

E

Air Preparation Products

Air Preparation Products

Air Preparation Products

Global FRL's



- Port size: 1/4 through 3/4 inch
- Maximum supply pressure: 300 PSIG
- Operating temperature: -13°F through 150°F
- Filters, regulators, filter / regulators, lubricators and accessories

E3

General Industrial FRL's



- Port size: 1/8 through 3 inch
- Maximum supply pressure: 250 PSIG
- Operating temperature: 32°F through 150°F
- Filters, regulators, filter / regulators, lubricators and accessories

E83

Prep-Air II FRL's



- Compact & standard
- Port size: 1/4 through 3/4 inch
- Filters, regulators, filter / regulators, lubricators and accessories
- Operating temperature: 32°F through 175°F
- Point of use applications
- Modular construction

E44

Stainless Steel FRL's



- Port sizes: 1/4 and 1/2 inch
- Stainless steel construction handles most corrosive environments
- Operating temperature -40°F through 180°F
- Meets NACE specifications MR-01-75/ISO 15156
- Filters, regulators, filter / regulators, and lubricators

E104

Miniature FRL's



- Port size: 1/8 through 3/8 inch
- Filters, regulators, filter / regulators, lubricators and accessories
- Operating temperature: -4°F through 125°F
- Non-modular construction
- Ideal for point of use applications

E63

Precision / Proportional Regulators



- Port sizes: 1/4 through 2 inch
- Maximum supply pressure: 300 PSIG
- Operating temperature: -40°F through 200°F
- High precision
- Electronic proportional

E111

P3N FRL's



- Port size: 3/4 through 1-1/2 inch
- Filters, regulators, filter / regulators, lubricators and accessories
- Operating temperature: 32°F through 175°F
- High flow

E74

Bulk Liquid Separators



- Port sizes 1/4 through 6 inch flange
- High liquid removal efficiencies at all flow conditions
- Low maintenance
- Suitable for variable flow compressors

E122

Global Modular Particulate Filters

- Integral 1/4", 3/8", 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



Operating information

	P31 (Mini)	P32 (Compact)	P33 (Standard)
Supply pressure (max):			
Plastic Bowl	10 bar (150 PSIG)	10 bar (150 PSIG)	10 bar (150 PSIG)
Metal Bowl	17 bar (250 PSIG)	17 bar (250 PSIG)	17 bar (250 PSIG)
Operating temperature:			
Plastic Bowl	-10°C to 52°C (14°F to 25°F)	-25°C to 52°C (-13°F to 25°F)	-25°C to 52°C (-13°F to 25°F)
Metal Bowl	-10°C to 65.5°C (14°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)
Standard filtration:	5 micron	5 micron	5 micron
Flow Capacity*:			
1/4	12 dm ³ /s (25 SCFM)*	18 dm ³ /s (38 SCFM)*	—
3/8	—	30 dm ³ /s (64 SCFM)*	—
1/2	—	38 dm ³ /s (80 SCFM)*	40 dm ³ /s (85 SCFM)*
3/4	—	—	48 dm ³ /s (102 SCFM)*

*Inlet pressure 6.3 bar (91.3 PSIG), pressure 0.34 bar (4.9 PSIG).

For Flow Curve Charts please see page E34.

Ordering information

P31F A 9 2 E G M N

Basic series	Engr level	Thread type	Port size	Element	Drain type	Bowl type	Mounting
Global modular mini particulate filter P31F	Current A	BSPP 1 BSPT 2 NPT 9	1/4 (P31, P32) 2 3/8 (P32) 3 1/2 (P32, P33) 4 3/4 (P33) 6	5µ Element E	M Manual drain A Auto drain (P32, P33) B Pulse drain (P31)	G Poly bowl with bowl guard M Metal bowl without sight gauge S* Metal bowl with sight gauge	N No bracket

Basic series

Global modular mini particulate filter	P31F
Global modular compact particulate filter	P32F
Global modular standard particulate filter	P33F

Drain type

M	Manual drain
A	Auto drain (P32, P33)
B	Pulse drain (P31)

Bowl type

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

Mounting

N	No bracket
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Element

5µ Element	E
------------	---

Drain type

M	Manual drain
A	Auto drain (P32, P33)
B	Pulse drain (P31)

Bowl type

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

Mounting

N	No bracket
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Element

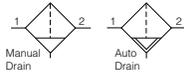
5µ Element	E
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* Not available with P31 Series.

Bold items are most common.



Particulate Filters



Port size	Bowl type	Drain type	Element type	Part number		
				P31	P32	P33
1/4"	Poly	Manual	5 micron	P31FA92EGMN	P32FA92EGMN	
1/4"	Poly	Pulse	5 micron	P31FA92EGBN		
1/4"	Poly	Auto	5 micron		P32FA92EGAN	
1/4"	Metal	Manual	5 micron	P31FA92EMMN	P32FA92ESMN	
1/4"	Metal	Pulse	5 micron	P31FA92EMBN		
1/4"	Metal	Auto	5 micron		P32FA92ESAN	
3/8"	Poly	Manual	5 micron		P32FA93EGMN	
3/8"	Poly	Auto	5 micron		P32FA93EGAN	
3/8"	Metal	Manual	5 micron		P32FA93ESMN	
3/8"	Metal	Auto	5 micron		P32FA93ESAN	
1/2"	Poly	Manual	5 micron		P32FA94EGMN	P33FA94EGMN
1/2"	Poly	Auto	5 micron		P32FA94EGAN	P33FA94EGAN
1/2"	Metal	Manual	5 micron		P32FA94ESMN	P33FA94ESMN
1/2"	Metal	Auto	5 micron		P32FA94ESAN	P33FA94ESAN
3/4"	Poly	Manual	5 micron			P33FA96EGMN
3/4"	Poly	Auto	5 micron			P33FA96EGAN
3/4"	Metal	Manual	5 micron			P33FA96ESMN
3/4"	Metal	Auto	5 micron			P33FA96ESAN

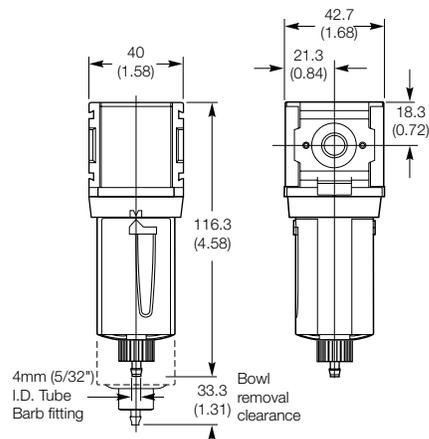
Service kits

Description		P31	P32	P33
Plastic bowl / bowl guard	Manual drain	P31KA00BGM	P32KA00BGM	P33KA00BGM
	Pulse drain	P31KA00BGB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl w/o sight gauge	Manual drain	P31KA00BMM		
	Pulse drain	P31KA00BMB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl / sight gauge	Manual drain		P32KA00BSM	P33KA00BSM
	Auto drain		P32KA00DA	P32KA00DA
Filter element	5µ particulate	P31KA00ESE	P32KA00ESE	P33KA00ESE
C-bracket	Fits to body	P31KA00MW		
L-bracket	Fits to body		P32KA00ML	P33KA00ML
	Fits to body connector		P32KA00MB	P32KA00MB
T-bracket	With body connector	P31KA00MT	P32KA00MT	P33KA00MT
	Body connector	P31KA00CB	P32KA00CB	P32KA00CB
Differential pressure indicator (replacement)		P31KA00RQ	P32KA00RQ	P32KA00RQ

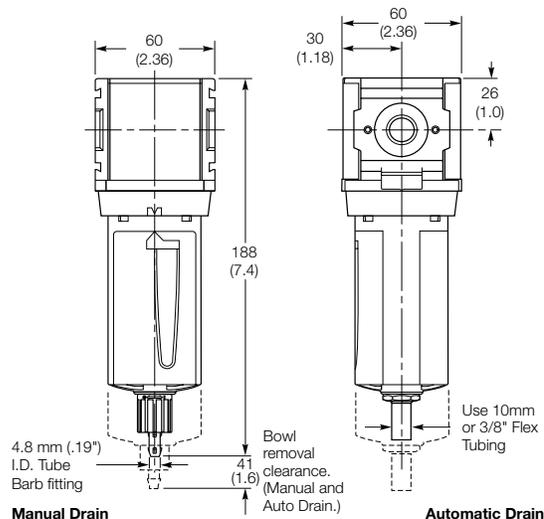
Most popular.



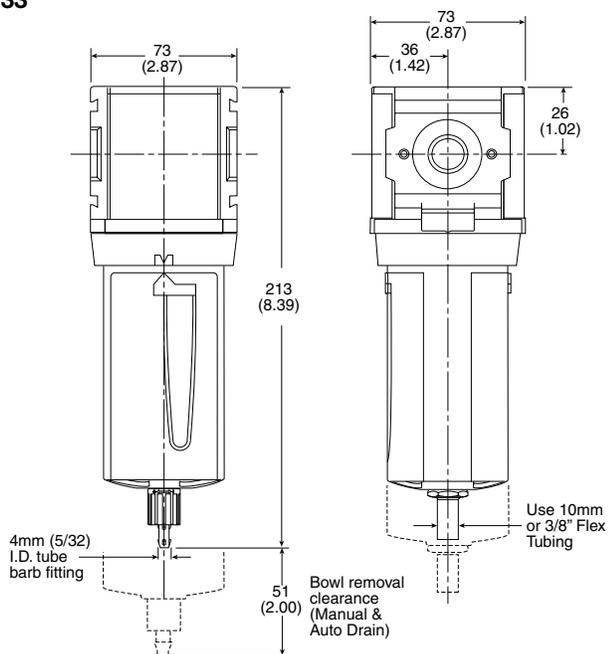
P31



P32



P33



Material specifications

Description		P31	P32	P33
Body		Aluminum	Aluminum	Aluminum
Body cap		N/A	N/A	ABS
Bowl	Plastic bowl	Polycarbonate	Polycarbonate	Polycarbonate
	Metal bowl	Aluminum	Aluminum	Aluminum
Bowl guard		Nylon	Nylon	Nylon
Deflector		N/A	Polypropylene	Polypropylene
Element retainer / baffle		Acetal	Acetal	Acetal
Filter element		Sintered Polyethylene	Sintered Polyethylene	Sintered Polyethylene
Seals		Nitrile	Nitrile	Nitrile
Sight gauge	Metal bowl	N/A	Polycarbonate	Polycarbonate

P	Air Preparation Products
	Global
Prep-Air II	
Miniature	
P3N	
General Industrial	
Stainless Steel	
Precision / Proportional	
Bulk Liquid Separators	

Global Modular Coalescing & Adsorber Filters

- Integral 1/4", 3/8", 1/2", 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
- 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 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 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Operating information

	P31 (Mini)	P32 (Compact)	P33 (Standard)
Supply pressure (max):			
Plastic Bowl	10 bar (150 PSIG)	10 bar (150 PSIG) [§]	10 bar (150 PSIG) [§]
Metal Bowl	17 bar (250 PSIG)	10 bar (150 PSIG) [§]	10 bar (150 PSIG) [§]
Operating temperature:			
Plastic Bowl	-10°C to 52°C (14°F to 125°F)	-25°C to 52°C (-13°F to 125°F)	-25°C to 52°C (-13°F to 125°F)
Metal Bowl	-10°C to 65.5°C (14°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)
Standard filtration:	1.0 and 0.01 micron	1.0 and 0.01 micron	1.0 and 0.01 micron
Flow Capacity:			
1.0 Micron Coalescing –			
Energy Efficient Flow*	3.8 dm ³ /s (8 SCFM)	17 dm ³ /s (36 SCFM)	32 dm ³ /s (68 SCFM)
Maximum Flow**	6 dm ³ /s (13 SCFM)	27 dm ³ /s (57 SCFM)	44 dm ³ /s (93 SCFM)
0.01 Micron Coalescing –			
Energy Efficient Flow*	2 dm ³ /s (4.2 SCFM)	11 dm ³ /s (23 SCFM)	20 dm ³ /s (42 SCFM)
Maximum Flow**	3.8 dm ³ /s (8 SCFM)	28 dm ³ /s (38 SCFM)	34 dm ³ /s (72 SCFM)
Activated Carbon Adsorber			
Rated Flow*:	6 dm ³ /s (13 SCFM)	27 dm ³ /s (57 SCFM)	44 dm ³ /s (93 SCFM)

* Inlet pressure 6.3 bar (91.3 PSIG), pressure drop 0.2 bar (3 PSIG) saturated element.
 ** Inlet pressure 6.3 bar (91.3 PSIG), pressure drop 0.4 bar (6 PSIG) saturated element.
 § Without pressure indicator (DPI) – max. supply pressure for metal bowl version is 17 bar (250 psig).
 For Flow Curve Charts please see page E35.

Ordering information

P31F A 9 2 C G M N

Basic series	Engr level	Thread type	Port size	Drain type	Bowl type	Element
Global modular mini coalescing filter P31	Current A	BSPP 1	1/4 (P31, P32) 2	M Manual drain	G Poly bowl with bowl guard	C 0.01µ Element
Global modular compact coalescing filter P32		BSPT 2	3/8 (P32) 3	A Auto drain (P32, P33)	M Metal bowl without sight gauge	D 0.01µ Element with DPI
Global modular standard coalescing filter P33		NPT 9	1/2 (P32, P33) 4	B Pulse drain (P31)	S* Metal bowl with sight gauge	9 1µ Element
			3/4 (P33) 6			Q 1µ Element with DPI
						A Adsorber

* Not available with P31 Series.

Mounting
N No bracket

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

Basic series
Global modular mini coalescing filter P31
Global modular compact coalescing filter P32
Global modular standard coalescing filter P33

Engr level
Current A

Thread type
BSPP 1
BSPT 2
NPT 9

Port size
1/4 (P31, P32) 2
3/8 (P32) 3
1/2 (P32, P33) 4
3/4 (P33) 6

Drain type
M Manual drain
A Auto drain (P32, P33)
B Pulse drain (P31)

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

Mounting
N No bracket

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

Bold items are most common.

Coalescing and Adsorber Filters,



(1 micron and adsorber elements available)



Port size	Bowl type	Drain type	Element type	Part number		
				P31	P32	P33
1/4"	Poly	Manual	0.01 micron	P31FA92CGMN	P32FA92DGMN	
1/4"	Poly	Pulse	0.01 micron	P31FA92CGBN		
1/4"	Poly	Auto	0.01 micron		P32FA92DGAN	
1/4"	Metal	Manual	0.01 micron	P31FA92CMMN	P32FA92DSMN	
1/4"	Metal	Pulse	0.01 micron	P31FA92CMBN		
1/4"	Metal	Auto	0.01 micron		P32FA92DSAN	
3/8"	Poly	Manual	0.01 micron		P32FA93DGMN	
3/8"	Poly	Auto	0.01 micron		P32FA93DGAN	
3/8"	Metal	Manual	0.01 micron		P32FA93DSMN	
3/8"	Metal	Auto	0.01 micron		P32FA93DSAN	
1/2"	Poly	Manual	0.01 micron		P32FA94DGMN	P33FA94DGMN
1/2"	Poly	Auto	0.01 micron		P32FA94DGAN	P33FA94DGAN
1/2"	Metal	Manual	0.01 micron		P32FA94DSMN	P33FA94DSMN
1/2"	Metal	Auto	0.01 micron		P32FA94DSAN	P33FA94DSAN
3/4"	Poly	Manual	0.01 micron			P33FA96DGMN
3/4"	Poly	Auto	0.01 micron			P33FA96DGAN
3/4"	Metal	Manual	0.01 micron			P33FA96DSMN
3/4"	Metal	Auto	0.01 micron			P33FA96DSAN

Service kits

Description		P31	P32	P33
Plastic bowl / bowl guard	Manual drain	P31KA00BGM	P32KA00BGM	P33KA00BGM
	Pulse drain	P31KA00BGB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl w/o sight gauge	Manual drain	P31KA00BMM		
	Pulse drain	P31KA00BMB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl / sight gauge	Manual drain		P32KA00BSM	P33KA00BSM
	Auto drain		P32KA00DA	P32KA00DA
Filter element	1µ coalescing	P31KA00ES9	P32KA00ES9	P33KA00ES9
	0.01µ coalescing	P31KA00ESC	P32KA00ESC	P33KA00ESC
	Activated carbon adsorber	P31KA00ESA	P32KA00ESA	P33KA00ESA
C-bracket	Fits to body	P31KA00MW		
L-bracket	Fits to body		P32KA00ML	P33KA00ML
T-bracket	Fits to body connector		P32KA00MB	P32KA00MB
	With body connector	P31KA00MT	P32KA00MT	P32KA00MT
Body connector		P31KA00CB	P32KA00CB	P32KA00CB
Differential pressure indicator (replacement)		P31KA00RQ	P32KA00RQ	P32KA00RQ

Most popular.



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

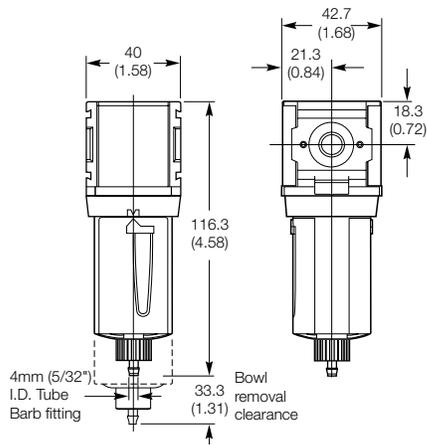
Stainless Steel

Precision / Proportional

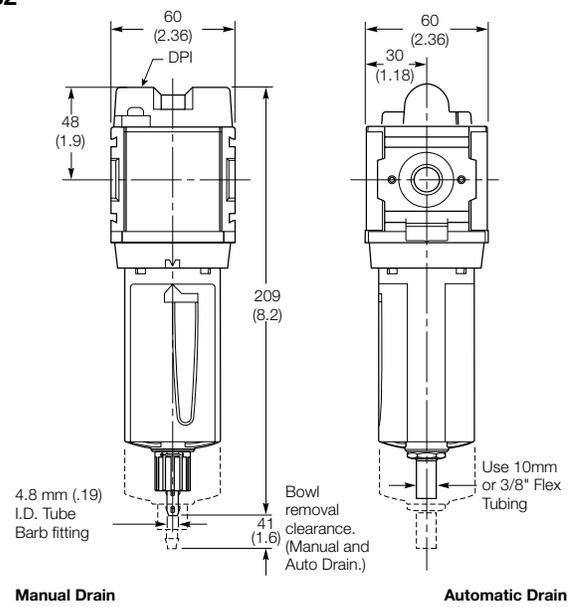
Bulk Liquid Separators

P
Air Preparation Products
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Prep-Air II
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P3N
General Industrial
Stainless Steel
Precision / Bulk Liquid Separators

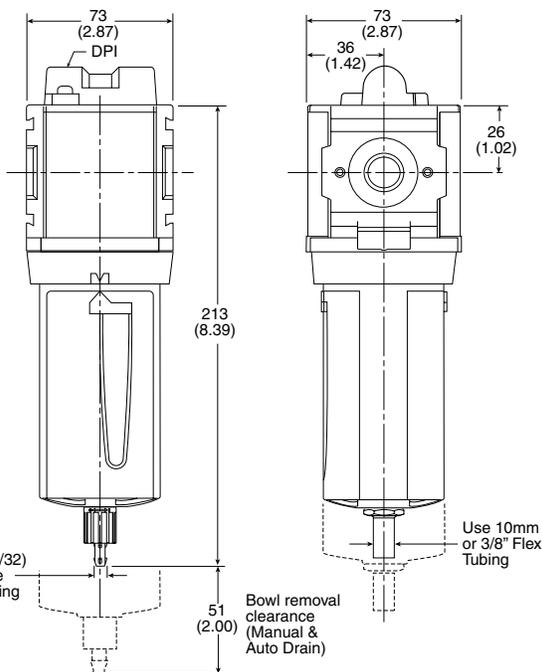
P31



P32



P33



Material specifications

Description	P31	P32	P33
Body	Aluminum	Aluminum	Aluminum
Body cap	N/A	N/A	ABS
Bowl	Plastic bowl	Polycarbonate	Polycarbonate
	Metal bowl	Aluminum	Aluminum
Bowl guard	Nylon	Nylon	Nylon
Filter element	Borosilicate cloth, 1.0 and .01 micron	Borosilicate cloth, 1.0 and .01 micron	Borosilicate cloth, 1.0 and .01 micron
Adsorber	Activated carbon	Activated carbon	Activated carbon
Seals	Nitrile	Nitrile	Nitrile
Sight gauge	Metal bowl	N/A	Polycarbonate

Global Modular Regulators

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



P31



P32



P33

⚠ 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.

Operating information

	P31 (Mini)	P32 (Compact)	P33 (Standard)
Supply pressure (max):	20 bar (300 PSIG)	20 bar (300 PSIG)	20 bar (300 PSIG)
Operating temperature:	-20°C to 65.5°C (-4°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)
Units with square gauges:	-15°C to 65.5°C (5°F to 150°F)		
Flow Capacity*:	1/4 30 dm³/s (64 SCFM)	41 dm³/s* (81 SCFM)*	—
	3/8 —	65 dm³/s* (138 SCFM)*	—
	1/2 —	67 dm³/s* (142 SCFM)*	100 dm³/s* (212 SCFM)*
	3/4 —	—	100 dm³/s* (212 SCFM)*

* Inlet pressure 10 bar (145 PSIG). Secondary pressure 6.3 bar (91.3 PSIG), pressure drop 1 bar (14.7 PSIG)

For Flow Curve Charts please see page E36.

Ordering information

P31R A 9 2 B N N P

Basic series	Engr level	Thread type	Mounting
Global modular mini regulator P31R	Current A	BSPP 1	P Plastic panel mount nut
Global modular compact regulator P32R		BSPT 2	
Global modular standard regulator P33R		NPT 9	

Port size	Relief	Adjustment range	
1/4 (P31, P32) 2	Relieving B	P31 & P32 with square gauge	
3/8 (P32) 3	Non-relieving N	psig	bar
1/2 (P32, P33) 4	Reverse flow-relieving R	1 = 30*	V = 2*
3/4 (P33) 6		3 = 60	S = 4
		5 = 125	T = 8
			With round gauge
			Z 2 bar; 30 psig; 0.2 MPa
			M 4 bar; 60 psig; 0.4 MPa
			G 8 bar; 125 psig; 0.8 MPa
			J‡ 17 bar; 250 psig; 1.7 MPa
			Without gauge
			Y 2 bar; 30 psig; 0.2 MPa
			L 4 bar; 60 psig; 0.4 MPa
			N 8 bar; 125 psig; 0.8 MPa
			H‡ 17 bar; 250 psig; 1.7 MPa

Bold items are most common.

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
 † Not available with poly bowl with bowl guard.
 ‡ Not available with P31 Series.



Regulators



Port size	Pressure (relieving)	Gauge	Part number		
			P31	P32	P33
1/4"	8 bar (125 PSIG)	—	P31RA92BNNP	P32RA92BNNP	
1/4"	8 bar (125 PSIG)	Square	P31RA92BN5P		
1/4"	8 bar (125 PSIG)	Round		P32RA92BNGP	
3/8"	8 bar (125 PSIG)	—		P32RA93BNNP	
3/8"	8 bar (125 PSIG)	Round		P32RA93BNGP	
1/2"	8 bar (125 PSIG)	—		P32RA94BNNP	P33RA94BNNP
1/2"	8 bar (125 PSIG)	Round		P32RA94BNGP	P33RA94BNGP
3/4"	8 bar (125 PSIG)	—			P33RA96BNNP
3/4"	8 bar (125 PSIG)	Round			P33RA96BNGP

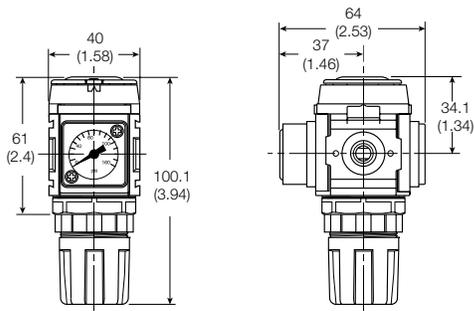
Service kits

Description		P31	P32	P33
Regulator repair kit	Relieving	P31KA00RB	P32KA00RB	P33KA00RB
	Non-relieving	P31KA00RC	P32KA00RC	P33KA00RC
Panel mount nut	Aluminum	P31KA00MM	P32KA00MM	P33KA00MM
	Plastic	P31KA00MP	P32KA00MP	P33KA00MP
Angle bracket	Uses panel mount threads	P31KA00MR	P32KA00MR	P33KA00MR
T-bracket	With body connector	P31KA00MT	P32KA00MT	P32KA00MT
T-bracket				P32KA00MB
Body connector		P31KA00CB	P32KA00CB	P32KA00CB
Gauges - Square flush mount gauge	0-4 bar	K4511SCR04B	K4511SCR04B	
	0-10 bar	K4511SCR11B	K4511SCR11B	
	0-60 PSIG	K4511SCR060	K4511SCR060	
	0-160 PSIG	K4511SCR160	K4511SCR160	
1.00" round 1/8" center back mount	0-60 PSIG / 0-4 bar	K4510N18060		
	0-160 PSIG / 0-11 bar	K4510N18160		
40mm round 1/8" center back mount	0-30 PSIG / 0-2 bar	K4515N18030		
	0-60 PSIG / 0-4 bar	K4515N18060		
	0-160 PSIG / 0-11 bar	K4515N18160		
50mm (2") round 1/4" center back mount	0-30 PSIG / 0-2 bar / 0-0.2 MPa		K4520N14030	K4520N14030
	0-60 PSIG / 0-4 bar / 0-0.4 MPa		K4520N14060	K4520N14060
	0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4520N14160	K4520N14160
	0-300 PSIG / 0-20 bar / 0-2 MPa		K4520N14300	K4520N14300
44mm (1-3/4") digital round 1/4" center back mount	0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4517N14160D	K4517N14160D

Most popular.

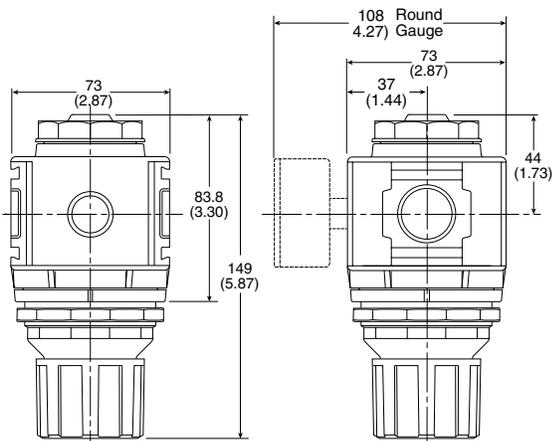


P31



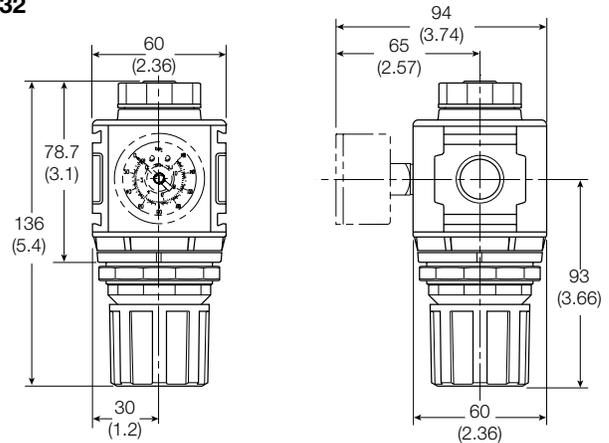
NOTE: 31.7 mm (1.25 in.) hole required for panel nut mounting.

P33



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

P32



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

Material specifications

Description	P31	P32	P33
Body	Aluminum	Aluminum	Aluminum
Adjustment knob	N/A	N/A	Acetal
Body cap	ABS	ABS	ABS
Bonnet	PBT	33% glass-filled nylon	33% glass-filled nylon
Diaphragm assembly	Brass / nitrile	Nitrile / zinc	Nitrile / zinc
Valve assembly	Brass / nitrile	Brass / nitrile	Brass / nitrile / acetal
Springs	Steel	Steel S.S. (main regulating valve)	Steel S.S. (main regulating valve)
Seals	Nitrile	Nitrile	Nitrile
Panel nut	Acetal	Acetal	Acetal



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators

Global Modular Common Regulators

- Manifold style regulator with line pressure on both sides
- Pressure output is at front or rear
- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust construction
- Secondary pressure ranges 0-2 bar (0-30 PSIG), 0-4 bar, (0-60 PSIG), 0-8 bar (0-125 PSIG), 0-17 bar (0-250 PSIG)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob



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.

Operating information

	P31 (Mini)	P32 (Compact)
Supply pressure (max):	20 bar (300 PSIG)	20 bar (300 PSIG)
Operating temperature:	-20°C to 65.5°C (-4°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)
Flow Capacity*:		
1/4	18 dm ³ /s* (38 SCFM)*	28 dm ³ /s* (59 SCFM)*
3/8	—	28 dm ³ /s* (59 SCFM)*
1/2	—	28 dm ³ /s* (59 SCFM)*

* Inlet pressure 10 bar (145 PSIG). Secondary pressure 6.3 bar (91.3 PSIG), pressure drop 1 bar (14.7 PSIG)
 For Flow Curve Charts please see page E36.

Ordering information

P31H A 9 2 B N N P

Basic series	Engr level	Thread type	Relief	Mounting
Global modular mini common regulator P31H	Current A	BSPP 1 BSPT 2 NPT 9	B Relieving N Non-relieving	P Plastic panel mount nut
Global modular compact common regulator P32H			Port size	Adjustment range Without gauge
			2 1/4 (P31, P32) 3 3/8 (P32) 4 1/2 (P32)	Y 2 bar; 30 psig; 0.2 MPa L 4 bar; 60 psig; 0.4 MPa N 8 bar; 125 psig; 0.8 MPa H* 17 bar; 250 psig; 1.7 MPa

* Not available with P31 Series.
 Order gauges separately - see next page.

Bold items are most common.

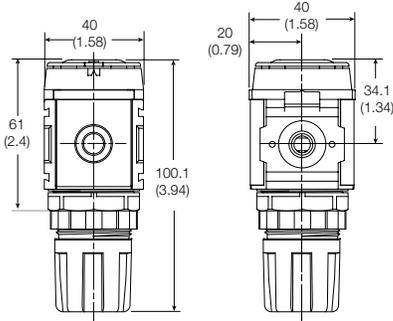
Regulators



Port size	Pressure	Part number	
		P31	P32
1/4"	8 bar (125 PSIG) relieving	P31HA92BNNP	P32HA92BNNP
3/8"	8 bar (125 PSIG) relieving		P32HA93BNNP
1/2"	8 bar (125 PSIG) relieving		P32HA94BNNP



P31

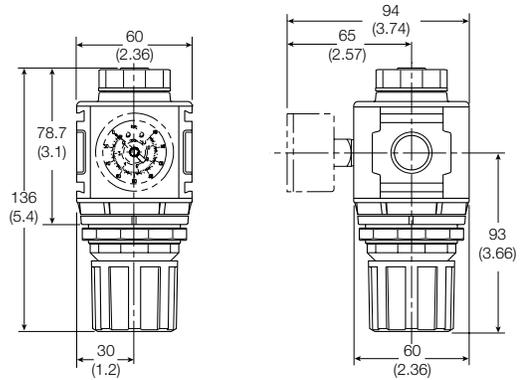


NOTE: 31.7 mm (1.25 in.) hole required for panel nut mounting.

Service kits

Description		P31	P32	
Regulator repair kit	Relieving	P31KA00RB	P32KA00RB	
	Non-relieving	P31KA00RC	P32KA00RC	
Panel mount nut	Aluminum	P31KA00MM	P32KA00MM	
	Plastic	P31KA00MP	P32KA00MP	
Angle bracket (uses panel mount threads)		P31KA00MR	P32KA00MR	
T-bracket	With body connector	P31KA00MT	P32KA00MT	
	Fits to body connector	P31KA00MB	P32KA00MB	
Body connector		P31KA00CB	P32KA00CB	
Gauges -	Square flush mount gauge	0-4 bar	K4511SCR04B	K4511SCR04B
		0-10 bar	K4511SCR11B	K4511SCR11B
		0-60 PSIG	K4511SCR060	K4511SCR060
		0-160 PSIG	K4511SCR160	K4511SCR160
	Square with adapter kit	0-4 bar	P6G-PR11040	P6G-PR11040
		0-10 bar	P6G-PR11100	P6G-PR11100
		0-60 PSIG	P6G-PR11P06	P6G-PR11P06
		0-160 PSIG	P6G-PR11P16	P6G-PR11P16
	1.00" round 1/8" center back mount	0-60 PSIG / 0-4 bar	K4510N18060	
		0-160 PSIG / 0-11 bar	K4510N18160	
	50mm (2") round 1/4" center back mount	0-30 PSIG / 0-2 bar / 0-0.2 MPa		K4520N14030
		0-60 PSIG / 0-4 bar / 0-0.4 MPa		K4520N14060
		0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4520N14160
		0-300 PSIG / 0-20 bar / 0-2 MPa		K4520N14300
	44mm (1-3/4") digital round 1/4" center back mount	0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4517N14160D

P32



NOTE: 51 mm (2.0 in.) hole required for panel nut mounting.

Material specifications

Description	P31	P32
Body	Aluminum	Aluminum
Adjustment knob	Acetal	Acetal
Bonnet	33% Glass-filled PBT	33% Glass-filled nylon
Diaphragm assembly	Brass / nitrile	Nitrile / zinc
Valve assembly	Brass / nitrile	Brass / nitrile
Springs		Steel S.S. (Main regulating valve)
Seals		Nitrile
Panel nut		Acetal

Most popular.





Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators

Global Modular Filter / Regulators

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



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.

Operating information

	P31 (Mini)	P32 (Compact)	P33 (Standard)
Supply pressure (max):			
Plastic Bowl	10 bar (150 PSIG)	10 bar (150 PSIG)	10 bar (150 PSIG)
Metal Bowl	17 bar (250 PSIG)	17 bar (250 PSIG)	17 bar (250 PSIG)
Operating temperature:			
Plastic Bowl	-10°C to 52°C (14°F to 125°F)	-25°C to 52°C (-13°F to 125°F)	-25°C to 52°C (-13°F to 125°F)
Metal Bowl	-10°C to 65.5°C (14°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)	-25°C to 65.5°C (-13°F to 150°F)
Units with square gauges:	-15°C to 65.5°C (5°F to 150°F)		
Standard filtration:	5 micron	5 micron	5 micron
Flow Capacity*:			
1/4	14 dm ³ /s* (30 SCFM)*	42 dm ³ /s* (89 SCFM)*	-
3/8	-	58 dm ³ /s* (123 SCFM)*	-
1/2	-	64 dm ³ /s* (136 SCFM)*	90 dm ³ /s* (191 SCFM)*
3/4	-	-	98 dm ³ /s* (208 SCFM)*

* Inlet pressure 10 bar (145 PSIG). Secondary pressure 6.3 bar (91.3 PSIG), pressure drop 1 bar (14.7 PSIG)

For Flow Curve Charts please see page E37.

Ordering information

P31E A 9 2 E G M B N 5 P

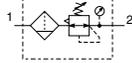
Basic series Global modular mini filter / regulator P31E Global modular compact filter / regulator P32E Global modular standard filter / regulator P33E	Engr level Current A	Thread type BSPP 1 BSPT 2 NPT 9	Element 5µ Element E	Relief B Relieving N Non-relieving	Mounting P Plastic panel mount nut																																								
		Port size 1/4 (P31, P32) 2 3/8 (P32) 3 1/2 (P32, P33) 4 3/4 (P33) 6		Drain type M Manual drain A Auto drain (P32, P33) B Pulse drain (P31)																																									
		Bowl type Poly bowl with bowl guard G Metal bowl without sight gauge M Metal bowl with sight gauge S		Adjustment range <table border="1"> <thead> <tr> <th colspan="2">P31 & P32 with square gauge</th> <th colspan="2">With round gauge</th> </tr> <tr> <th>psig</th> <th>bar</th> <th>Z</th> <th>With round gauge</th> </tr> </thead> <tbody> <tr> <td>1 = 30*</td> <td>V = 2*</td> <td>M</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td>3 = 60</td> <td>S = 4</td> <td>G</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td>5 = 125</td> <td>T = 8</td> <td>J[‡]</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> <tr> <td colspan="2"></td> <th colspan="2">Without gauge</th> </tr> <tr> <td colspan="2"></td> <td>Y</td> <td>2 bar; 30 psig; 0.2 MPa</td> </tr> <tr> <td colspan="2"></td> <td>L</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td colspan="2"></td> <td>N</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td colspan="2"></td> <td>H[‡]</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> </tbody> </table>	P31 & P32 with square gauge		With round gauge		psig	bar	Z	With round gauge	1 = 30*	V = 2*	M	4 bar; 60 psig; 0.4 MPa	3 = 60	S = 4	G	8 bar; 125 psig; 0.8 MPa	5 = 125	T = 8	J [‡]	17 bar; 250 psig; 1.7 MPa			Without gauge				Y	2 bar; 30 psig; 0.2 MPa			L	4 bar; 60 psig; 0.4 MPa			N	8 bar; 125 psig; 0.8 MPa			H [‡]	17 bar; 250 psig; 1.7 MPa	
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		H [‡]	17 bar; 250 psig; 1.7 MPa																																										

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
 † Not available with poly bowl with bowl guard.
 ‡ Not available with P31 Series.

Bold items are most common.



Filter / Regulator



Port size	Pressure (relieving)	Bowl type	Drain type	Part number		
				P31	P32	P33
1/4"	8 bar (125 PSIG)	Poly	Manual	P31EA92EGMBN5P	P32EA92EGMBNGP	
1/4"	8 bar (125 PSIG)	Poly	Pulse	P31EA92EGBBN5P		
1/4"	8 bar (125 PSIG)	Poly	Auto		P32EA92EGMBNGP	
1/4"	8 bar (125 PSIG)	Metal	Manual	P31EA92EMMBN5P	P32EA92ESMBNGP	
1/4"	8 bar (125 PSIG)	Metal	Pulse	P31EA92EMBBN5P		
1/4"	8 bar (125 PSIG)	Metal	Auto		P32EA92ESABNGP	
3/8"	8 bar (125 PSIG)	Poly	Manual		P32EA93EGMBNGP	
3/8"	8 bar (125 PSIG)	Poly	Auto		P32EA93EGABNGP	
3/8"	8 bar (125 PSIG)	Metal	Manual		P32EA93ESMBNGP	
3/8"	8 bar (125 PSIG)	Metal	Auto		P32EA93ESABNGP	
1/2"	8 bar (125 PSIG)	Poly	Manual		P32EA94EGMBNGP	P33EA94EGMBNGP
1/2"	8 bar (125 PSIG)	Poly	Auto		P32EA94EGABNGP	P33EA94EGABNGP
1/2"	8 bar (125 PSIG)	Metal	Manual		P32EA94ESMBNGP	P33EA94ESMBNGP
1/2"	8 bar (125 PSIG)	Metal	Auto		P32EA94ESABNGP	P33EA94ESABNGP
3/4"	8 bar (125 PSIG)	Poly	Manual			P33EA96EGMBNGP
3/4"	8 bar (125 PSIG)	Poly	Auto			P33EA96EGABNGP
3/4"	8 bar (125 PSIG)	Metal	Manual			P33EA96ESMBNGP
3/4"	8 bar (125 PSIG)	Metal	Auto			P33EA96ESABNGP

Most popular.

Service kits

Description		P31	P32	P33
Plastic bowl / bowl guard	Manual drain	P31KA00BGM	P32KA00BGM	P33KA00BGM
	Pulse drain	P31KA00BGB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl w/o sight gauge	Manual drain	P31KA00BMM		
	Pulse drain	P31KA00BMB		
	Auto drain		P32KA00DA	P32KA00DA
Metal bowl / sight gauge	Manual drain		P32KA00BSM	P33KA00BSM
	Auto drain		P32KA00DA	P32KA00DA
Filter element	5µ particulate	P31KA00ESE	P32KA00ESE	P33KA00ESE
Regulator repair kit	Relieving	P31KB00RB	P32KB00RB	P33KA00RB
	Non-relieving	P31KB00RC	P32KB00RC	P33KA00RC
Panel mount nut	Aluminum	P31KA00MM	P32KA00MM	P33KA00MM
	Plastic	P31KA00MP	P32KA00MP	P33KA00MP
Angle bracket (uses panel mount threads)		P31KA00MR	P32KA00MR	P33KA00MR
C-bracket	Fits to body	P31KA00MW		
T-bracket	Fits to body connector		P32KA00MB	P32KA00MB
	With body connector	P31KA00MT	P32KA00MT	P32KA00MT
Body connector		P31KA00CB	P32KA00CB	P32KA00CB
Gauges - square flush mount gauge	0-4 bar	K4511SCR04B		
	0-10 bar	K4511SCR11B		
	0-60 PSIG	K4511SCR060		
	0-160 PSIG	K4511SCR160		
50mm (2") round 1/4" center back mount	0-30 PSIG / 0-2 bar / 0-0.2 MPa		K4520N14030	K4520N14030
	0-60 PSIG / 0-4 bar / 0-0.4 MPa		K4520N14060	K4520N14060
	0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4520N14160	K4520N14160
	0-300 PSIG / 0-20 bar / 0-2 MPa		K4520N14300	K4520N14300
44mm (1-3/4") digital round 1/4" center back mount	0-160 PSIG / 0-11 bar / 0-1.1 MPa		K4517N14160D	K4517N14160D



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators



Air Preparation Products

Global

Prep-Air II

Miniature

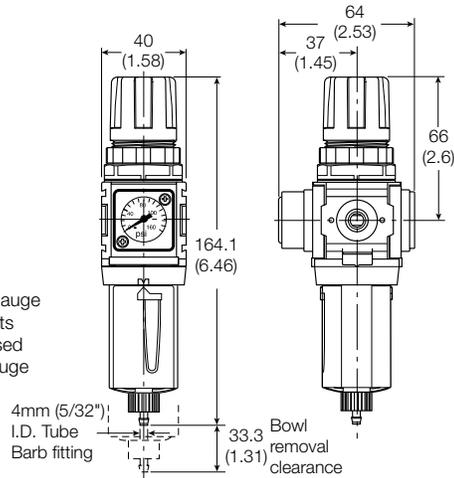
P3N

General Industrial

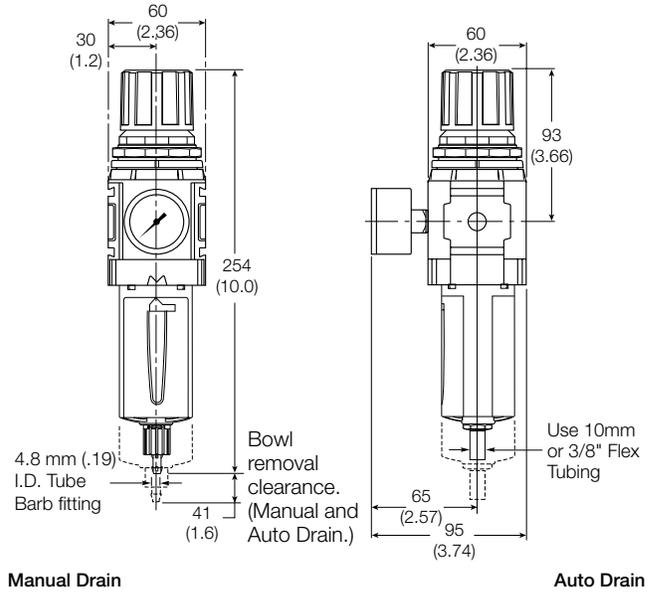
Stainless Steel

Precision / Bulk Liquid Separators

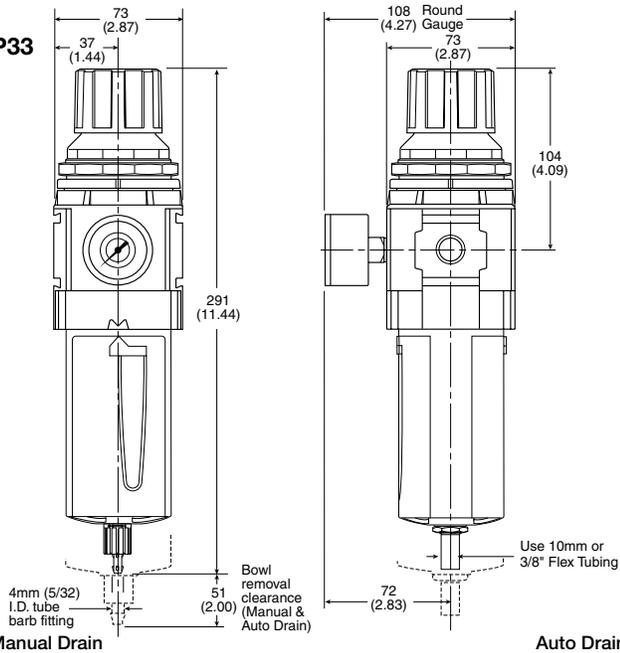
P31



P32



P33



Material Specifications

Description	P31	P32	P33
Body	Aluminum	Aluminum	Aluminum
Adjustment knob	Acetal	Acetal	Acetal
Body cap	ABS	ABS	ABS
Bonnet	PBT	33% glass-filled nylon	33% glass-filled nylon
Element retainer/baffle	N/A	Acetal	Acetal
Bowl	Plastic bowl Polycarbonate	Polycarbonate	Polycarbonate
	Metal bowl Aluminum	Zinc	Aluminum
Bowl guard	Nylon	Nylon	Nylon
Filter element	Sintered polyethylene	Sintered polyethylene	Polyethylene
Seals	Nitrile	Nitrile	Nitrile
Springs	Main regulating / valve Steel	Steel / S.S.	Steel
Valve assembly	Brass / nitrile	Brass / nitrile	Brass / nitrile
Diaphragm assembly	Brass / nitrile	Nitrile / zinc	Nitrile / zinc
Panel nut	Acetal	Acetal	Acetal
Sight gauge	Metal bowl N/A	Polycarbonate	Polycarbonate



Global Modular Lubricators

- Integral 1/4", 3/8", 1/2", 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



P31



P32



P33

Operating information

Supply pressure (max): Plastic Bowl 10 bar (150 PSIG)
 Metal Bowl 17 bar (250 PSIG)

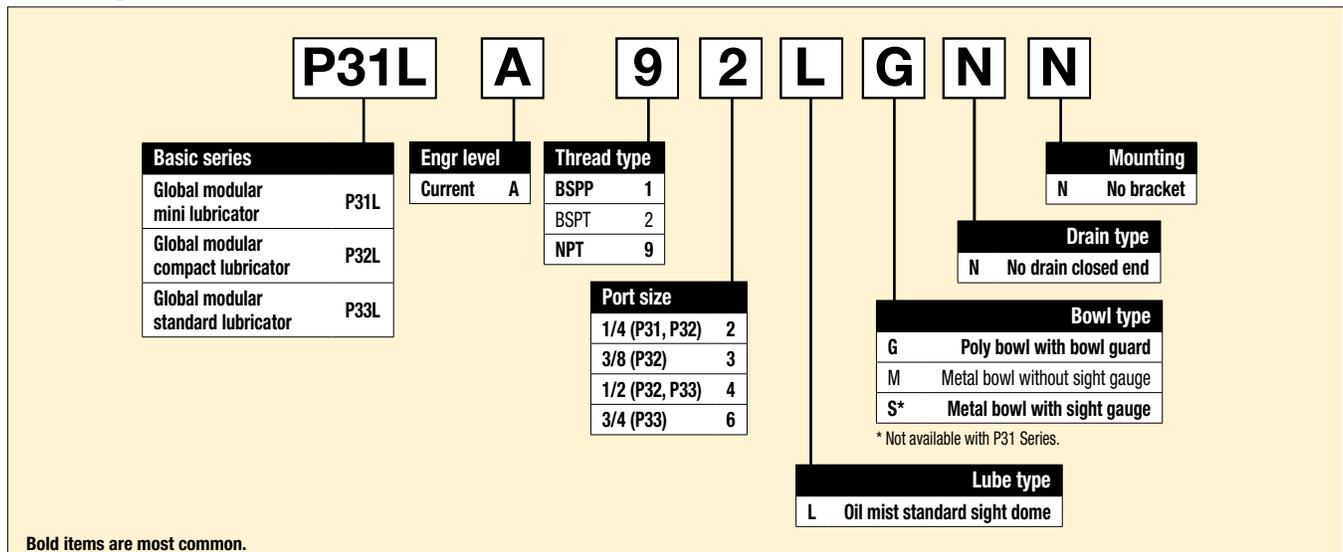
Operating temperature: Plastic Bowl -10°C to 52°C (14°F to 125°F)
 Metal Bowl -10°C to 65.5°C (14°F to 150°F)

Standard filtration: 5 micron

	P31 (Mini)	P32 (Compact)	P33 (Standard)
Flow Capacity*: 1/4	13 dm ³ /s (28 SCFM)	18 dm ³ /s (38 SCFM)	–
3/8	–	32 dm ³ /s (68 SCFM)	–
1/2	–	47 dm ³ /s (100 SCFM)	48 (102 SCFM)
3/4	–	–	68 dm ³ /s (144 SCFM)

* Inlet pressure 6.3 bar (91.3 PSIG), pressure drop 0.34 bar (4.9 PSIG).
 For Flow Curve Charts please see page E38.

Ordering information





Lubricators



Port size	Bowl type	Type	Part number		
			P31	P32	P33
1/4"	Poly / no drain	Mist	P31LA92LGNN	P32LA92LGNN	
1/4"	Metal / no drain	Mist / sight gauge	P31LA92LMNN	P32LA92LSNN	
3/8"	Poly / no drain	Mist		P32LA93LGNN	
3/8"	Metal / no drain	Mist / sight gauge		P32LA93LSNN	
1/2"	Poly / no drain	Mist		P32LA94LGNN	P33LA94LGNN
1/2"	Metal / no drain	Mist / sight gauge		P32LA94LSNN	P33LA94LSNN
3/4"	Poly / no drain	Mist			P33LA96LGNN
3/4"	Metal / no drain	Mist / sight gauge			P33LA96LSNN

Service kits

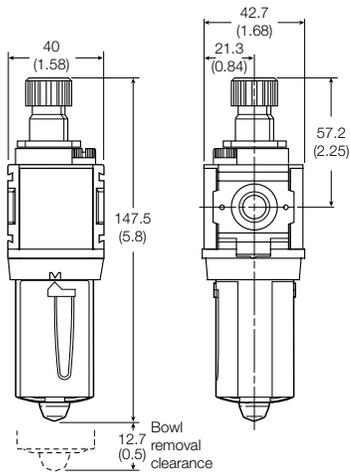
Description	P31	P32	P33
Plastic bowl / bowl guard / no drain	P31KA00BGN	P32KA00BGN	P33KA00BGN
Drip control assembly	P32KA00PG	P32KA00PG	P32KA00PG
Fill plug	P31KA00PL	P32KA00PL	P32KA00PL
C-bracket	Fits to body P31KA00MW		
L-bracket		P32KA00ML	P33KA00ML
T-bracket	Fits to body connector With body connector P31KA00MT	P32KA00MB	P32KA00MB
Body connector	P31KA00CB	P32KA00CB	P32KA00CB
Lubricant* (1 quart)	F442001	F442001	F442001

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

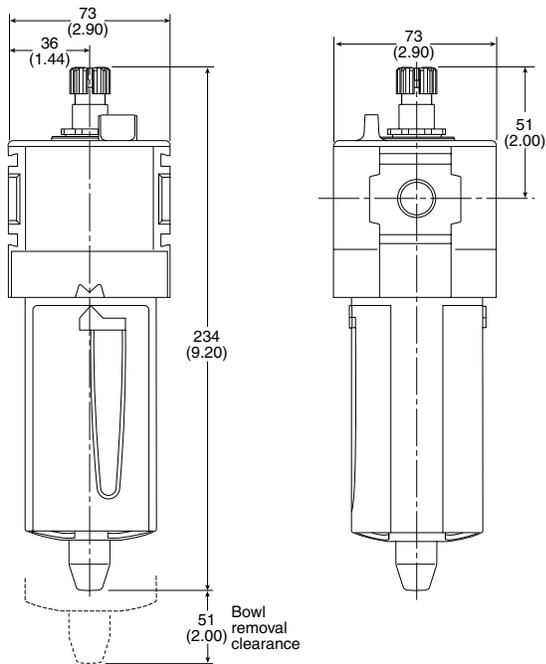
Most popular.



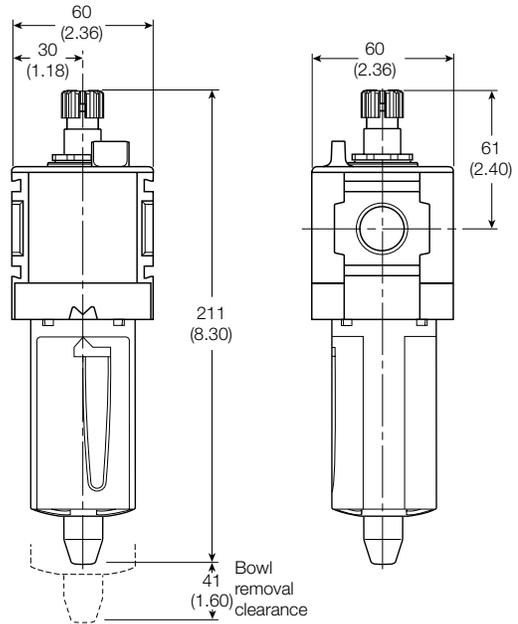
P31



P33



P32



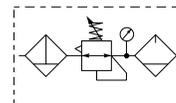
Material Specifications

Description		P31	P32	P33
Body		Aluminum	Aluminum	Aluminum
Body cap		N/A	N/A	ABS
Bowl	Plastic bowl	Polycarbonate	Polycarbonate	Polycarbonate
	Metal bowl	Aluminum	Aluminum	Aluminum
Bowl guard		Nylon	Nylon	Nylon
Seals		Nitrile	Nitrile	Nitrile
Sight dome		Polycarbonate	Polycarbonate	Polycarbonate
Suggested lubricant		ISO / ASTM VG32	ISO / ASTM VG32	ISO / ASTM VG32
Pick-up filter		Sintered bronze	Sintered bronze	Sintered bronze
Sight gauge	Metal bowl	N/A	Polycarbonate	Polycarbonate

Global Modular Combinations

Filter + Regulator + Lubricator Combinations + Poly Bowl

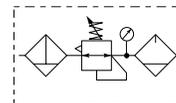
5 micron element, 8 bar (116 PSIG) Regulator + Gauge and Wall Mounting Brackets
 Inlet pressure 10 bar (145 PSIG), Secondary pressure 6.3 bar (91.3 PSIG),
 1 bar (14.5 PSIG) pressure drop.



	Port size	Drain type	Part number		
			P31 Series	P32 Series	P33 Series
	1/4"	Manual	P31CB92GEMN5LNW	P32CB92GEMNGLNW	
	1/4"	Pulse	P31CB92GEBN5LNW		
	1/4"	Auto		P32CB92GEANGLNW	
	3/8"	Manual		P32CB93GEMNGLNW	
	3/8"	Auto		P32CB93GEANGLNW	
	1/2"	Manual		P32CB94GEMNGLNW	P33CB94GEMNGLNW
	1/2"	Auto		P32CB94GEANGLNW	P33CB94GEANGLNW
	3/4"	Manual			P33CB96GEMNGLNW
	3/4"	Auto			P33CB96GEANGLNW

Filter / Regulator + Lubricator Combinations + Poly Bowl

5 micron element, 8 bar (116 PSIG) Regulator + Gauge and Wall Mounting Brackets
 Inlet pressure 10 bar (145 PSIG), Secondary pressure 6.3 bar (91.3 PSIG),
 1 bar (14.5 PSIG) pressure drop.



	Port size	Drain type	Part number		
			P31 Series	P32 Series	P33 Series
	1/4"	Manual	P31CA92GEMN5LNW	P32CA92GEMNGLNW	
	1/4"	Pulse	P31CA92GEBN5LNW		
	1/4"	Auto		P32CA92GEANGLNW	
	3/8"	Manual		P32CA93GEMNGLNW	
	3/8"	Auto		P32CA93GEANGLNW	
	1/2"	Manual		P32CA94GEMNGLNW	P33CA94GEMNGLNW
	1/2"	Auto		P32CA94GEANGLNW	P33CA94GEANGLNW
	3/4"	Manual			P33CA96GEMNGLNW
	3/4"	Auto			P33CA96GEANGLNW

⚠ 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.

Most popular.

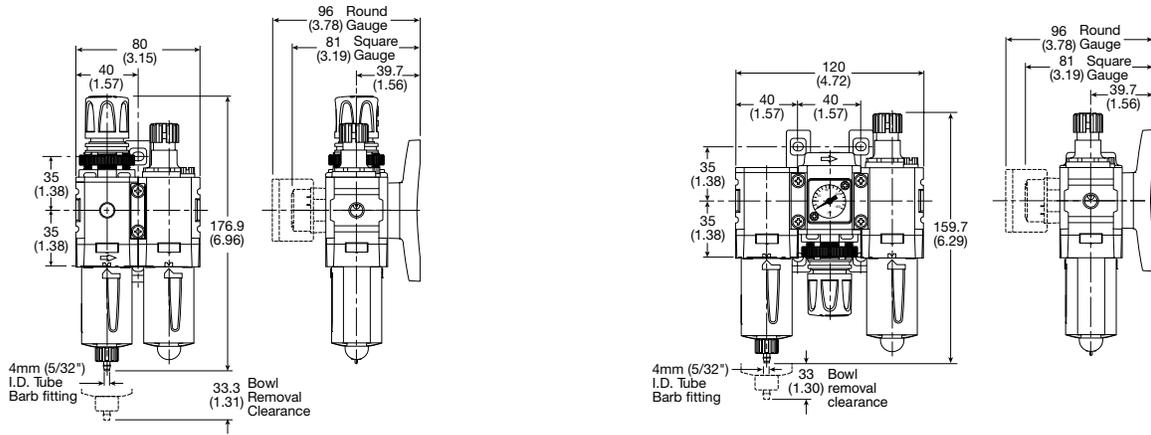
Ordering information

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		Relief adjustment Non-rising knob relieving N																																									
Combination type* F/R+L A F+Fc+Fa G F+R+L B F/R+Fc M F+Fc F F+Fc1+Fc Q * Combination type F = 5µ Fc1 = 1µ Fc = .01µ Fa = Adsorber		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.		Lube type Oil mist standard sight dome L Drain type No drain closed end N																																									
Port size 1/4 (P31, P32) 2 3/8 (P32) 3 1/2 (P32, P33) 4 3/4 (P33) 6		Drain type Auto drain A† Manual drain M Pulse drain B † Not available on P31 Series		Mounting No bracket A Port blocks C* Port blocks with wall brkt D* Wall bracket W * For P31 Series 3/8" Port Blocks please order separately. See Kits section.																																									
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. ‡ Not available with P31 Series. 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.		Adjustment range <table border="1"> <thead> <tr> <th colspan="2">P31 & P32 with square gauge</th> <th colspan="2">With round gauge</th> </tr> <tr> <th>psig</th> <th>bar</th> <th>Z</th> <th>2 bar; 30 psig; 0.2 MPa</th> </tr> </thead> <tbody> <tr> <td>1 = 30*</td> <td>V = 2*</td> <td>M</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td>3 = 60</td> <td>S = 4</td> <td>G</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td>5 = 125</td> <td>T = 8</td> <td>J§†</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> <tr> <td colspan="2"></td> <th colspan="2">Without gauge</th> </tr> <tr> <td colspan="2"></td> <td>Y</td> <td>2 bar; 30 psig; 0.2 MPa</td> </tr> <tr> <td colspan="2"></td> <td>L</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td colspan="2"></td> <td>N</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td colspan="2"></td> <td>H§†</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> </tbody> </table>				P31 & P32 with square gauge		With round gauge		psig	bar	Z	2 bar; 30 psig; 0.2 MPa	1 = 30*	V = 2*	M	4 bar; 60 psig; 0.4 MPa	3 = 60	S = 4	G	8 bar; 125 psig; 0.8 MPa	5 = 125	T = 8	J§†	17 bar; 250 psig; 1.7 MPa			Without gauge				Y	2 bar; 30 psig; 0.2 MPa			L	4 bar; 60 psig; 0.4 MPa			N	8 bar; 125 psig; 0.8 MPa			H§†	17 bar; 250 psig; 1.7 MPa
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		H§†	17 bar; 250 psig; 1.7 MPa																																										
Bold items are most common.		* Unit comes with 0-4 bar or 0-60 psig gauge respectively. § Not available with poly bowl with bowl guard. ‡ Not available with P31 Series.																																											

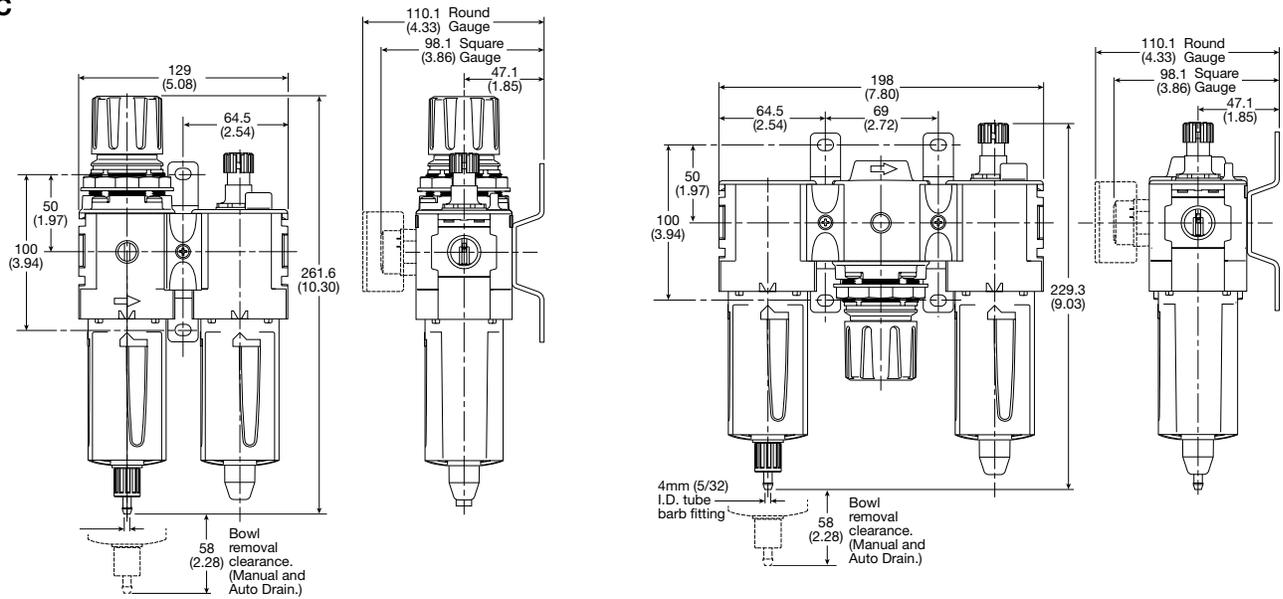
E
Air Preparation Products
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Bulk Liquid Separators

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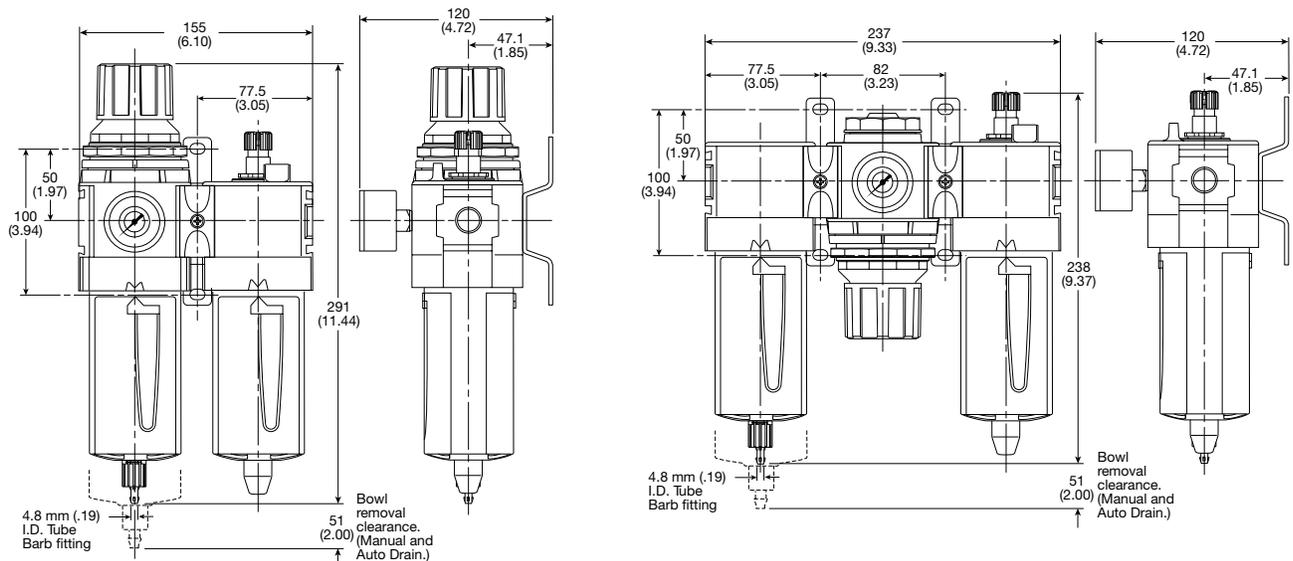
P31C



P32C



P33C



Global Modular Electronic Proportional Regulators

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



P31PA Series
Bottom exhaust



P32PA Series
Bottom exhaust

Ordering information

P31P	A	9	2	A	D	2	V	D	1	
-------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	--

Body size	P31P
Global modular mini (1/4")	
Global modular compact (1/2")	P32P

Engr level	A
Current	

Thread type	1
BSPP	
BSPT	2
NPT	9

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

Version	A
Bottom ported exhaust (NC)	
Bottom ported forced exhaust (NO) [†]	E

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.

Pressure range	Z
0 - 2 bar (0-29 PSIG)	
D	
0 - 10 bar (0-145 PSIG)	

Input Connector	1
M12 (4-pin)	

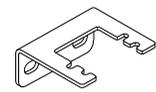
Output signal	D
Digital, PNP	
P	
PNP or 0-10V	
N	
NPN or 0-10V	
M	
4-20mA fixed	

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.

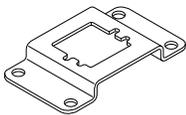
[†] When the supply voltage is lost the unit will automatically exhaust the regulated pressure to 0 bar (atmospheric pressure)

Bold items are most common.

P31P mounting brackets



L-bracket



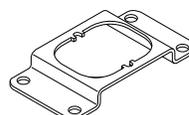
Foot bracket

Description	Part number
L-bracket mounting kit	P3HKA00ML
Foot bracket mounting kit	P3HKA00MC

P32P mounting brackets



L-bracket



Foot bracket

Description	Part number
L-bracket mounting kit	P3KKA00ML
Foot bracket mounting kit	P3KKA00MC

Cables

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

Most popular.

For Flow Curve Charts please see page E39.



Air Preparation Products

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Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

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Bulk Liquid Separators

Technical information

Working medium

Compressed air or inert gasses, filtered to 40µ.

Supply pressure

Max. operating pressure:

2 bar unit:3 bar (43.5 PSIG)

10 bar unit:10.5 bar (152 PSIG)

Min. Operating Pressure P2 pressure + 0.5 bar (7.3 PSIG)

Pressure control range

Available in three pressure ranges, 0-2 bar (0-29 PSIG), 0-7 bar (0-101.5 PSIG) or 0-10 bar (0-145 PSIG). Pressure range can be changed through the software at all times. (parameter 19)

Temperature range

0°C up to +50°C (32°F up to 122°F)

Weights:

P31P = 0.291 kg (0.64 lbs)

P32P = 0.645 kg (1.42 lbs)

Air consumption

No consumption in stable regulated situation.

Display

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

The factory setting is as indicated on the label, can be changed through to software at all times (parameter 14)

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

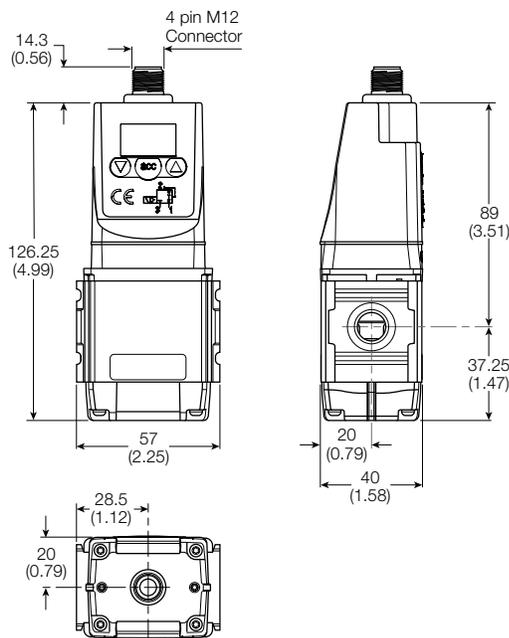
The electrical connections are as follows:

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

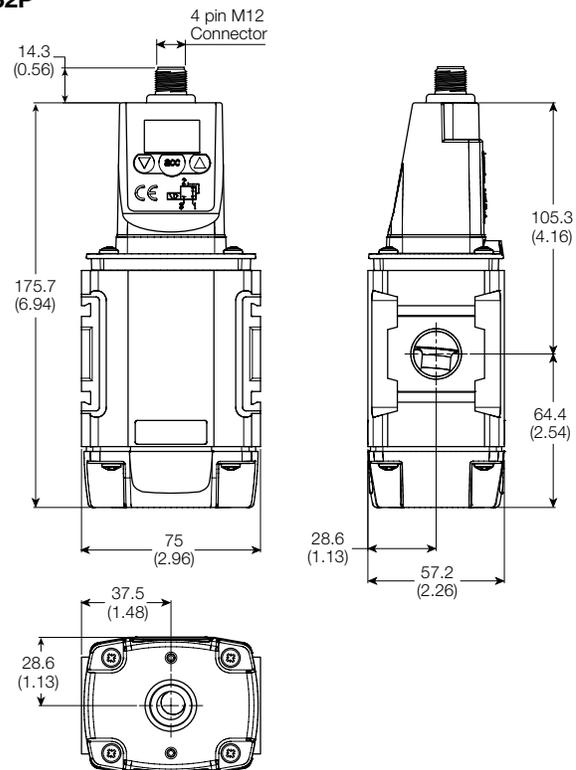
⚠ WARNING

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

P31P



P32P



Global Modular Soft Start / Dump Valves

- Modular design with 1/4" or 1/2" integral ports (NPT, BSPP & BSPT)
- 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



P31TA Series shown
Bottom exhaust



P32TA Series shown
Bottom exhaust

Operating information

Operating pressure (max):	Solenoid	10 bar (150 PSIG)
	Air pilot	17 bar (250 PSIG)
Operating pressure (min):		3 bar (44 PSIG)
Operating temperature (max):	Solenoid	50°C (122°F)
	Air pilot	80°C (176°F)
Flow Capacity*:	P31 Series	17 dm ³ /s (36 SCFM)
	P32 Series	48 dm ³ /s (97 SCFM)

*Inlet pressure 6.3 bar (91.3 PSIG), pressure drop 1 bar (14.5 PSIG).
 For Flow Curve Charts please see page E39.

Ordering information

P31T A 9 2 S G N C 2CN

Body size	Engr level	Thread type	Pilot type	Actuator interface	Solenoid voltage	Solenoid type
Combined soft start / dump valve (1/4") P31T	Current A	BSPP 1	P External air pilot	0 Internal Pilot	2CN 24VDC non locking manual override	C 15mm (P31 series only)
Combined soft start / dump valve (1/2") P32T		BSPT 2	S Solenoid pilot	G 15mm solenoid (P31 only)	3GN 120VAC non locking manual override	A 30mm CNOMO coil (P32 only)
Dump valve (1/4") P31D		NPT 9	Y* Internal air pilot	C 30mm solenoid	1FN 120VAC non locking manual override (P31 series only)	D 30mm CNOMO coil (M12 connection) (P32 only)
Dump valve (1/2") P32D				P* Threaded air pilot		
Soft start P31S						
Soft start P32S						

Port size

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

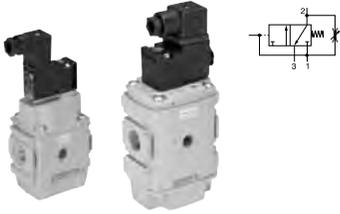
Note:
 P32 unit used for both P32 & P33 series
Bold items are most common.

* Only available on P31SA & P32SA Dump Valves.



Air Preparation Products

Combined soft start / Dump valves (P31T / P32T)



Port size	Description	Part number
1/4"	120VAC Solenoid & cable plug	P31TA92SGNC1FN
1/4"	24VDC Solenoid & cable plug	P31TA92SGNC2CN
1/4"	External air pilot operated	P31TA92PPN
1/2"	120VAC 30mm coil & cable plug included	P32TA94SCNA3GN
1/2"	24VDC 30mm coil & cable plug included	P32TA94SCNA2CN
1/2"	External air pilot operated	P32TA94PPN

Note: Includes exhaust silencer. Flow with 6.3 bar (91.3 PSIG) inlet and 1 bar (14.5 PSIG) pressure drop.

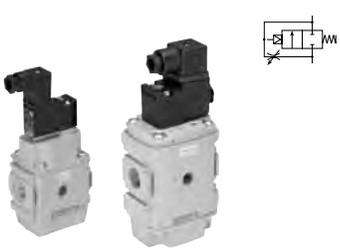
Dump valves (P31D / P32D)



Port size	Description	Part number
1/4"	120VAC Solenoid & cable plug	P31DA92SGNC1FN
1/4"	24VDC Solenoid & cable plug	P31DA92SGNC2CN
1/4"	External air pilot operated	P31DA92PPN
1/2"	120VAC 30mm coil & cable plug included	P32DA94SCNA3GN
1/2"	24VDC 30mm coil & cable plug included	P32DA94SCNA2CN
1/2"	External air pilot operated	P32DA94PPN

Note: Includes exhaust silencer.

Soft starts (P31S / P32S)

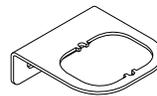


Port size	Description	Part number
1/4"	120VAC Solenoid & cable plug	P31SA92SGNC1FN
1/4"	24VDC Solenoid & cable plug	P31SA92SGNC2CN
1/4"	Internal air pilot operated	P31SA92Y0N
1/4"	External air pilot operated	P31SA92PPN
1/2"	120VAC 30mm coil & cable plug included	P32SA94SCNA3GN
1/2"	Internal air pilot operated	P32SA92Y0N
1/2"	24VDC 30mm coil & cable plug included	P32SA94SCNA2CN
1/2"	External air pilot operated	P32SA94PPN

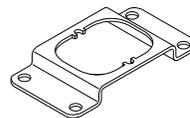
Material specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

P31P mounting brackets



L-bracket



Foot bracket

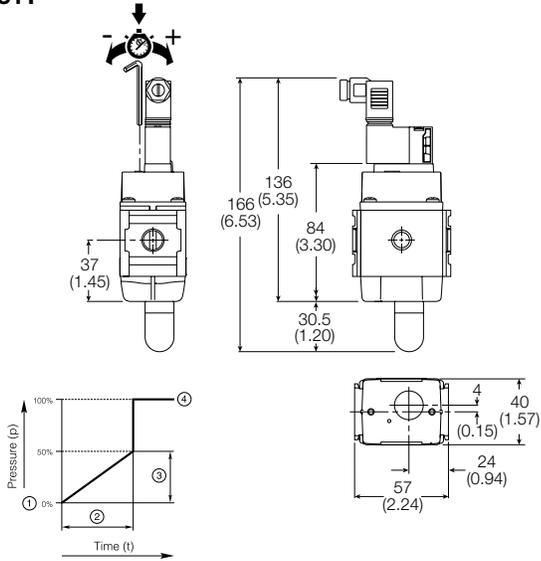
Description	Part number
L-bracket mounting kit	P3HKA00ML
Foot bracket mounting kit	P3HKA00MC

Most popular.

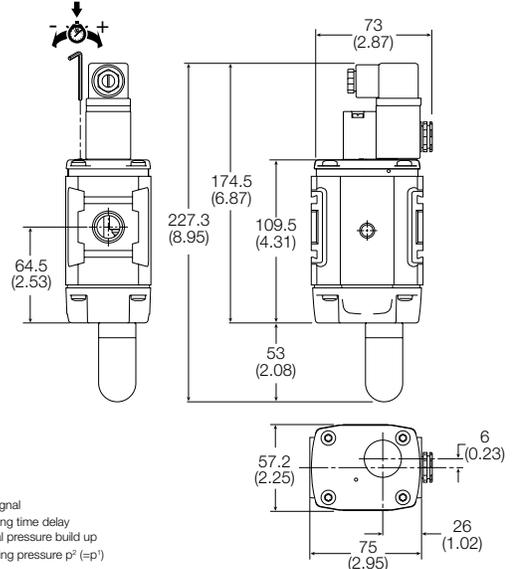
Note: For solenoid operators and cable plugs (connectors) see pages E28 to E29.



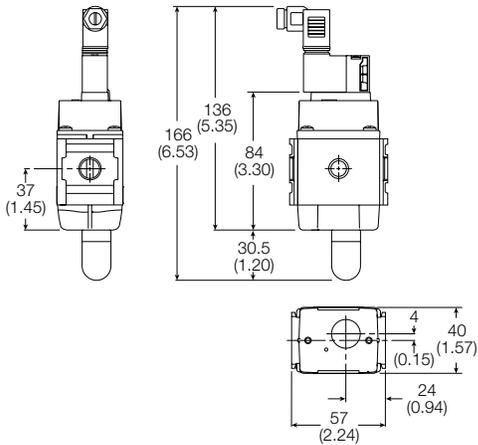
P31T



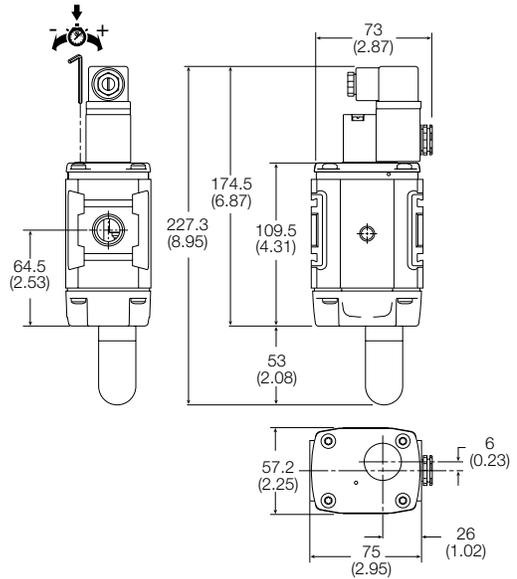
P32T



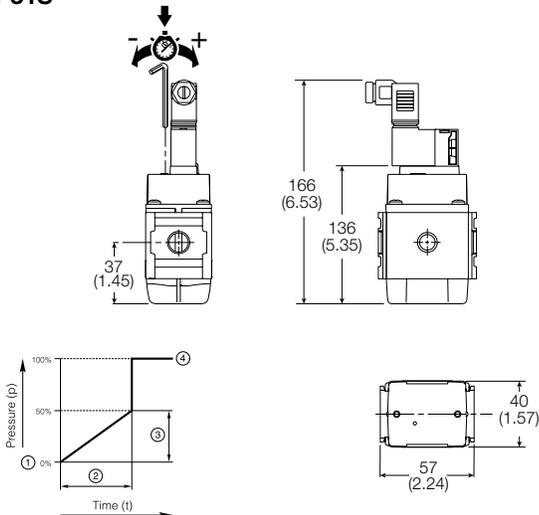
P31D



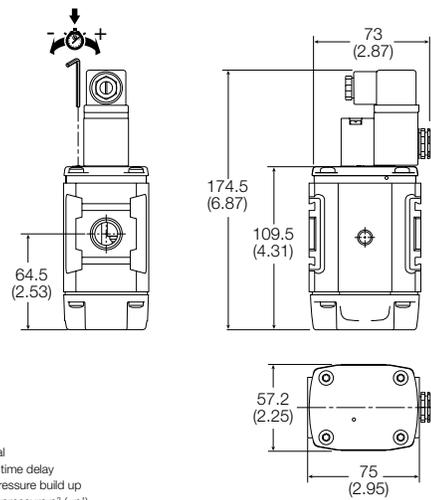
P32D



P31S



P32S



E

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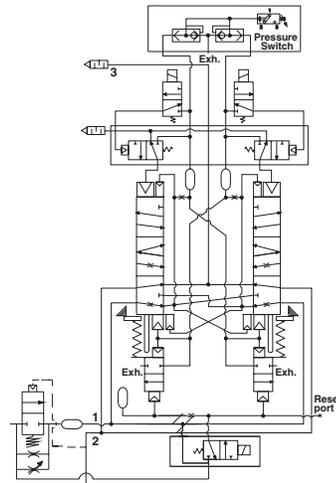
Bulk Liquid Separators

Redundant Safety Exhaust Valves

- 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

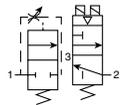


P33T Schematic



Options:

P33TA	9	6 R	G 4	F	2CN
Body size Standard P33T	Port size 3/4" 6	Operator 15mm Solenoid G	Solenoid Dual M12 connector without transducer F Triple M12 connector with transducer G	Voltage 24VDC with manual override 2CN	
Thread type BSPP 1 NPT 9	Type Solenoid pilot + gauge R	Mounting Cat 4 w/bracket 4			



Redundant Safety Exhaust Valves

Port size			Cv		Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number*
Inlet	Outlet	Transducer	1 to 2	2 to 3					
3/4	3/4	w/o transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (581)	7.3 (16.1)	P33TA96RG4F2CN
3/4	3/4	w/ transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (581)	7.4 (16.3)	P33TA96RG4G2CN

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



Technical data

Pilot solenoidsAccording to VDE 0580
 Enclosure rating..... According to DIN 400 50 IP 65
 Connector socket..... According to DIN 43650 Form A
 three solenoids, rated for continuous duty

Standard voltages24VDC

Power consumption (each solenoid):
 for primary and 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 temperature40°F to 175°F (4°C to 80°C)

Flow media Compressed air, filtered to minimum 40 micron

Inlet pressure30 to 150 psig (2 to 10 bar)

Pressure switch rating
 (Status indicator) 5 amps at 30 volts DC.

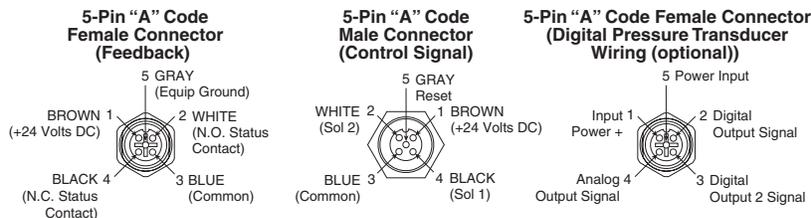
Monitoring..... Dynamically, cyclically, internally during each
 actuating and de-actuating movement.
 Monitoring function has memory and requires
 an overt act to reset unit after lockout.

Mounting orientation Vertically with pilot solenoids on top

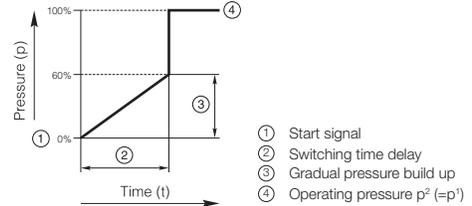
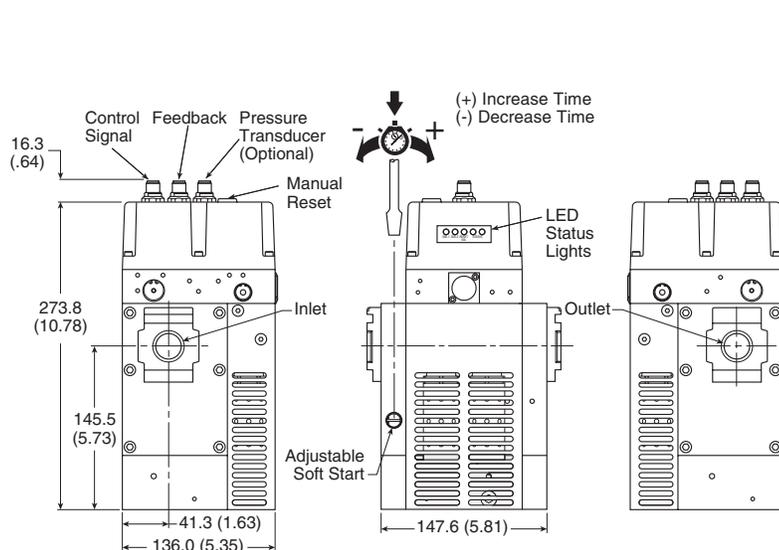
Port threads 3/4 NPT, 3/4 BSPP

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

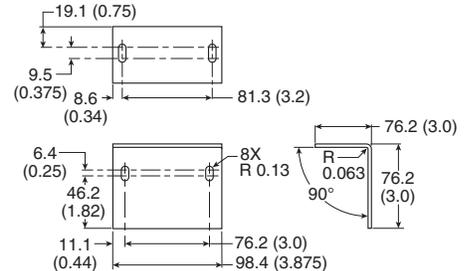
Valve wiring



Dimensions mm (inches)



Angle Mounting Bracket



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

Service kits

Description	P33T
Black grill	1834C05-001
Body connector	P32KA00CB
Cables	
M12, 5-pin female to flying lead cable, TPE; 2 m (6.6 ft)	RKC 4.5-2/S1587
M12, 5-pin male to flying lead cable, TPE; 2 m (6.6 ft)	RSC 4.5-2/S1587
Port block kit	
1/2 NPT	P32KA94CP
3/4 NPT	P32KA96CP
1/2 BSPP	P32KA14CP
3/4 BSPP	P32KA16CP
1/2 BSPT	P32KA24CP
3/4 BSPT	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



Air Preparation Products

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Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

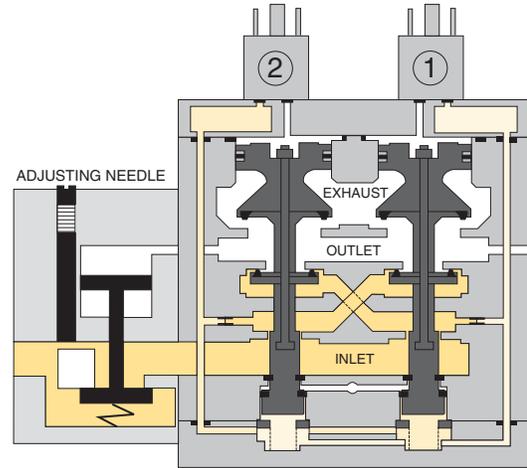
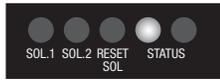
Precision / Proportional

Bulk Liquid Separators

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.

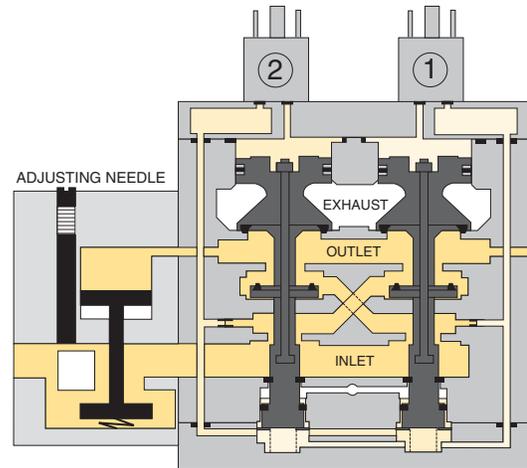


Valve actuated:

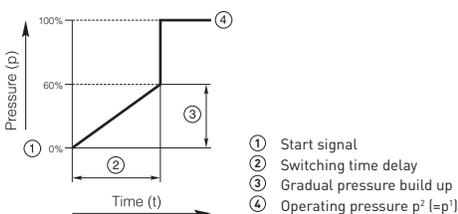
Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized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



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):

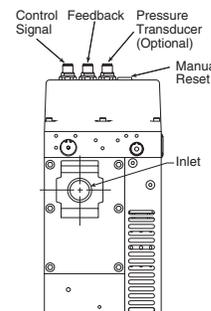
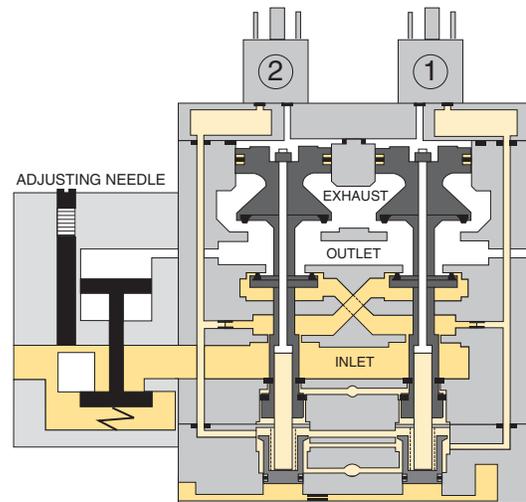
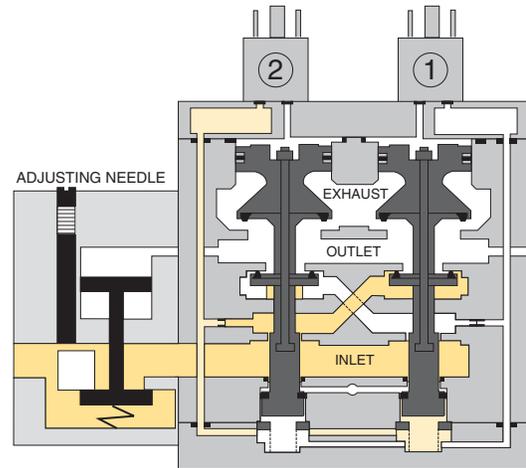
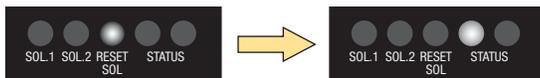
The reset procedure is as follows:

- 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 adapter 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.



P
Air Preparation Products
Global
Prep-Air II
Miniature
P3N
General Industrial
Stainless Steel
Precision / Proportional
Bulk Liquid Separators

Global Modular Solenoid Operators

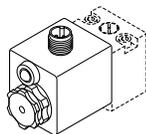
Solenoid Operators - CNOMO

Technical data - 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

Solenoid Coils with M12 Connection



Voltage	Order code	Weight (Kg)
Direct current		
24VDC	P2FC6449	0.065

Transients

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

Materials

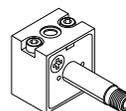
Pilot Valve

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

Coil

Encapsulation material:	Thermoplastic as standard Duroplast for M12 connection
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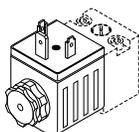
Spare Base Solenoid Pilot Operator CNOMO NC



Description	Order code 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.

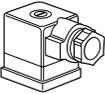
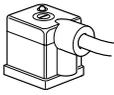
Solenoid Coils with DIN A or Industrial B Connection



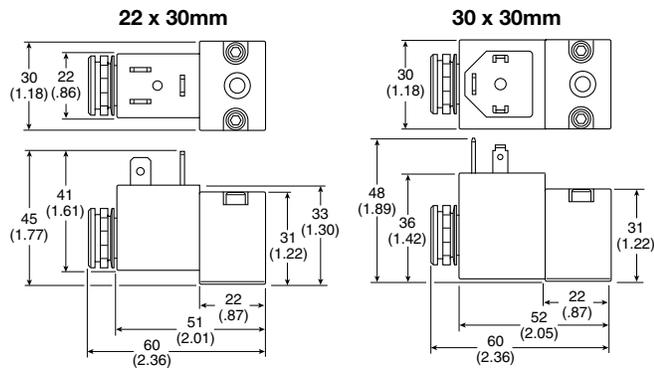
Voltage	22mm x 30mm Order code B industrial standard	Weight (Kg)	30mm x 30mm Order code DIN 43650A standard	Weight (Kg)
Direct current				
24VDC	P2FCB449	0.093	P2FCA449	0.105
Alternative current				
110V 50Hz, 120V 60Hz	P2FCB453	0.093	P2FCA453	0.105

Most popular.

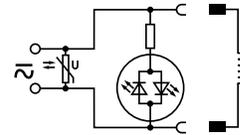
Solenoid Connectors / Cable Plugs EN175301-803

	Description	Order code 22mm Form B Industrial	Order code 30mm Form A DIN 43650A
	With standard screw	PS2429BP	PS2028BP
	With LED and protection 24VAC/DC	PS243079BP	PS203279BP
	With LED and protection 110VAC	PS243083BP	PS203283BP
	With cable	PS2429JBP	PS2028JCP
	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 mm (inches)



Electrical schematics

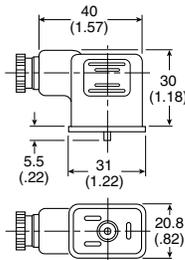


PS243079BP	PS203279BP
PS2430J79BP	PS2032J79CP
PS243083BP	PS203283BP
PS2430J83BP	PS2032J83CP
PS294679BP	PS294683BP
PS2946J79BP	PS2946J83BP

Cable plug dimensions mm (inches)

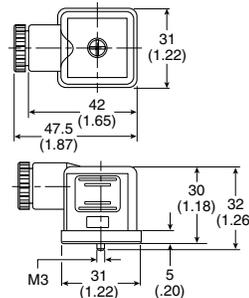
22mm Form B Industrial
Cable plugs

PS2429BP



30mm DIN 43650A
Cable plugs

PS2028BP



 Most popular.

Global Modular Accessories

Safety Lockout Valves

	Model type	Port size	Thread type	Flow dm ³ /s (SCFM)	Part number Flow from left to right	Part number Flow from right to left
	P31	1/4"	NPT	47.2 (100)	P31VA92LSAN	
	P32	1/4"	NPT	66.5 (141)	P32VA92LSAN	P32VA92LSBN
		3/8"	NPT	101.9 (216)	P32VA93LSAN	P32VA93LSBN
		1/2"	NPT	128.4 (272)	P32VA94LSAN	P32VA94LSBN
	P33	1/2"	NPT	136.9 (290)	P33VA94LSAN	P33VA94LSBN
		3/4"	NPT	141.6 (300)	P33VA96LSAN	P33VA96LSBN

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

Modular Ball Valve

	Model type	Port size	Exhaust port	Thread type	Flow dm ³ /s (SCFM)	Part number Flow from left to right
	P31	1/4"	1/4"	NPT	20 (42.4)	P31VB92LBNN
	P32	3/8"	1/4"	NPT	90 (190.7)	P32VB93LBNN
		1/2"	1/4"	NPT	122 (258.5)	P32VB94LBNN
	P33	1/2"	1/2"	NPT	265 (561.5)	P33VB94LBNN
		3/4"	1/2"	NPT	320 (678)	P33VB96LBNN

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

Manifold Blocks

	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

 Most popular.

P31 Series Accessories

Description	Port size	Part number
 C-bracket (Fits to filter and lubricator body)	—	P31KA00MW
 T-bracket w/ body connector	—	P31KA00MT
 Body connector	—	P31KA00CB
 Port block kit	1/8 NPT	P31KA91CP
	1/4 NPT	P31KA92CP
	3/8 NPT	P31KA93CP
	1/8 BSPP	P31KA11CP
	1/4 BSPP	P31KA12CP
	3/8 BSPP	P31KA13CP
	1/8 BSPT	P31KA21CP
	1/4 BSPT	P31KA22CP
	3/8 BSPT	P31KA23CP
	 Port block kit with T-bracket	1/8 NPT
1/4 NPT		P31KA92CN
3/8 NPT		P31KA93CN
1/8 BSPP		P31KA11CN
1/4 BSPP		P31KA12CN
3/8 BSPP		P31KA13CN
1/8 BSPT		P31KA21CN
1/4 BSPT	P31KA22CN	
3/8 BSPT	P31KA23CN	
 Angle bracket (Fits to regulator and filter / regulator body)	—	P31KA00MR

P32 Series Accessories

Description	Part number
 Angle bracket (Fits to regulator and filter / regulator body)	P32KA00MR
 L-bracket (Fits to filter and lubricator body)	P32KA00ML

P32 & P33 Series Accessories

Description	Port size	Part number
 T-bracket with 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	
 T-bracket (fits to body connector or port block)	—	P32KA00MB

P33 Series Accessories

Description	Part number
 Angle bracket (Fits to regulator and filter / regulator body)	P33KA00MR
 L-bracket (Fits to filter and lubricator body)	P33KA00ML

PPS1 Pressure Switch

Thread size	Part number
1/4 NPT	PPS1-1C3-RHM
1/8 NPT	PPS1-2C3-RHM
1/4" NPT	PPS1-1C3-RWL
1/8" NPT	PPS1-2C3-RWL

 Most popular.





Service Kits

	Description	P31	P32	P33
Air Preparation Products	Panel mount (plastic)	P31KA00MP	P32KA00MP	P33KA00MP
	Panel mount nut (aluminum)	P31KA00MM	P32KA00MM	P33KA00MM
Global	5µ element kit	P31KA00ESE	P32KA00ESE	P33KA00ESE
	1µ element kit	P31KA00ES9	P32KA00ES9	P33KA00ES9
Prep-Air II	0.01µ element kit	P31KA00ESC	P32KA00ESC	P33KA00ESC
	Adsorber element kit	P31KA00ESA	P32KA00ESA	P33KA00ESA
Miniature	Auto drain kit		P32KA00DA	P32KA00DA
	Differential pressure indicator kit	P31KA00RQ	P32KA00RQ	P32KA00RQ
P3N	Fill plug kit	P31KA00PL	P32KA00PL	P32KA00PL
	Drip control assembly kit	P32KA00PG	P32KA00PG	P32KA00PG
General Industrial	Plastic bowl w/ bowl guard & manual drain	P31KA00BGM	P32KA00BGM	P33KA00BGM
		P31KA00BGB		
Stainless Steel	Plastic bowl w/ bowl guard & pulse drain		P32KA00BGA	P33KA00BGA
		P31KA00BGN	P32KA00BGN	P33KA00BGN
Precision / Proportional	Metal bowl w/o sight gauge & manual drain	P31KA00BMM	P32KA00BMM	P33KA00BMM
		P31KA00BMB		
Bulk Liquid Separators	Metal bowl w/o sight gauge & pulse drain		P32KA00BMA	P33KA00BMA
		P31KA00BMN		
	Metal bowl w/ sight gauge & manual drain		P32KA00BSM	P33KA00BSM
			P32KA00BSA	P33KA00BSA
	Metal bowl w/ sight gauge & auto drain		P32KA00BSA	P33KA00BSA
	Metal bowl w/ sight gauge & no drain		P32KA00BSN	P33KA00BSN

Most popular.



Service Kits

Port size	Description	P31	P32	P33
	Regulator - relieving repair kit	P31KA00RB	P32KA00RB	P33KA00RB
	Regulator - non relieving repair kit	P31KA00RC	P32KA00RC	P33KA00RC
	Regulator - main adjusting spring 0-2 bar (0-30 PSIG) kit	P31KA00PR	P32KA00PR	P33KA00PR
	Regulator - main adjusting spring 0-4.1 bar (0-60 PSIG) kit	P31KA00PS	P32KA00PS	P33KA00PS
	Regulator - main adjusting spring 0-8.6 bar (0-125 PSIG) kit	P31KA00PT	P32KA00PT	P33KA00PT
	Regulator - main adjusting spring 0-17 bar (0-250 PSIG) kit		P32KA00PV	P33KA00PV
	Square flush mount gauge kit	0-4 bar	K4511SCR04B	
		0-11 bar	K4511SCR11B	
		0-60 PSIG	K4511SCR060	
		0-160 PSIG	K4511SCR160	
	1.00" round gauge	0-60 PSIG / 0-4.1 bar	K4510N18060	
		0-160 PSIG / 0-10 bar	K4510N18160	
	40mm round gauge (Not for use with common port regulators)	0-30 PSIG / 0-2 bar	K4515N18030	
		0-60 PSIG / 0-4.1 bar	K4515N18060	
		0-160 PSIG / 0-10 bar	K4515N18160	
	50mm round gauge	0-30 PSIG / 0-2 bar	K4520N14030	K4520N14030
		0-60 PSIG / 0-4.1 bar	K4520N14060	K4520N14060
		0-160 PSIG / 0-10 bar	K4520N14160	K4520N14160
		0-300 PSIG / 0-20 bar	K4520N14300	K4520N14300
	44mm (1-3/4") digital round	0-160 PSIG / 0-11 bar / 0-1.1 MPa	K4517N14160D	K4517N14160D
	Body connector o-ring (spares kit) (pack of 10)	P31KA00CY	P32KA00CY	P33KA00CY
	Tamperproof knob kit	P31KB00AT	P32KB00AT	



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators

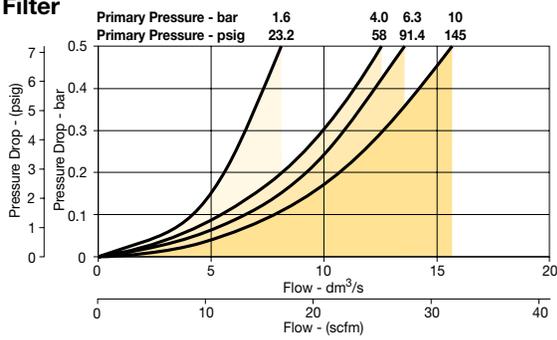
 Most popular.



Global FRL Flow Charts

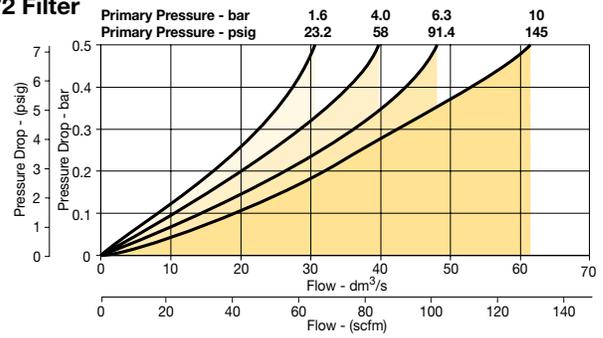
Mini Particulate Filter - P31

1/4 Filter



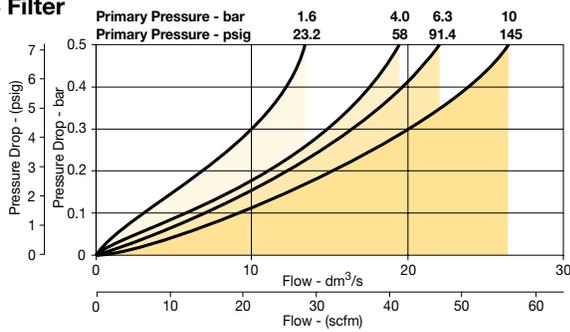
Standard Particulate Filter - P33

1/2 Filter

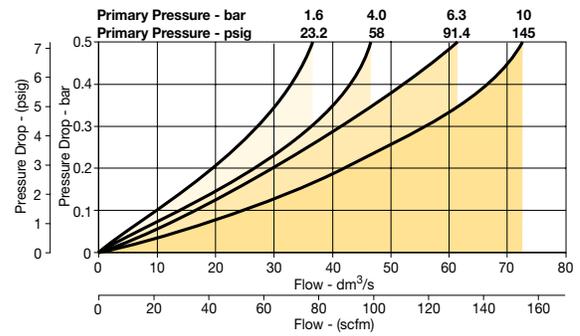


Compact Particulate Filter - P32

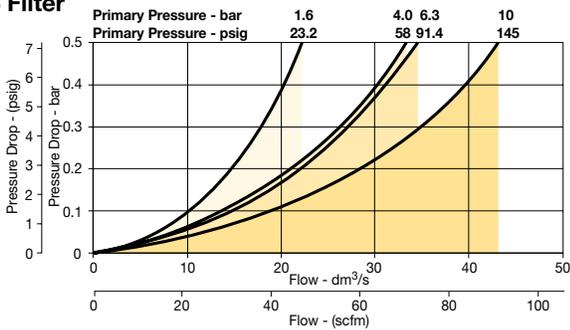
1/4 Filter



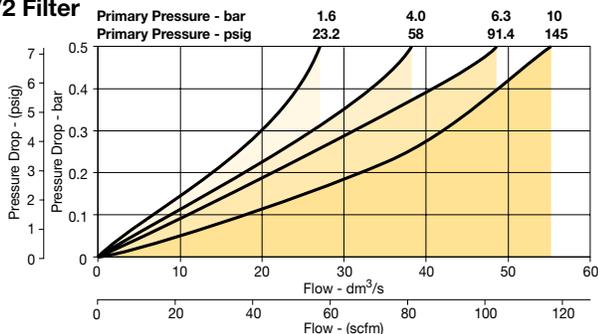
3/4 Filter



3/8 Filter

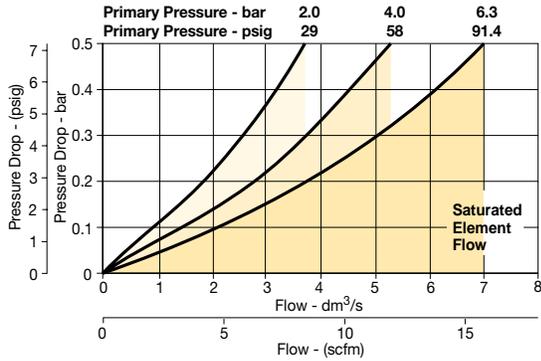


1/2 Filter

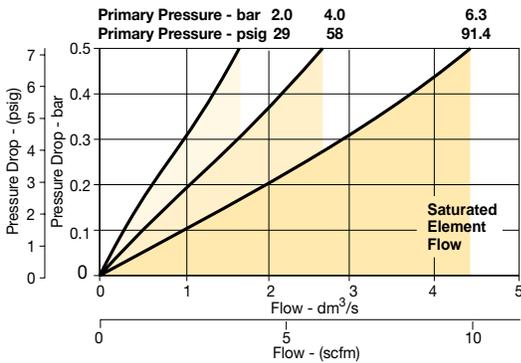


Mini Coalescing and Adsorber Filters - P31

P31 - 1.0 micron flow

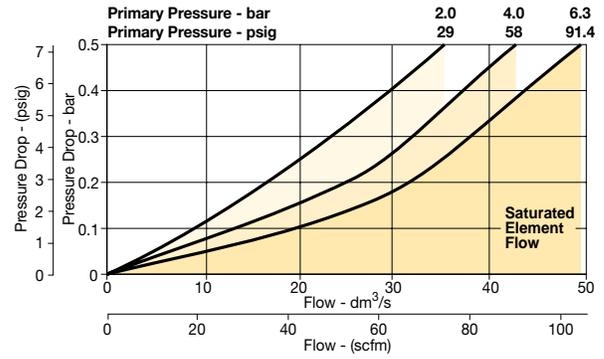


P31 - 0.01 micron flow

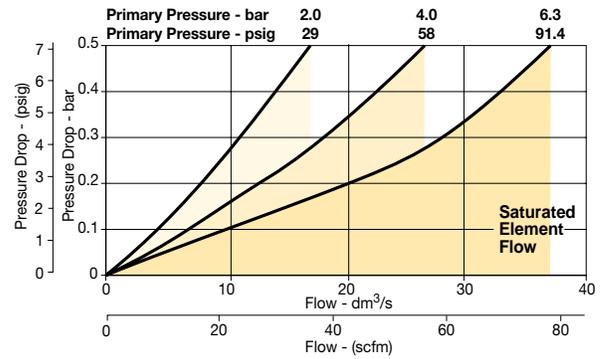


Standard Coalescing and Adsorber Filter - P33

P33 - 1.0 micron flow

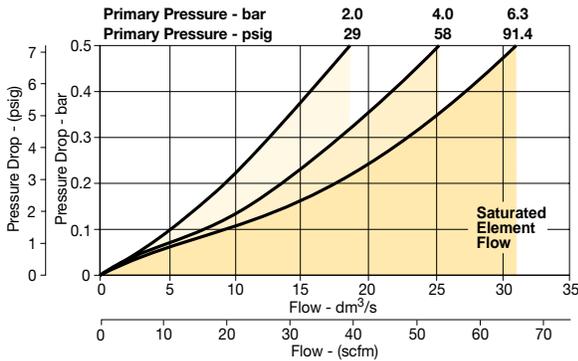


P33 - 0.01 micron flow

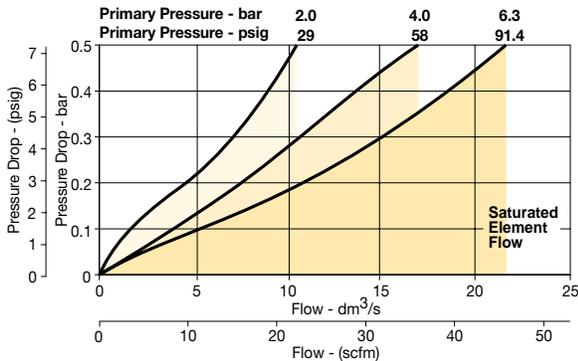


Compact Coalescing and Adsorber Filter - P32

P32 - 1.0 micron flow



P32 - 0.01 micron flow



Air Preparation Products

Global

Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

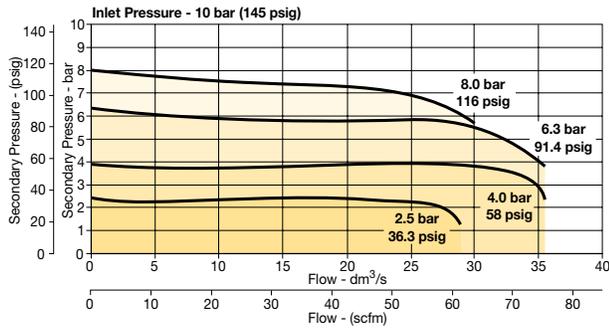
Precision / Proportional

Bulk Liquid Separators



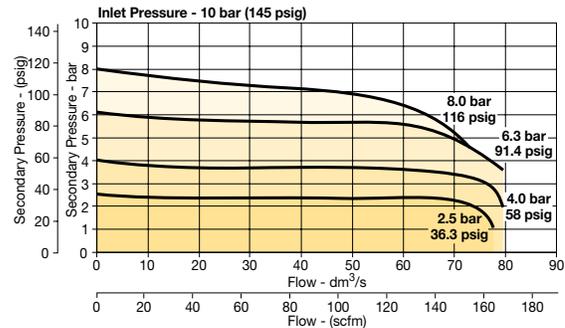
Mini Regulator - P31

1/4 Regulator



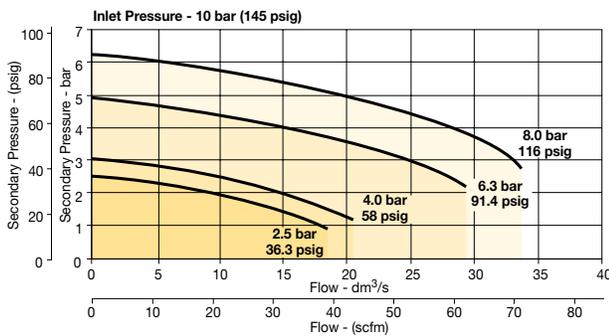
Compact Regulator - P32

1/2 Regulator



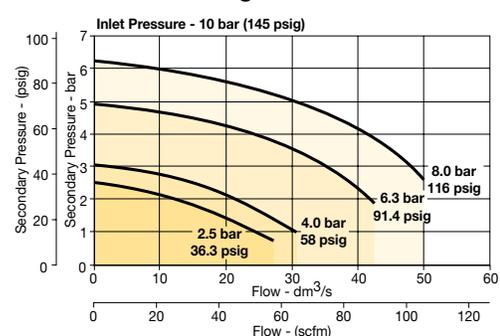
Mini Common - P1 Regulator - P31

1/4 Common Regulator



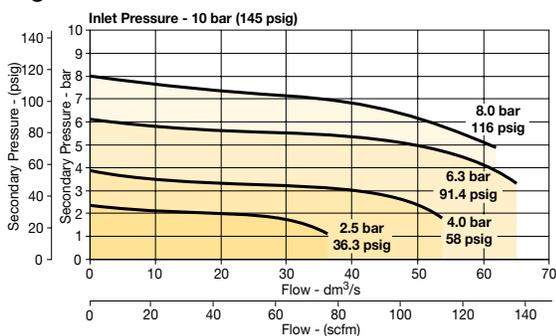
Compact Common - P1 Regulator - P32

1/4, 3/8 or 1/2 Common Regulator



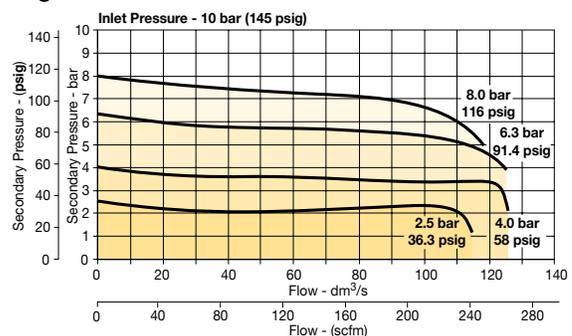
Compact Regulator - P32

1/4 Regulator

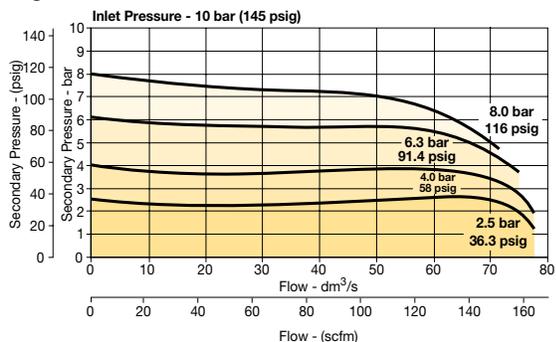


Standard Regulator - P33

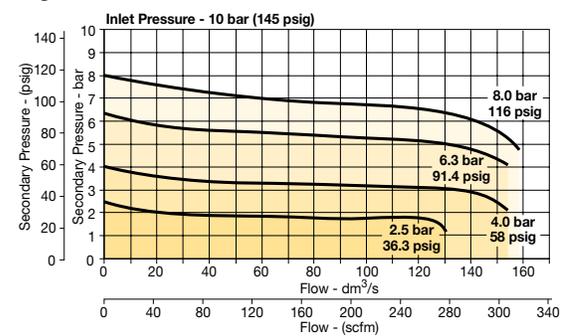
1/2 Regulator



3/8 Regulator



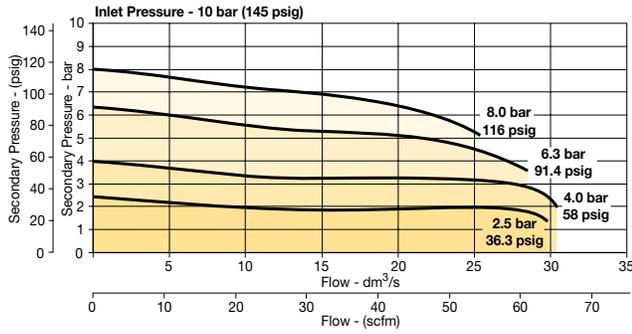
3/4 Regulator



Air Preparation Products
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Prep-Air II
Miniature
P3N
General Industrial
Stainless Steel
Precision / Proportional
Bulk Liquid Separators

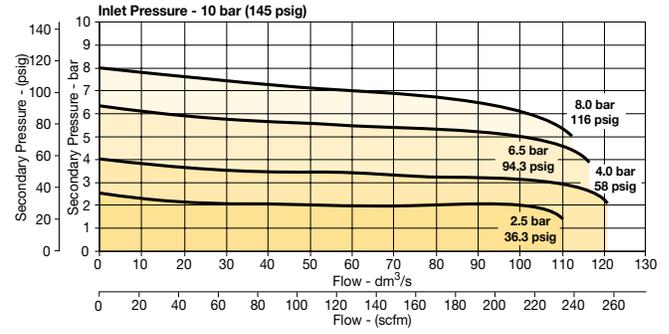
Mini Filter / Regulator - P31

1/4 Filter/Regulator



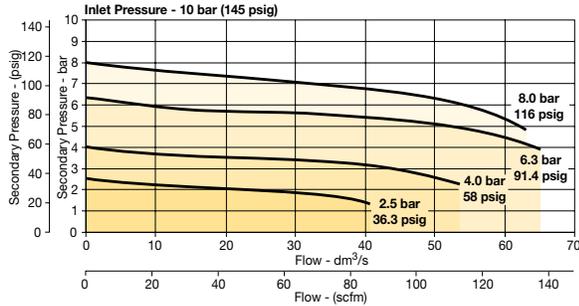
Standard Filter / Regulator - P33

1/2 Filter/Regulator

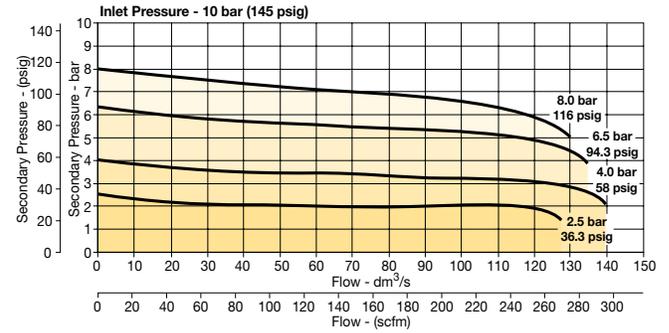


Compact Filter / Regulator - P32

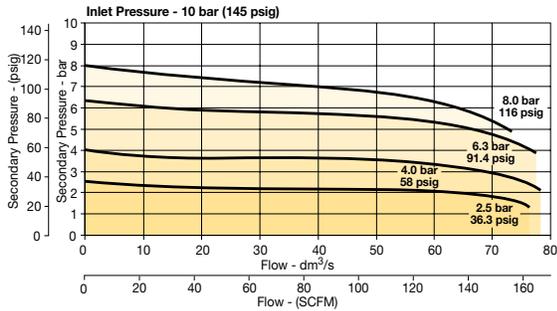
1/4 Filter/Regulator



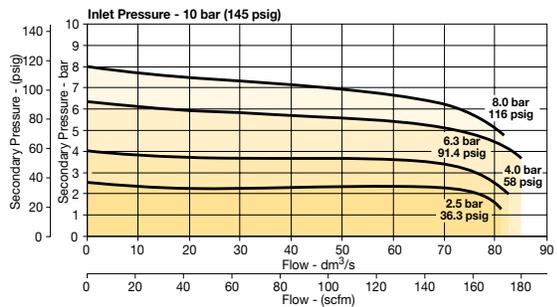
3/4 Filter/Regulator



3/8 Filter/Regulator



1/2 Filter/Regulator



Air Preparation Products

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Prep-Air II

Miniature

P3N

General Industrial

Stainless Steel

Precision / Proportional

Bulk Liquid Separators





Air Preparation Products

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P3N

General Industrial

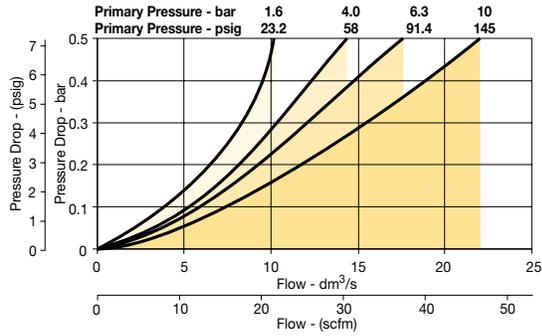
Stainless Steel

Precision / Proportional

Bulk Liquid Separators

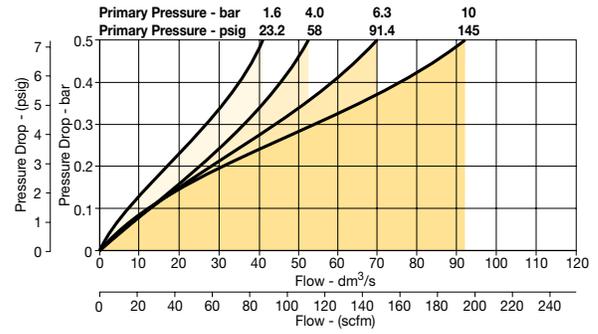
Mini Lubricator - P31

1/4 Lubricator

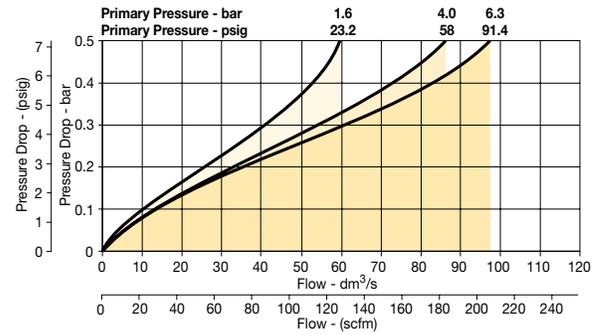


Standard Lubricator - P33

1/2 Lubricator

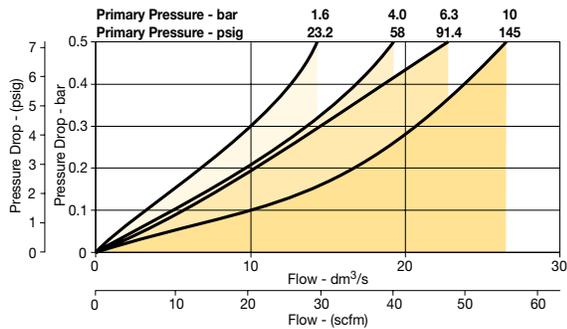


3/4 Lubricator

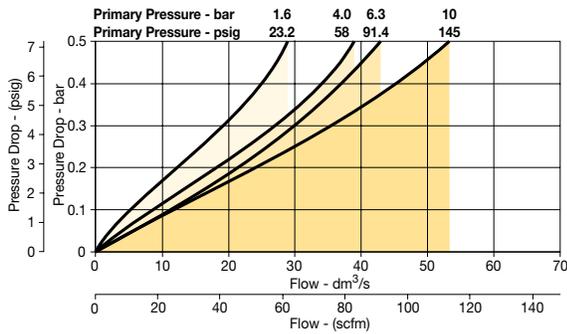


Compact Lubricator - P32

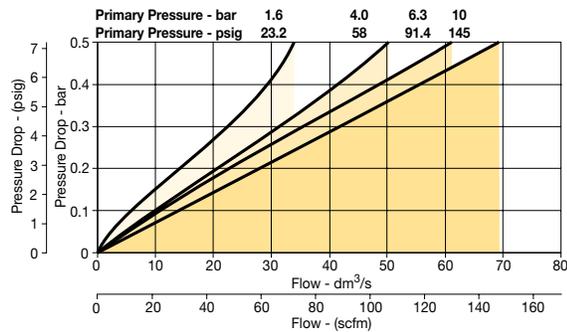
1/4 Lubricator



3/8 Lubricator

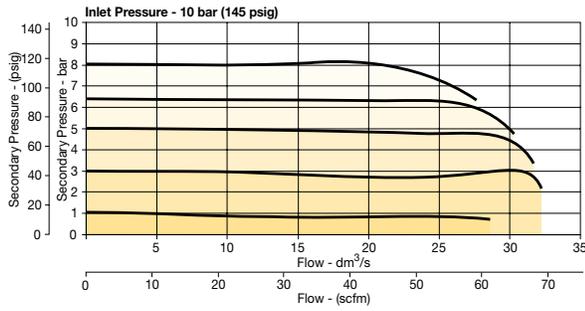


1/2 Lubricator

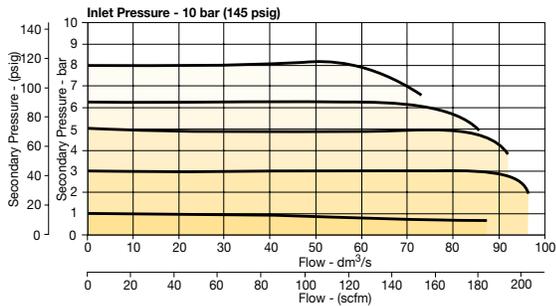


Proportional Regulators

P31P Regulator 1/4" Ports

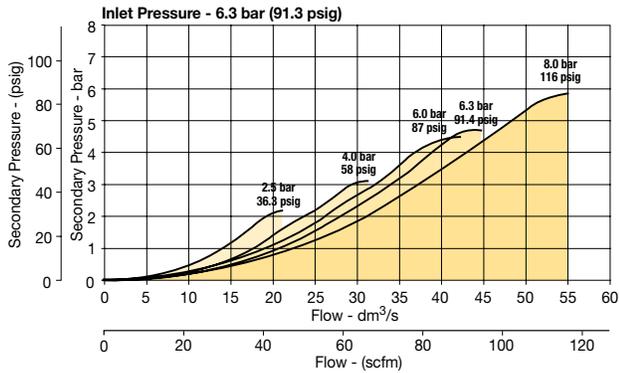


P32P Regulator 1/2" Ports

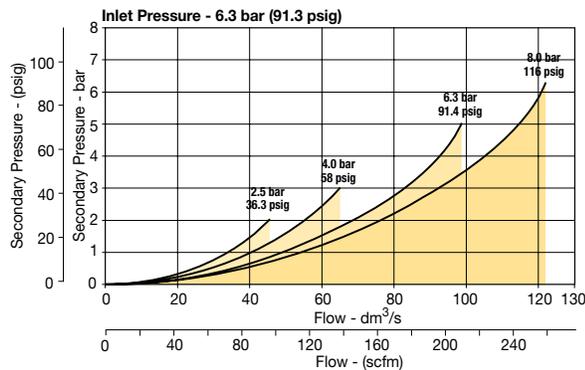


Combined Soft Start / Dump Valve

1/4 Soft Start & Dump Valve

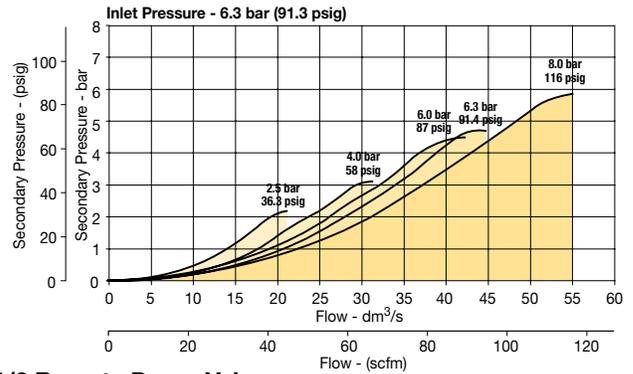


1/2 Soft Start & Dump Valve

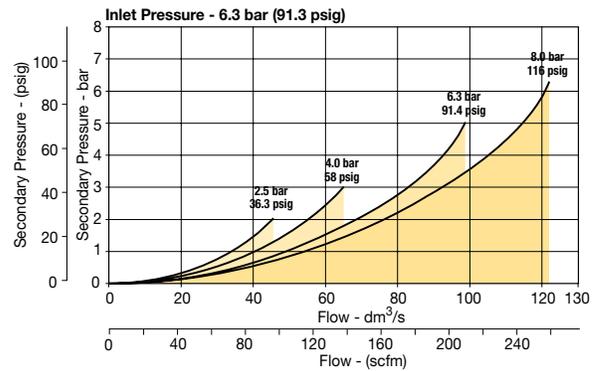


Dump Valve

1/4 Remote Dump Valve

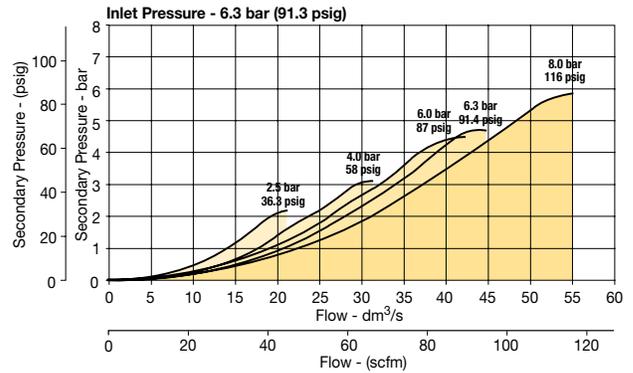


1/2 Remote Dump Valve

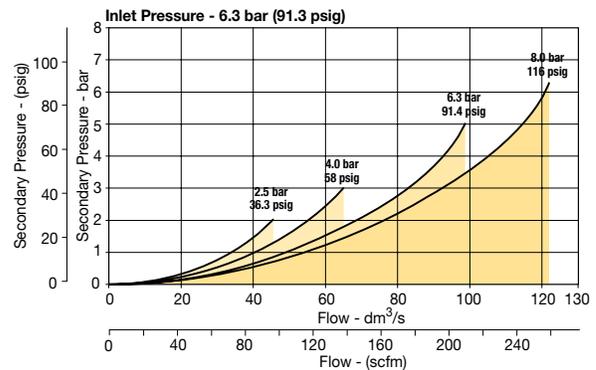


Soft Start Valve

1/4 Soft Start Valve



1/2 Soft Start Valve



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