The concentration level must not exceed 0.1% by weight. This substance is not known to be in any of our products.

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

Global Air Preparation product range has been designed and tested in accordance with ISO flow testing, envelope integrity, and catalog data presented.


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.

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.”
## Parker Global Air Preparation System

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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

**Stage 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).

**Stage 2**
For every 11°C (20°F) that the air cools after leaving the heat of the compressor, 50% of the moisture condenses into liquid into the system.

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

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

**Stage 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

---

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

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.
## Introduction

Refrigeration, membrane and desiccant dryers lower the air's dew point by removing water vapor, providing appropriately dry air for the downstream application.

### Clean Dry Air

<table>
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<tr>
<th>Stages</th>
<th>Function</th>
<th>Application</th>
<th>Description</th>
<th>Parker Global Air Preparation Solution</th>
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<td>1</td>
<td>Air Compressor</td>
<td>All pneumatic systems</td>
<td>Air leaving the compressor room at 93°C (200°F) releases 95% of its moisture into the piping system when it cools to 38°C (100°F)</td>
<td>Customer supplied</td>
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<tr>
<td>2</td>
<td>Bulk Liquid Removal</td>
<td>Basic pneumatic systems</td>
<td>Removes bulk liquid contamination and protects filters where excess cooling takes place in the distribution piping</td>
<td>P3TF Bulk Liquid Separator</td>
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<td>3</td>
<td>Particulate Filtration</td>
<td>Basic pneumatic systems</td>
<td>Removes solid particulates down to 5 micron, and the separation of bulk contaminants.</td>
<td>P31, P32, P33 Particulate Filter</td>
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<td>4</td>
<td>Coalescing Filtration</td>
<td>Systems requiring highest quality air.</td>
<td>Removes liquid aerosols and submicron particulates (not vapor) down to 0.01 micron.</td>
<td>P31, P32, P33 Coalescing Filter</td>
</tr>
<tr>
<td>5</td>
<td>Air Dryers</td>
<td>Systems requiring air with reduced moisture content</td>
<td>Removes water vapor from air stream. Dew point reduced down to -40°C membrane and -70°C desiccant.</td>
<td>P3XJ Membrane Dryer P3TJ Regenerative Desiccant Dryer</td>
</tr>
<tr>
<td>6</td>
<td>Hydrocarbon Removal</td>
<td>Systems requiring highest quality air for critical applications</td>
<td>Removal of odors and trace vapors for critical applications.</td>
<td>P31, P32, P33 Activated Carbon (Adsorber) Filter</td>
</tr>
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</table>

Hydrocarbon and oil vapors are removed using filters utilizing activated carbon. These airborne hydrocarbons are often left over from the compressor oils.
A completely modular air preparation system

- Ball Valve
- Padlock slide
- Filter / Regulator
- Pressure gauge
- Quick release bayonet-type integral bowl and bowl guard assembly
- Bowl guard with multiple viewing slots
- Manual drain with pipe-away, auto drain available
- Easy to adjust non-rising knob with snap-lock, preventing accidental change of set pressure
Parker Global Air Preparation System

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

Parker Hannifin Corporation
Pneumatic Division - Europe
Air Preparation

P31 Mini Series

40mm body width
1/4" Ported

Flows up to: \( \text{dm}^3/\text{s} \) (SCFM)
- Filter: 12 (25)
- Coalescer: 3.6 (7.5)
- Regulator: 32 (68)
- Filter/Regulator: 35 (74)
- 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: \( \text{dm}^3/\text{s} \) (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: \( \text{dm}^3/\text{s} \) (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>P31 Mini Series</th>
<th>P32 Compact Series</th>
<th>P33 Standard Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of valves that would actuate at once</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Moduflex 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isys Micro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HB / Viking Xtreme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moduflex 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA / Global ISO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Larger Parker FRL Offering

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

<table>
<thead>
<tr>
<th>Cylinder bore size</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (5/16)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tube diameter external</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (5/32)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of cylinders actuating at once</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31 Mini Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P32 Compact Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P33 Standard Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Larger Parker FRL Offering

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

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

Product
Filter*
Regulator
Filter regulator*
Lubricator*
Ball Valve & Slide Valve
Manifold

Series
P31FB, P32FB, P33FA
P31RB, P32RB, P33RA
P31EB, P32EB, P33EA
P31LB, P32LB, P33LA
P31VB, P32VB, P33VB
P31MA, P32MA, P33MA

Category
for zone 1, 21
for zone 1, 21
for zone 1, 21
for zone 1, 21
for zone 1, 21
for zone 1, 21

For non-fitted solenoid product
Soft start & Dump Valve
Soft Start Valve
Dump Valve

Series
P31TA, P32TA
P31SA, P32SA
P31DA, P32DA

Category
for zone 1, 21
for zone 1, 21
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

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

<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>P31CB12GEMNTLNW</td>
<td>0.46 kg (1.01 lbs)</td>
<td>P31CB12GEBNTLNW</td>
<td>0.46 kg (1.01 lbs)</td>
</tr>
</tbody>
</table>

#### Filter/Regulator + Lubricator Combinations, Poly bowl

<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>P31CA12GEMNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
<td>P31CA12GEBNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
</tr>
</tbody>
</table>

#### Ball Valve + Filter/Regulator + Lubricator Combinations, Poly bowl

<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>P31QA12GEMNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
<td>P31QA12GEBNTLNW</td>
<td>0.35 kg (0.77 lbs)</td>
</tr>
</tbody>
</table>

### Combination

**Combination type**

- F/R+L: A
- F+R+L: B
- F/R: N

**Thread type**

- BSPP: 1
- NPT: 9

**Port size**

- 1/4"

**Bowl type**

- Poly bowl with bowl guard: G
- Metal bowl without sight glass: M

**Adjustment range**

- With square gauge
  - 2 bar: V
  - 8 bar: T

- Without gauge
  - 2 bar: Y
  - 8 bar: N
  - 16 bar: H

*Unit comes with 0-4 bar, gauge respectively
**Unit comes with 0-10 bar, gauge respectively

**Option not available with F+R+L

Bar gauges fitted to BSPP
PSI gauges fitted to NPT

---

**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 Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>20 dm³/s 42 (scfm)</td>
<td>P32CB12GEMNGLNW 1.29 kg (2.84 lbs)</td>
<td>P32CB12GEANGLNW 1.29 kg (2.84 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>32 dm³/s 68 (scfm)</td>
<td>P32CB13GEMNGLNW 1.29 kg (2.84 lbs)</td>
<td>P32CB13GEANGLNW 1.29 kg (2.84 lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>40 dm³/s 85 (scfm)</td>
<td>P32CB14GEMNGLNW 1.29 kg (2.84 lbs)</td>
<td>P32CB14GEANGLNW 1.29 kg (2.84 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 Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>22 dm³/s 45 (scfm)</td>
<td>P32CA12GEMNGLNW 1.03 kg (2.27 lbs)</td>
<td>P32CA12GEANGLNW 1.03 kg (2.27 lbs)</td>
<td></td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s 70 (scfm)</td>
<td>P32CA13GEMNGLNW 1.03 kg (2.27 lbs)</td>
<td>P32CA13GEANGLNW 1.03 kg (2.27 lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s 90 (scfm)</td>
<td>P32CA14GEMNGLNW 1.03 kg (2.27 lbs)</td>
<td>P32CA14GEANGLNW 1.03 kg (2.27 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 Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s 70 (scfm)</td>
<td>P32QA13GEMNGLNW 1.03 kg (2.27 lbs)</td>
<td>P32QA13GEANGLNW 1.03 kg (2.27 lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s 90 (scfm)</td>
<td>P32QA14GEMNGLNW 1.03 kg (2.27 lbs)</td>
<td>P32QA14GEANGLNW 1.03 kg (2.27 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 Manual drain</th>
<th>Weight</th>
<th>Auto drain</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>33 dm³/s 70 (scfm)</td>
<td>P32GN13GEMNGW 1.1 kg (2.42 lbs)</td>
<td>P32GN13GEANGW 1.1 kg (2.42 lbs)</td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>43 dm³/s 90 (scfm)</td>
<td>P32GN14GEMNGW 1.1 kg (2.42 lbs)</td>
<td>P32GN14GEANGW 1.1 kg (2.42 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
- All bowl types are the same for each component.
- Example: If a “G” is specified for a F+L, both units would get a poly bowl with bowl guard.
**Parker Hannifin Corporation**  
Pneumatic Division - Europe  
PDE2676TCUK  
Parker Global Air Preparation System

### 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 (dm³/s)</th>
<th>Manual drain (scfm)</th>
<th>Weight (kg)</th>
<th>Auto drain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>43</td>
<td>90</td>
<td>1.84</td>
<td>1.84</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>52</td>
<td>110</td>
<td>1.84</td>
<td>1.84</td>
</tr>
</tbody>
</table>

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

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<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
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<th>Auto drain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52</td>
<td>110</td>
<td>1.51</td>
<td>1.51</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71</td>
<td>150</td>
<td>1.51</td>
<td>1.51</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>
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<th>Flow (dm³/s)</th>
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</tr>
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<tr>
<td>1/2&quot;</td>
<td>52</td>
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<td>150</td>
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<td>1.51</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 (dm³/s)</th>
<th>Manual drain (scfm)</th>
<th>Weight (kg)</th>
<th>Auto drain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>52</td>
<td>110</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71</td>
<td>150</td>
<td>1.7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

---

**Combination**

<table>
<thead>
<tr>
<th>Combination</th>
<th>Thread type</th>
<th>Port size</th>
<th>Drain type</th>
<th>Adjustment range</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/R + L</td>
<td>BSPP</td>
<td>1/2</td>
<td>Auto drain</td>
<td>0-2 bar, 0-30 psi, 0.2 MPa Z</td>
</tr>
<tr>
<td>F + R + L</td>
<td>NPT</td>
<td>3/4</td>
<td>Manual drain</td>
<td>4-8 bar, 60 psi, 0.4 MPa M</td>
</tr>
<tr>
<td>F / R</td>
<td></td>
<td></td>
<td></td>
<td>8 bar, 125 psi, 0.8 MPa G</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

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<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
<th>Manual drain (scfm)</th>
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<tbody>
<tr>
<td>1/2&quot;</td>
<td>43</td>
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<td>1.84</td>
</tr>
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**Filter/Regulator + Lubricator Combinations, Poly bowl**
5 micron element, 8 bar (116 psig) regulator + gauge and wall mounting brackets

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

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

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<thead>
<tr>
<th>Port size</th>
<th>Flow (dm³/s)</th>
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<th>Auto drain (kg)</th>
</tr>
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<tr>
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<td>110</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>71</td>
<td>150</td>
<td>1.7</td>
<td>1.7</td>
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</tbody>
</table>

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**Combination**

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<tbody>
<tr>
<td>F/R + L</td>
<td>BSPP</td>
<td>1/2</td>
<td>Auto drain</td>
<td>0-2 bar, 0-30 psi, 0.2 MPa Z</td>
</tr>
<tr>
<td>F + R + L</td>
<td>NPT</td>
<td>3/4</td>
<td>Manual drain</td>
<td>4-8 bar, 60 psi, 0.4 MPa M</td>
</tr>
<tr>
<td>F / R</td>
<td></td>
<td></td>
<td></td>
<td>8 bar, 125 psi, 0.8 MPa G</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 Combination Dimensions

P31C

P32C

P33C
Mini Particulate Filter - P31

Options:

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integral</td>
<td>Integral 1/4&quot; ports (NPT &amp; BSPP)</td>
</tr>
<tr>
<td>Efficiency</td>
<td>High efficiency 5 micron element as standard</td>
</tr>
<tr>
<td>Water Removal</td>
<td>Excellent water removal efficiency</td>
</tr>
<tr>
<td>Construction</td>
<td>Robust but lightweight aluminum construction</td>
</tr>
<tr>
<td>Operation</td>
<td>One hand operation for easy element cartridge removal</td>
</tr>
<tr>
<td>Bayonet</td>
<td>Positive bayonet latch to ensure correct &amp; safe fitting</td>
</tr>
</tbody>
</table>

Symbols

- Manual drain
- Pulse drain

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>No bracket</td>
</tr>
<tr>
<td>M</td>
<td>Manual drain</td>
</tr>
<tr>
<td>B</td>
<td>Pulse drain</td>
</tr>
<tr>
<td>G</td>
<td>Poly bowl with bowl guard</td>
</tr>
<tr>
<td>M</td>
<td>Metal bowl without sight gauge</td>
</tr>
</tbody>
</table>

Port size Description Flow\(^{ \dagger }\) Max. bar (psig) Height mm (inches) Width mm (inches) Depth mm (inches) Part number\(^{ \ddagger }\)
1/4" Poly bowl - manual drain 12 (25) 10 (150) 124.8 (4.9) 40 (1.58) 40 (1.58) P31FB12EGMN
1/4" Poly bowl - pulse drain 12 (25) 10 (150) 119.6 (4.7) 40 (1.58) 40 (1.58) P31FB12EGBN
1/4" Metal bowl - manual drain 12 (25) 17 (250) 124.8 (4.9) 40 (1.58) 40 (1.58) P31FB12EMMN
1/4" Metal bowl - pulse drain 12 (25) 17 (250) 119.6 (4.7) 40 (1.58) 40 (1.58) P31FB12EMBN

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

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow capacity*</td>
<td>1/4 12 dm³/s (25 scfm)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>Plastic bowl -10°C to 52°C (14°F to 125°F)</td>
</tr>
<tr>
<td>Max. supply pressure</td>
<td>Plastic bowl 10 bar (150 psig)</td>
</tr>
<tr>
<td>Standard filtration</td>
<td>Plastic bowl 5 micron</td>
</tr>
<tr>
<td>Useful retention†</td>
<td>12 cm³ (0.4 US oz.)</td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT 1/4</td>
</tr>
<tr>
<td>Weight</td>
<td>0.11 kg (0.24 lbs)</td>
</tr>
<tr>
<td>* Inlet pressure 6.3 bar (91.3 psig), Pressure drop 0.34 bar (4.9 psig).</td>
<td></td>
</tr>
<tr>
<td>† Useful retention refers to volume below the quiet zone baffle.</td>
<td></td>
</tr>
</tbody>
</table>

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

Material Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Body cap</td>
<td>ABS</td>
</tr>
<tr>
<td>Bowl</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Bowl guard</td>
<td>Nylon</td>
</tr>
<tr>
<td>Element retainer</td>
<td>Acetal</td>
</tr>
<tr>
<td>Baffle</td>
<td>Acetal</td>
</tr>
<tr>
<td>Filter element</td>
<td>Sintered polyethylene</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

<table>
<thead>
<tr>
<th>Manual Drain</th>
<th>Pulse Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
</tr>
<tr>
<td>124.8 (4.91)</td>
<td>119.6 (4.71)</td>
</tr>
<tr>
<td>4mm (5/32) I.D. tube barb fitting</td>
<td></td>
</tr>
<tr>
<td>Bowl removal clearance</td>
<td></td>
</tr>
</tbody>
</table>

Flow Charts

1/4 Filter

<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>0.1</td>
<td>0.5</td>
<td>7.5</td>
</tr>
<tr>
<td>0.2</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>0.3</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>0.4</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>0.5</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>0.6</td>
<td>5</td>
<td>75</td>
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<tr>
<td>0.7</td>
<td>6</td>
<td>90</td>
</tr>
<tr>
<td>0.8</td>
<td>7</td>
<td>110</td>
</tr>
</tbody>
</table>

Repair and Service Kits

<table>
<thead>
<tr>
<th>Component</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic bowl / Bowl guard manual drain</td>
<td>P31KB00BGM</td>
</tr>
<tr>
<td>Metal bowl / w/o sight gauge manual drain</td>
<td>P31KB00BMM</td>
</tr>
<tr>
<td>Plastic bowl / Bowl guard pulse drain</td>
<td>P31KB00BGB</td>
</tr>
<tr>
<td>Metal bowl / w/o sight gauge pulse drain</td>
<td>P31KB00BMB</td>
</tr>
<tr>
<td>5µ particle filter element</td>
<td>P31KA00ESE</td>
</tr>
<tr>
<td>C-bracket (fits to body)</td>
<td>P31KA00MW</td>
</tr>
<tr>
<td>T-bracket with body connector</td>
<td>P31KA00MT</td>
</tr>
<tr>
<td>Body connector</td>
<td>P31KA00CB</td>
</tr>
</tbody>
</table>
Compact Particulate Filter - P32

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 - 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>3/8&quot;</td>
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<td>37 (78)</td>
<td>17 (250)</td>
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<td>60 (2.36)</td>
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<td>3/8&quot;</td>
<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 (92)</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 (92)</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>17 (250)</td>
<td>190.3 (7.49)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB14ESMN</td>
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<tr>
<td>1/2&quot;</td>
<td>Metal bowl - auto drain</td>
<td>39 (92)</td>
<td>17 (250)</td>
<td>184.3 (7.26)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32FB14ESAN</td>
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</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
-25°C to 52°C (-13°F to 125°F)
-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.)

Port size BSPP / NPT 1/4, 3/8, 1/2

Weight 0.28 kg (0.62 lbs)

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

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

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)

CTF 14 12 10 8 6 4 2 1 0.4 0.2 0.1 0.03 0.01

P32 Series

Flow Charts

P32FB 1/4” Filter

P32FB 3/8” Filter

P32FB 1/2” Filter

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[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>1/2&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>
<td>P33FA14EGAN</td>
</tr>
<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>
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<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>
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<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>
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<td>3/4&quot;</td>
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<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

Flow capacity* 1/2 40 dm³/s (85 scfm)
3/4 48 dm³/s (102 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† 85 cm³ (2.8 US oz.)

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

Weight 0.46 kg (1.01 lbs)

* Inlet pressure 6.3 bar (91.4 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 Polycarbonate

Dimensions mm (inches)

Flow Charts

1/2 Filter

<table>
<thead>
<tr>
<th>Flow (dm³/s)</th>
<th>Pressure Drop (bar)</th>
</tr>
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<tbody>
<tr>
<td>0</td>
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<td>100</td>
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<tr>
<td>120</td>
<td>1.1</td>
</tr>
<tr>
<td>140</td>
<td>1.3</td>
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<table>
<thead>
<tr>
<th>Flow (scfm)</th>
<th>Pressure Drop (psig)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>20</td>
<td>11.7</td>
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<tr>
<td>40</td>
<td>16.5</td>
</tr>
<tr>
<td>60</td>
<td>21.2</td>
</tr>
<tr>
<td>80</td>
<td>25.9</td>
</tr>
<tr>
<td>100</td>
<td>30.7</td>
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<tr>
<td>120</td>
<td>35.5</td>
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<tr>
<td>140</td>
<td>40.3</td>
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3/4 Filter

<table>
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<tr>
<th>Flow (dm³/s)</th>
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<tr>
<td>0</td>
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<td>40</td>
<td>0.3</td>
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<tr>
<td>60</td>
<td>0.5</td>
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<tr>
<td>80</td>
<td>0.7</td>
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<tr>
<td>100</td>
<td>0.9</td>
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<tr>
<td>120</td>
<td>1.1</td>
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<tr>
<td>140</td>
<td>1.3</td>
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</table>

<table>
<thead>
<tr>
<th>Flow (scfm)</th>
<th>Pressure Drop (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>20</td>
<td>11.7</td>
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<tr>
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<td>16.5</td>
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<td>60</td>
<td>21.2</td>
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<td>80</td>
<td>25.9</td>
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<tr>
<td>100</td>
<td>30.7</td>
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<tr>
<td>120</td>
<td>35.5</td>
</tr>
<tr>
<td>140</td>
<td>40.3</td>
</tr>
</tbody>
</table>

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 connctor) 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:**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow² dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - 0.01 micron - manual drain</td>
<td>3.6 (7.5)</td>
<td>10 (150)</td>
<td>136.9 (5.39)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12DGMN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Poly bowl - 0.01 micron - pulse drain</td>
<td>3.6 (7.5)</td>
<td>10 (150)</td>
<td>131.7 (5.19)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12DGBN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - 0.01 micron - manual drain</td>
<td>3.6 (7.5)</td>
<td>10 (150)</td>
<td>136.9 (5.39)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12DMNN</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>Metal bowl - 0.01 micron - pulse drain</td>
<td>3.6 (7.5)</td>
<td>10 (150)</td>
<td>131.7 (5.19)</td>
<td>40 (1.58)</td>
<td>40 (1.58)</td>
<td>P31FB12DMBN</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.

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Parker Hannifin Corporation
Pneumatic Division - Europe
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)

Flow Charts

P31 - 1.0 micron flow

P31 - 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>Bowl</td>
<td>Plastic bowl</td>
</tr>
<tr>
<td></td>
<td>Polycarbonate</td>
</tr>
<tr>
<td></td>
<td>Metal bowl</td>
</tr>
<tr>
<td></td>
<td>Aluminum</td>
</tr>
<tr>
<td>Filter element</td>
<td>1.0 and 0.01 micron Borosilicate cloth</td>
</tr>
<tr>
<td>Adsorber</td>
<td>Activated carbon</td>
</tr>
<tr>
<td>Seals</td>
<td>Nitrile</td>
</tr>
</tbody>
</table>

Dimensions mm (inches)

<table>
<thead>
<tr>
<th>Manual Drain</th>
<th>Pulse Drain</th>
</tr>
</thead>
</table>

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:

<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 - 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&quot;</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&quot;</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&quot;</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>
<td>P32FB12DSAN</td>
</tr>
<tr>
<td>3/8&quot;</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>
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<tr>
<td>3/8&quot;</td>
<td>Poly bowl - 0.01 micron, auto 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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<tr>
<td>3/8&quot;</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
<td>17 (36)</td>
<td>17 (250)</td>
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<td>60 (2.36)</td>
<td>60 (2.36)</td>
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<tr>
<td>3/8&quot;</td>
<td>Metal bowl - 0.01 micron, auto drain</td>
<td>17 (36)</td>
<td>17 (250)</td>
<td>206.3 (8.12)</td>
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<tr>
<td>1/2&quot;</td>
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<td>10 (150)</td>
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<td>60 (2.36)</td>
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<td>60 (2.36)</td>
<td>P32FB14DGAN</td>
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<tr>
<td>1/2&quot;</td>
<td>Metal bowl - 0.01 micron, manual drain</td>
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<td>17 (250)</td>
<td>212.3 (8.36)</td>
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<td>60 (2.36)</td>
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<td>1/2&quot;</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**

**Flow capacity**
- 1.0 micron coalescing: 25 dm³/s (53 scfm)
- 0.01 micron coalescing: 17 dm³/s (36 scfm)
- Activated carbon adsorber: 40 dm³/s (85 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)

**Maximum supply pressure**
- Plastic bowl: 10 bar (150 psig)
- Metal bowl: 17 bar (250 psig)

**Standard filtration**
- 1.0 and 0.01 micron

**Useful retention**
- Plastic bowl: 0.003 @ 21°C (70°F)
- Metal bowl: 51 cm³ (1.7 US oz.)

**Port size**
- BSPP / NPT 1/4, 3/8, 1/2

**Weight**
- 0.32 kg (0.71 lbs)

**Dimensions mm (inches)**

**Material Specifications**

<table>
<thead>
<tr>
<th>Part</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>Bowls</td>
<td>Plastic bowl</td>
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<tr>
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<td>Metal bowl</td>
</tr>
<tr>
<td>Filter element</td>
<td>1.0 and .01 micron</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>
</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 to body): P32KA00ML
- T-bracket (fits to body connector): P32KA00MB
- T-bracket with body connector: P32KA00MT
- Body connector: P32KA00CB
- Differential pressure indicator (replacement): P32KA00RQ

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*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.
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 coalescing element, it is advisable to install a P33F pre-filter with a 5 micron element upstream of the coalescing filter.

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

Options:

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>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 - 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, auto 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>P33FA14DSMN</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, auto 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>P33FA14DSAN</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, auto 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>P33FA16DSMN</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>P33FA16DSAN</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>Metal bowl - 0.01 micron, auto 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>P33FA16DSAN</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

**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

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

**Useful retention†**
85 cm³ (2.8 US oz.)

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

**Weight**
0.50 kg (1.10 lbs)

**Dimensions (mm)**

Flow Charts

**P33 - 1.0 micron flow**

Material Specifications

<table>
<thead>
<tr>
<th>Component</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</td>
</tr>
<tr>
<td></td>
<td>Metal bowl</td>
</tr>
<tr>
<td>Filter element</td>
<td>1.0 and 0.01 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

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic bowl / Bowl guard manual drain</td>
<td>P33KA00BGM</td>
</tr>
<tr>
<td>Metal bowl / Sight gauge manual drain</td>
<td>P33KA00BSM</td>
</tr>
<tr>
<td>Auto drain</td>
<td>P32KA00DA</td>
</tr>
<tr>
<td>1µ coalescing filter element</td>
<td>P33KA00ES9</td>
</tr>
<tr>
<td>0.01µ coalescing filter element</td>
<td>P33KA00ESC</td>
</tr>
<tr>
<td>Activated carbon adsorber filter element</td>
<td>P33KA00ESA</td>
</tr>
<tr>
<td>L-bracket (fits to body)</td>
<td>P33KA00ML</td>
</tr>
<tr>
<td>T-bracket (fits to body connector)</td>
<td>P32KA00MB</td>
</tr>
<tr>
<td>T-bracket with body connector</td>
<td>P32KA00MT</td>
</tr>
<tr>
<td>Body connector</td>
<td>P32KA00CB</td>
</tr>
<tr>
<td>Differential pressure indicator (replacement)</td>
<td>P32KA00RQ</td>
</tr>
</tbody>
</table>
Mini Regulator - P31

Symbols

- 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>
<th>Flow² dm³/s (scfm)</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
<th>Part number†</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>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;</td>
<td>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>
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</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).
** Non-gauge option only.
† Units with square gauges: -15°C to 65.5°C (5°F to 150°F)

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)

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

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

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

Flow Charts

1/4 Regulator

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-PR11040
0-11 bar P6G-PR11110
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

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

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

Dimensions
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>Basic series</th>
<th>P31HB</th>
<th>2</th>
<th>N</th>
<th>P</th>
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<tr>
<td>Global modular mini common regulator</td>
<td>P31HB</td>
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</table>

<table>
<thead>
<tr>
<th>Port size †</th>
<th>1/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working port 1/8&quot;.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Relief</th>
<th>Non-relieving</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reversing flow / Relieving</td>
<td>B</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjustment range</th>
</tr>
</thead>
<tbody>
<tr>
<td>With square gauge</td>
</tr>
<tr>
<td>psig</td>
</tr>
<tr>
<td>1 = 30°</td>
</tr>
<tr>
<td>3 = 60°</td>
</tr>
<tr>
<td>5 = 125°</td>
</tr>
<tr>
<td>Without gauge</td>
</tr>
<tr>
<td>psig</td>
</tr>
<tr>
<td>1 = 30°</td>
</tr>
<tr>
<td>3 = 60°</td>
</tr>
<tr>
<td>5 = 125°</td>
</tr>
<tr>
<td>* Unit comes with 0-4 bar or 0-60 psig gauge respectively.</td>
</tr>
<tr>
<td>Bar gauges fitted to BSPP</td>
</tr>
<tr>
<td>PSI gauges fitted to NPT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow‡</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>P31HB12BNP</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 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.

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

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

Flow Charts

1/4 Common Regulator

Flow Charts

Dimensions

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

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.

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

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

Flow Charts

1/4 Common Regulator

Flow Charts

Dimensions

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

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

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

<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>93 (3.66)</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>93 (3.66)</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>93 (3.66)</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.

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

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-PR11040
0-11 bar P6G-PR11110
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‡ 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>25 (53)</td>
<td>20 (300)</td>
<td>136 (5.4)</td>
<td>60 (2.36)</td>
<td>60 (2.36)</td>
<td>P32RB12PNPP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) 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 psig) 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>
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<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) 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 psig) 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>P32RB14PNPP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) 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 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: 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.

Flow Charts

1/4 Regulator

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

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

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
Parker Global Air Preparation System

Compact Common - P1 Regulator - P32

Symbols:
- Self relieving regulator with gauge
- Non relieving regulator

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
  - With square gauge
    - psig bar
    - 1 = 30 V = 2
    - 3 = 60 S = 4
    - 5 = 125 T = 8
  - With round gauge
    - Z 2 bar; 30 psig; 0.2 MPa
    - Y 4 bar; 60 psig; 0.4 MPa
    - G 8 bar; 125 psig; 0.8 MPa
    - J 17 bar; 250 psig; 1.7 MPa
- Without gauge
  - Y 2 bar; 30 psig; 0.2 MPa
  - L 4 bar; 60 psig; 0.4 MPa
  - N 8 bar; 125 psig; 0.8 MPa
  - H 17 bar; 250 psig; 1.7 MPa

P32HB

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

† Working port 1/4".

Bold items are most common.

Options chart above.

† 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.
Parker Global Air Preparation System

Specifications

| Flow capacity  | 1/4  | 30 dm³/s (64 scfm) |
| 3/8  | 30 dm³/s (64 scfm) |
| 1/2  | 30 dm³/s (64 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 | 0.50 kg (1.10 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. |

WARNING

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

CAUTION:

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

Flow Charts

P32 Common Port Regulator

![Flow Chart]

P32 Series

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 |

Gauges

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

| Pressure | Gauge |
| 0-60 psig | P6G-ERB2040 |
| 0-160 psig | P6G-ERB2110 |
| 0-300 psig | P6G-ERB2200 |

Square flush mount gauge

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

Square with adapter kit

| Pressure | Gauge |
| 0-4 bar | P6G-PR11040 |
| 0-11 bar | P6G-PR11110 |
| 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.
### Standard Regulator - P33

**Symbols**

- Self relieving regulator with gauge
- Non relieving regulator

- 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:

#### P33RA

<table>
<thead>
<tr>
<th>Basic series</th>
<th>Global modular standard regulator P33RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread type</td>
<td>BSPP 1 NPT 9</td>
</tr>
<tr>
<td>Port size</td>
<td>1/2 4 3/4 6</td>
</tr>
<tr>
<td>Relief</td>
<td>Relieving B Non-relieving N Reverse flow-relieving R</td>
</tr>
</tbody>
</table>

**Adjustment range**

- With round gauge
  - Z 2 bar; 30 psig; 0.2 MPa
  - M 4 bar; 60 psig; 0.4 MPa
  - G 8 bar; 125 psig; 0.8 MPa
  - J 17 bar; 250 psig; 1.7 MPa

- Without gauge
  - Y 2 bar; 30 psig; 0.2 MPa
  - L 4 bar; 60 psig; 0.4 MPa
  - N 8 bar; 125 psig; 0.8 MPa
  - H 17 bar; 250 psig; 1.7 MPa

**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>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>P33RA14BNBP</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>P33RA16BNBP</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.
Parker Global Air Preparation System

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>1/2</th>
<th>3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow capacity*</td>
<td>110 dm³/s (233 scfm)</td>
<td>110 dm³/s (233 scfm)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25°C to 65.5°C (-13°F to 150°F)</td>
<td></td>
</tr>
<tr>
<td>Max. supply pressure</td>
<td>20 bar (300 psig)</td>
<td></td>
</tr>
<tr>
<td>Adjusting range pressure</td>
<td>0-2 bar (30 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-4 bar (60 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-8 bar (125 psig)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-17 bar (250 psig)</td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>BSPP / NPT</td>
<td></td>
</tr>
<tr>
<td>Gauge port (2 ea.)</td>
<td>BSPP / NPT</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.62 kg (1.37 lbs)</td>
<td></td>
</tr>
</tbody>
</table>

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

Flow Charts

1/2 Regulator

![1/2 Regulator Flow Chart](image)

3/4 Regulator

![3/4 Regulator Flow Chart](image)

Material Specifications

- **Body**: Aluminum
- **Adjustment knob**: Acetal
- **Body cap**: ABS
- **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)

<table>
<thead>
<tr>
<th>Feature</th>
<th>108 Round 4.27 Gauge</th>
<th>73 (2.87)</th>
<th>97 (1.44)</th>
<th>44 (1.73)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round</td>
<td>149 (5.87)</td>
<td>83.8 (3.30)</td>
<td>72.8 (2.87)</td>
<td>73 (2.87)</td>
</tr>
</tbody>
</table>

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

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

- 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 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 - poly bowl - manual drain</td>
<td>35 (74)</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>35 (74)</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>35 (74)</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>35 (74)</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.
Parker Hannifin Corporation
Pneumatic Division - Europe
PDE2676TCUK
Parker Global Air Preparation System

Specifications

Flow capacity* 1/4 35 dm³/s (74 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 5 micron
Useful retention 12 cm³ (0.4 US oz.)
Adjusting range pressure 0-2 bar (30 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)

Flow Charts

1/4 Filter / Regulator

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

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 P31K800BMB
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 K4511SCR60
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-PR11040
0-11 bar P6G-PR11110
0-60 psig P6G-PR0060
0-160 psig P6G-PR0160

Dimensions

mm (inches)

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

Parker Hannifin Corporation
Pneumatic Division - Europe

45

Inlet Pressure - 10 bar (145 psig)
Secondary Pressure - 6.3 bar (91.3 psig)
Flow - dm³/s
Flow - (scfm)
Flow Capacity
1/4 35 dm³/s (74 scfm)

Flow Charts

1/4 Filter / Regulator

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

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 P31K800BMB
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 K4511SCR60
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-PR11040
0-11 bar P6G-PR11110
0-60 psig P6G-PR0060
0-160 psig P6G-PR0160

Dimensions

mm (inches)

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

Parker Hannifin Corporation
Pneumatic Division - Europe

45
**Compact Filter / Regulator - P32**

- 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

### Options:

**Basic series**
- Global modular compact filter / regulator

**Thread type**
- BSPP
- NPT

**Element**
- Sp Element
- E

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

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

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

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

**Adjustment range**
- With square gauge
- Without gauge

- With round gauge

**Part number**
- P32EB12ESMBNGP
- P32EB14ESABNGP

**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

**Options:**

- Standard part numbers shown in bold. For other models refer to Options chart above.
- * Not available with poly bowl with bowl guard.

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

---

**Symbols**

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:**

- Bold items are most common.

---

**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
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7. Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation

---

**Options:**

- Bold items are most common.

---

**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:**

- Bold items are most common.

---

**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:**

- Bold items are most common.

---

**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

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**Options:**

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---

**Options:**

- Bold items are most common.
**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). |
| 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., Diaphragm assembly - Nitrile / Zinc
- **Panel nut**: Acetal
- **Sight gauge**: Metal bowl - Polycarbonate

**Dimensions** mm (inches)

<table>
<thead>
<tr>
<th>Flow - dm³/s</th>
<th>Flow - (SCFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>80</td>
<td>160</td>
</tr>
</tbody>
</table>

**WARNING**

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

---

**Flow Charts**

**1/4 Filter / Regulator**

**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.
## Compact Semi-Precision Filter / Regulator - P32

### 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

### 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 - poly bowl - manual drain</td>
<td>35 (75)</td>
<td>10 (150)</td>
<td>261.6 (10.3)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32EB12EGMPNGP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - auto drain</td>
<td>35 (75)</td>
<td>10 (150)</td>
<td>255.6 (10.1)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32EB12EGAPNGP</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>8 bar (125 psig) relieving - metal bowl - manual drain</td>
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<tr>
<td>3/8&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>35 (75)</td>
<td>10 (150)</td>
<td>261.6 (10.3)</td>
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<td>10 (150)</td>
<td>255.6 (10.1)</td>
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<td>10 (150)</td>
<td>261.6 (10.3)</td>
<td>60 (2.36)</td>
<td>93 (3.66)</td>
<td>P32EB14EGMPNGP</td>
</tr>
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<td>10 (150)</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.

Parker Hannifin Corporation
Pneumatic Division - Europe
## 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)

---

### Flow Charts

**1/4 Filter / Regulator**

![Flow Chart 1/4 Filter / Regulator](chart1.png)

**3/8 Filter/Regulator**

![Flow Chart 3/8 Filter/Regulator](chart2.png)

**1/2 Filter/Regulator**

![Flow Chart 1/2 Filter/Regulator](chart3.png)

---

### Repair and Service Kits

- Plastic bowl / Bowl guard manual drain: P32KB00BGM
- Plastic bowl / Sight gauge manual drain: P32KB00BSM
- Auto drain: P32KA00DA
- 5µ particle filter element: P32KA00ESE
- Panel mount nut - aluminum: P32KA00MM
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- 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

---

### 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))

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet Pressure</td>
<td>10 bar (145 psig)</td>
</tr>
<tr>
<td>Secondary Pressure</td>
<td>6.3 bar (91.3 psig)</td>
</tr>
<tr>
<td>Flow</td>
<td>35 dm³/s (75 scfm)</td>
</tr>
</tbody>
</table>

---

### Warranty

**WARNING**

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

---

**Information**

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

---

**Regulation**

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
Parker Hannifin Corporation
Pneumatic Division - Europe
PDE2676TCUK
Parker Global Air Preparation System

Standard Filter / Regulator - 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
- 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)
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<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>8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>99 (210)</td>
<td>10 (150)</td>
<td>291 (11.44)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA14EGMBNGP</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - auto drain</td>
<td>99 (210)</td>
<td>10 (150)</td>
<td>285 (11.22)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA14EGABNGP</td>
</tr>
<tr>
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<td>99 (210)</td>
<td>17 (250)</td>
<td>291 (11.44)</td>
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<td>108 (4.27)</td>
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<td>285 (11.22)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA14ESABNGP</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - manual drain</td>
<td>106 (230)</td>
<td>10 (150)</td>
<td>291 (11.44)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA16EGMBNGP</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>8 bar (125 psig) relieving - poly bowl - auto drain</td>
<td>106 (230)</td>
<td>10 (150)</td>
<td>285 (11.22)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA16EGABNGP</td>
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<td>285 (11.22)</td>
<td>73 (2.87)</td>
<td>108 (4.27)</td>
<td>P33EA16ESABNGP</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.

Parker Hannifin Corporation
Pneumatic Division - Europe

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Parker Global Air Preparation System

Specifications

Flow capacity* 1/2 99 dm³/s (210 scfm)
3/4 108 dm³/s (230 scfm)
Operating Plastic bowl -25°C to 82°C (-13°F to 125°F)
temperature Metal bowl -25°C to 65.5°C (-13°F to 150°F)
Supply Plastic bowl 10 bar (150 psig)
pressure Metal bowl 17 bar (250 psig)
Standard filtration 5 micron
Useful retention† 85 cm³ (2.8 US oz.)
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

Flow Charts

3/4 Filter/Regulator

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
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

- 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

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

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

Material Specifications

| Body | Aluminum |
| Body cap | ABS |
| Bowl | Plastic bowl Polycarbonate |
| | Metal bowl Aluminum |
| Seals | Nitrile |
| Sight dome | Polycarbonate |
| Suggested lubricant | ISO / ASTM VG32 |
| Pick-up filter | Sintered bronze |

Dimensions mm (inches)

| Flow Charts |

P31LB 1/4" Lubricator

| Primary Pressure - bar | 2.5 | 5.3 | 6.3 | 10 |
| Primary Pressure - psig | 36.2 | 73.7 | 91.4 | 145 |

| Pressure Drop - bar | 0 | 0.1 | 0.2 | 0.3 | 0.4 |
| Pressure Drop - (psig) | 0 | 0.1 | 0.2 | 0.3 | 0.4 |

| Flow - dm³/s | 0 | 40 | 48 | 60 | 100 |
| Flow - (scfm) | 0 | 1.4 | 1.9 | 2.5 | 4.0 |

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

**Specifications:**

- 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:**

- **Basic series**
  - Global modular compact lubricator P32LB
- **Thread type**
  - SSPP 1
  - NPT 9
- **Port size**
  - 1/4
  - 3/8
  - 1/2
- **Drain type**
  - N No drain closed end
- **Bowl type**
  - G Poly bowl with bowl guard
  - S Metal bowl with sight gauge
- **Mounting**
  - N No bracket

**Flow**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow$^\dagger$</th>
<th>Max. bar (psig)</th>
<th>Height mm (inches)</th>
<th>Width mm (inches)</th>
<th>Depth mm (inches)</th>
<th>Part number$^\dagger$</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>P32LB12GNN</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>P32LB13GNN</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>P32LB14GNN</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>

$^\dagger$ Standard part numbers shown in bold. For other models refer to Options chart above.

$^\dagger$ 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**
- Plastic bowl: 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)

- 217.3 (8.56)
- 60 (2.36)
- 62.3 (2.45)
- 60 (2.36)
- 30 (1.18)
- 247 (9.73)
- 60 (2.36)
- 58 (2.28)
- 30 (1.18)

**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

#### Symbol

- 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

---

### Options:

#### P33LA

- **Thread type**
  - BSPP
  - NPT

- **Mounting**
  - N (No bracket)

- **Drain type**
  - N (No drain closed end)

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

#### Lube type

- Oil mist standard sight dome L

---

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</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;</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>P33LA14LGNN</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>P33LA14LSNN</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>P33LA16LGNN</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>P33LA16LSNN</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.

---

Parker Hannifin Corporation
Pneumatic Division - Europe
Specifications

Flow capacity*  1/2  52 dm³/s (110 scfm)  
3/4  71 dm³/s (150 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  181 cm³ (6.1 US oz.)  

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

Weight  0.47 kg (1.04 lbs)  

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

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)

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  P33KA00BMM  
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:

**P31P**

- **Body size**
  - Global modular mini (1/4") P31PA
  - Global modular compact (1/2") P32PA
- **Thread type**
  - BSPP 1
  - NPT 9
- **Port size**
  - Global modular mini (1/4") 2
  - Global modular compact (1/2") 4
- **Version**
  - Bottom ported exhaust (NC) A
  - Bottom ported forced exhaust (NO)† E
  - Side ported exhaust (NC) B
  - Side ported forced exhaust (NO)† C

**P32P**

- **Body size**
  - Global modular mini (1/4") P31PA
  - Global modular compact (1/2") P32PA
- **Thread type**
  - BSPP 1
  - NPT 9
- **Port size**
  - Global modular mini (1/4") 2
  - Global modular compact (1/2") 4
- **Version**
  - Bottom ported exhaust (NC) A
  - Bottom ported forced exhaust (NO)† E
  - Side ported exhaust (NC) B
  - Side ported forced exhaust (NO)† C

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

**P31P 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>

**P32P Mounting brackets**

<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>P3KKA00MC</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)

**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.

**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. (parameter 19)

**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)

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

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

Schematic

![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 “0” or “A” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to the fail safe mode. The last known output pressure is maintained at approximately the same level depending upon air consumption. The digital display indicates the last known pressure setting.
  - When the supply voltage is reinstated to the correct level, the valve moves from the fail safe mode and the output pressure immediately follows the control signal requirement. The display indicates the actual output pressure.
- Note: In the event of loss of both power and inlet pressure the unit will exhaust downstream pressure.

- If the P31P / P32P unit has an “E” in the 12th digit of the model number
  - When the supply voltage drops, the electronic control reverts to “Forced Exhaust Mode” and will automatically exhaust the downstream (regulated) pressure.
  - When the supply voltage is reinstated to the correct level the unit will return to normal operation and follows the control signal requirement. The display indicates the actual pressure.

- 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>Flow Charts</th>
<th>P31P Regulator 1/4&quot; Ports</th>
<th>P32P Regulator 1/2&quot; Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31P Regulator 1/4&quot; Ports</td>
<td>Inlet Pressure - 10 bar (145 psig)</td>
<td>Inlet Pressure - 10 bar (145 psig)</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>
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 in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.

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>
<tr>
<td></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>
<tr>
<td></td>
</tr>
</tbody>
</table>

Parker Hannifin Corporation
Pneumatic Division - Europe
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 “O” = Digital Output – PNP
  - Factory set at “0” Non Adjustable
- Output Signal option “P” = Digital PNP or Analog 1-10V
  - Factory set at “1” for Analog Signal
  - Convert to Digital PNP by changing parameter to “0” setting
- Output Signal option “N” = Digital NPN or Analog 1-10V
  - Factory set at “1” Analog Signal
  - Convert to Digital NPN by changing parameter to “0”
- Output Signal option “M” = Analog 4-20 mA
  - Factory set at “2” Non Adjustable

Parameter Number 6 – Set Output Signal

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td></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. 6.</td>
<td>Displays current parameter value. 1 = m factory default for P3H with analog options</td>
<td>Edits parameter. 0 = digital (PNP or PNP) 1 = analog 0..10V 2 = analog 4..20 mA</td>
<td>Accepts and saves new parameter setting. Sequences to next parameter.</td>
</tr>
</tbody>
</table>

Adjust Span Analog Output Signal

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

In the event that the output signal is to low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale. Note that all values are nominal and that an actual measurement may be required to ensure signal strength.

Parameter Number 8 – Adjust Span Analog Output Signal

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td></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>
## 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)

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ ▲</td>
<td>acc</td>
<td>▼ ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P x x</td>
<td>P 0 9</td>
<td># # # .</td>
<td># # # .</td>
<td># # #</td>
</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 9.</td>
<td>Displays current digital display value if using an external pressure sensor.</td>
<td>Accepts and saves new parameter setting.</td>
<td>Sequences to next parameter.</td>
</tr>
</tbody>
</table>

## 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

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼ ▲</td>
<td>acc</td>
<td>▼ ▲</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P x x</td>
<td>P 1 4</td>
<td>0 0 1</td>
<td>0 0 0 .</td>
<td>0 0 0</td>
</tr>
</tbody>
</table>
## 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><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
</tr>
<tr>
<td>3-6 seconds</td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
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<tr>
<td>Until Display Reads</td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></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>Sequences to next parameter.</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><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
</tr>
<tr>
<td>3-6 seconds</td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
<td><img src="image" alt="Parker Hannifin Corporation" /></td>
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</tr>
<tr>
<td>Description</td>
<td>Accesses changeable parameters.</td>
<td>Accesses parameter no. 19.</td>
<td>Displays current parameter value. Incremental value is: % of F.S.</td>
<td>Edits parameter.</td>
<td>Sequences to next parameter.</td>
</tr>
</tbody>
</table>
Behavior Control
The regulation speed of the pressure regulator can be modified by means of one parameter (P 20). The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

Parameter Number 20 – Set Behavior Control

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼</td>
<td>▲</td>
<td>acc</td>
<td>acc</td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P × x</td>
<td>P 2 0</td>
<td>0 0 3</td>
<td># # #</td>
<td># # #</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>

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

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

<table>
<thead>
<tr>
<th>Step</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼</td>
<td>▲</td>
<td>acc</td>
<td>acc</td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P × x</td>
<td>P 1 2</td>
<td>1 0 0</td>
<td># # #</td>
<td># # #</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.
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>acc</td>
<td>▼  ▼</td>
<td>acc</td>
<td>▼  ▼</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P×x</td>
<td>P13</td>
<td>0.15</td>
<td>###</td>
<td>P14</td>
</tr>
<tr>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td>Flashing Decimal (value between 4 and 40)</td>
<td></td>
<td>Flashing</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>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>acc</td>
<td>▼  ▼</td>
<td>acc</td>
<td>▼  ▼</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P×x</td>
<td>P21</td>
<td>0.10</td>
<td>###</td>
<td>P22</td>
</tr>
<tr>
<td></td>
<td>Flashing Decimal</td>
<td></td>
<td>Flashing Decimal (value between 5 and 100)</td>
<td></td>
<td>Flashing</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>acc</td>
<td>▼  ▼</td>
<td>acc</td>
</tr>
<tr>
<td>3-6 seconds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Until Display Reads</td>
<td>P×x</td>
<td>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>
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:

<table>
<thead>
<tr>
<th>Part number†</th>
<th>Solenoid type only</th>
<th>Solenoid voltage</th>
<th>Body size</th>
<th>Port size</th>
<th>Actuator interface</th>
<th>Pilot type</th>
<th>Thread type</th>
<th>Thread type</th>
<th>Max. bar (psig)</th>
<th>Flow dm³/s (scfm)</th>
<th>Weight kg (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31DA</td>
<td></td>
<td>000</td>
<td>Dump valve (1/4&quot;)</td>
<td>Global modular mini (1/4&quot;)</td>
<td>P</td>
<td>G</td>
<td>BSPP 1</td>
<td>17 (36)</td>
<td>17 (150)</td>
<td>0.37 (0.8)</td>
<td></td>
</tr>
<tr>
<td>P31DA</td>
<td></td>
<td>2CN</td>
<td>Dump valve (1/2&quot;)</td>
<td>Global modular compact (1/2&quot;)</td>
<td>N</td>
<td>C</td>
<td>BSPP</td>
<td>17 (36)</td>
<td>10 (150)</td>
<td>0.41 (0.9)</td>
<td></td>
</tr>
<tr>
<td>P32DA</td>
<td></td>
<td>3GN</td>
<td>Dump valve (1/4&quot;)</td>
<td>Global modular mini (1/4&quot;)</td>
<td>P</td>
<td>S</td>
<td>NPT 9</td>
<td>17 (36)</td>
<td>166 (6.5)</td>
<td>0.37 (0.8)</td>
<td></td>
</tr>
<tr>
<td>P32DA</td>
<td></td>
<td>1FN</td>
<td>Dump valve (1/2&quot;)</td>
<td>Global modular compact (1/2&quot;)</td>
<td>N</td>
<td>A</td>
<td>NPT</td>
<td>17 (36)</td>
<td>161.5 (6.4)</td>
<td>0.87 (1.9)</td>
<td></td>
</tr>
</tbody>
</table>

Port size

1/4” Solenoid operated (not included)
1/4” 24VDC Solenoid & cable plug
1/4” External air pilot operated
1/2” Solenoid operated (not included)
1/2” 24VDC 30mm coil & cable plug incl.
1/2” External air pilot operated

† 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

Body: Aluminum
Body cover: Polyester
Seals: Nitrile NBR

Material Specifications

Mounting Brackets

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-bracket mounting kit</td>
<td>P3HKA000ML</td>
</tr>
<tr>
<td>Foot bracket mounting kit</td>
<td>P3HKA000MC</td>
</tr>
</tbody>
</table>

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

Flow Charts

P31DA 1/4” Remote Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)

Flow - dm³/s

P32DA 1/2” Remote Dump Valve

Inlet Pressure - 6.3 bar (91.3 psig)

Flow - dm³/s

Dimensions mm (inches)

P31D

For mounting brackets see page 86.
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:

<table>
<thead>
<tr>
<th>Body size</th>
<th>Description</th>
<th>Flow</th>
<th>Max. bar (psig)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31SA</td>
<td>Modular design with 1/4” or 1/2” integral ports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P32SA</td>
<td>The 2-way, 2-position function provides for the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>safe introduction of pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adjustable slow start</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Solenoid or air pilot options</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Soft Start Valve**

**Symbol**

- Modular design with 1/4” or 1/2” integral ports (NPT & BSPP)
- The 2-way, 2-position function provides for the safe introduction of pressure
- Adjustable slow start
- Solenoid or air pilot options
- High flow

**Options:**

- **P31SA**
  - **Body size:** Soft start, P31SA
  - **Thread type:** BSPP 1, NPT 9
  - **Port size:** Global modular mini (1/4”), 2
  - **Global modular compact (1/2”), 4

- **P32SA**
  - **Body size:** Soft start, P32SA
  - **Thread type:** BSPP 1, NPT 9
  - **Port size:** Global modular mini (1/4”), 2
  - **Global modular compact (1/2”), 4

**Actuator Interface**

- **N**
  - Internal Pilot

**Solenoid type only**

- **0**
  - Solenoid / Coil not fitted
- **2CN**
  - 24VDC non locking manual override
- **3GN**
  - 120VAC non locking manual override

**Solenoid voltage**

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

**P32 unit used for both P32 & P33 series**

**Bold items are most common.**

---

**Soft Start Valve**

**Symbol**

- Modular design with 1/4” or 1/2” integral ports (NPT & BSPP)
- The 2-way, 2-position function provides for the safe introduction of pressure
- Adjustable slow start
- Solenoid or air pilot options
- High flow

**Options:**

- **P31SA**
  - **Body size:** Soft start, P31SA
  - **Thread type:** BSPP 1, NPT 9
  - **Port size:** Global modular mini (1/4”), 2
  - **Global modular compact (1/2”), 4

- **P32SA**
  - **Body size:** Soft start, P32SA
  - **Thread type:** BSPP 1, NPT 9
  - **Port size:** Global modular mini (1/4”), 2
  - **Global modular compact (1/2”), 4

**Actuator Interface**

- **N**
  - Internal Pilot

**Solenoid type only**

- **0**
  - Solenoid / Coil not fitted
- **2CN**
  - 24VDC non locking manual override
- **3GN**
  - 120VAC non locking manual override

**Solenoid voltage**

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

**P32 unit used for both P32 & P33 series**

**Bold items are most common.**

---

**Options:**

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Flow</th>
<th>Max. bar (psig)</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Weight (lbs)</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>
</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>
</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>
</tr>
<tr>
<td>1/4&quot;</td>
<td>External air pilot (1/8” 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>
</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>
</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>
</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>
</tr>
<tr>
<td>1/2&quot;</td>
<td>External air pilot (1/8 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>
</tr>
</tbody>
</table>

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

Fluid: Compressed air

Max. pressure solenoid operated: 10 bar (150 psig)
Max. pressure air pilot operated: 17 bar (250 psig)
Min. operating pressure: 3 bar (44 psig)

Temperature Max.* solenoid operated: -10°C to 50°C (14°F to 122°F)
Temperature Max.* air pilot operated: -20°C to 80°C (-4°F to 176°F)

Air pilot port: 1/8”

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 P3HKA00ML
Foot bracket mounting kit P3HKA00MC

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

Flow Charts

P31SA 1/4” Soft Start Valve

Inlet Pressure - 6.3 bar (91.3 psig)
Secondary Pressure - bar
Secondary Pressure - (psig)

Flow - dm³/s
Flow - (scfm)

P32SA 1/2” Soft Start Valve

Inlet Pressure - 6.3 bar (91.3 psig)
Secondary Pressure - bar
Secondary Pressure - (psig)

Flow - dm³/s
Flow - (scfm)

Dimensions mm (inches)

P31S

P32S

Soft Start Function:

1. Start signal
2. Switching time delay
3. Gradual pressure build up
4. Operating pressure (p1 - p2)

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.

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

Options:

<table>
<thead>
<tr>
<th>Body size</th>
<th>P31TA</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft start / dump valve (1/4&quot;)</td>
<td>P31TA</td>
<td></td>
</tr>
<tr>
<td>Soft start / dump valve (1/2&quot;)</td>
<td>P32TA</td>
<td></td>
</tr>
</tbody>
</table>

### Options

<table>
<thead>
<tr>
<th>Part number†</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31TA12SGN0000</td>
<td>Solenoid operated (not included)</td>
</tr>
<tr>
<td>P31TA12SGNC2CN</td>
<td>2/4VDC Solenoid &amp; cable plug</td>
</tr>
<tr>
<td>P31TA12PPN</td>
<td>External air pilot operated</td>
</tr>
<tr>
<td>P32TA14SCN0000</td>
<td>Solenoid operated (not included)</td>
</tr>
<tr>
<td>P32TA14SCN2CN</td>
<td>2/4VDC Solenoid &amp; cable plug inc.</td>
</tr>
<tr>
<td>P32TA14PPN</td>
<td>External air pilot operated</td>
</tr>
</tbody>
</table>

† 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”

**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 (36 scfm)
  - 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 (101 scfm)
  - Flow - (scfm)

**Material Specifications**

- **Body:** Aluminum
- **Body cover:** Polyester
- **Seals:** Nitrile NBR

**Mounting Brackets**

**Description**

<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.

**Dimensions mm (inches)**

- **P31T**
  - 136 (5.35)
  - 84 (3.30)
  - 30.5 (1.20)
  - 1/8” Gauge Port

- **P32T**
  - 174.5 (6.87)
  - 109.5 (4.31)
  - 53 (2.06)

**For mounting brackets see page 86.**
## Solenoid operator - CNOMO

### Order key

```
Parker Hannifin Corporation
Pneumatic Division - Europe
PDE2676TCUK
Parker Global Air Preparation System

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>CNOMO 22 x 30 Plastic</td>
<td>10 bar / -10°C to +50°C</td>
<td>Non locking - monostable - Flush - Brass</td>
</tr>
</tbody>
</table>
```

### Technical data -

**Solenoid operators, coil combinations**

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

**Transients**

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

### Materials

**Pilot Valve**

- **Body:** Polyamide
- **Armature tube:** Brass
- **Plunger & core:** Corrosion resistant Cr-Ni steel
- **Seals:** FKM (Viton™)
- **Screws:** Stainless steel

**Coil**

- **Encapsulation 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>Weight (Kg)</th>
<th>Order code Industrial B Standard</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

**Spare Solenoid Operators**

**Solenoid pilot operator CNOMO NC**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard duty</td>
<td>P2FP23N4B</td>
<td>0.065</td>
</tr>
</tbody>
</table>

**Note.**

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

### Solenoid coils with M12 connection

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Order code Form A W (Kg)</th>
<th>Order code Form B W (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12V DC</td>
<td>P2FC6419 0.065</td>
<td>P2FC7419 0.065</td>
</tr>
</tbody>
</table>

**Spare Solenoid Nuts**

**Valves requiring captured exhaust should be fitted with plastic knurled nut**

Order code **P2FNP**

**Valves with vented exhaust are fitted with diffuser plastic nut**

Order code **P2FND**
## Solenoid Connectors / Cable Plugs EN175301-803

<table>
<thead>
<tr>
<th>Description</th>
<th>Order code 15mm Form C</th>
<th>Order code 22mm Form B</th>
<th>Order code 30mm Form A</th>
</tr>
</thead>
<tbody>
<tr>
<td>With large headed screw suitable for mounting in inaccessible or recess position</td>
<td>P8C-C</td>
<td>P8C-C26C</td>
<td>P8C-C21E</td>
</tr>
<tr>
<td>Standard IP65</td>
<td>24V DC LED and protection IP65</td>
<td>110V AC LED and protection IP65</td>
<td></td>
</tr>
<tr>
<td>With standard screw</td>
<td>P8C-D</td>
<td>3EV10V10</td>
<td>3EV290V10</td>
</tr>
<tr>
<td>Standard IP65</td>
<td>Without flying lead</td>
<td>With LED and protection 24V AC/DC</td>
<td></td>
</tr>
<tr>
<td>With LED and protection 110V AC</td>
<td>P8C-D26C</td>
<td>3EV10V20-24</td>
<td>3EV290V20-24</td>
</tr>
<tr>
<td>With LED and protection 230V AC</td>
<td>P8C-D21E</td>
<td>3EV10V20-110</td>
<td>3EV290V20-110</td>
</tr>
<tr>
<td>With cable</td>
<td>P8L-C2</td>
<td>3EV10V20-230</td>
<td>3EV290V20-230</td>
</tr>
<tr>
<td>Standard with 2m cable IP65</td>
<td>P8L-C2 24V AC/DC, 2m cable LED and protection IP65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard with 5m cable IP65</td>
<td>P8L-C5 24V AC/DC, 5m cable LED and protection IP65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24V AC/DC, 2m cable LED and protection IP65</td>
<td>P8L-C226C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24V AC/DC, 5m cable LED and protection IP65</td>
<td>P8L-C526C 3EV10V20-24L5</td>
<td>3EV290V20-24L5</td>
<td></td>
</tr>
<tr>
<td>24V AC/DC, 10m cable LED and protection IP65</td>
<td>P8L-CA26C 3EV10V20-230L5</td>
<td>3EV290V20-230L5</td>
<td></td>
</tr>
<tr>
<td>110V AC/DC, 2m cable LED and protection IP65</td>
<td>P8L-C221E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110V AC/DC, 5m cable LED and protection IP65</td>
<td>P8L-C521E 3EV10V20-110L5</td>
<td>3EV290V20-110L5</td>
<td></td>
</tr>
<tr>
<td>230V AC, 5m cable LED and protection IP65</td>
<td>P8L-CA21E 3EV10V20-110L5</td>
<td>3EV290V20-110L5</td>
<td></td>
</tr>
</tbody>
</table>

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

#### P2F - CNOMO - 22 x 30mm

![Solenoid Connector Diagram](image_url)

#### Form C Cable plugs:
- P8C-C
- P8C-C26C
- P8C-C21E
- P8C-D
- P8C-D26C
- P8C-D21E

#### Form C Cable plugs (without LED):
- P8L-C2
- P8L-C5
- P8L-C226C
- P8L-C526C
- P8L-CA26C
- P8L-C221E
- P8L-C521E

#### Form B Cable plugs:
- 3EV10V10

#### Form A Cable plugs:
- 3EV290V10
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>Product is supplied / tested and fitted with electronic sensor P8S-GPMHX</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

P8S-GPMHX

M12
± V DC 3

Signal
4 + V DC

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>G1/4</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>G3/8</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

Symbol

- 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>
<tbody>
<tr>
<td><strong>Body size</strong></td>
<td><strong>Port size</strong></td>
<td><strong>Operator</strong></td>
<td><strong>Solenoid</strong></td>
<td><strong>Voltage</strong></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>3/4</td>
<td>15mm Solenoid</td>
<td>Dual M12 connector</td>
<td>24VDC with manual override</td>
<td></td>
</tr>
<tr>
<td>P33T</td>
<td>6</td>
<td>G</td>
<td>F</td>
<td>2CN</td>
<td></td>
</tr>
<tr>
<td><strong>Thread type</strong></td>
<td><strong>Type</strong></td>
<td><strong>Mounting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSPP</td>
<td>Solenoid pilot + gauge</td>
<td>Cat 4 w/bracket</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPT</td>
<td>R</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Cv</th>
<th>Height (mm) (inches)</th>
<th>Width (mm) (inches)</th>
<th>Depth (mm) (inches)</th>
<th>Weight (kg) (lb)</th>
<th>Part number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4 3/4</td>
<td>3.7</td>
<td>273.8 (10.78)</td>
<td>136.0 (5.35)</td>
<td>147.6 (58.1)</td>
<td>7.3 (16.1)</td>
<td>P33TA16RG4F2CN</td>
</tr>
<tr>
<td>3/4 3/4</td>
<td>3.7</td>
<td>273.8 (10.78)</td>
<td>136.0 (5.35)</td>
<td>147.6 (58.1)</td>
<td>7.4 (16.3)</td>
<td>P33TA16RG4G2CN</td>
</tr>
</tbody>
</table>

* BSPP port threads. For NPT threads, replace "1" in the part number with a "9".
Technical Information

Pilot Solenoids: According to VDE 0580
Enclosure rating: According to DIN 400 50 IP65
Connector rating: 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 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 4.5-2/S1587
M12, 5-pin male to flying lead cable, TPE; 2 m (6.6 ft). ................................................................ RSC 4.5-2/S1587

Port block kit 1/2 NPT .................................................................................... P32KA94CP
3/4 NPT .................................................................................... P32KA96CP
1/2 BSPP .................................................................................. P32KA14CP
3/4 BSPP .................................................................................. P32KA16CP

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(s) 3/4” 5500A5013
Solenoit (Main & reset) 1527B7916-001
Square flush mounting gauge kit, 0-160 psig K4511SCR160

Valve Wiring

5-Pin “A” Code Female Connector (Feedback)
Female Connector
BROWN (+24 Volts DC)
GRAY (Ground)
BLACK (N.C. Status Contact)
BLUE (Common)
WHITE (N.O. Status Contact)

5-Pin “A” Code Male Connector (Control Signal)
Male Connector
BROWN (+24 Volts DC)
GRAY (Reset)
BLACK (Sol 1)
BLUE (Common)
WHITE (Sol 2)

5-Pin “A” Code Female Connector (Digital Pressure Transducer Wiring (optional))
Female Connector
Input 1 Power +
Input 1 Analog Output Signal
Input 1 Digital Output Signal
Input 2 Digital Output Signal

Dimensions mm (inches)

Angle Mounting Bracket

Note: Mounting bracket and installation screws included and required to install unit in the system.

Parker Global Air Preparation System

P33T Series
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)
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 red “Status” LED will be illuminated once the valve is reset.

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

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”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>20 (42.4)</td>
<td>P31VB12LBNN</td>
</tr>
<tr>
<td>P32</td>
<td>3/8”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>90 (190.7)</td>
<td>P32VB13LBNN</td>
</tr>
<tr>
<td></td>
<td>1/2”</td>
<td>1/4”</td>
<td>BSPP</td>
<td>122 (258.5)</td>
<td>P32VB14LBNN</td>
</tr>
<tr>
<td>P33</td>
<td>1/2”</td>
<td>1/2”</td>
<td>BSPP</td>
<td>265 (561.5)</td>
<td>P33VB14LBNN</td>
</tr>
<tr>
<td></td>
<td>3/4”</td>
<td>1/2”</td>
<td>BSPP</td>
<td>320 (678)</td>
<td>P33VB16LBNN</td>
</tr>
</tbody>
</table>

For thread type: NPT

### Specifications

**Operating temperature**  
-40°C to 80°C (-40°F to 176°F)

**Max. supply pressure**  
17 bar (250 psig)

**Port size**  
BSPP / NPT  
1/4, 3/8, 1/2, 3/4

**Weight**

- **P31:** 0.15 kg (0.33 lbs)
- **P32:** 0.36 kg (0.79 lbs)
- **P33:** 0.55 kg (1.21 lbs)

### Material Specifications

**Body**  
Aluminum

**Seals**  
PTFE

**Ball**

- **P31:** Stainless Steel
- **P32 / P33:** Stainless Steel

### Dimensions mm (inches)

#### P31

#### P32

#### P33

Parker Hannifin Corporation  
Pneumatic Division - Europe
Manifold Blocks

[Image of manifold blocks]

<table>
<thead>
<tr>
<th>Model</th>
<th>In / Out</th>
<th>Auxiliary Port Size</th>
<th>Auxiliary Port Type</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P31</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>P31MA12022N</td>
</tr>
<tr>
<td>P32</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>P32MA14024N</td>
</tr>
<tr>
<td>P33</td>
<td>3/4&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>P33MA16024N</td>
</tr>
</tbody>
</table>

For thread type: BSPP 1 NPT 9

Branch Manifold

<table>
<thead>
<tr>
<th>Model</th>
<th>In / Out Port Size</th>
<th>Auxiliary Port Size</th>
<th>Auxiliary Port Type</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P32</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>P32MD14022N</td>
</tr>
<tr>
<td>P32</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>BSPP</td>
<td>P32MD12022N</td>
</tr>
</tbody>
</table>

Materials of Construction

Body: Aluminium

Specifications

Max Operating Temperature: 65.5°C (150°F)
Max Supply Pressure: 20.7 bar (300 psi)
Weight:
- P31: 0.19 kg (0.42 lbs)
- P32: 0.30 kg (0.66 lbs)
- P32MD: 0.14 kg (0.31 lbs)
- P33: 0.34 kg (0.75 lbs)

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

[Image of branch manifold diagram]

P31, P32, P33 Series
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>Outputs change N.O. / N.C.</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<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

Sensor pin out with analog output

<table>
<thead>
<tr>
<th>Pin #</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Brown</td>
<td>24VDC</td>
</tr>
<tr>
<td>2 White</td>
<td>4 to 20mA</td>
</tr>
<tr>
<td>3 Blue</td>
<td>0VDC</td>
</tr>
<tr>
<td>4 Black</td>
<td>PNP Open Collector Output 1</td>
</tr>
</tbody>
</table>
Parker Hannifin Corporation
Pneumatic Division - Europe

PDE2676TCUK
Parker Global Air Preparation System

Pressure Sensors

Specifications

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>Vacuum (V)</th>
<th>Positive (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-101.3 to 0 kPa (-14.5 to 0 PSI)</td>
<td>-0.1 to 1 Mpa (0 to 145 PSI)</td>
<td></td>
</tr>
<tr>
<td>Proof pressure</td>
<td>0.3 Mpa (44PSI)</td>
<td>1.5 Mpa (218 PSI)</td>
</tr>
<tr>
<td>Display resolution,</td>
<td>0.1, kPa</td>
<td>1, kPa</td>
</tr>
<tr>
<td>Units of measure</td>
<td>0.001, kgf/cm²</td>
<td>0.01, kgf/cm²</td>
</tr>
<tr>
<td>Media</td>
<td>Air &amp; non-corrosive gases</td>
<td></td>
</tr>
<tr>
<td>Pressure port</td>
<td>(N) 1/8&quot; NPT male, (G) 1/8 BSPP male both with M5 female port</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>32 to 122°F (0 to 50°C)</td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-4 to 140°F (-20 to 60°C)</td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td>35 to 85% RH (no condensation)</td>
<td></td>
</tr>
<tr>
<td>Electrical connection</td>
<td>(C) 4-pin, M8 connector on 150mm lead wire</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>12 to 24VDC ±10%, Ripple (P-P) 10% or less</td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>3 + 1/2 digit, 2 color, 7-segment RED / GREEN LED</td>
<td></td>
</tr>
<tr>
<td>Display refresh</td>
<td>Timing update : 0.1 ~ 3 sec. (Factory Set Unit: 0.1 sec.)</td>
<td></td>
</tr>
<tr>
<td>Switch output</td>
<td>Output signal, PNP, Normally open or closed, LED indicator, 125 mA max. output load</td>
<td></td>
</tr>
<tr>
<td>Output modes</td>
<td>Hysteresis or Window Comparator</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>≤ 2.5ms (chattering-proof function: 24ms, 250ms, 500ms, 1000ms and 1500ms selections)</td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>± 0.2% of F.S. ± 1 digit</td>
<td></td>
</tr>
<tr>
<td>Output current</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Thermal error</td>
<td>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)</td>
<td></td>
</tr>
<tr>
<td>General protection</td>
<td>IP40, CE marked, EMC-EN61000-6-2: 2001</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>45mA (with no load)</td>
<td></td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>10 to 150Hz, Double amplitude 1.5mm, XYZ, 2 hrs.</td>
<td></td>
</tr>
<tr>
<td>Shock resistance</td>
<td>980 m/s² (about 10G), 3 times/each directions X, Y, Z</td>
<td></td>
</tr>
<tr>
<td>Noise Resistance</td>
<td>Vp-p400V, 10 ms, 0.5μs noise simulator</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Housing: ABS (gray) , Pressure port: Zinc die-cast, Diaphragm: Silicon</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>1.45 oz. (45g) with M8 connector</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

1/8" Male
Accessories - P31 Series

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

- 68 (2.68)
- 42.5 (1.67)
- 10 (0.39)
- 6.6 (0.26)
- 19.3 Dia (0.76)
- 2 (0.08)
- 60 (2.36)
- 40 (1.57)
- 62 (2.44)
- 35.5 (1.40)

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

- 7 (0.28)
- 10 (0.39)
- 5.5 (0.22)
- 16 (0.63)
- 90 (3.54)
- 10 (-0.39)

Body Connector
(O-ring not shown)
P31KA00CB

Port Block Kit
(O-ring not shown)

- 1/8 NPT ............ P31KA91CP
- 1/4 NPT ............ P31KA92CP
- 3/8 NPT ............ P31KA93CP
- 1/8 BSPP .......... P31KA11CP
- 1/4 BSPP .......... P31KA12CP
- 3/8 BSPP .......... P31KA13CP

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

![T-Bracket w/ Body Connector](image1)

**Body Connector**

P32KA00CB

![Body Connector](image2)

**Port Block Kit**

<table>
<thead>
<tr>
<th>Connection</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 NPT</td>
<td>P32KA92CP</td>
</tr>
<tr>
<td>3/8 NPT</td>
<td>P32KA93CP</td>
</tr>
<tr>
<td>1/2 NPT</td>
<td>P32KA94CP</td>
</tr>
<tr>
<td>3/4 NPT</td>
<td>P32KA96CP</td>
</tr>
<tr>
<td>1/4 BSPP</td>
<td>P32KA12CP</td>
</tr>
<tr>
<td>3/8 BSPP</td>
<td>P32KA13CP</td>
</tr>
<tr>
<td>1/2 BSPP</td>
<td>P32KA14CP</td>
</tr>
<tr>
<td>3/4 BSPP</td>
<td>P32KA16CP</td>
</tr>
</tbody>
</table>

![Port Block Kit](image3)

**Angle Bracket**

(Fits to regulator and filter/regulator bonnet)

P32KB00MR

P32KB00MS - with Metal Nut

![Angle Bracket](image4)

**L-Bracket**

(Fits to filter and lubricator body)

P32KA00ML

![L-Bracket](image5)

**T-Bracket**

(fits to body connector or port block)

P32KA00MB

![T-Bracket](image6)
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 P32KA00MP P33KA00MP</td>
</tr>
<tr>
<td>P32</td>
<td>Panel Mount Nut (Aluminum)</td>
<td>P31KA00MM P32KA00MM P33KA00MM</td>
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<tr>
<td>P33</td>
<td>5µ Element Kit</td>
<td>P31KA00ESE P32KA00ESE P33KA00ESE</td>
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<tr>
<td>P32</td>
<td>1µ Element Kit</td>
<td>P31KA00ES9 P32KA00ES9 P33KA00ES9</td>
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<tr>
<td>P33</td>
<td>0.01µ Element Kit</td>
<td>P31KA00ESC P32KA00ESC P33KA00ESC</td>
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<td>P32</td>
<td>Adsorber Element Kit</td>
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<td></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 P32KA00RQ</td>
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<tr>
<td>P31</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 P32KA00PL</td>
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<tr>
<td>P31</td>
<td>Lubricator - Plastic Bowl w/ Bowl Guard No Drain</td>
<td>P31KB00BGN P32KB00BGN P33KA00BGN</td>
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<tr>
<td>Series</td>
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<tr>
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<td>Lubricator - Metal Bowl w/o Sight Gauge No Drain</td>
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<tr>
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<td>Lubricator - Metal Bowl w/ Sight Gauge No Drain</td>
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<tr>
<td>P33</td>
<td>Lubricator - Metal Bowl w/ Sight Gauge No Drain</td>
<td>P33KA00BSN</td>
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<tr>
<td>P31</td>
<td>Metal Bowl w/o Sight Gauge &amp; Manual Drain</td>
<td>P31KB00BMM  P32KB00BMM  P33KA00BMM</td>
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<td></td>
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<td>P32KB00BMM  P33KA00BMM</td>
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<tr>
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<td>Metal Bowl w/o Sight Gauge &amp; Manual Drain</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  P33KA00BMA</td>
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<tr>
<td>P33</td>
<td>Metal Bowl w/o Sight Gauge &amp; Auto Drain</td>
<td>P33KA00BMA</td>
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<tr>
<td>P32</td>
<td>Metal Bowl w/ Sight Gauge &amp; Manual Drain</td>
<td>P32KB00BSM  P33KA00BSM</td>
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<tr>
<td>P33</td>
<td>Metal Bowl w/ Sight Gauge &amp; Manual Drain</td>
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<td>Metal Bowl w/ Sight Gauge &amp; Auto Drain</td>
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<td>P33</td>
<td>Metal Bowl w/ Sight Gauge &amp; Auto Drain</td>
<td>P33KA00BSA</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td>P31</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Manual Drain</td>
<td>P31KB00BGM  P32KB00BGM  P33KA00BGM</td>
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<td></td>
<td></td>
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<tr>
<td>P32</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Manual Drain</td>
<td>P32KB00BGM  P33KA00BGM</td>
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<tr>
<td>P33</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Manual Drain</td>
<td>P33KA00BGM</td>
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</tr>
<tr>
<td>P31</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Pulse Drain</td>
<td>P31KB00BGB</td>
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<tr>
<td>P33</td>
<td>Plastic Bowl w/ Bowl Guard &amp; Auto Drain</td>
<td>P33KA00BGB</td>
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### Parker Global Air Preparation System

#### Kits & Accessories

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Connection</th>
<th>Part number</th>
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<tbody>
<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>
<td>K4511SCR04B K4511SCR11B K4511SCR060 K4511SCR160</td>
</tr>
<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</td>
<td>P3D-KAB1AYN P3D-KAB1ALN P3D-KAB1ANN</td>
</tr>
<tr>
<td>P32 / P33</td>
<td>40mm Round Gauge</td>
<td>0-60 psig / 0-4.1 bar 0-160 psig / 0-10 bar 0-300 psig / 0-20 bar</td>
<td>P6G-ERB2040 P6G-ERB2110 P6G-ERB2200</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>P31KA00CY P32KA00CY</td>
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<tr>
<td>P31</td>
<td>Tamperproof Knob Kit</td>
<td></td>
<td>P31KB00AT P32KB00AT</td>
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<tr>
<td>P31</td>
<td>Tamperproof Lockable Kit</td>
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<td>P31KB00AL P32KB00AL</td>
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</table>
## Parker Global Air Preparation System

### Pressure Switches

**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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</thead>
<tbody>
<tr>
<td>Standard version</td>
<td>GSD-30DS</td>
<td>KL3349</td>
</tr>
<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>
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**Plugs to DIN EN 175301-803, Form A, ISO 4400**

- **Standard version**
- **Version with LEDs**
Pressure Switches G1/8", G1/4"

Characteristics

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

Material

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Housing</td>
<td>Passivated steel</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Buna N</td>
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Switching function

<p>| | |</p>
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>Make contact</td>
<td>Closes the circuit when the set pressure is reached</td>
</tr>
<tr>
<td>Break contact</td>
<td>Interrupts the circuit when the set pressure is reached</td>
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</table>

Dimensions and order instructions

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

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<th>Port size</th>
<th>Function</th>
<th>Setting range (bar)</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
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<td>Make contact</td>
<td>0.2-1</td>
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<td>PR / 0.1-1 NC ST 1/4 48 G1/4</td>
<td>Break contact</td>
<td>0.1-1</td>
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<tr>
<td>PR / 0.1-1 NO SR 1/4 48 G1/4</td>
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<td>0.1-1</td>
<td>KL3455</td>
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<td>PR / 1-10 NC SR 1/8 48 G1/8</td>
<td>Break contact</td>
<td>1-10</td>
<td>KL3452</td>
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<tr>
<td>PR / 1-10 NC SR 1/4 48 G1/4</td>
<td>Break contact</td>
<td>1-10</td>
<td>KL3451</td>
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<td>PR / 1-10 NO SR 1/8 48 G1/8</td>
<td>Make contact</td>
<td>1-10</td>
<td>KL3453</td>
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</tr>
<tr>
<td>PR / 1-10 NO SR 1/4 48 G1/4</td>
<td>Make contact</td>
<td>1-10</td>
<td>KL3450</td>
<td></td>
</tr>
</tbody>
</table>

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

Dimensions in mm
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, ketones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight gauges in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

WARNING:

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

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

Before selecting or using any of these Products, it is important that you read and follow the instructions below.
2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5.

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
- Do not exceed the Maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

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

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at Minimum, must include instructions 4.2 through 4.10.

4.2. Inspection 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-C Parker, 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.
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Europe, Middle East, Africa

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