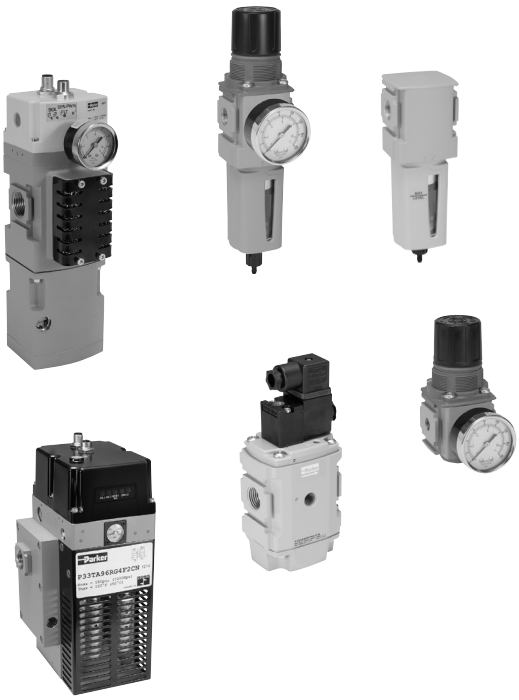

Air Preparation Products
Global Air Preparation Series

Introduction	B2-B7
Particulate Filters	B8-B13
Coalescing Filters	B14-B19
Regulators	B20-B31
Proportional Regulators	B32-B41
Filter / Regulators	B42-B49
Lubricators	B50-B55
Combinations	B56-B59
Dump Valves / Soft Start Valves	B60-B65
Safety Exhaust Valve	B66-B69
Redundant Safety Exhaust Valve	B70-B73
Accessories	B74-B84

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RoHS COMPLIANT

DECLARATION OF COMPLIANCE (ROHS)

European Directive 2011/65/EU – RoHS (Restriction us of certain Hazardous Substances in electrical and electronic equipment), restricts the use of the 6 substances in the manufacture of specified electrical equipment.

Lead: Product containing lead and its compound (except for applications of lead as an alloying element by weight in steel up to 0.35%, in aluminium up to 0.4% and in copper alloys up to 4% and in circuit board solder) must not exceed 0.1% by weight

Mercury: The concentration level must not exceed 0.1% by volume

Cadmium: The concentration level must not exceed 0.01% by volume

Hexavalent Chromiou:
This is a corrosive protective finish used on our product line. Where this finish is utilized the Chromate solution is Hexavalent (Chrome 6) free.

Polybrominated Biphenyls (PBB):
The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.

Polybrominated Diphenyl Esters (PBDE):
The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.

CE

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.

REACh Compliant

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

Ex ATEX

Following Ignition Hazard Assessments performed on the non-electrical Global Air Preparation products they are 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.

ISO

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

- Filters – ISO 5782-1 & ISO 5782-2: 1997
- Regulators- ISO 6953-1 & ISO 6953-2: 2000
- Lubricators- ISO 6301-1 & ISO 6301-2: 2009

Parker Global Air Preparation System

Global.

Modular.

*Performance you need, **wherever** you need it.*

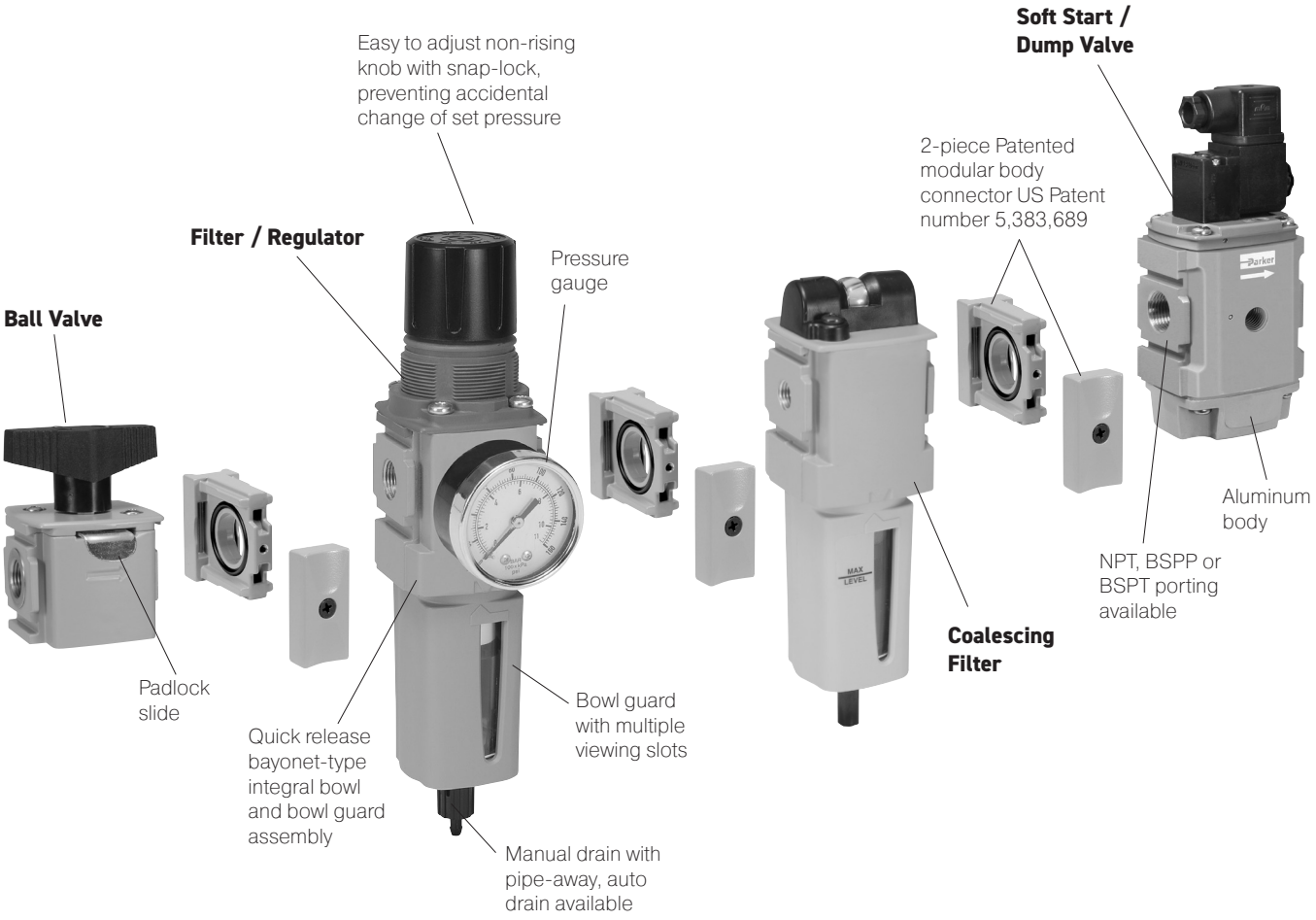
Full featured particulate and coalescing filters, regulators, filter/regulators, and lubricators are available with a wide range of standard options to meet air preparation needs.

The comprehensive Global Air Preparation System is available in three body sizes with either BSPP, BSPT, 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

A completely modular air preparation system



Comprehensive Offering

P31 Mini Series
1/4" ports
40mm body width

P32 Compact Series
1/4", 3/8" and 1/2"
60mm body width

P33 Standard Series
1/2" and 3/4"
73mm body width

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.

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Air Preparation

P31 Mini Series

40mm body width
1/4" Ported

Flows up to:	scfm	(dm^3/s, ANR)
Filter	25	(12)
Coalescer	7.5	(3.6)
Regulator	73	(34)
Filter/Regulator	22	(10)
Lubricator	52	(25)

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:	scfm	(dm^3/s, ANR)
Filter	82	(39)
Coalescer	36	(17)
Regulator	165	(78)
Filter/Regulator	136	(64)
Lubricator	90	(42)

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

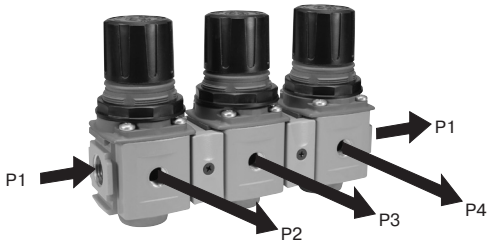
Flows up to:	scfm	(dm^3/s, ANR)
Filter	85	(40)
Coalescer	72	(34)
Regulator	233	(111)
Filter/Regulator	230	(108)
Lubricator	150	(71)

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

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

P31P Mini Series

P32P Compact Series

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 P32 Only (Consult factory for availability)

- T-Handle

- Preset and Tamperproof

- Preset
- Pressure Limiter

For inventory, lead times, and kit lookup, visit www.pdnplu.com

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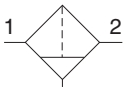
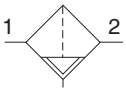
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

P31 Particulate Filter – Mini

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



Manual drain



Pulse drain

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Manual Drain	**P31FB92EGMN**
1/4"	Poly Bowl, Pulse Drain	**P31FB92EGBN**
1/4"	Metal Bowl, Manual Drain	**P31FB92EMMN**
1/4"	Metal Bowl, Pulse Drain	**P31FB92EMBN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):	
Plastic bowl	150 psig (10 bar)
Metal bowl	250 psig (17 bar)
Operating temperature:	
Plastic bowl	14°F to 125°F (-10°C to 52°C)
Metal bowl	14°F to 150°F (-10°C to 65.5°C)
Standard filtration:	5 micron
Flow capacity*:	25 scfm (12 dm^3/s, ANR)
Useful retention†:	0.4 US oz. (12 cm^3)
Weight:	0.24 lb (0.11 kg)

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

Ordering information:

P31FB 9 2 E G M N

Basic Series	
Global Modular Mini Particulate Filter	P31FB

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/4	2

Element	
5µ Element	E

Bowl type	
G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge

Drain Type	
M	Manual Drain
B	Pulse Drain
X	Flex Drain

Mounting	
N	No Bracket

☐ Most popular.

Material Specifications

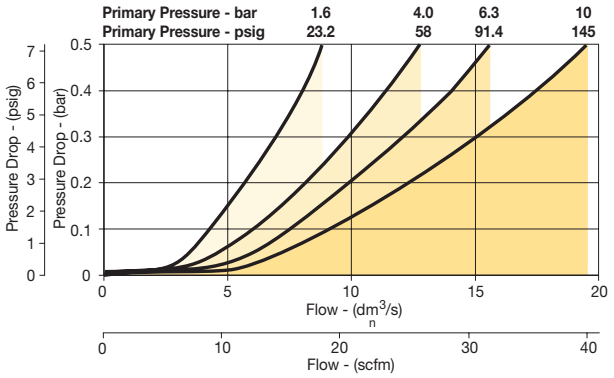
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Element retainer	Acetal
Baffle	Acetal
Filter element polyethylene	Sintered
Seals	Nitrile

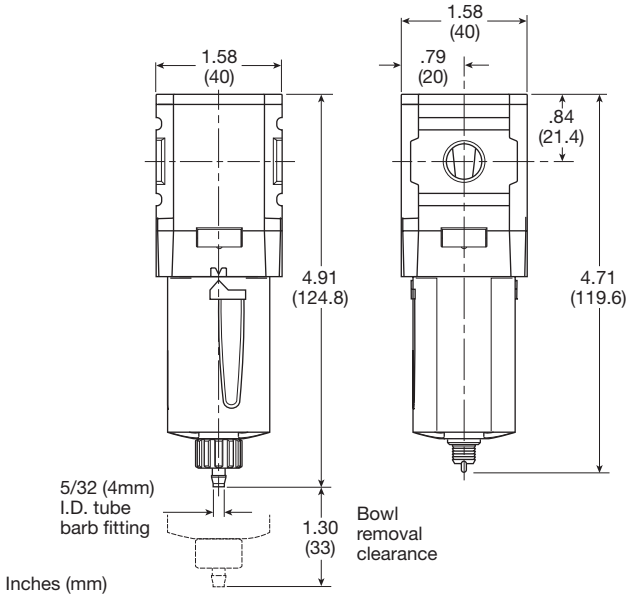
Repair and Service Kits

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

Flow Charts

P31FB 1/4" Filter

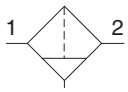




Manual Drain **Pulse Drain**

P32 Particulate Filter – Compact

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



Manual drain

Auto drain

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Manual Drain	**P32FB92EGMN**
1/4"	Poly Bowl, Auto Drain	**P32FB92EGAN**
1/4"	Metal Bowl, Manual Drain	**P32FB92ESMN**
1/4"	Metal Bowl, Auto Drain	**P32FB92ESAN**
3/8"	Poly Bowl, Manual Drain	**P32FB93EGMN**
3/8"	Poly Bowl, Auto Drain	**P32FB93EGAN**
3/8"	Metal Bowl, Manual Drain	**P32FB93ESMN**
3/8"	Metal Bowl, Auto Drain	**P32FB93ESAN**
1/2"	Poly Bowl, Manual Drain	**P32FB94EGMN**
1/2"	Poly Bowl, Auto Drain	**P32FB94EGAN**
1/2"	Metal Bowl, Manual Drain	**P32FB94ESMN**
1/2"	Metal Bowl, Auto Drain	**P32FB94ESAN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):		
Plastic bowl		150 psig (10 bar)
Metal bowl		250 psig (17 bar)
Operating temperature:		
Plastic bowl		-13°F to 125°F (-25°C to 52°C)
Metal bowl		-13°F to 150°F (-25°C to 65.5°C)
Standard filtration:		5 micron
Flow capacity*:	1/4	50 scfm (24 dm^3/s, ANR)
	3/8	78 scfm (37 dm^3/s, ANR)
	1/2	82 scfm (39 dm^3/s, ANR)
Useful retention†:		1.7 US oz. (51 cm^3)
Weight:		0.62 lb (0.28 kg)

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

Ordering Information:

P32FB 9 2 E G M N

Basic Series	
Global Modular Compact Particulate Filter	P32FB

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/4	2
3/8	3
1/2	4

Element	
5µ Element	E

Bowl Type	
G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge
S	Metal Bowl with Sight Gauge

Drain Type	
M	Manual Drain
A	Auto Drain
X	Flex Drain

Mounting	
N	No Bracket

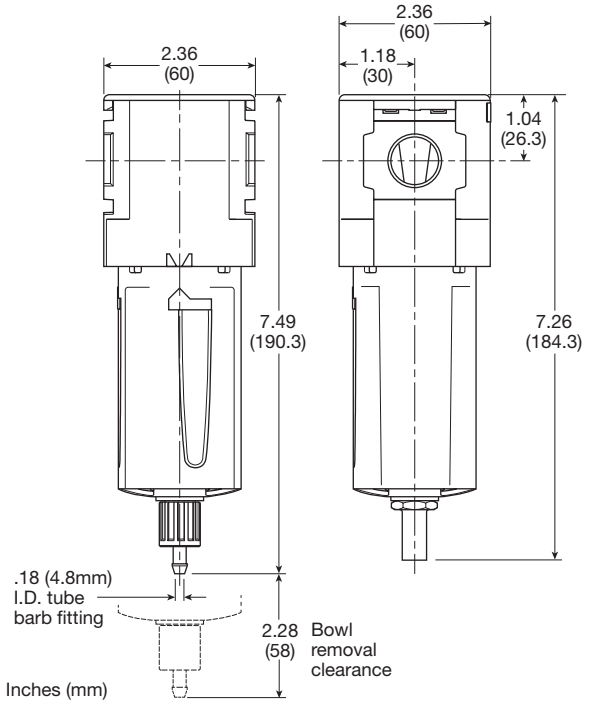
☐ Most popular.

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Deflector	Polypropylene
Element retainer / Baffle	Acetal
Filter element polyethylene	Sintered
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

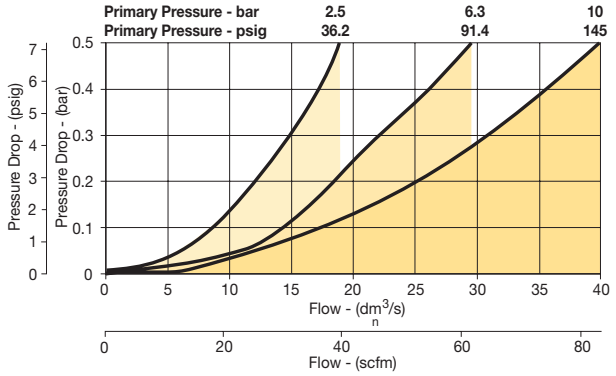
Plastic bowl / bowl guard, manual drain	**P32KB00BGM**
Metal bowl / sight gauge, manual drain	**P32KB00BSM**
Auto drain	**P32KA00DA**
5µ particle filter element	**P32KA00ESE**
L-bracket (fits to body)	**P32KA00ML**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P32KA00MT**
Body connector	**P32KA00CB**



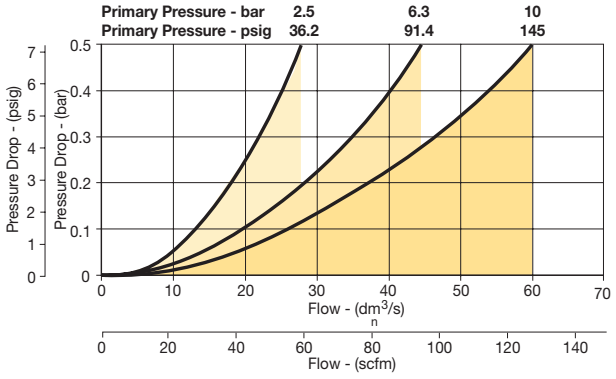
Manual Drain **Automatic Drain**

Flow Charts

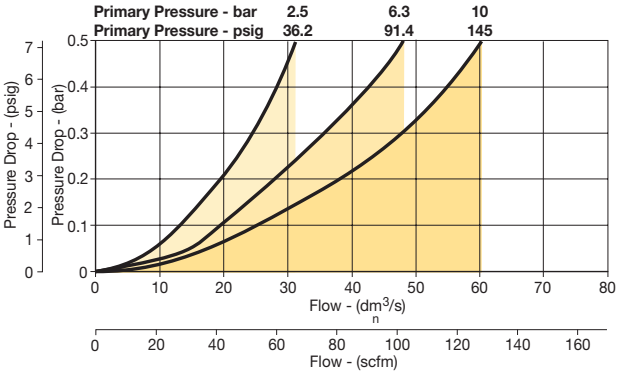
P32FB 1/4" Filter



P32FB 3/8" Filter



P32FB 1/2" Filter



For inventory, lead times, and kit lookup, visit www.pdnplu.com

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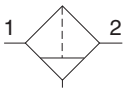
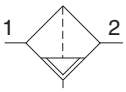
P33 Particulate Filter – Standard

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



Manual drain



Auto drain

Port Size	Description ‡	Part Number
1/2"	Poly Bowl, Manual Drain	**P33FA94EGMN**
1/2"	Poly Bowl, Auto Drain	**P33FA94EGAN**
1/2"	Metal Bowl, Manual Drain	**P33FA94ESMN**
1/2"	Metal Bowl, Auto Drain	**P33FA94ESAN**
3/4"	Poly Bowl, Manual Drain	**P33FA96EGMN**
3/4"	Poly Bowl, Auto Drain	**P33FA96EGAN**
3/4"	Metal Bowl, Manual Drain	**P33FA96ESMN**
3/4"	Metal Bowl, Auto Drain	**P33FA96ESAN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):		
Plastic bowl		150 psig (10 bar)
Metal bowl		250 psig (17 bar)
Operating temperature:		
Plastic bowl		-13°F to 125°F (-25°C to 52°C)
Metal bowl		-13°F to 150°F (-25°C to 65.5°C)
Standard filtration:		5 micron
Flow capacity*:	1/2	85 scfm (40 dm^3/s, ANR)
	3/4	102 scfm (48 dm^3/s, ANR)
Useful retention†:		2.8 US oz. (85 cm^3)
Weight:		1.01 lb (0.46 kg)

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

Ordering Information:

P33FA 9 6 E G M N

Basic Series

Global Modular Standard Particulate Filter	P33FA

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

1/2	4
3/4	6

Element

5µ Element	E

Bowl Type

G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge
S	Metal Bowl with Sight Gauge

Drain Type

M	Manual Drain
A	Auto Drain

Mounting

N	No Bracket

☐ Most popular.

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Richland, Michigan
www.parker.com/pneumatics

Material Specifications

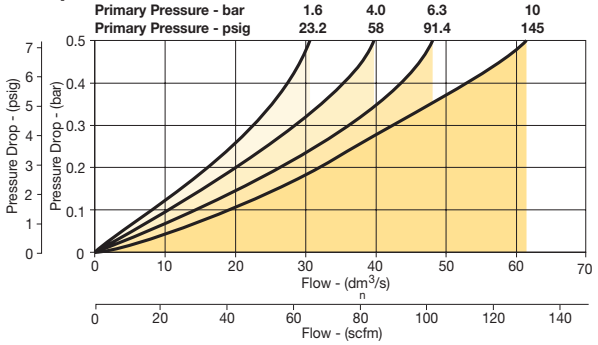
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Deflector	Polypropylene
Element retainer / Baffle	Acetal
Filter element polyethylene	Sintered
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

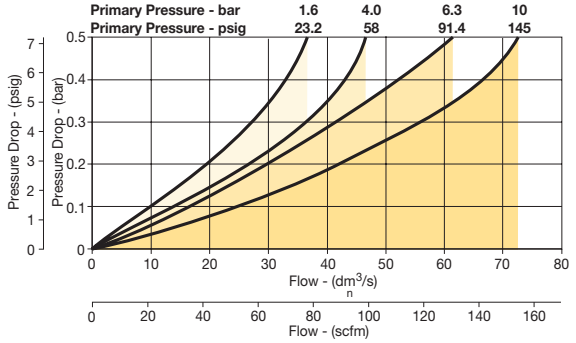
Plastic bowl / bowl guard, manual drain	**P33KA00BGM**
Metal bowl / sight gauge, manual drain	**P33KA00BSM**
Auto drain	**P32KA00DA**
5µ particle filter element	**P33KA00ESE**
L-bracket (fits to body)	**P33KA00ML**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P33KA00MT**
Body connector	**P32KA00CB**

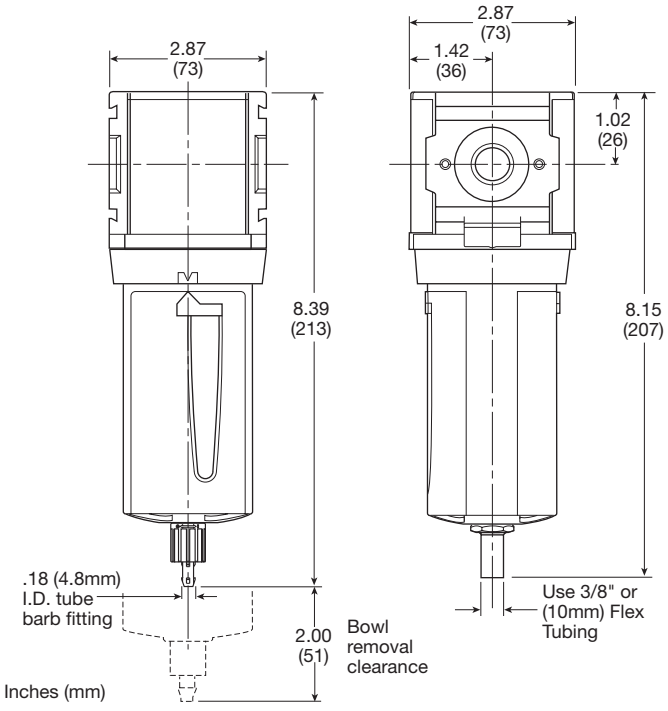
Flow Charts

P33FA 1/2" Filter



P33FA 3/4" Filter





Manual Drain **Automatic Drain**

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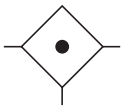
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

P31 Coalescing and Adsorber Filters – Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- 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.



Port Size	Description ‡	Element	Part Number
1/4"	Poly Bowl, Manual Drain	0.01 micron	**P31FB92DGMN**
1/4'	Poly Bowl, Pulse Drain	0.01 micron	**P31FB92DGBN**
1/4"	Metal Bowl, Manual Drain	0.01 micron	**P31FB92DMMN**
1/4'	Metal Bowl, Pulse Drain	0.01 micron	**P31FB92DMBN**

‡ **For polycarbonate bowl, see caution in Engineering Section A.**

Operating information

Supply pressure (max):	
Poly bowl	150 psig (10 bar)
Metal bowl w/ DPI	150 psig (10 bar)
Metal bowl w/o DPI	250 psig (17 bar)
Operating temperature:	
Plastic bowl	14°F to 125°F (-10°C to 52°C)
Metal bowl	14°F to 150°F (-10°C to 65.5°C)
Standard filtration:	1.0 and 0.01 micron
Adsorber	Max. oil carryover (ppm w/w) 0.003 @ 70°F (21°C)
Flow capacity*:	
1.0 micron coalescing	12 scfm (5.5 dm^3/s, ANR)
0.01 micron coalescing	7.5 scfm (3.6 dm^3/s, ANR)
Activated carbon adsorber	12.7 scfm (6 dm^3/s, ANR)
Useful retention†:	0.4 US oz. (12 cm^3)
Weight:	0.24 lb (0.11 kg)

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

Ordering Information:

P31FB **9** **2** **D** **G** **M** **N**

Basic Series	
Global Modular Mini Coalescing Filter	P31FB

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/4	2

Element	
0.01µ Element	C
0.01µ Element with DPI	D
1µ Element	9
1µ Element with DPI	Q
Adsorber	A

Bowl Type	
G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge

Drain Type	
B	Pulse Drain
M	Manual Drain
X	Flex Drain

Mounting	
N	No Bracket

☐ Most popular.

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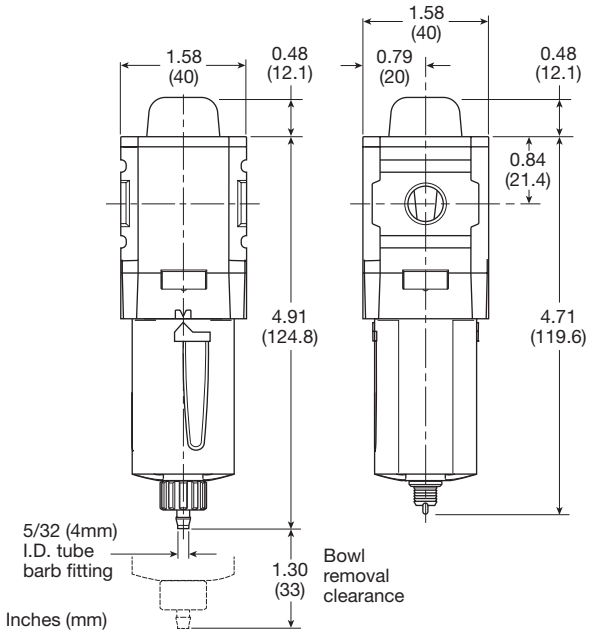
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber element	Activated carbon
Seals	Nitrile

Repair and Service Kits

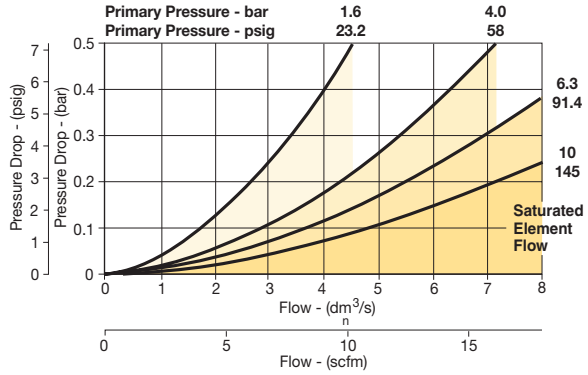
Plastic bowl / bowl guard, manual drain	**P31KB00BGM**
Metal bowl / w/o sight gauge ,manual drain	**P31KB00BMM**
Plastic bowl / bowl guard, pulse drain	**P31KB00BGB**
Metal bowl / w/o sight gauge, pulse drain	**P31KB00BMB**
1µ coalescing filter element	**P31KA00ES9**
0.01µ coalescing filter element	**P31KA00ESC**
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**



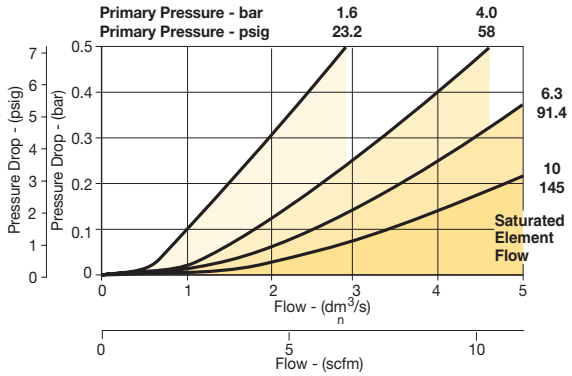
Manual Drain **Pulse Drain**

Flow Charts

P31FB - 1.0 micron flow



P31FB - 0.01 micron flow

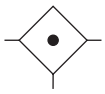


P32 Coalescing and Adsorber Filters – Compact

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

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

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



Port Size	Description ‡	Element	Part Number
1/4"	Poly Bowl, Manual Drain	0.01 micron	**P32FB92DGMN**
1/4"	Poly Bowl, Auto Drain	0.01 micron	**P32FB92DGAN**
1/4"	Metal Bowl, Manual Drain	0.01 micron	**P32FB92DSMN**
1/4"	Metal Bowl, Auto Drain	0.01 micron	**P32FB92DSAN**
3/8"	Poly Bowl, Manual Drain	0.01 micron	**P32FB93DGMN**
3/8"	Poly Bowl, Auto Drain	0.01 micron	**P32FB93DGAN**
3/8"	Metal Bowl, Manual Drain	0.01 micron	**P32FB93DSMN**
3/8'	Metal Bowl, Auto Drain	0.01 micron	**P32FB93DSAN**
1/2"	Poly Bowl, Manual Drain	0.01 micron	**P32FB94DGMN**
1/2"	Poly Bowl, Auto Drain	0.01 micron	**P32FB94DGAN**
1/2"	Metal Bowl, Manual Drain	0.01 micron	**P32FB94DSMN**
1/2"	Metal Bowl, Auto Drain	0.01 micron	**P32FB94DSAN**

‡ **For polycarbonate bowl, see caution in Engineering Section A.**

Operating information

Supply pressure (max):	
Poly bowl	150 psig (10 bar)
Metal bowl w/ DPI	150 psig (10 bar)
Metal bowl w/o DPI	250 psig (17 bar)
Operating temperature:	
Plastic bowl	-13°F to 125°F (-25°C to 52°C)
Metal bowl	-13°F to 150°F (-25°C to 65.5°C)
Standard filtration:	1.0 and 0.01 micron
Adsorber	Max. oil carryover (ppm w/w) 0.003 @ 70°F (21°C)
Flow capacity*:	
1.0 micron coalescing	53 scfm (25 dm^3/s, ANR)
0.01 micron coalescing	36 scfm (17 dm^3/s, ANR)
Activated carbon adsorber	85 scfm (40 dm^3/s, ANR)
Useful retention†:	1.7 US oz. (51 cm^3)
Weight:	0.71 lb (0.32 kg)

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

Ordering Information:

P32FB **9** **2** **D** **G** **M** **N**

Basic Series	
Global Modular Compact Coalescing Filter	P32FB

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/4	2
3/8	3
1/2	4

Element	
0.01µ Element	C
0.01µ Element with DPI	D
1µ Element	9
1µ Element with DPI	Q
Adsorber	A

Bowl Type	
G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge
S	Metal Bowl with Sight Gauge

Drain Type	
M	Manual Drain
A	Auto Drain
X	Flex Drain

Mounting	
N	No Bracket

☐ Most popular.

For inventory, lead times, and kit lookup, visit www.pdnplu.com

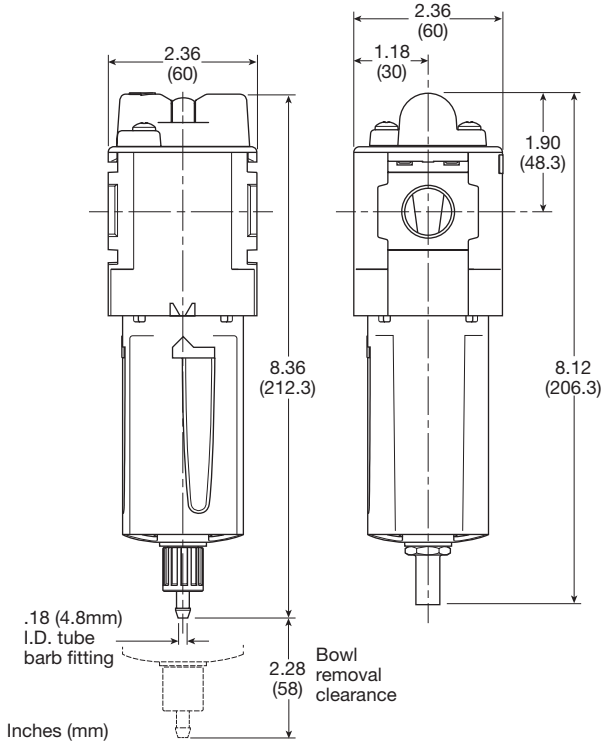
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber	Activated carbon
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

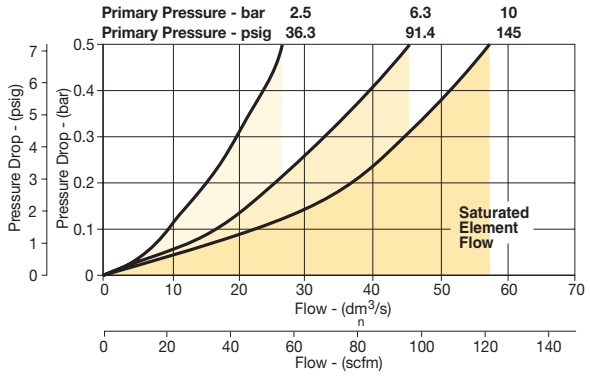
Plastic bowl / bowl guard, manual drain	**P32KB00BGM**
Metal bowl / sight gauge, manual drain	**P32KB00BSM**
Auto drain	**P32KA00DA**
1µ coalescing filter element	**P32KA00ES9**
0.01µ coalescing filter element	**P32KA00ESC**
Activated carbon adsorber filter element	**P32KA00ESA**
L-bracket (fits to body)	**P32KA00ML**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P32KA00MT**
Body connector	**P32KA00CB**
Differential pressure indicator (replacement)	**P32KA00RQ**



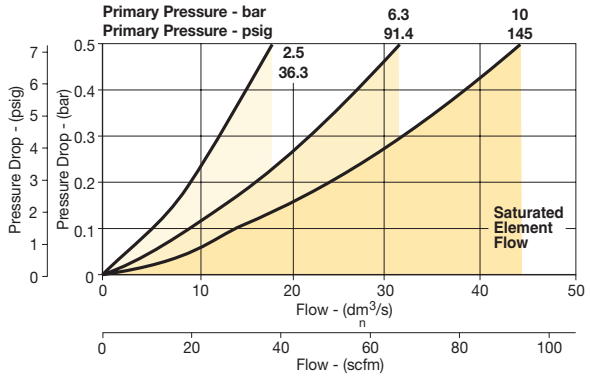
Manual Drain **Automatic Drain**

Flow Charts

P32FB - 1.0 micron flow



P32FB - 0.01 micron flow



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www.parker.com/pneumatics

P33 Coalescing and Adsorber Filters – Standard

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

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

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

Port Size	Description ‡	Element	Part Number
1/2"	Poly Bowl, Manual Drain	0.01 micron	**P33FA94DGMN**
1/2"	Poly Bowl, Auto Drain	0.01 micron	**P33FA94DGAN**
1/2"	Metal Bowl, Manual Drain	0.01 micron	**P33FA94DSMN**
1/2"	Metal Bowl, Auto Drain	0.01 micron	**P33FA94DSAN**
3/4"	Poly Bowl, Manual Drain	0.01 micron	**P33FA96DGMN**
3/4"	Poly Bowl, Auto Drain	0.01 micron	**P33FA96DGAN**
3/4"	Metal Bowl, Manual Drain	0.01 micron	**P33FA96DSMN**
3/4"	Metal Bowl, Auto Drain	0.01 micron	**P33FA96DSAN**

‡ **For polycarbonate bowl, see caution in Engineering Section A.**

Operating information

Supply pressure (max):	
Poly bowl	150 psig (10 bar)
Metal bowl w/ DPI	150 psig (10 bar)
Metal bowl w/o DPI	250 psig (17 bar)
Operating temperature:	
Plastic bowl	-13°F to 125°F (-25°C to 52°C)
Metal bowl	-13°F to 150°F (-25°C to 65.6°C)
Standard filtration:	1.0 and 0.01 micron
Adsorber	Max. oil carryover (ppm w/w) 0.003 @ 70°F (21°C)
Flow capacity*:	
1.0 micron coalescing	68 scfm (32 dm^3/s, ANR)
0.01 micron coalescing	42 scfm (20 dm^3/s, ANR)
Activated carbon adsorber	72 scfm (34 dm^3/s, ANR)
Useful retention†:	2.8 US oz. (85 cm^3)
Weight:	1.10 lb (0.50 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 3 psig (0.2 bar), saturated element.

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

Ordering information:

P33FA | **9** | **6** | **D** | **G** | **M** | **N**

Basic Series

Global Modular Standard Coalescing Filter	P33FA

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

1/2	4
3/4	6

Element

0.01µ Element	C
0.01µ Element with DPI	D
1µ Element	9
1µ Element with DPI	Q
Adsorber	A

Bowl Type

G	Poly Bowl with Bowl Guard
M	Metal Bowl without Sight Gauge
S	Metal Bowl with Sight Gauge

Drain Type

M	Manual Drain
A	Auto Drain

Mounting

N	No Bracket

☐ Most popular.

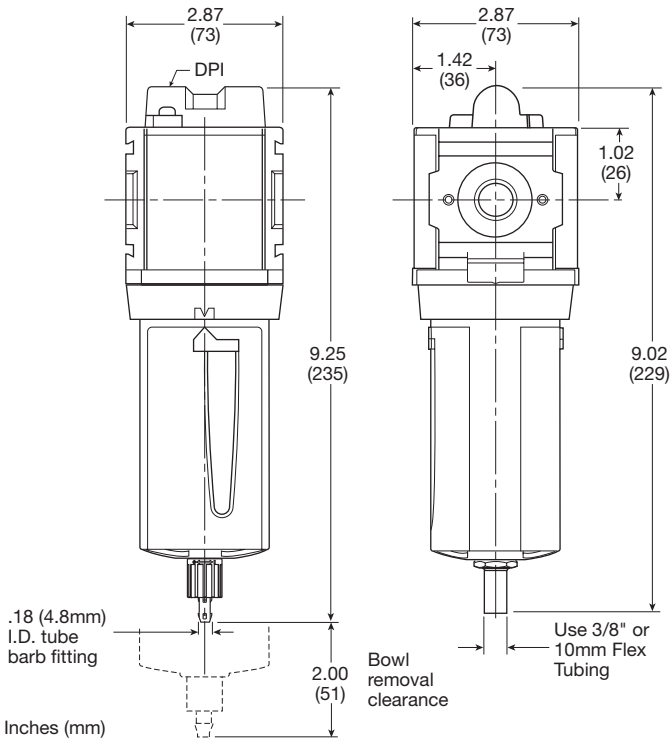
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber	Activated carbon
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

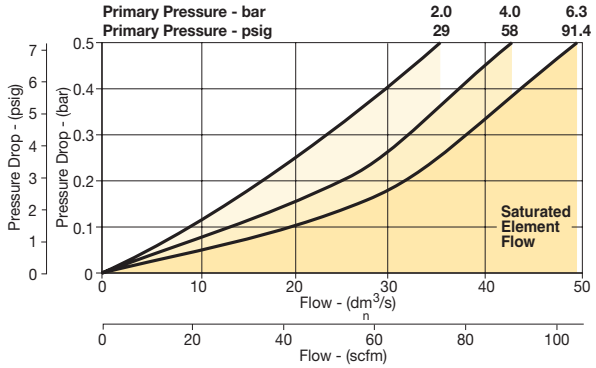
Plastic bowl / bowl guard, manual drain	**P33KA00BGM**
Metal bowl / sight gauge, manual drain	**P33KA00BSM**
Auto drain	**P32KA00DA**
1µ coalescing filter element	**P33KA00ES9**
0.01µ coalescing filter element	**P33KA00ESC**
Activated carbon adsorber filter element	**P33KA00ESA**
L-bracket (fits to body)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



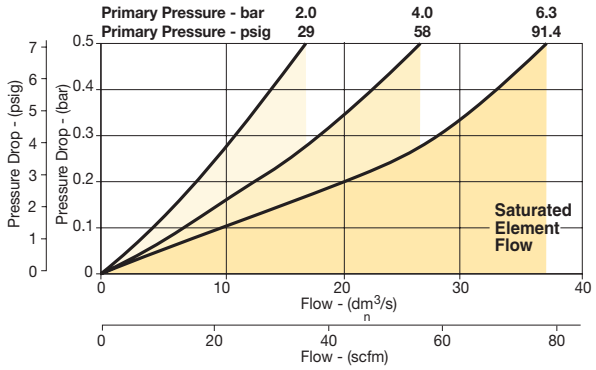
Manual Drain **Automatic Drain**

Flow Charts

P33FA - 1.0 micron flow

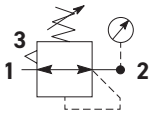


P33FA - 0.01 micron flow

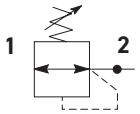


P31 Regulators – Mini

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



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	Square	**P31RB92BN5P**

Operating information

Flow capacity*:	1/4	73 scfm (34 dm³/s, ANR)
Operating temperature†:		-4°F to 150°F (-20°C to 65.5°C)
Supply pressure (max):		300 psig (20 bar)
Adjusting range pressure:		30 psig (0-2 bar) 60 psig (0-4 bar) 125 psig (0-8 bar) 232 psig (0-16 bar)
Weight:		0.37 lb (0.17 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 100 psig (6.9 bar) and 14.5 psig (1 bar) pressure drop. .
† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

Ordering Information:

P31RB 9 2 B N 5 P

Basic Series

Global Modular Mini Regulator	P31RB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

1/4	2

Relief

Relieving	B
Non-Relieving	N
Reverse Flow - Relieving	R

Adjustment

N	Non-Rising Knob

Adjustment Range With Square Gauge

psig	Bar	MPa
1 = 30*	V = 2*	2 = 0.2*
3 = 60	S = 4	4 = 0.4
5 = 125	T = 8	6 = 0.8
7 = 232	W = 16	8 = 1.6

* Regulator comes with gauge respective to the adjustment range available.

Mounting

P	Plastic Panel Mount Nut

☐ Most popular.

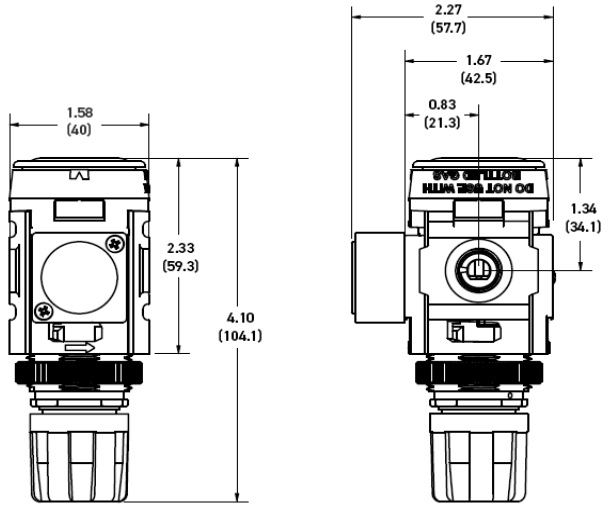
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Stainless steel / Nitrile
Valve assembly	Acetal/ Nitrile
Springs	Steel
Seals	Nitrile
Panel nut	Acetal
Bottom Cap	Glass-filled nylon

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**



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

⚠ WARNING

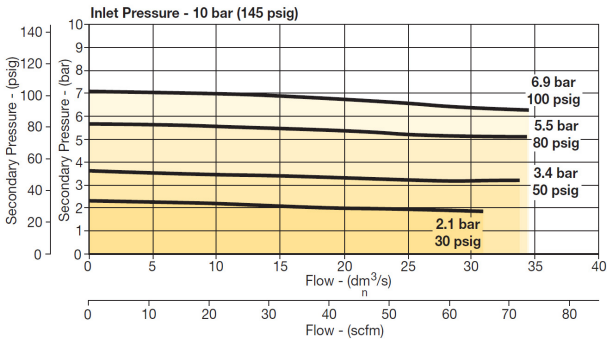
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

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

P31RB 1/4" Regulator



Gauges (*see note below)

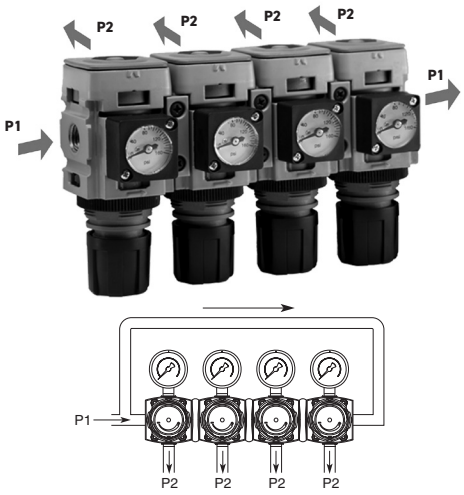
Square flush mount gauge	0-060 psig	**P31KA060XB**
	0-160 psig	**P31KA160XB**
	0-290 psig	**P31KA290XB**
	0-4 bar	**P31KA04BXB**
	0-11 bar	**P31KA11BXB**
	0-20 bar	**P31KA20BXB**
	0-0.4 MPa	**P31KA04MXB**
	0-1.1 MPa	**P31KA11MXB**
	0-2.0 MPa	**P31KA20MXB**
Square flush mount gauge	0-4 bar	**K4511SCR04B**
	0-11 bar	**K4511SCR11B**
	0-60 psig	**K4511SCR060**
	0-160 psig	**K4511SCR160**
Square with adapter kit	0-4 bar	**P6G-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
1.00" Round 1/8" center back mount	0-60 psig / 1-4 bar	**K4510N18060**
	0-160 psig / 0-11 bar	**K4510N18160**
40mm Round 1/8" center back mount (not for use with common port regulators)	0-30 psig / 0-2 bar	**K4515N18030**
	0-60 psig / 0-4 bar	**K4515N18060**
	0-160 psig / 0-11bar	**K4515N18160**

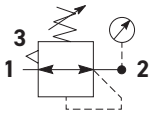
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

***For P31 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.**

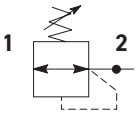
P31 Common P1 Regulators – Mini

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





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	Square	**P31HB92BN5P**

Operating information

Flow capacity*:	
1/4	64 scfm (31 dm³/s, ANR)
Operating temperature:	-4°F to 150°F (-20°C to 65.5°C)
Supply pressure (max):	300 psig (20 bar)
Adjusting range pressure:	30 psig (0-2 bar) 60 psig (0-4 bar) 125 psig (0-8 bar) 232 psig (0-16 bar)
P1 port size (inlet/outlet)	1/4 NPT, BSPP, BSPT
P2 regulated ports (2 ea.)	1/8 NPT, BSPP, BSPT
Weight:	0.66 lb (0.30 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 100 psig (6.9 bar) and 14.5 psig (1 bar) pressure drop.

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

Ordering Information:

P31HB | **9** | **2** | **B** | **N** | **5** | **P**

Basic Series

Global Modular Mini Common Regulator	P31HB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size †

1/4	2

† Working port 1/8".

Relief

Relieving	B
Non-Relieving	N
Reverse Flow - Relieving	R

Adjustment

N	Non-Rising Knob

Adjustment Range With Square Gauge

psig	Bar	MPa
1 = 30*	V = 2*	2 = 0.2*
3 = 60	S = 4	4 = 0.4
5 = 125	T = 8	6 = 0.8
7 = 232	W = 16	8 = 1.6

* Regulator comes with gauge respective to the adjustment range available.

Mounting

P	Plastic Panel Mount Nut

☐ Most popular.

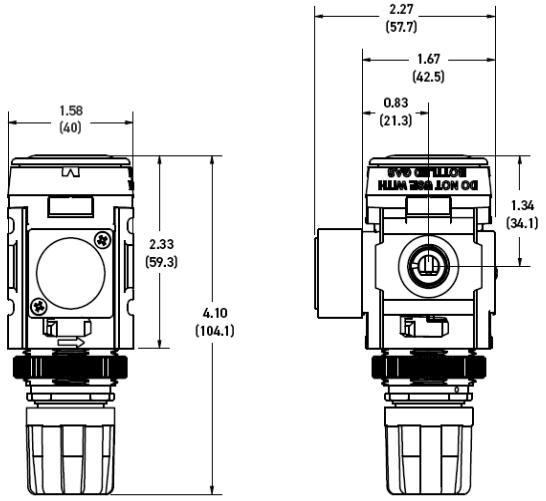
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Materials of Construction

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Stainless steel / Nitrile
Valve assembly	Acetal / Nitrile

Repair and Service Kits

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



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

⚠ WARNING

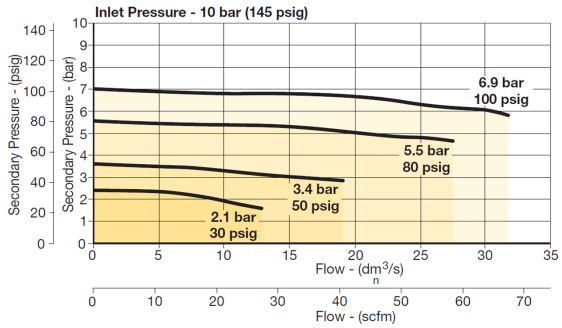
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

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

P31HB 1/4" Common Regulator



Gauges (*see note below)

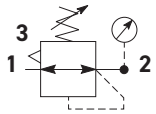
Square flush mount gauge	0-160 psig	**P31KA060XB**
	0-160 psig	**P31KA160XB**
	0-290 psig	**P31KA290XB**
	0-4 bar	**P31KA04BXB**
	0-11 bar	**P31KA11BXB**
	0-20 bar	**P31KA20BXB**
	0-0.4 MPa	**P31KA04MXB**
	0-1.1 MPa	**P31KA11MXB**
	0-2.0 MPa	**P31KA20MXB**
Square flush mount gauge	0-4 bar	**K4511SCR04B**
	0-11 bar	**K4511SCR11B**
	0-60 psig	**K4511SCR060**
	0-160 psig	**K4511SCR160**
Square with adapter kit	0-4 bar	**P6G-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
1.00" Round 1/8" center back mount	0-60 psig / 1-4 bar	**K4510N18060**
	0-160 psig / 0-11 bar	**K4510N18160**
40mm Round 1/8" center back mount (not for use with common port regulators)	0-30 psig / 0-2 bar	**K4515N18030**
	0-60 psig / 0-4 bar	**K4515N18060**
	0-160 psig / 0-11bar	**K4515N18160**

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

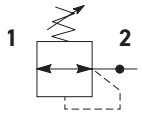
***For P31 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.**

P32 Regulators – Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Regulator will reverse flow as standard
- Non-rising knob
- Available T-handle



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	**P32RB92BNNP**
1/4"	125 psig (8 bar)	Round	**P32RB92BNGP**
3/8"	125 psig (8 bar)	None	**P32RB93BNNP**
3/8"	125 psig (8 bar)	Round	**P32RB93BNGP**
1/2"	125 psig (8 bar)	None	**P32RB94BNNP**
1/2"	125 psig (8 bar)	Round	**P32RB94BNGP**

Operating information

Flow capacity*:	
1/4	148 scfm (70 dm^3/s, ANR)
3/8, 1/2	165 scfm (78 dm^3/s, ANR)
Operating temperature:	-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):	300 psig (20 bar)
Adjusting range pressure:	30 psig (0-2 bar) 60 psig (0-4 bar) 125 psig (0-8 bar) 250 psig (0-17 bar)
Gauge port (2 each)	1/4 NPT, BSPP, BSPT
Weight:	0.90 lb (0.41 kg)

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

Ordering Information:

P32RB 9 2 B N G P

Basic Series

Global Modular Compact Regulator	P32RB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

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

Relief

Relieving	B
Non-Relieving	N

Adjustment

N	Non-Rising Knob
T	T-Handle

Mounting

P	Plastic Panel Mount Nut

Adjustment Range

With Square Gauge		With Round Gauge	
psig	Bar		
1 = 30*	V = 2*	Z	30 psig; 2 Bar; 0.2 MPa
3 = 60	S = 4	M	60 psig; 4 Bar; 0.4 MPa
5 = 125	T = 8	G	125 psig; 8 Bar; 0.8 MPa
		J	250 psig; 17 Bar; 1.7 MPa
		Without Gauge	
		Y	30 psig; 2 Bar; 0.2 MPa
		L	60 psig; 4 Bar; 0.4 MPa
		N	125 psig; 8 Bar; 0.8 MPa
		H	250 psig; 17 Bar; 1.7 MPa

* Regulator comes with gauge respective to the adjustment range selected.

☐ Most popular.

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

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / Zinc
Valve assembly	Brass / Nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

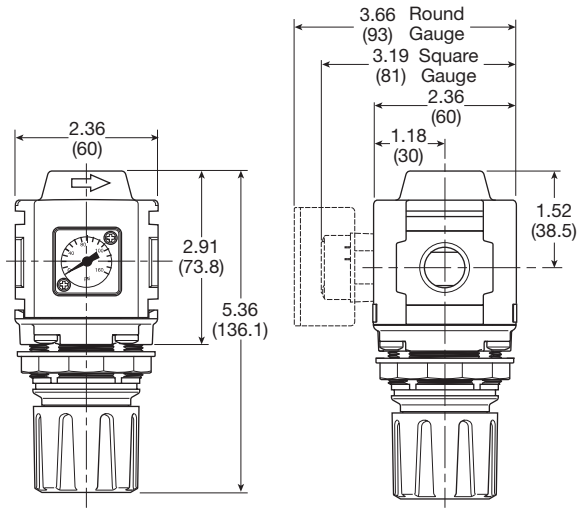
Diaphragm repair kit - relieving	**P32KB00RB**
Diaphragm repair kit - non-relieving	**P32KB00RC**
Panel mount nut - aluminum	**P32KA00MM**
Panel mount nut - plastic	**P32KA00MP**
Angle bracket (attaches via panel nut)	**P32KB00MR**
T-bracket with body connector	**P32KA00MT**
T-bracket	**P32KA00MB**
Body connector	**P32KA00CB**

⚠ 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.

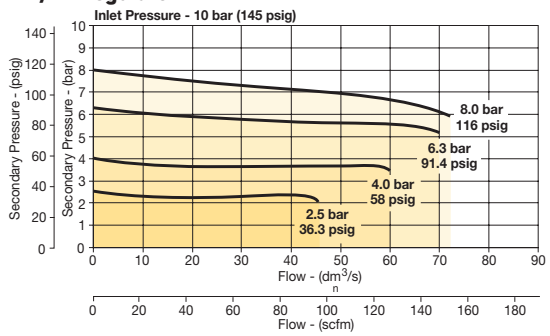


Inches (mm)

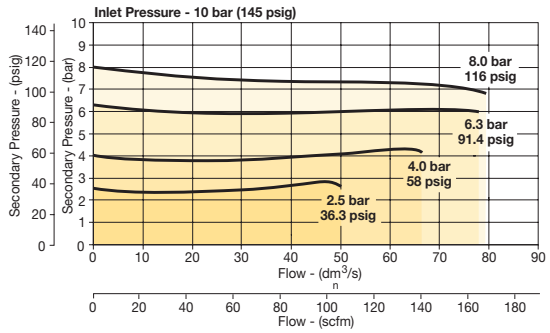
NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

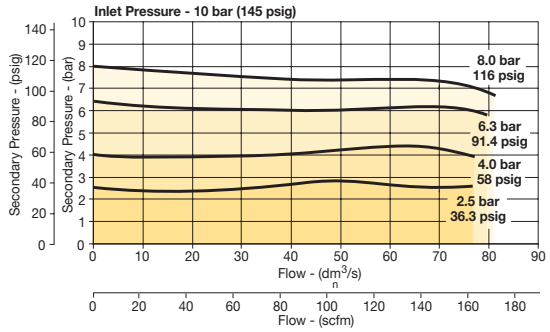
P32RB 1/4" Regulator



P32RB 3/8" Regulator



P32RB 1/2" Regulator



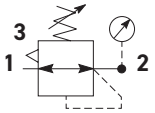
Gauges

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-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

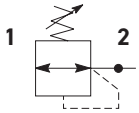
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

P32 Semi-Precision Regulator – Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Regulator will reverse flow as standard
- Non-rising knob



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	**P32RB92PNNP**
1/4"	125 psig (8 bar)	Round	**P32RB92PNGP**
3/8"	125 psig (8 bar)	None	**P32RB93PNNP**
3/8"	125 psig (8 bar)	Round	**P32RB93PNGP**
1/2"	125 psig (8 bar)	None	**P32RB94PNNP**
1/2"	125 psig (8 bar)	Round	**P32RB94PNGP**

Operating information

Flow capacity*: 1/4, 3/8, 1/2	53 scfm (25 dm³/s, ANR)
Effect of supply pressure variation	0.6 psig (0.04 bar) for 25 psig (1.7 bar) change in P1
Operating temperature:	-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):	300 psig (20 bar)
Adjusting range pressure:	0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Gauge port (2 each):	1/4 NPT, BSPP, BSPT
Weight:	0.90 lb (0.41 kg)

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

Ordering Information:

P32RB 9 2 P N G P

Basic Series

Global Modular Compact Regulator	P32RB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

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

Relief

Semi-Precision Relieving	P
Semi-Precision Non-Relieving	T

Adjustment

N	Non-Rising Knob
T	T-Handle

Mounting

P	Plastic Panel Mount Nut

Adjustment Range

With Square Gauge		With Round Gauge	
psig	Bar		
1 = 30*	V = 2*	Z	30 psig; 2 Bar; 0.2 MPa
3 = 60	S = 4	M	60 psig; 4 Bar; 0.4 MPa
5 = 125	T = 8	G	125 psig; 8 Bar; 0.8 MPa
		J	250 psig; 17 Bar; 1.7 MPa
		Without Gauge	
		Y	30 psig; 2 Bar; 0.2 MPa
		L	60 psig; 4 Bar; 0.4 MPa
		N	125 psig; 8 Bar; 0.8 MPa
		H	250 psig; 17 Bar; 1.7 MPa

* Regulator comes with gauge respective to the adjustment range selected.

☐ Most popular.

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

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / zinc
Valve assembly	Brass / nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

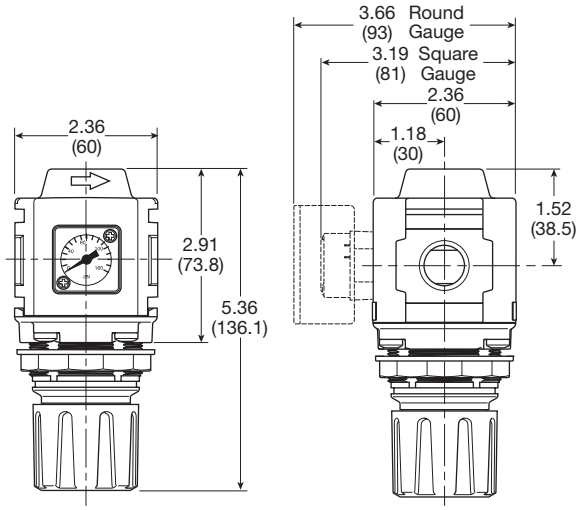
Diaphragm repair kit - relieving	**P32KB00RB**
Diaphragm repair kit - non-relieving	**P32KB00RC**
Panel mount nut - aluminum	**P32KA00MM**
Panel mount nut - plastic	**P32KA00MP**
Angle bracket (attaches via panel nut)	**P32KB00MR**
T-bracket with body connector	**P32KA00MT**
T-bracket	**P32KA00MB**
Body connector	**P32KA00CB**

⚠ 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.

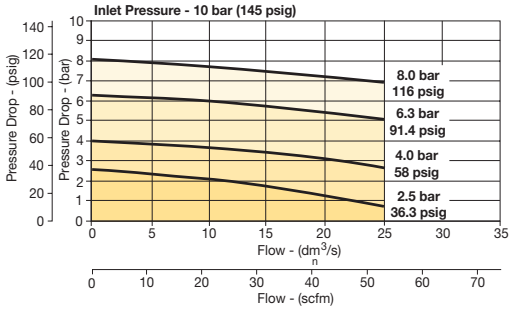


Inches (mm)

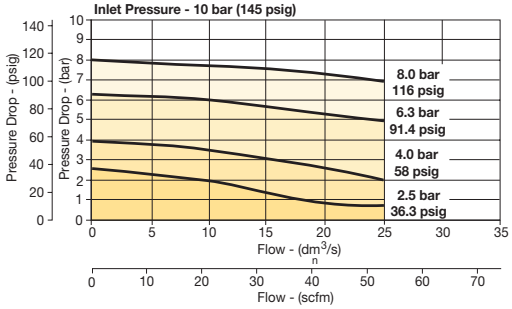
NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

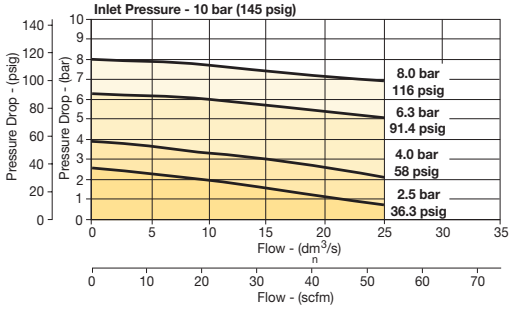
P32RB 1/4" Regulator



P32RB 3/8" Regulator



P32RB 1/2" Regulator



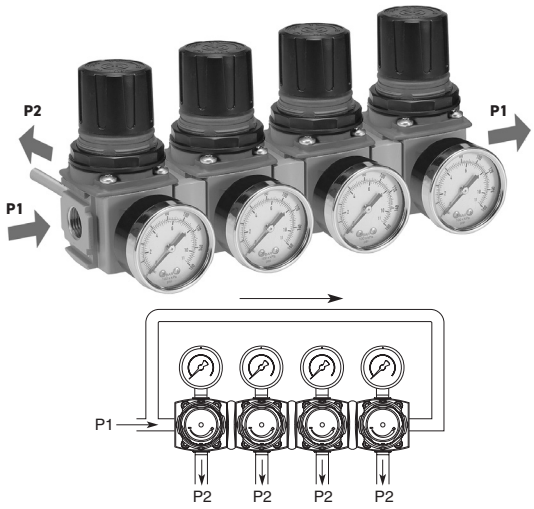
Gauges

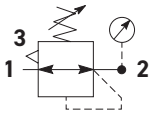
Square flush mount gauge	0-4 bar	**K4511SCR04B**
	0-11 bar	**K4511SCR11B**
	0-60 psig	**K4511SCR060**
	0-160 psig	**K4511SCR160**
Square with adapter kit	0-4 bar	**P6G-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

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

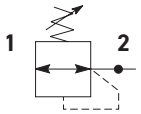
P32 Common - P1 Regulator – Compact

- Manifold style regulator with line pressure on both sides.
- Pressure output is at front or rear.
- Inlet ports 1/4", 3/8" or 1/2" (NPT, BSPP & BSPT)
- Working port 1/4"
- Robust construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Regulator will reverse flow as standard
- Non-rising knob





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	**P32HB92BNNP**
3/8"	125 psig (8 bar)	None	**P32HB93BNNP**
1/2"	125 psig (8 bar)	None	**P32HB94BNNP**

Operating information

Flow capacity*: 1/4, 3/8, 1/2	64 scfm (30 dm^3/s, ANR)
Operating temperature:	-25°C to 65.5°C (-13°F to 150°F)
Supply pressure (max):	300 psig (20 bar)
Adjusting range pressure:	0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 232 psig (0 to 16 bar)
Gauge port (2 each):	1/4 NPT, BSPP, BSPT
Weight:	0.50 lb (0.23 kg)

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

Ordering Information:

P32HB | 9 | 2 | B | N | N | P

Basic Series

Global Modular Compact Regulator	P32HB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size †

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

† Working port 1/4".

Relief

Relieving	B
Non-Relieving	N

Adjustment

N	Non-Rising Knob
T	T-Handle

Adjustment Range

With Square Gauge psig	With Square Gauge Bar	With Round Gauge	
		Z	30 psig; 2 Bar; 0.2 MPa
1 = 30*	V = 2*	M	60 psig; 4 Bar; 0.4 MPa
3 = 60	S = 4	G	125 psig; 8 Bar; 0.8 MPa
5 = 125	T = 8	J	250 psig; 17 Bar; 1.7 MPa
		Without Gauge	
		Y	30 psig; 2 Bar; 0.2 MPa
		L	60 psig; 4 Bar; 0.4 MPa
		N	125 psig; 8 Bar; 0.8 MPa
		H	250 psig; 17 Bar; 1.7 MPa

* Regulator comes with gauge respective to the adjustment range selected.

Mounting

P	Plastic Panel Mount Nut

☐ Most popular.

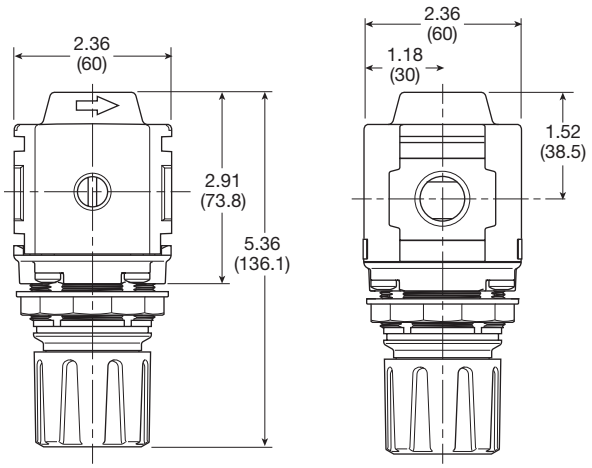
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / zinc
Valve assembly	Brass / nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

Diaphragm repair kit - relieving	**P32KB00RB**
Diaphragm repair kit - non-relieving	**P32KB00RC**
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**

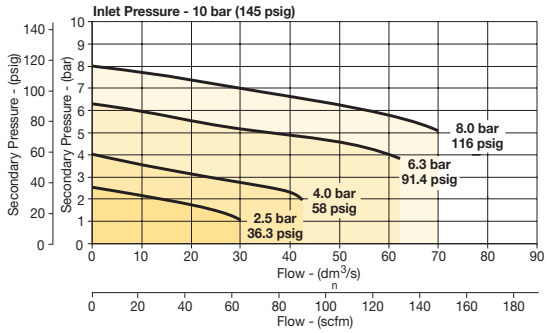


Inches (mm)

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

Flow Charts

P32HB Common Port Regulator



⚠ WARNING

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

CAUTION:

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

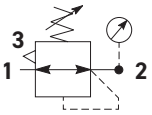
Gauges

Square flush mount gauge	0-4 bar	**K4511SCR04B**
	0-11 bar	**K4511SCR11B**
	0-60 psig	**K4511SCR060**
	0-160 psig	**K4511SCR160**
Square with adapter kit	0-4 bar	**P6G-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

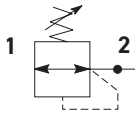
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

P33 Regulators – Standard

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



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/2"	125 psig (8 bar)	None	**P33RA94BNNP**
1/2"	125 psig (8 bar)	Round	**P33RA94BNGP**
3/4"	125 psig (8 bar)	None	**P33RA96BNNP**
3/4"	125 psig (8 bar)	Round	**P33RA96BNGP**

Operating information

Flow capacity*:	
1/2, 3/4	233 scfm (110 dm^3/s, ANR)
Operating temperature:	-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):	300 psig (20 bar)
Adjusting range pressure:	0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Gauge port (2 each):	1/4 NPT, BSPP, BSPT
Weight:	1.37 lb (0.62 kg)

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

Ordering Information:

P33RA 9 6 B N G P

Basic Series	
Global Modular Standard Regulator	P33RA

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/2	4
3/4	6

Relief	
Relieving	B
Non-Relieving	N
Reverse Flow-Relieving	R

Adjustment	
Non-Rising Knob	N

Adjustment Range	
With Round Gauge	
Z	30 psig; 2 Bar; 0.2 MPa
M	60 psig; 4 Bar; 0.4 MPa
G	125 psig; 8 Bar; 0.8 MPa
J	250 psig; 17 Bar; 1.7 MPa
Without Gauge	
Y	30 psig; 2 Bar; 0.2 MPa
L	60 psig; 4 Bar; 0.4 MPa
N	125 psig; 8 Bar; 0.8 MPa
H	250 psig; 17 Bar; 1.7 MPa

Mounting	
P	Plastic Panel Mount Nut

☐ Most popular.

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / zinc
Valve assembly	Brass / nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

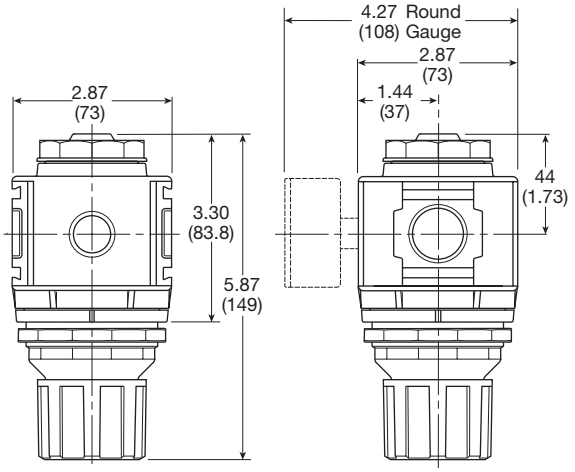
Diaphragm repair kit - relieving	**P33KA00RB**
Diaphragm repair kit - non-relieving	**P33KA00RC**
Panel mount nut - aluminum	**P33KA00MM**
Panel mount nut - plastic	**P33KA00MP**
Angle bracket (attaches via panel nut)	**P33KA00MR**
T-bracket with body connector	**P32KA00MT**
T-bracket	**P32KA00MB**
Body connector	**P32KA00CB**

⚠ 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.

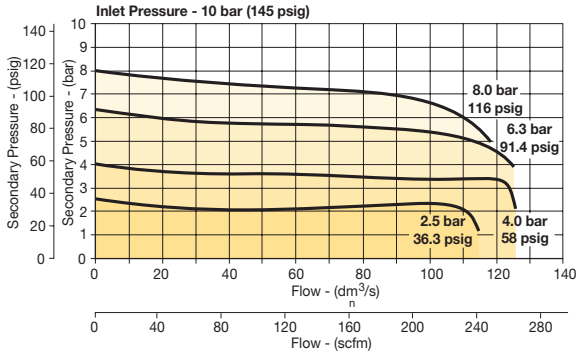


Inches (mm)

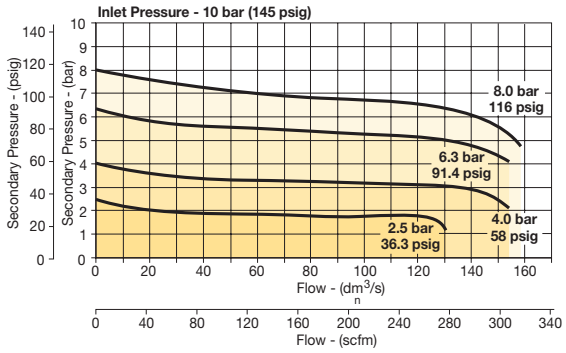
NOTE: 2.40 in. (61mm) hole required for panel nut mounting.

Flow Charts

P33RA 1/2" Regulator



P33RA 3/4" Regulator



Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

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

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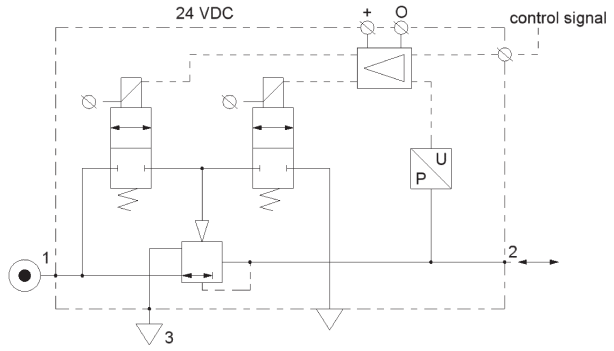
P31P & P32P Proportional Regulators

- Very fast response times
- Accurate output pressure
- 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 Series
Bottom exhaust

P32P Series
Bottom exhaust



Port Size	Description	Part Number
1/4"	145 psig (0-10 bar), NC 0-10V	**P31PA92AD2VD1A**
1/2"	145 psig (0-10 bar), NC 0-10V	**P32PA94AD2VD1A**

Operating information

Flow capacity*:	P31P	40 scfm (19 dm^3/s, ANR)
	P32P	120 scfm (57 dm^3/s, ANR)
Temperature range:		32°F to 122°F (0°C to 50°C)
Supply pressure (max):		
2 bar unit		36.3 psig (2.5 bar)
10 bar unit		152 psig (10.5 bar)
Operating pressure (min):		P2 pressure + 7.3 psig (0.5 bar)
Working medium:		Compressed air or inert gasses, filtered to 40µ
Pressure range:		0 to 30 psig (0 to 2 bar) 0 to 145 psig (0 to 10 bar)
Weight:	P31P	0.64 lb (0.291 kg)
	P32P	1.42 lb (0.645 kg)

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 4.9 psig (0.34 bar) pressure drop.

Ordering Information:

P31PA | **9** | **2** | **A** | **D** | **2** | **V** | **D** | **1** | **A**

Body Size	
Global Modular Mini (1/4")	P31PA
Global Modular Compact (1/2")	P32PA

Thread Type	
BSPP	1
BSPT	2
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

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

Pressure Range	
Z	0 - 29 psig (0 - 2 Bar)
D	0 - 145 psig (0 - 10 Bar)

Power Supply	
2	24 Volts

Control Signal	
V	0-10V‡

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

Input Connector	
1	M12 (4-pin)

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

D) Digital PNP output only, no analog output selectable
P) Digital PNP and analogue 0-10V outputs selectable, by means of parameter 6.(Factory default 0-10V)
N) Digital NPN and analog 0-10 V outputs selectable by means of parameter 6. (Factory default 0-10V)
M) Analog 4-20mA output only.
Note: On all analog outputs the F.S. value can be adjusted by means of parameter 8.

☐ Most popular.

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Technical Information

Accuracy

+/- 1.0% of F.S.*

* 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).

Air consumption

No consumption in stable regulated situation.

Display

The regulator is provided with a digital display, indicating the output pressure, either in bar or psig.
The factory setting is as indicated on the label, can be changed through to software at all times (parameter 14)

Supply voltage

24 VDC +/- 10%

Power consumption

Max. 1.1W with unloaded signal outputs

Control signals

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

Output signals

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

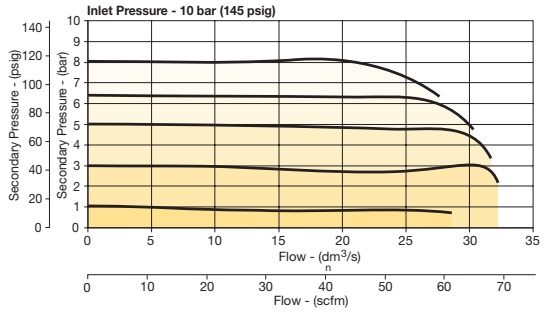
Connections

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

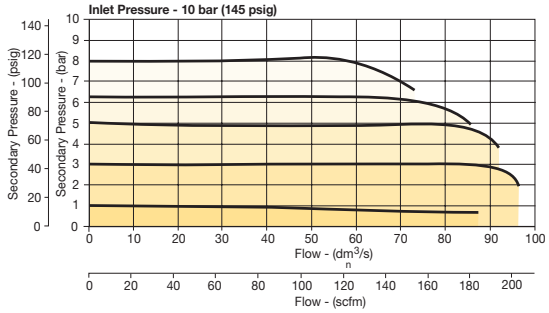
Pin No.		Function	Color
1	24 V	Supply	Brown
2	0 to 10 V	Control Signal Ri = 100k Ω	White
	4 to 20mA	Control Signal Ri = 500 Ω	
3	0 V (GND)	Supply & Set Point Ground	Blue
4	24 V	Alarm Output Signal	Black

Flow Charts

P31P Regulator 1/4" Ports



P32P Regulator 1/2" Ports



Degree of protection: IP65

EU conformity

CE: standard
EMC: according to directive 89/336/EEC

This 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**

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

How to change parameters – How to Videos available at www.pdnetools.com

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)

Parameter Number 0 – Reset Back to Factory Settings

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P00	000. Flashing Decimal	003. Flashing Decimal	003 Flashing	P01
Description	Accesses changeable parameters.	Accesses parameter no. 0.	Displays current parameter value.	Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Control Signal

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

Parameter Number 4 – Set Control Signal in Volts or Milliamps

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P04	001. Flashing Decimal	000. Flashing Decimal	000 Flashing	P05
Description	Accesses changeable parameters.	Accesses parameter no. 4.	Displays current parameter value. 1 = V 0 = mA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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Set Output Signal

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

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

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

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

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

Parameter Number 6 – Set Output Signal

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

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

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P08	100.	###.	###.	P09
			Flashing Decimal (For 2 bar versions value = 92)	Flashing Decimal (Value between 0 and 130)	Flashing	
Description	Accesses changeable parameters.	Accesses parameter no. 8.	Displays current parameter value.	Edits parameter.	Accepts and saves new parameter setting and implements the new analog signal span.	Sequences to next parameter.

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Adjust Digital Display

If necessary, adjustments can be made to the digital display when using an external pressure sensor.

Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P09	###	###	###	P 10
			Flashing Decimal	Flashing Decimal	Flashing	
Description	Accesses changeable parameters.	Accesses parameter no. 9.	Displays current digital display	Use up or down arrows and accept to adjust the display value if using an external pressure sensor.	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Pressure Scale

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

Parameter Number 14 – Set Pressure Scale in psig or bar

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 14	001.	000.	000	P 15
			Flashing Decimal	Flashing Decimal	Flashing	
Description	Accesses changeable parameters.	Accesses parameter no. 14.	Displays current parameter value. 1 = psig 0 = bar 2 = MPa	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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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

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 18	000. Flashing Decimal	# # #. Flashing Decimal (value between 0 and 200)	# # # Flashing	P 19
Description	Accesses changeable parameters.	Accesses parameter no. 18.	Displays current parameter value. Incremental value is: 2 bar unit: x 2 mbar x % P19 10 bar unit: x 10 mbar x % P19	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 19	100. Flashing Decimal	# # #. Flashing Decimal (value between 0 and 100)	# # # Flashing	P20
Description	Accesses changeable parameters.	Accesses parameter no. 19.	Displays current parameter value. Incremental value is: % of F.S.	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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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

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P20	003. Flashing Decimal	###. Flashing Decimal (value between 0 and 5)	### Flashing	P21
Description	Accesses changeable parameters.	Accesses parameter no. 20.	Displays current parameter value.	Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)	Accepts and saves new parameter setting.	Sequences to next parameter.

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

Fine Settings
Set Proportional Band

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

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

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P12	100. Flashing Decimal	###. Flashing Decimal (value between 50 and 250)	### Flashing	P13
Description	Accesses changeable parameters.	Accesses parameter no. 12.	Displays current parameter value. Incremental value is: x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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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)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 13	0 15. Flashing Decimal	# # #. Flashing Decimal (value between 4 and 40)	# # # Flashing	P 14
Description	Accesses changeable parameters.	Accesses parameter no. 13.	Displays current parameter value. Incremental value is x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Proportional Effect

Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P21	0 10. Flashing Decimal	# # #. Flashing Decimal (value between 5 and 100)	# # # Flashing	P22
Description	Accesses changeable parameters.	Accesses parameter no. 21.	Displays current parameter value.	Edits parameter. 5 = fastest regulation 100 = slowest regulation.	Accepts and saves new parameter setting.	Sequences to next parameter.

Parameter Number 39 – Displays Current Software Version

Step	1	2	3
Press	acc 3-6 seconds	▼ or ▲	acc
Until Display Reads	Pxx	P39	# # # Flashing Decimal
Description	Accesses changeable parameters.	Accesses parameter no. 39.	Displays current parameter value. XXX = current software version

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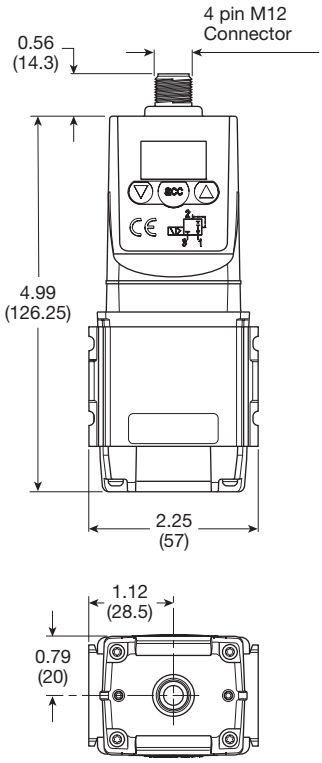
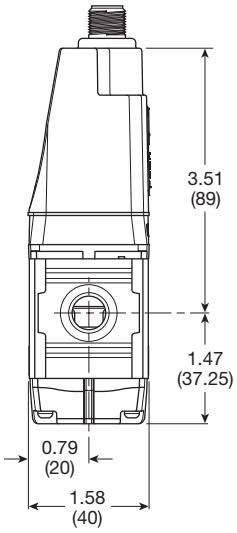
P31P

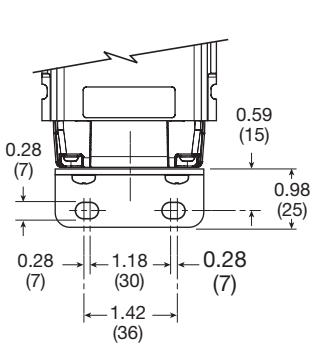
Dimensions inches (mm)

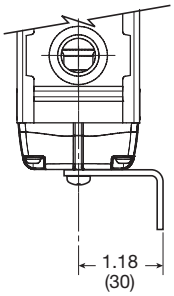


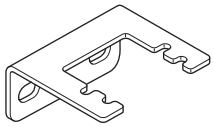


L-Bracket

P3HKA00ML

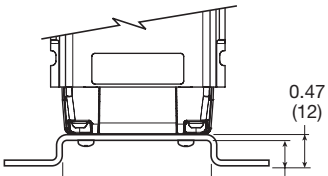


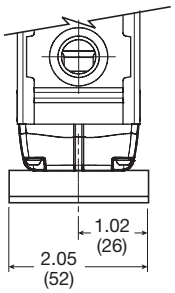


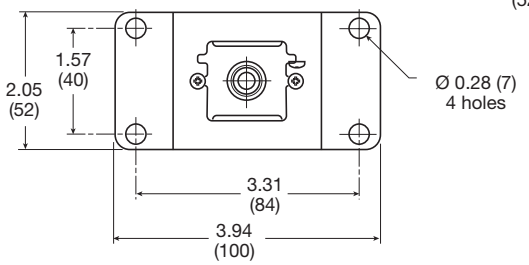


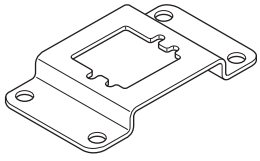
Foot Bracket

P3HKA00MC









Cables

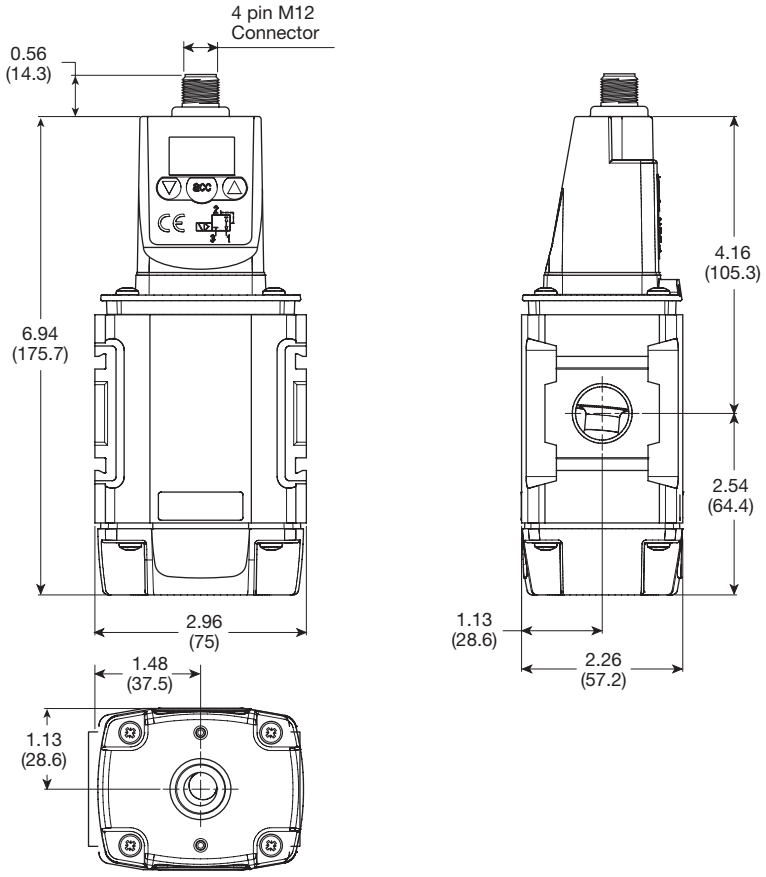
Description	Part Number
2 mtr. cable with moulded straight M12x1 connector	**CB-M12-4P-2M**

Most popular.

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

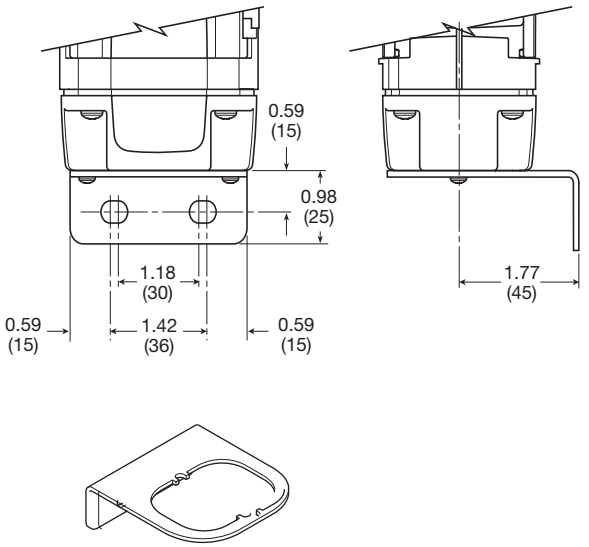
P32P

Dimensions inches (mm)



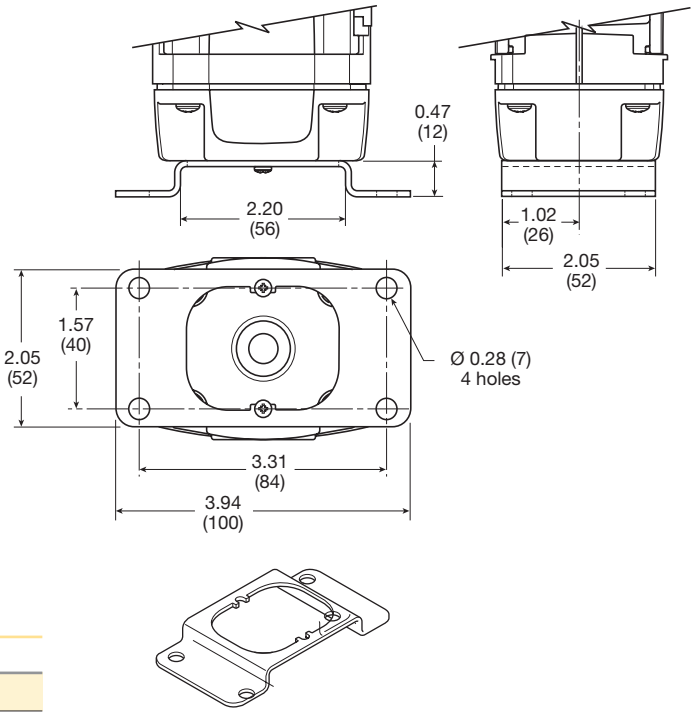
L-Bracket

P3KKA00ML



Foot Bracket

P3KKA00MC



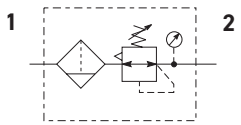
Cables

Description	Part Number
2 mtr. cable with moulded straight M12x1 connector	**CB-M12-4P-2M**

Most popular.

P31 Filter / Regulators – Mini

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



Port Size	Description (Relieving)	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	**P31EB92EGMBN5P**
1/4"	125 psig (8 bar)	Poly / Pulse	**P31EB92EGBBN5P**
1/4"	125 psig (8 bar)	Metal / Manual	**P31EB92EMMBN5P**
1/4"	125 psig (8 bar)	Metal / Pulse	**P31EB92EMBBN5P**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:	1/4	73 scfm (35 dm³/s, ANR)
Operating temperature†:		
Plastic bowl		14°F to 125°F (-10°C to 52°C)
Metal bowl		14°F to 150°F (-10°C to 65.5°C)
Supply pressure (max):		
Plastic bowl		150 psig (10 bar)
Metal bowl		250 psig (17 bar)
Standard filtration		5 micron
Useful retention†:		0.4 US oz. (12 cm³)
Adjusting range pressure:		0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Weight:		0.42 lb (0.19 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 100 psig (6.9 bar) and 14.5 psig (1 bar) pressure drop.
‡ Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)
† Useful retention refers to volume below the quiet zone baffle.

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

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

Ordering Information:

P31EB | 9 | 2 | E | G | M | B | N | 5 | P

Basic Series

Global Modular Mini Filter / Regulator	P31EB

Thread Type

BSPP	1
BSPT	2
NPT	9

Element

5µ Element	E

Port Size

1/4	2

Bowl Type

Poly Bowl with Bowl Guard	G
Metal Bowl without Sight Gauge	M

Drain Type

Pulse Drain	B
Manual Drain	M

Relief

B	Relieving
N	Non-Relieving

Adjustment

N	Non-Rising Knob

Adjustment Range

With Square Gauge		
psig	Bar	MPa
1 = 30*	V = 2*	2 = 0.2*
3 = 60	S = 4	4 = 0.4
5 = 125	T = 8	6 = 0.8
7§ = 232	W§ = 16	8§ = 1.6

* Regulator comes with gauge respective to the adjustment range available.
§ Not available with poly bowl with bowl guard.

Mounting

P	Plastic Panel Mount Nut

☐ Most popular.

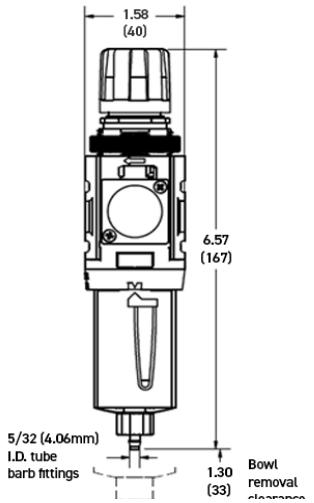
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

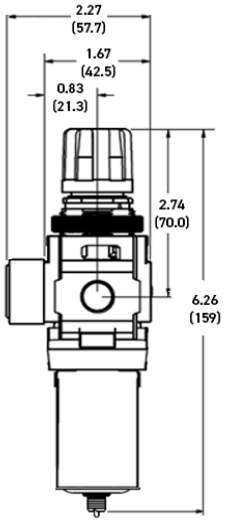
Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element	Polyethylene
Seals	Nitrile
Springs	Steel
Valve assembly	Acetal / Nitrile
Diaphragm assembly	Stainless Steel / Nitrile
Panel nut	Acetal

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	**P31KB00BMB**
5µ particle filter element	**P31KA00ESE**
Panel mount nut - aluminum	**P31KA00MM**
Panel mount nut - plastic	**P31KA00MP**
Angle bracket (attaches via panel nut)	**P31KB00MR**
C-bracket (fits to body)	**P31KA00MW**
T-bracket with body connector	**P31KA00MT**
Body connector	**P31KA00CB**



Manual Drain



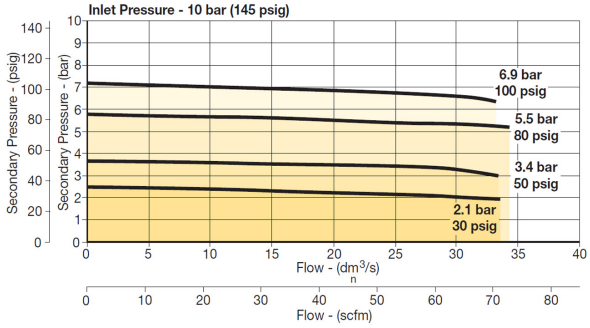
Pulse Drain

⚠ WARNING

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

Flow Charts

P31EB 1/4" Filter / Regulator



Gauges (*see note below)

Square flush mount gauge	0-60 psig	**P31KA060XB**
	0-160 psig	**P31KA160XB**
	0-290 psig	**P31KA290XB**
	0-4 bar	**P31KA04BXB**
	0-11 bar	**P31KA11BXB**
	0-20 bar	**P31KA20BXB**
	0-0.4 MPa	**P31KA04MXB**
	0-1.1 MPa	**P31KA11MXB**
	0-2.0 MPa	**P31KA20MXB**
Square flush mount gauge	0-4 bar	**K4511SCR04B**
	0-11 bar	**K4511SCR11B**
	0-60 psig	**K4511SCR060**
	0-160 psig	**K4511SCR160**
Square with adapter kit	0-4 bar	**P6G-PR10040**
	0-11 bar	**P6G-PR10110**
	0-60 psig	**P6G-PR90060**
	0-160 psig	**P6G-PR90160**
1.00" Round 1/8" center back mount	0-60 psig / 1-4 bar	**K4510N18060**
	0-160 psig / 0-11 bar	**K4510N18160**
40mm Round 1/8" center back mount (not for use with common port regulators)	0-30 psig / 0-2 bar	**K4515N18030**
	0-60 psig / 0-4 bar	**K4515N18060**
	0-160 psig / 0-11bar	**K4515N18160**
	0-60 psig	**P31KA060XB**

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

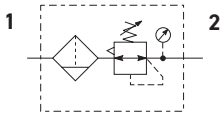
***For P31 Regulators with date code after November 2023 (4423 Date Code), please use these part numbers when ordering a replacement gauge.**

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.

P32 Filter / Regulators – Compact

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



Port Size	Description (Relieving)	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	**P32EB92EGMBNGP**
1/4"	125 psig (8 bar)	Poly / Auto	**P32EB92EGABNGP**
1/4"	125 psig (8 bar)	Metal / Manual	**P32EB92ESMBNGP**
1/4"	125 psig (8 bar)	Metal / Auto	**P32EB92ESABNGP**
3/8"	125 psig (8 bar)	Poly / Manual	**P32EB93EGMBNGP**
3/8"	125 psig (8 bar)	Poly / Auto	**P32EB93EGABNGP**
3/8"	125 psig (8 bar)	Metal / Manual	**P32EB93ESMBNGP**
3/8"	125 psig (8 bar)	Metal / Auto	**P32EB93ESABNGP**
1/2"	125 psig (8 bar)	Poly / Manual	**P32EB94EGMBNGP**
1/2"	125 psig (8 bar)	Poly / Auto	**P32EB94EGABNGP**
1/2"	125 psig (8 bar)	Metal / Manual	**P32EB94ESMBNGP**
1/2"	125 psig (8 bar)	Metal / Auto	**P32EB94ESABNGP**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:	1/4	148 scfm (70 dm3/s, ANR)
	3/8	158 scfm (75 dm3/s, ANR)
	1/2	164 scfm (77 dm3/s, ANR)
Operating temperature:		
Plastic bowl		-13°F to 125°F (-25°C to 52°C)
Metal bowl		-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):		
Plastic bowl		150 psig (10 bar)
Metal bowl		250 psig (17 bar)
Standard filtration:		5 micron
Useful retention†:		1.7 US oz. (51 cm^3)
Adjusting range pressure:		0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Gauge port (2 each):		1/4 NPT, BSPP, BSPT
Weight:		1.17 lb (0.53 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.
† 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)

Ordering Information:

P32EB | **9** | **2** | **E** | **G** | **M** | **B** | **N** | **5** | **P**

Basic Series
Global Modular Compact Filter / Regulator — P32EB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

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

Element
5µ Element — E

Bowl Type

Poly Bowl with Bowl Guard	G
Metal Bowl without Sight Gauge	M
Metal Bowl with Sight Gauge	S

Drain Type

Manual Drain	M
Auto Drain	A
Flex Drain	X

Relief

B	Relieving
N	Non-Relieving

Adjustment

N	Non-Rising Knob
T	T-Handle

Mounting

	Plastic
P	Panel Mount Nut

Adjustment Range

With Square Gauge		With Round Gauge	
psig	Bar		
1 = 30*	V = 2*	Z	30 psig; 2 Bar; 0.2 MPa
3 = 60	S = 4	M	60 psig; 4 Bar; 0.4 MPa
5 = 125	T = 8	G	125 psig; 8 Bar; 0.8 MPa
		J§	250 psig; 17 Bar; 1.7 MPa
		Without Gauge	
		Y	30 psig; 2 Bar; 0.2 MPa
		L	60 psig; 4 Bar; 0.4 MPa
		N	125 psig; 8 Bar; 0.8 MPa
		H§	250 psig; 17 Bar; 1.7 MPa

* Regulator comes with gauge respective to the adjustment range selected.
§ Not available with poly bowl with bowl guard.

☐ Most popular.

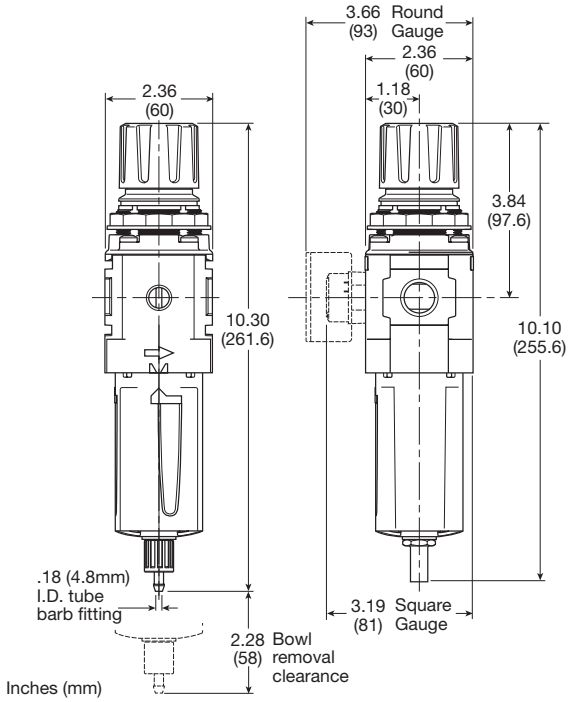
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element polyethylene	Sintered
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

Repair and Service Kits

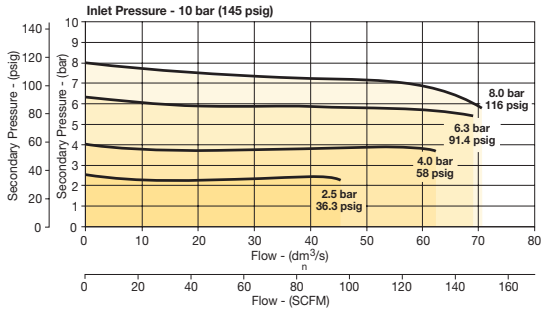
Plastic bowl / bowl guard manual drain	**P32KB00BGM**
Metal bowl / sight gauge manual drain	**P32KB00BSM**
Auto drain	**P32KA00DA**
5µ particle filter element	**P32KA00ESE**
Diaphragm repair kit - relieving	**P32KB00RB**
Diaphragm repair kit - non-relieving	**P32KB00RC**
Panel mount nut - aluminum	**P32KA00MM**
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**



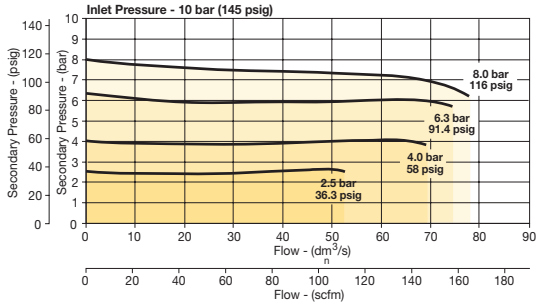
Manual Drain **Automatic Drain**

Flow Charts

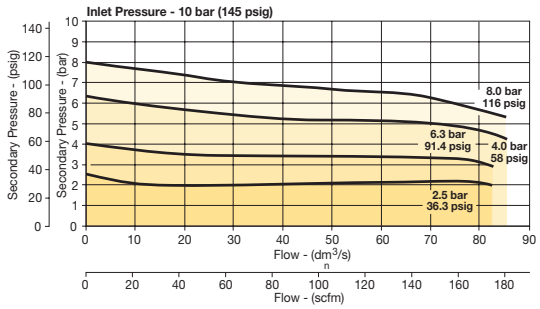
P32EB 1/4" Filter / Regulator



P32EB3/8" Filter/Regulator



P32EB 1/2" Filter/Regulator



⚠ WARNING

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

CAUTION:

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

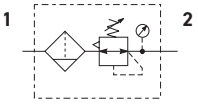
Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

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

P32 Semi-Precision Filter / Regulators – Compact

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



Port Size	Description / Relieving	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	**P32EB92EGMPNGP**
1/4"	125 psig (8 bar)	Poly / Auto	**P32EB92EGAPNGP**
1/4"	125 psig (8 bar)	Metal / Manual	**P32EB92ESMPNGP**
1/4"	125 psig (8 bar)	Metal / Auto	**P32EB92ESAPNGP**
3/8"	125 psig (8 bar)	Poly / Manual	**P32EB93EGMPNGP**
3/8"	125 psig (8 bar)	Poly / Auto	**P32EB93EGAPNGP**
3/8"	125 psig (8 bar)	Metal / Manual	**P32EB93ESMPNGP**
3/8"	125 psig (8 bar)	Metal / Auto	**P32EB93ESAPNGP**
1/2"	125 psig (8 bar)	Poly / Manual	**P32EB94EGMPNGP**
1/2"	125 psig (8 bar)	Poly / Auto	**P32EB94EGAPNGP**
1/2"	125 psig (8 bar)	Metal / Manual	**P32EB94ESMPNGP**
1/2"	125 psig (8 bar)	Metal / Auto	**P32EB94ESAPNGP**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*: 1/4, 3/8, 1/2	75 scfm (35 dm³/s, ANR)
Effect of supply pressure variation	0.6 psig (0.04 bar) for 25 psig (1.7 bar) change in P1
Operating temperature:	
Plastic bowl	-13°F to 125°F (-25°C to 52°C)
Metal bowl	-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):	
Plastic bowl	150 psig (10 bar)
Metal bowl	250 psig (17 bar)
Standard filtration:	5 micron
Useful retention†:	1.7 US oz. (51 cm³)
Adjusting range pressure:	0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Gauge port (2 each):	1/4 NPT, BSPP, BSPT
Weight:	1.17 lbs (0.53 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.
† 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)

Ordering Information:

P32EB | 9 | 2 | E | G | M | P | N | G | P

Basic Series
Global Modular Compact Filter / Regulator — P32EB

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

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

Element
5µ Element — E

Bowl Type

Poly Bowl with Bowl Guard	G
Metal Bowl without Sight Gauge	M
Metal Bowl with Sight Gauge	S

Drain Type

Manual Drain	M
Auto Drain	A

Relief

P	Semi-Precision Relieving
T	Semi-Precision Non-Relieving

Adjustment

N	Non-Rising Knob
T	T-Handle

Mounting

P	Plastic Panel Mount Nut

Adjustment Range

With Square Gauge		With Round Gauge	
psig	Bar		
1 = 30*	V = 2*	Z	30 psig; 2 Bar; 0.2 MPa
3 = 60	S = 4	M	60 psig; 4 Bar; 0.4 MPa
5 = 125	T = 8	G	125 psig; 8 Bar; 0.8 MPa
		J§	250 psig; 17 Bar; 1.7 MPa
		Without Gauge	
		Y	30 psig; 2 Bar; 0.2 MPa
		L	60 psig; 4 Bar; 0.4 MPa
		N	125 psig; 8 Bar; 0.8 MPa
		H§	250 psig; 17 Bar; 1.7 MPa

* Regulator comes with gauge respective to the adjustment range selected.
§ Not available with poly bowl with bowl guard.

☐ Most popular.

For inventory, lead times, and kit lookup, visit www.pdnplu.com

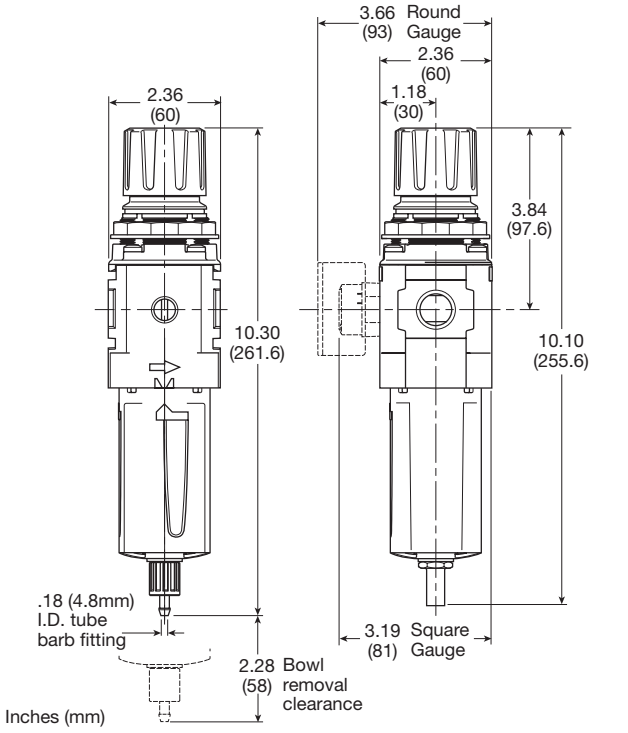
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element polyethylene	Sintered
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

Repair and Service Kits

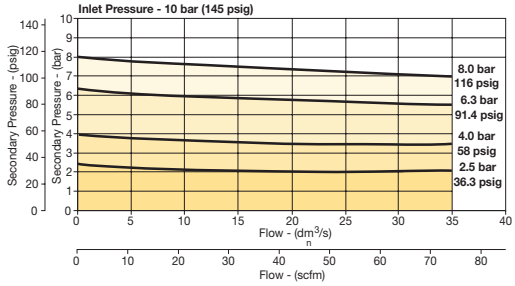
Plastic bowl / bowl guard manual drain	**P32KB00BGM**
Metal bowl / sight gauge manual drain	**P32KB00BSM**
Auto drain	**P32KA00DA**
5µ particle filter element	**P32KA00ESE**
Diaphragm repair kit - relieving	**P32KB00RB**
Diaphragm repair kit - non-relieving	**P32KB00RC**
Panel mount nut - aluminum	**P32KA00MM**
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**



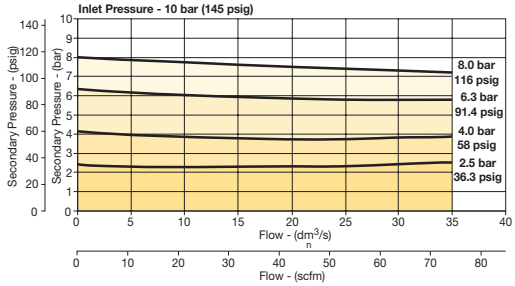
Manual Drain **Automatic Drain**

Flow Charts

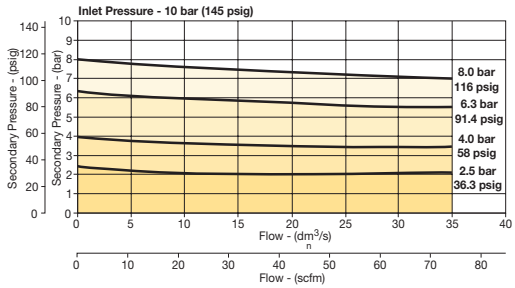
P32EB 1/4" Filter / Regulator



P32EB 3/8" Filter/Regulator



P32EB 1/2" Filter/Regulator



⚠ WARNING

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

CAUTION:

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

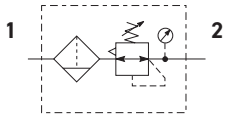
Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

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

P33 Filter / Regulators – Standard

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



Port Size	Description / Relieving	Bowl / Drain Type ‡	Part Number
1/2"	125 psig (8 bar)	Poly / Manual	**P33EA94EGMBNGP**
1/2"	125 psig (8 bar)	Poly / Auto	**P33EA94EGABNGP**
1/2"	125 psig (8 bar)	Metal / Manual	**P33EA94ESMBNGP**
1/2"	125 psig (8 bar)	Metal / Auto	**P33EA94ESABNGP**
3/4"	125 psig (8 bar)	Poly / Manual	**P33EA96EGMBNGP**
3/4"	125 psig (8 bar)	Poly / Auto	**P33EA96EGABNGP**
3/4"	125 psig (8 bar)	Metal / Manual	**P33EA96ESMBNGP**
3/4"	125 psig (8 bar)	Metal / Auto	**P33EA96ESABNGP**

‡ **For polycarbonate bowl, see caution in Engineering Section A.**

Operating information

Flow capacity*:	1/2	200 scfm (94 dm³/s, ANR)
	3/4	235 scfm (109 dm³/s, ANR)
Operating temperature:		
Plastic bowl		-13°F to 125°F (-25°C to 52°C)
Metal bowl		-13°F to 150°F (-25°C to 65.5°C)
Supply pressure (max):		
Plastic bowl		150 psig (10 bar)
Metal bowl		250 psig (17 bar)
Standard filtration:		5 micron
Useful retention†:		2.8 US oz. (85 cm³)
Adjusting range pressure:		0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)
Gauge port (2 each):		1/4 NPT, BSPP, BSPT
Weight:		1.87 lbs (0.85 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.
† 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)

Ordering Information:

P33EA | **9** | **6** | **E** | **G** | **M** | **B** | **N** | **G** | **P**

Basic Series
Global Modular Standard Filter / Regulator — P33EA

Thread Type
BSPP — 1
BSPT — 2
NPT — 9

Port Size
1/2 — 4
3/4 — 6

Element
5µ — E
Element

Bowl Type
Poly Bowl with Bowl Guard — G
Metal Bowl without Sight Gauge — M
Metal Bowl with Sight Gauge — S

Drain Type
M — Manual Drain
A — Auto Drain

Relief
B — Relieving
N — Non-Relieving

Adjustment
N — Non-Rising Knob

Mounting
P — Plastic Panel Mount Nut

Adjustment Range

	With Round Gauge
Z	30 psig; 2 Bar; 0.2 MPa
M	60 psig; 4 Bar; 0.4 MPa
G	125 psig; 8 Bar; 0.8 MPa
J§	250 psig; 17 Bar; 1.7 MPa
	Without Gauge
Y	30 psig; 2 Bar; 0.2 MPa
L	60 psig; 4 Bar; 0.4 MPa
N	125 psig; 8 Bar; 0.8 MPa
H§	250 psig; 17 Bar; 1.7 MPa

§ Not available with poly bowl with bowl guard.

☐ Most popular.

For inventory, lead times, and kit lookup, visit www.pdnplu.com

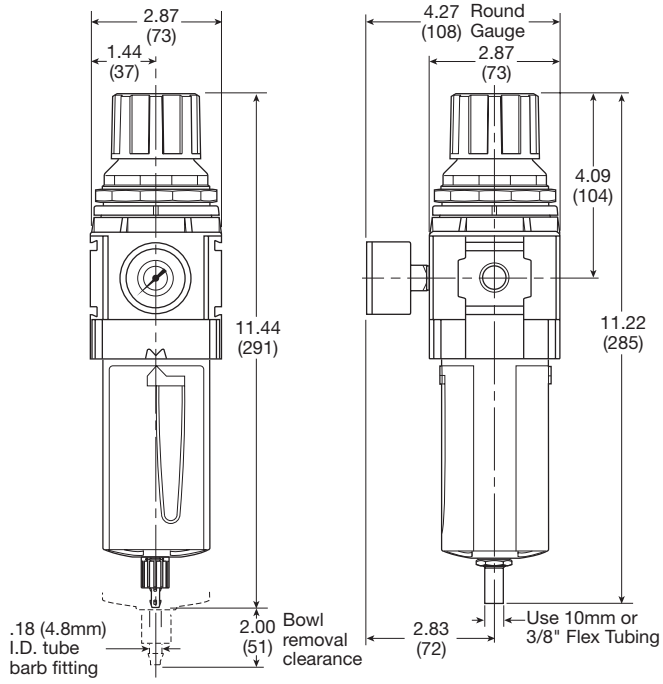
Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element Polyethylene	Sintered
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

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**
Diaphragm repair kit - Relieving	**P33KA00RB**
Diaphragm repair kit - Non-relieving	**P33KA00RC**
Panel mount nut - Aluminum	**P33KA00MM**
Panel mount nut - Plastic	**P33KA00MP**
Angle bracket (fits to panel mount threads)	**P33KA00MR**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P32KA00MT**
Body connector	**P32KA00CB**

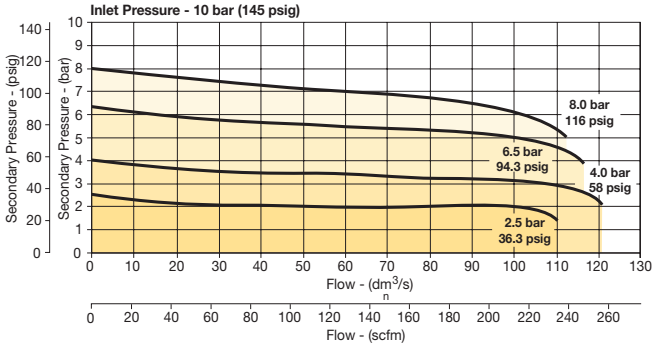


Inches (mm)

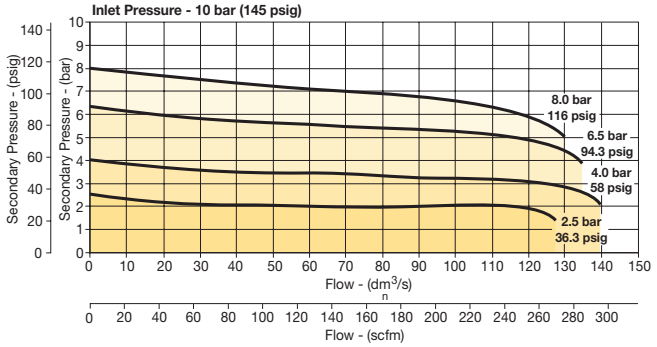
Manual Drain **Automatic Drain**

Flow Charts

P33EA 1/2" Filter / Regulator



P33EA 3/4" Filter/Regulator



⚠ WARNING

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

CAUTION:

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

Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	**K4520N14030**
	0-60 psig / 0-4 bar	**K4520N14060**
	0-160 psig / 0-11 bar	**K4520N14160**
	0-300 psig / 0-20 bar	**K4520N14300**

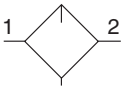
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

For inventory, lead times, and kit lookup, visit www.pdnplu.com

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

P31 Lubricators – Mini

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



Lubricator with drain

Port Size	Description ‡	Part Number
1/4"	Poly Bowl - No Drain	**P31LB92LGNN**
1/4"	Metal Bowl - No Drain	**P31LB92LMNN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:	
1/4	52 scfm (25 dm^3/s, ANR)
Operating temperature:	
Plastic bowl	14°F to 125°F (-10°C to 52°C)
Metal bowl	14°F to 150°F (-10°C to 65.5°C)
Supply pressure (max):	
Plastic bowl	150 psig (10 bar)
Metal bowl	250 psig (17 bar)
Bowl capacity:	0.6 US oz. (18 cm^3)
Weight:	0.29 lb (0.13 kg)

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

Ordering Information:

P31LB 9 2 L G N N

Basic Series
Global Modular Mini Lubricator — P31LB

Thread Type
BSPP 1
BSPT 2
NPT 9

Port Size
1/4 2

Lube Type
Oil Mist Standard Sight Dome L

Bowl Type
G Poly Bowl with Bowl Guard
M Metal Bowl without Sight Gauge

Drain Type
N No Drain Closed End

Mounting
N No Bracket

Suggested Lubricant ..... **F442 Oil**

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

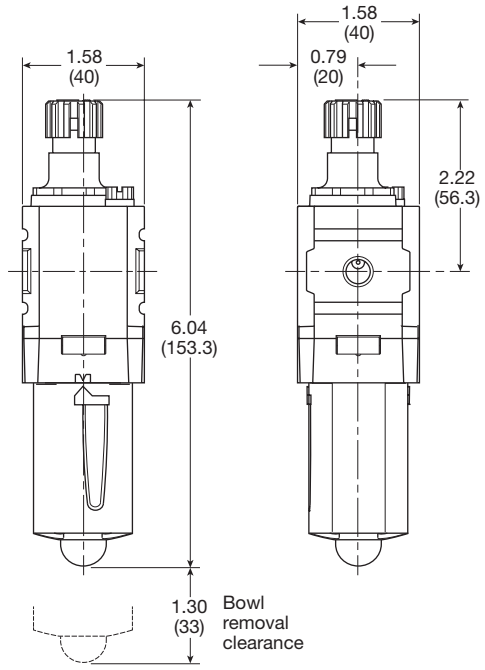
☐ Most popular.

Material Specifications

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

Repair and Service Kits

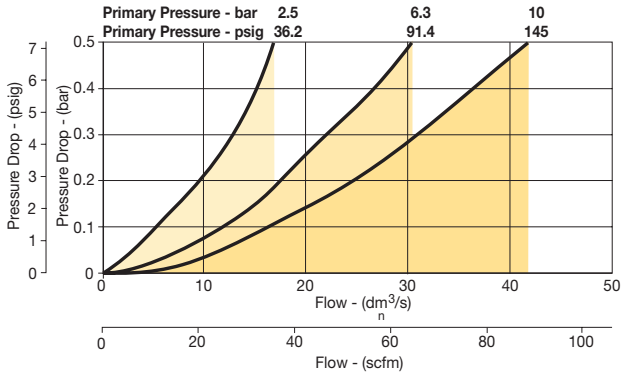
Plastic bowl / bowl guard no drain	**P31KB00BGN**
Metal bowl / w/o sight gauge no drain	**P31KB00BMN**
Drip control assembly	**P32KA00PG**
Fill plug	**P31KA00PL**
C-bracket (fits to body)	**P31KA00MW**
T-bracket with body connector	**P31KA00MT**
Body connector	**P31KA00CB**
Oil (1 quart)	**F442001**
Oil (1 gallon)	**F442002**
Oil (12 quart case)	**F442003**
Oil (4 gallon case)	**F442005**



Inches (mm)

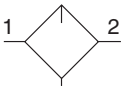
Flow Charts

P31LB 1/4" Lubricator



P32 Lubricators – Compact

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



Lubricator with drain

Port Size	Description ‡	Part Number
1/4"	Poly Bowl - No Drain	**P32LB92LGNN**
1/4"	Metal Bowl - No Drain	**P32LB92LSNN**
3/8"	Poly Bowl - No Drain	**P32LB93LGNN**
3/8"	Metal Bowl - No Drain	**P32LB93LSNN**
1/2"	Poly Bowl - No Drain	**P32LB94LGNN**
1/2"	Metal Bowl - No Drain	**P32LB94LSNN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:	
1/4	38 scfm (17 dm^3/s, ANR)
3/8	70 scfm (33 dm^3/s, ANR)
1/2	90 scfm (42 dm^3/s, ANR)
Operating temperature:	
Plastic bowl	14°F to 125°F (-10°C to 52°C)
Metal bowl	14°F to 150°F (-10°C to 65.5°C)
Supply pressure (max):	
Plastic bowl	150 psig (10 bar)
Metal bowl	250 psig (17 bar)
Bowl capacity:	4.09 US oz. (121 cm^3)
Weight:	0.68 lb (0.31 kg)

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

Ordering Information:

P32LB 9 2 L G N N

Basic Series
Global Modular Compact Lubricator — P32LB

Thread Type
BSPP — 1
BSPT — 2
NPT — 9

Port Size
1/4 — 2
3/8 — 3
1/2 — 4

Lube Type
Oil Mist Standard Sight Dome — L

Bowl Type
G — Poly Bowl With Bowl Guard
S — Metal Bowl With Sight Gauge

Drain Type
N — No Drain Closed End

Mounting
N — No Bracket

Suggested Lubricant ..... **F442 Oil**
Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

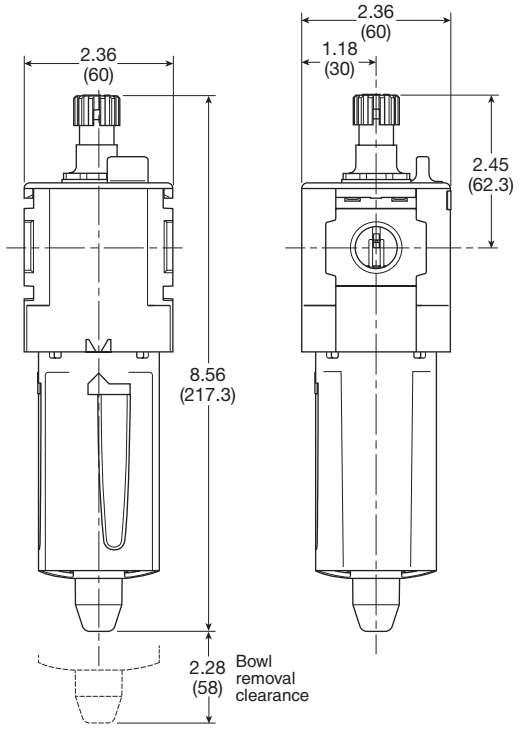
☐ Most popular.

Material Specifications

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

Repair and Service Kits

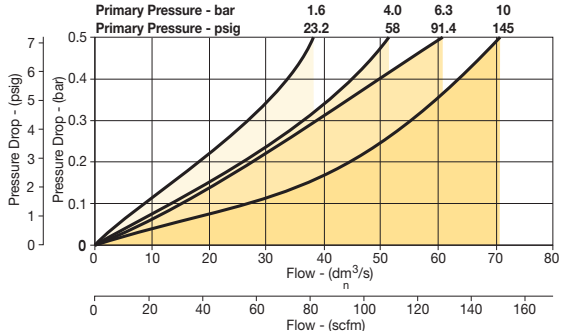
Plastic bowl / bowl guard no drain	**P32KB00BGN**
Metal bowl / w/o sight gauge no drain	**P32KB00BMN**
Metal bowl / Sight gauge no drain	**P32KB00BSN**
Drip control assembly	**P32KA00PG**
Fill plug	**P32KA00PL**
L-bracket (fits to body)	**P32KA00ML**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P32KA00MT**
Body connector	**P32KA00CB**
Oil (1 quart)	**F442001**
Oil (1 galllon)	**F442002**
Oil (12 quart case)	**F442003**
Oil (4 gallon case)	**F442005**



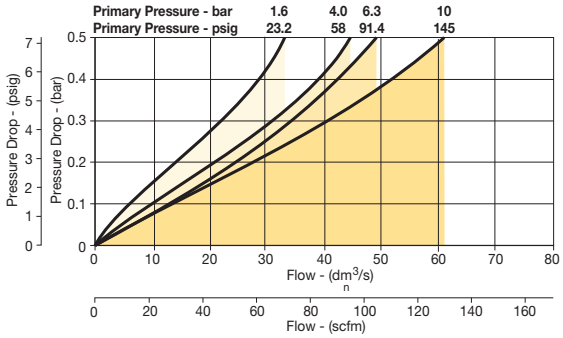
Inches (mm)

Flow Charts

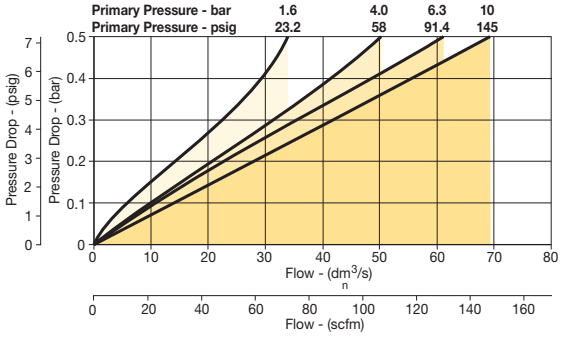
P32LB 1/4" Lubricator



P32LB 3/8" Lubricator



P32LB 1/2" Lubricator



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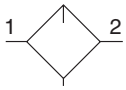
Richland, Michigan
www.parker.com/pneumatics

P33 Lubricators – Standard

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



Lubricator with drain

Port Size	Description ‡	Part Number
1/2"	Poly Bowl - No Drain	**P33LA94LGNN**
1/2"	Metal Bowl - No Drain	**P33LA94LSNN**
3/4"	Poly Bowl - No Drain	**P33LA96LGNN**
3/4"	Metal Bowl - No Drain	**P33LA96LSNN**

‡ For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:	
1/2	110 scfm (52 dm^3/s, ANR)
3/4	150 scfm (71 dm^3/s, ANR)
Operating temperature:	
Plastic bowl	14°F to 125°F (-10°C to 52°C)
Metal bowl	14°F to 150°F (-10°C to 65.5°C)
Supply pressure (max):	
Plastic bowl	150 psig (10 bar)
Metal bowl	250 psig (17 bar)
Bowl capacity:	6.1 US oz. (181 cm^3)
Weight:	1.04 lb (0.47 kg)

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

Ordering Information:

P33LA 9 6 L G N N

Basic Series

Global Modular Standard Lubricator	P33LA

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

1/2	4
3/4	6

Lube Type

Oil Mist Standard Sight Dome	L

Bowl Type

G	Poly Bowl with Bowl Guard
S	Metal Bowl with Sight Gauge

Drain Type

N	No Drain Closed End

Mounting

N	No Bracket

Suggested Lubricant ..... **F442 Oil**

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

☐ Most popular.

Material Specifications

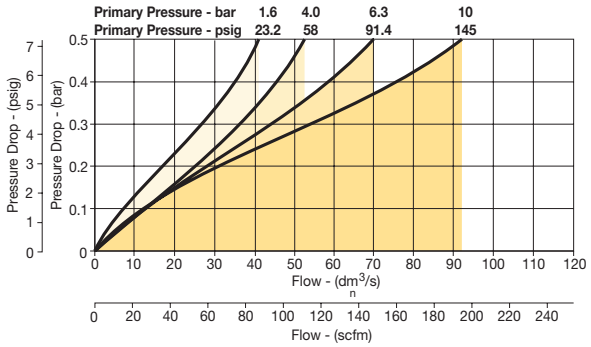
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Nylon
Suggested lubricant	ISO / ASTM VG32
Pick-up filter	Sintered bronze

Repair and Service Kits

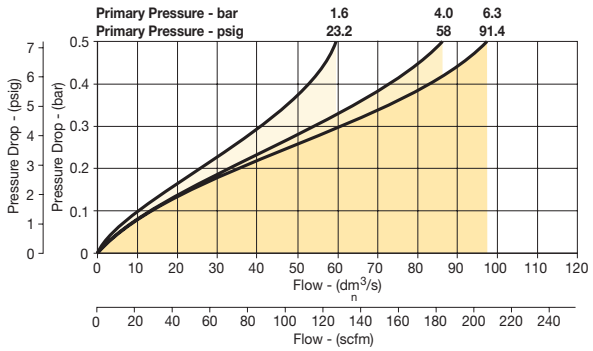
Plastic bowl / bowl guard no drain	**P33KA00BGN**
Metal bowl / w/o sight gauge no drain	**P33KA00BMN**
Metal bowl / sight gauge no drain	**P33KA00BSN**
Drip control assembly	**P32KA00PG**
Fill plug	**P32KA00PL**
L-bracket (fits to body)	**P33KA00ML**
T-bracket (fits to body connector)	**P32KA00MB**
T-bracket with body connector	**P32KA00MT**
Body connector	**P32KA00CB**
Oil (1 quart)	**F442001**
Oil (1 galllon)	**F442002**
Oil (12 quart case)	**F442003**
Oil (4 gallon case)	**F442005**

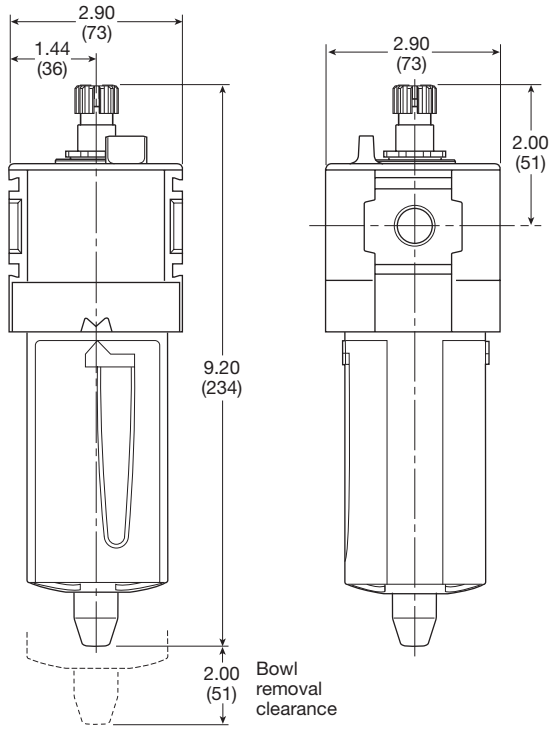
Flow Charts

P33LA 1/2" Lubricator



P33LA 3/4" Lubricator



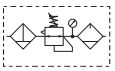


Inches (mm)

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

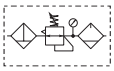
Popular Combinations: Inlet pressure 145 psig (10 bar), secondary pressure 100 psig (6.9 bar), 14.5 psig (1 bar) pressure drop.

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



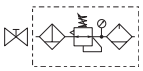
Port Size	Flow	Manual Drain	Pulse Drain
1/4"	27 scfm (13 dm³/s, ANR)	**P31CB92GEMN5LNW**	**P31CB92GEBN5LNW**

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



Port Size	Flow	Manual Drain	Pulse Drain
1/4"	28 scfm (14 dm³/s, ANR)	**P31CA92GEMN5LNW**	**P31CA92GEBN5LNW**

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



Port Size	Flow	Manual Drain	Pulse Drain
1/4"	27 scfm (13 dm³/s, ANR)	**P31QB92GEMN5LNW**	**P31QB92GEBN5LNW**

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

Port Size	Flow	Manual Drain	Pulse Drain
1/4"	28 scfm (14 dm³/s, ANR)	**P31QA92GEMN5LNW**	**P31QA92GEBN5LNW**

Filter / Regulator coding
(use with codes: A M)

Filter coding (use with combo codes: B F G). **For multiple filters, repeat as needed.**	Regulator coding (use with combo code: B)	Lubricator coding (use with combo codes: A B)	Assembly configuration

P31 **C** **B** **9** **2** **G** **E** **M** **N** **5** **L** **N** **W**

Combination

B/V + Combination	**Q**
Combination + B/V	**X**
Combination	**C**

B/V = Ball valve

Thread Type

BSPP	**1**
BSPT	**2**
NPT	**9**

Port Size

1/4	**2**

Combination Type*

F/R+L	**A**	F+Fc+Fa	**G**
F+R+L	**B**	F/R+Fc	**M**
F+Fc	**F**		

* Combination type
F = 5µ
Fc1 = 1µ
Fc = .01µ
Fa = Adsorber

Bowl Type

Poly Bowl with Bowl Guard ‡	**G**
Metal Bowl without Sight Gauge	**M**

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.

‡ For polycarbonate bowl, see caution in Engineering Section A.

Element

5µ Element	**E**
0.01µ Element	**C**
1µ Element	**9**
Adsorber	**A**

Drain Type

Manual Drain	**M**
Pulse Drain	**B**

Relief / Adjustment

Non-Rising Knob	**N**

Adjustment Range

With Square Gauge	
Psig:	
30 psig*	**1**
60 psig	**3**
125 psig	**5**
232 psig	**7**

Bar:		MPa:	
2 Bar*	**V**	0.2 MPa*	**2**
4 Bar	**S**	0.4 MPa	**4**
8 Bar	**T**	0.8 MPa	**6**
16 Bar	**W**	0.8 MPa	**8**

* Regulator comes with gauge respective to the adjustment range available.

§ Not available with poly bowl with bowl guard.

Gauge supplied with every part. Gauge can be installed on the front or back of the regulator. If no gauge is installed, both seal screws must be installed.

Lub Type

Oil Mist Standard Sight Dome	**L**

Drain Type

No Drain; Closed End	**N**

Mounting

No Bracket	**A**
Port Blocks*	**C**
Port Blocks & Wall Brkt*	**D**
Wall Bracket	**W**

* For 3/8" Port Blocks please order separately. See Kits section.

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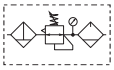
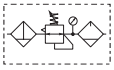
Popular Combinations: Inlet pressure 145 psig (10 bar), secondary pressure 91.3 psig (6.3 bar), 14.5 psig (1 bar) pressure drop.

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



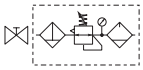
Port Size	Flow	Manual Drain	Auto Drain
1/4"	42 scfm (20 dm³/s, ANR)	**P32CB92GEMNGLNW**	**P32CB92GEANGLNW**
3/8"	68 scfm (32 dm³/s, ANR)	**P32CB93GEMNGLNW**	**P32CB93GEANGLNW**
1/2"	85 scfm (40 dm³/s, ANR)	**P32CB94GEMNGLNW**	**P32CB94GEANGLNW**

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



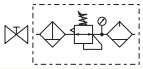
Port Size	Flow	Manual Drain	Auto Drain
1/4"	45 scfm (22 dm³/s, ANR)	**P32CA92GEMNGLNW**	**P32CA92GEANGLNW**
3/8"	70 scfm (33 dm³/s, ANR)	**P32CA93GEMNGLNW**	**P32CA93GEANGLNW**
1/2"	90 scfm (43 dm³/s, ANR)	**P32CA94GEMNGLNW**	**P32CA94GEANGLNW**

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



Port Size	Flow	Manual Drain	Auto Drain
1/4"	42 scfm (20 dm³/s, ANR)	**P32QB92GEMNGLNW**	**P32QB92GEANGLNW**
3/8"	68 scfm (32 dm³/s, ANR)	**P32QB93GEMNGLNW**	**P32QB93GEANGLNW**
1/2"	85 scfm (40 dm³/s, ANR)	**P32QB94GEMNGLNW**	**P32QB94GEANGLNW**

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



Port Size	Flow	Manual Drain	Auto Drain
1/4"	45 scfm (22 dm³/s, ANR)	**P32QA92GEMNGLNW**	**P32QA92GEANGLNW**
3/8"	70 scfm (33 dm³/s, ANR)	**P32QA93GEMNGLNW**	**P32QA93GEANGLNW**
1/2"	90 scfm (43 dm³/s, ANR)	**P32QA94GEMNGLNW**	**P32QA94GEANGLNW**

Filter / Regulator coding
(use with codes: A M)

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

Regulator coding
(use with combo code: B)

Lubricator coding
(use with combo codes: A B)

Assembly configuration

P32 C B 9 4 G E M N G L N W

Combination

B/V + Combination	Q
Combination + B/V	X
Combination	C

B/V = Ball valve

Thread Type

BSPP	1
BSPT	2
NPT	9

Port Size

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

* Order combo Q or X: ball valve (BV) comes with 3/8 ports.

Combination Type*

F/R+L	A	F+Fc+Fa	G
F+R+L	B	F/R+Fc	M
F+Fc	F		

* Combination type
F = 5µ
Fc1 = 1µ
Fc = .01µ
Fa = Adsorber

‡ For polycarbonate bowl, see caution in Engineering Section A.

Bowl Type

Poly Bowl with Bowl Guard ‡	G
Metal Bowl without Sight Gauge	M*
Metal Bowl with Sight Gauge	S

* Not available when using lubricator.
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.

Element

0.01µ Element	C
0.01µ Element with dpi	D*
5µ Element	E
5µ Element with dpi	F*
1µ Element	9
1µ Element with dpi	Q*
Adsorber	A

* Not available with F/R.

Drain Type

Auto Drain	A
Manual Drain	M

Relief / Adjustment

Non-Rising Knob Relieving	N

Adjustment Range

With Round Gauge

30 psig; 2 Bar; 0.2 MPa	Z
60 psig; 4 Bar; 0.4 MPa	M
125 psig; 8 Bar; 0.8 MPa	G
250 psig; 17 Bar; 1.7 MPa	J§

Without Gauge

30 psig; 2 Bar; 0.2 MPa	Y
60 psig; 4 Bar; 0.4 MPa	L
125 psig; 8 Bar; 0.8 MPa	N
250 psig; 17 Bar; 1.7 MPa	H§

With Square Gauge

psig	Bar
30* = 1	2* = V
60 = 3	4 = S
125 = 5	8 = T

* Regulator comes with gauge respective to the adjustment range selected.

§ Not available with poly bowl with bowl guard.

Lub Type

Oil Mist Standard Sight Dome	L

Drain Type

No Drain; Closed End	N

Mounting

No Bracket	A
Port Blocks	C
Port Blocks & Wall Brkt	D
Wall Bracket	W

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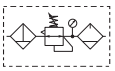
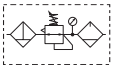
Popular Combinations: **Inlet pressure 145 psig (10 bar), secondary pressure 91.3 psig (6.3 bar), 14.5 psig (1 bar) pressure drop.**

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



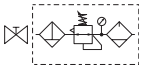
Port Size	Flow	Manual Drain	Auto Drain
1/2"	90 scfm (43 dm^3/s, ANR)	**P33CB94GEMNGLNW**	**P33CB94GEANGLNW**
3/4"	110 scfm (52 dm^3/s, ANR)	**P33CB96GEMNGLNW**	**P33CB96GEANGLNW**

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



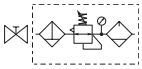
Port Size	Flow	Manual Drain	Auto Drain
1/2"	110 scfm (52 dm^3/s, ANR)	**P33CA94GEMNGLNW**	**P33CA94GEANGLNW**
3/4"	150 scfm (71 dm^3/s, ANR)	**P33CA96GEMNGLNW**	**P33CA96GEANGLNW**

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



Port Size	Flow	Manual Drain	Auto Drain
1/2"	90 scfm (43 dm^3/s, ANR)	**P33QB94GEMNGLNW**	**P33QB94GEANGLNW**
3/4"	110 scfm (52 dm^3/s, ANR)	**P33QB96GEMNGLNW**	**P33QB96GEANGLNW**

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



Port Size	Flow	Manual Drain	Auto Drain
1/2"	110 scfm (52 dm^3/s, ANR)	**P33QA94GEMNGLNW**	**P33QA94GEANGLNW**
3/4"	150 scfm (71 dm^3/s, ANR)	**P33QA96GEMNGLNW**	**P33QA96GEANGLNW**

Filter / Regulator coding
(use with codes: A M)

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

Regulator coding
(use with combo code: B)

Lubricator coding
(use with combo codes: A B)

Assembly configuration

P33 C B 9 6 G E M N G L N W

Combination	
B/V + Combination	Q
Combination + B/V	X
Combination	C

B/V = Ball valve

Thread Type	
BSPP	1
BSPT	2
NPT	9

Port Size	
1/2	4
3/4	6

Combination Type*			
F/R+L	A	F+Fc+Fa	G
F+R+L	B	F/R+Fc	M
F+Fc	F		

* Combination type
F = 5µ
Fc1 = 1µ
Fc = .01µ
Fa = Adsorber

Bowl Type ‡	
Poly Bowl with Bowl Guard	G
Metal Bowl without Sight Gauge	M*
Metal Bowl with Sight Gauge	S

* Not available when using lubricator.
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.

‡ For polycarbonate bowl, see caution in Engineering Section A.

Element	
0.01µ Element	C
0.01µ Element with dpi	D*
5µ Element	E
5µ Element with dpi	F*
1µ Element	9
1µ Element with dpi	Q*
Adsorber	A

* Not available with F/R.

Drain Type	
Auto Drain	A
Manual Drain	M

Relief / Adjustment	
Non-Rising Knob Relieving	N

Adjustment Range	
With Round Gauge	
30 psig; 2 bar; 0.2 MPa	Z
60 psig; 4 bar; 0.4 MPa	M
125 psig; 8 bar; 0.8 MPa	G
250 psig; 17 bar; 1.7 MPa	J*
Without Gauge	
30 psig; 2 bar; 0.2 MPa	Y
60 psig; 4 bar; 0.4 MPa	L
125 psig; 8 bar; 0.8 MPa	N
250 psig; 17 bar; 1.7 MPa	H*

* Not available with poly bowl with bowl guard.

Lub Type	
Oil Mist Standard Sight Dome	L

Drain Type	
No Drain; Closed End	N

Mounting	
No Bracket	A
Port Blocks	C
Port Blocks & Wall Brkt	D
Wall Bracket	W

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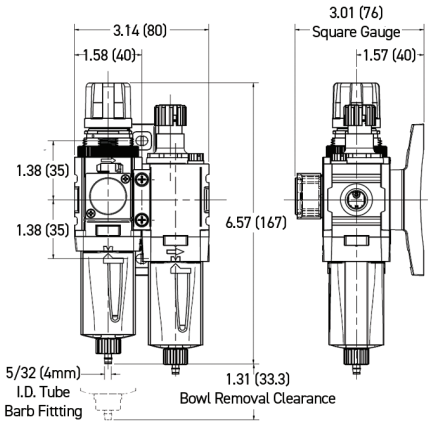
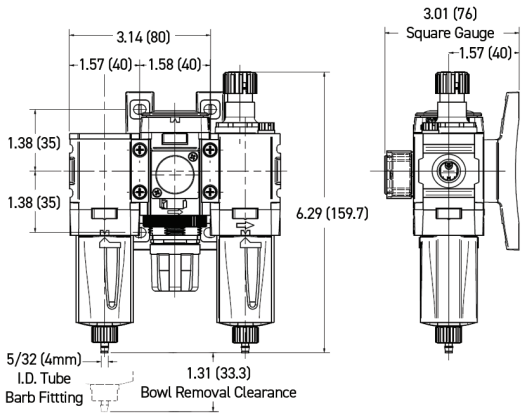
Popular Combination Dimensions

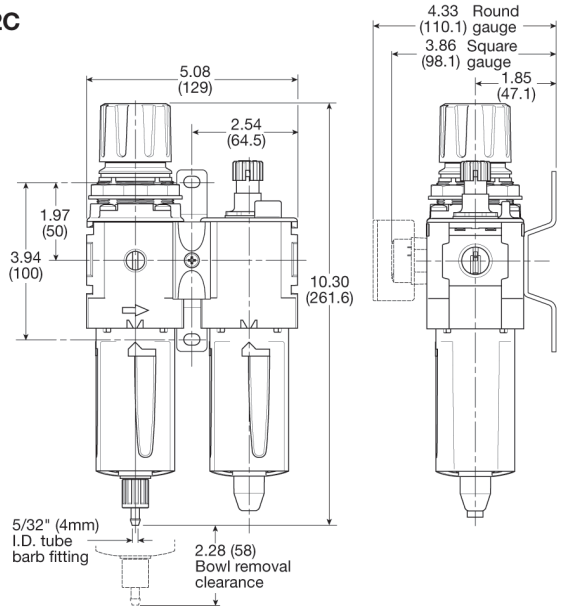
inches (mm)

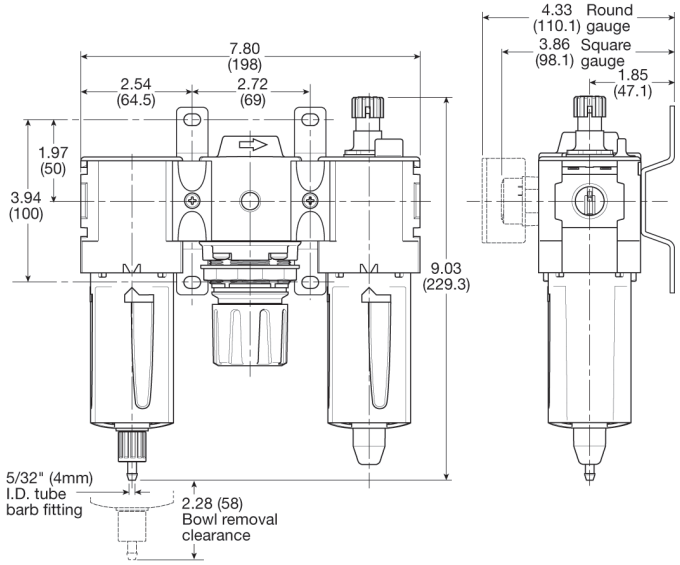
P31C



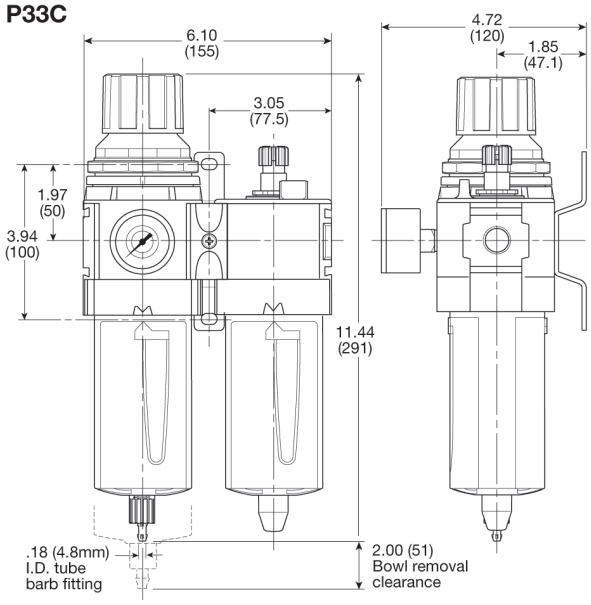


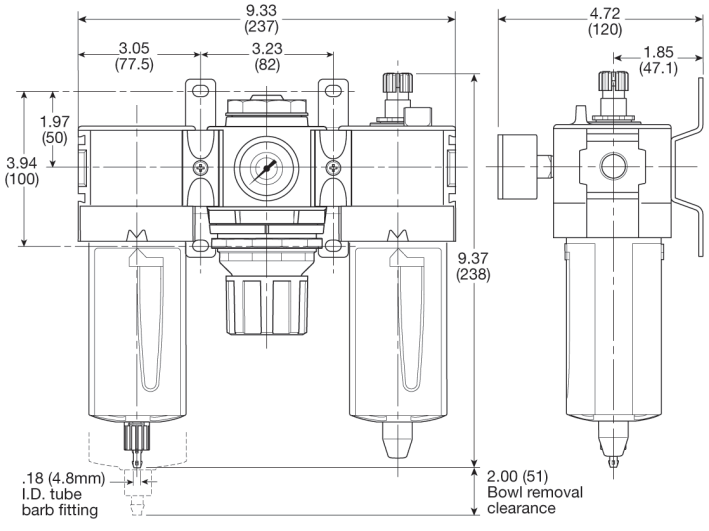
P32C





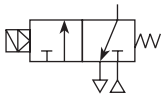
P33C





P31D & P32D Dump Valves

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



Remotely 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.

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & cable plug	0.8 (0.37)	**P31DA92SGNC1FN**
1/4"	24VDC Solenoid & cable plug ‡	0.9 (0.41)	**P31DA92SGNC2CN**
1/2"	120VAC 30mm coil & cable plug incl. ‡	1.5 (0.69)	**P32DA94SCNA3GN**
1/2"	24VDC 30mm coil & cable plug incl. ‡	2.0 (0.91)	**P32DA94SCNA2CN**
1/2"	External air pilot operated ‡	1.9 (0.87)	**P32DA94PPN**

‡ Includes exhaust silencer

Operating information

Flow capacity*:	P31D	36 scfm (17 dm^3/s, ANR)
	P32D	108 scfm (51 dm^3/s, ANR)
Temperature range (max)†:		
Solenoid operated		14°F to 122°F (-10°C to 50°C)
Air pilot operated		-4°F to 176°F (-20°C to 80°C)
Pressure (max):		
Solenoid operated		150 psig (10 bar)
Air pilot operated		250 psig (17 bar)
Operating pressure (min):		44 psig (3 bar)
Fluid:		Compressed air
Ports:	Air pilot	1/8
	Exhaust	P31D - 1/4; P32D - 1/2
	Gauge	P31D - 1/8; P32D - 1/4

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.

† Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:

P31DA | **9** | **2** | **S** | **G** | **N** | **C** | **2CN**

Solenoid type only

Body Size	
Dump Valve (1/4")	P31DA
Dump Valve (1/2")	P32DA

Thread Type	
BSPP	1
NPT	9

Port Size	
Global Modular Mini (1/4")	2
Global Modular Compact (1/2")	4

Pilot Type	
P	External Air Pilot (P32 only)
S	Solenoid Pilot

Actuator Interface	
G	15mm Solenoid (P31 Only)
C	30mm Solenoid
P	Threaded Air Pilot (P32 only)

Solenoid Type	
C	15mm (P31 series only)
A	30mm CNOMO Coil (P32 only)
D	30mm CNOMO Coil (M12 connection) (P32 only)

Solenoid Voltage	
2CN	24VDC Non Locking Manual Override
3GN	120VAC Non Locking Manual Override
1FN	120VAC Non Locking Manual Override (P31 series only)

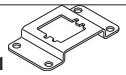
Note:
P32 unit used for both P32 & P33 series

☐ Most popular.

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

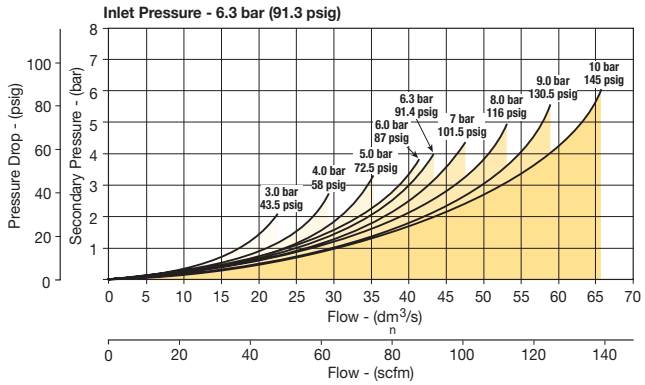
Mounting Brackets

	Description	Part Number P31D
 P31	L-bracket mounting kit	**P3HKA00ML**
 P31	Foot bracket mounting kit	**P3HKA00MC**

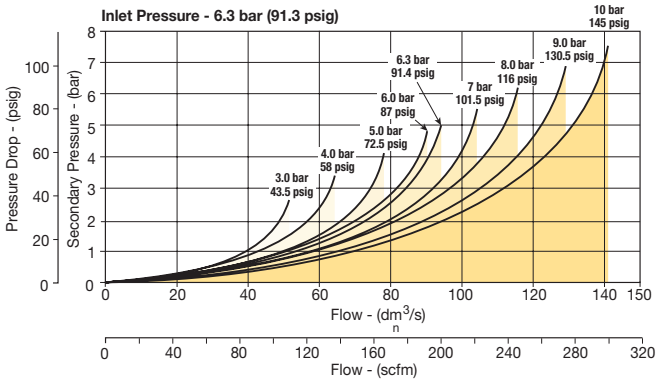
Note:
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

P31DA 1/4" Remote Dump Valve

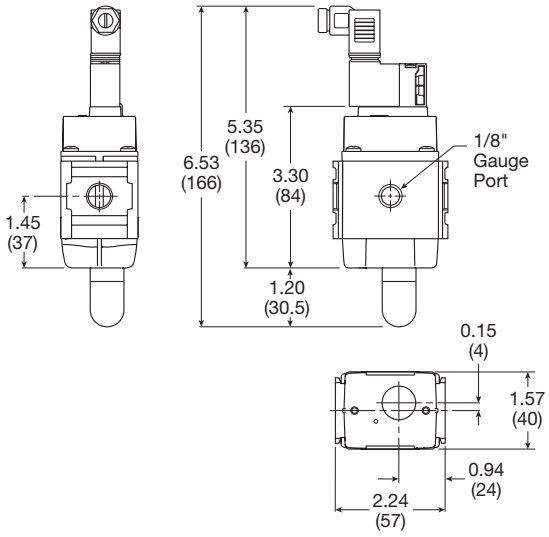


P32DA 1/2" Remote Dump Valve

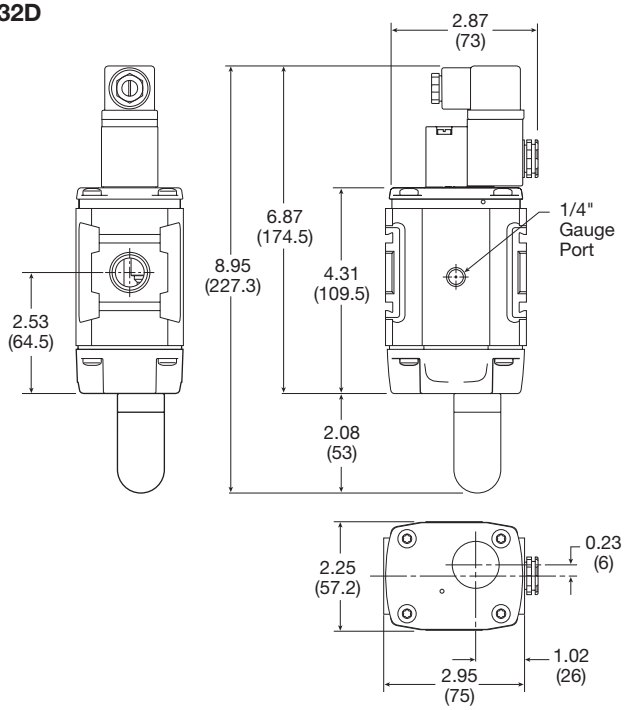


Dimensions inches (mm)

P31D



P32D



Most popular.

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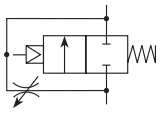
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

P31S & P32S Soft Start Valves

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



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

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & Cable Plug	0.8 (0.37)	**P31SA92SGNC1FN**
1/4"	24VDC Solenoid & Cable Plug	0.9 (0.41)	**P31SA92SGNC2CN**
1/2"	120VAC 30mm Coil & Cable Plug Incl.	1.5 (0.87)	**P32SA94SCNA3GN**
1/2"	24VDC 30mm Coil & Cable Plug	2.0 (0.90)	**P32SA94SCNA2CN**
1/2"	Internal Air Pilot Operated	2.0 (0.90)	**P32SA94Y0N**
1/2"	External Air Pilot (1/8 threaded)	1.5 (0.87)	**P32SA94PPN**

Operating information

Flow capacity*:	P31S	36 scfm (17 dm³/s, ANR)
	P32S	101 scfm (48 dm³/s, ANR)
Temperature range (max)†:		
Solenoid operated		14°F to 122°F (-10°C to 50°C)
Air pilot operated		-4°F to 176°F (-20°C to 80°C)
Pressure (max):		
Solenoid operated		150 psig (10 bar)
Air pilot operated		250 psig (7 bar)
Operating pressure (min):		44 psig (3 bar)
Fluid:		Compressed air
Ports:	Air pilot	1/8
	Gauge	P31S - 1/8; P32S - 1/4

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.

† Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:

P31SA 9 2 S G N C 2CN

Solenoid type only

Body Size

Soft Start	P31SA
Soft Start	P32SA

Thread Type

BSPP	1
NPT	9

Port Size

Global Modular Mini (1/4")	2
Global Modular Compact (1/2")	4

Pilot type

P	External air pilot (P32 only)
S	Solenoid pilot
Y	Internal air pilot (P32 only)

Actuator Interface

0	Internal Pilot (P32 only)
G	15mm Solenoid (P31 only)
C	30mm Solenoid
P	Threaded Air Pilot (P32 only)

Solenoid type

C	15mm (P31 series only)
A	30mm CNOMO coil (P32 only)
D	30mm CNOMO coil (M12 connection) (P32 only)

Solenoid Voltage

2CN	24VDC non Locking Manual Override
3GN	120VAC non Locking Manual Override
1FN	120VAC Non Locking Manual Override (P31 series only)

Note:
P32 unit used for bothP32 & P33 series

☐ Most popular.

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

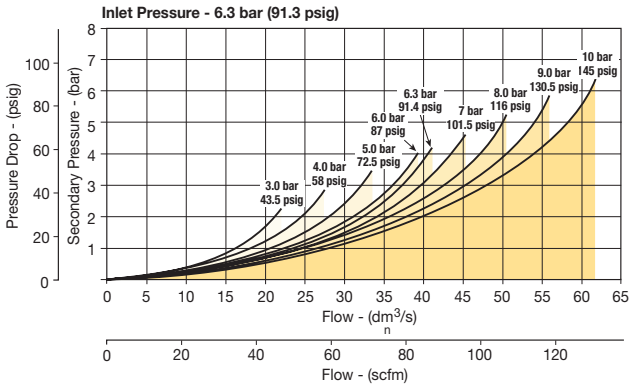
Service Kits

P31S	L-bracket mounting kit	**P3HKA00ML**
	Foot bracket mounting kit	**P3HKA00MC**
P32S	L-bracket mounting kit	**P3KKA00ML**
	Foot bracket mounting kit	**P3KKA00MC**

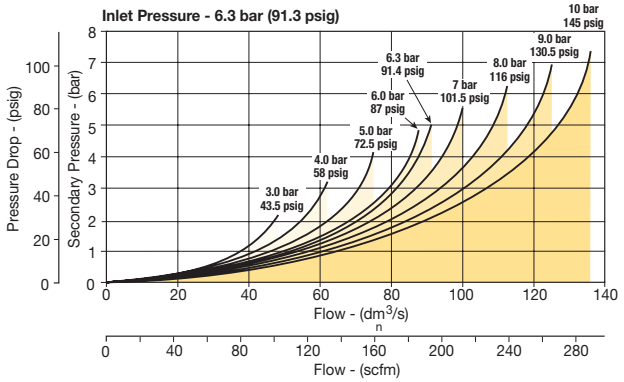
Note:
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

P31SA 1/4" Soft Start Valve

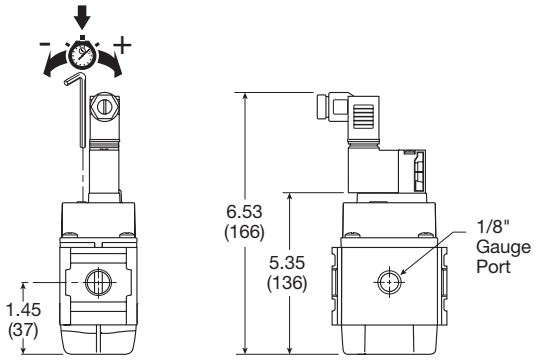


P32SA 1/2" Soft Start Valve

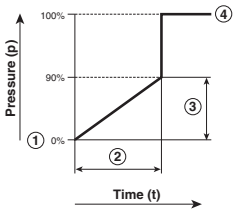


Dimensions inches (mm)

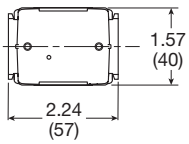
P31S



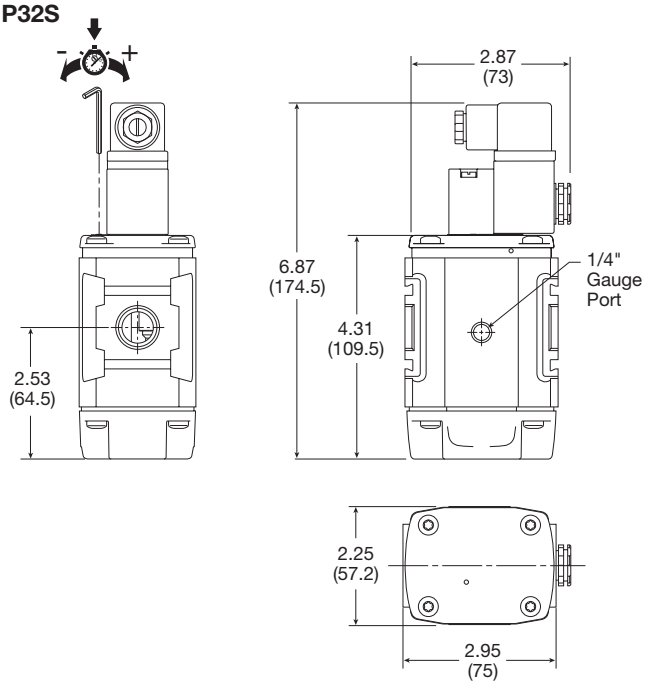
Soft Start Function:



① Start signal
② Switching time delay
③ Gradual pressure build up
④ Operating pressure p^2 (=p^1)

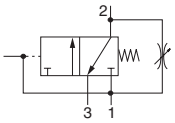


P32S



P31T & P32T Combined Soft Start / Dump Valves

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



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.

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & cable plug	0.8 (0.37)	**P31TA92SGNC1FN**
1/4"	24VDC Solenoid & cable plug	0.9 (0.41)	**P31TA92SGNC2CN**
1/2"	120VAC 30mm coil & cable plug incl.	1.9 (0.87)	**P32TA94SCNA3GN**
1/2"	24VDC 30mm coil & cable plug incl.	2.0 (0.91)	**P32TA94SCNA2CN**
1/2"	External air pilot operated	1.9 (0.87)	**P32TA94PPN**

Operating information

Flow capacity*:	P31T	36 scfm (17 dm^3/s, ANR)
	P32T	108 scfm (51 dm^3/s, ANR)
Temperature range (max)†:		
Solenoid operated		14°F to 122°F (-10°C to 50°C)
Air pilot operated		-4°F to 176°F (-20°C to 80°C)
Pressure (max):		
Solenoid operated		150 psig (10 bar)
Air pilot operated		250 psig (7 bar)
Operating pressure (min):		44 psig (3 bar)
Fluid:		Compressed air
Ports:	Air pilot	1/8
	Exhaust	P31T - 1/4; P32T - 1/2
	Gauge	P31T - 1/8; P32T - 1/4

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.

† Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:

P31TA | **9** | **2** | **S** | **G** | **N** | Solenoid type only: **C** **2CN**

Body Size

Soft Start / Dump Valve (1/4")	P31TA
Soft Start / Dump Valve (1/2")	P32TA

Thread Type

BSPP	1
NPT	9

Port Size

Global Modular Mini (1/4")	2
Global Modular Compact (1/2")	4

Pilot Type

P	External Air Pilot (P32 only)
S	Solenoid Pilot

Actuator Interface

G	15mm Solenoid (P31 only)
C	30mm Solenoid
P	Threaded Air Pilot (P32 only)

Solenoid Type

C	15mm (P31 series only)
A	30mm CNOMO Coil (P32 only)
D	30mm CNOMO Coil (M12 connection) (P32 only)

Solenoid Voltage

2CN	24VDC Non Locking Manual Override
3GN	120VAC Non Locking Manual Override
1FN	120VAC Non Locking Manual Override (P31 series only)

Note:
P32 unit used for both P32 & P33 series

☐ Most popular.

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

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

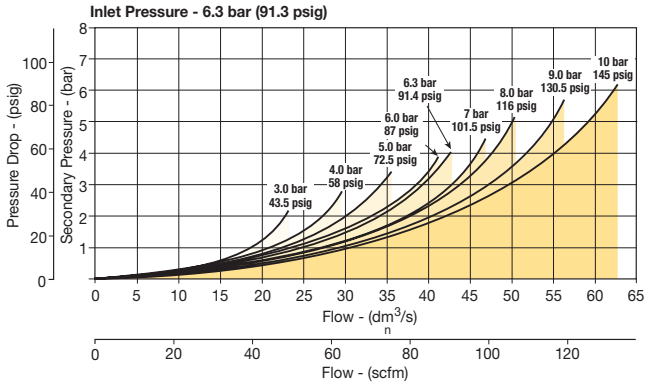
Service Kits

P31T	L-bracket mounting kit	**P3HKA00ML**
	Foot bracket mounting kit	**P3HKA00MC**
P32T	L-bracket mounting kit	**P3KKA00ML**
	Foot bracket mounting kit	**P3KKA00MC**

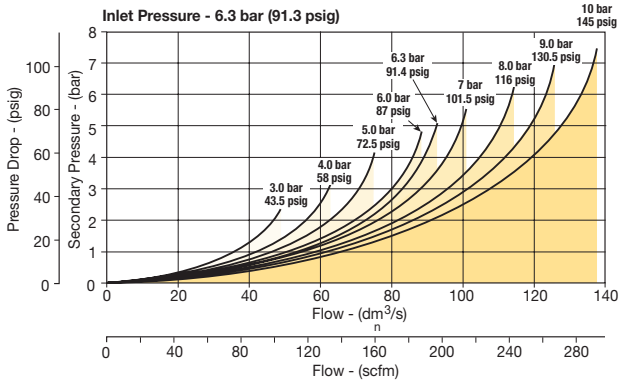
Note:
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

P31TA 1/4" Soft Start & Dump Valve

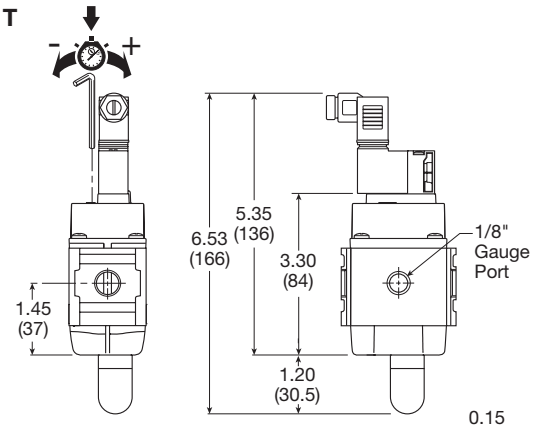


P32TA 1/2" Soft Start & Dump Valve

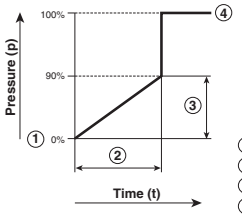


Dimensions inches (mm)

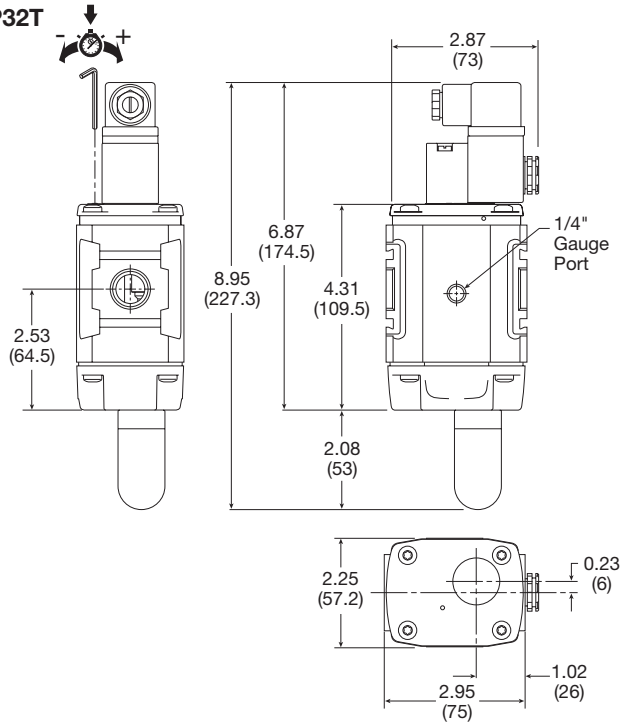
P31T



Soft Start Function:



P32T

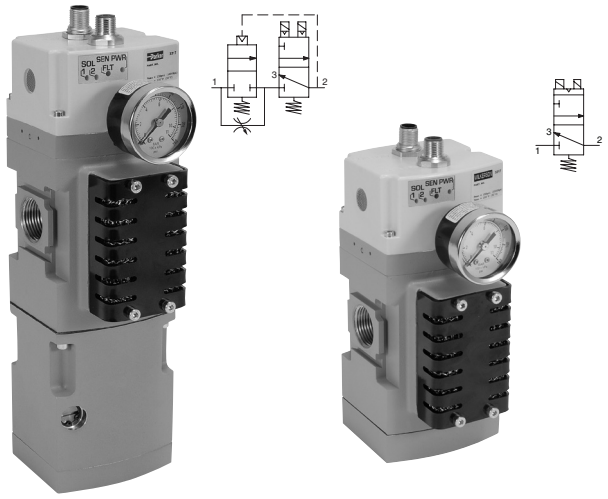


For inventory, lead times, and kit lookup, visit www.pdnplu.com

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

P33D & P33T Safety Exhaust Valves

- Easy electrical interface with M12 connectors to safety circuit
- External monitoring provides a cost and space saving advantage
- Solid state pressure sensors provide accurate, fast fault detection
- Quick visual LED indicators on the front of the valve
- Superior seated seal design for longer life
- Safety exhaust outlet is no-maintenance and non-clog by design
- Suitable for stand alone use or modular mounting to P32 or P33 FRL assembly
- High B10 life value
- Fast exhaust times allow for smaller machine footprint



(optional soft start)

Operating information

Operating pressure:	30 to 150 PSIG (2 to 10 bar)
Minimum operating pressure:	30 PSIG (2 bar)
Ambient temperature:	40° to 120°F (4° to 50°C)
Recommended filtration:	40µ
Operating medium:	Compressed air
Ingress protection class:	IP65
B10 (mio):	10 million switching cycles
B10 d (mio):	20 million switching cycles
Allowable discordance:	150ms
Flow media:	Compresses air to ISO 8573-1 Class 7:4:4
Weight lbs (kg):	6.5 (2.9) with soft start 4.2 (1.9) without soft start

The soft start opens to full flow at approximately 60% of input pressure.

Ordering Information:

P3	3	T	B	1	6	A	B	E	N

Series
Standard P3

Global
Standard 3

Type
- Safety Redundant (no soft start) D
- Safety Redundant (c/w soft start) T

Design
Current B

Thread Type
- BSPP 1
- NPT 9

Port Size
3/4" [1] 6

Output for Solenoid, M12 Connector Pin
- 2 & 4, Common 3 A
- 3 & 4 C
- 2 & 4 D

Output for Sensors, M12 Connector Pin
- 1 & 2, 1 & 4, Common 3 A
- 1 & 2, 5 & 4, Common 3 B
- 5 & 2, 1 & 4, Common 3 C

Sensor Monitoring
External E

Gauge [2]
- No Gauge N
- Dial Gauge [3] (standard) G
- Digital Gauge [3] D
- MPS-P34 Pressure Sensor M

Notes:
1. For 1/2" connections use 1/2" port blocks on standard 3/4" housing.
2. Safety valve supplied with 1/8" gauge port in either BSPP or NPT threads as specified for ports. Gauges shipped loose.
3. Dial or digital gauge not available on BSPP version.

Note: Mounting hardware and port blocks are sold separately.

☐ Most popular.

General Technical Data

Valve type	Externally monitored, redundant, dual poppet
Soft start	Optional
Valve function	3/2 way, normally closed
Housing material	Cast aluminum
Seals	NBR
Fasteners	Stainless steel / brass
Silencer	Steel, non clog safety design

Electrical Specifications

Operating voltage 24V DC	
Electrical connection	Two M12 connectors
Switching time 1-2 (ms)	23.3
Switching time 2-3 (ms)	42.7
Duty cycle (%)	100%
Operating voltage (DC)	21.6 to 26.4
Nominal power	
per solenoid coil at 24V DC (W) +/- 10%	1.2 W
per pressure sensor at 24V DC	1.2 W

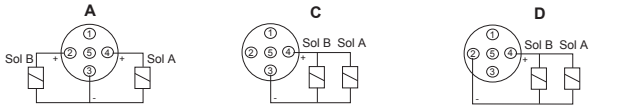
In accordance with EN ISO 13849-1 this safety valve is suitable for use up to Category 4, Ple, sil 3. Certified to $_{c}CSA_{us}$ and bears the CE mark.

A product Integration Guide is available to help connect your logic controller to the Parker Safety Exhaust Valve under the Product Support tab at www.parker.com/pdn/safetyvalve

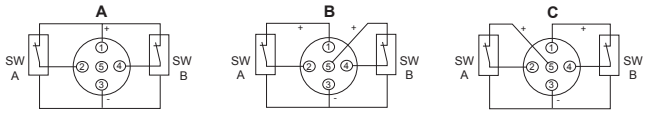
Mounting Hardware

Body Connector		**P32KA00CB**
T-Bracket w / Body Connector		**P32KA00MT**
T-Bracket (fits to body connector or port block)		**P32KA00MB**
Port Block Kits (includes two)	1/2" NPT	**P32KA94CP**
	1/2" BSPT	**P32KA24CP**
	1/2" BSPP	**P32KA14CP**
	3/4" NPT	**P32KA96CP**
	3/4" BSPT	**P32KA26CP**
	3/4" BSPP	**P32KA16CP**

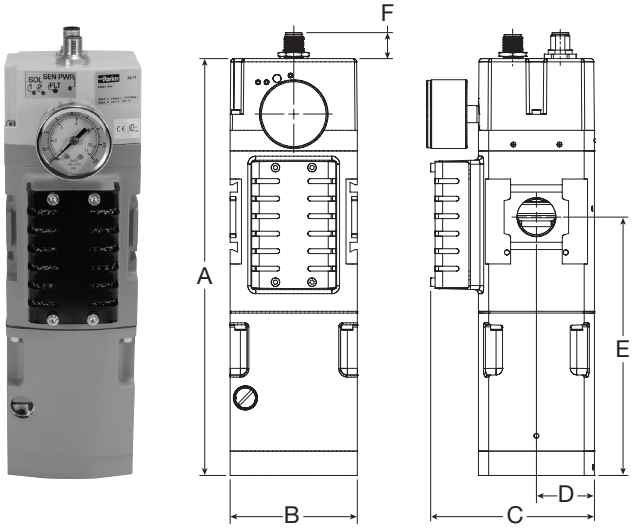
Solenoid M12 Pinouts



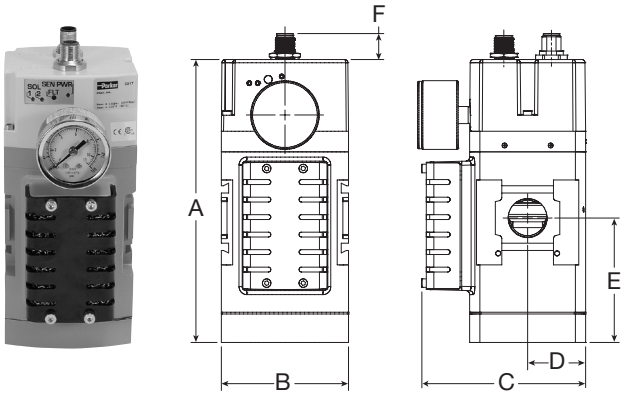
Pressure Sensor M12 Pinouts



Externally Monitored (with Soft Start)



Externally Monitored (No Soft Start)



Dimensions inches (mm)

	Ports	Standard nominal flow rate 1 → 2 L/min (SCFM)*	Standard nominal flow rate 2 → 3 L/min (SCFM)*	A	B	C	D	E	F
Externally Monitored with soft start	3/4"	4,100 (145)	7,500 (265)	10.31 (261.9)	3.15 (80)	4.30 (109.3)	1.44 (36.5)	6.39 (162.3)	0.64 (16.3)
Externally Monitored no soft start	3/4"	4,300 (152)	7,500 (265)	7.03 (178.7)	3.15 (80)	4.30 (109.3)	1.44 (36.5)	3.11 (79.0)	0.64 (16.3)

* Standard nominal flow rate is based on 6 bar input pressure with ΔP = 1 bar

Safety Exhaust Valve Function

When applications demand a safe environment you can count on safety valves from Parker Hannifin. The P33 family of safety exhaust valves are 3/2 normally closed valves designed to rapidly exhaust compressed air in the event of a fault condition and to provided monitored coverage ensuring safe function. The P33 is available in two distinct styles, internally* or externally monitored. The valve is suitable for use up to Category 4, performance level e. Monitoring is achieved externally via a two channel system connected to a safety interface device. Both valves are available with an adjustable soft start and high flow exhaust to shut your equipment down faster when needed. LED's provide clear status of main solenoid operation, sensor power and fault condition for quick visual reference.

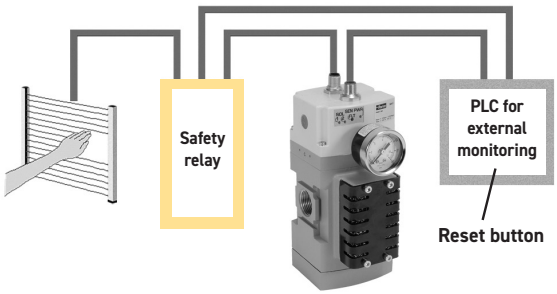
Externally Monitored Valve, Faults and Resets

The externally monitored valve has the monitoring done via a PLC or relay which offers a size and cost advantage over internally monitored valves. The integration of a safety interface into the PLC or relay will help determined the achievable category and performance level of the control system. Customers are required to provide the logic function via the safety device. The valve will lock-out to the "safe state" if asynchronous movement of the valve elements occur which will be detected by solid state pressure sensors. To achieve the proper safety rating, the safety PLC or relay must monitor the solid state pressure sensors to ensure they are not in different states for more than 150ms. If the sensors are in different states for longer than 150ms then the programming logic must shut off power to the solenoids and consider it a fault condition. If during operation the externally monitored P33 enters a fault condition the valve will shut off. A separate reset signal must be incorporated into the logic sequence to avoid automatic restart of the valve. The safety exhaust valves are not for use with clutch or brake applications and are designed for use in conjunction with a safety relay or safety PLC for safe monitoring and fault detection.

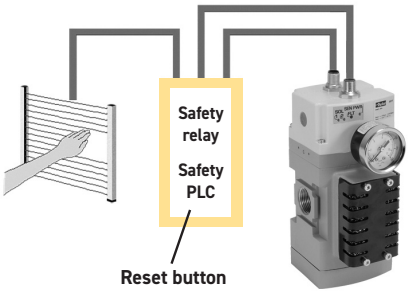
Achieving Desired Performance Level **

The category and performance level (PLr) needed for your machine is determined by a risk assessment of the machinery design and application based on EN ISO 13849-1. The Parker P33 safety valve is designed for those applications requiring a PL of d or e. Please note these levels require other aspects of the system to meet these requirements. As a guide: you can achieve a Cat 4 PL e system by integrating monitoring via a programmable safety rated device. Because the P33 is a mechanical fail-safe device, the monitoring could also be done via a standard PLC and still attain as high as a PL d rating.

Cat 3, PL d

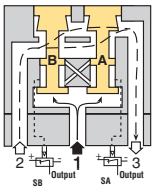


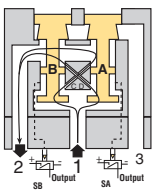
Cat 4, PL e

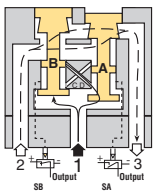


* For information on internally monitored safety valves reference Bulletin 0700-B 13.

** An integration guide is available to provide further information on connecting the safety valve product to achieve the desired performance level. Please consult Parker and the standard EN ISO 13849-1 for more information.







Conditions at Start

The Safety exhaust valve starts with inlet 1 closed to outlet 2 by both valve elements A and B. Outlet 2 is open to exhaust 3. Pressure signals at both sensors SA and SB are exhausted and contacts 1 and 2 of sensors SA and SB are connected. The normally closed sensors both provide voltage feedback signals to the external monitoring system.

Normal Operation

During normal operation the two solenoids are simultaneously energized which actuates both pilots and causes valve elements A and B to shift. Inlet 1 is then connected to outlet 2 via crossflow passages C and D. Exhaust 3 is closed. Sensing pressure signals go to each pressure sensor and become equal to inlet pressure. Both sensors contacts open and no voltage signals are provided to the external monitoring system. This indicates that both sides of the valve actuated as expected.

Detecting a Malfunction

A malfunction in the system or the valve itself could cause one valve element to be open and the other closed. Air then flows past the inlet poppet on valve element A, into crossflow passage D, but is substantially blocked by the spool portion of element B. The large size of the open exhaust passage past element B keeps the pressure at the outlet port below 2% of inlet pressure. Full sensing air pressure from side A goes to sensor SA, and a reduced pressure goes to sensor SB. This full pressure signal causes SA to open. Sensor SB, with a reduced pressure signal, does not open. An external monitoring system can detect the malfunction by monitoring the outputs of the SA and SB sensors. The external monitor system must then react accordingly by shutting down the power to the valve solenoids and any other components deemed necessary to stop the machine.

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Pneumatic Division
Richland, Michigan
www.parker.com/pneumatics

Machinery Directive - Overview

The Machinery Directives' goal is to protect people and the environment from accidents caused from all types of machinery. Based on the standard EN 13849 [safety of machines; safety-related parts of control systems] these standards build the procedure to assess safety-related control systems.

Required Performance Level (PLr) based on a risk assessment are now commonly used to determine the safety level required for the controls system, for the application of machinery.

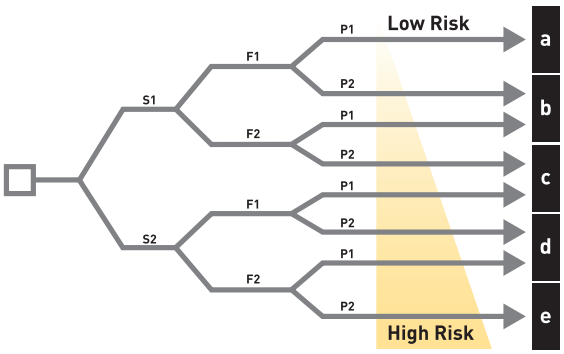
Performance Level (PL) based on the original B, 1,2,3,4 safety categories, diagnostic capabilities, Mean time to dangerous failure (MTTFd), and common cause failure (CCF), define safety levels of a given safety function. This ensures that safety is not just focused on component reliability, but instead introduces common sense safety principles such as redundancy, diversity, and fail-safe behavior of safety related control parts.

The new EN 13849 standards of the Machinery Directive dictates the machine is safe when the Performance Level of the safety control circuit is equal to or greater than the Required Performance Level of the application. When determining the required performance level, the greater the risk, the higher the requirements of the control system.

$$PLr \leq PL$$

Determining PLr According to EN 13849-1

The level of each hazardous situation is classified in five Performance levels from a to e. With PL a the control functions contribution to risk reduction is low, while at PL e it is high. The risk graph above can be used as a guideline to determine the required performance level PLr for safety function.



Risk Parameters

(S) Severity of injury

- **S1** Slight (normally reversible injury)
- **S2** Serious (normally irreversible injury, or death)

(F) Frequency and / or duration of exposure to hazard

- **F1** Seldom to less often and / or brief
- **F2** Frequent to continuous and / or long

(P) Possibility of avoiding the hazard

- **P1** Possibility of avoiding the hazard
- **P2** Scarcely ever possible

Determining PL According to EN 13849-1

Determining the $MTTF_d$ = Mean Time To Dangerous Failure

Determining the PL = Performance Level

a									$10^{-5} \leq PFH_d < 10^{-4}$
b								1	$3 \times 10^{-6} \leq PFH_d < 10^{-5}$
c									$10^{-6} \leq PFH_d < 3 \times 10^{-6}$
d								2	$10^{-7} \leq PFH_d < 10^{-6}$
e								3	$10^{-8} \leq PFH_d < 10^{-7}$
	DC < 60% None	DC < 60% None	60% ≤ DC < 90% Low	90% ≤ DC < 99% Medium	60% ≤ DC < 90% Low	90% ≤ DC < 99% Medium	99% ≤ DC High		
	Cat. B	Cat. 1	Cat. 2		Cat. 3		Cat. 4		
	CCF not relevant		CCF ≥ 65%						

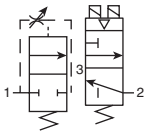
Determining the SIL = Safety Integrity Level

Categories Defined by EN 13849-1

Category	Summary
Category B	When a fault occurs it can lead to the loss of the safety function.
Category 1	Same that Category B, but loss of the safety function is less likely thanks to a good MTTFd of each channel.
Category 2	System behavior allow that the occurrence of a fault can lead to the loss of the safety function between the checks; the loss of the safety function is detected by the check.
Category 3	A single fault in any of safety related parts does not lead to the loss of the safety function. Whenever reasonably possible the single fault shall be detected at or before the next demand upon the safety function. (Means redundancy)
Category 4	Same as Category 3, but if detection of single fault is not possible on or before the next demand upon the safety, an accumulation of these undetected faults shall not lead to the loss of the safety function. (Means redundancy & check)

P33T Redundant Safety Exhaust Valve

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



Port size			Cv		
Inlet	Outlet	Transducer	1 to 2	2 to 3	Part Number*
3/4	3/4	w/o transducer	3.7	8.5	**P33TA96RG4F2CN**
3/4	3/4	w/ transducer	3.7	8.5	**P33TA96RG4G2CN**

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

Operating information

Pilot Solenoids:	According to VDE 0580
Enclosure rating:	According to DIN 400 50 IP65
Connector socket:	According to DIN 43650 Form A Three solenoids, rated for continuous duty
Standard voltages:	24VDC
Power consumption (each solenoid), for primary & reset solenoids:	1.2 Watts on DC
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)
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)
Weight:	16.1 lb (7.3 kg) w/o transducer 16.3 lb (7.4 kg) w/ transducer

Ordering Information:

P33TA | **9** | **6** | **R** | **G** | **4** | **F** | **2CN**

Body Size
- Standard — P33T

Thread Type
- BSPP — 1
- NPT — 9

Port Size
- 3/4" — 6

Type
- Solenoid Pilot + Gauge — R

Operator
- 15mm Solenoid — G

Mounting
- Cat 4 w/ Bracket — 4

Solenoid
- Dual M12 Connector without Transducer — F
- Triple M12 Connector with Transducer — G

Voltage
- 24VDC with Manual Override — 2CN

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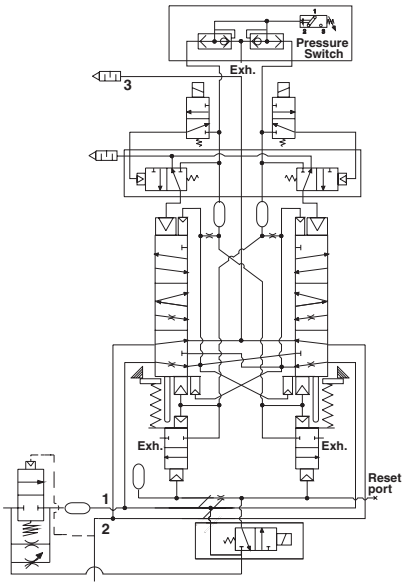
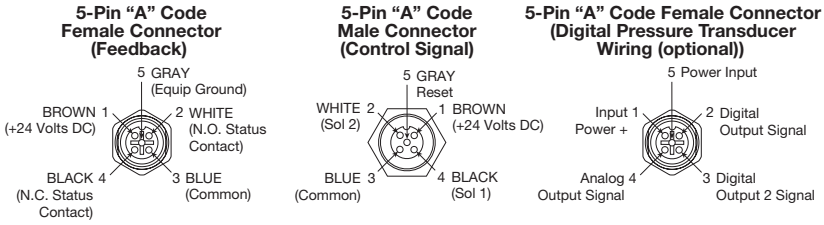


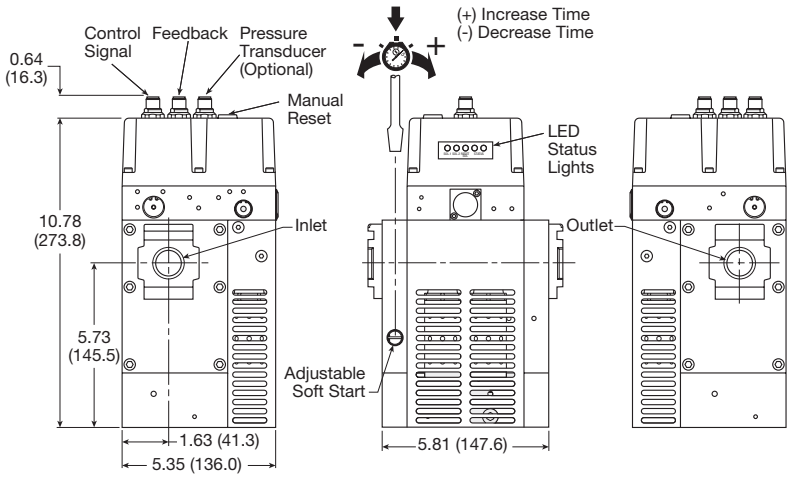
Repair and Service Kits

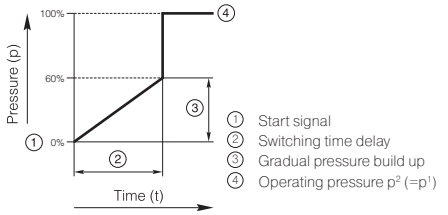
Black grill	**1834C05-001**
Body connector	**P32KA00CB**
M12, 5-pin female to flying lead cable, TPE; 6.6 ft (2 m)	**RKC 4.5T-2/S1587**
M12, 5-pin male to flying lead cable, TPE; 6.6 ft (2 m)	**RSC 4.5T-2/S1587**
1/2 NPT, port block kit	**P32KA94CP**
3/4 NPT, port block kit	**P32KA96CP**
1/2 BSPP, port block kit	**P32KA14CP**
3/4 BSPP, port block kit	**P32KA16CP**
1/2 BSPT, port block kit	**P32KA24CP**
3/4 BSPT, port block kit	**P32KA26CP**
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**
Solenoid (main & reset)	**1527B7916-001**
Square flush mounting gauge kit, 0-160 psig	**K4511SCR160**

Valve Wiring

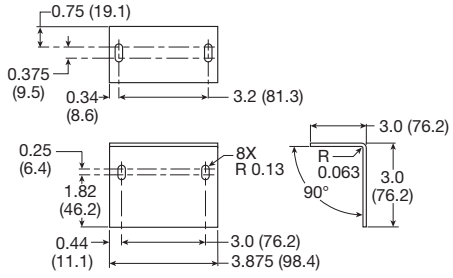


Dimensions inches (mm)





Angle Mounting Bracket



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

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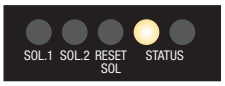
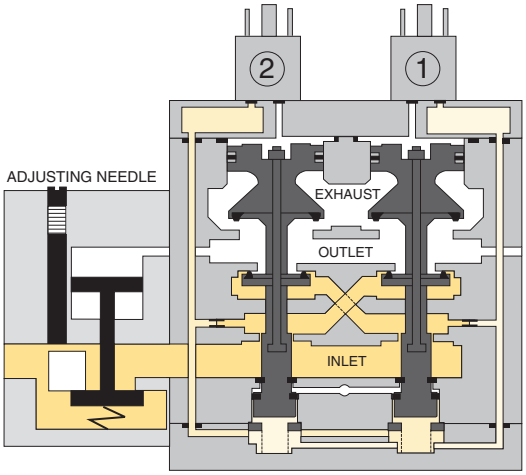
Valve de-actuated (ready-to-run):

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.



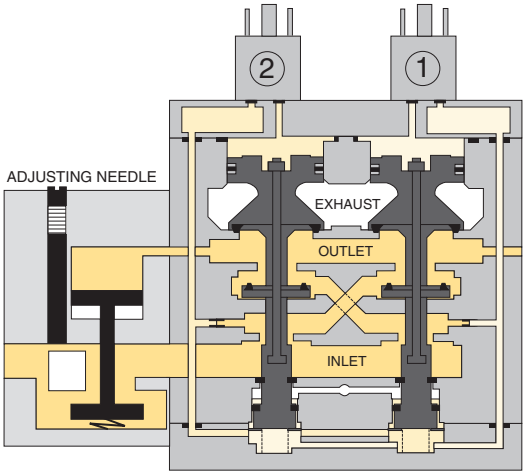


Valve actuated:

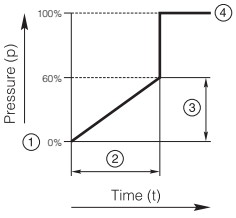
Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized 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:



① Start signal
② Switching time delay
③ Gradual pressure build up
④ Operating pressure p^2 (=p^1)

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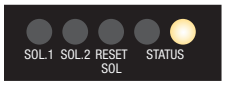
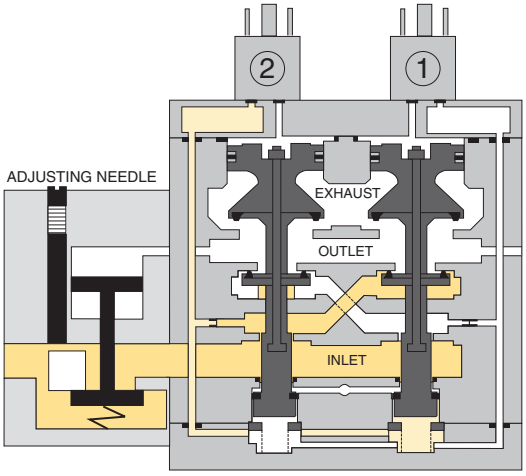
Valve fault and lock-out:

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

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

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





Valve reset (electrical or manual):

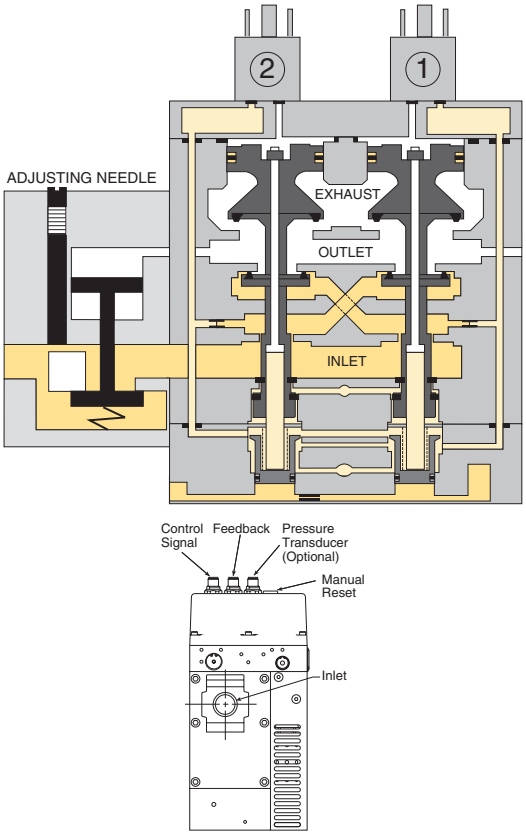
The reset procedure is as follows:

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

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

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

The green "Status" LED will be illuminated once the valve is reset.



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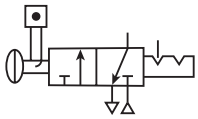
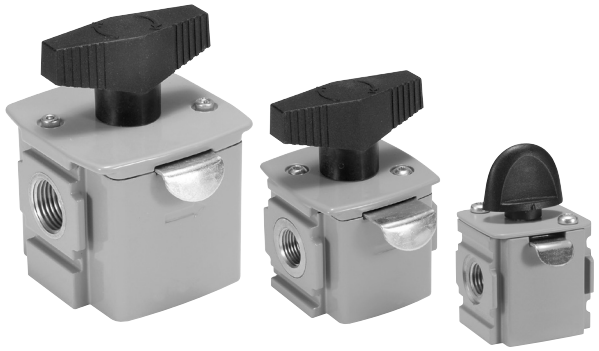
Ball Valve / Lockout Valve

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.

The Safety Lockout valves conform to OSHA #29 CFR part 1910 — control of hazardous energy source (lockout / tagout).

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.





Operating information

Operating temperature:		-40°C to 80°C (-40°F to 176°F)
Pressure supply (max):		250 psig (17 bar)
Port size: BSPP / BSPT / NPT		1/4, 3/8, 1/2, 3/4
Weight:	P31	0.33 lbs (0.15 kg)
	P32	0.79 lbs (0.36 kg)
	P33	1.21 lbs (0.55 kg)

Ordering Information

Model Type	Port Size	Exhaust Port	Thread Type	Flow scfm (dm^3/s, ANR)	Modular Ball Valve Flow from Left to Right
P31	1/4"	1/4"	NPT	42.4 (20)	**P31VB92LBNN**
P32	3/8"	1/4"	NPT	190.7 (90)	**P32VB93LBNN**
	1/2"	1/4"	NPT	258.5 (122)	**P32VB94LBNN**
P33	1/2"	1/2"	NPT	561.5 (265)	**P33VB94LBNN**
	3/4"	1/2"	NPT	678 (320)	**P33VB96LBNN**

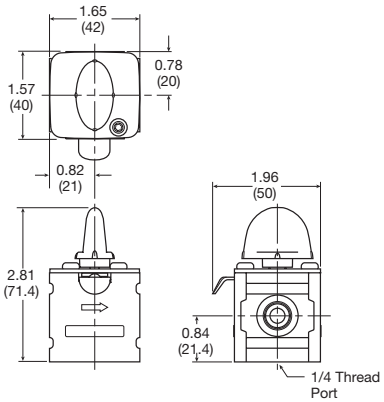
* Lockout tab and muffler supplied with unit.
For thread type: BSPP **1**
BSPT **2**
NPT **9**

Material Specifications

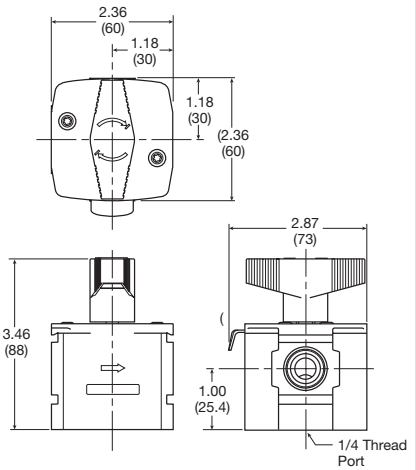
Body	Aluminum
Seals	PTFE
Ball	Stainless Steel
Lockout Tab	Zinc Plated Steel
Screw	Zinc Plated Steel

Dimensions inches (mm)

P31



P32



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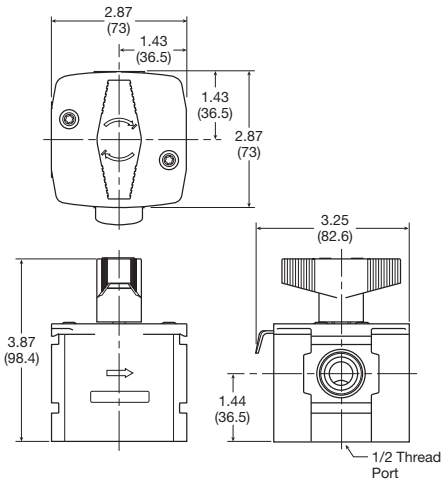

Most popular.

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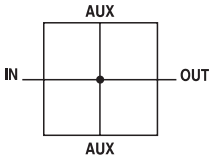
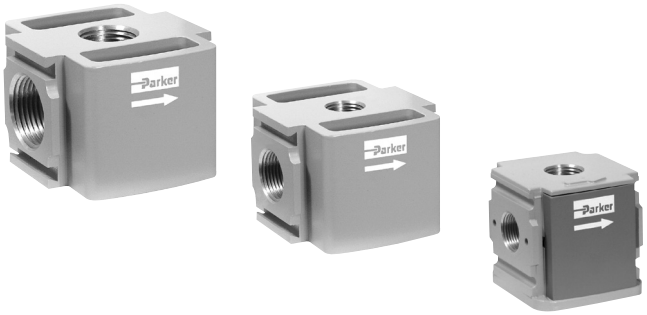
Manifold Blocks

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





Ordering Information

Model Type	In / Out Port Size	Auxiliary Port Size Top	Auxiliary Port Size Bottom	Thread Type	Part Number
P31	1/4"	1/4"	1/4"	NPT	**P31MA92022N**
P32	1/2"	1/4"	1/2"	NPT	**P32MA94024N**
P33	3/4"	1/4"	1/2"	NPT	**P33MA96024N**

For thread type: BSPP **1**
BSPT **2**
NPT **9**

Operating information

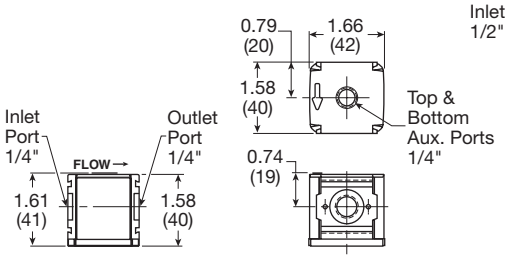
Operating temperature:		-40°F to 150°F (-40°C to 65.5°C)
Pressure supply (max):		300 psig (20.7 bar)
Weight:	P31	0.26 lbs (0.12 kg)
	P32	0.45 lbs (0.20 kg)
	P33	0.45 lbs (0.20 kg)

Material Specifications

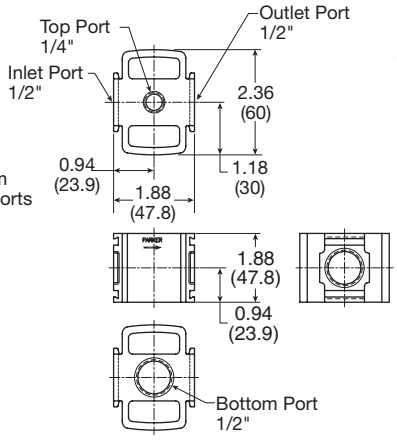
Body	Aluminum

Dimensions inches (mm)

P31



P32



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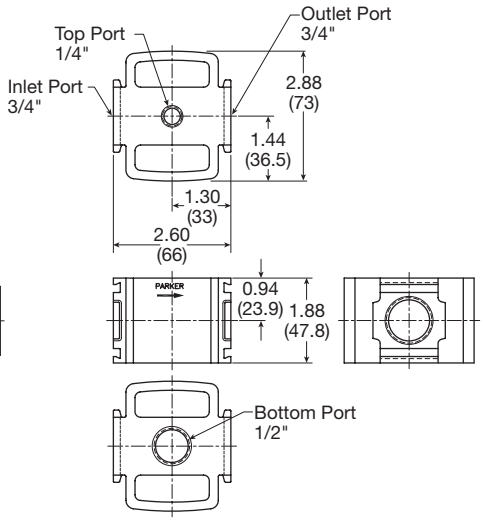

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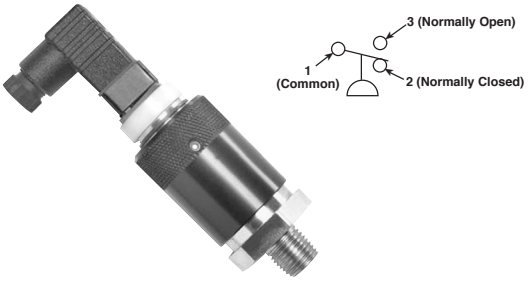
PPS1 Pressure Switch

- Long life elastomer diaphragm
- High quality snap action switch
- Field adjustable
- Compact design
- Easily customized
- Quick delivery
- NEMA 4, 13



Definitions and Terminology

Repeatability — Accuracy is the maximum allowable set point deviation of a single pressure or temperature switch under one given set of environmental and operational conditions.

Single Pole Double Throw (SPDT) Switching element — A SPDT switching element has one normally open, one normally closed and one common terminal. Three terminals mean that the switch can be wired with the circuit either normally open (NO), or normally closed (NC), or both.

Dead Band — The dead band, sometimes referred to as "differential" or "hysteresis", is the change in pressure between actuation and deactuation set points.

Operating information

Temperature range:	-40°F to 105°F (-40°C to 220°C)
Operating pressure range:	1, 2, 3 - 250 PSI (17.2 bar) 4 - 2000 PSI (137.9 bar)
Set point tolerance	±1 PSI or 5% (.07 bar)
Deadband	10 - 20% of set pressure
Current rating	3A @ 125 VAC 2A @ 30 VDC (Resistive)
Circuit form	SPDT Standard
Cycle life	1 Million

Ordering Information:

PPS1 - 1 C 3 - R HM

Thread	
1/4" NPT Male	1
1/8" NPT Male	2
1/4" BSPP Male	17
1/8" BSPP Male	18

Circuit	
SPDT	C

	Range*
1	3-10 PSI
2	6-30 PSI
3	20-120 PSI
4†	100-400 PSI

† Only available in 1/4" NPT

Set Point Direction	
R	Rising

Electrical Connection	
HM	DIN 9.4mm
WL	Wire Leads 18"

*Factory setting for calibration purposes
Range 1 = 6 PSI
Range 2 = 18 PSI
Range 3 = 70 PSI
Range 4 = 250 PSI

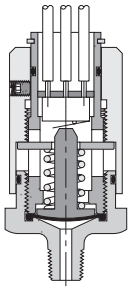
Note: Switch is field adjustable.

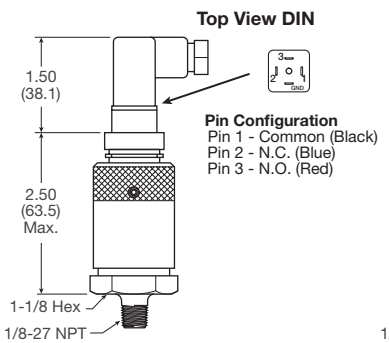
Material Specifications

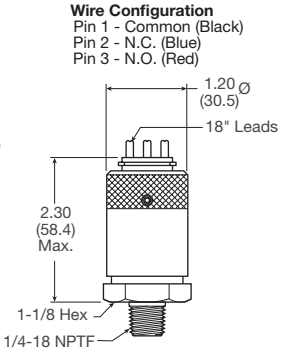
Adjustment knob	Anodized aluminum
Body	Brass
Diaphragm	Nitrile

Operation

The pressure switch monitors the air pressure in your pneumatic system. When the pressure in your system either drops below or exceeds the set point pressure, an electrical output is given.







For inventory, lead times, and kit lookup, visit www.pdnplu.com

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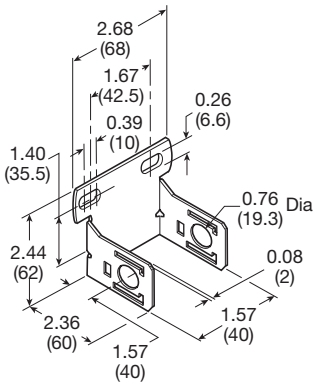
P31 Accessories

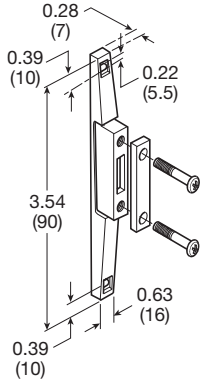
C-Bracket
(Fits to filter and lubricator body)

P31KA00MW



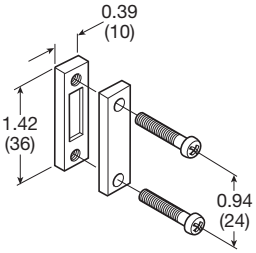
T-Bracket w/ Body Connector
(O-ring not shown)

P31KA00MT



Body Connector
(O-ring not shown)

P31KA00CB



Port Block Kit
(O-ring not shown)

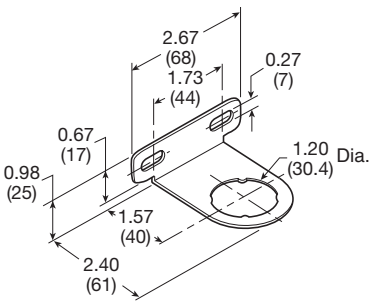
1/8 NPT **P31KA91CP**	1/8 BSPT **P31KA21CP**
1/4 NPT **P31KA92CP**	1/4 BSPT **P31KA22CP**
3/8 NPT **P31KA93CP**	3/8 BSPT **P31KA23CP**
1/8 BSPP **P31KA11CP**	
1/4 BSPP **P31KA12CP**	
3/8 BSPP **P31KA13CP**	

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

1/8 NPT **P31KA91CN**	1/8 BSPT **P31KA21CN**
1/4 NPT **P31KA92CN**	1/4 BSPT **P31KA22CN**
3/8 NPT **P31KA93CN**	3/8 BSPT **P31KA23CN**
1/8 BSPP **P31KA11CN**	
1/4 BSPP **P31KA12CN**	
3/8 BSPP **P31KA13CN**	

Angle Bracket
(Fits to regulator and filter/regulator body)

P31KB00MR



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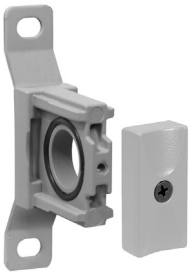
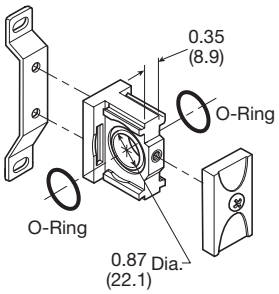
P32 Accessories

T-Bracket w/ Body Connector

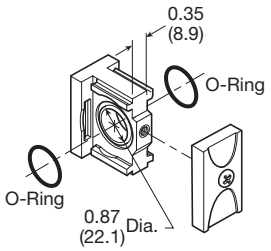
P32KA00MT





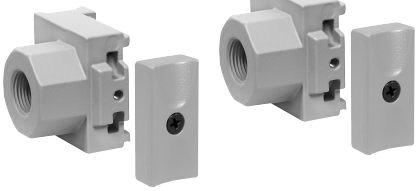
Body Connector

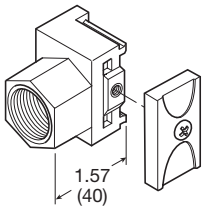
P32KA00CB



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**
1/4 BSPT	**P32KA22CP**
3/8 BSPT	**P32KA23CP**
1/2 BSPT	**P32KA24CP**
3/4 BSPT	**P32KA26CP**

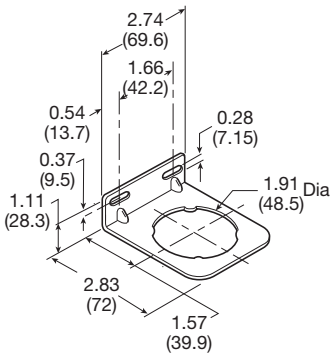




Angle Bracket

(Fits to regulator and filter/regulator bonnet)

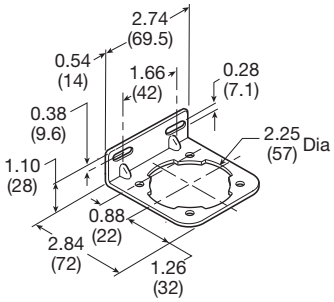
P32KB00MR



L-Bracket

(Fits to filter and lubricator body)

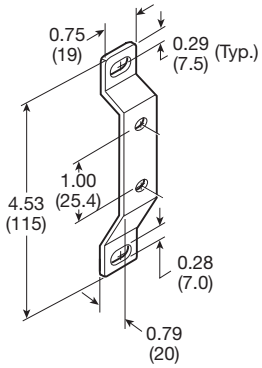
P32KA00ML



T-Bracket

(fits to body connector or port block)

P32KA00MB



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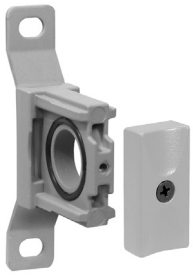
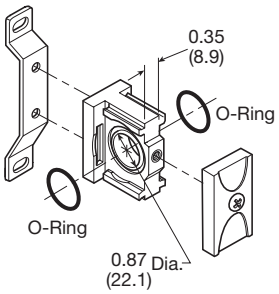
P33 Accessories

T-Bracket w/ Body Connector

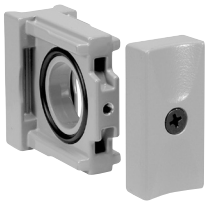
P32KA00MT

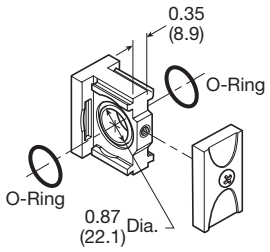




Body Connector

P32KA00CB





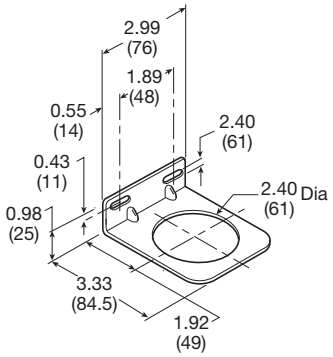
Port Block Kit

1/4 NPT	**P32KA92CP**	1/4 BSPT	**P32KA22CP**
3/8 NPT	**P32KA93CP**	3/8 BSPT	**P32KA23CP**
1/2 NPT	**P32KA94CP**	1/2 BSPT	**P32KA24CP**
3/4 NPT	**P32KA96CP**	3/4 BSPT	**P32KA26CP**
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)

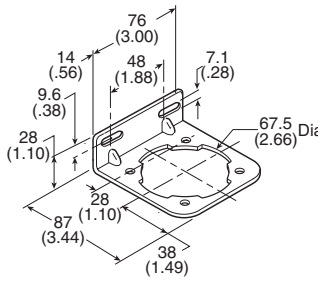
P33KA00MR



L-Bracket

(Fits to filter and lubricator body)

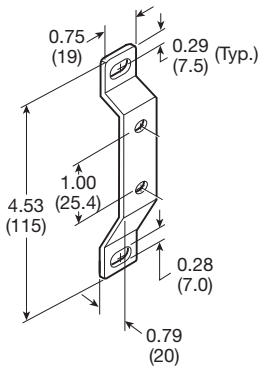
P33KA00ML



T-Bracket

(fits to body connector or port block)

P32KA00MB



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Series	Description	Part number	
P31 P32 P33	Panel Mount Nut (Plastic)	**P31KA00MP** **P32KA00MP** **P33KA00MP**	
P31 P32 P33	Panel Mount Nut (Aluminum)	**P31KA00MM** **P32KA00MM** **P33KA00MM**	
P31 P32 P33	5µ Element Kit	**P31KA00ESE** **P32KA00ESE** **P33KA00ESE**	
P31 P32 P33	1µ Element Kit	**P31KA00ES9** **P32KA00ES9** **P33KA00ES9**	
P31 P32 P33	0.01µ Element Kit	**P31KA00ESC** **P32KA00ESC** **P33KA00ESC**	
P31 P32 P33	Adsorber Element Kit	**P31KA00ESA** **P32KA00ESA** **P33KA00ESA**	
P32 / P33	Auto Drain Kit	**P32KA00DA**	
P31 P32 / P33	Differential Pressure Indicator Kit	**P31KB00RQ** **P32KA00RQ**	
P31 / P32 / P33	Drip Control Assembly Kit	**P32KA00PH**	
P31 P32 / P33	Fill Plug Kit	**P31KA00PL** **P32KA00PL**	
P31 P32 P33	Lubricator - Plastic Bowl w/ Bowl Guard No Drain	**P31KB00BGN** **P32KB00BGN** **P33KA00BGN**	

Series	Description	Part number	
P31 P32 P33	Lubricator - Metal Bowl w/o Sight Gauge No Drain	**P31KB00BMN** **P32KB00BMN** **P33KA00BMN**	
P32 P33	Lubricator - Metal Bowl w/ Sight Gauge No Drain	**P32KB00BSN** **P33KA00BSN**	
P31 P32 P33	Metal Bowl w/o Sight Gauge & Manual Drain	**P31KB00BMM** **P32KB00BMM** **P33KA00BMM**	
P31	Metal Bowl w/o Sight Gauge & Pulse Drain	**P31KB00BMB**	
P32 P33	Metal Bowl w/o Sight Gauge & Auto Drain	**P32KB00BMA** **P33KA00BMA**	
P32 P33	Metal Bowl w/ Sight Gauge & Manual Drain	**P32KB00BSM** **P33KA00BSM**	
P32 P33	Metal Bowl w/ Sight Gauge & Auto Drain	**P32KB00BSA** **P33KA00BSA**	
P31 P32 P33	Plastic Bowl w/ Bowl Guard & Manual Drain	**P31KB00BGM** **P32KB00BGM** **P33KA00BGM**	
P31	Plastic Bowl w/ Bowl Guard & Pulse Drain	**P31KB00BGB**	
P32 P33	Plastic Bowl w/ Bowl Guard & Auto Drain	**P32KB00BGA** **P33KA00BGA**	
P32 P33	Regulator - Relieving Repair Kit	**P32KB00RB** **P33KA00RB**	
P32 P33	Regulator - Non-Relieving Repair Kit	**P32KB00RC** **P33KA00RC**	

Series	Description	Connection	Part number
P32 P33	Regulator - Main Adjusting Spring 0-30 psig (0-2 bar) Kit		**P32KB00PR** **P33KA00PR**
P32 P33	Regulator - Main Adjusting Spring 0-60 psig (0-4.1 bar) Kit		**P32KB00PS** **P33KA00PS**
P32 P33	Regulator - Main Adjusting Spring 0-125 psig (0-8.6 bar) Kit		**P32KB00PT** **P33KA00PT**
P32 P33	Regulator - Main Adjusting Spring 0-250 psig (0-17 bar) Kit		**P32KB00PV** **P33KA00PV**
P31	Square Guage	0-60 psig 0-160 psig 0-290 psig 0-4 bar 0-11 bar 0-20 bar 0-0.4 MPa 0-1.1 MPa 0-2.0 MPa	**P31KA060XB** **P31KA160KB** **P31KA290XB** **P31KA04BXB** **P31KA11BXB** **P31KA20BXB** **P31KA04MXB** **P31KA11MXB** **P31KA20MXB**
P31	Square Flush Mounting Gauge Kit	0-60 psig 0-160 psig 0-4 bar 0-11 bar	**K4511SCR060** **K4511SCR160** **K4511SCR04B** **K4511SCR11B**
P31 / P32	Square Mounting Gauge with Adapter Kit	0-60 psig 0-160 psig 0-4 bar 0-11 bar	**P6G-PR90060** **P6G-PR90160** **P6G-PR10040** **P6G-PR10110**
P31	1" Round Gauge	0-60 psig / 0-4.1 bar 1/8" 0-160 psig / 0-10 bar 1/8"	**K4510N18060** **K4510N18160**
P31	40mm Round Gauge	0-30 psig / 0-2 bar 1/8" 0-60 psig / 0-4.1 bar 1/8" 0-160 psig / 0-10 bar 1/8"	**K4515N18030** **K4515N18060** **K4515N18160**
P32 / P33	50mm Round Gauge	0-30 psig / 0-2 bar 1/4" 0-60 psig / 0-4.1 bar 1/4" 0-160 psig / 0-10 bar 1/4" 0-300 psig / 0-20 bar 1/4"	**K4520N14030** **K4520N14060** **K4520N14160** **K4520N14300**
P31 P32 / P33	Body Connector O-ring (Replacement kit) (Pack of 10)		**P31KA00CY** **P32KA00CY**
P31 P32	Tamperproof Knob Kit		**P31KB00AT** **P32KB00AT**
P31 P32	Tamperproof Lockable Kit		**P31KB00AL** **P32KB00AL**

Solenoid Operators - CNOMO

Solenoid operators, coil combinations

	NC Normal Operator with 22 x 30 standard coil	NC Normal Operator with 30 x 30 standard coil
Working pressure	0 to 10 bar	0 to 10 bar
Ambient temperature	-10°C to 60°C *	-10°C to 60°C *
Power (DC)	4.8W	2.7W
Power (AC)	8.5VA	4.9VA
Voltage tolerance	+/-10%	+/-10%
Duty cycle	100%	100%
Insulation class	F	F
Electric connection	B Industrial	DIN 43650A
Protection	IP65	IP65
Approval		UL/CSA
Working media	All neutral media such as compressed air	

* Limited to 50°C if use with 100% duty cycle

Transients

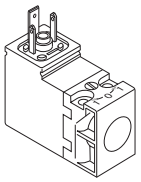
Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavorable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the Maximum life of relays in the circuit (and particularly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

Materials

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

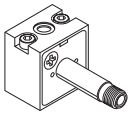
Coil	
Encapsulation material:	Thermoplastic as standard Duroplast for M12 connection

P31 Series only - Solenoid coils 15mm NC



Voltage	Order code Override, blue, non-locking flush	Weight (kg)
24VDC	**PS2982B49P**	0.038
115VAC 50Hz / 120VAC 60Hz	**PS2982B53P**	0.038

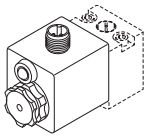
Spare Base Solenoid Pilot Operator CNOMO NC



Description	Part number non-lock manual override	Weight (kg)
Standard Duty	**P2FP23N4B**	0.065
No Override	**P2FP23N4A**	0.065

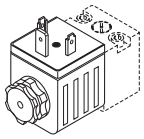
Note: Solenoid pilot operators are fitted to the Global range. Order the above part numbers for spares. The operators are supplied with mounting screws and interface 'O' rings. Coils and connectors must be ordered separately.

Solenoid Coils with M12 Connection



Voltage	Part number	Weight (kg)
Direct current		
24VDC	**P2FC6449**	0.065

Solenoid Coils with DIN A or Industrial B Connection



Voltage	22mm x 30mm Part number B industrial standard	Weight (kg)	30mm x 30mm Part number DIN 43650A standard	Weight (kg)
Direct current				
24VDC	**P2FCB449**	0.093	**P2FCA449**	0.105
Alternative current				
110V 50Hz, 120V 60Hz	**P2FCB453**	0.093	**P2FCA453**	0.105

☐ Most popular.

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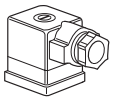
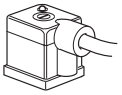
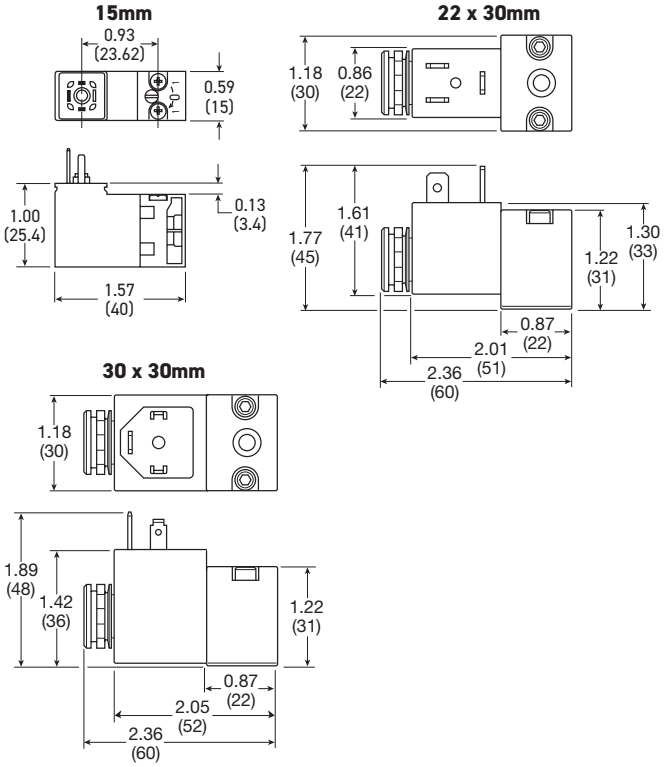
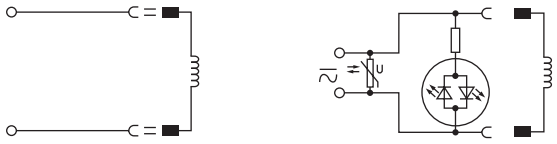
Solenoid Connectors / Cable Plugs EN175301-803

	Description	Part number 22mm Form B Industrial	Part number 30mm Form A DIN 43650A
With standard screw 	Standard IP65 without flying lead	**PS2429BP**	**PS2028BP**
	With LED and protection 24VAC/DC	**PS243079BP**	**PS203279BP**
	With LED and protection 110VAC	**PS243083BP**	**PS203283BP**
With cable 	Standard with 2m cable IP65	**PS2429JBP**	**PS2028JCP**
	24VAC/DC, 2m cable LED and protection IP65	**PS2430J79BP**	**PS2032J79CP**
	110VAC/DC, 2m cable LED and protection IP65	**PS2430J83BP**	**PS2032J83CP**

Solenoid coil dimensions inches (mm)



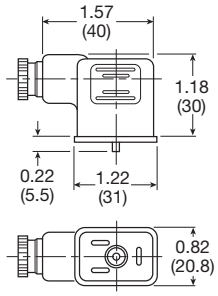
Electrical schematics



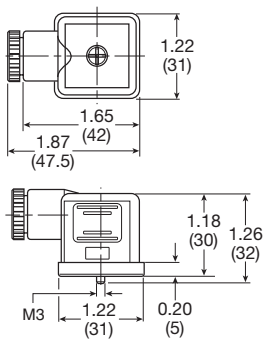
PS2028BP	**PS243079BP**	**PS203279BP**
PS2028JBP	**PS2430J79BP**	**PS2032J79CP**
PS2429BP	**PS243083BP**	**PS203283BP**
PS2429JBP	**PS2430J83BP**	**PS2032J83CP**
PS2932BP	**PS294679BP**	**PS294683BP**
PS2932JBP	**PS2946J79BP**	**PS2946J83BP**

Cable plug dimensions inches (mm)

22mm Form B Industrial Cable plugs	**PS2429BP**



30mm DIN 43650A Cable plugs	**PS2028BP**



Most popular.

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