowls: Plastic bowl, Metal bowl
Filter element: 1.0 and 0.01 micron Borosilicate cloth
Adsorber: Activated carbon
Seals: Nitrile
Sight gauge: Metal bowl

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
- 4mm (5/32) I.D. tube barb fitting
- Bowl removal clearance (Manual & Auto Drain)
- Use 10mm or 3/8” Flex Tubing

Automatic Drain
- 4mm (5/32) I.D. tube barb fitting
- Use 10mm or 3/8” Flex Tubing

Dimensions:
- Height: 73 (2.87) mm
- Width: 235 (9.25) mm
- Depth: 26 (1.02) mm

Parker Hannifin Corporation
Pneumatic Division - Europe
Mini Regulator - P31

- Integral 1/4" ports (NPT & BSPP)
- 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), 0-16 bar (0-232 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & Non-relieving types
- Non-rising knob

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) + gauge</td>
</tr>
</tbody>
</table>

Adjustment range

<table>
<thead>
<tr>
<th>psig</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 bar; 30 psig: 0.2 MPa</td>
</tr>
<tr>
<td>3</td>
<td>60 psig: 0.8 MPa</td>
</tr>
<tr>
<td>5</td>
<td>125 psig: 1.6 MPa</td>
</tr>
<tr>
<td>1</td>
<td>30* V = 2*</td>
</tr>
<tr>
<td>3</td>
<td>60 S = 4</td>
</tr>
<tr>
<td>5</td>
<td>125 T = 8</td>
</tr>
</tbody>
</table>

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
Bar gauges fitted to BSPP
PSI gauges fitted to NPT

Symbols

- Self relieving regulator with gauge
- Non relieving regulator

Bold items are most common.

Part number:

<table>
<thead>
<tr>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; 8 bar (125 psig) relieving</td>
<td>32 (68)</td>
<td>20 (300)</td>
<td>104.1 (4.1)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31RB12BNNP</td>
</tr>
<tr>
<td>1/4&quot; 8 bar (125 psig) + gauge</td>
<td>32 (68)</td>
<td>20 (300)</td>
<td>104.1 (4.1)</td>
<td>40 (1.58)</td>
<td>61.3 (2.41)</td>
<td>P31RB12BNTP</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.
### Specifications

**Flow capacity**  
1/4 32 dm³/s (68 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)  
0-16 bar (232 psig)

**Port size**  
BSPP / NPT 1/4

**Gauge port (2 ea.)**  
BSPP / NPT 1/8

**Weight**  
0.17 kg (0.37 lbs)

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

**Material Specifications**

- **Body**: Aluminum
- **Adjustment knob**: Acetal
- **Bonnet**: PBT
- **Diaphragm assembly**: Brass / Nitrile
- **Valve assembly**: Brass / Nitrile
- **Springs**: Steel
- **Seals**: Nitrile
- **Panel nut**: Acetal

**Dimensions mm (inches)**

- **76.3 Round (3.00) Gauge**
- **61.3 Square (2.41) Gauge**
- **40 (1.58)**
- **20 (0.79)**
- **30.6 (1.20)**
- **56.8 (2.24)**
- **104.1 (4.10)

**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

![Flow Chart](chart.png)

### Repair and Service Kits

- **Panel mount nut - aluminum**: P31KA00MM
- **Panel mount nut - plastic**: P31KA00MP
- **Angle bracket (attaches via panel nut)**: P31KB00MR
- **C-bracket (fits to body)**: P31KA00MW
- **T-bracket with body connector**: P31KA00MT
- **Body connector**: P31KA00CB

### Gauges

#### Square flush mount gauge

- 0-4 bar: K4511SCR04B
- 0-11 bar: K4511SCR11B
- 0-60 psig: K4511SCR060
- 0-160 psig: K4511SCR160

#### Square with adapter kit

- 0-4 bar: P6G-PR10040
- 0-11 bar: P6G-PR10110
- 0-60 psig: P6G-PR90060
- 0-160 psig: P6G-PR90160

#### 40mm Round 1/8" center back mount

- 0-30 psig / 0-2 bar: P3D-KAB1AYN
- 0-60 psig / 0-4 bar: P3D-KAB1ALN
- 0-160 psig / 0-11 bar: P3D-KAB1ANN
- 0-300 psig / 0-20 bar: P3D-KAB1AHN

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
Mini Common - P1 Regulator - P31

Symbols

- Manifold style regulator with line pressure on both sides
- Pressure output is at front or rear
- Inlet port 1/4" (NPT & BSPP)
- Working port 1/8"
- Robust construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig), 0-16 bar (0-232 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob

Options:

<table>
<thead>
<tr>
<th>Port size†</th>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>20 (42)</td>
<td>20 (300)</td>
<td>104.1 (4.1)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31HB12BNBP</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 psi) set pressure and 1 bar (14.5 psi) pressure drop.
Specifications

Flow capacity* 1/4 20 dm³/s (42 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) 0-16 bar (232 psig)
P1 Port size (Inlet / Outlet) BSPP / NPT 1/4
P2 Regulated ports (2 ea.) BSPP / NPT 1/8
Weight 0.30 kg (0.66 lbs)

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

Materials of Construction

Body Aluminum
Adjustment knob Acetal
Bonnet 33% Glass-filled PBT
Diaphragm assembly Brass / Nitrile
Valve assembly Brass / Nitrile

Dimensions mm (inches)

NOTE: 30 mm (1.20 in.) hole required for panel nut mounting.

Flow Charts

1/4 Common Regulator

Flow - dm³/s

40mm Round 1/8” center back mount

0-30 psig / 0-2 bar P3D-KAB1AYN
0-60 psig / 0-4 bar P3D-KAB1ALN
0-160 psig / 0-11 bar P3D-KAB1ANN
0-300 psig / 0-20 bar P3D-KAB1AHN

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.

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.
**Compact Regulator – P32**

**Symbols**

- Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
- 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:**

- **P32RB**
  - Basic series
  - Global modular compact regulator
- **Thread type**
  - BSPP 1
  - NPT 9
- **Port size**
  - 1/4" 2
  - 3/8" 3
  - 1/2" 4
- **Relief**
  - Relieving B
  - Non-relieving N

**Adjustment range**

<table>
<thead>
<tr>
<th>With square gauge</th>
<th>With round gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>psig</td>
<td>bar</td>
</tr>
<tr>
<td>1 = 30&quot;</td>
<td>V = 2&quot;</td>
</tr>
<tr>
<td>3 = 60</td>
<td>S = 4</td>
</tr>
<tr>
<td>5 = 125</td>
<td>T = 8</td>
</tr>
<tr>
<td>Y 2 bar; 30 psig; 0.2 MPa</td>
<td></td>
</tr>
<tr>
<td>L 4 bar; 60 psig; 0.4 MPa</td>
<td></td>
</tr>
<tr>
<td>N 8 bar; 125 psig; 0.8 MPa</td>
<td></td>
</tr>
<tr>
<td>H 17 bar; 250 psig; 1.7 MPa</td>
<td></td>
</tr>
<tr>
<td>Z 2 bar; 30 psig; 0.2 MPa</td>
<td></td>
</tr>
<tr>
<td>M 4 bar; 60 psig; 0.4 MPa</td>
<td></td>
</tr>
<tr>
<td>G 8 bar; 125 psig; 0.8 MPa</td>
<td></td>
</tr>
<tr>
<td>J 17 bar; 250 psig; 1.7 MPa</td>
<td></td>
</tr>
</tbody>
</table>

**Flow pickup**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>70 (148)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB12BNNP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving + gauge</td>
<td>70 (148)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB12BNGP</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>78 (165)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB13BNNP</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) relieving + gauge</td>
<td>78 (165)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB13BNGP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>78 (165)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB14BNNP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving + gauge</td>
<td>78 (165)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB14BNGP</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.

**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.
Specifications

Flow capacity*  
1/4  70 dm³/s (148 scfm)  
3/8  78 dm³/s (165 scfm)  
1/2  78 dm³/s (165 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 / NPT  
1/4, 3/8, 1/2

Gauge port (2 ea.) BSPP / NPT  
1/4

Weight 0.41 kg (0.90 lbs)

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

Material Specifications

Body  Aluminum
Adjustment knob  Acetal
Bonnet  33% Glass-filled nylon
Diaphragm assembly  Nitrile / Zinc
Valve assembly  Brass / Nitrile
Springs Main regulating valve  Steel S.S.
Seals  Nitrile
Panel nut  Acetal

Dimensions mm (inches)

NOTE: 48 mm (1.90 in.) hole required for panel nut mounting.

Repair and Service Kits

Panel mount nut - aluminum  P32KA00MM
Panel mount nut - plastic  P32KA00MP
Angle bracket (attaches via panel nut)  P32KB00MR
T-bracket with body connector  P32KA00MT
T-bracket  P32KA00MB
Body connector  P32KA00CB

Flow Charts

1/4 Regulator

3/8 Regulator

1/2 Regulator

Gauges

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

0-60 psig / 0-4 bar  P6G-ERB2040
0-160 psig / 0-11 bar  P6G-ERB2110
0-300 psig / 0-20 bar  P6G-ERB2200

Square flush mount gauge

0-4 bar  K4511SCR04B
0-11 bar  K4511SCR11B
0-60 psig  K4511SCR060
0-160 psig  K4511SCR160

Square with adapter kit

0-4 bar  P6G-PR10040
0-11 bar  P6G-PR10110
0-60 psig  P6G-PR90060
0-160 psig  P6G-PR90160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
Compact Semi-Precision Regulator – P32

Symbols

- Self relieving regulator with gauge
- Non relieving regulator

- Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
- 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:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow‡</th>
<th>Max. bar (psi)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psi) relieving</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB12PNPN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psi) relieving + gauge</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32RB12PNGP</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psi) relieving</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB13PNPN</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psi) relieving + gauge</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32RB13PNGP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psi) relieving</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB14PNPN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psi) relieving + gauge</td>
<td>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32RB14PNGP</td>
</tr>
</tbody>
</table>

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

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.
Specifications

Flow capacity*  
- 1/4 25 dm³/s (53 scfm)
- 3/8 25 dm³/s (53 scfm)
- 1/2 25 dm³/s (53 scfm)

Effect of supply pressure variation  
0.04 bar (0.6 PSIG) for 1.7 bar (25 PSIG) change in P1

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 / NPT 1/4, 3/8, 1/2

Gauge port (2 ea.)  
BSPP / NPT 1/4

Weight  
0.41 kg (0.90 lbs)

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

Material Specifications

Body  
Aluminum

Adjustment knob  
Acetal

Bonnet  
33% Glass-filled nylon

Diaphragm assembly  
Nitrile / Zinc

Valve assembly  
Brass / Nitrile

Springs  
Main regulating valve Steel S.S.

Seals  
Nitrile

Panel nut  
Acetal

Dimensions mm (inches)

NOTE: 48 mm (1.90 in.) hole required for panel nut mounting.

Repair and Service Kits

Panel mount nut - aluminum  
P32KA00MM

Panel mount nut - plastic  
P32KA00MP

Angle bracket (attaches via panel nut)  
P32KB00MR

T-bracket with body connector  
P32KA00MT

T-bracket  
P32KA00MB

Body connector  
P32KA00CB

Flow Charts

1/4 Regulator

3/8 Regulator

1/2 Regulator

Gauges

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

0-60 psig / 0-4 bar  P6G-ERB2040
0-160 psig / 0-11 bar  P6G-ERB2110
0-300 psig / 0-20 bar  P6G-ERB2200

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

- **Self relieving regulator with gauge**
- **Non relieving regulator**

- **Manifold style regulator with line pressure on both sides.**
- **Pressure output is at front or rear.**
- **Inlet ports 1/4", 3/8" or 1/2" (NPT & BSPP)**
- **Working port 1/4"**
- **Robust 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:

**P32 Series**

**Basic series**

Global modular compact regulator P32HB

**Thread type**

BSPP 1
NPT 9

**Port size**

1/4 2
3/8 3
1/2 4

† Working port 1/4”.

**Relief**

Relieving B
Non-relieving N

**Mounting**

P Plastic panel mount nut

**Adjustment range**

<table>
<thead>
<tr>
<th>With square gauge</th>
<th>With round gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>psig</td>
<td>bar</td>
</tr>
<tr>
<td>Z</td>
<td>2 bar; 30 psig; 0.2 MPa</td>
</tr>
<tr>
<td>Y</td>
<td>2 bar; 30 psig; 0.2 MPa</td>
</tr>
<tr>
<td>M</td>
<td>4 bar; 60 psig; 0.4 MPa</td>
</tr>
<tr>
<td>L</td>
<td>4 bar; 60 psig; 0.4 MPa</td>
</tr>
<tr>
<td>G</td>
<td>8 bar; 125 psig; 0.8 MPa</td>
</tr>
<tr>
<td>N</td>
<td>8 bar; 125 psig; 0.8 MPa</td>
</tr>
<tr>
<td>H</td>
<td>17 bar; 250 psig; 1.7 MPa</td>
</tr>
</tbody>
</table>

† Unit comes with 0-4 bar or 0-60 psig gauge respectively.

---

### Details

- **Port size**
  - 1/4" 8 bar (125 psig) relieving
  - 3/8" 8 bar (125 psig) relieving
  - 1/2" 8 bar (125 psig) relieving

- **Flow**
  - dm³/s (scfm)

- **Max. bar (psig)**
  - 20 (300)

- **Height**
  - mm (inches)

- **Width**
  - mm (inches)

- **Depth**
  - mm (inches)

- **Part number†**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow†</th>
<th>Max. bar (psig)</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>30 (64)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32HB12BNNP</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>30 (64)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32HB13BNNP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>30 (64)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32HB14BNNP</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.
0750-UK
Parker Global Air Preparation System

Specifications

<table>
<thead>
<tr>
<th>Flow capacity*</th>
<th>1/4</th>
<th>30 dm³/s (64 scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3/8</td>
<td>30 dm³/s (64 scfm)</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>30 dm³/s (64 scfm)</td>
</tr>
</tbody>
</table>

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 / NPT 1/4, 3/8, 1/2

Gauge port (2 ea.)
BSPP / NPT 1/4

Weight
0.50 kg (1.10 lbs)

NOTE: 48 mm (1.90 in.) hole required for panel nut mounting.

Material Specifications

Body: Aluminum
Adjustment knob: Acetal
Bonnet: 33% Glass-filled nylon
Diaphragm assembly: Nitrile / Zinc
Valve assembly: Brass / Nitrile
Springs: Main regulating valve Steel S.S.
Seals: Nitrile
Panel nut: Acetal

Dimensions mm (inches)

P32 Common Port Regulator

50mm (2") Round 1/4" center back mount
0-60 psig / 0-4 bar
0-160 psig / 0-11 bar
0-300 psig / 0-20 bar

Square flush mount gauge
0-4 bar
0-11 bar
0-60 psig
0-160 psig

Square with adapter kit
0-4 bar
0-11 bar
0-60 psig
0-160 psig

**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.
Standard Regulator - P33

Symbols

- Integral 1/2" or 3/4" ports (NPT & BSPP)
- 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:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow(\ddot{\text{s}})</th>
<th>Max. bar (psig)</th>
<th>Height (inches)</th>
<th>Width (inches)</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>110 (233)</td>
<td>20 (300)</td>
<td>149 (5.87)</td>
<td>73 (2.87)</td>
<td>P33RA14BNNP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving + gauge</td>
<td>110 (233)</td>
<td>20 (300)</td>
<td>149 (5.87)</td>
<td>108 (4.27)</td>
<td>P33RA14BNGP</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) relieving</td>
<td>110 (233)</td>
<td>20 (300)</td>
<td>149 (5.87)</td>
<td>73 (2.87)</td>
<td>P33RA16BNNP</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) relieving + gauge</td>
<td>110 (233)</td>
<td>20 (300)</td>
<td>149 (5.87)</td>
<td>108 (4.27)</td>
<td>P33RA16BNGP</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.
Specifications
Flow capacity*  
1/2  110 dm³/s (233 scfm)  
3/4  110 dm³/s (233 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 / NPT  
1/2, 3/4  
Gauge port (2 ea.) BSPP / NPT 1/4  
Weight 0.62 kg (1.37 lbs)  
* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

Material Specifications
Body Aluminum  
Adjustment knob Acetal  
Body cap ABS  
Bonnet 33% Glass-filled nylon  
Diaphragm assembly Nitrile / Zinc  
Bonnet 33% Glass-filled nylon  
Valve assembly Brass / Nitrile  
Springs Main regulating valve Steel S.S.  
Seals Nitrile  
Panel nut Acetal

Dimensions mm (inches)

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

Flow Charts
1/2 Regulator

3/4 Regulator

Repair and Service Kits
Panel mount nut - aluminum P33KA00MM  
Panel mount nut - plastic P33KA00MP  
Angle bracket (attaches via panel nut) P33KA00MR  
T-bracket with body connector P32KA00MT  
T-bracket P32KA00MB  
Body connector P32KA00CB

Gauges
50mm (2") Round 1/4" center back mount
0-60 psig / 0-4 bar P6G-ERB2040  
0-160 psig / 0-11 bar P6G-ERB2110  
0-300 psig / 0-20 bar P6G-ERB2200

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.

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.
Mini Filter / Regulator - P31

Symbols

- Integral 1/4" ports (NPT & BSPP)
- 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), 0-16 bar (0-232 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow</th>
<th>Max.</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>10 (22)</td>
<td>10 (150)</td>
<td>176.9 (6.96)</td>
<td>40 (1.58)</td>
<td>61.3 (2.41)</td>
<td>P31EB12EGMBNTP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - pulse drain</td>
<td>10 (22)</td>
<td>10 (150)</td>
<td>172.0 (6.77)</td>
<td>40 (1.58)</td>
<td>61.3 (2.41)</td>
<td>P31EB12EGBBNTP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - metal bowl - manual drain</td>
<td>10 (22)</td>
<td>17 (250)</td>
<td>176.9 (6.96)</td>
<td>40 (1.58)</td>
<td>61.3 (2.41)</td>
<td>P31EB12EMMBNTP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - metal bowl - pulse drain</td>
<td>10 (22)</td>
<td>17 (250)</td>
<td>172.0 (6.77)</td>
<td>40 (1.58)</td>
<td>61.3 (2.41)</td>
<td>P31EB12EMBBNTP</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.
Specifications

Flow capacity* 1/4 10 dm³/s (22 scfm)
Operating temperature† Plastic bowl -10°C to 52°C (14°F to 125°F)
Max. supply pressure Plastic bowl 10 bar (150 psig)
Standard filtration Plastic bowl 5 micron
Useful retention 12 cm³ (0.4 US oz.)
Adjusting range pressure 0-2 bar (30 psig)
0-4 bar (60 psig)
0-8 bar (125 psig)
0-16 bar (232 psig)
Port size BSPP / NPT 1/4
Gauge port (2 ea.)** BSPP / NPT 1/8
Weight 0.19 kg (0.42 lbs)

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).
** Non-gauge option only.
† Units with square gauges: -15°C to 65.5°C (5°F to 150°F)

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

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

Dimensions mm (inches)

Material Specifications

Body  Aluminum
Adjustment knob  Acetal
Body cap  ABS
Bonnet  PBT
Bowl  Plastic bowl Polycarbonate
      Metal bowl Aluminum
Bowl guard  Nylon
Filter element  Polyethylene
Seals  Nitrile
Springs  Steel
Valve assembly  Brass / Nitrile
Diaphragm assembly  Brass / Nitrile
Panel nut  Acetal

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

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P31KB00BGM
Plastic bowl / Bowl guard pulse drain P31KB00BGB
Metal bowl / w/o sight gauge pulse drain P31KB00BMB
5µ particle filter element P31KA00ESE
Panel mount nut - aluminum P31KA00MM
Panel mount nut - plastic P31KA00MP
Angle bracket (attaches via panel nut) P31KB00MR
C-bracket (fits to body) P31KA00MW
T-bracket with body connector P31KA00MT
Body connector P31KA00CB

Gauges

Square flush mount gauge
0-4 bar K4511SCR04B
0-11 bar K4511SCR11B
0-60 psig K4511SCR060
0-160 psig K4511SCR160

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

Square with adapter kit
0-4 bar P6G-PR10040
0-11 bar P6G-PR10110
0-60 psig P6G-PR90060
0-160 psig P6G-PR90160
### Compact Filter / Regulator - P32

![Image of Compact Filter / Regulator - P32](image)

**Options:**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow(^d), 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>
<th>Part number(^f)</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>261.6 (10.3)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32EB12EGMBNGP</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>255.6 (10.1)</td>
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<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - metal bowl - manual drain</td>
<td>42 (89)</td>
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</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>261.6 (10.3)</td>
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<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>261.6 (10.3)</td>
<td>60 (2.36)</td>
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</tr>
</tbody>
</table>

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

\(^f\) Standard part numbers shown in bold. For other models refer to Options chart above.

---

**Symbols**

1. Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
2. High efficiency 5 micron element as standard
3. Excellent water removal efficiency
4. Robust but lightweight aluminum construction
5. Positive bayonet latch to ensure correct & safe fitting
6. 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)
7. Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation

---

**Options:**

- **Thread type**
  - BSPP
  - NPT

- **Element**
  - 5µ Element E

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

- **Bowl type**
  - Poly bowl with bowl guard G
  - Metal bowl with sight gauge S

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

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**P32 Series**

**0750-UK**

Parker Global Air Preparation System

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**Parker Hannifin Corporation**

Pneumatic Division - Europe

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46
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 pressure  
- Plastic bowl 10 bar (150 psig)
- Metal bowl 17 bar (250 psig)

Standard filtration  
5 micron

Useful retention†  
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 / NPT 1/4, 3/8, 1/2

Gauge port (2 ea.)  
BSPP / NPT 1/4

Weight  
0.53 kg (1.17 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); 2001 Class 6 (Particulates)

Material Specifications

Body  Aluminum
Adjustment knob  Acetal
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  P32KB00BGM
Metal bowl / Sight gauge manual drain  P32KB00BSM
Auto drain  P32KA00DA
5µ particle filter element  P32KA00ESE
Panel mount nut - aluminum  P32KA00MM
Panel mount nut - plastic  P32KA00MP
Angle bracket (fits to panel mount threads)  P32KB00MR
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
- 0-60 psig / 0-4 bar  P6G-ERB2040
- 0-160 psig / 0-11 bar  P6G-ERB2110
- 0-300 psig / 0-20 bar  P6G-ERB2200

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.
Symbols

- Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
- 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

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<tr>
<th>Port size</th>
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<th>Max. bar (psig)</th>
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<th>Depth (mm)</th>
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<td>35 (75)</td>
<td>10 (150)</td>
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<td>60 (2.36)</td>
<td>93 (3.66)</td>
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<td>1/4&quot;</td>
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† 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

Flow capacity* 1/4  35 dm³/s (75 scfm)
3/8  35 dm³/s (75 scfm)
1/2  35 dm³/s (75 scfm)

Effect of supply pressure variation 0.04 bar (0.6 PSIG) for 1.7 bar (25 PSIG) change in P1

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 pressure Plastic bowl 10 bar (150 psig)
Metal bowl  17 bar (250 psig)

Standard filtration 5 micron

Useful retention† 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 / NPT 1/4, 3/8, 1/2

Gauge port (2 ea.) BSPP / NPT 1/4

Weight 0.53 kg (1.17 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); 2001 Class 6 (Particulates)

Material Specifications

Body  Aluminum
Adjustment knob  Acetal
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 P32KB00BGM
Metal bowl / Sight gauge manual drain P32KB00BSM
Auto drain P32KA00DA
5µ particle filter element P32KA00ESE
Panel mount nut - aluminum P32KA00MM
Panel mount nut - plastic P32KA00MP
Angle bracket (fits to panel mount threads) P32KB00MR
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

0-60 psig / 0-4 bar P6G-ERB2040
0-160 psig / 0-11 bar P6G-ERB2110
0-300 psig / 0-20 bar P6G-ERB2200

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.
Parker Global Air Preparation System

Standard Filter / Regulator - P33

- Integral 1/2" or 3/4" ports (NPT & BSPP)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminium 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

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<tr>
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<th>Port size</th>
<th>Flow†</th>
<th>Max. bar (psig)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; 8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>1/2&quot;</td>
<td>0.0099 (30 scfm)</td>
<td>10 (150)</td>
<td>291 (11.44)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA14EGMBNGP</td>
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<td>1/2&quot; 8 bar (125 psig) relieving - poly bowl - auto drain</td>
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<td>3/4&quot; 8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>3/4&quot;</td>
<td>0.0188 (60 scfm)</td>
<td>10 (150)</td>
<td>285 (11.22)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
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<td>0.0188 (60 scfm)</td>
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<td>P33EA16ESABNGP</td>
</tr>
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</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

Flow capacity* 1/2 99 dm³/s (210 scfm)
3/4 108 dm³/s (230 scfm)

Operating
- 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
- 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 / NPT 1/2, 3/4

Gauge port (2 ea.) BSPP / 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); 2001 Class 6 (Particulates)

Material Specifications

Body Aluminum
Adjustment knob Acetal
Body cap ABS
Element retainer / Baffle Acetal
Bowls Plastic bowl Polycarbonate
Metal bowl Aluminum
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

1/2 Filter / Regulator

<table>
<thead>
<tr>
<th>Inlet Pressure - 10 bar (145 psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow - dm³/s</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Pressure - bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow - (scfm)</td>
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</table>

3/4 Filter/Regulator

<table>
<thead>
<tr>
<th>Inlet Pressure - 10 bar (145 psig)</th>
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<tbody>
<tr>
<td>Flow - dm³/s</td>
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<table>
<thead>
<tr>
<th>Secondary Pressure - bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow - (scfm)</td>
</tr>
</tbody>
</table>

Repair and Service Kits

Plastic bowl / Bowl guard manual drain P33KA00BGM
Metal bowl / Sight gauge manual drain P33KA00BMSM
Auto drain P33KA00DA
5µ particle filter element P33KA00ESE
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
0-60 psig / 0-4 bar P6G-ERB2040
0-160 psig / 0-11 bar P6G-ERB2110
0-300 psig / 0-20 bar P6G-ERB2200

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

Symbol

- Integral 1/4" ports (NPT & BSPP)
- 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>Port size</th>
<th>Description</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>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - No drain</td>
<td>19 (40)</td>
<td>10 (150)</td>
<td>153.3 (6.04)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31LB12LGNN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - No drain</td>
<td>19 (40)</td>
<td>17 (250)</td>
<td>153.3 (6.04)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31LB12LMNN</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.
**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow capacity*</td>
<td>1/4 19 dm³/s (40 scfm)</td>
</tr>
<tr>
<td>Operating Plastic bowl</td>
<td>-10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td>Operating Metal bowl</td>
<td>-10°C to 65.5°C (14°F to 150°F)</td>
</tr>
<tr>
<td>Max. supply Plastic bowl</td>
<td>10 bar (150 psig)</td>
</tr>
<tr>
<td>Max. supply Metal bowl</td>
<td>17 bar (250 psig)</td>
</tr>
<tr>
<td>Useful retention</td>
<td>18 cm³ (0.6 US oz.)</td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT 1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.13 kg (0.29 lbs)</td>
</tr>
</tbody>
</table>

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

**Material Specifications**

<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>Plastic bowl Polycarbonate</td>
</tr>
<tr>
<td></td>
<td>Metal bowl Aluminum</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Sight dome</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Suggested lubricant</td>
<td>ISO / ASTM VG32</td>
</tr>
<tr>
<td>Pick-up filter</td>
<td>Sintered bronze</td>
</tr>
</tbody>
</table>

**Flow Charts**

**P31LB 1/4" Lubricator**

<table>
<thead>
<tr>
<th>Flow (dm³/s)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Drop (bar)</td>
<td>0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Pressure Drop (psig)</td>
<td>0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Dimensions mm (inches)**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>40 (1.58)</td>
</tr>
<tr>
<td>Body cap</td>
<td>40 (1.58)</td>
</tr>
<tr>
<td>Bowl removal clearance</td>
<td>56.3 (2.22)</td>
</tr>
<tr>
<td>Bowl</td>
<td>153.3 (6.04)</td>
</tr>
</tbody>
</table>

**Repair and Service Kits**

- Plastic bowl / Bowl guard no drain: P31KB00BGN
- Metal bowl / w/o sight gauge no drain: P31KB00BMN
- Drip control assembly: P32KA00PG
- Fill plug: P31KA00PL
- C-bracket (fits to body): P31KA00MW
- T-bracket with body connector: P31KA00MT
- Body connector: P31KA00CB
- Lubricator oil - VG15: ISO 3448 - 100 ml: P3XKA00PPA
- Lubricator oil - VG32 - 1 litre: P3YKA00PPBB

(Do not use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils.)
Compact Lubricator - P32

**Symbol**

- Integral 1/4", 3/8" or 1/2" ports (NPT & BSPP)
- 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

**Options:**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - No drain</td>
<td>17 (35)</td>
<td>10 (150)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB12LGNN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - No drain</td>
<td>17 (35)</td>
<td>17 (250)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB12LSNN</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Poly bowl - No drain</td>
<td>33 (70)</td>
<td>10 (150)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB13LGNN</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>Metal bowl - No drain</td>
<td>33 (70)</td>
<td>17 (250)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB13LSNN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - No drain</td>
<td>42 (90)</td>
<td>10 (150)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB14LGNN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - No drain</td>
<td>42 (90)</td>
<td>17 (250)</td>
<td>217.3 (8.56)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32LB14LSNN</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.
Specifications

Flow capacity* 1/4 17 dm³/s (38 scfm) 3/8 33 dm³/s (70 scfm) 1/2 42 dm³/s (90 scfm)

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)

Useful retention 121 cm³ (4.09 US oz.)

Port size BSPP / 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).

Material Specifications

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)

1/4 Lubricator

Flow Charts

3/8 Lubricator

1/2 Lubricator

Repair and Service Kits

Plastic bowl / Bowl guard no drain P32KB00BGN
Metal bowl / w/o sight gauge no drain P32KB00BMN
Metal bowl / Sight gauge no drain P32KB00BSN
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

(Do not use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils.)
Standard Lubricator - P33

### Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>Poly bowl - No drain</td>
<td>52 (110)</td>
<td>10 (150)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
<td><strong>P33LA14LGNN</strong></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Metal bowl - No drain</td>
<td>52 (110)</td>
<td>17 (250)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
<td><strong>P33LA14LSNN</strong></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Poly bowl - No drain</td>
<td>71 (150)</td>
<td>10 (150)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
<td><strong>P33LA16LGNN</strong></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - No drain</td>
<td>71 (150)</td>
<td>17 (250)</td>
<td>234 (9.21)</td>
<td>73 (2.9)</td>
<td>73 (2.9)</td>
<td><strong>P33LA16LSNN</strong></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 1/2" or 3/4" ports (NPT & BSPP)
- 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
Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow capacity*</td>
<td>1/2: 52 dm³/s (110 scfm)</td>
</tr>
<tr>
<td></td>
<td>3/4: 71 dm³/s (150 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>Useful retention</td>
<td>181 cm³ (6.1 US oz.)</td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT 1/2, 3/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.47 kg (1.04 lbs)</td>
</tr>
</tbody>
</table>

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

Material Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Body cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bowls</td>
<td>Plastic bowl Polycarbonate</td>
</tr>
<tr>
<td></td>
<td>Metal bowl Aluminum</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Sight dome</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Sight gauge</td>
<td>Metal bowl Polycarbonate</td>
</tr>
<tr>
<td>Suggested lubricant</td>
<td>ISO / ASTM VG32</td>
</tr>
<tr>
<td>Pick-up filter</td>
<td>Sintered bronze</td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>73 (2.90)</td>
</tr>
<tr>
<td>Body cap</td>
<td>79 (3.10)</td>
</tr>
<tr>
<td>Bowls</td>
<td>36 (1.44)</td>
</tr>
<tr>
<td>Bowls</td>
<td>51 (2.00)</td>
</tr>
<tr>
<td>Bowl removal clearance</td>
<td>234 (9.20)</td>
</tr>
</tbody>
</table>

Flow Charts

1/2 Lubricator

3/4 Lubricator

Repair and Service Kits

- Plastic bowl / Bowl guard no drain: P33KA00BGN
- Metal bowl / w/o sight gauge no drain: P33KA00BMN
- Metal bowl / Sight gauge no drain: P33KA00BSN
- 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
- Lubricator oil - VG15: ISO 3448 - 100 ml: P3XKA00PPA
- Lubricator oil - VG32 - 1 litre: P3YKA00PPBB

(Do not use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils.)
Proportional Regulators - P31P & P32P

- 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)

Options:

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Bracket mounting kit</td>
<td>P3HKA00ML</td>
</tr>
<tr>
<td>Foot bracket mounting kit</td>
<td>P3HKKA00MC</td>
</tr>
</tbody>
</table>

Proportional Regulators

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Bracket mounting kit</td>
<td>P3KKA00ML</td>
</tr>
<tr>
<td>Foot bracket mounting kit</td>
<td>P3KKKA00MC</td>
</tr>
</tbody>
</table>

Cables

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mtr. cable with moulded straight M12x1 connector</td>
<td>P8L-MC04A2A-M12</td>
</tr>
<tr>
<td>2 mtr. cable with moulded 90 degree M12x1 connector</td>
<td>P8L-MC04R2A-M12</td>
</tr>
</tbody>
</table>

Note:

These brackets fit both Proportional Regulators and Combined Soft Start & Dump Valves.
Dimensions see page 68.
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 to software at all times (parameter 14).

**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**
(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</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>4 to 20mA Control</td>
<td></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</td>
<td>Black</td>
</tr>
</tbody>
</table>

Schematic

![Schematic Diagram](image-url)
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 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.
- If the unit has been programmed in manual mode (not with a control signal) the unit will EXHAUST and the regulator will need to be reset when power is applied.

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) ...................... Aluminum
- 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>Pressure Range</th>
<th>P31P</th>
<th>P32P</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 to 4 bar</td>
<td>25 msecs</td>
<td>35 msecs</td>
</tr>
<tr>
<td>1 to 6 bar</td>
<td>56 msecs</td>
<td>136 msecs</td>
</tr>
<tr>
<td>4 to 2 bar</td>
<td>70 msecs</td>
<td>85 msecs</td>
</tr>
<tr>
<td>6 to 1 bar</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.

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, 19, 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 increase/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.

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.

(Default calibration data is used)

<table>
<thead>
<tr>
<th>Parameter Number 0 – Reset Back to Factory Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step</strong></td>
</tr>
<tr>
<td>Press</td>
</tr>
<tr>
<td>Until Display Reads</td>
</tr>
<tr>
<td>Description</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.

<table>
<thead>
<tr>
<th>Parameter Number 4 – Set Control Signal in Volts or Milliamps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step</strong></td>
</tr>
<tr>
<td>Press</td>
</tr>
<tr>
<td>Until Display Reads</td>
</tr>
<tr>
<td>Description</td>
</tr>
</tbody>
</table>
## 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

<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><img src="thumb_up.png" alt="Thumb Up" /></td>
<td><img src="thumb_down.png" alt="Thumb Down" /></td>
<td><img src="thumb_up.png" alt="Thumb Up" /></td>
<td><img src="thumb_down.png" alt="Thumb Down" /></td>
<td><img src="thumb_up.png" alt="Thumb Up" /></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing.png" alt="Flashing" /></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.

<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><img src="thumb_up.png" alt="Thumb Up" /></td>
<td><img src="thumb_down.png" alt="Thumb Down" /></td>
<td><img src="thumb_up.png" alt="Thumb Up" /></td>
<td><img src="thumb_down.png" alt="Thumb Down" /></td>
<td><img src="thumb_up.png" alt="Thumb Up" /></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing_decimal.png" alt="Flashing Decimal" /></td>
<td><img src="flashing.png" alt="Flashing" /></td>
</tr>
</tbody>
</table>

### Parameter Number 6 – Set Output Signal

### Parameter Number 8 – Adjust Span Analog Output Signal
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           | ▼▲           | acc            | ▼▲              | acc           |
| 3-6 seconds      |               |              |                |                 |               |
| Until Display    | P×x           | P09          | # # # #         | # # #           | P10           |
| Reads            |               |              |                |                 |               |
| 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           | ▼▲           | acc            | ▼▲              | acc           |
| 3-6 seconds      |               |              |                |                 |               |
| Until Display    | P×x           | P14          | 001            | 000             | P15           |
| Reads            |               |              |                |                 |               |
Preset Minimum Pressure
If there is a need for a pre-set Minimum pressure, use parameter 18. (Note: preset pressure is affected by % P19.)

**Parameter Number 18 – Set Minimum 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>Press</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 18.</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>
</tbody>
</table>

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>Press</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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><img src="image1" alt="Acc" /></td>
<td><img src="image2" alt="Down Triangle" /></td>
<td><img src="image3" alt="Up Triangle" /></td>
<td><img src="image4" alt="Down Triangle" /></td>
<td><img src="image5" alt="Acc" /></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="image6" alt="Pxx" /></td>
<td><img src="image7" alt="P20" /></td>
<td><img src="image8" alt="003" /></td>
<td><img src="image9" alt="Flashing Decimal" /></td>
<td><img src="image10" alt="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><img src="image1" alt="Acc" /></td>
<td><img src="image2" alt="Down Triangle" /></td>
<td><img src="image3" alt="Up Triangle" /></td>
<td><img src="image4" alt="Down Triangle" /></td>
<td><img src="image5" alt="Acc" /></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="image6" alt="Pxx" /></td>
<td><img src="image7" alt="P12" /></td>
<td><img src="image8" alt="100" /></td>
<td><img src="image9" alt="Flashing Decimal" /></td>
<td><img src="image10" alt="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).

**Parameter Number 13 – Set Deadband (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><img src="image" alt="acc" /></td>
<td><img src="image" alt="△" /></td>
<td><img src="image" alt="acc" /></td>
<td><img src="image" alt="△" /></td>
<td><img src="image" alt="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><img src="image" alt="pxx" /></td>
<td><img src="image" alt="p13" /></td>
<td><img src="image" alt="0.15" /></td>
<td># # #</td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td>Value between 4 and 40</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 13.</td>
<td>Displays current parameter value. Incremental value is x 10 mbar</td>
<td>Edits parameter.</td>
<td>Accepts and saves new parameter setting.</td>
</tr>
</tbody>
</table>

**Proportional Effect**

**Parameter Number 21 – Set Proportional Effect (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><img src="image" alt="acc" /></td>
<td><img src="image" alt="△" /></td>
<td><img src="image" alt="acc" /></td>
<td><img src="image" alt="△" /></td>
<td><img src="image" alt="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><img src="image" alt="pxx" /></td>
<td><img src="image" alt="p21" /></td>
<td><img src="image" alt="0.10" /></td>
<td># # #</td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td>Value between 5 and 100</td>
<td></td>
</tr>
</tbody>
</table>

**Parameter Number 39 – Displays Current Software Version**

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td><img src="image" alt="acc" /></td>
<td><img src="image" alt="△" /></td>
<td><img src="image" alt="acc" /></td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="image" alt="pxx" /></td>
<td><img src="image" alt="p39" /></td>
<td># # #</td>
</tr>
<tr>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 39.</td>
<td>Displays current parameter value. XXX = current software version</td>
</tr>
</tbody>
</table>
0750-UK
Parker Global Air Preparation System
Proportional Regulators

P31P

P32P

Dimensions are in mm (Inches)
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.

### Options:

**P31DA**

- **Body size**
  - Dump valve (1/4")
  - Dump valve (1/2")

- **Thread type**
  - BSPP 1
  - NPT 9

- **Actuator interface**
  - G 15mm solenoid (P31 only)
  - C 30mm solenoid
  - P Threaded Air Pilot

- **Pilot type**
  - P External air pilot
  - S Solenoid pilot

- **Solenoid type only**

**Port size**

- **Global modular mini (1/4")**
  - 2
- **Global modular compact (1/2")**
  - 4

**Solenoid voltage**

- 000 Solenoid / Coil not fitted
- 2CN 24VDC non-locking manual override
- 3GN 120VAC non-locking manual override
- 1FN 120VAC non-locking manual override (P31 series only)

<table>
<thead>
<tr>
<th>Part size</th>
<th>Description</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>
<th>Weight (kg (lbs))</th>
<th>Part number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Solenoid operated (not included)</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>
<td>P31DA12SGN0000</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>24VDC Solenoid &amp; cable plug</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>
<td>P31DA12SGNC2CN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot operated</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>
<td>P31DA12PPN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Solenoid operated (not included)</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>
<td>P32DA14SCN0000</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>24VDC 30mm coil &amp; cable plug incl.</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>
<td>P32DA14SCNA2CN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot operated</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>
<td>P32DA14PPN</td>
</tr>
</tbody>
</table>

† Includes exhaust silencer

* 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"
Exhaust port: P31D - 1/4" / P32D - 1/2"
Gauge port: P31D - 1/8" / P32D - 1/4"

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)

* 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

Material Specifications

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-bracket mounting kit</td>
<td>P3HKAA00ML</td>
</tr>
<tr>
<td>Foot bracket mounting kit</td>
<td>P3HKAA00MC</td>
</tr>
</tbody>
</table>

Note:
For solenoid operators and cable plugs (connectors) see pages 74 to 75.

Dimensions mm (inches)

P31D

For mounting brackets see page 86.

Flow Charts

P31DA 1/4" Remote Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)

Secondary Pressure - bar

Secondary Pressure - (psig)

Flow - dm³/s

Flow - (scfm)

P32DA 1/2" Remote Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)

Secondary Pressure - bar

Secondary Pressure - (psig)

Flow - dm³/s

Flow - (scfm)
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**
  - 1/4" Soft start P31SA
  - 1/2" Soft start P32SA

- **Port size**
  - Global modular mini (1/4"") 2
  - Global modular compact (1/2"") 4

- **Thread type**
  - BSPP 1
  - NPT 9

- **Actuator interface**
  - Internal Pilot 0
  - 15mm solenoid (P31 only) G
  - 30mm solenoid (P32 only) C
  - Threaded air pilot P

- **Pilot type**
  - External air pilot P
  - Solenoid pilot S
  - Internal air pilot Y

- **Solenoid type only**
  - 24VDC non locking manual override 2CN
  - 120VAC non locking manual override 3GN, 1FN

- **Solenoid voltage**
  - Solenoid / Coil not fitted 000
  - 24VDC non locking manual override 2CN
  - 120VAC non locking manual override 3GN, 1FN

- **Actuator interface**
  - Internal Pilot 0
  - 15mm solenoid (P31 only) G
  - 30mm solenoid (P32 only) C

- **Pilot type**
  - Threaded air pilot P
  - External air pilot P
  - Solenoid pilot S
  - Internal air pilot Y

- **Solenoid type**
  - None (For P32 series - Operator is fitted to valve) 0
  - 15mm (P31 series only) C
  - 30mm CNOMO coil (P32 only) A
  - 30mm CNOMO coil (M12 connection) (P32 only) D

### Part Numbers:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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>
<th>Weight kg (lbs)</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Solenoid operated (not included)</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>
<td>P31SA12SGN0000</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>24VDC Solenoid &amp; cable plug</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>0.41 (0.9)</td>
<td>P31SA12SGNC2CN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Internal air pilot operated</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>
<td>P31SA12Y0N</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot (1/8&quot; threaded)</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>
<td>P31SA12PPN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Solenoid operated (not included)</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>0.87 (1.5)</td>
<td>P32SA14SCN0000</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>24VDC 30mm coil &amp; cable plug</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>0.90 (2.0)</td>
<td>P32SA14SCNA2CN</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>Internal air pilot operated</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>0.90 (2.0)</td>
<td>P32SA14Y0N</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot (1/8&quot; threaded)</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>0.87 (1.5)</td>
<td>P32SA14PPN</td>
</tr>
</tbody>
</table>

1 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”
Gauge port: P31S - 1/8” / P32S - 1/4”

Typical flow with 6.3 bar inlet pressure and 1 bar pressure drop:
P31S 17 dm³/s (36 scfm)
P32S 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

Material Specifications

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

Description Part number
L-bracket mounting kit P31SA
Foot bracket mounting kit P32SA

Note:
For solenoid operators and cable plugs (connectors) see pages 74 to 75.

Dimensions mm (inches)

P31S

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body width</td>
<td>166 (6.53)</td>
</tr>
<tr>
<td>Body height</td>
<td>136 (5.35)</td>
</tr>
<tr>
<td>Gauge port</td>
<td>1/8”</td>
</tr>
</tbody>
</table>

P32S

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body width</td>
<td>174.5 (6.87)</td>
</tr>
<tr>
<td>Body height</td>
<td>109.5 (4.31)</td>
</tr>
<tr>
<td>Gauge port</td>
<td>1/4”</td>
</tr>
</tbody>
</table>

Soft Start Function:

- Start signal
- Switching time delay
- Gradual pressure build up
- Operating pressure P2 (P1)

Flow Charts

P31SA 1/4” Soft Start Valve

P32SA 1/2” Soft Start Valve

For mounting brackets see page 86.
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.

Options:

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.

Port size Description Flow² dm³/s (scfm) Max. bar (psig) Height mm (inches) Width mm (inches) Depth mm (inches) Weight kg (lbs) Part number†

1/4" Solenoid operated (not included) 17 (36) 10 (150) 115.6 (4.5) 57 (2.2) 40 (1.5) 0.37 (0.8) P31TA12SGN0000

1/4" 24VDC Solenoid & cable plug 17 (36) 10 (150) 166† (6.5) 57 (2.2) 40 (1.5) 0.41 (0.9) P31TA12SGNC2CN

1/4" External air pilot operated 17 (36) 17 (250) 115.6 (4.5) 57 (2.2) 40 (1.5) 0.37 (0.8) P31TA12PPN

1/2" Solenoid operated (not included) 46 (97) 10 (150) 162.5† (6.3) 88 (3.4) 57.2 (2.2) 0.87 (1.9) P32TA14SCN0000

1/2" 24VDC 30mm coil & cable plug incl. 46 (97) 10 (150) 227.5† (8.9) 88 (3.4) 57.2 (2.2) 0.91 (2.0) P32TA14SCN22CN

1/2" External air pilot operated 46 (97) 17 (250) 162.5† (6.3) 75 (2.9) 57.2 (2.2) 0.87 (1.9) P32TA14PPN

† Includes exhaust silencer. Flow with 6.3 bar (91.3) psig inlet and 1 bar (14.5 psig) pressure drop.

† 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"
Exhaust port: P31T - 1/4" / P32T - 1/2"
Gauge port: P31T - 1/8" / P32T - 1/4"

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

Material Specifications

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Mounting Brackets

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-bracket mounting kit</td>
<td>P3HKA00ML</td>
</tr>
<tr>
<td>Foot bracket mounting kit</td>
<td>P3HKA00MC</td>
</tr>
</tbody>
</table>

Note:
For solenoid operators and cable plugs (connectors) see pages 74 to 75.

Flow Charts

P31TA 1/4" Soft Start & Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)
Secondary Pressure - bar
Secondary Pressure - (psig)
Flow - dm³/s
Flow - (scfm)

P32TA 1/2" Soft Start & Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)
Secondary Pressure - bar
Secondary Pressure - (psig)
Flow - dm³/s
Flow - (scfm)

Dimensions mm (inches)

P31T

Soft Start Function:

<table>
<thead>
<tr>
<th></th>
<th>Start signal</th>
<th>Switching time delay</th>
<th>Gradual pressure build up</th>
<th>Operating pressure p₁ (+p₂)</th>
</tr>
</thead>
</table>

For mounting brackets see page 86.
### Solenoid Operators

**Solenoid operator - CNOMO**

**Order key**

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Pressure / Temp</th>
<th>Manual / Override</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 CNOMO 22 x 30 Plastic</td>
<td>N 10 bar / -10°C to +50°C</td>
<td>B Non locking - monostable - Flush - Brass</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Normal Operator with 30 x 30 standard coil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working pressure</td>
<td>0 to 10 bar</td>
<td>0 to 10 bar</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-10°C to 60°C (1)</td>
<td>-10°C to 60°C (1)</td>
</tr>
<tr>
<td>Office</td>
<td>1.3/1.5mm</td>
<td>1.3/1.5mm</td>
</tr>
<tr>
<td>Flow On</td>
<td>0.84 dm³/s</td>
<td>0.84 dm³/s</td>
</tr>
<tr>
<td>Power (DC)</td>
<td>2.7W</td>
<td>4.8W</td>
</tr>
<tr>
<td>Power (AC)</td>
<td>4.9VA</td>
<td>8.5VA</td>
</tr>
<tr>
<td>Voltage tolerance</td>
<td>+/- 10%</td>
<td>+/- 10%</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Insulation class</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Electric connection</td>
<td>Form A</td>
<td>Industrial B</td>
</tr>
<tr>
<td>Protection</td>
<td>IP65</td>
<td>IP65</td>
</tr>
<tr>
<td>Shock &amp; Vibration</td>
<td>1g</td>
<td>1g</td>
</tr>
<tr>
<td>Approval</td>
<td>UL/CSA</td>
<td></td>
</tr>
<tr>
<td>Working media</td>
<td>All neutral media such as compressed air and inert gases.</td>
<td></td>
</tr>
</tbody>
</table>

(1) limited to 50°C if use with 100% duty cycle

**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: FKM (Viton™)
- Screws: Stainless steel

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

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

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code DIN A Standard</th>
<th>30mm x 30mm Weight (Kg)</th>
<th>Order code Industrial B Standard</th>
<th>22mm x 30mm Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12V DC</td>
<td>P2FCA445</td>
<td>0.105</td>
<td>P2FCB445</td>
<td>0.093</td>
</tr>
<tr>
<td>24V DC</td>
<td>P2FCA449</td>
<td>0.105</td>
<td>P2FCB449</td>
<td>0.093</td>
</tr>
<tr>
<td>48V DC</td>
<td>P2FCA453*</td>
<td>0.105</td>
<td>P2FCB451</td>
<td>0.093</td>
</tr>
<tr>
<td>Alternative current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12V 50/60Hz</td>
<td>P2FCA440</td>
<td>0.105</td>
<td>P2FCB440</td>
<td>0.093</td>
</tr>
<tr>
<td>24V 50/60Hz</td>
<td>P2FCA442</td>
<td>0.105</td>
<td>P2FCB442</td>
<td>0.093</td>
</tr>
<tr>
<td>48V 50/60Hz</td>
<td>P2FCA469*</td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110V 50Hz, 120V 60Hz</td>
<td>P2FCA453*</td>
<td>0.105</td>
<td>P2FCB453</td>
<td>0.093</td>
</tr>
<tr>
<td>230V 50Hz, 230V 60Hz</td>
<td>P2FCA457</td>
<td>0.105</td>
<td>P2FCB457</td>
<td>0.093</td>
</tr>
</tbody>
</table>

**Solenoid coils with M12 connection**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code Form A W (Kg)</th>
<th>Order code Form B W (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24V DC</td>
<td>P2FC6419</td>
<td>0.065</td>
</tr>
</tbody>
</table>

### Spare Solenoid Operators

**Spare Solenoid Nuts**

Valves requiring captured exhaust should be fitted with plastic knurled nut

<table>
<thead>
<tr>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2FNP</td>
</tr>
</tbody>
</table>

Valves with vented exhaust are fitted with diffuser plastic nut

<table>
<thead>
<tr>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2FND</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 Operators**

**Solenoid Operators**

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Normal Operator with 22 x 30 standard coil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working pressure</td>
<td>0 to 10 bar</td>
<td>0 to 10 bar</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-10°C to 60°C (1)</td>
<td>-10°C to 60°C (1)</td>
</tr>
<tr>
<td>Office</td>
<td>1.3/1.5mm</td>
<td>1.3/1.5mm</td>
</tr>
<tr>
<td>Flow On</td>
<td>0.84 dm³/s</td>
<td>0.84 dm³/s</td>
</tr>
<tr>
<td>Power (DC)</td>
<td>2.7W</td>
<td>4.8W</td>
</tr>
<tr>
<td>Power (AC)</td>
<td>4.9VA</td>
<td>8.5VA</td>
</tr>
<tr>
<td>Voltage tolerance</td>
<td>+/- 10%</td>
<td>+/- 10%</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Insulation class</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Electric connection</td>
<td>Form A</td>
<td>Industrial B</td>
</tr>
<tr>
<td>Protection</td>
<td>IP65</td>
<td>IP65</td>
</tr>
<tr>
<td>Shock &amp; Vibration</td>
<td>1g</td>
<td>1g</td>
</tr>
<tr>
<td>Approval</td>
<td>UL/CSA</td>
<td></td>
</tr>
<tr>
<td>Working media</td>
<td>All neutral media such as compressed air and inert gases.</td>
<td></td>
</tr>
</tbody>
</table>

(1) limited to 50°C if use with 100% duty cycle

**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: FKM (Viton™)
- Screws: Stainless steel

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

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

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code DIN A Standard</th>
<th>30mm x 30mm Weight (Kg)</th>
<th>Order code Industrial B Standard</th>
<th>22mm x 30mm Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12V DC</td>
<td>P2FCA445</td>
<td>0.105</td>
<td>P2FCB445</td>
<td>0.093</td>
</tr>
<tr>
<td>24V DC</td>
<td>P2FCA449</td>
<td>0.105</td>
<td>P2FCB449</td>
<td>0.093</td>
</tr>
<tr>
<td>48V DC</td>
<td>P2FCA453*</td>
<td>0.105</td>
<td>P2FCB451</td>
<td>0.093</td>
</tr>
<tr>
<td>Alternative current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12V 50/60Hz</td>
<td>P2FCA440</td>
<td>0.105</td>
<td>P2FCB440</td>
<td>0.093</td>
</tr>
<tr>
<td>24V 50/60Hz</td>
<td>P2FCA442</td>
<td>0.105</td>
<td>P2FCB442</td>
<td>0.093</td>
</tr>
<tr>
<td>48V 50/60Hz</td>
<td>P2FCA469*</td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110V 50Hz, 120V 60Hz</td>
<td>P2FCA453*</td>
<td>0.105</td>
<td>P2FCB453</td>
<td>0.093</td>
</tr>
<tr>
<td>230V 50Hz, 230V 60Hz</td>
<td>P2FCA457</td>
<td>0.105</td>
<td>P2FCB457</td>
<td>0.093</td>
</tr>
</tbody>
</table>

**Solenoid coils with M12 connection**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code Form A W (Kg)</th>
<th>Order code Form B W (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24V DC</td>
<td>P2FC6419</td>
<td>0.065</td>
</tr>
</tbody>
</table>

### Spare Solenoid Operators

**Spare Solenoid Nuts**

Valves requiring captured exhaust should be fitted with plastic knurled nut

<table>
<thead>
<tr>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2FNP</td>
</tr>
</tbody>
</table>

Valves with vented exhaust are fitted with diffuser plastic nut

<table>
<thead>
<tr>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2FND</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 Connectors / Cable Plugs EN175301-803

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
<th>Order code</th>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>With large headed screw suitable for mounting in inaccessible or recess position</td>
<td>Standard IP65</td>
<td>P8C-C</td>
<td>3EV10V10</td>
</tr>
<tr>
<td></td>
<td>24V DC LED and protection IP65</td>
<td>P8C-C26C</td>
<td>3EV10V20-24</td>
</tr>
<tr>
<td></td>
<td>110V AC LED and protection IP65</td>
<td>P8C-C21E</td>
<td>3EV10V20-110</td>
</tr>
<tr>
<td>With standard screw</td>
<td>Standard IP65 without flying lead</td>
<td>P8C-D</td>
<td>3EV10V10-230</td>
</tr>
<tr>
<td></td>
<td>With LED and protection 24V AC/DC</td>
<td>P8C-D26C</td>
<td>3EV10V20-24L5</td>
</tr>
<tr>
<td></td>
<td>With LED and protection 110V AC</td>
<td>P8C-D21E</td>
<td>3EV10V20-110L5</td>
</tr>
<tr>
<td>With cable</td>
<td>Standard with 2m cable IP65</td>
<td>P8L-C2</td>
<td>3EV10V10</td>
</tr>
<tr>
<td></td>
<td>Standard with 5m cable IP65</td>
<td>P8L-C5</td>
<td>3EV10V20-110L5</td>
</tr>
<tr>
<td></td>
<td>24V AC/DC, 2m cable LED and protection IP65</td>
<td>P8L-C226C</td>
<td>3EV10V20-230L5</td>
</tr>
<tr>
<td></td>
<td>24V AC/DC, 5m cable LED and protection IP65</td>
<td>P8L-C526C</td>
<td>3EV10V20-24L5</td>
</tr>
<tr>
<td></td>
<td>24V AC/DC, 10m cable LED and protection IP65</td>
<td>P8L-CA26C</td>
<td>3EV10V20-110L5</td>
</tr>
<tr>
<td></td>
<td>110V AC/DC, 2m cable LED and protection IP65</td>
<td>P8L-C221E</td>
<td>3EV10V20-230L5</td>
</tr>
<tr>
<td></td>
<td>110V AC/DC, 5m cable LED and protection IP65</td>
<td>P8L-C521E</td>
<td>3EV10V20-24L5</td>
</tr>
<tr>
<td></td>
<td>230V AC, 5m cable LED and protection IP65</td>
<td>P8L-CA221E</td>
<td>3EV10V20-230L5</td>
</tr>
</tbody>
</table>

### Solenoid Coil & Cable Plug Dimensions (mm)

**P2F - CNOMO - 22 x 30mm**

- **Form C Cable plugs**
  - P8C-C
  - P8C-C26C
  - P8C-C21E
  - P8C-D
  - P8C-D26C
  - P8C-D21E
- **Form C Cable plugs**
  - P8L-C2
  - P8L-C5
  - P8L-C226C
  - P8L-CA26C
  - P8L-C221E
  - P8L-CA221E
  - 3EV10V10
- **Form B Cable plugs**
  - 3EV10V10
- **Form A Cable plugs**
  - 3EV290V10
Parker Global Air Preparation System

Machine Directive - EN ISO 13849-1
Global combined soft start / dump valves to meet Category 2

- Safety Standard ISO13849-1 for Category 2, compliant with performance level. (contact the division for details).
- This product is designed to be used as a component within a system. The single unit alone cannot be considered as a Category 2 safety product.
- Sensor is energised in the Dump / Exhaust position.

Note: For other Technical Data, see pages 72 - 73

Remote operated dump valve & Combined soft start dump valve

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Order code</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>Solenoid operated (not included)</td>
<td>P32DA14SC20000</td>
<td>Product is supplied / tested and fitted with electronic sensor P8S-GPMHX</td>
</tr>
<tr>
<td>1/2</td>
<td>Solenoid operated (not included)</td>
<td>P32TA14SC20000</td>
<td></td>
</tr>
</tbody>
</table>

For thread type: NPT

Ordering data

Electronic sensors, 10-30 V DC
PNP type, normally open: 0.27 m PUR-cable and M12 screw male connector

For solenoid operators and cable plugs (connectors) see pages 74 - 75
Global Products Fitted with Pressure Sensor

Additional methods of pressure monitoring, is to fit a MPS Pressure Sensor in the Global product gauge port. See page 84-85 for details.

A reducer Male/Female fitting can be used for P32 series and Manifold accessories.

Reducer, Male/Female BSPP and Metric Thread

<table>
<thead>
<tr>
<th>C1</th>
<th>C2</th>
<th>E</th>
<th>F</th>
<th>L</th>
<th>Weight (Kg)</th>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/4</td>
<td>G1/8</td>
<td>5.5</td>
<td>16</td>
<td>9.5</td>
<td>0.006</td>
<td>0178 13 10</td>
</tr>
<tr>
<td>G3/8</td>
<td>G1/8</td>
<td>5.5</td>
<td>20</td>
<td>10.5</td>
<td>0.016</td>
<td>0178 17 10</td>
</tr>
<tr>
<td>G1/4</td>
<td>G1/8</td>
<td>5.5</td>
<td>20</td>
<td>10.5</td>
<td>0.011</td>
<td>0178 17 13</td>
</tr>
<tr>
<td>G1/2</td>
<td>G1/4</td>
<td>7.5</td>
<td>24</td>
<td>12.5</td>
<td>0.024</td>
<td>0178 21 13</td>
</tr>
<tr>
<td>G3/8</td>
<td>G1/4</td>
<td>7.5</td>
<td>24</td>
<td>12.5</td>
<td>0.016</td>
<td>0178 21 17</td>
</tr>
<tr>
<td>G3/4</td>
<td>G1/2</td>
<td>7.5</td>
<td>32</td>
<td>13.5</td>
<td>0.035</td>
<td>0178 27 21</td>
</tr>
</tbody>
</table>

With integrated O-ring seal
Redundant Safety Exhaust Valve

- Proven control reliable technology with integrated soft start
- Soft start application of air to the system when energized; can be adjusted for slower or faster buildup of system pressure
- Rapid exhaust of downstream air when de-energized to remove stored energy and allow safe access
- Memory, monitoring, and air flow control functions are integrated into two identical valve elements. Valves lock-out if asynchronous movement of valve elements occurs during actuation or de-actuation, resulting in a residual outlet pressure of less than 1% of supply.
- Reset can only be accomplished by the integrated electrical (solenoid) reset. Cannot be reset by removing and re-applying supply pressure.
- Basic 3/2 normally closed valve function: Dirt tolerant, wear compensating poppet design for quick response and high flow capacity.
- LED indicators of main solenoid operation, reset solenoid operation, and status indicator condition.
- Optional transducer for monitoring of downstream pressure in the system.
- Dual exhaust silencers included.
- Not for use with clutch / brake applications.
- For use in conjunction with a safety relay or safety PLC.

Options:

<table>
<thead>
<tr>
<th>P33TA</th>
<th>6</th>
<th>R</th>
<th>G</th>
<th>4</th>
<th>2CN</th>
</tr>
</thead>
</table>

- **Body size**: Standard P33T
- **Port size**: 3/4" BSPP or NPT
- **Operator**: 15mm Solenoid G
- **Type**: Solenoid pilot + gauge R
- **Mounting**: Cat 4 w/bracket 4
- **Solenoid**: Dual M12 connector F
- **Voltage**: 24VDC with manual override 2CN
- **Part number**: P33TA16RG4F2CN

<table>
<thead>
<tr>
<th>Port size</th>
<th>Cv</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Weight (kg)</th>
<th>Part number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4</td>
<td>3/4 w/o transducer</td>
<td>3.7</td>
<td>6.5</td>
<td>273.8 (10.78)</td>
<td>136.0 (5.35)</td>
<td>147.6 (581)</td>
</tr>
<tr>
<td>3/4</td>
<td>3/4 w/ transducer</td>
<td>3.7</td>
<td>6.5</td>
<td>273.8 (10.78)</td>
<td>136.0 (5.35)</td>
<td>147.6 (581)</td>
</tr>
</tbody>
</table>

* BSPP port threads. For NPT threads, replace “1” in the part number with a “9”.

Parker Hannifin Corporation
Pneumatic Division - Europe

78
Technical Information

Pilot Solenoids: According to VDE 0580
Enclosure rating: According to DIN 400 50 IP65
Connector socket: According to DIN 43650 Form A
Three solenoids, rated for continuous duty

Standard voltages: 24VDC
Power consumption (each solenoid): 1.2 Watts on DC
for primary and reset solenoids:

Enclosure rating: IP65, IEC 60529
Electrical connection: M12, 5-pin

Ambient temperature: 15°F to 122°F (-10°C to 50°C)
Media temperature: 40°F to 175°F (4°C to 80°C)
Flow media: Compressed Air, Filtered to Minimum 40 Micron

Inlet pressure: 30 to 150 PSIG (2 to 10 bar)
Pressure switch switch rating (Status indicator): 5 Amps at 30 Volts DC.

Monitoring: Dynamically, cyclically, internally during each actuating and de-actuating movement. Monitoring function has memory and requires an overt act to reset unit after lockout.

Mounting orientation: Vertically with pilot solenoids on top
Port threads: 3/4 NPT, 3/4 BSPP

Control reliable: Category 4 (Cat 4); performance Level e (PLe) in accordance with Machine directive - EN ISO 13849-1 (Certification pending)

Repair and Service Kits

Description | Part number
--- | ---
Black grill | 1834C05-001
Body connector | P32KA00CB

Cables
- M12, 5-pin female to flying lead cable, TPE; 2 m (6.6 ft) .................. RKC 4.5T-2/S1587
- M12, 5-pin male to flying lead cable, TPE; 2 m (6.6 ft) .................. RSC 4.5T-2/S1587

Pressure switch | 1227A30-001
Pressure transducer (Optional) | 1232H30-001
T-bracket w/ body connector | P32KA00MT
T-bracket (Fits to body connector or port block) | P32KA00MB
Silencer(1) 3/4" | 5500A5013

Solenoid (Main & reset) | 1527B7916-001
Square flush mounting gauge kit, 0-160 psig | K4511SCR160

Valve Wiring

Dimensions mm (inches)

Angle Mounting Bracket

Note: Mounting bracket and installation screws included and required to install unit in the system.
Valve de-actuated (ready-to-run):

The flow of inlet air pressure to the inlet chamber of the main valve internals is restricted by a fixed orifice and an adjustable flow control as well as an air piloted 2-way normally closed poppet valve. The flow of inlet air pressure into the crossover passages is restricted by the size of the passage between the stem and the valve body opening. Flow is sufficient to quickly pressurize pilot supply / timing chambers 1 and 2. The inlet poppets prevent air flow from crossover passages into the outlet chamber. Air pressure acting on the inlet poppets and return pistons securely hold the valve elements in the closed position. (Reset adapter omitted for clarity.)

The green “Status” LED will be illuminated indicating the valve is operational.

Valve actuated:

Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized at a rate allowed by the fixed orifice and the adjusted flow control. Once the air pressure in the outlet chamber reaches approximately 60% of inlet pressure, the air piloted 2-way normally closed poppet valve opens fully and the pressure in the inlet, crossovers, outlet, and timing chambers are quickly equalized. The adjustable flow control will control the time it takes for the outlet air pressure to reach approximately 60% of inlet pressure.

De-energizing the pilots quickly causes the valve elements to return to the ready-to-run position.

Solenoid 1, Solenoid 2 and the green “Status” LED’s will be illuminated indicating the valve is operating properly.

Soft start function:

- Start signal
- Switching time delay
- Gradual pressure build up
- Operating pressure p' (=p)

The flow of inlet air pressure to the inlet chamber of the main valve internals is restricted by a fixed orifice and an adjustable flow control as well as an air piloted 2-way normally closed poppet valve. The flow of inlet air pressure into the crossover passages is restricted by the size of the passage between the stem and the valve body opening. Flow is sufficient to quickly pressurize pilot supply / timing chambers 1 and 2. The inlet poppets prevent air flow from crossover passages into the outlet chamber. Air pressure acting on the inlet poppets and return pistons securely hold the valve elements in the closed position. (Reset adapter omitted for clarity.)

The green “Status” LED will be illuminated indicating the valve is operational.

Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized at a rate allowed by the fixed orifice and the adjusted flow control. Once the air pressure in the outlet chamber reaches approximately 60% of inlet pressure, the air piloted 2-way normally closed poppet valve opens fully and the pressure in the inlet, crossovers, outlet, and timing chambers are quickly equalized. The adjustable flow control will control the time it takes for the outlet air pressure to reach approximately 60% of inlet pressure.

De-energizing the pilots quickly causes the valve elements to return to the ready-to-run position.

Solenoid 1, Solenoid 2 and the green “Status” LED’s will be illuminated indicating the valve is operating properly.
Valve fault and lock-out:

Whenever the valve elements operate in a sufficiently asynchronous manner, either on actuation or de-actuation, the valve will move to a locked-out position. In the locked-out position, one crossover and its related timing chamber will be exhausted, and the other crossover and its related timing chamber will be fully pressurized. The valve element (side 2) that is partially actuated has pilot air available to fully actuate it, but no air pressure on the return piston to fully de-actuate the valve element.

Air pressure in the crossover acts on the differential of side 2 stem diameters creating a latching force. Side 1 is in a fully closed position, and has no pilot air available to actuate, but has full pressure on the inlet poppet and return piston to hold the element in the fully closed position. Inlet air flow on side 1 into its crossover is restricted, and flows through the open inlet poppet on side 2, through the outlet into the exhaust port, and from the exhaust port to atmosphere. Residual pressure in the outlet is less than 1% of inlet pressure. The return springs are limited in travel, and can only return the valve elements to the intermediate (locked-out) position. Sufficient air pressure acting on the return pistons is needed to return the valve elements to a fully closed position.

The red “Status” LED will be illuminated indicating the valve in fault and lock-out must be reset.

Valve reset (electrical or manual):

The reset procedure is as follows:

- Remove the electrical signals to the main coils
- Ensure there is air supplied to the valve
- Energize the reset solenoid for a minimum of 200 ms
- Allow a 200 ms delay after de-energizing the reset solenoid and re-energizing the main solenoids

The valve will remain in the locked-out position, even if the inlet air supply is removed and re-applied.

A remote reset signal must be applied to reset the valve. A momentary, remote electrical signal must be applied to the reset solenoid to apply pressure to the reset pistons in the valve. Actuation of the reset piston physically pushes the main valve elements to their closed position. Inlet air fully pressurizes the crossovers and holds the inlet poppets on seat. Actuation of the reset piston opens the reset poppet, thereby, immediately exhausting pilot supply air, thus, preventing valve operation during reset (Reset adapter added to illustration.). De-actuation of reset pistons causes the reset poppets to close and pilot supply to fully pressurize. Reset air pressure is applied by a 3/2 normally closed solenoid, or a manual push button mounted on the reset adapter in the top valve cover.

The green “Status” LED will be illuminated once the valve is reset.
Ball Valve / Lockout Valve

Features
The Ball / Lockout Valve shuts off downstream line pressure in the closed position with a 90° turn of the handle. In the closed position, inlet air pressure is blocked and downstream / system air is exhausted through a threaded port. To prevent unauthorized adjustment, the padlock slide may be assembled on either side. It is recommended that this slide is installed after final system assembly.

Note: This padlock slide is a permanent assembly and may not be removed later, any unauthorized tampering will void any warranty claims. The valve can only be locked in the closed position.

Ordering Information

<table>
<thead>
<tr>
<th>Model type</th>
<th>Port size</th>
<th>Exhaust port</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>1/4&quot;</td>
<td>BSPP</td>
<td>20 (42.4)</td>
<td>P31VB12LBNN</td>
</tr>
<tr>
<td>P32</td>
<td>3/8&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>90 (190.7)</td>
<td>P32VB13LBNN</td>
</tr>
<tr>
<td></td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>122 (258.5)</td>
<td>P32VB14LBNN</td>
</tr>
<tr>
<td>P33</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>BSPP</td>
<td>265 (561.5)</td>
<td>P33VB14LBNN</td>
</tr>
<tr>
<td></td>
<td>3/4&quot;</td>
<td>1/2&quot;</td>
<td>BSPP</td>
<td>320 (678)</td>
<td>P33VB16LBNN</td>
</tr>
</tbody>
</table>

For thread type: NPT

Material Specifications

<table>
<thead>
<tr>
<th>Body</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seals</td>
<td>PTFE</td>
</tr>
<tr>
<td>Ball P31</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>P32 / P33</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

P31

Parker Hannifin Corporation
Pneumatic Division - Europe

82
### Manifold Blocks

**Features**
- Available in 1/4, 1/2 & 3/4 threaded inlet / outlet ports
- Two additional top and bottom auxiliary ports standard
- Can be mounted anywhere in the FRL system

### Branch Manifold Dimensions - P32

**Materials of Construction**
- Body: Aluminium

**Specifications**
- Max Operating Temperature: 65.5°C (150°F)
- Max Supply Pressure: 20.7 bar (300 psi)

<table>
<thead>
<tr>
<th>Weight</th>
<th>Model Type</th>
<th>Port Size</th>
<th>Auxiliary Port Size</th>
<th>Thread Type</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31: 0.19 kg (0.42 lbs)</td>
<td>P31</td>
<td>1/4”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>P31MA12022N</td>
</tr>
<tr>
<td>P32: 0.30 kg (0.66 lbs)</td>
<td>P32</td>
<td>1/2”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>P32MA14024N</td>
</tr>
<tr>
<td>P33: 0.14 kg (0.31 lbs)</td>
<td>P33</td>
<td>3/4”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>P33MA16024N</td>
</tr>
</tbody>
</table>

**P32**
- 1/2” 1/4” 1/4” BSPP
- Order Code: P32MD14024N

**P32MD**
- 1/4” 1/4” 1/4” BSPP
- Order Code: P32MD12022N

### Manifold Block - Dimensions
Pressure Sensors

MPS-34, 2-Colour Panel Mount

- Sensor output:
  PNP Open collector
  Transistor output, 30VDC, 125mA with Analog output, 4 to 20mA
- Output response time less than 2.0 milliseconds
- RoHS
- Air and non-corrosive gases
- Sensor face includes icons to show sensor programming status

Programming options

<table>
<thead>
<tr>
<th>Feature</th>
<th>✔</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outputs change N.O. / N.C.</td>
<td>✔</td>
</tr>
<tr>
<td>Units of measure change</td>
<td>✔</td>
</tr>
<tr>
<td>Hysteresis mode</td>
<td>✔</td>
</tr>
<tr>
<td>Window comparator mode</td>
<td>✔</td>
</tr>
<tr>
<td>Auto teach mode</td>
<td>✔</td>
</tr>
<tr>
<td>Output response time</td>
<td>✔</td>
</tr>
<tr>
<td>Lockout option</td>
<td>✔</td>
</tr>
<tr>
<td>Password lockout</td>
<td>✔</td>
</tr>
<tr>
<td>Max. value display</td>
<td>✔</td>
</tr>
<tr>
<td>Min. value display</td>
<td>✔</td>
</tr>
<tr>
<td>Zero reset</td>
<td>✔</td>
</tr>
<tr>
<td>Red / Green LED display options</td>
<td>✔</td>
</tr>
<tr>
<td>Error output mode</td>
<td>✔</td>
</tr>
</tbody>
</table>

MPS-34 Sensor Only Ordering Numbers

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>Electrical output</th>
<th>Electrical connection</th>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30 inHg</td>
<td>(1) PNP with (1) 4-20mA</td>
<td>M8, 4 Pin</td>
<td>MPS-V34N-PCI</td>
</tr>
<tr>
<td>0-145 PSI</td>
<td>(1) PNP with (1) 4-20mA</td>
<td>M8, 4 Pin</td>
<td>MPS-P34N-PCI</td>
</tr>
</tbody>
</table>

MPS-34 Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8, 4-pin, 2 meter cable</td>
<td>CB-M8-4P-2M-PUR</td>
</tr>
<tr>
<td>M8, 4-pin, 5 meter cable</td>
<td>CB-M8-4P-5M-PUR</td>
</tr>
</tbody>
</table>

Internal circuit for open collector and analog output wiring

<table>
<thead>
<tr>
<th>Pin #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Brown: 24VDC</td>
</tr>
<tr>
<td>2 White: 4 to 20mA</td>
</tr>
<tr>
<td>3 Blue: 0VDC</td>
</tr>
<tr>
<td>4 Black: PNP Open Collector Output 1</td>
</tr>
</tbody>
</table>
Specifications

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>Vacuum (V)</th>
<th>Positive (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure range</td>
<td>-101.3 to 0 kPa (-14.5 to 0 PSI)</td>
<td>-0.1 to 1 Mpa (0 to 145 PSI)</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>0.3 Mpa (44 PSI)</td>
<td>1.5 Mpa (218 PSI)</td>
</tr>
</tbody>
</table>

Display resolution, Units of measure

<table>
<thead>
<tr>
<th>Display</th>
<th>kPa</th>
<th>kPa/cm²</th>
<th>bar</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1, kPa</td>
<td>0.001, kPa/cm²</td>
<td>0.1, bar</td>
<td>0.01, PSI</td>
<td></td>
</tr>
<tr>
<td>0.001, bar</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>0.01, PSI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Media

Air & non-corrosive gases

Pressure port

(N) 1/8" NPT male, (G) 1/8 BSPP male both with M5 female port

Operating temperature

32 to 122°F (0 to 50°C)

Storage temperature

-4 to 140°F (-20 to 60°C)

Humidity

35 to 85% RH (no condensation)

Electrical connection

(C) 4-pin, M8 connector on 150mm lead wire

Power supply

12 to 24VDC ±10%, Ripple (P-P) 10% or less

Display

3 + 1/2 digit, 2 color, 7-segment RED / GREEN LED

Display refresh

Timing update: 0.1 – 3 sec. (Factory Set Unit: 0.1 sec.)

Switch output

Output signal, PNP, Normally open or closed, LED indicator, 125 mA max. output load

Output modes

Hysteresis or Window Comparator

Response time

≤ 2.5ms (chattering-proof function: 24ms, 250ms, 500ms, 1000ms and 1500ms selections)

Repeatability

± 0.2% of F.S. ± 1 digit

Output current

Output current 4 to 20mA; Linearity ±1.0% of F.S.; Maximum load impedance 300Ω at power supply of 12V; 600Ω at power supply of 12V; Minimum load impedance 50Ω

Thermal error

32 to 122°F (0 to 50°C) 25°C (77°C) + 2% of F.S. or less at range of 32 to 122°F (0 to 50°C)

General protection

IP40, CE marked, EMC-EN61000-6-2: 2001

Current consumption

45mA (with no load)

Vibration resistance

10 to 150Hz, Double amplitude 1.5mm, XYZ, 2 hrs.

Shock resistance

980 m/s² (about 10G), 3 times/each directions X, Y, Z

Noise Resistance

Vp-p400V, 10 ms, 0.5μs noise simulator

Material

Housing: ABS (gray) Pressure port: Zinc die-cast, Diaphragm: Silicon

Mass

1.45 oz. (45g) with M8 connector

Dimensions

1/8" Male
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)
1/8 NPT P31KA91CN
1/4 NPT P31KA92CN
3/8 NPT P31KA93CN
1/8 BSPP P31KA11CN
1/4 BSPP P31KA12CN
3/8 BSPP P31KA13CN

**Port Block Kit w/ T-Bracket**
(O-ring not shown)
1/8 NPT P31KA91CN
1/4 NPT P31KA92CN
3/8 NPT P31KA93CN
1/8 BSPP P31KA11CN
1/4 BSPP P31KA12CN
3/8 BSPP P31KA13CN

**Angle Bracket**
(Fits to regulator and filter/regulator body)
P31KB00MR
P31KB00MS - with Metal Nut
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)
P32KB00MR
P32KB00MS - with Metal Nut

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

**T-Bracket**
(fits to body connector or port block)
P32KA00MB
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 & Accessories

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>Panel Mount Nut (Plastic)</td>
<td>P31KA00MP</td>
</tr>
<tr>
<td>P32</td>
<td>Panel Mount Nut (Plastic)</td>
<td>P32KA00MP</td>
</tr>
<tr>
<td>P33</td>
<td>Panel Mount Nut (Plastic)</td>
<td>P33KA00MP</td>
</tr>
<tr>
<td>P31</td>
<td>Panel Mount Nut (Aluminum)</td>
<td>P31KA00MM</td>
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<tr>
<td>P32</td>
<td>Panel Mount Nut (Aluminum)</td>
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<tr>
<td>P33</td>
<td>Panel Mount Nut (Aluminum)</td>
<td>P33KA00MM</td>
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<tr>
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<td>5µ Element Kit</td>
<td>P31KA00ESE</td>
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<td>P32</td>
<td>5µ Element Kit</td>
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<td>P31KA00ES9</td>
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<td>P31</td>
<td>0.01µ Element Kit</td>
<td>P31KA00ESC</td>
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<td>P31</td>
<td>Adsorber Element Kit</td>
<td>P31KA00ESA</td>
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<td>Adsorber Element Kit</td>
<td>P32KA00ESA</td>
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<td>Adsorber Element Kit</td>
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<tr>
<td>P32 / P33</td>
<td>Auto Drain Kit</td>
<td>P32KA00DA</td>
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<tr>
<td>P31</td>
<td>Differential Pressure Indicator Kit</td>
<td>P31KB00RQ</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 / P32 / P33</td>
<td>Drip Control Assembly Kit</td>
<td>P32KA00PH</td>
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<tr>
<td>P31</td>
<td>Fill Plug Kit</td>
<td>P31KB00RQ</td>
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<td>P32 / P33</td>
<td>Fill Plug Kit</td>
<td>P32KA00PL</td>
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<tr>
<td>P31</td>
<td>Lubricator - Plastic Bowl w/ Bowl Guard No Drain</td>
<td>P31KB00BGN</td>
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<tr>
<td>P32</td>
<td>Lubricator - Plastic Bowl w/ Bowl Guard No Drain</td>
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<tr>
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<td>Lubricator - Plastic Bowl w/ Bowl Guard No Drain</td>
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## 0750-UK
### Parker Global Air Preparation System

<table>
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<tr>
<th>Series</th>
<th>Description</th>
<th>Part number</th>
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<tbody>
<tr>
<td>P31</td>
<td>Lubricator - Metal Bowl w/o Sight Gauge No Drain</td>
<td>P31KB00BMN</td>
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<tr>
<td></td>
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<td>P32KB00BMN</td>
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<td>P33KA00BMN</td>
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<tr>
<td>P32</td>
<td>Lubricator - Metal Bowl w/ Sight Gauge No Drain</td>
<td>P32KB00BSN</td>
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<td>P33KA00BSN</td>
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<tr>
<td>P31</td>
<td>Metal Bowl w/o Sight Gauge &amp; Manual Drain</td>
<td>P31KB00BMM</td>
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<tr>
<td></td>
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<td>P32KB00BMM</td>
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<tr>
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<td>P33KA00BMM</td>
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<tr>
<td>P31</td>
<td>Metal Bowl w/o Sight Gauge &amp; Pulse Drain</td>
<td>P31KB00BMB</td>
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<tr>
<td>P32</td>
<td>Metal Bowl w/o Sight Gauge &amp; Auto Drain</td>
<td>P32KB00BMA</td>
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<tr>
<td>P32</td>
<td>Metal Bowl w/ Sight Gauge &amp; Manual Drain</td>
<td>P32KB00BSM</td>
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<td>P33KA00BSM</td>
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<td>P32</td>
<td>Metal Bowl w/ Sight Gauge &amp; Auto Drain</td>
<td>P32KB00BSA</td>
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<td>P33KA00BSA</td>
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<td>P31</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Manual Drain</td>
<td>P31KB00BGM</td>
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<td>P31</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Pulse Drain</td>
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<td>P32</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Auto Drain</td>
<td>P32KB00BGA</td>
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<td>P33KA00BGA</td>
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<tr>
<td>Series</td>
<td>Description</td>
<td>Connection</td>
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<tr>
<td>P31</td>
<td>Square Flush Mounting Gauge Kit</td>
<td>0-4 bar 0-11 bar 0-60 psig 0-160 psig</td>
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<tr>
<td>P31</td>
<td>1” Round Gauge</td>
<td>0-60 psig / 0-4.1 bar 0-160 psig / 0-10 bar 1/8”</td>
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<tr>
<td>P31</td>
<td>40mm Round Gauge</td>
<td>0-30 psig / 0-2 bar 0-60 psig / 0-4.1 bar 0-160 psig / 0-10 bar 1/8”</td>
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<tr>
<td>P32 / P33</td>
<td>50mm Round Gauge</td>
<td>0-30 psig / 0-2 bar 0-60 psig / 0-4.1 bar 0-160 psig / 0-10 bar 0-300 psig / 0-20 bar 1/4”</td>
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<tr>
<td>P31</td>
<td>Body Connector O-ring (Replacement kit) (Pack of 10)</td>
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<td>P31</td>
<td>Tamperproof Knob Kit</td>
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<tr>
<td>P31</td>
<td>Tamperproof Lockable Kit</td>
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Plugs to DIN EN 175301-803, Form A, ISO 4400

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Order code</th>
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<tr>
<td>Standard version</td>
<td>GSD-30DS</td>
<td>KL3349</td>
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<tr>
<td>Version with LEDs 24 V</td>
<td>GSD-30DSL24V</td>
<td>KL3350</td>
</tr>
<tr>
<td>Version with LEDs 230 V</td>
<td>GSD-30DSL230V</td>
<td>KL3351</td>
</tr>
</tbody>
</table>
Pressure Switches G1/8", G1/4"

**Characteristics**

- Safety pressure relief $P_{\text{max}}$: 300 bar
- Port size: G1/8, G1/4
- Medium and ambient $T_{\text{max}}$: +100 °C
- Switch back difference: Max. 5 - 15%
- Voltage: Max. 48 V
- Current: 0.5 A
- Degree of protection: IP 65
- Switching frequency: Max. 200 s/min

**Material**

- Housing: Passivated steel
- Diaphragm: Buna N

**Switching function**

- Make contact: Closes the circuit when the set pressure is reached
- Break contact: Interrupts the circuit when the set pressure is reached

**Dimensions and order instructions**

<table>
<thead>
<tr>
<th>Order instructions</th>
<th>Port size</th>
<th>Function</th>
<th>Setting range (bar)</th>
<th>Order code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR / 0.1-1 NC ST 1/4 48</td>
<td>G1/4</td>
<td>Break contact</td>
<td>0.1-1</td>
<td>KL3439</td>
</tr>
<tr>
<td>PR / 0.1-1 NO ST 1/4 48</td>
<td>G1/4</td>
<td>Make contact</td>
<td>0.1-1</td>
<td>KL3440</td>
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<tr>
<td>PR / 1-10 NC ST 1/8 48</td>
<td>G1/8</td>
<td>Break contact</td>
<td>1-10</td>
<td>KL3437</td>
</tr>
<tr>
<td>PR / 1-10 NC ST 1/4 48</td>
<td>G1/4</td>
<td>Break contact</td>
<td>1-10</td>
<td>KL3436</td>
</tr>
<tr>
<td>PR / 1-10 NO ST 1/8 48</td>
<td>G1/8</td>
<td>Make contact</td>
<td>1-10</td>
<td>KL3438</td>
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<tr>
<td>PR / 1-10 NO ST 1/4 48</td>
<td>G1/4</td>
<td>Make contact</td>
<td>1-10</td>
<td>KL3435</td>
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</tbody>
</table>

**Order instructions**

- Type: PR / 0.2-1 NO SR 1/4 48
- Port size: G1/4
- Function: Make contact
- Setting range (bar): 0.2-1
- Order code: KL3445

**Material**

- Housing: Passivated steel
- Diaphragm: Buna N

**Switching function**

- Make contact: Closes the circuit when the set pressure is reached
- Break contact: Interrupts the circuit when the set pressure is reached

**Dimensions in mm**

- Plug can be turned 90°
- Protective cap can be turned 6 x 60°
  
- View A without plug
  
- View A without protective cap
Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

WARNING:

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

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

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.


1.4. 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.
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.