Parker
Pneumatic

Modular FRLs

Mini Series G1/8 - G1/4
Modular Junior Series G1/8 to G3/8
Modular Maxi Series G1/4 to G3/4
Modular Series G1

Catalogue no. 2158GB-ca

Home

Index

Mini FRLs

The Mini FRL range is designed for use in small pneumatic systems or in control cabinets where space is at a premium.

The system allows units to be connected together, without the use of pipe connectors, saving space; providing constant mounting centres; whilst maintaining a modern aesthetically pleasing appearance.

The individual filters, regulators, lubricators and filter/regulators are all moulded in a quality engineering polymer, and carry integral port threads $G^1/_8$ or $G^1/_4$ using a metal insert, to give added strength when units are used individually.

Overall the individual products are extremely light in weight, a complete FRL unit weighs only 380 grams.

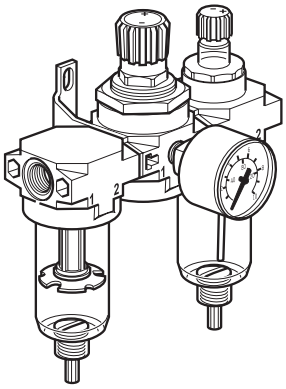
The Mini FRL system

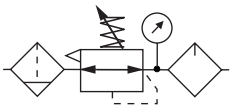
Coloured knobs

8 bar	Black	
4 bar	Grey	
2 bar	Blue	

Mini FRLs

Popular combinations

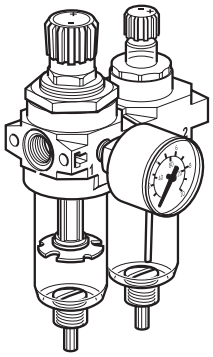


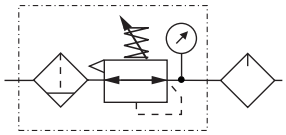


Mini FRL Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets

Ports	Bowl - Drain		
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Transparent Bowl Auto Drain*
G1/8	**P3A-CB11BGB**	**P3A-CB11CGB**	**P3A-CB118GB**
G1/4	**P3A-CB12BGB**	**P3A-CB12CGB**	**P3A-CB128GB**





Filter/Regulator - Lubricator Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets

Ports	Bowl - Drain		
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Transparent Bowl Auto drain*
G1/8	**P3A-CA11BGB**	**P3A-CA11CGB**	**P3A-CA118GB**
G1/4	**P3A-CA12BGB**	**P3A-CA12CGB**	**P3A-CA128GB**

Part numbers.

P3A- C X X X X X B

Filter/Reg + Lub combo	**A**
FR L combo	**B**
FRL combo + Manifold after Regulator	**K**
F/R L combo + Manifold after Filter/Regulator	**H**

G1/8	**11**
G1/4	**12**

Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi-Auto Drain	**C**
Transparent Bowl Auto Drain*	**8**

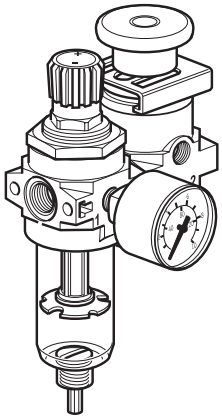
No Gauge	**N**
Gauge	**G**

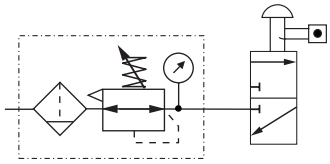
Note: For materials see page 16
For dimensions see page 17

* Available year 2000

Popular combinations

Filter/Regulator and manual bistable dump valve combinations with wall mounting brackets
5 micron element, 8 bar regulator spring
Dump valve with black knob and locking clip





Filter regulator manual bistable dump valve

Ports	Locking dump valve		
	Transparent bowl manual drain	Transparent bowl semi auto drain	Transparent bowl auto drain*
G1/4	**P3A-CN12BGB**	**P3A-CN12CGB**	**P3A-CN128GB**

Part numbers.

P3A-	C	N	X X	X	X	B

G1/4	**12**

Transparent bowl manual drain	**B**
Transparent bowl semi auto drain	**C**
Transparent bowl auto drain*	**8**

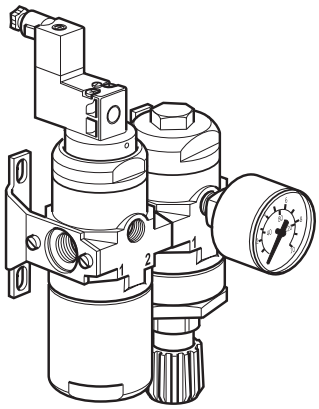
Gauge	**G**
No Gauge	**N**

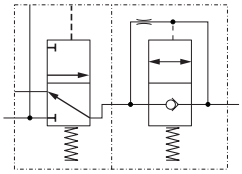
Note: For customised combinations consult Technical Sales Department.

Note: For materials see page 16
For dimensions see page 17
* Available year 2000

Popular combinations

Dump valve and soft start valve combinations with wall mounting brackets





Valves for other than 24 V DC to be ordered less solenoid & solenoid ordered separately.

Dump valve and soft start valve

Ports	Solenoid operated dump valve + manual set point soft start valve	
	24V DC	Less Solenoid
G1/4	**P3A-CS12GMB2CC**	**P3A-CS12GMBØØØ**

For solenoids see page 17

Dump valve and soft start valve

Ports	Pilot operated dump valve + manual set point soft start valve
G1/4	**P3A-CS12QMB**

Part numbers.

P3A- **C** **S** **X** **X** **X** **M** **B** **X** **X** **X**

G1/4	**12**

15mm solenoids 8mm PIN centres on opposite side	**G**
Pilot port push-in	**Q**

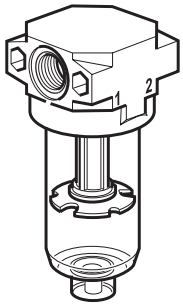
24V DC	**2CC**
Without Solenoid	**000**

Note: For customised combinations consult Technical Sales Department.

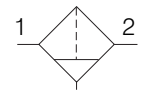
Note: For materials see page 16
For dimensions see page 17

For solenoids see page 16

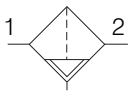
Filters



Symbols



Manual drain



Auto Drain /
Semi auto drain

- High quality polyamide bowls standard.
- Unique 'elastomatic' filter elements 5 micron standard, 40 micron optional.
- Manual, Auto or Semi-auto drain options.

Part numbers:

P3A - FA **X** **X** **X** **X** **N**

G1/8	**11**
G1/4	**12**

Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi-Auto Drain	**C**
High Capacity Transparent Bowl Automatic Drain*	**8**

40 Micron	**G**
5 Micron	**E**

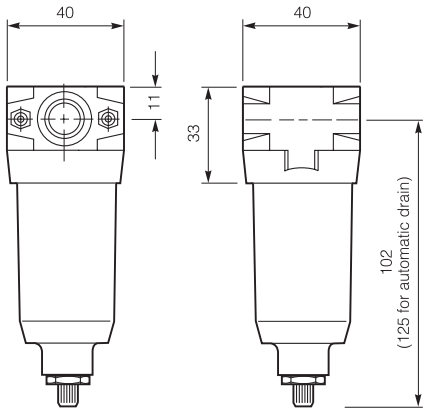
* Available year 2000

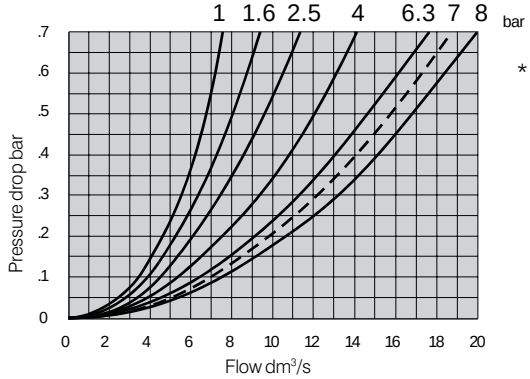
Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm³
High capacity bowl	33 cm³
Flow*	
G1/8	14.5 dm³/s
G1/4	17.5 dm³/s
Weight	75g

Note: For materials see page 16

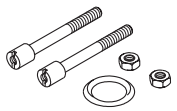
Dimensions (mm)





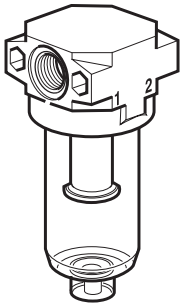
* At 6 bar inlet, 0,7 bar pressure drop.

* Modular connection kit with each product

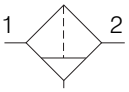


For Repair Kits and Spares see pages 62 and 63.

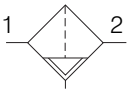
Coalescing Filters and Adsorbers



Symbols



Manual drain



Auto Drain /
Semi auto drain

Part numbers:

P3A - FA	X	X	X	X	N

G1/8	11
G1/4	12

Transparent Bowl Manual Drain	B
Transparent Bowl Semi-Auto Drain	C
High Capacity Transparent Bowl Automatic Drain*	8

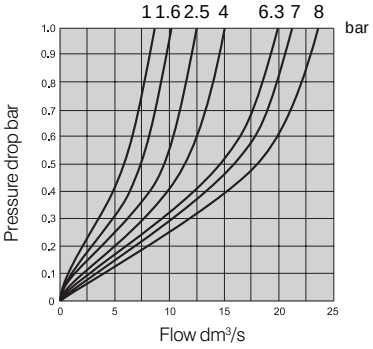
Coalescing	C
Adsorber	A

* Available year 2000

Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm³
High capacity bowl	33 cm³
Max flow*	2.5 dm³/s (Adsorber)
Max flow*	dm³/s (Coalescer)
Weight	75g

Note: For materials see page 16



Medium flow
meter-inlet
12.5 bar

Coalescing filters
* Maximum recommended flow at 7 bar inlet pressure and 140 mbar pressure drop with element wet.

Adsorbers
* Maximum recommended flow at 7 bar inlet pressure and 100 mbar pressure drop.

The use of a Coalescing pre-filter is essential. Adsorber filters do not remove carbon monoxide or carbon dioxide.

Features: Coalescing filters

- Maximum solid particle passed 0.3 microns.
- Maximum oil carry-over 0.02 mg/m³
- High quality polyamide bowls standard, metal bowl option.
- Manual, auto or semi auto drain options.

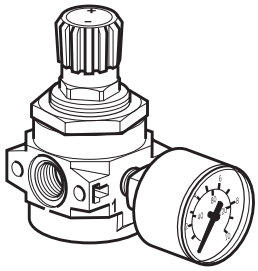
Features: Adsorbers

- Removes hydro-carbon vapours.
- Removes oil vapour carry-over.
- Activated carbon element
- For "breathable air" applications.

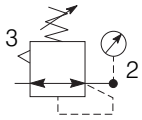
* Modular connection kit with each product

For Repair Kits and Spares see page 62 and 63.

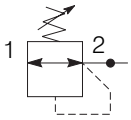
Regulators



Symbols



Self bleed regulator with gauge



Non bleed regulator

- 3 secondary pressure ranges available, 0-2 bar, 0-4 bar, 0-8 bar.
- Balanced diaphragm design, self relieving standard, non relieving optional.
- Push to lock non-rising control knob.
- Colour coded adjustment knobs.
  8 bar Black, 4 bar Grey, 2 bar Blue.

Part numbers:

P3A - RA **X** **X** **X** **X** **P**

$G^1/_8$	**11**
$G^1/_4$	**12**

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

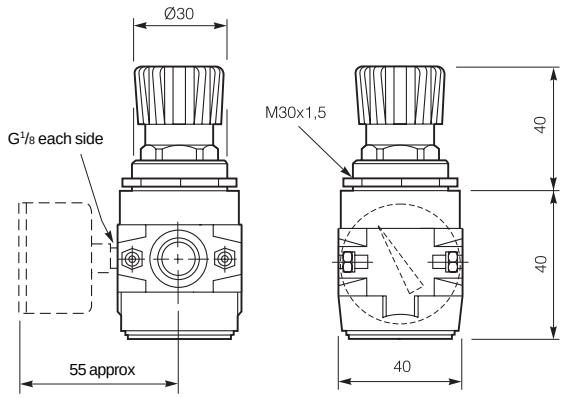
0,2 - 8 bar + Gauge	**G**
0,2 - 8 bar No Gauge	**N**
0,2 - 2 bar + Gauge	**Z**
0,2 - 2 bar No Gauge	**Y**
0,2 - 4 bar + Gauge	**M**
0,2 - 4 bar No Gauge	**L**

Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow	
4 - 8 bar	12,7 dm^3/s
2 bar	6,5 dm^3/s
Weight	85g

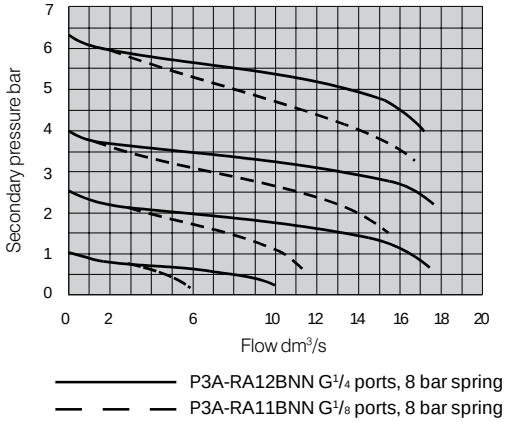
Note: For materials see page 16.
For pressure gauges see page 61.

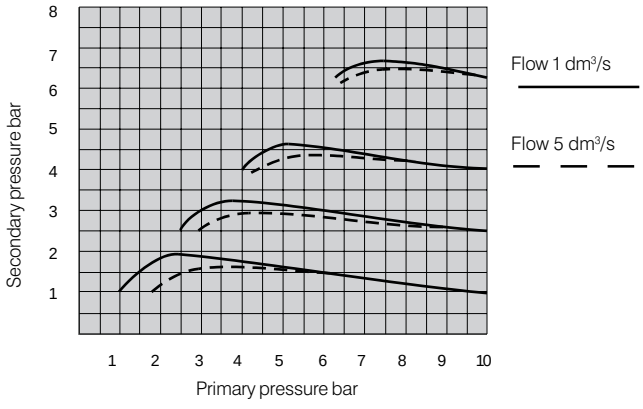
Dimensions (mm)



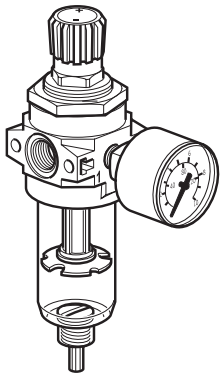
For Repair Kits and Spares see pages 62 and 63.

Regulation characteristics

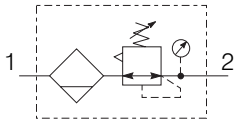




Filter regulator



Symbol



- 'Elastomatic' filter elements 5 micron standard, 40 micron optional.
- 3 secondary pressure ranges, 0-2 bar, 0-4 bar or 0-8 bar.
- Push to lock, non-rising control knob.
- Colour coded adjustment knobs.
  8 bar Black, 4 bar Grey, 2 bar Blue.

Part numbers:

P3A - EA **0** **0** **X** **X** **X** **X** **P**

$G^1/_8$	**11**	Transparent Bowl Manual Drain	**B**	5 Micron	**E**	Relieving	**B**	0,2 - 8 bar + Gauge	**G**
$G^1/_4$	**12**	Transparent Bowl Semi-Auto Drain	**C**	40 Micron	**G**	Non-Relieving	**N**	0,2 - 8 bar No Gauge	**N**
		High Capacity Transparent Bowl Automatic Drain*	**8**					0,2 - 2 bar + Gauge	**Z**
								0,2 - 2 bar No Gauge	**Y**
								0,2 - 4 bar + Gauge	**M**
								0,2 - 4 bar No Gauge	**L**

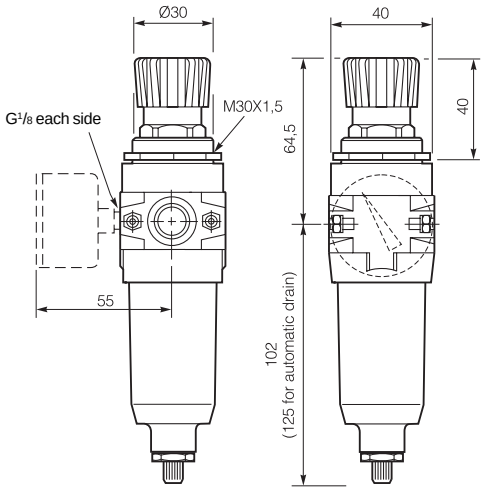
* Available year 2000

Technical information

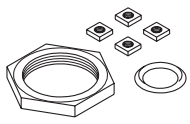
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm^3
High capacity bowl	33 cm^3
Flow $G^1/_4$ - 2 - 8 bar	10,9 dm^3/s
Weight	132g

Note: For materials see page 16.
For pressure gauges see page 61.

Dimensions (mm)

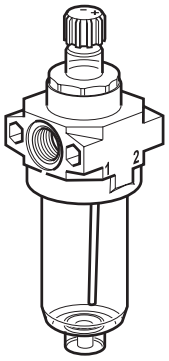


* Modular connection kit with each product

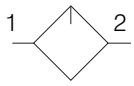


For Repair Kits and Spares see page 62 and 63.

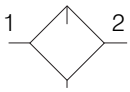
Lubricators



Symbols



Lubricator



Lubricator with drain

- High quality polyamide bowls standard.
- 360⁰ sight dome - drip control.
- Low flow oil pick-up capability.

Part numbers:

P3A - LA **X** **X** **X** **N** **N**

G1/8	**11**
G1/4	**12**

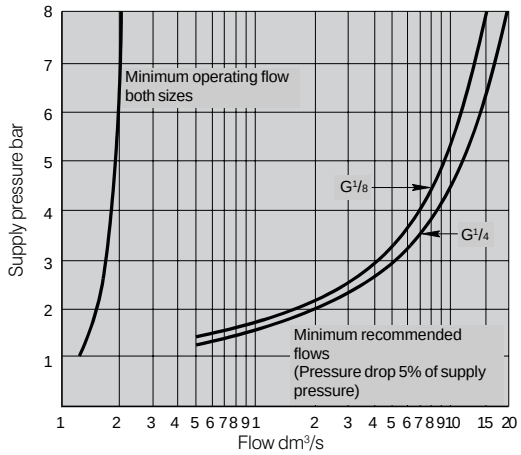
Transparent Bowl with Manual Drain	**B**
Transparent Bowl Without Drain	**A**
High Capacity Transparent Bowl Manual Drain	**6**
High Capacity Transparent Bowl No Drain	**7**

Technical information

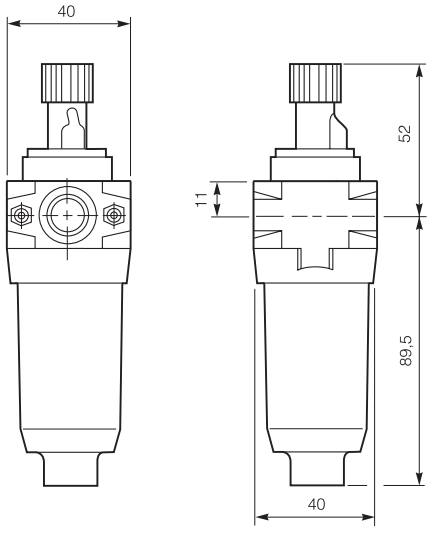
Max. inlet pressure	10 bar max.
Temperature range	-10⁰C +50⁰C
Bowl capacity	26 cm³
High capacity bowl	48 cm³
Flow*	G1/8 13 dm³/s. G1/4 18 dm³/s

* At 7 bar inlet 5% pressure drop

Note: For materials see page 16.



Dimensions (mm)



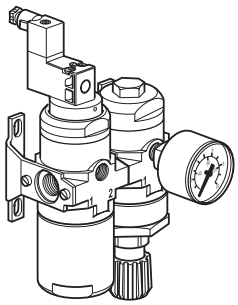
* Modular connection kit with each product

For Repair Kits and Spares see page 62 and 63.

Soft Start and Dump Valves

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling etc. when air pressure is introduced at machine start up.

The soft start valve is an ideal method of providing a fully adjustable controlled introduction of pressure.



Soft Start Valve Operation:

The switch point is set via the control knob and is fully adjustable between 1 and 5 bar. Additionally the bleed orifice which delays the rise in pressure is supplied as standard in several diameters:-
Ø1mm, Ø1,5mm, Ø2,2mm, and Ø3mm.

These are field interchangeable by removing the top plug of the valve.

The soft start valve will, when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

In normal operation the soft start valve is assembled, in series, with an accompanying air pilot, solenoid pilot or manually actuated dump valve. This is used as an on - off switch for line pressure, and for exhausting the system.

Typical combinations

Fig. 1.

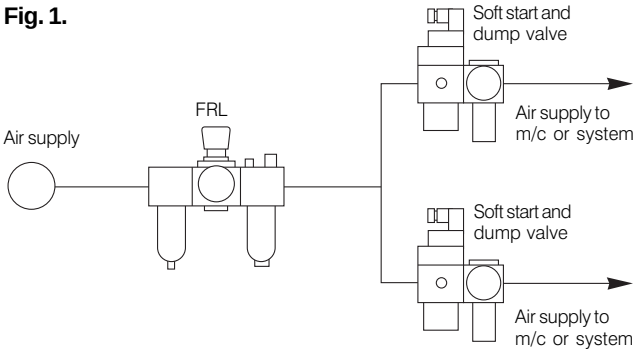


Fig.1. enables part of a system to be isolated and the air dumped to atmosphere whilst operating another part normally.

Fig. 2.

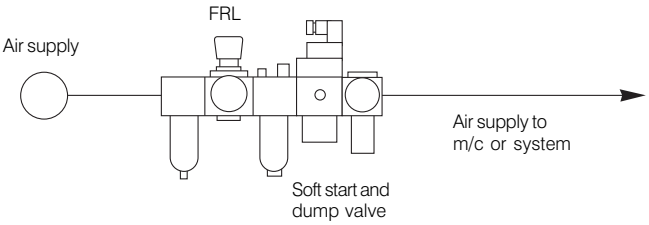
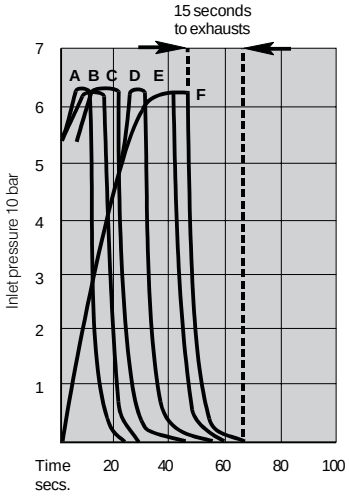


Fig. 2. shows the Soft Start and Dump valve assembled as part of the main Mini FRL combination feeding an entire system.

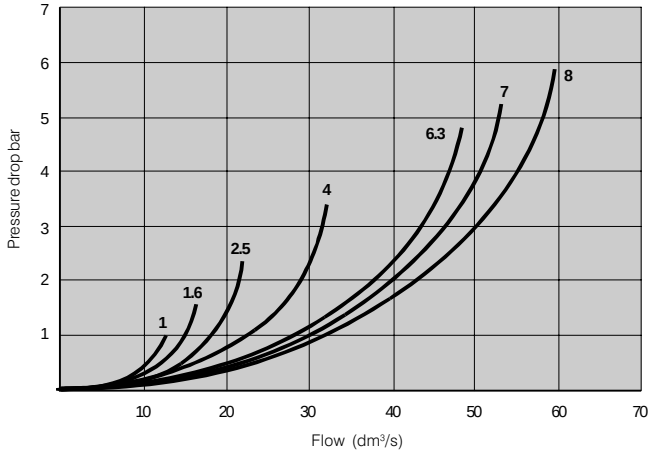
Effect of orifice on flow characteristics of pneumatic switch



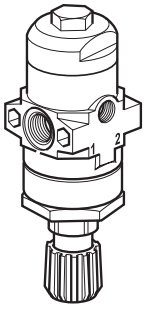
6 bar inlet
10 litre volume
1.5mm dia orifice

A zero switch point
B 1 turn
C 2 turns
D 3 turns
E 4 turns
F 5 turns

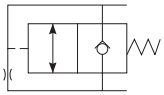
Flow characteristics for ('Soft Start' valve)



Soft Start Valves



Symbol



- Manually operated
- Controlled induction of pressure
- Fully adjustable switch point

Part numbers:

P3A - SA	0	0	X	0	N

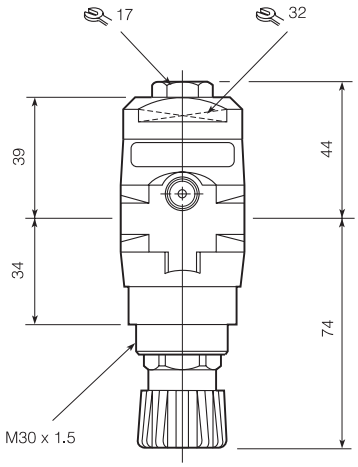
G1/8	11
G1/4	12

No adjustment	N
Manual adjustment	M
Manual + Gauge	G
Manual + Tamperproof	T
Manual + Gauge + Tamperproof	V
Manual + Key Lock	K
Manual + Key Lock + Gauge	J

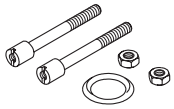
Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow	
4 - 8 bar	12,7 dm³/s
2 bar	6,5 dm³/s
Weight	85g

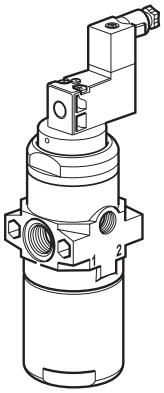
Note: For materials see page 16.
For pressure gauges see page 61.



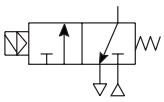
* Modular connection kit with each product



Remotely Operated Dump Valves



Symbol



- Air pilot or solenoid pilot operated dump valves
- Low Watt solenoid coils

  Valves for other than 24 V DC to be purchased less solenoid & solenoid ordered separately.

Part numbers:

P3A - DA	0	0	XX	N	XXX

0	0
G1/4	12

XX	
Pilot Monostable 4mm Push-in	PQ
Solenoid (15mm) Monostable	SG

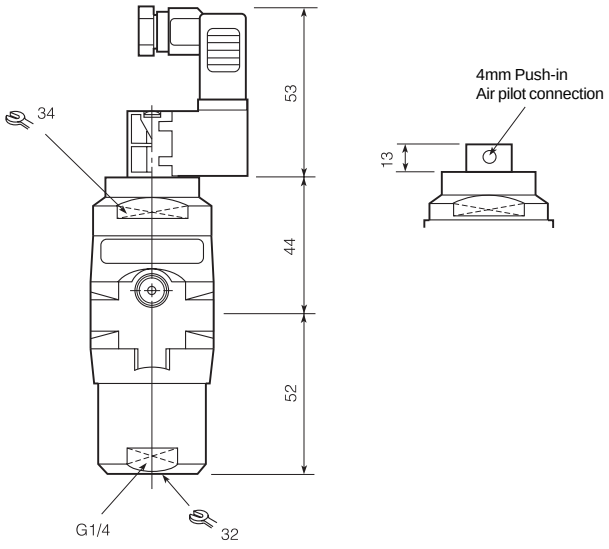
XXX	
No Solenoid	
24V. D.C.	2CC
Less Solenoid	ØØØ

For alternative solenoids see page 16.

Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow	
4 - 8 bar	12,7 dm³/s
2 bar	6,5 dm³/s
Weight	85g

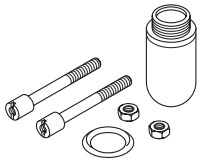
Note: For materials see page 16.



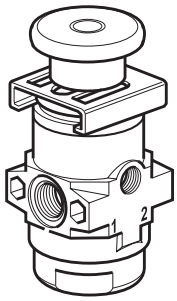
Operation

Remotely operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.
To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version mist be maintained.
The valve will automatically dump when the holding signal is removed.

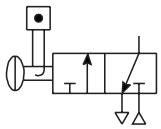
* Modular connection kit with each product



Manually Operated Dump Valves



Symbol



- Shuts off upstream and dumps downstream pressure.
- Choice of red or black knobs.
- G1/4 ports.
- Ventral G1/4 exhaust port.
- Padlockable version.

Manual dump valves shut off upstream pressure and exhaust the downstream pressure at the touch of a button. They are available and with a choice of either black or high visibility red knobs, especially useful for emergency stop applications.

Part numbers:

P3A - DA	0	0		X		X		N

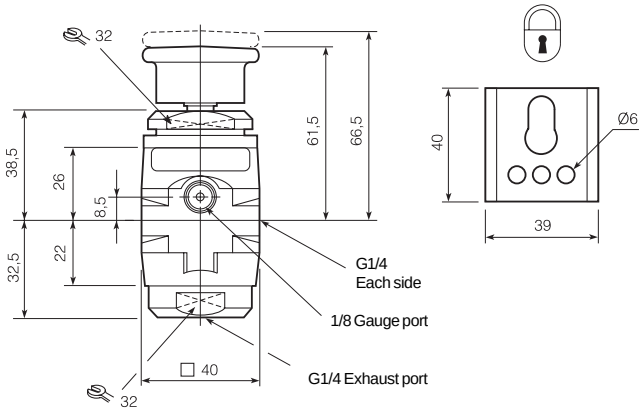
G1/4	12

Manual Monostable black knob	M
Manulal Bistable black knob	B
Manual monostable red knob	N
Manual Bistable red knob	R

Non Locking	N
Locking	L

Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow*	
G1/8	14.5 dm³/s
G1/4	17.5 dm³/s
Weight	75g



Note: For materials see page 16.

* Modular connection kit with each product

Materials

Filter

Body	Nylon 6 glass filled
Bowl (Transparent)	Nylon
Louvre	Acetal
Element	Nylon 6
Manual Drain	Acetal
Semi-Auto Drain	Acetal / Brass
Springs	Stainless Steel
Seals	Nitrile

Regulator

Body	Nylon 6 glass filled
Bonnet	Acetal
Control Knob	Acetal
Adjustable Screw	Plated Steel
Spring Rest (Upper)	Brass
Spring Rest (Lower)	Steel / Brass
Spring	Plated Steel
Diaphragm	Nitrile / Nylon
Valve Stem	Brass
Valve Guide	Acetal
Valve Seat	Nitrile
Bottom Cap	Acetal
Springs	Stainless Steel
Seals	Nitrile

Lubricator

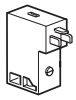
Body	Nylon 6 glass filled
Bowl (Transparent)	Nylon
Knob	Acetal
Sight Glass	Polyamide
Venturi Valve	Acetal
Transfer Tube	Nylon
Tube Retainer	Brass
Spring	Stainless Steel
Seals	Nitrile

Accessory Products

Bodies	Zinc
Housings	Aluminium
Valve Stems	Brass
Knobs	Acetal
SSV Main Spring	Plated Steel
Springs	Stainless Steel
Seals	Nitrile

Solenoids for Dump Valves (15mm solenoid)

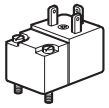
Supplied with cable plug and non-locking flush manual override



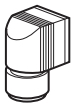
Voltage	Order code
12VDC	**P2E-KV32B1N**
24VDC	**P2E-KV32C1N**
12V 50Hz/60Hz	**P2E-KV31B1N**
24V 50Hz	**P2E-KV31C1N**
115V 50Hz/120VAC 60Hz	**P2E-KV31F1N**
230V 50Hz/240VAC 60Hz	**P2E-KV31J1N**

Solenoids for Dump Valves (CNOMO solenoid)

(Non locking override)



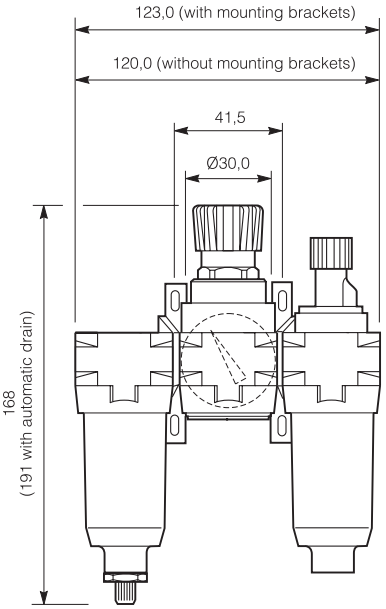
Voltage	Order code
CNOMO-Solenoids	
24VDC (48V 50Hz)	**P2G-PV32C1**
24V/50Hz/60Hz (11VDC)	**P2G-PV34C1**
110V/50Hz/60Hz (50VDC)	**P2G-PV34E1**
230V/50Hz/60Hz (120VDC)	**P2G-PV34J1**
12V/50Hz/60Hz (6VDC)	**P2G-PV34B1**



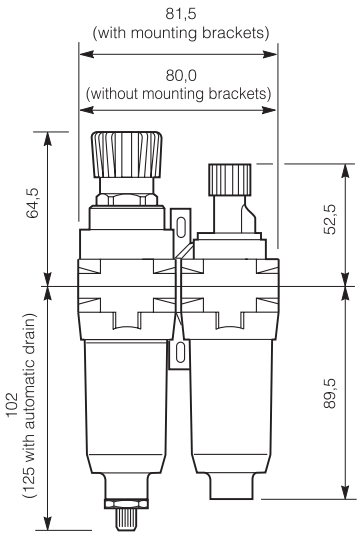
Description	Order code
Cable plug, for CNOMO solenoid	
24V, LED+Diode	**9125 9980-04**
24V AC/DC, LED+VDR	**9125 9980-06**
110V AC/DC, LED+VDR	**9125 9980-08**
240V AC/DC, LED+VDR	**9125 9980-10**
Black	**9125 9980-11**

Combination dimensions

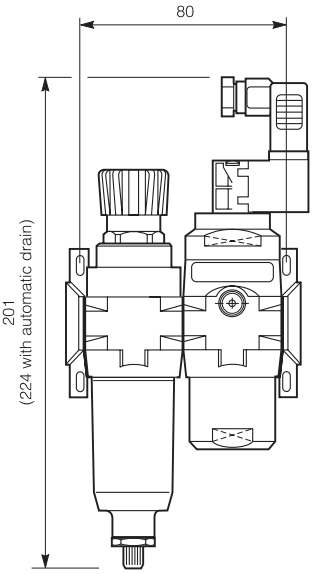
Filter, Regulator, Lubricator



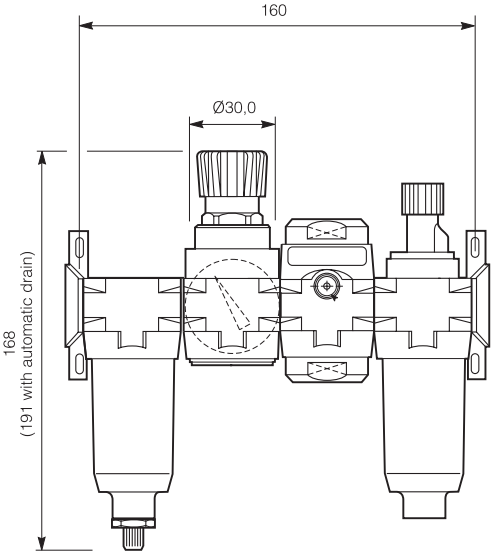
Filter/Regulator, Lubricator



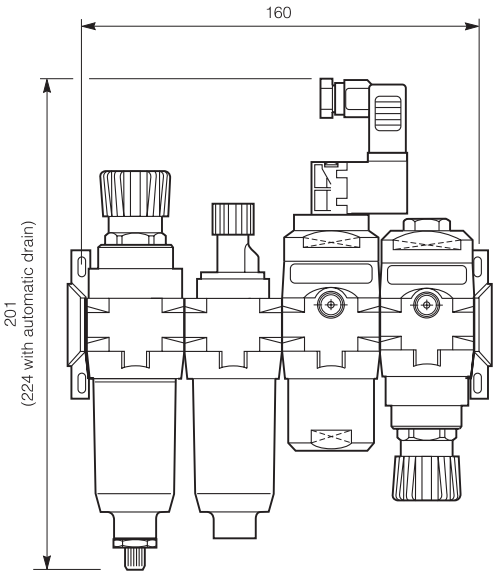
Filter/Regulator & Dump Valve



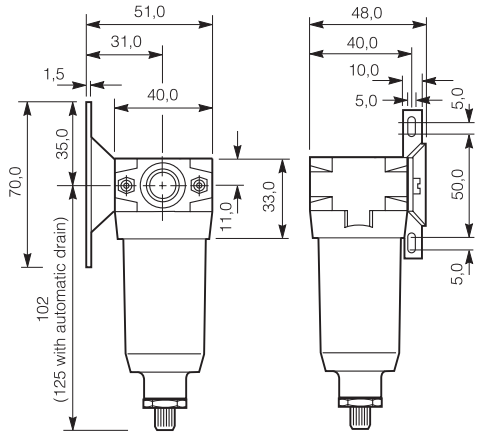
Filter, Regulator, Manifold, Lubricator.



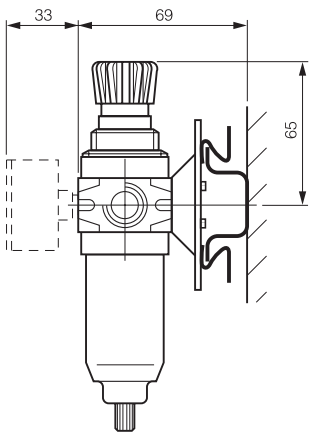
Filter/Regulator, Lubricator, Dump valve, Soft start valve



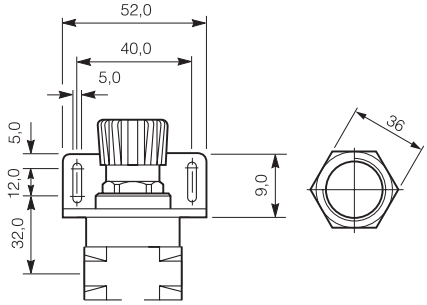
Wall mountings



DIN rail



Neck mounting



Mounting assemblies

Assembly containing a regulator or filter regulator

Assembly without regulator or filter regulator

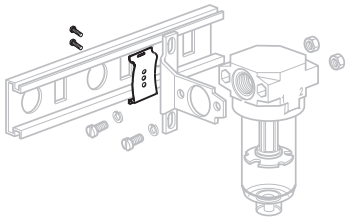
Wall brackets mounted at the ends of an assembly

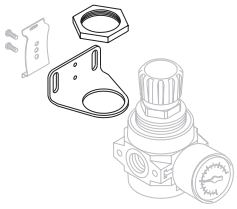
Wall brackets mounted at the ends of an assembly

Wall brackets mounted inside an assembly

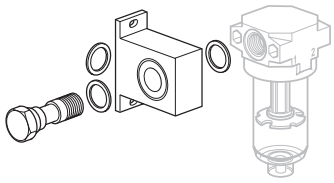
Wall brackets mounted inside an assembly

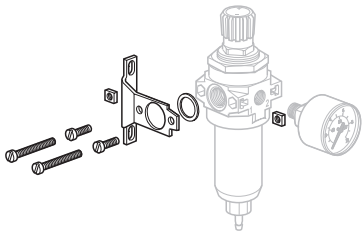
Mounting Kits

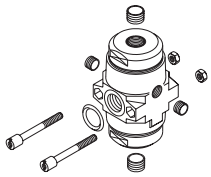
	Part no.	Mounting Style	
DIN rail Mounting kit	**P3A-KA00MKN**	DIN rail clip for wall mounting P3A-KA00CWN or P3A-KA00MRN	

	Part no.	Mounting Style	
Angle Bracket Mounting	**P3A-KA00MRN**	Regulator and Filter/Regulator bracket mounting	

	Part no.		Part no.	
Plastic panel mounting ring	**P3A-KA00MPN**	Metal panel mounting ring	**P3A-KA00MMN**	

	Part no.	Mounting Style	
Rear Entry Connector	**P3A-KA00CWN**	Direct G¼ ported or may be mounted to butt directly to machine bulkhead	

	Part no.	Mounting Style	
Wall Mounting kit	**P3A-KA00CWN**	Basic kit for wall mounting individual Regulator or Filter/Regulator units	

	Part no.	Mounting Style	
Modular Manifold Block	**P3A - MA1V**	Provides 5 outlets May be connected in series	

	Part no.	Mounting Style	
Regulator Tamperproof Kit	**P3A - KA00ATN**	Prevents unauthorised adjustment	 **x6**

Modular Junior FRLs

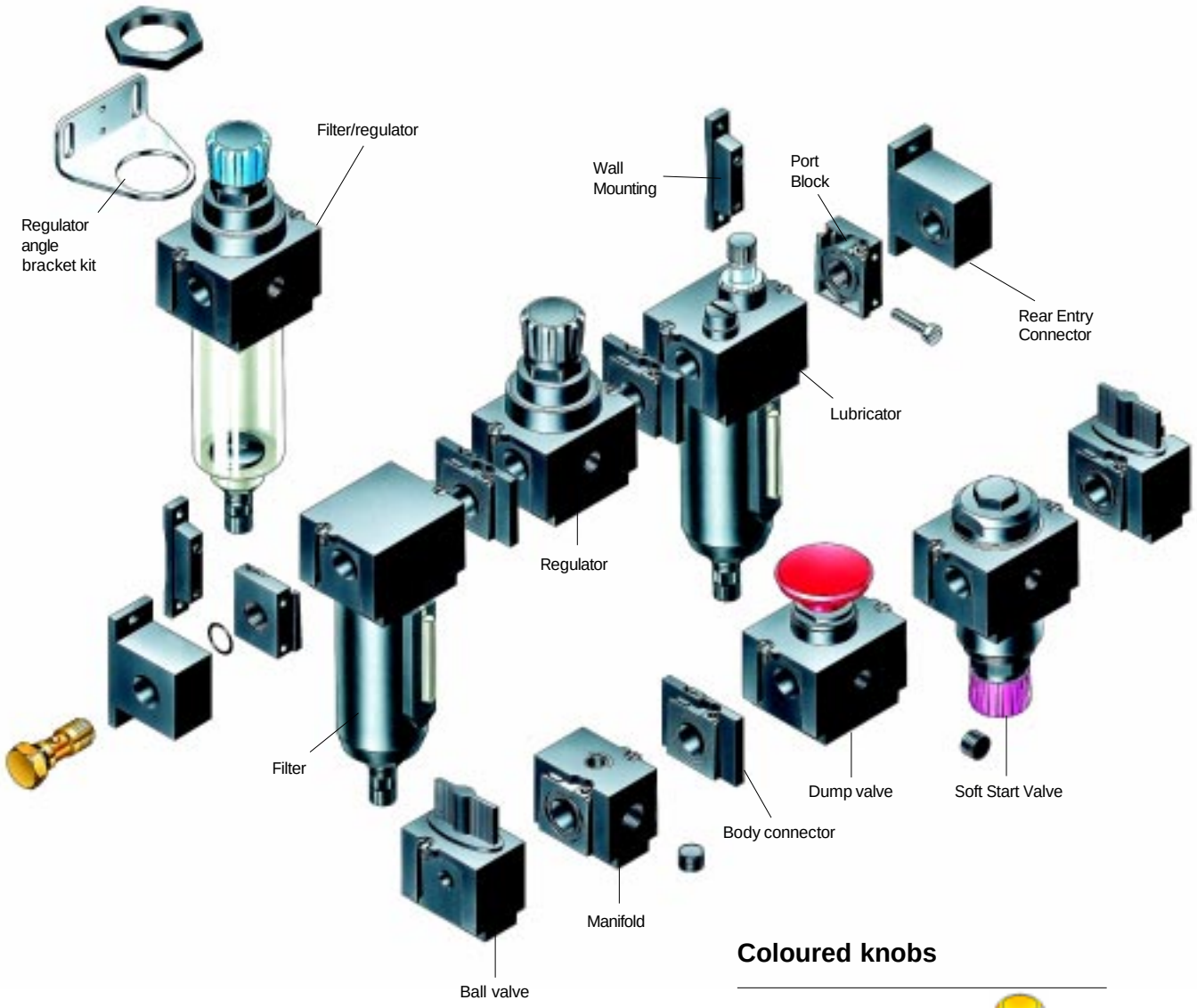
The System

The Modular system allows units to be connected together, without the use of pipe connectors, saving space; providing constant mounting centres; whilst maintaining a modern aesthetically pleasing appearance.

The system comprises standard units with a common body size, body connectors and separate port blocks with a choice of port thread. This provides the designer with a truly modular system which can be adapted and expanded to suit the future needs of the application.

The system also allows units to be removed from the air line without disturbing the fixed pipe connections greatly simplifying maintenance.

The Modular system comprises Filters, Coalescing Filters, Adsorbers, Regulators, Combined Filter - Regulators and air line Lubricators together with a wide range of accessory products including Soft Start Valves, Dump Valves, Manifolds and Rear Entry Connectors.



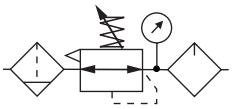
Coloured knobs

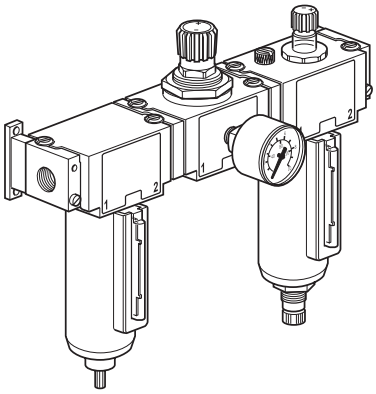
16 bar	Orange	
8 bar	Black	
4 bar	Grey	
2 bar	Blue	

Popular combinations

1/4" FRL Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets





Ports	Bowl - Drain					
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Transparent Bowl Auto Drain*	Metal Bowl Manual Drain	Metal Bowl Semi-Auto Drain	Metal Bowl Auto Drain*
G1/4	**P3D-CB12BGB**	**P3D-CB12CGB**	**P3D-CB12DGB**	**P3D-CB12KGB**	**P3D-CB12LGB**	**P3D-CB12MGB**
G3/8	**P3D-CB13BGB**	**P3D-CB13CGB**	**P3D-CB13DGB**	**P3D-CB13KGB**	**P3D-CB13LGB**	**P3D-CB13MGB**

Options:

Part no. **P3D-** | C | B | X | X | X | G | B

Options:

C		B		X X		X		G	
Upstream Ball Valve as first unit	**A**	FRL combination + G1/4 ported body connector after Regulator	**L**	G1/4	**12**	Transparent Bowl Manual Drain	**B**	No Gauge	**N**
Downstream Ball Valve as last unit	**B**	FRL combination + Manifold after Regulator	**K**	G3/8	**13**	Transparent Bowl Semi-Auto Drain	**C**	With Gauge	**G**
Combination without Ball Valve	**C**	F/R L Combination + G1/4 ported body connector after Filter/Regulator	**J**			Metal Bowl Manual Drain	**K**		
		F/R L Combination + Manifold after Filter/Regulator	**H**			Metal Bowl Semi Auto Drain	**L**		
		F+R+L combination	**B**			Transparent bowl Auto Drain*	**D**		
		F/R+L combination	**A**			Metal bowl Auto Drain*	**M**		

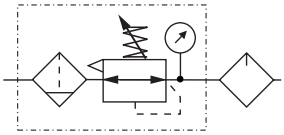
Note: For customised combinations consult Technical Sales Department.

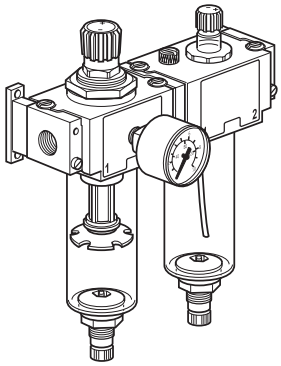
* Available year 2000

Popular combinations

Filter/Regulator - Lubricator Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets





Ports	Bowl - Drain					
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Transparent Bowl Auto Drain*	Metal Bowl Manual Drain	Metal Bowl Semi-Auto Drain	Metal Bowl Auto Drain*
G1/4	**P3D-CA12BGB**	**P3D-CA12CGB**	**P3D-CA12DGB**	**P3D-CA12KGB**	**P3D-CA12LGB**	**P3D-CA12MGB**
G3/8	**P3D-CA13BGB**	**P3D-CA13CGB**	**P3D-CA13DGB**	**P3D-CA13KGB**	**P3D-CA13LGB**	**P3D-CA13MGB**

Options:

Part no. **P3D-** | C | B | X | X | X | G | B

Options:

C	
Upstream Ball Valve as first unit	**A**
Downstream Ball Valve as last unit	**B**
Combination without Ball Valve	**C**

B	
FRL combination + G1/4 ported body connector after Regulator	**L**
FRL combination + Manifold after Regulator	**K**
F/R L Combination + G1/4 ported body connector after Filter/Regulator	**J**
F/R L Combination + Manifold after Filter/Regulator	**H**
F+R+L combination	**B**
F/R+L combination	**A**

X X	
G1/4	**12**
G3/8	**13**

X	
Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi-Auto Drain	**C**
Metal Bowl Manual Drain	**K**
Metal Bowl Semi Auto Drain	**L**
Transparent bowl Auto Drain*	**D**
Metal bowl Auto Drain*	**M**

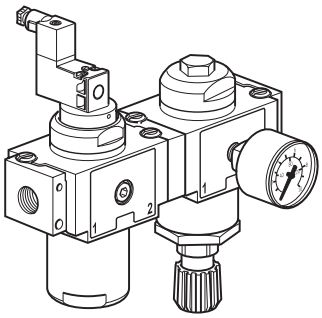
G	
No Gauge	**N**
With Gauge	**G**

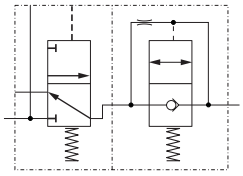
Note: For customised combinations consult Technical Sales Department.

* Available year 2000

Popular combinations

Dump valve and soft start valve combinations with wall mounting brackets





Ports	Solenoid operated dump valve + manual set point soft start valve	
	24V DC	Valve without Solenoid
G1/4	**P3D-CS12GMB2CC**	**P3D-CS12GMB000**
G3/8	**P3D-CS13GMB2CC**	**P3D-CS13GMB000**

Valves other than 24 V DC to be purchased less solenoid and solenoid ordered separately.

Ports	Pilot operated dump valve + manual set point soft start valve
G1/4	**P3D-CS12QMB**
G3/8	**P3D-CS13QMB**

Options:

Part no. **P3D-** C S X X X M B X X X

Options:

Upstream Ball Valve as first unit	**A**
Downstream Ball Valve as last unit	**B**
Combination without Ball Valve	**C**

G1/4	**12**
G3/8	**13**

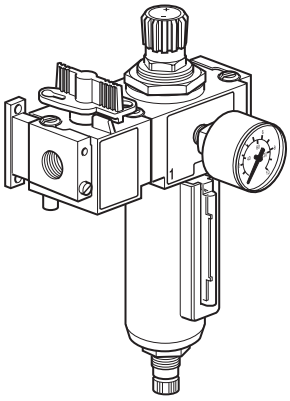
Air pilot operated dump valve	**Q**
Solenoid operated dump valve	**G**

24V DC	**2CC**
Valve without solenoid	**000**

Note: For customised combinations consult Technical Sales Department.

Popular combinations

Filter/Regulator and Ball valve combinations with wall mounting brackets and port connectors, 5µ element



Ports	Pressure	Metal Bowl			Transparent bowl		
	max, bar	Manual	Semi-Auto	Auto*	Manual	Semi-Auto	Auto*
G1/4	17	**P3D-AN12KGB**	**P3D-AN12LGB**	**P3D-AN12MGB**			
G3/8	17	**P3D-AN13KGB**	**P3D-AN13LGB**	**P3D-AN13MGB**			
G1/4	10				**P3D-AN12BGB**	**P3D-AN12CGB**	**P3D-AN12DGB**
G3/8	10				**P3D-AN13BGB**	**P3D-AN13CGB**	**P3D-AN13DGB**

Options:

P	3	D	-	X	N	X	X	X	X	B

	Ball valve
A	Upstream Ball Valve as first unit
B	Downstream Ball Valve as last unit

	Thread
12	G1/4
13	G3/8

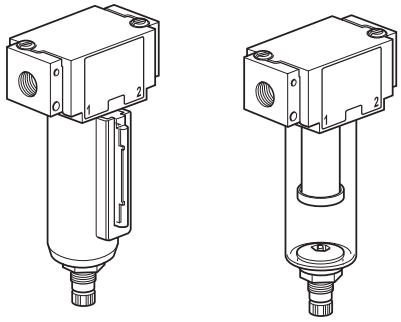
	Bowl / drain
B	Transparent Bowl Manual Drain
C	Transparent Bowl Semi-Auto Drain
D	Transparent Bowl Auto Drain*
K	Metal Bowl Manual Drain
L	Metal Bowl Semi Auto Drain
M	Metal Bowl Auto Drain*

	Gauge
G	With gauge
N	Without gauge

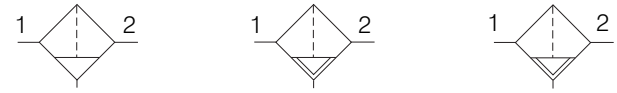
Note!
For customised combinations consult Technical Sales Department.

* Available year 2000

Filters



Symbols



- Choice of transparent nylon or metal bowls with convex integral sight glasses.
- Quick release bowl mechanism - added safety, bowl cannot be removed whilst pressurised.
- Sight glass can be located in 90^0 increments.
- Elastomatic filter elements shrug off larger dirt particles as flow varies.
- 5 micron elements as standard, option 40 micron.
- No tools required for dismantling or cleaning element - routine servicing without removing from line.

Options:

P3D - FA **0** **0** **X** **E** **N**

$G^1/_4$	**12**
$G^3/_8$	**13**
Without Port blocks	**00**

Metal Bowl Manual Drain	**K**
Metal Bowl Semi Auto Drain	**L**
Metal Bowl Auto Drain*	**M**
Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi Auto Drain	**C**
Transparent Bowl Auto Drain*	**D**

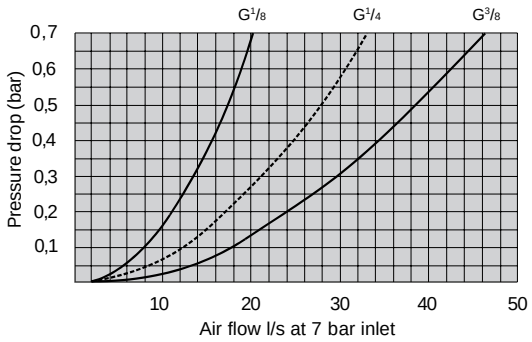
40 Micron Element	**G**
5 Micron Element	**E**

Note: For customised combinations consult Technical Sales Department.

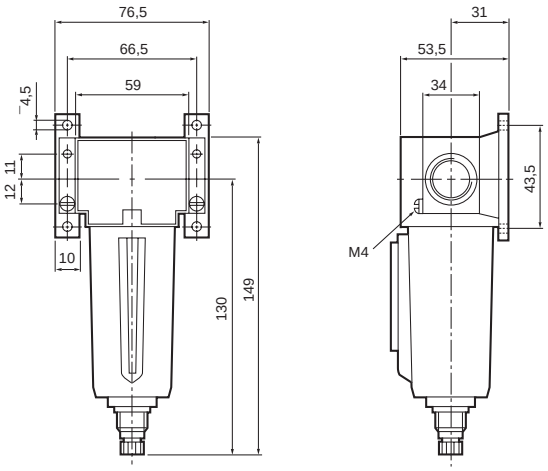
* Available year 2000

Technical information

Filter element grade:	Standard 5 micron
	Option 40 micron
Flow @ 7 bar	$G^1/_8$ 20 dm^3/s
Inlet 0.7 bar	$G^1/_4$ 33 dm^3/s
pressure drop	$G^3/_8$ 46 dm^3/s
Pressure range:	10 bar max metal bowl with auto drain
	10 bar max Nylon bowl
	17 bar max Metal bowl
Temperature range:	-10°C to +50°C Nylon bowl
	-10°C to +75°C Metal bowl
Weight (g)	276g Nylon bowl
without port blocks	450g Metal bowl



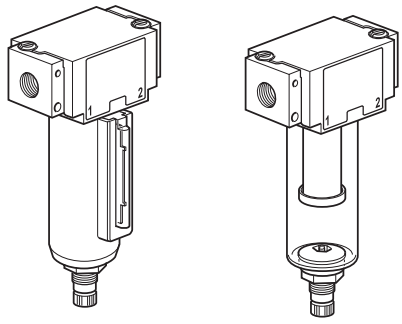
Dimensions (mm)



For accessories and port blocks see page 37.

For Repair Kits and Spares see page 62 and 63.

Coalescing filters and Adsorbers



Coalescing filters

- Removes oil and water aerosols.
- Maximum oil carry over 0.02 mg/m³
- All units interchangeable and removable without disturbing pipework, by simply unscrewing retaining screws.
- Captive retaining screws automatically realign and reseal units when refitting.

Adsorbers

- Removes hydro-carbon vapours.
- Removes oil vapour carry-over.
- Activated carbon element.
- For breathable air applications.
- Maximum oil carry over 0.005 mg/m³

Options:

P3D - FA **0** **0** **X** **X** **N**

G1/4	**12**
G3/8	**13**
Without Port blocks	**00**

Metal Bowl Manual Drain	**K**
Metal Bowl Semi Auto Drain	**L**
Metal Bowl Auto Drain*	**M**
Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi Auto Drain	**C**
Transparent Bowl Auto Drain*	**D**

Coalescing filter	**C**
Adsorber filter	**A**

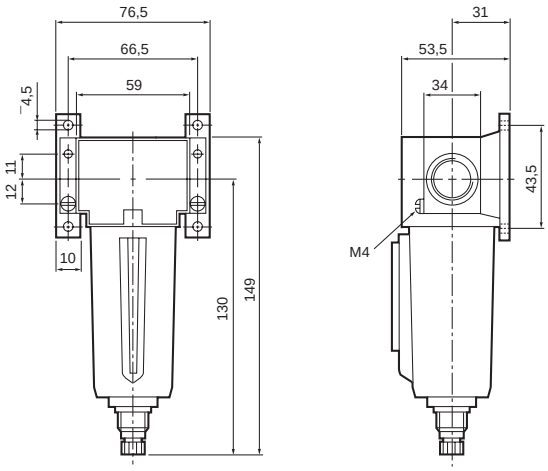
Note: For customised combinations consult Technical Sales Department.

* Available year 2000

Technical information

Temperature range:	0°C to +50°C max.
Pressure range:	10 bar max metal bowl with auto drain
	10 bar max Nylon bowl
	17 bar max Metal bowl
Weight (g) without port blocks	276g Transparent bowl
	450g Metal bowl
Maximum recommended flow	4 dm³/s at 7 bar inlet
Efficiency	99.97% D.O.P. USA Federal standard
Maximum particle passed	0,3 microns

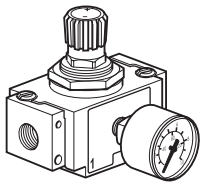
Dimensions (mm)

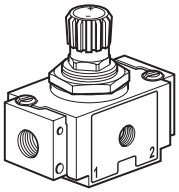


For accessories and port blocks see page 37.

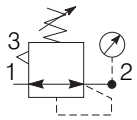
For Repair Kits and Spares see page 62 and 63.

Regulators

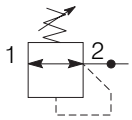




Symbols



Self bleed regulator with gauge



Non bleed regulator

- One balanced, self relieving, diagram operated unit for all flows and combinations - optional non-relieving unit available.
- Simple push to lock non-rising adjustment knob with low operating torque; easily tamperproofed.
- Panel mounting ring available.
- Excess secondary pressure relieves at low differential.
- Four secondary pressure ranges available, with colour coded adjustment knobs.
  16 bar Orange, 8 bar Black, 4 bar Grey, 2 bar Blue

Options:

P3D - RA | **0** | **0** | | **X** | | **X** | | **P**

G1/4	**12**
G1/4	**12**
G3/8	**13**
Without Port blocks	**00**

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

0,4 - 8 bar + Gauge	**G**
0,4 - 8 bar No Gauge	**N**
0,2 - 2 bar + Gauge	**Z**
0,2 - 2 bar No Gauge	**Y**
0,2 - 4 bar + Gauge	**M**
0,2 - 4 bar No Gauge	**L**
0,4 - 16 bar + Gauge	**J**
0,4 - 16 bar No Gauge	**H**

Note: For customised combinations consult Technical Sales Department.

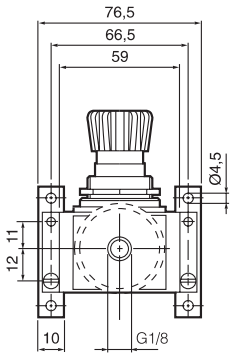
Technical information

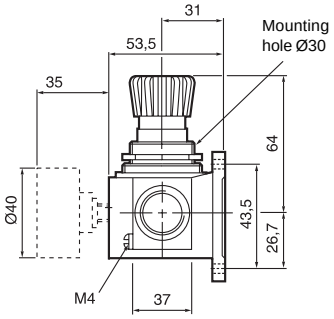
Gauge port size	G1/8	
Maximum inlet pressure	20 bar max	
Flow	See performance characteristics	
Secondary pressure range	Low	0,2 to 2 bar max
	Low	0,2 to 4 bar max
	Medium	0,4 to 8 bar max
	High	0,4 to 16 bar max
Temperature range	-10°C to +75°C	
Weight (g) without port blocks	330	

For accessories and port blocks see page 37.

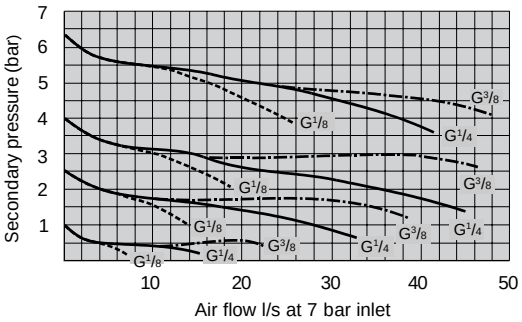
For Gauges see page 61.

Dimensions (mm)

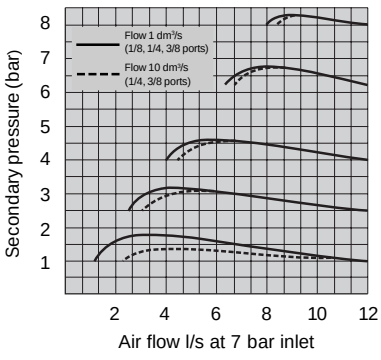




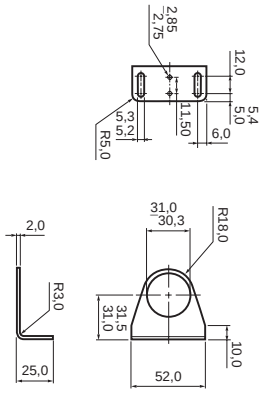
Flow characteristics



Regulation characteristics

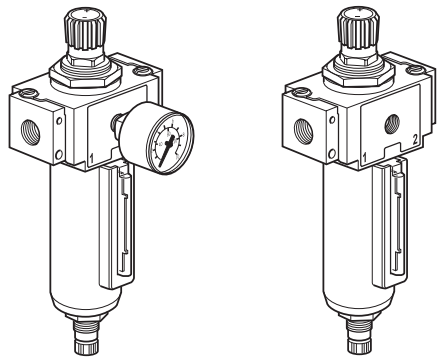


Regulator angle bracket

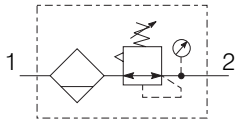


Modular Junior FRLs

Filter/Regulators



Symbol



- Choice of metal bowl with convex sight glass or transparent nylon bowl.
- Elastomatic filter elements shrug off larger dirt particles as flow varies.
- 5 micron element as standard, option 40 micron.
- One balanced, self relieving, diagram operated unit for all flows and combinations - optional non-relieving unit available.
- Simple push to lock non-rising adjustment knob with low operating torque; easily tamperproofed.
- Four secondary pressure ranges available, with colour coded adjustment knobs.
  16 bar Orange, 8 bar Black, 4 bar Grey, 2 bar Blue

Options:

P3D - EA	0	0		X		E		B		X	P
$G^1/_8$	11		Metal Bowl Manual Drain	K		40 Micron Element	G	Non-Relieving	N	0,4 - 8 bar + Gauge	G
$G^1/_4$	12		Metal Bowl Semi Auto Drain	L		5 Micron Element	E	Relieving	B	0,4 - 8 bar No Gauge	N
$G^3/_8$	13		Transparent Bowl Manual Drain	B						0,2 - 2 bar + Gauge	Z
Without Port blocks	00		Transparent Bowl Semi Auto Drain	C						0,2 - 2 bar No Gauge	Y
			Metal Bowl Auto Drain*	M						0,2 - 4 bar + Gauge	M
			Transparent Bowl Auto Drain*	D						0,2 - 4 bar No Gauge	L
										0,4 - 16 bar + Gauge	J
										0,4 - 16 bar No Gauge	H

Note: For customised combinations consult Technical Sales Department.

* Available year 2000

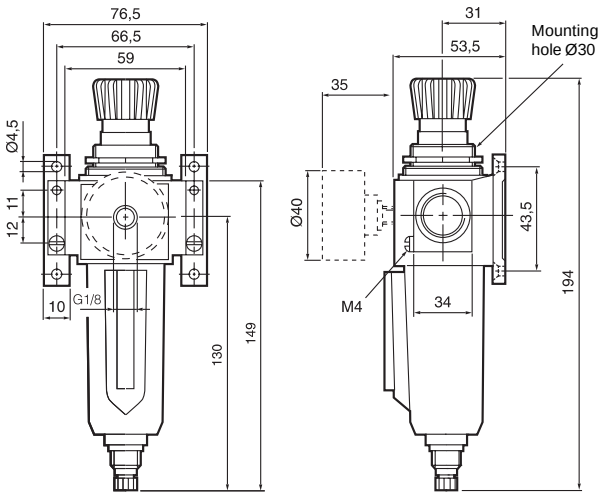
Technical information

Gauge port size	$G^1/_8$	
Maximum inlet pressure	Metal bowls	17 bar max
	Metal bowl with auto drain	10 bar max
	Nylon bowls	10 bar max
Secondary pressure range	Low	0,2 to 2 bar max
	Low	0,2 to 4 bar max
	Medium	0,4 to 8 bar max
	High	0,4 to 16 bar max*
Filter element grade	Standard	5 micron
	Option	40 micron
Temperature range	-10°C to +50°C Nylon bowl	
	-10°C to +75°C Metal bowl	

* Metal bowl only, not available with auto-drain

For performance graphs see Regulator page 27.

Dimension (mm)

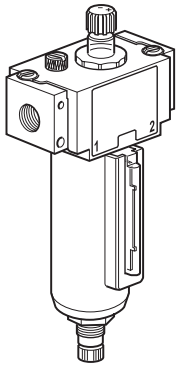


For accessories and port blocks see page 37.

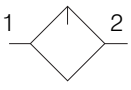
For Gauges see page 61.

For Repair Kits and Spares see page 62 and 63.

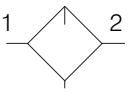
Lubricators



Symbols



Lubricator



Lubricator with drain

- Choice of transparent nylon or metal bowls with convex integral sight glasses.
- Quick release bowl mechanism - added safety bowls cannot be removed whilst pressurised.
- Sight glass can be located in 90^0 increments.
- Constant density lubrication with fingertip adjustment.
- Low flow oil pick up capability.
- 360^0 drip rate sight glass gives all round visibility, contained in separately serviceable cartridge.

Options:

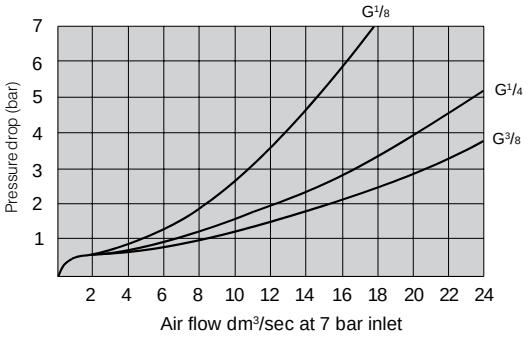
P	3	D	-	L	A	0	0		X	F	N

	Thread
00	Without
11	G1/8
12	G1/4
13	G3/8

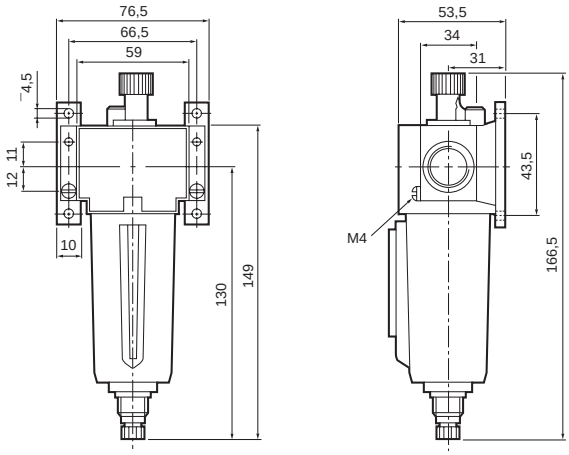
	Bowl / drain
A	Transparent Bowl Without Drain
B	Transparent Bowl Manual Drain
K	Metal Bowl Manual Drain

Technical information

Pressure range:	10 bar max Nylon bowl
	17 bar max Metal bowl
Temperature range:	-10°C to +50°C Nylon bowl
	-10°C to +75°C Metal bowl
Flow	See performance characteristics
Weight (g)	286g Nylon bowl
without port blocks	456g Metal bowl
Minimum flow for oil pick up	0,25 dm³/s
Bowl capacity	55 cm³
Recommended lubricants	See box leaflet



Dimensions (mm)



For accessories and port blocks see page 37.

For Repair Kits and Spares see page 62 and 63.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling etc. when air pressure is introduced at machine start up.

The soft start valve is an ideal method of providing a fully adjustable controlled introduction of pressure.

Soft Start Valve Operation:

The switch point is set via the control knob and is fully adjustable between 1 and 5 bar. Additionally the bleed orifice which delays the rise in pressure is supplied as standard in several diameters:-
Ø1,5mm, Ø2,2mm, Ø3mm, and Ø3,8mm.

These are field interchangeable by removing the top plug of the valve.

The soft start valve will, when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

In normal operation the soft start valve is assembled, in series, with an accompanying air pilot, solenoid pilot or manually actuated dump valve. This is used as an on - off switch for line pressure, and for exhausting the system.

Typical combinations

Fig. 1.

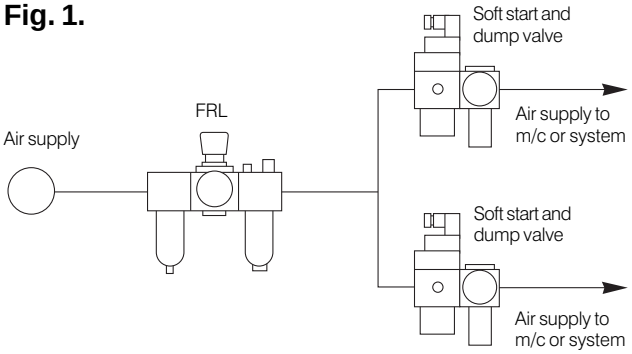


Fig.1. enables part of a system to be isolated and the air dumped to atmosphere whilst operating another part normally.

Fig. 2.

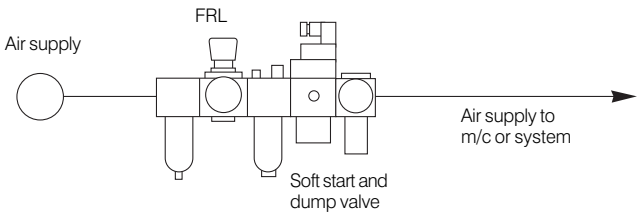
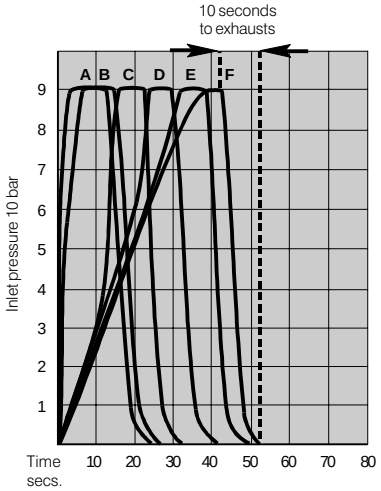


Fig. 2. shows the Soft Start and Dump valve assembled as part of the main 1/4" Modular FRL combination feeding an entire system.

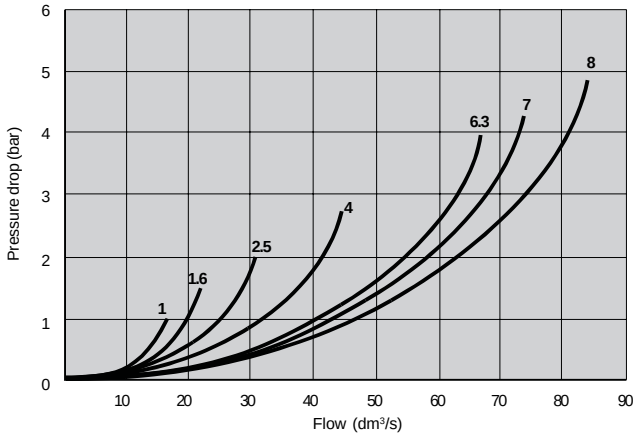
Effect of orifice on flow characteristics of pneumatic switch



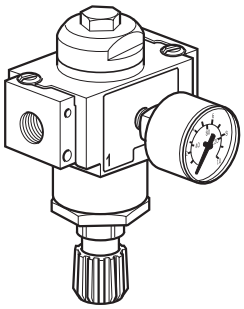
10 bar inlet
10 litre volume
1mm dia orifice

A 1 to 3 turns
B 4 turns
C 5 turns
D 6 turns
E 7 turns
F 8 turns

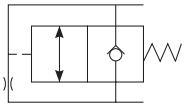
Flow characteristics for ('Soft Start' valve)



Soft Start Valves



Symbol



- Manually operated
- Controlled induction of pressure
- Fully adjustable switch point

Options:

P	3	D	-	S	A	0	0		X		0		N

	Thread
00	Without
11	G1/8
12	G1/4
13	G3/8

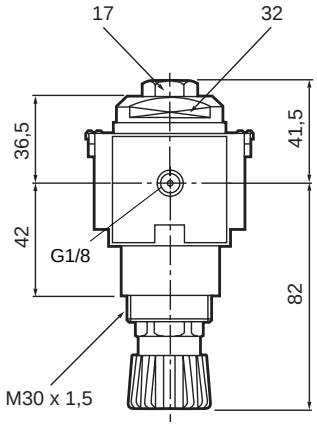
	Gauge
G	With
M	Without

Technical information

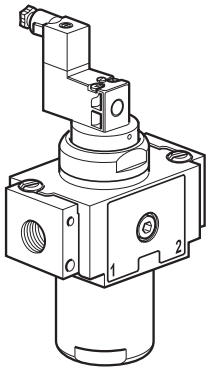
Max. inlet pressure	10 bar max.
Temperature range	-10^{0}C +50^{0}C
Flow	
4 - 8 bar	12,7 dm^3/s
2 bar	6,5 dm^3/s
Weight	85g

Note: For materials see page 34.

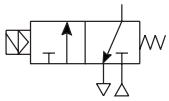
Dimensions



Remotely Operated Dump Valves



Symbol



- Air pilot or solenoid pilot operated dump valves
- Low Watt solenoid coils

  Valves for other than 24 V DC to be purchased less solenoid & solenoid ordered separately.

Options:

P	3	D	-	D	A	0	0	X	X	N	X	X	X

	Thread
00	Without
11	G1/8
12	G1/4
13	G3/8

	Piloting
PQ	Air pilot
SG	Solenoid

	Solenoid
0	None
2	DC

	Voltage
00	Without Solenoid
CC	24

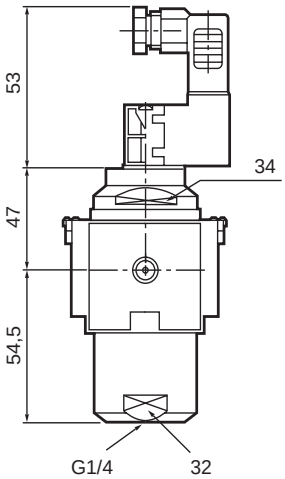
For alternative solenoids see page 16.

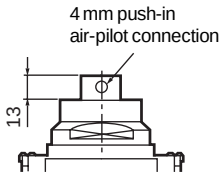
Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow	
4 - 8 bar	12,7 dm³/s
2 bar	6,5 dm³/s
Weight	85g

Note: For materials see page 34.

Dimensions

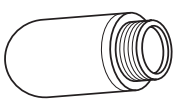




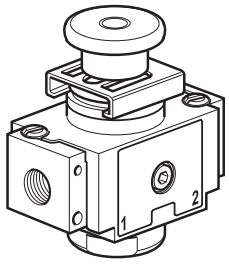
Operation

Remotely operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.
To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version mist be maintained.
The valve will automatically dump when the holding signal is removed.

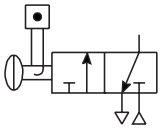
Muffler included with each product.



Manually Operated Dump Valves



Symbol



- Shuts off upstream and dumps downstream pressure.
- Choice of red or black knobs.
- G1/4 ports.
- Ventral G1/4 exhaust port.
- Padlockable version.
- 2 position or latching versions.

Manual dump valves are available in two versions, the first being a 2 position valve with either position being selectable. The second version is an air latching dump valve, which requires the control knob to be held operated until the system pressure is sufficient to 'latch' the valve in the operated condition. If the air supply fails the air latching dump valve will reset and exhaust the system. Manual operation will also exhaust the system.

Options:

P	3	D	-	D	A	0	0	X	X	N

	Thread
00	Without
11	G1/8
12	G1/4
13	G3/8

	Knob / Function
B	Black 2 position
R	Red 2 position
N	Red Latching
M	Black Latching

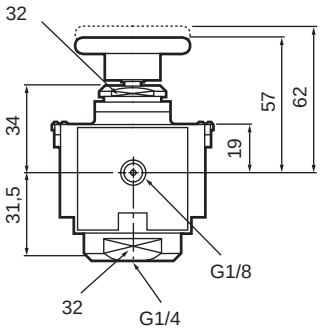
	Locking Clip
L	With Locking Clip
N	Without Locking Clip

Technical information

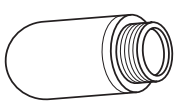
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow*	
G1/8	14.5 dm³/s
G1/4	17.5 dm³/s
Weight	75g

Note: For materials see page 34.

Dimensions

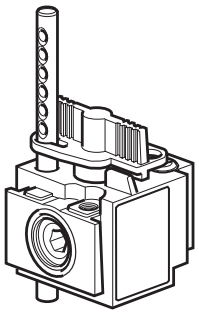


Muffler included with each product.

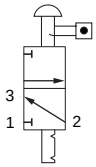


Modular Junior FRLs

Junior Modular Ball Valve



Symbol



- Positive bubble tight shut-off.
- Upstream and downstream versions.
- Padlockable version.
- Ventral G1/4 exhaust port.

Connection	Pressure max, bar	Actuation	Note	Weight Kg	Order code
Upstream	10	Hand	Standard	0,230	**P3D-VA00A0N**
Downstream	10	Hand	Standard	0,230	**P3D-VA00B0N**
Upstream	10	Hand	3 Padlock Facility	0,255	**P3D-VA00P0N**
Downstream	10	Hand	3 Padlock Facility	0,255	**P3D-VA00R0N**
Upstream	10	Hand	6 Padlock Facility	0,260	**P3D-VA00Q0N**
Downstream	10	Hand	6 Padlock Facility	0,260	**P3D-VA00S0N**

Note! Modular Ball valves have an integral body connector on one side and a slot to accept a port block or body connector on the other.

Materials

Filter

Body	Zinc
Fixing Screws	Plated Steel
Bowl (metal)	Zinc
Bowl (transparent)	Polyamide
Sight Glass	Polyamide
Louvre	Acetal
Element	Nylon 6
Manual Drain	Acetal
Semi-Auto Drain	Acetal / Brass
Springs	Stainless Steel
Seals	Nitrile

Regulator

Body	Zinc
Fixing Screws	Plated Steel
Control Knob	Acetal
Adjusting Screw	Plated Steel
Spring Rest (upper)	Brass
Spring Rest (lower)	Steel / Brass
Spring	Plated Steel
Diaphragm	Nitrile / Nylon
Valve Stem	Brass
Valve Seat	Nitrile
Bottom Cap	Acetal
Springs	Stainless Steel
Seals	Nitrile

Lubricator

Body	Zinc
Fixing Screws	Plated Steel
Bowl (metal)	Zinc
Bowl (transparent)	Polyamide
Sight Glass	Polyamide
Knob	Acetal
Venturi Valve	Acetal
Transfer Tube	Nylon
Tube Retainer	Brass
Springs	Stainless Steel
Seals	Nitrile
Fill Plug	Aluminium

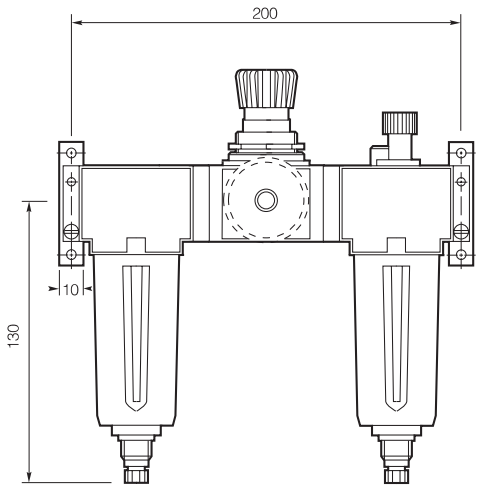
Accessory Products

Bodies	Zinc
Housings	Aluminium
Fixing Screws	Plated Steel
Knobs	Acetal
Valve Stems	Brass
SSV Main Spring	Plated Steel
Springs	Stainless Steel
Seals	Nitrile
Body Connectors	Zinc
Port Blocks	Zinc

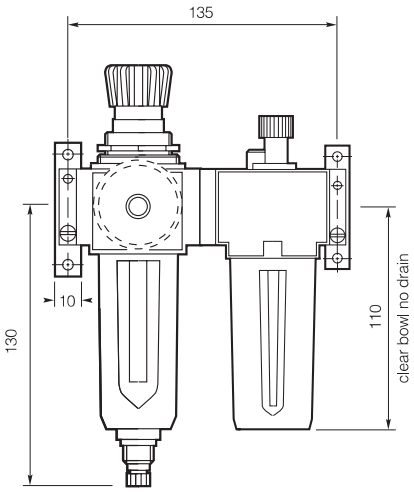
Dimensions of combinations

The modular system ensures constant mounting centres; assemblies are fixed to the special wall brackets by a single fixing screw.

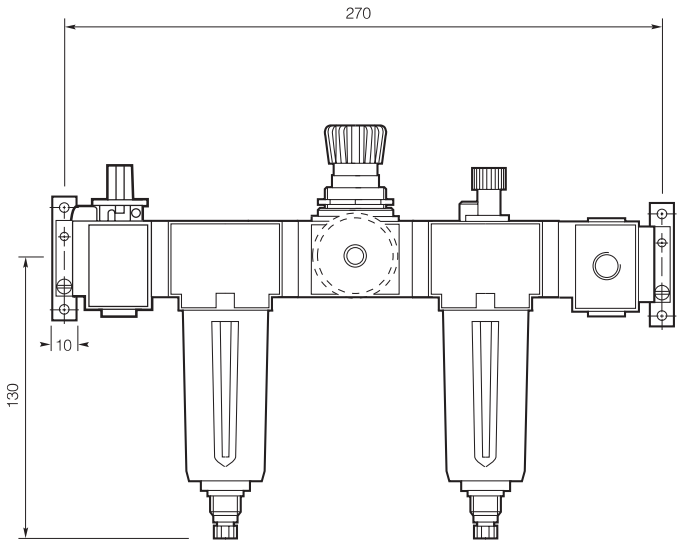
Filter, Regulator, Lubricator



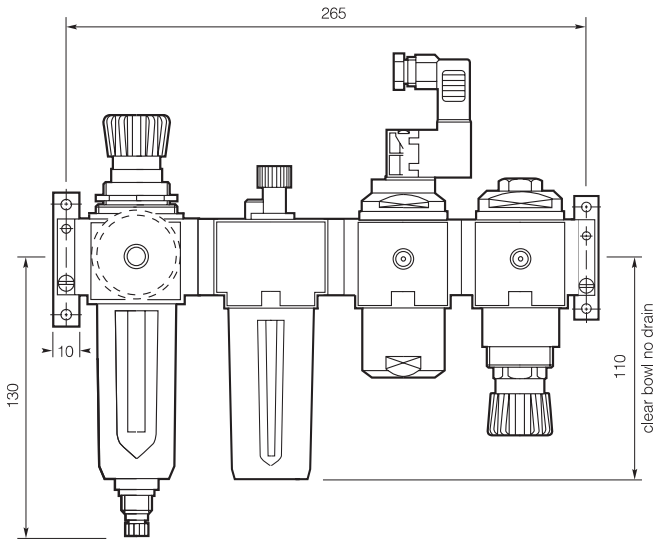
Filter/Regulator, Lubricator



Ball valve, Filter, Regulator, Lubricator, Manifold



Filter/Regulator, Lubricator, Dump valve, Soft start valve



All dimensions in (mm).

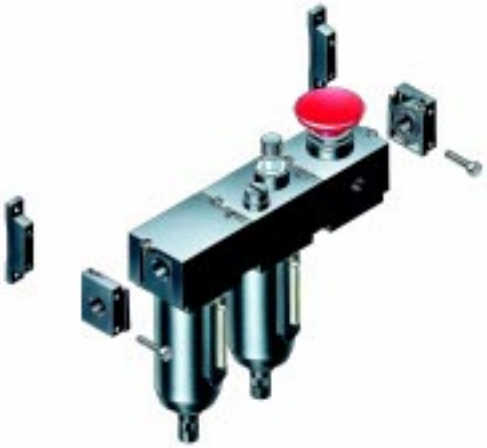
Mounting assemblies

Assembly containing a regulator or filter regulator

Assembly without regulator or filter regulator

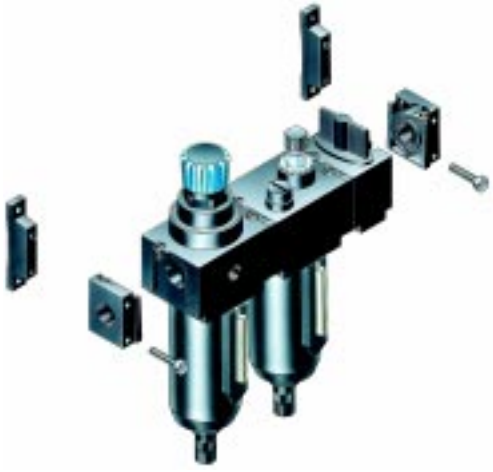
Wall brackets mounted at the ends of an assembly

Wall brackets mounted at the ends of an assembly

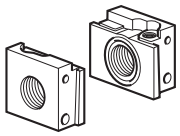
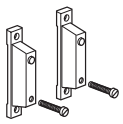
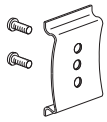
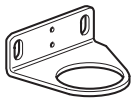
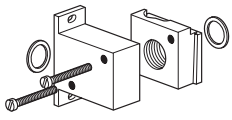


Neck mounting bracket on Filter/Regulator

Popular combination with wall mounting brackets



Accessories

Description	Connection	Weight	Order code Kg	
Port connector kits (2 port blocks + 2 seals)	G1/8	0,150	**P3D-KA11CPN**	
	G1/4	0,150	**P3D-KA12CPN**	
	G3/8	0,150	**P3D-KA13CPN**	
Body connector		0,088	**P3D-KA00CBN**	
	G1/4 ventral port	0,088	**P3D-KA12CAN**	
Wall mounting kit (2 brackets + 2 screws)		0,048	**P3D-KA00MWN**	
DIN rail mounting kit for **P3A-KA00MRN**		0,010	**P3A-KA00MKN**	
Regulator angle bracket kit (Angle bracket + mounting ring)		0,020	**P3A-KA00MRN**	
Plastic panel mounting ring		0,010	**P3A-KA00MPN**	
Metal panel mounting ring		0,016	**P3A-KA00MMN**	
Regulator Tamperproof kit (Kit contains 5 pieces)		0,010	**P3A-KA00ATN**	
Modular manifold block* (Includes port plugs)	1 x G1/8 2 x G1/4	0,208	**P3D-MA1V**	
Rear entry connector kit	G1/4	0,120	**P3D-KA12CRN**	

***Note:** Modular manifold blocks have an integral Body Connector on one side and a slot to accept a Port Block or Body Connector on the other.

Modular Maxi FRLs

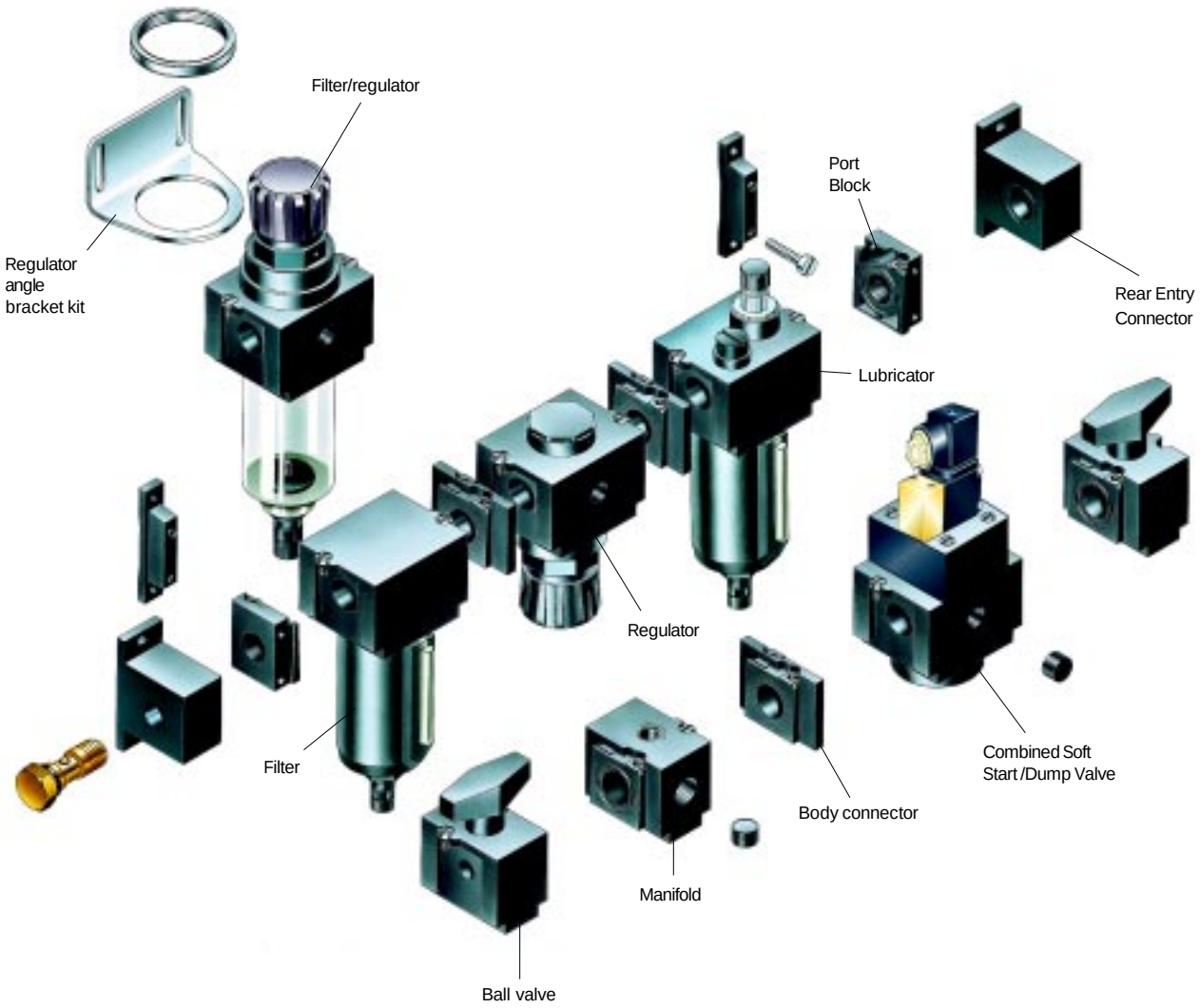
The System

The Modular system allows units to be connected together, without the use of pipe connectors, saving space; providing constant mounting centres; whilst maintaining a modern aesthetically pleasing appearance.

The system comprises standard units with a common body size, body connectors and separate port blocks with a choice port thread. This provides the designer with a truly modular system which can be adapted and expanded to suit the future needs of the application.

The system also allows units to be removed from the air line without disturbing the fixed pipe connections greatly simplifying maintenance.

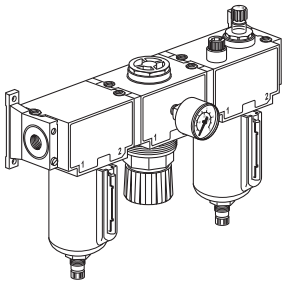
The Modular system comprises Filters, Coalescing Filters, Adsorbers, Regulators, Combined Filter - Regulators and air line Lubricators together with a wide range of accessory products including Soft Start Valves, Dump Valves, Manifolds and Rear Entry Connectors.

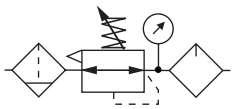


Coloured knobs

16 bar	Orange	
8 bar	Black	
4 bar	Grey	

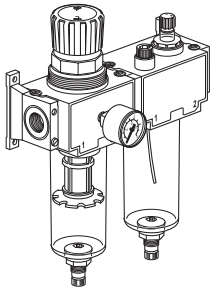
Popular combinations

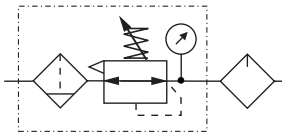




FRL Combinations
5 micron elements, 8 bar Regulator + Gauge and Wall Mounting Brackets

Port size	High flow Metal Bowl Manual Drain	High Flow Metal Bowl Auto Drain	Transparent Bowl + Manual Drain	Transparent Bowl + Auto Drain	Compact Metal Bowl Manual Drain	Compact Metal Bowl Auto Drain
G3/8	**P3E-CB13KGB**	**P3E-CB13MGB**	**P3E-CB13BGB**	**P3E-CB13DGB**	**P3E-CB13TGB**	**P3E-CB13WGB**
G1/2	**P3E-CB14KGB**	**P3E-CB14MGB**	**P3E-CB14BGB**	**P3E-CB14DGB**	**P3E-CB14TGB**	**P3E-CB14WGB**
G3/4	**P3E-CB16KGB**	**P3E-CB16MGB**	**P3E-CB16BGB**	**P3E-CB16DGB**	**P3E-CB16TGB**	**P3E-CB16WGB**





Filter/Regulator - Lubricator Combinations
5 micron elements, 8 bar Regulator + Gauge and Wall Mounting Brackets

Port size	High flow Metal Bowl Manual Drain	High Flow Metal Bowl Auto Drain	Transparent Bowl + Manual Drain	Transparent Bowl + Auto Drain	Compact Metal Bowl Manual Drain	Compact Metal Bowl Auto Drain
G3/8	**P3E-CA13KGB**	**P3E-CA13MGB**	**P3E-CA13BGB**	**P3E-CA13DGB**	**P3E-CA13TGB**	**P3E-CA13WGB**
G1/2	**P3E-CA14KGB**	**P3E-CA14MGB**	**P3E-CA14BGB**	**P3E-CA14DGB**	**P3E-CA14TGB**	**P3E-CA14WGB**
G3/4	**P3E-CA16KGB**	**P3E-CA16MGB**	**P3E-CA16BGB**	**P3E-CA16DGB**	**P3E-CA16TGB**	**P3E-CA16WGB**

Part no. **P3E-** | C | B | X | X | X | G | B

Options:

C	
Upstream Ball Valve as first unit	**A**
Downstream Ball Valve as last unit	**B**
No Ball Valve	**C**

B	
FRL combination + G1/4 ported body connector after Regulator	**L**
FRL combination + Manifold after Regulator	**K**
F/R L Combination + G1/4 ported body connector after Filter/Regulator	**J**
F/R L Combination + Manifold after Filter/Regulator	**H**
F+R+L combination	**B**
F/R+L combination	**A**

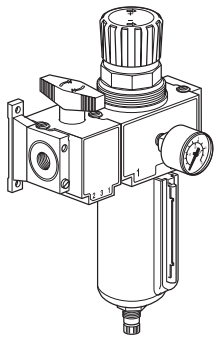
X X	
G3/8	**13**
G1/2	**14**
G3/4	**16**
Without port blocks	**00**

X	
Transparent Bowl Semi-Auto Drain	**C**
High Flow Metal Bowl Semi Auto Drain	**L**
Compact Metal Bowl Semi Auto Drain	**V**
Metal Bowl Manual Drain	**K**
Metal Bowl Auto Drain	**M**
Transparent Bowl Manual Drain	**B**
Transparent Bowl Auto Drain	**D**
Compact Metal Bowl Manual Drain	**T**
Compact Metal Bowl Auto Drain	**W**

Note: For customised combination consult Technical Sales Department.

Popular combinations

Filter/Regulator and Ball valve combinations with wall mounting brackets



Ports	Pressure	Metal Bowl			Transparent bowl		
	max, bar	Manual	Semi-Auto	Auto	Manual	Semi-Auto	Auto
G1/2	17	**P3E-AN14KGB**	**P3E-AN14LGB**	**P3E-AN14MGB**			
G3/4	17	**P3E-AN16KGB**	**P3E-AN16LGB**	**P3E-AN16MGB**			
G1/2	10				**P3E-AN14BGB**	**P3E-AN14CGB**	**P3E-AN14DGB**
G3/4	10				**P3E-AN16BGB**	**P3E-AN16CGB**	**P3E-AN16DGB**

Options:

P	3	D	-	X	N	X	X	X	X	B

	Ball valve
A	Upstream Ball Valve as first unit
B	Downstream Ball Valve as last unit

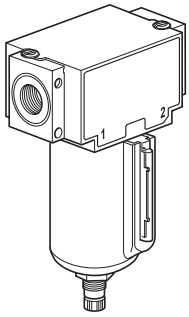
	Thread
13	G3/8
14	G1/2
16	G3/4

	Bowl / drain
B	Transparent Bowl Manual Drain
C	Transparent Bowl Semi-Auto Drain
D	Transparent Bowl Auto Drain
K	Metal Bowl Manual drain
L	Metal Bowl Semi-Auto Drain
M	Metal Bowl Auto Drain
T	Compact Metal Bowl Manual drain
V	Compact Metal Bowl Semi-Auto Drain
W	Compact Metal Bowl Auto Drain

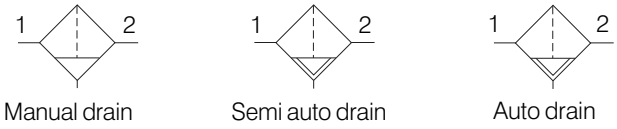
	Gauge
G	With gauge
N	Without gauge

Note!
For customised combinations consult Technical Sales Department.

Filters



Symbols



- Choice of metal bowls with convex integral sight glasses or transparent nylon bowls.
- Quick release bowl mechanism - added safety, bowl cannot be removed whilst pressurised.
- Sight glass can be located in 90° increments.
- Elastomatic filter elements shrug off larger dirt particles as flow varies.
- 5 micron elements as standard, option 40 micron.
- No tools required for dismantling or cleaning element - routine servicing without removing from line.

Options:

P3E - FA **0** **0** **X** **E** **N**

$G^1/_4$	**12**
$G^3/_8$	**13**
$G^1/_2$	**14**
$G^3/_4$	**16**
Without Port blocks	**00**

Compact Metal Bowl Manual Drain	**T**
Compact Metal Bowl Semi Auto Drain	**V**
Compact Metal Bowl Auto Drain	**W**
Metal Bowl Manual Drain	**K**
High Flow Metal Bowl Semi Auto Drain	**L**
Metal Bowl Auto Drain	**M**
Transparent Bowl Manual Drain	**B**
Transparent Bowl Semi-Auto Drain	**C**
Transparent Bowl Auto Drain	**D**

40 Micron Element	**G**
5 Micron Element	**E**

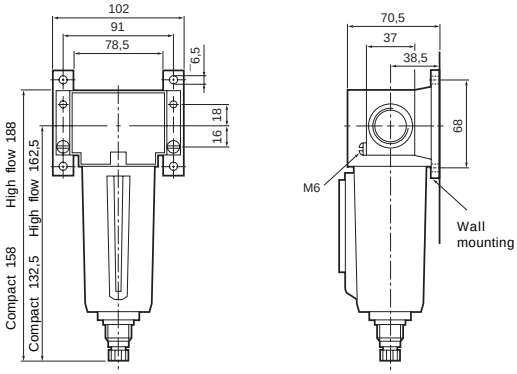
Note: For customised combinations consult Technical Sales Department.

Technical information

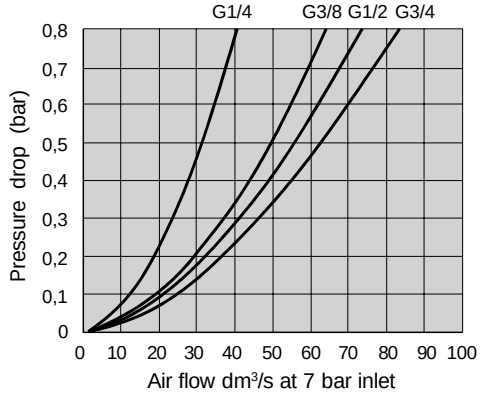
Filter element grade:	Standard 5 micron	
	Option 40 micron	
Flow	See performance characteristics	
Pressure range:	10 bar max Nylon bowl	
	17 bar max Metal bowl	
Temperature range:	-10°C to +50°C Nylon bowl	
	-10°C to +75°C Metal bowl	
Weight (g) without port blocks	Transparent Bowl	560
	Compact Metal Bowl	832
	High flow Metal Bowl	946

For Repair Kits and Spares see pages 62 and 63.
For Accessories and Port Blocks see page 51.

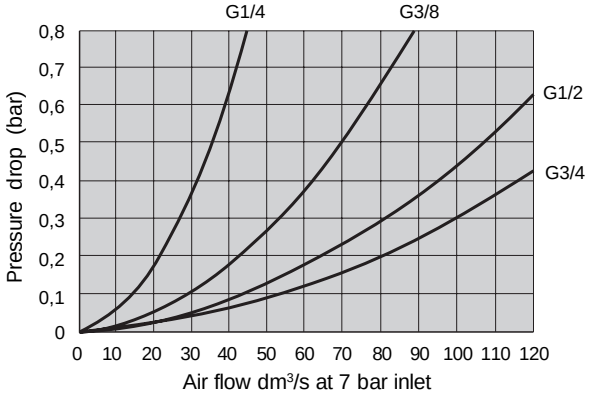
Dimensions (mm)



Compact

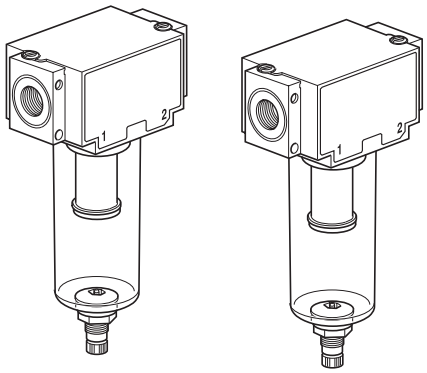


High Flow



Modular Maxi FRLs

Coalescing filters and Adsorbers



Coalescing filters

- Removes oil and water aerosols.
- Maximum oil carry over 0.02 mg/m^3
- Metal bowls with integral convex sight glasses as standard, option of manual or auto drain
- Sight glass can be located in 90^O increments.

Adsorbers

- Removes hydro-carbon vapours.
- Removes oil vapour carry-over.
- Activated carbon element.
- For breathable air applications.
- Maximum oil carry over 0.005 mg/m^3

Options:

P3E - FA **0** **0** **X** **C** **N**

G1/4	12
G3/8	13
G1/2	14
G3/4	16
Without port blocks	00

Compact Metal Bowl Manual Drain	T	Metal Bowl Auto Drain	M
Compact Metal Bowl Semi Auto Drain	V	Transparent Bowl Manual Drain	B
Compact Metal Bowl Auto Drain	W	Transparent Bowl Semi-Auto Drain	C
Metal Bowl Manual Drain	K	Transparent Bowl Auto Drain	D
High Flow Metal Bowl Semi Auto Drain	L		

Coalescing	C
Adsorber	A

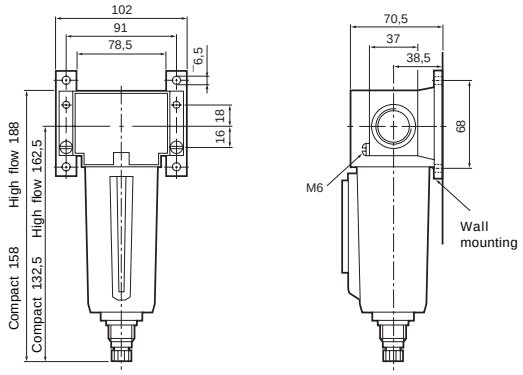
Note:
For customised combinations consult Technical Sales Department. Adsorber filters only available with K, T or B bowl options

Technical information

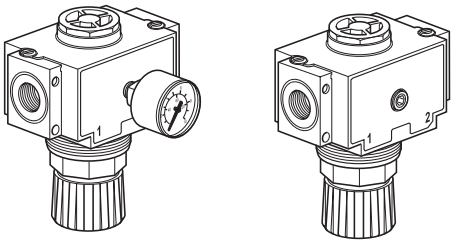
Maximum recommended flow	Compact 7 dm3/s at 6 bar
	High flow 12 dm3/s at 6 bar @0.7 bar pressure drop
Temperature range:	0^{O}C to +50^{O}C max.
Pressure range:	10 bar max Transparent bowl
	17 bar max Metal bowl
Weight (g) without port blocks	560g Transparent bowl
	832g Compact metal bowl
	946g High flow metal bowl
Efficiency	99.97% D.O.P. USA Federal standard 2098
Maximum particle passed	0,3 microns

For Repair Kits and Spares see page 62 and 63.
For Accessories and Port Blocks see page 51.

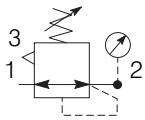
Dimensions (mm)



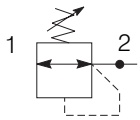
Regulators



Symbols



Relieving regulator with gauge



Non relieving regulator

- One balanced, self relieving, diagram operated unit for all flows and combinations - optional non-relieving unit available.
- Simple push to lock non-rising adjustment knob with low operating torque; easily tamperproofed.
- Panel mounting ring available.
- Excess secondary pressure relieves at low differential.
- Four secondary pressure ranges available, with colour coded adjustment knobs.
  16 bar Orange, 8 bar Black, 4 bar Grey

Options:

P3E - RA	0	0	X	X	P

G1/4	12
G3/8	13
G1/2	14
G3/4	16
Without Port blocks	00

Non -relieving	N
Relieving	B

0,4 - 8 bar + Gauge	G
0,4 - 8 bar No Gauge	N
0,2 - 4 bar + Gauge	M
0,2 - 4 bar No Gauge	L
0,4 - 16 bar + Gauge	J
0,4 - 16 bar No Gauge	H

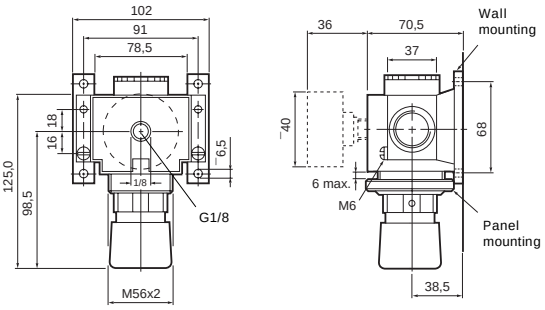
Note: For customised combinations consult Technical Sales Department.

Technical information

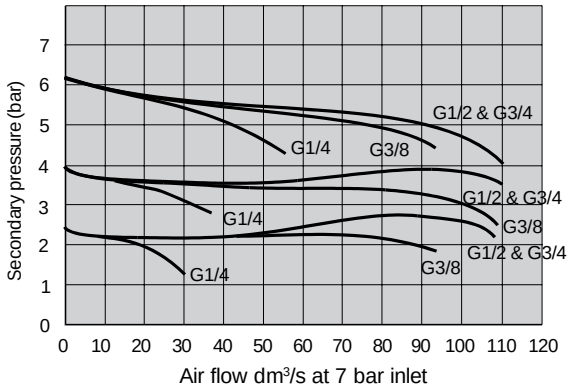
Gauge port size	G1/8	
Maximum inlet pressure	20 bar max	
Flow	See performance characteristics	
Secondary pressure range	Low	0,2 to 4 bar max
	Medium	0,4 to 8 bar max
	High	0,4 to 16 bar max
Temperature range	-10°C to +75°C	
Weight (g) without port blocks	756	

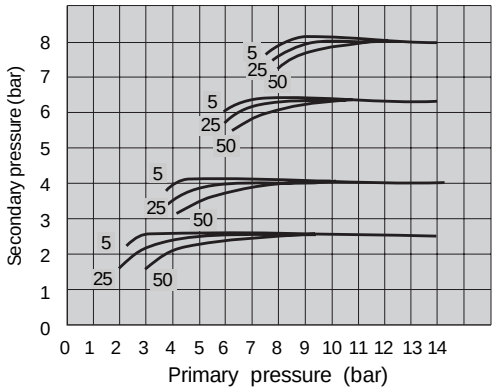
For Accessories and Port Blocks see page 51.
For Repair Kits and Spares see pages 62 and 63.
For Gauges see page 61.

Dimensions (mm)



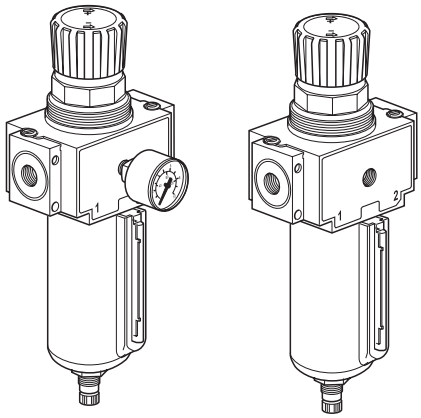
Regulation characteristics for flow of 5,25 and 50dm³/s (G1/2)



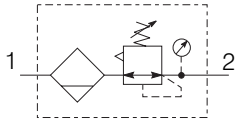


Modular Maxi FRLs

Filter/Regulators



Symbol



- Choice of metal bowl with convex sight glass or transparent nylon bowl.
- Elastomatic filter elements shrug off larger dirt particles as flow varies.
- 5 micron element as standard, option 40 micron.
- One balanced, self relieving, diagram operated unit for all flows and combinations - optional non-relieving unit available.
- Simple push to lock non-rising adjustment knob with low operating torque; easily tamperproofed.
- Four secondary pressure ranges available, with colour coded adjustment knobs.
  16 bar Orange, 8 bar Black, 4 bar Grey

Options:

P3E - EA **0** **0** **X** **E** **B** **X** **P**

G1/4	12
G3/8	13
G1/2	14
G3/4	16
Without Port blocks	00

Transparent Bowl Semi-Auto Drain	C
High Flow Metal Bowl Semi Auto Drain	L
Compact Metal Bowl Semi Auto Drain	V
Metal Bowl Manual Drain	K
Metal Bowl Auto Drain	M

Transparent Bowl Manual Drain	B
Transparent Bowl Auto Drain	D
Compact Metal Bowl Manual Drain	T
Compact Metal Bowl Auto Drain	W

Non-Relieving	N
Relieving	B

40 Micron Element	G
5 Micron Element	E

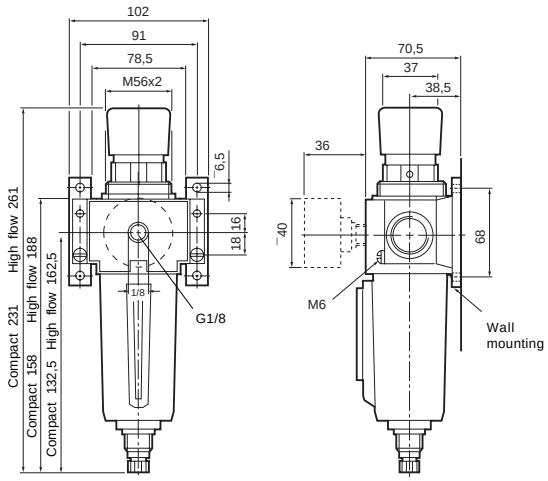
0,4 - 8 bar + Gauge	G
0,4 - 8 bar No Gauge	N
0,2 - 4 bar + Gauge	M
0,2 - 4 bar No Gauge	L
0,4 - 16 bar + Gauge	J
0,4 - 16 bar No Gauge	H

Note: For customised combinations consult Technical Sales Department.

Technical information

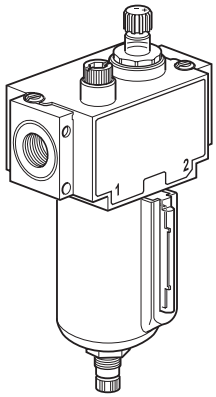
Gauge port size	G1/8	
Filter element grade:	Standard 5 micron	
	Option 40 micron	
Flow	See characteristics of Regulators	
Max inlet pressure:	10 bar max Nylon bowl	
	17 bar max Metal bowl	
Secondary pressure range	Low	0,2 to 4 bar max
	Medium	0,4 to 8 bar max
	High	0,4 to 16 bar max
Temperature range:	-10°C to +50°C Nylon bowl	
	-10°C to +75°C Metal bowl	
Weight (g) without port blocks	Transparent Bowl	808
	Compact Metal Bowl	1154
	High flow Metal Bowl	1196

Dimensions (mm)

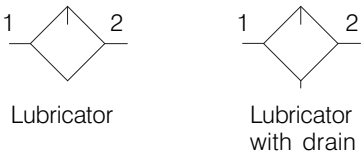


For Accessories and Port Blocks see page 51.
For Repair Kits and Spares see pages 62 and 63.
For Gauges see page 61.

Lubricators



Symbols



- Choice of metal bowls with integral sight glasses or transparent nylon bowls.
- Sight glass can be located in 90^0 increments.
- Constant density lubrication with fingertip adjustment.
- Low flow oil pick up capability.
- 360^0 drip rate sight glass gives all round visibility, contained in separately serviceable cartridge.
- Internal shut off valve, operated by the filler plug allows oil filling to be carried out without shutting off air supply.

Options:

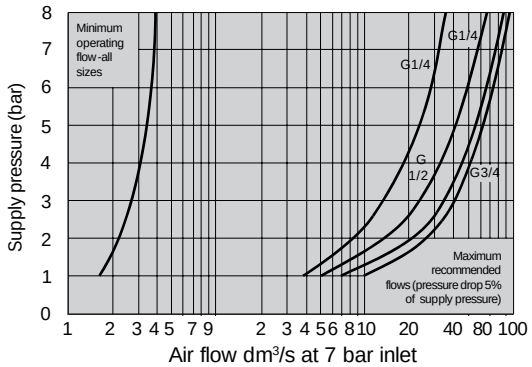
P	3	E	-	L	A	0	0		X	F	N

	Thread
00	Without
12	G1/4
13	G3/8
14	G1/2
16	G3/4

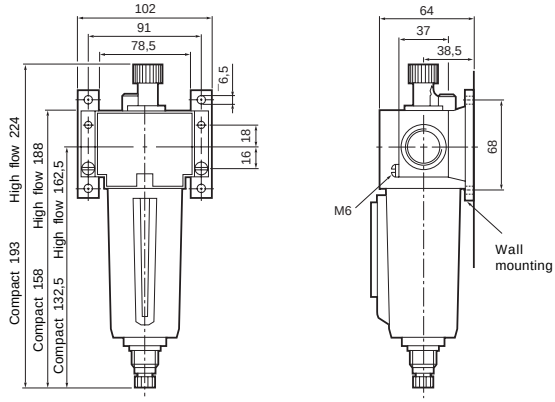
	Bowl / drain
A	Transparent Bowl Without Drain
B	Transparent Bowl Manual Drain
K	Metal Bowl Manual Drain
T	Compact Metal Bowl Manual Drain

Technical information

Pressure range:	10 bar max Nylon bowl	
	17 bar max Metal bowl	
Temperature range:	-10°C to +50°C Nylon bowl	
	-10°C to +75°C Metal bowl	
Flow	See performance characteristics	
Weight (g) without port blocks	Transparent Bowl	588
	Compact Metal Bowl	860
	High flow Metal Bowl	976
Minimum flow for oil pick up	See graph	
Bowl capacity	Compact 10cL.	
	High capacity 20 cL.	
Recommended lubricants	See box leaflet	



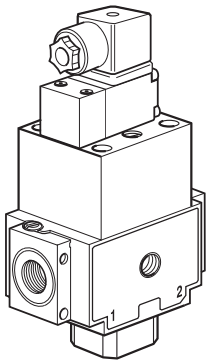
Dimensions (mm)



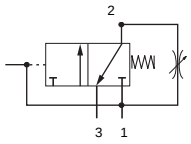
For Accessories and Port Blocks see page 51.

For Repair Kits and Spares see page 62 and 63.

Combined Soft Start and Dump Valve



Symbol



- Combines the functions of Soft Start and Dump Valves
- Controlled induction of pressure
- Fully adjustable bleed rate
- Choice of 15mm or CNOMO solenoids
- High flow G1/2 exhaust
- Integral gauge ports

Options:

P	3	E	-	T	A	X	X	X	X	N	X	X	X

	Thread
00	Without
13	G3/8
14	G1/2
16	G3/4

	Piloting / gauge
P	Air pilot, without gauge
Q	Air pilot, with gauge
S	Solenoid, without gauge
R	Solenoid, with gauge

	Pilot options
P	Pilot port threaded G1/8
Q	Pilot port Push-in
C	CNOMO solenoid
G	15 mm solenoid

For alternative solenoids see page 16.

	Voltage
00	Without Solenoid
CC	24 VDC

	Solenoid
0	None
2	DC

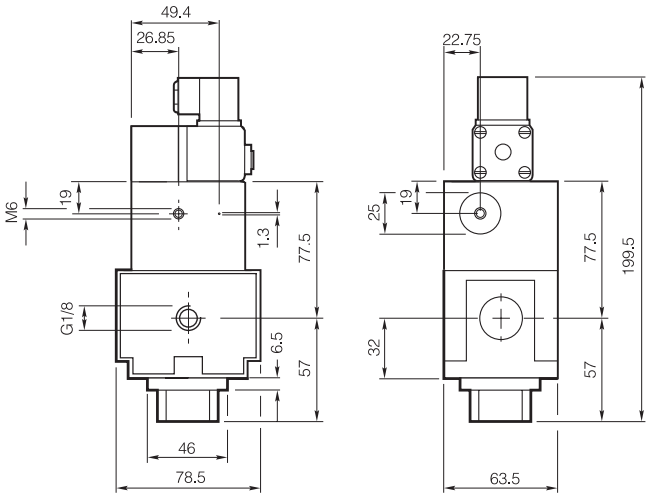
Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C

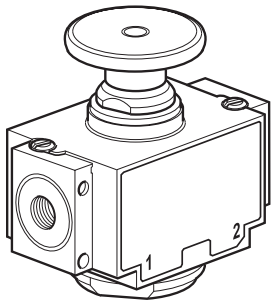
Note: For materials see page 48.

For Gauges see page 61.

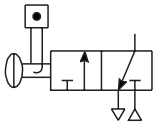
Dimensions



Manually Operated Dump Valves



Symbol



- Shuts off upstream and dumps downstream pressure.
- Air latching or 2 position versions.
- Choice of red or black knobs.
- Ventral $G^1/_4$ exhaust port.
- Padlockable version.

Manual dump valves are available in two versions, the first being a 2 position valve with either position being selectable. The second version is an air latching dump valve, which requires the control knob to be held operated until the system pressure is sufficient to 'latch' the valve in the operated condition. If the air supply fails the air latching dump valve will reset and exhaust the system. Manual operation will also exhaust the system.

Options:

P	3	E	-	D	A	X	X		X		X		N

	Thread
00	Without
13	G3/8
14	G1/2
16	G3/4

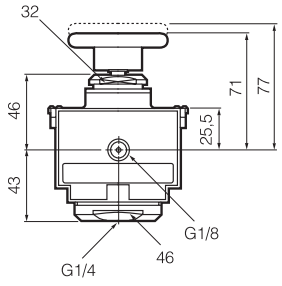
	Knob / Function
B	Black 2 Position
R	Red 2 Position
N	Red Latching
M	Black Latching

	Locking Clip
L	With Locking Clip
N	Without Locking Clip

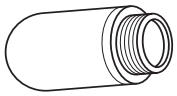
Technical information

Max. inlet pressure	20 bar max.
Operating pressure	7 bar max
Temperature range	-10^0C $+75^0$C

Dimensions

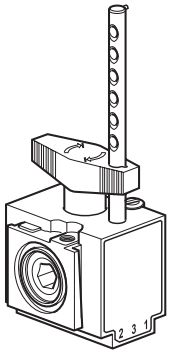


Muffler included with each product.

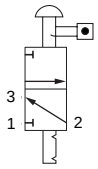


Modular Maxi FRLs

Maxi Modular Ball Valve



Symbol



- Positive bubble tight shut-off.
- Upstream and downstream versions.
- Key lockable versions.
- Padlockable version.
- Ventral G3/8 exhaust port.

Connection	Pressure max, bar	Actuation	Note	Weight Kg	Order code
Upstream	10	Hand	Standard	0,470	**P3E-VA00A0N**
Downstream	10	Hand	Standard	0,470	**P3E-VA00B0N**
Upstream	10	Hand	Key Locking	0,670	**P3E-VA00K0N**
Upstream	10	Hand	3 Padlock Facility	0,532	**P3E-VA00P0N**
Downstream	10	Hand	3 Padlock Facility	0,532	**P3E-VA00R0N**
Upstream	10	Hand	6 Padlock Facility	0,542	**P3E-VA00Q0N**
Downstream	10	Hand	6 Padlock Facility	0,542	**P3E-VA00S0N**

*** Note!** Modular Ball valves have an integral Body Connector
on one side and a slot to accept a Port Block or Body Connector on the other

Materials

Filter

Body	Zinc
Fixing Screws	Plated Steel
Bowl (metal)	Zinc
Bowl (transparent)	Polyamide
Sight Glass	Polyamide
Louvre	Acetal
Element	Nylon
Manual Drain	Acetal
Semi-Auto Drain	Plastic / Brass
Auto-Drain	Acetal / Brass
Springs	Stainless Steel
Seals	Nitrile

Regulator

Body	Zinc
Fixing Screws	Plated Steel
Control Knob	Acetal
Adjusting Screw	Plated Steel
Spring Rest (upper)	Brass
Spring Rest (lower)	Steel / Brass
Spring	Steel
Diaphragm	Nitrile / Nylon
Valve Stem	Brass
Valve Seat	Nitrile
Bottom Cap	Nylon 6 glass filled
Springs	Stainless Steel
Seals	Nitrile

Lubricator

Body	Zinc
Fixing Screws	Plated Steel
Bowl (metal)	Zinc
Bowl (transparent)	Polyamide
Sight Glass	Polyamide
Knob	Acetal
Venturi Valve	Acetal
Transfer Tube	Nylon
Tube Retainer	Brass
Springs	Stainless Steel
Seals	Nitrile
Fill Plug	Plastic

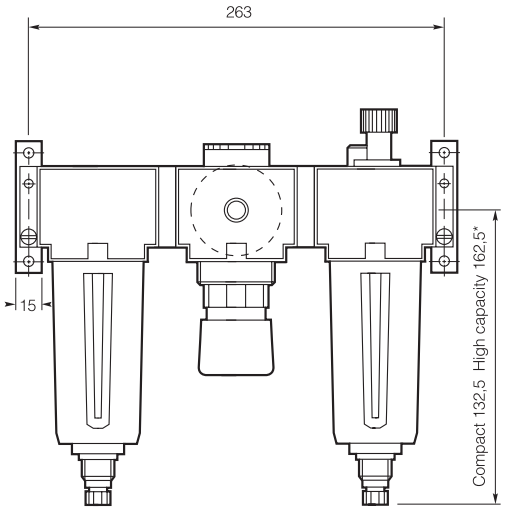
Accessory Products

Bodies	Zinc
Housings	Aluminium
Fixing Screws	Plated Steel
Knobs	Acetal
Valve Stems	Brass
SSV Main Spring	Plated Steel
Springs	Stainless Steel
Seals	Nitrile
Port Connectors	Zinc
Body Connectors	Zinc

Dimensions of combinations

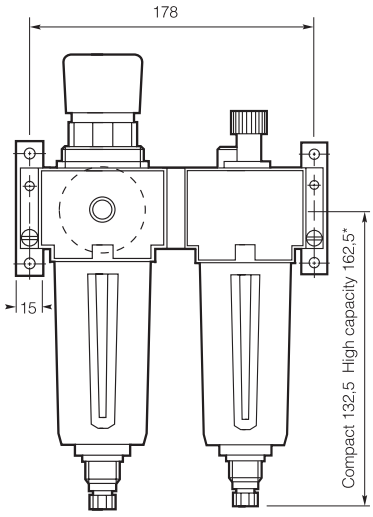
The modular system ensures constant mounting centres; assemblies are fixed to the special wall brackets by a single fixing screw.

Filter, Regulator, Lubricator

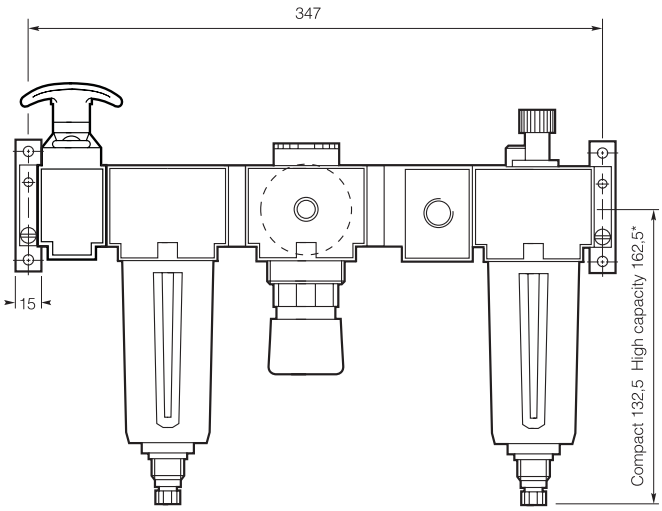


* Transparent bowl option dimensions identical to high capacity version.

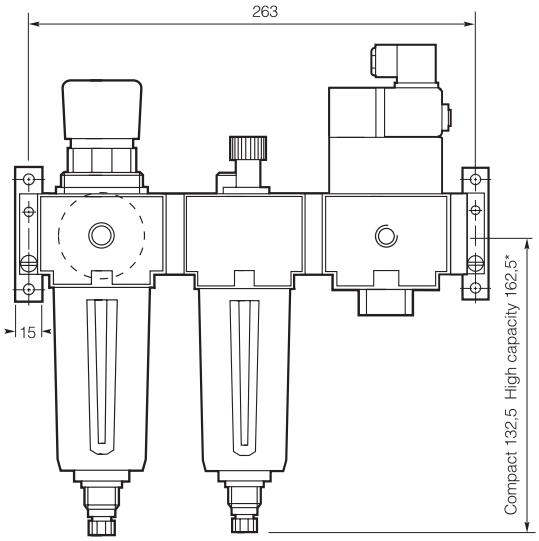
Filter/Regulator, Lubricator



Ball valve, Filter, Regulator, Manifold, Lubricator.



Filter/Regulator, Lubricator, Combined Soft start and Dump valve



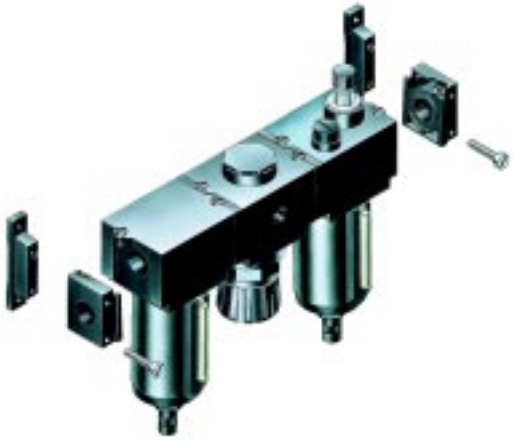
All dimensions in (mm).

Mounting assemblies

Assembly containing a regulator or filter regulator

Assembly without regulator or filter regulator

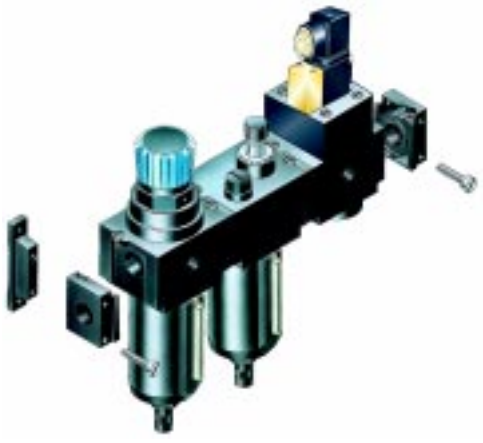
Wall brackets mounted at the ends of an assembly



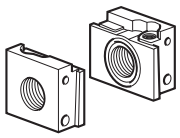
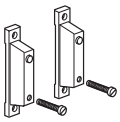
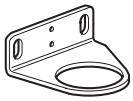
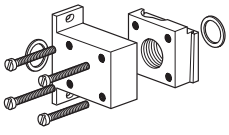
Wall brackets mounted at the ends of an assembly

Neck mounting bracket on Filter/Regulator

Popular combination with wall mounting brackets



Accessories

Description	Connection	Weight Kg	Order code	
Port connector kits (2 port blocks + 2 seals)	G1/4	0,144	**P3E-KA12CPN**	
	G3/8	0,144	**P3E-KA13CPN**	
	G1/2	0,134	**P3E-KA14CPN**	
	G3/4	0,124	**P3E-KA16CPN**	
Body connector		0,156	**P3E-KA00CBN**	
	G1/4 ventral port	0,156	**P3E-KA12CAN**	
Wall mounting kit (2 brackets + 2 screws)		0,140	**P3E-KA00MWN**	
Regulator angle bracket kit (Angle bracket + mounting ring)		0,800	**P3E-KA00MSN**	
Panel mounting ring only		0,400	**P3E-KA00MMN**	
Regulator Tamperproof kit (Kit contains 5 pieces)		0,010	**P3E-KA00ATN**	
Modular manifold block* (Includes port plugs)	1 x G1/8 1 x G1/4 2 x G1/2	0,340	**P3E-MA1V**	
Rear entry connector kit	G1/2	0,240	**P3E-KA14CRN**	

***Note:** Modular manifold blocks have an integral Body Connector on one side and a slot to accept a Port Block or Body Connector on the other.

1" Modular FRLs

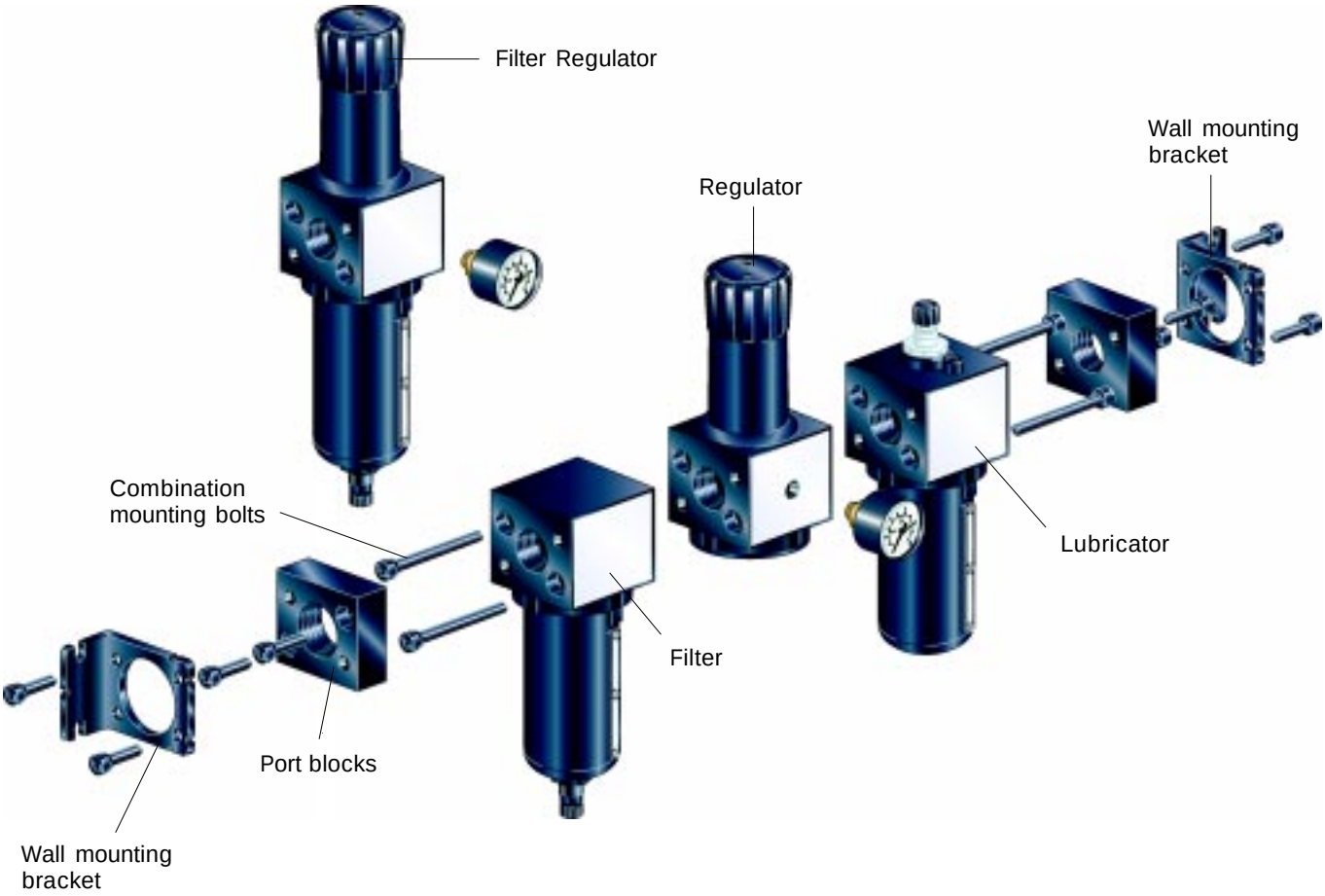
The System

The Modular system allows units to be connected together, without the use of pipe connectors, saving space; providing constant mounting centres; whilst maintaining a modern aesthetically pleasing appearance.

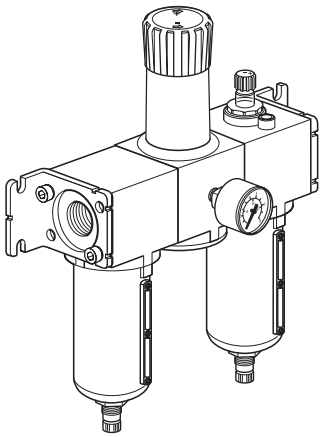
The 1" Series filters are specially designed to efficiently filter out rust, dirt, moisture and other impurities from compressed air lines. Operation is fully automatic with a minimum of pressure drop.

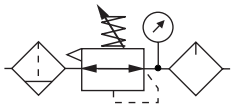
The 1" Series Regulators are designed to provide quick response and accurate pressure regulation for the most demanding Hi-flow industrial applications. The unique solid piston was designed for long trouble-free operation and will not rupture or tear under high cycle or other demanding applications.

The 1" Series mist lubricators are designed to provide lubrication for many general purpose applications in a pneumatic system.



Popular combinations

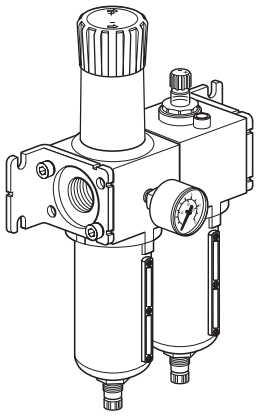


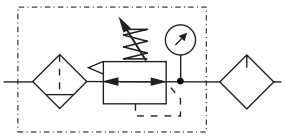


1" FRL Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets

Ports	Bowl - Drain	
	Metal Bowl Manual Drain	Metal Bowl Auto Drain
G1	**P3NCB18SEMNNLMB**	**P3NCB18SEANNLMB**





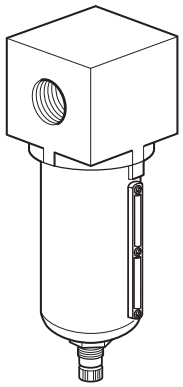
Filter/Regulator - Lubricator Combinations

5 micron elements, 8 bar regulator + gauge and wall mounting brackets

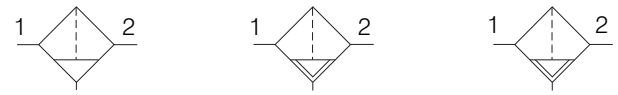
Ports	Bowl - Drain	
	Metal Bowl Manual Drain	Metal Bowl Auto Drain
G1	**P3NCA18SEMNNLMB**	**P3NCA18SEANNLMB**

1" Modular FRLs

Filters



Symbols



- Port blocks available to provide G$^{3}/_{4}$ and G1$^{1}/_{2}$ port extension to G1 ported bodies.
- Excellent water removal efficiency.
- Metal bowl with sight gauge.
- Larger filter element surface guarantees low pressure drop and increased element life.
- Manual drain, Semi-Auto or Auto Drain options.

Options:

P3N	F	A	1	8	X	X	X
	Filter		Port size	G1			

5 Micron Element Optional	**E**
40 Micron Element Standard	**G**

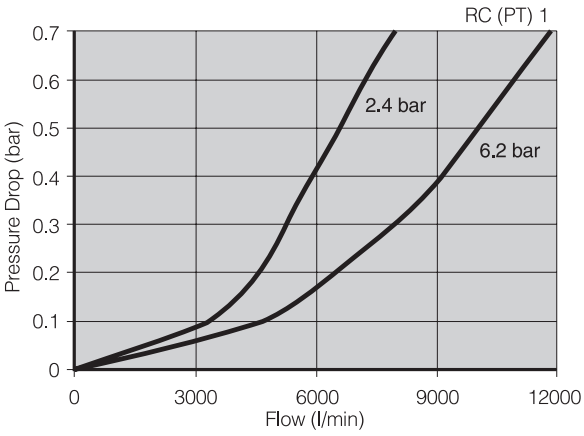
Metal Bowl Manual Drain	**SM**
Metal Bowl Semi Auto Drain	**SS**
Metal Bowl Auto Drain	**SA**

Technical information

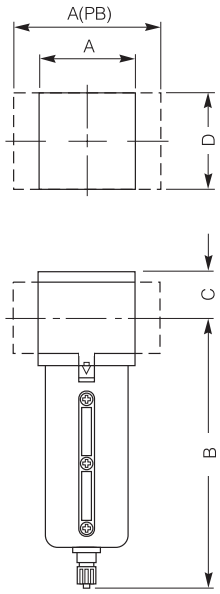
Port size	G1
Filter element grade:	Standard 5 micron
	Option 40 micron
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C

Note: For materials see page 59.

Flow vs pressure drop at line pressure



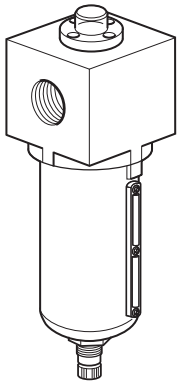
Dimensions (mm)



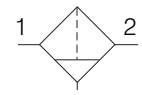
Port size	A	B	C	D	Weight (kg)
G1	92	254	35	92	1.6

For accessories and port blocks see page 59.

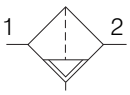
Coalescing filters



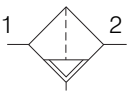
Symbols



Manual drain



Semi auto drain



Auto drain

- DPI indicator as standard
- Port blocks available to provide G$^{3}/_{4}$ and G1$^{1}/_{2}$ port extension to G1 ported bodies.
- Excellent water removal efficiency.
- Metal bowl with sight gauge or plastic bowl with steel cover available.
- Larger filter element surface guarantees low pressure drop and increased element life.
- Manual drain as standard, optional auto drain or semi-auto drain available.

Options:

P3N	X	A	1	8	X	X	X

Coalescing	F
Adsorber	J

Port size	G1

Coalescing Grade 6 with pressure drop indicator	D

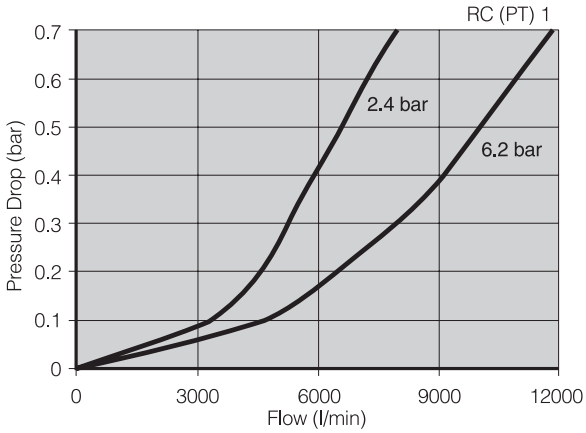
Metal Bowl Manual Drain	SM
Metal Bowl Semi Auto Drain	SS
Metal Bowl Auto Drain	SA

Technical information

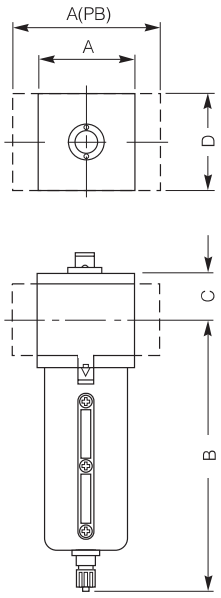
Port size	G1
Coalescing element grade:	0.3 micron Grade 6
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C

Note: For materials see page 59.

Flow vs pressure drop at line pressure



Dimensions (mm)

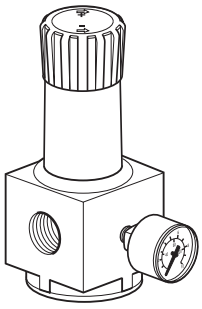


Port size	A	B	C	D	Weight (kg)
G1	92	254	35	92	1.6

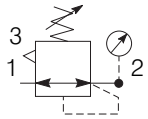
For accessories and port blocks see page 59.

1" Modular FRLs

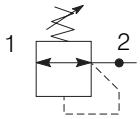
Regulators



Symbols



Self bleed regulator with gauge



Non bleed regulator

- Port blocks available to provide G3/4 and G1 1/2 port extension to G1 ported bodies
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

Options:

P3N	R	A	1	8	X	N	X
	Regulator		Port size	G1			

Non-relieving	N
Relieving	B

0 - 2 bar No Gauge	Y
0 - 4 bar No Gauge	L
0 - 8 bar No Gauge	N
0 - 16 bar No Gauge	H

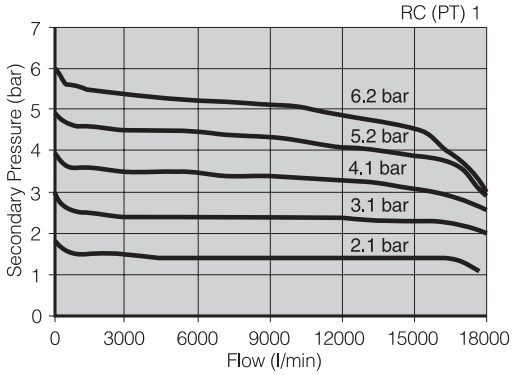
For Gauges see page 61.

Technical information

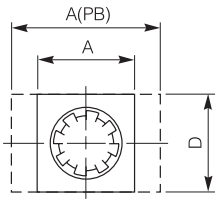
Port size	G1	
Gauge ports:	G1/4	
Max inlet pressure (p1):	17 bar max	
Secondary pressure range: (p2)	Standard:	0.1 to 8 bar
	Option 1:	0.1 to 2 bar
	Option 2:	0.1 to 4 bar
	Option 3:	0.3 to 17 bar
Temperature range:	-20°C to +80°C	

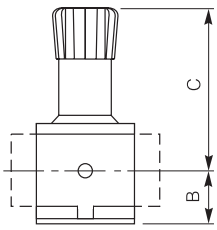
Note: For materials see page 59.

Regulator flow



Dimensions (mm)

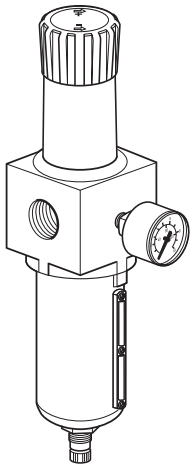




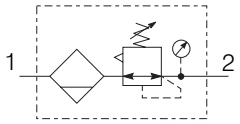
Port size	A	B	C	D	Weight (kg)
G1	92	53	162	92	1.9

For accessories and port blocks see page 59.

Filter/Regulators



Symbol



- Port blocks are available to provide G3/4 and G1 1/2 port extension to G1 ported bodies.
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

Options:

P3N	E	A	1	8	G	X	X	B	N	X

E — Filter/Regulator

A — Port size: **1 8** — G1

G

5 Micron Element Optional	**E**
40 Micron Element Standard	**G**

X X

Metal Bowl Manual Drain	**SM**
Metal Bowl Semi-Auto Drain	**SS**
Metal Bowl Auto Drain	**SA**

B — Relieving

N

0 - 2 bar No Gauge	**Y**
0 - 4 bar No Gauge	**L**
0 - 8 bar No Gauge	**N**
0 - 16 bar No Gauge	**H**

X

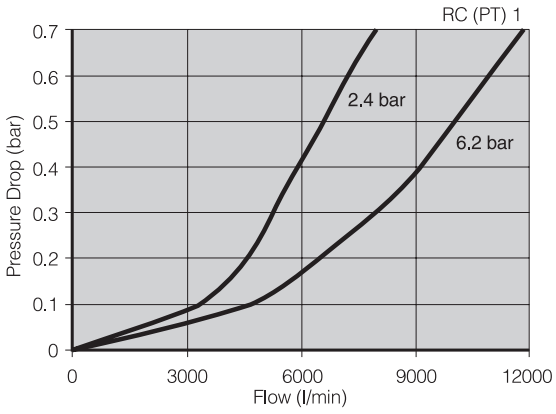
For Gauges see page 61.

Technical information

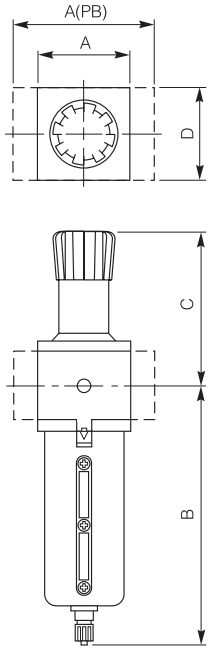
Port size	G1	
Gauge ports:	G1/4	
Max inlet pressure (p1):	17 bar max	
Secondary pressure range: (p2)	Standard:	0.1 to 8 bar
	Option 1:	0.1 to 2 bar
	Option 2:	0.1 to 4 bar
	Option 3:	0.3 to 17 bar
Temperature range:	-20°C to +80°C	

Note: For materials see page 59.

Flow vs pressure drop at line pressure



Dimensions (mm)

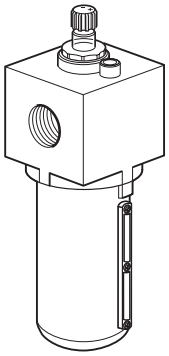


Port size	A	B	C	D	Weight (kg)
G1	92	53	162	92	1.9

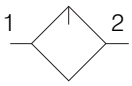
For accessories and port blocks see page 59.

1" Modular FRLs

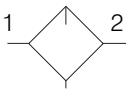
Lubricators



Symbols



Lubricator



Lubricator with drain

- Port blocks available to provide G$^{3}/_{4}$ and G1$^{1}/_{2}$ port extension to G1 ported bodies.
- Proportional oil delivery over a wide range of air flows.
- Bowl can be filled while air line is under pressure.
- Transparent sight dome for 360^{O} visibility.

Options:

P3N	L	A	1	8	L	X	X

L = Lubricator

18 = Port size G1

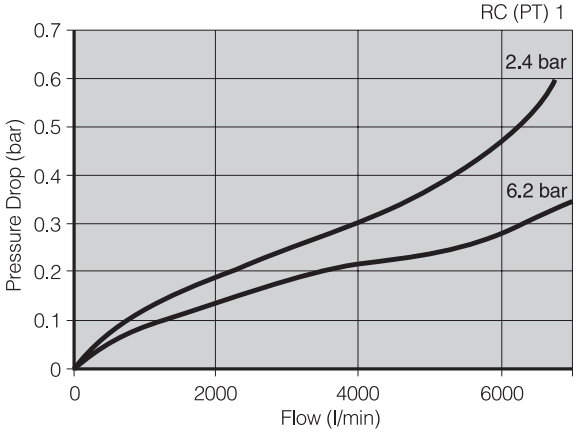
Metal Bowl No Drain	SN
Metal Bowl Manual Drain	SM

Technical information

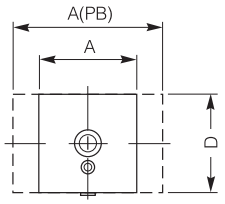
Port size	G1
Max inlet pressure (p1):	17 bar max
Min flow oil pickup:	3.7 l/sec
Bowl capacity:	300cc
Recommended lubricant:	See box leaflet
Temperature range:	-20^{O}C to +80^{O}C

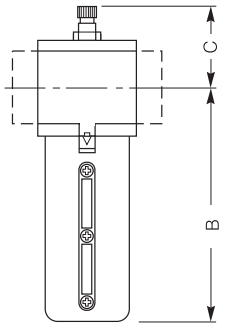
Note: For materials see page 59.

Flow vs pressure drop at line pressure



Dimensions (mm)

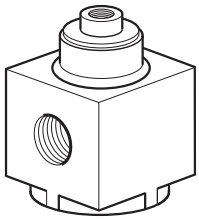


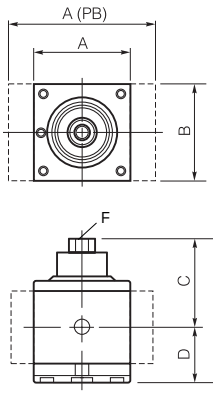


Port size	A	B	C	D	Weight (kg)
G1	92	230	71.3	92	1.6

For accessories and port blocks see page 59.

Air pilot regulators



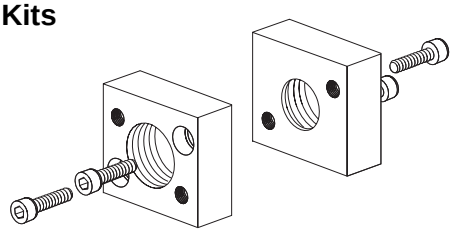


- Port blocks available to provide G3/4 and G1 1/2 port extension to G1 ported bodies.
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

Order code
P3NRA18BPP

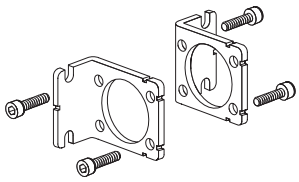
A	A (PB)	B	C	D	E	F
92	142	92	86	53	139	G1/4

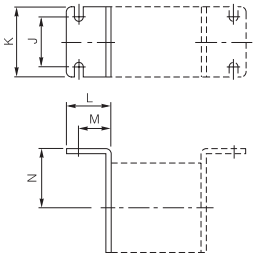
Port Block Kits



Description	Connection	Weight Kg	Order Code
Kits for single Units (2 port blocks + 2 seals)	G3/4	574	**P3NKA16CP**
	G1	554	**P3NKA18CP**
	G1 1/2	534	**P3NKA1BCP**
Kits for Combinations (2 port blocks + 2 seals)	G3/4	574	**P3NKA16CL**
	G1	554	**P3NKA18CL**
	G1 1/2	534	**P3NKA1BCL**

Mounting brackets

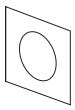




Order code
P3NKA00MW

L	M	N	J	K
45	33	60	50	70

Body Covers



Order code
P3NKA00PM

Each kit contains two covers.

Materials

Filter

Body	Aluminium
Bowl	Aluminium
Deflector	Plastic
Drain	Plastic
Seals	Nitril
Element	Plastic
Sight Glass	Polyamide

Regulator

Adjustment Stem	Steel
Body	Aluminium
Bonnet	Aluminium
Knob	Plastic
Piston	Plastic
Poppet Assembly	Brass
Seals	Nitrile
Spring (Poppet & Control)	Steel

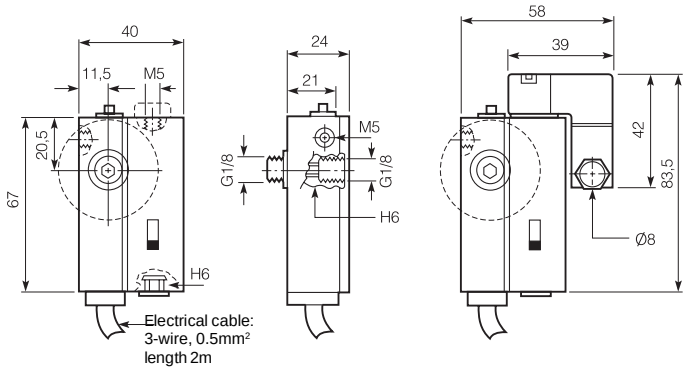
Lubricator

Body	Aluminium
Bowl (metal)	Aluminium
Drains	Plastic
Injector meter block & brass assembly	Plastic
Seals	Nitrile
Sight glass	Polyamide
Sight dome	Polycarbonate

Filter/Regulator

Body, Bonnet & Bowl	Aluminium
Deflector	Plastic
Drains	Plastic
Seals	Nitrile
Element	Plastic
Sight glass	Polyamide
Piston	Plastic
Knob	Plastic
Spring (Poppet & Control)	Steel

Adjustable Reset Pressure Switches



The Adjustable Reset Pressure Switch is designed to provide a safeguard for pneumatic systems or machines, which require a minimum operating pressure to operate effectively. When the correct pressure is present the switch provides a constant output signal which should be used to operate a control valve or device to enable the system to perform its normal function. If the operating pressure falls below the set level, the constant output signal is cancelled, allowing the control valve or device to stop the system in a safe manner.

Once the pressure rises above the preset threshold, unlike a conventional pressure switch, the Adjustable Reset Pressure Switch must be reset before it can once again transmit the output signal authorising operation. The reset signal may be manual, pneumatic or electrical.
Versions are available to provide either pneumatic or electrical output signals or both.

Pneumatic characteristics

Pressure range	:	1,5 to 8 bar max
Temperature range	:	-10^0 to $+55^0$C
Adjustment range	:	1,5 to 6 bar
Precision	:	±0,2 bar

Electrical characteristics

Electrical output	:	On/Off relay
5A / 250V A.C.		
5W / 48V D.C.		
Electrical reset = 1W		

Part nos. Switches

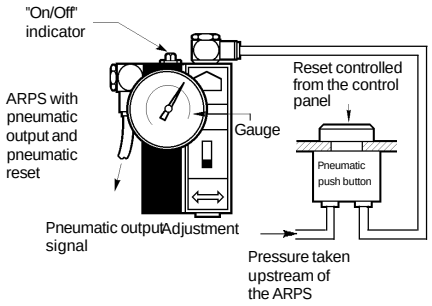
Part no.	Description
P3E-KA11SAN	Pneumatic output, manual reset.
P3E-KA11SBN	Pneumatic output, reset.
P3E-KA11SCN	Electrical and pneumatic outputs, manual resets.
P3E-KA11SDN	Electrical and pneumatic outputs, pneumatic reset.
P3E-KA11SEN	Electrical and pneumatic outputs, electrical reset

Note: Micro-solenoid not included. Micro-solenoid valve must be ordered separately.

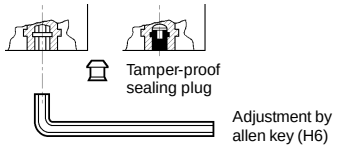
Micro-Solenoid Valve (Non-locking override) for pressure switch

Part no.	Description
P2E-LV32B1	12V. D.C.
P2E-LV32C1	24V. D.C.
P2E-LV32D1	48V. D.C.
P2E-LV34B1	12V. 50/60Hz
P2E-LV31C1	24V. 50Hz
P2E-LV33C1	24V. 60Hz
P2E-LV34D1	48 V. 50/60Hz
P2E-LV31F1	115V. 50Hz / 120V. 60Hz
P2E-LV31J1	230V. 50Hz / 240V. 60Hz

Pneumatic remote controlled reset

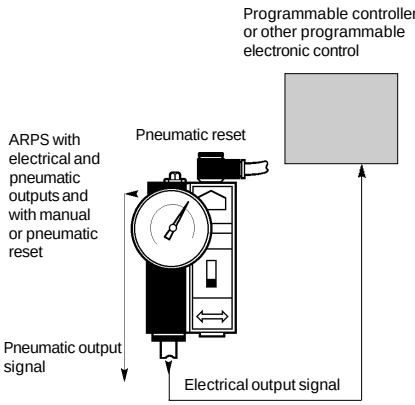


Adjusting the cut-off pressure

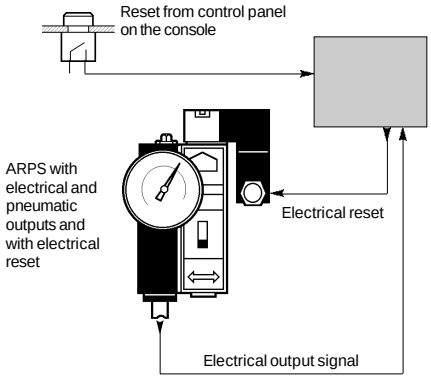


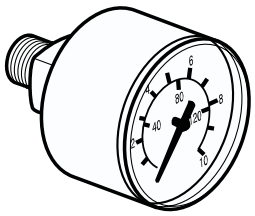
On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

Direct pressure return



Pressure return through programmable control





- Wide range of pressure gauges
- Rear entry and bottom entry options
- Back pressure gauge for reclassifier-silencers
- Round or square panel mounted gauges

Main data for Pressure and Vacuum gauges

Symbol	Description	Pressure range, bar	Port size	Dial mm	Weight Kg	Order code
	Rear entry	0-1,6	1/8 BSPT	40	0,062	**P3D-KAB1AWN**
		0-2,0	1/8 BSPT	40	0,062	**P3D-KAB1AYN**
		0-4,0	1/8 BSPT	40	0,062	**P3D-KAB1ALN**
		0-10,0	1/8 BSPT	40	0,062	**P3D-KAB1ANN**
		0-20,0	1/8 BSPT	40	0,062	**P3D-KAB1AHN**
	Rear Entry	0-4,0	1/8 BSPT	50	0,068	**P6G-ERB1040**
		0-7,0	1/8 BSPT	50	0,068	**P6G-ERB1070**
		0-11,0	1/8 BSPT	50	0,068	**P6G-ERB1110**
		0-14,0	1/8 BSPT	50	0,068	**P6G-ERB1140**
	Rear entry	0-4,0	1/4 BSPT	50	0,074	**P6G-ERB2040**
		0-14,0	1/4 BSPT	50	0,074	**P6G-ERB2140**
		0-20,0	1/4 BSPT	50	0,074	**P6G-ERB2200**
	Bottom entry	0-11,0	1/8 BSPT	50	0,065	**P6G-EBB1110**
		0-14,0	1/4 BSPT	50	0,070	**P6G-EBB2140**
	Panel Mounted - Rear Entry	0-14,0	G1/8	50	0,100	**P6G-EPA1140**
		0-10,0	G1/4	85	0,180	**P6G-HPA1100**
	Square - Panel Mounted - Rear Entry	0-10,0	G1/8	50x50	0,100	**P6G-RPA1100**
		0-4,0	G1/8	75x75	0,200	**P6G-TPA1040**
		0-10,0	G1/8	75x75	0,190	**P6G-TPA1100**
	Rear Entry - BackPressure (Reclassifiers)	0-2,0	1/8 BSPT	40	0,062	**P6G-DEB1020**

Filter Spare Kits Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
Drain Kits				
Manual drain kit	**P3E-KA00DBN**	**P3E-KA00DBN**	**P3E-KA00DBN**	**P3E-KA00DBN**
Semi-auto drain kit	**P3A-KA00DCN**	**P3A-KA00DCN**	**P3A-KA00DCN**	**P3A-KA00DCN**
Auto drain kit	**P3A-KA00DDN**	**P3A-KA00DDN**	**P3E-KA00DDN**	**P3E-KA00DDN**
Bowl Kits				
Poly bowl				
Poly bowl with manual drain	**P3A-KA00BBA**	**P3D-KA00BBA**	**P3E-KA00BBA**	
Poly bowl with semi-auto drain	**P3A-KA00BCA**	**P3D-KA00BCA**	**P3E-KA00BCA**	
Poly bowl with auto drain	**P3A-KA00BDA**	**P3D-KA00BDA**	**P3E-KA00BDA**	
Metal bowl				
Metal bowl with manual drain	**P3A-KA00BPA**	**P3D-KA00BKA**	**P3E-KA00BKA**	
Metal bowl with semi-auto drain	**P3A-KA00BQA**	**P3D-KA00BLA**	**P3E-KA00BLA**	
Metal bowl with auto drain		**P3D-KA00BMA**	**P3E-KA00BMA**	
Compact metal bowl with manual drain			**P3E-KA00BTA**	
Compact metal bowl with semi-auto drain			**P3E-KA00BVA**	
Compact metal bowl with auto drain			**P3E-KA00BWA**	
Filter Element Kits				
5 micron element	**P3A-KA00EEN**	**P3D-KA00EEN**	**P3E-KA00EEN**	**P3NKA00ESE**
5 micron element (compact bowl)			**P3E-KA00ERN**	
40 micron element	**P3A-KA00EGN**	**P3D-KA00EGN**	**P3E-KA00EGN**	**P3NKA00ESG**
40 micron element (compact bowl)			**P3E-KA00ESN**	
Coalescing element	**P3A-KA00ECN**	**P3D-KA00ECN**	**P3E-KA00ECN**	**P3NKA00ESC**
Coalescing element (compact bowl)			**P3E-KA00EPN**	
Adsorber element	**P3A-KA00EAN**	**P3D-KA00EAN**	**P3E-KA00EAN**	**P3NKA00ESA**
Adsorber element (compact bowl)			**P3E-KA00ENN**	
Seal Kits				
Poly bowl seal (10 off)	**P3A-KA00RZN**	**P3D-KA00RWN**	**P3E-KA00RZN**	
Metal bowl seal (10 off)	**P3A-KA00RZN**	**P3D-KA00RWN**	**P3E-KA00RWN**	
Connector O ring (10 off)	**P3A-KA00CYN**	**P3D-KA00CYN**	**P3E-KA00CYN**	

Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
Regulator Spare Kits				
Repair kit (self-relieving)		**P3D-KA00RRN**	**P3E-KA00RRN**	**P3NKA00RR**
Repair kit (non-relieving)		**P3D-KA00RNN**	**P3E-KA00RNN**	**P3NKA00RN**
Metal panel mounting ring	**P3A-KA00MMN**	**P3A-KA00MMN**	**P3E-KA00MMN**	
Plastic panel mounting ring (5 off)	**P3A-KA00MPN**	**P3A-KA00MPN**		
Tamperproof kit	**P3A-KA00ATN**	**P3A-KA00ATN**	**P3E-KA00ATN**	
Filter/Regulator Spare Kits				
5 micron element	**P3A-KA00EEN**	**P3D-KA00EFA**	**P3E-KA00EFA**	**P3NKA00ESE**
5 micron element (compact bowl)			**P3E-KA00ETA**	
40 micron element	**P3A-KA00EGN**	**P3D-KA00EHA**	**P3E-KA00EHA**	**P3NKA00ESG**
40 micron element (compact bowl)			**P3E-KA00EVA**	
Repair kit (self-relieving)		**P3D-KA00RRN**	**P3E-KA00REN**	**P3NKA00RR**
Repair kit (non-relieving)		**P3D-KA00RNN**	**P3E-KA00RGN**	**P3NKA00RN**
Tamperproof kit	**P3A-KA00ATN**	**P3A-KA00ATN**	**P3E-KA00ATN**	
For Drain Kits - see Filters on page 62				
For Bowl Kits - see Filters on page 62				
For Bowl Seal Kit - see Filters on page 62				
Lubricator Spare Kits				
Plastic bowl without drain	**P3A-KA00BAA**	**P3D-KA00BAA**	**P3E-KA00BAA**	
For Manual Drain Kits - see Filters on page 62				
For Bowl Kits with Manual Drain - see Filters on page 62				
For Bowl Seal Kit - see Filters on page 62				