



AIR PREPARATION SYSTEM P31, P32, P33 & P3Y SERIES

Modular & Body Ported 1/4 to 3/4
Body Ported 3/4 & 1, with Port Blocks 1.1/2



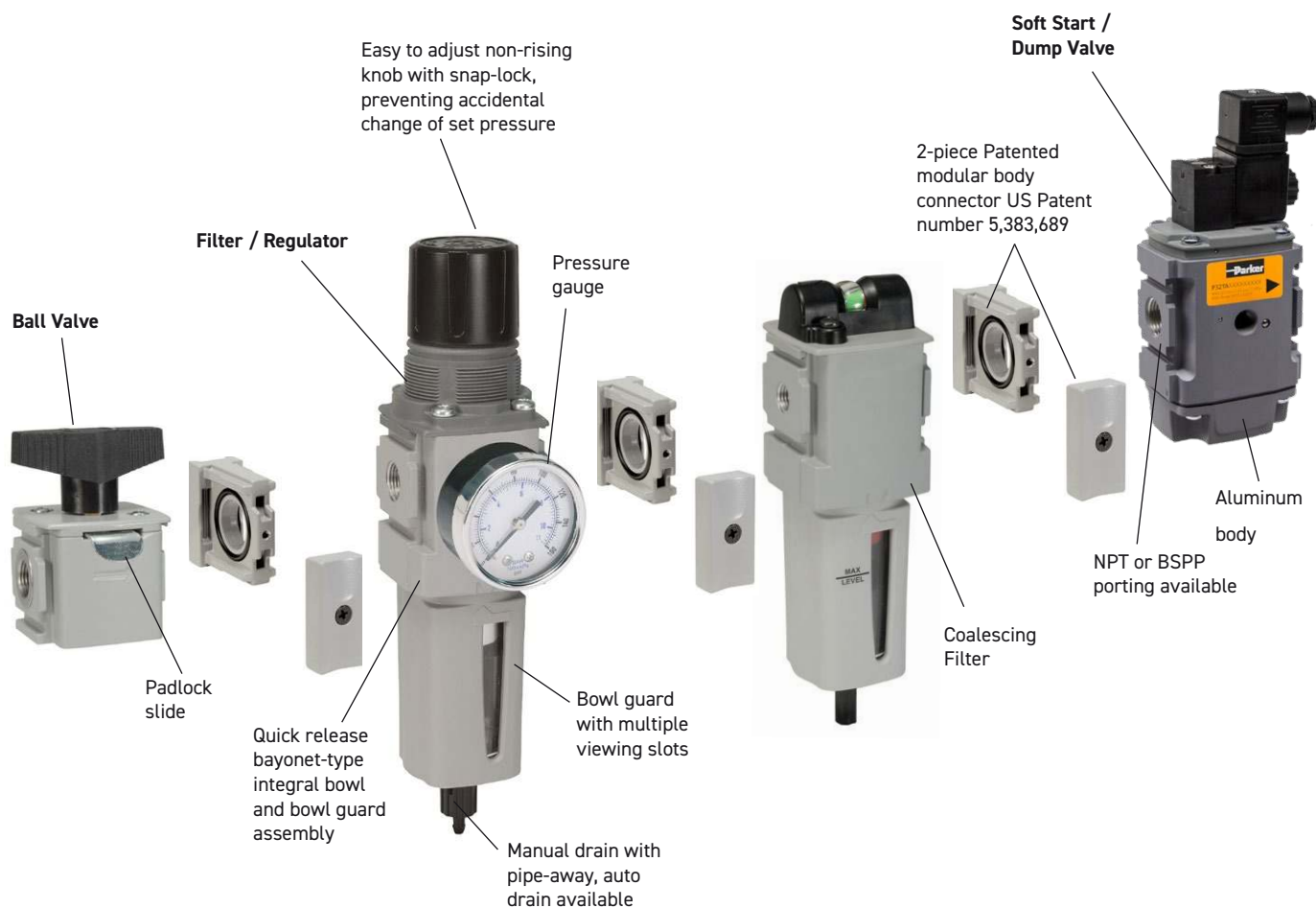
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If you have questions about the products contained in this catalog, or their applications, please contact:
Parker Hannifin EMEA Sàrl European Headquarters
parker.com/msge

FULLY MODULAR AIR PREPARATION SYSTEM



Picture for illustration, product could have a different design.

- Mixity between sizes P32 and P33 by using same mountings.
- Extended air ports sizes by adding end port blocks or for converting from BSPP body threaded to NPT.

	P31	P32	P33
1/8"	n		
1/4"	q	q	n
3/8"		q	n
1/2"		q	q
3/4"		n	q

n With end blocks

q Body threaded

AIR PREPARATION

Global 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.

Picture for illustration, product could have a different design.

AIR PREPARATION

Complete 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	68	(32)
Filter/Regulator	74	(35)
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	164	(77)
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	102	(48)
Coalescer	42	(20)
Regulator	233	(110)
Filter/Regulator	235	(109)
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)

P3Y Large Series



90mm body width

3/4" and 1" Ported

Flows up to:	scfm	(dm ³ /s, ANR)
Filter	170	(80)
Coalescer	307	(150)
Regulator	550	(260)
Filter/Regulator	465	(220)
Lubricator	390	(184)

Features:

- OSHA Compliant shut-off valves
- Soft-Start & Quick Dump valves
- Electronic Proportional Regulator

Picture for illustration, product could have a different design.

AIR PREPARATION

Complete FRL System

Safety Exhaust Valves

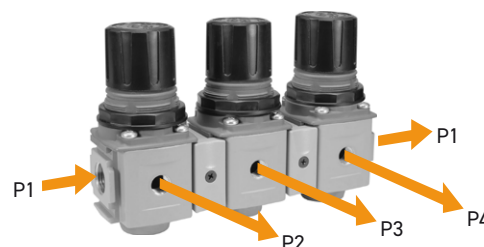
- External monitoring provides a cost and space saving advantage
- Solid state pressure sensors provide accurate, fast fault detection
- Quick visual LED indicators on the front of the valve
- Safety exhaust outlet is no-maintenance and non-clog by design
- Suitable for stand alone use or modular mounting to P32 or P33 FRL assembly



(optional soft start)

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 Regulators

- 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

Optional Tamperproof Kit

- 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



Picture for illustration, product could have a different design.

Application Guide

FRL to Valve: The chart below contains recommendations for the correct selection of Global Air Preparation units to suit the number and size of valves in a typical application.

	P31 Mini Series 					P32 Compact Series 						P33 Standard Series 					
	Number of valves that would actuate at once																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Moduflex 1																	
Isys Micro																	
HB / Viking Xtreme																	
Moduflex 2																	
HA / Global ISO																	
See Large P3Y Series																	

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

Cyl Ø mm Cyl Ø inches		Cylinder bore size													
		5 (5/16)	10 (7/16)	16 (9/16)	20 (3/4)	25 (1)	28 (1-1/8)	32 (1-1/4)	40 (1-1/2)	45 (1-3/4)	50 (2)	63 (2-1/2)	75 (3)	80 (3-1/4)	100 (4)
Tube Ø mm Tube Ø inches		Tube diameter external													
		4 (5/32)	4 (5/32)	4 (5/32)	6 (1/4)	6 (1/4)	6 (1/4)	6 (1/4)	8 (5/16)	8 (5/16)	8 (5/16)	10 (3/8)	10 (3/8)	12 (1/2)	12 (1/2)
Number of cylinders actuating at once	1														
	2														
	3														
	4														
	5														
	6														
	7														
	8														
	9														
	10														
		P31 Mini Series					P32 Compact Series				P33 Standard Series			Large P3Y Series	
															

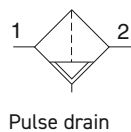
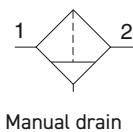
Note: Data listed above is simply a guideline for a typical application only.
Proper sizing and correct flow requirements must be taken into account.

P31, P32, P33 SERIES

Mini Particulate Filters

P31 Particulate Filter – Mini

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



Port Size	Description †	Part Number
1/4"	Poly Bowl, Manual Drain	P31FB12EGMN
1/4"	Poly Bowl, Pulse Drain	P31FB12EGBN
1/4"	Metal Bowl, Manual Drain	P31FB12EMMN
1/4"	Metal Bowl, Pulse Drain	P31FB12EMBN

† 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 dm³/s, ANR)

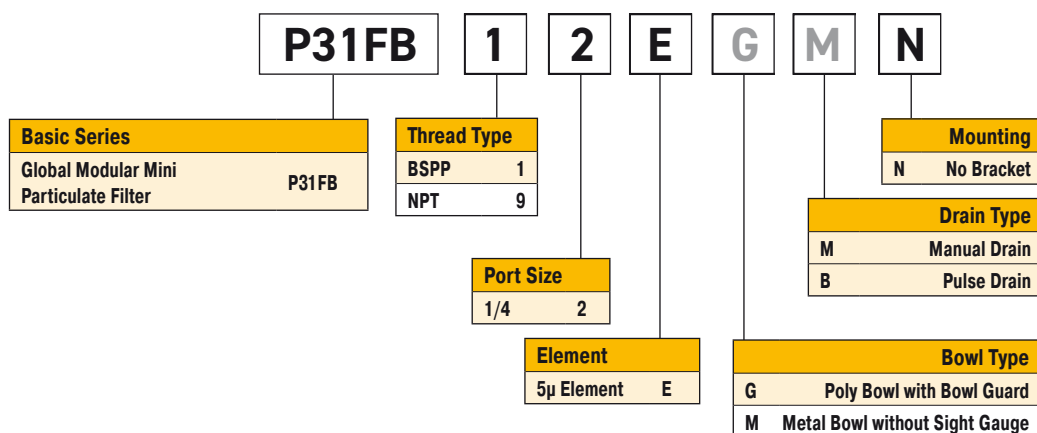
Useful retention†: 0.4 US oz. (12 cm³)

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.

Ordering Information:



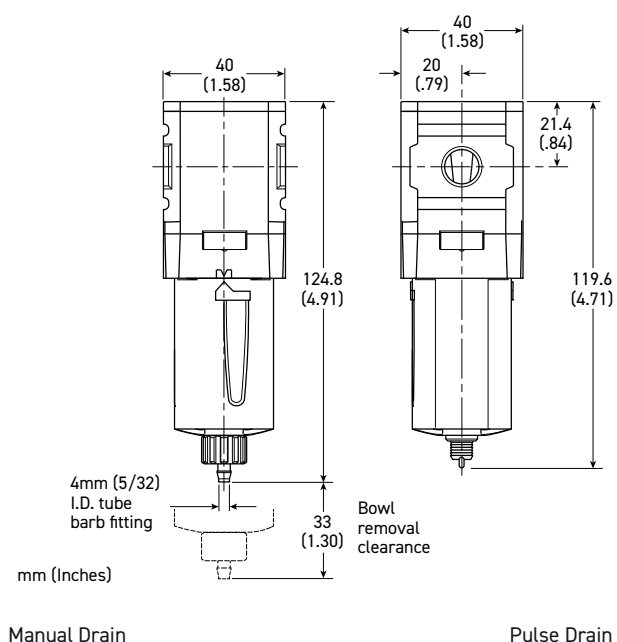
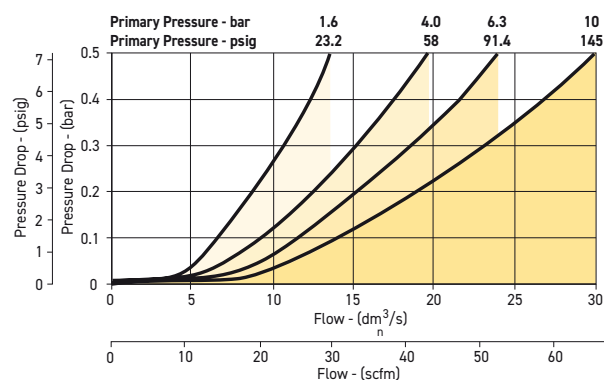
Most Popular

Material Specifications	
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Element retainer	Acetal
Baffle	Acetal
Filter element	Sintered polyethylene
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
5 μ 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



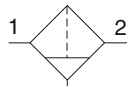
Most Popular

P31, P32, P33 SERIES

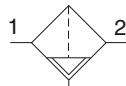
Compact Particulate Filters

P32 Particulate Filter – Compact

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



Manual drain



Auto drain



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 cm³)

Weight:

0.62 lb (0.28 kg)

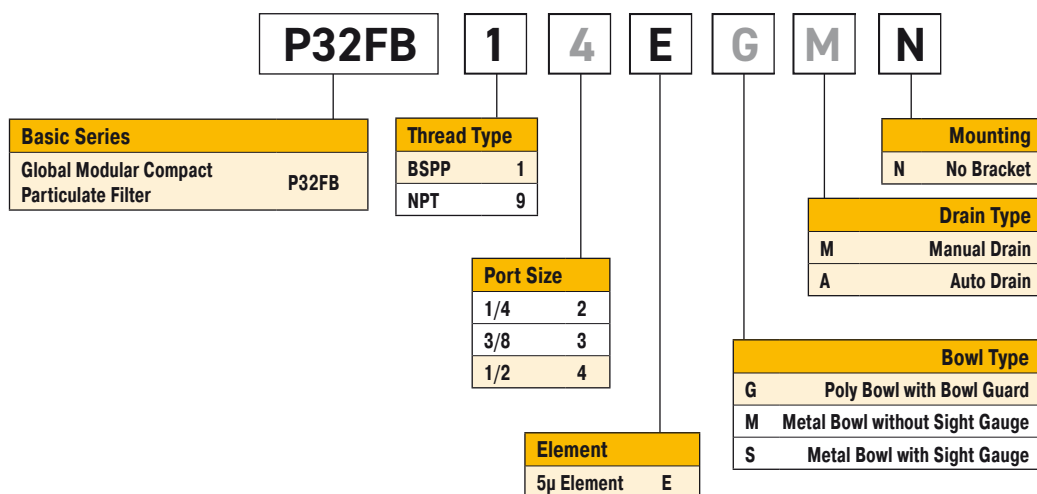
* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

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

Port Size	Description †	Part Number
1/4"	Poly Bowl, Manual Drain	P32FB12EGMN
1/4"	Poly Bowl, Auto Drain	P32FB12EGAN
1/4"	Metal Bowl, Manual Drain	P32FB12ESMN
1/4"	Metal Bowl, Auto Drain	P32FB12ESAN
3/8"	Poly Bowl, Manual Drain	P32FB13EGMN
3/8"	Poly Bowl, Auto Drain	P32FB13EGAN
3/8"	Metal Bowl, Manual Drain	P32FB13ESMN
3/8"	Metal Bowl, Auto Drain	P32FB13ESAN
1/2"	Poly Bowl, Manual Drain	P32FB14EGMN
1/2"	Poly Bowl, Auto Drain	P32FB14EGAN
1/2"	Metal Bowl, Manual Drain	P32FB14ESMN
1/2"	Metal Bowl, Auto Drain	P32FB14ESAN

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

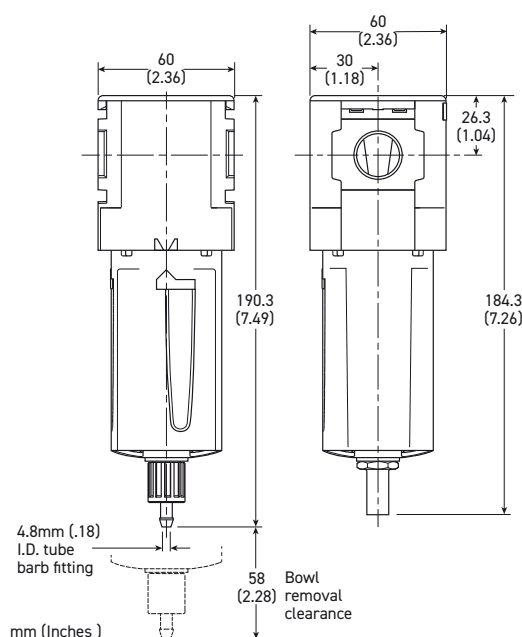
Ordering Information:



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	Sintered polyethylene
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
5 μ 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

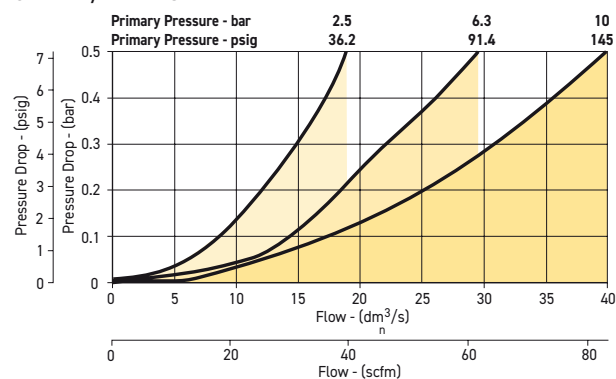


Manual Drain

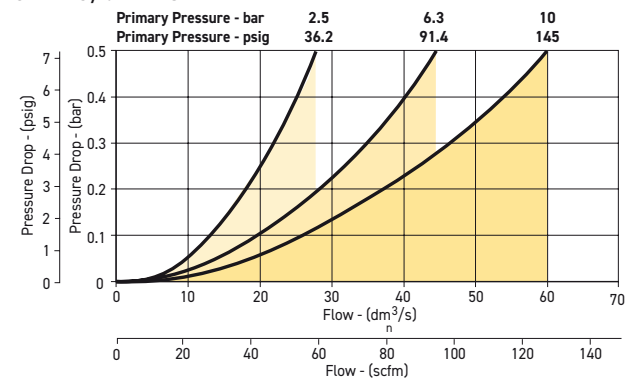
Automatic Drain

Flow Charts

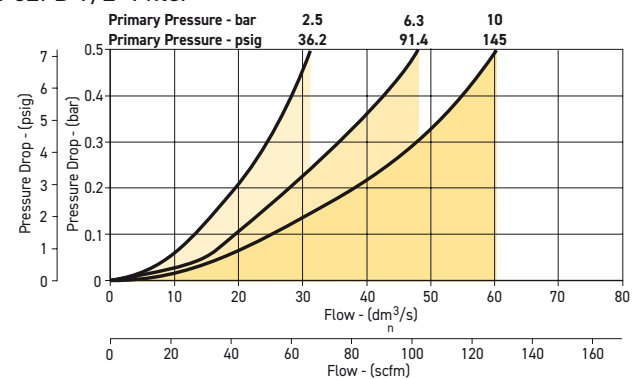
P32FB 1/4" Filter



P32FB 3/8" Filter



P32FB 1/2" Filter



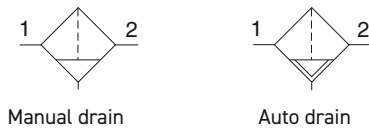
Most Popular

P31, P32, P33 SERIES

Standard Particulate Filters

P33 Particulate Filter – Standard

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



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 3/4

85 scfm (40 dm ³ /s, ANR)
102 scfm (48 dm ³ /s, ANR)

Useful retention†:

2.8 US oz. (85 cm³)

Weight:

1.01 lb (0.46 kg)

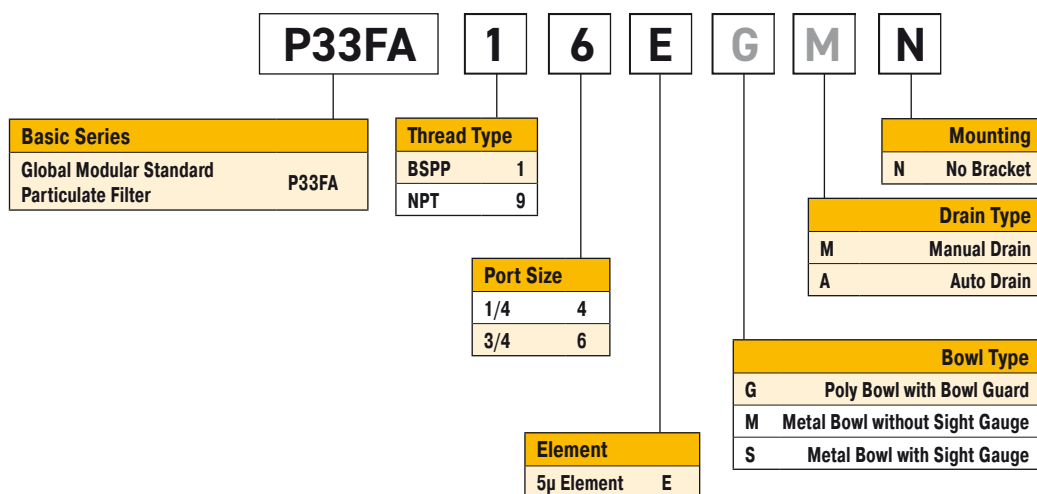
* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

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

Port Size	Description †	Part Number
1/2"	Poly Bowl, Manual Drain	P33FA14EGMN
1/2"	Poly Bowl, Auto Drain	P33FA14EGAN
1/2"	Metal Bowl, Manual Drain	P33FA14ESMN
1/2"	Metal Bowl, Auto Drain	P33FA14ESAN
3/4"	Poly Bowl, Manual Drain	P33FA16EGMN
3/4"	Poly Bowl, Auto Drain	P33FA16EGAN
3/4"	Metal Bowl, Manual Drain	P33FA16ESMN
3/4"	Metal Bowl, Auto Drain	P33FA16ESAN

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

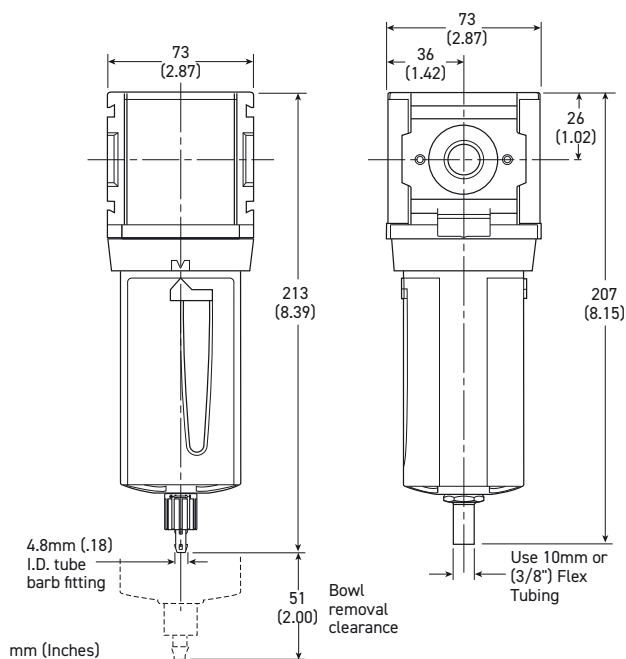
Ordering Information:



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	Sintered polyethylene
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
5 μ particle filter element	P33KA00ESE
L-bracket (fits to body)	P33KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB

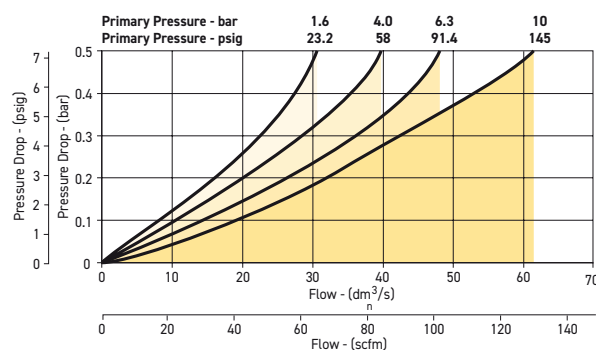


Manual Drain

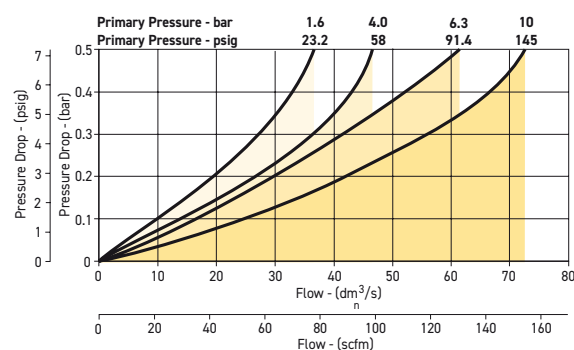
Automatic Drain

Flow Charts

P33FA 1/2" Filter



P33FA 3/4" Filter



Most Popular

P31, P32, P33 SERIES

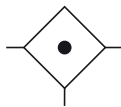
Mini Coalescing and Adsorber Filters

P31 Coalescing and Adsorber Filters – Mini

- Integral 1/4" ports (NPT & BSPP)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- 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	P31FB12AGMN
1/4"	Poly Bowl, Pulse Drain	0.01 micron	P31FB12CGBN
1/4"	Metal Bowl, Manual Drain	0.01 micron	P31FB12AMBN
1/4"	Metal Bowl, Pulse Drain	0.01 micron	P31FB12CMBN

† 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 dm³/s, ANR)
0.01 micron coalescing	7.5 scfm (3.6 dm³/s, ANR)
Activated carbon adsorber	12.7 scfm (6 dm³/s, ANR)

Useful retention†:

0.4 US oz. (12 cm³)

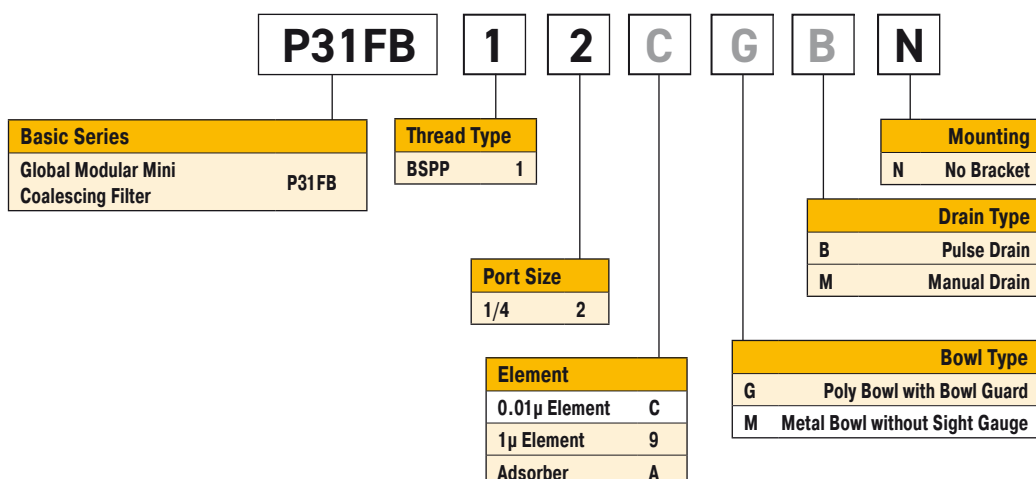
Weight:

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.

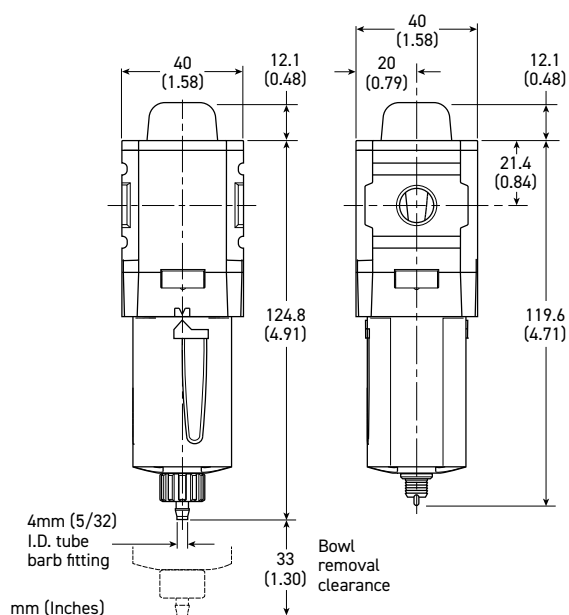
Ordering Information:



Most Popular

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
1 μ coalescing filter element	P31KA00ES9
0.01 μ 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

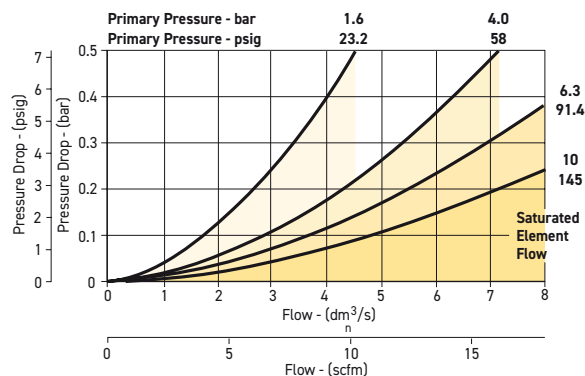


Manual Drain

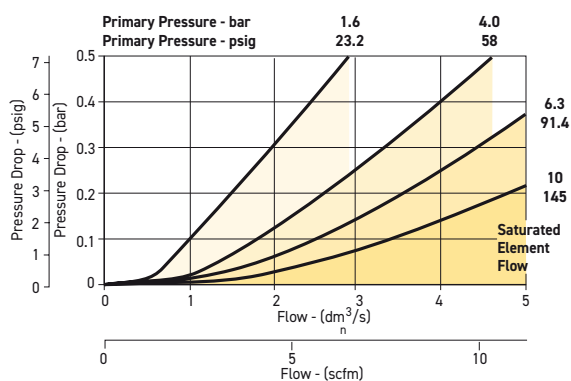
Pulse Drain

Flow Charts

P31FB - 1.0 micron flow



P31FB - 0.01 micron flow



Most Popular