

# Modular FRLs

**Mini Series G<sup>1</sup>/<sub>8</sub> - G<sup>1</sup>/<sub>4</sub>**

**Modular Junior Series G<sup>1</sup>/<sub>8</sub> to G<sup>3</sup>/<sub>8</sub>**

**Modular Maxi Series G<sup>1</sup>/<sub>4</sub> to G<sup>3</sup>/<sub>4</sub>**

**Modular Series G1**

Catalogue no. 2158GB-ca



## 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 $\frac{1}{8}$  or G $\frac{1}{4}$  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

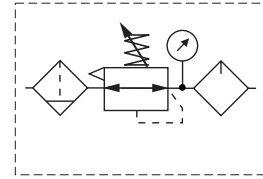
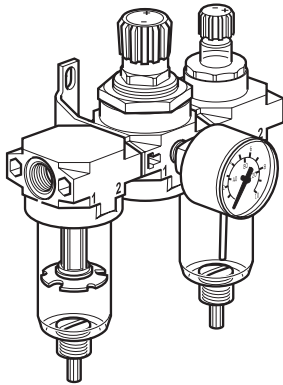


### Coloured knobs

8 bar	Black	
4 bar	Grey	
2 bar	Blue	

# Mini FRLs

## Popular combinations

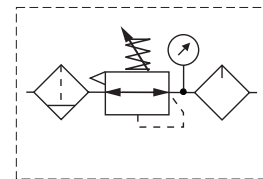
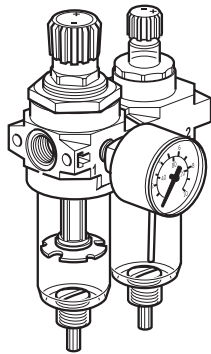


P3A-CB11BGB

## Mini FRL Combinations

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

Ports	Bowl - Drain		Flow @ 6 bar	
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	l/min	dm <sup>3</sup> /sec
G <sup>1</sup> / <sub>8</sub>	<b>P3A-CB11BGB</b>	<b>P3A-CB11CGB</b>	420	7
G <sup>1</sup> / <sub>4</sub>	<b>P3A-CB12BGB</b>	<b>P3A-CB12CGB</b>	480	8



P3A-CA11BGB

## Filter/Regulator - Lubricator Combinations

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

Ports	Bowl - Drain		Flow @ 6 bar	
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	l/min	dm <sup>3</sup> /sec
G <sup>1</sup> / <sub>8</sub>	<b>P3A-CA11BGB</b>	<b>P3A-CA11CGB</b>	420	7
G <sup>1</sup> / <sub>4</sub>	<b>P3A-CA12BGB</b>	<b>P3A-CA12CGB</b>	480	8

## Part numbers.

<b>P3A-</b>	<b>C</b>						<b>B</b>	
	Filter/Reg + Lub combo	<b>A</b>	G <sup>1</sup> / <sub>8</sub>	<b>11</b>	Transparent Bowl Manual Drain	<b>B</b>	No Gauge	<b>N</b>
	FR L combo	<b>B</b>	G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	Gauge	<b>G</b>
	FRL combo + Manifold after Regulator	<b>K</b>						
	F/R L combo + Manifold after Filter/Regulator	<b>H</b>						

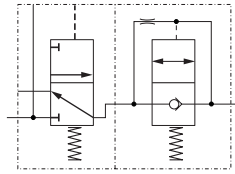
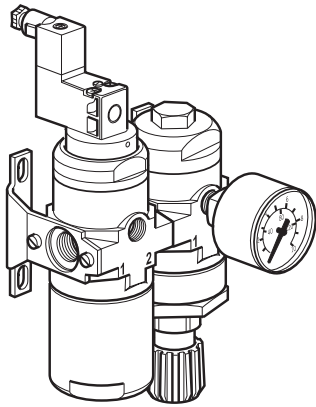
**Note:** For materials see page 16  
For dimensions see page 17



# Mini FRLs

## Popular combinations

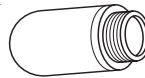
### Dump valve and soft start valve combinations with wall mounting brackets and muffler



**P3A-CS12QMB**

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

Muffler included with each product.



### Dump valve and soft start valve

Port	Solenoid operated dump valve + manual set point soft start valve		Flow @6 bar	
	24V DC	Less Solenoid	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3A-CS12GMB2CC</b>	<b>P3A-CS12GMB000</b>	1100	18.3

For solenoids see page 16

### Dump valve and soft start valve

Port	Pilot operated dump valve + manual set point soft start valve		Flow @6 bar	
			l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3A-CS12QMB</b>		1100	18.3

### Part numbers.

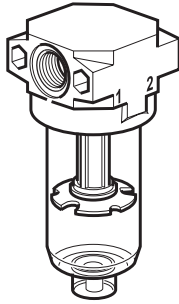
<b>P3A-</b>	<b>C</b>	<b>S</b>				<b>M</b>	<b>B</b>			
			G <sup>1</sup> / <sub>4</sub>	<b>12</b>	15mm solenoids 8mm PIN centres on opposite side	<b>G</b>		24V DC	<b>2CC</b>	
					Pilot port push-in	<b>Q</b>		Without Solenoid	<b>000</b>	

**Note:** For customised combinations consult Technical Sales Department.

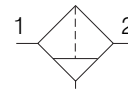
**Note:** For materials see page 16  
For dimensions see page 17

For solenoids see page 16

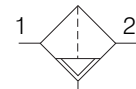
## Filters



## Symbols



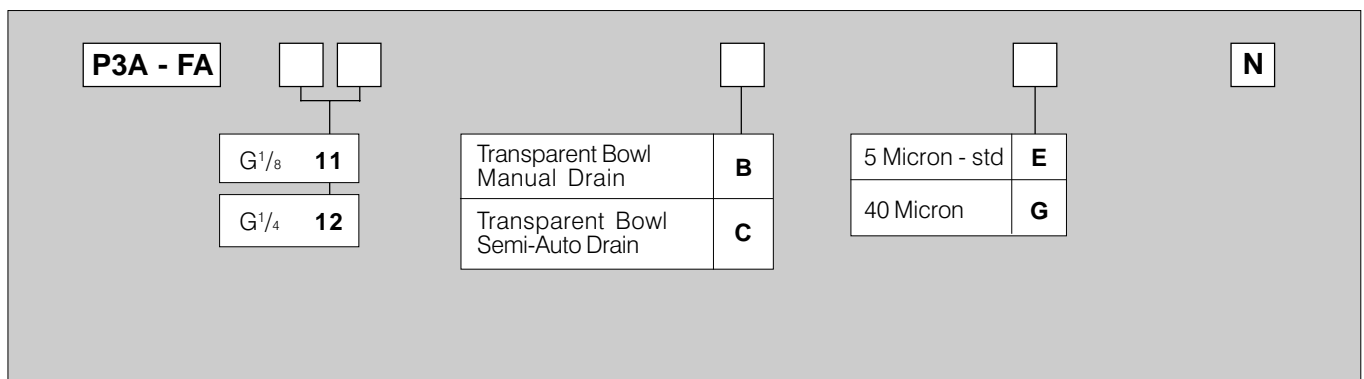
Manual drain



Semi auto drain

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

## Part numbers:

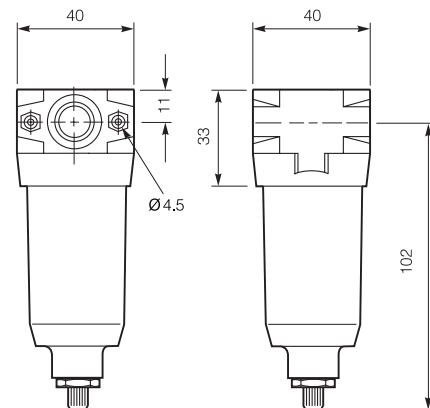


## Technical information

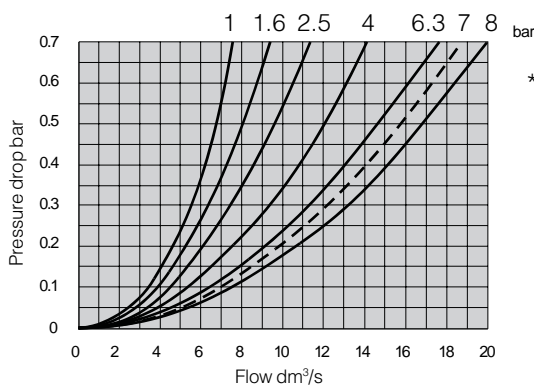
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm <sup>3</sup>
High capacity bowl	33 cm <sup>3</sup>
Flow*	
G <sup>1</sup> / <sub>8</sub>	870 l/min - 14.5 dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	1050 l/min - 17.5 dm <sup>3</sup> /s
Weight	75g

**Note:** For materials see page 16

## Dimensions (mm)



## Flow characteristics



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

\* Modular connection kit  
with each product

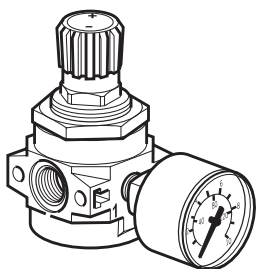


For Repair Kits and Spares  
see pages 62 and 63.

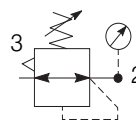




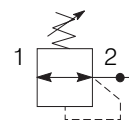
## Regulators



## Symbols



Self bleed regulator with gauge



Non bleed regulator

- 3 secondary pressure ranges available, 0.2 - 2 bar, 0.2 - 4 bar, 0.2 - 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.
- Tamperproof facility.

## Part numbers:

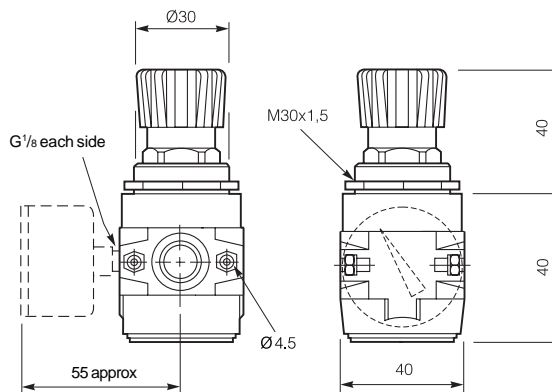
<b>P3A - RA</b>					<b>P</b>
G <sup>1/8</sup>	<b>11</b>	Relieving	<b>B</b>	0,2 - 8 bar + Gauge	<b>G</b>
G <sup>1/4</sup>	<b>12</b>	Non -relieving	<b>N</b>	0,2 - 8 bar No Gauge	<b>N</b>
				0,2 - 2 bar + Gauge	<b>Z</b>
				0,2 - 2 bar No Gauge	<b>Y</b>
				0,2 - 4 bar + Gauge	<b>M</b>
				0,2 - 4 bar No Gauge	<b>L</b>

## Technical information

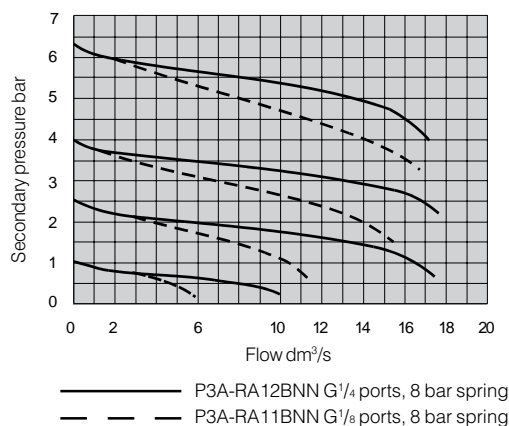
Max. inlet pressure	10 bar max.
Temperature range	-10°C + 50°C
Flow	
4 - 8 bar	760 l/min - 12,7 dm <sup>3</sup> /s
2 bar	390 l/min - 6,5 dm <sup>3</sup> /s
Weight	85g

**Note:** For materials see page 16.  
For pressure gauges see page 61.  
For Repair Kits and Spares see pages 62 and 63.

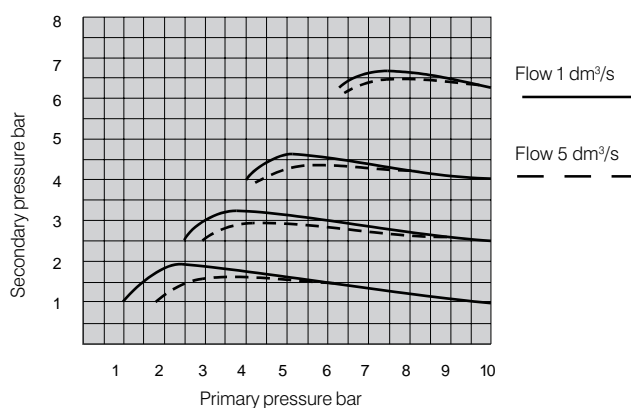
## Dimensions (mm)



## Flow characteristics



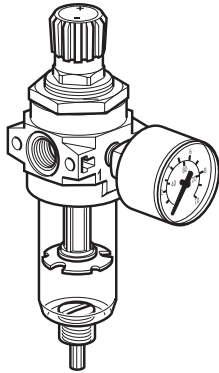
## Regulation characteristics



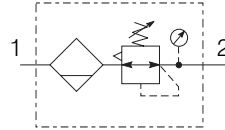


# Mini FRLs

## 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.
- Tamperproof facility.

## Part numbers:

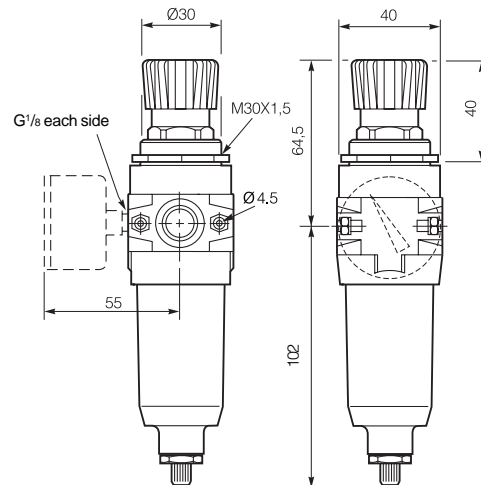
<b>P3A - EA</b>								<b>P</b>
G <sup>1/8</sup> <b>11</b>	Transparent Bowl Manual Drain	<b>B</b>	5 Micron-std	<b>E</b>	Relieving	<b>B</b>	0,2 - 8 bar + Gauge	<b>G</b>
G <sup>1/4</sup> <b>12</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	40 Micron	<b>G</b>	Non-Relieving	<b>N</b>	0,2 - 8 bar No Gauge	<b>N</b>
							0,2 - 2 bar + Gauge	<b>Z</b>
							0,2 - 2 bar No Gauge	<b>Y</b>
							0,2 - 4 bar + Gauge	<b>M</b>
							0,2 - 4 bar No Gauge	<b>L</b>

## Technical information

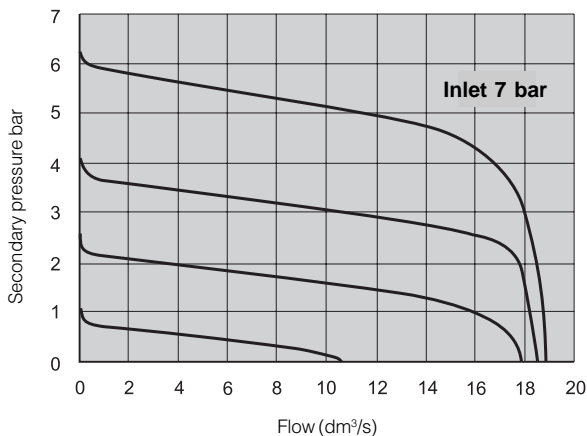
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm <sup>3</sup>
High capacity bowl	33 cm <sup>3</sup>
Weight	132g

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

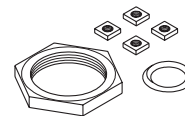
## Dimensions (mm)



## Flow characteristics

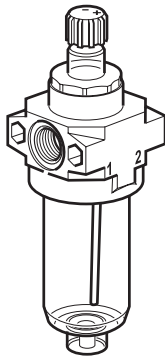


\* Modular connection kit  
with each product

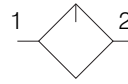


For Repair Kits and Spares  
see page 62 and 63.

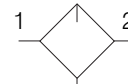
## Lubricators



## Symbols



Lubricator



Lubricator with drain

- High quality polyamide bowls standard.
- 360° sight dome - drip control.
- Low flow oil pick-up capability.

## Part numbers:

<b>P3A - LA</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>N</b>	<b>N</b>
	G <sup>1</sup> / <sub>8</sub> <b>11</b>				
	G <sup>1</sup> / <sub>4</sub> <b>12</b>				
		Transparent Bowl with Manual Drain	<b>B</b>		
		Transparent Bowl Without Drain	<b>A</b>		
		High Capacity Transparent Bowl Manual Drain	<b>6</b>		
		High Capacity Transparent Bowl No Drain	<b>7</b>		

## Technical information

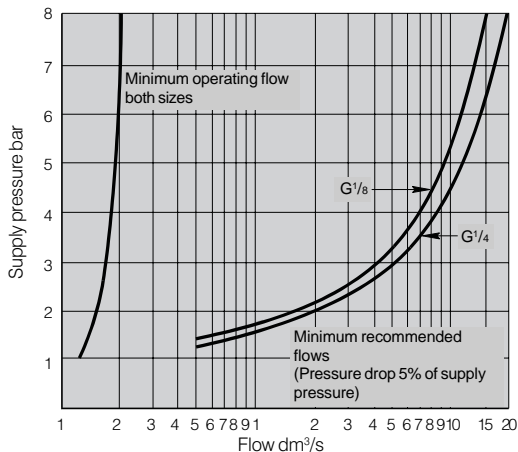
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	26 cm <sup>3</sup>
High capacity bowl	48 cm <sup>3</sup>
Flow* Pre lubricants	G <sup>1</sup> / <sub>8</sub> 780 l/min - 13 dm <sup>3</sup> /s
	G <sup>1</sup> / <sub>4</sub> 1080 l/min - 18 dm <sup>3</sup> /s

For preferred lubricants see page 63.

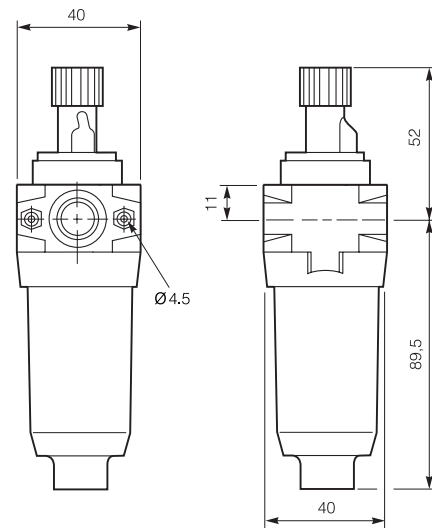
\* At 7 bar inlet 5% pressure drop

**Note:** For materials see page 16.

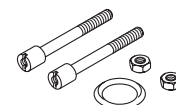
## Flow characteristics



## Dimensions (mm)



\* Modular connection kit with each product



For Repair Kits and Spares see page 62 and 63.

# Mini FRLs

## 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:-  
 $\varnothing 1\text{mm}$ ,  $\varnothing 1,5\text{mm}$ ,  $\varnothing 2,2\text{mm}$ , and  $\varnothing 3\text{mm}$ .

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

### Typical combinations

Fig. 1.

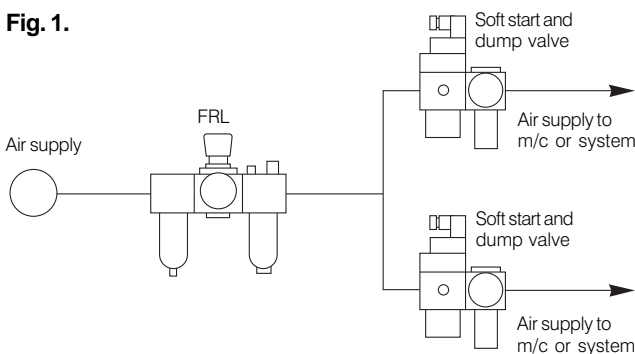


Fig.1. enables part of a system to be isolated and the air dumped to atmosphere whilst operating another part normally.

Fig. 2.

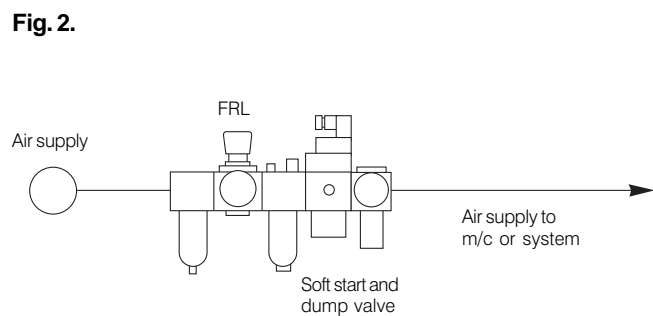
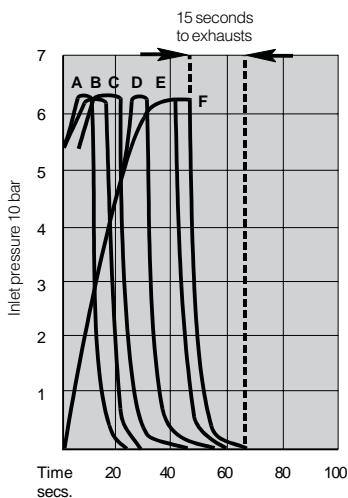


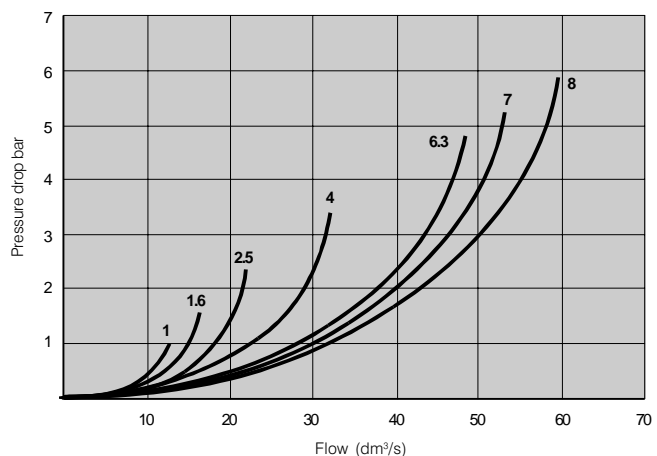
Fig. 2. shows the Soft Start and Dump valve assembled as part of the main Mini FRL combination feeding an entire system.

## Effect of orifice on flow characteristics of pneumatic switch



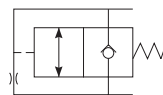
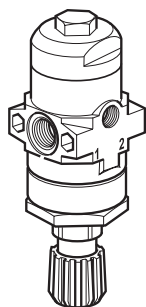
- 6 bar inlet
- 10 litre volume
- 1.5mm dia orifice
- A zero switch point
- B 1 turn
- C 2 turns
- D 3 turns
- E 4 turns
- F 5 turns

## Flow characteristics for ('Soft Start' valve)



## Soft Start Valves

## Symbol



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

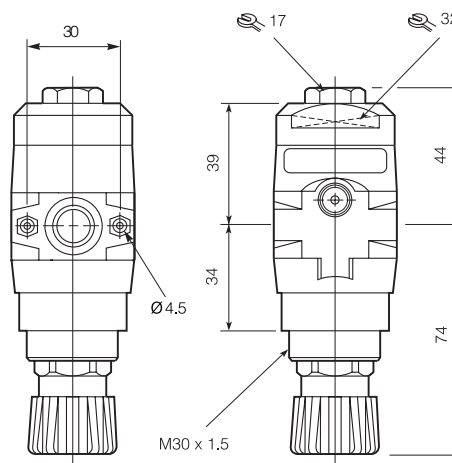
## Part numbers:

<b>P3A - SA</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>0</b>	<b>N</b>
G <sup>1</sup> / <sub>8</sub>	<b>11</b>	Manual adjustment	<b>M</b>		
G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Manual + Gauge	<b>G</b>		

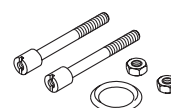
## Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	1000 l/min - 16,7 dm <sup>3</sup> /s
Weight	85g

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

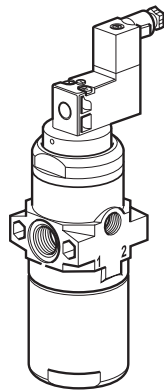


\* Modular connection kit with each product

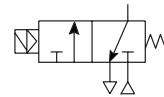


# Mini FRLs

## 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:

<b>P3A - DA</b>				<b>N</b>	
G <sup>1/4</sup> 12	Pilot Monostable 4mm Push-in	<b>PQ</b>	No Solenoid		
	Solenoid (15mm) Monostable	<b>SG</b>	24V. D.C.	<b>2CN</b>	
			Less Solenoid	<del>000</del>	

For alternative solenoids see page 16.

## Technical information

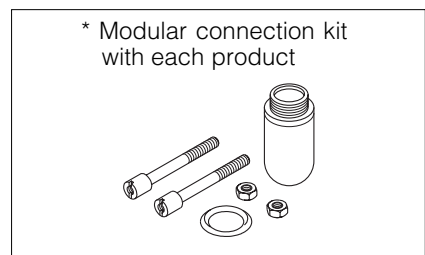
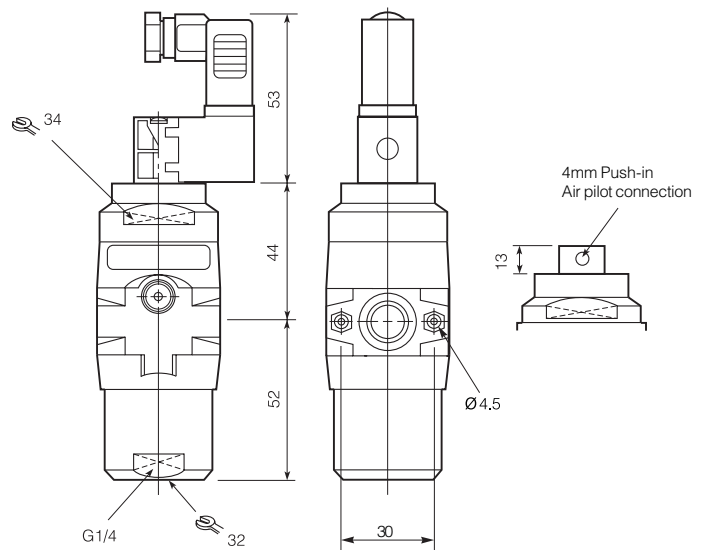
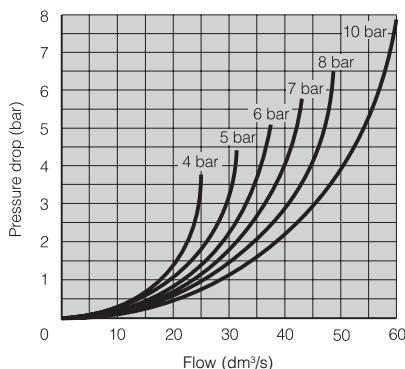
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	
Through valve	to exhaust
1300 l/min - 22 dm <sup>3</sup> /s	1000 l/min - 17 dm <sup>3</sup> /s
Weight	85g

**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 must be maintained. The valve will automatically dump when the holding signal is removed.

## Flow characteristics: Inlet to Secondary





# Mini FRLs

## Materials

### Filter

Body	Nylon 6 glass filled
Bowl (Transparent)	Nylon
Louvre	Acetal
Standard Element	Nylon 6
Coalescing Element	Borosilicate and felt glass fibre
Adsorber Element	Activated charcoal
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	<b>P2E-KV32BN</b>
	24VDC	<b>P2E-KV32CN</b>
	12V 50Hz/60Hz	<b>P2E-KV34BN</b>
	24V 50Hz	<b>P2E-KV31CN</b>
	115V 50Hz/120VAC 60Hz	<b>P2E-KV31FN</b>
	230V 50Hz/240VAC 60Hz	<b>P2E-KV31JN</b>


## Cable plugs 15 mm (8 mm pin spacing) IP 65

	Description	Order code
	Large headed screw for inaccessible or recess position	
	Standard to be wired universal To be wired LED+protection 24 VDC	<b>P8C-C</b> <b>P8C-C26C</b>
	With standard screw	
	Standard to be wired universal To be wired LED+protection 24 VDC	<b>P8C-D</b> <b>P8C-D26C</b>
	With cable and standard screw	
	Standard with 2 m cable	<b>P8L-C2</b>
	Standard with 5 m cable	<b>P8L-C5</b>
	LED+protection 24 VAC/DC, 2 m LED+protection 24 VAC/DC, 5 m	<b>P8L-C226C</b> <b>P8L-C526C</b>

## Solenoids for Dump Valves (CNOMO solenoid)

Supplied with cable plug and non-locking override

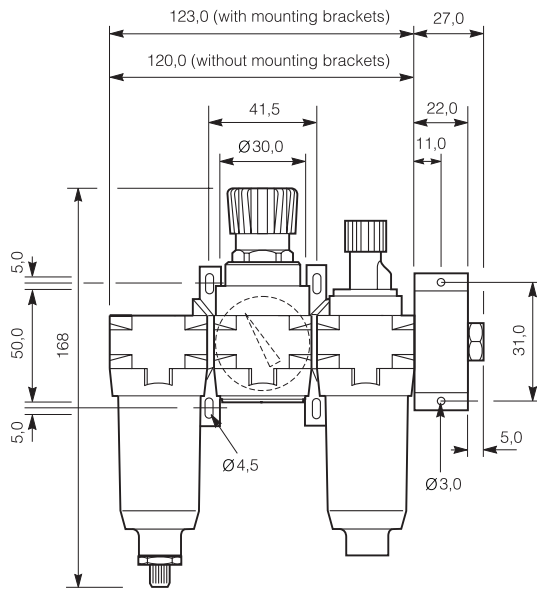
	Voltage	Order code
	<b>CNOMO-Solenoids</b>	
	24VDC (48V 50Hz)	<b>P2G-PV32C1</b>
	24V/50Hz/60Hz (11VDC)	<b>P2G-PV34C1</b>
	110V/50Hz/60Hz (50VDC)	<b>P2G-PV34E1</b>
	230V/50Hz/60Hz (120VDC)	<b>P2G-PV34J1</b>
	12V/50Hz/60Hz (6VDC)	<b>P2G-PV34B1</b>

	Description	Order code
	<b>Cable plug, for CNOMO solenoid</b>	
	24V, LED+Diode	<b>9125 9980-04</b>
	24V AC/DC, LED+VDR	<b>9125 9980-06</b>
	110V AC/DC, LED+VDR	<b>9125 9980-08</b>
	240V AC/DC, LED+VDR	<b>9125 9980-10</b>
	Black	<b>451B</b>

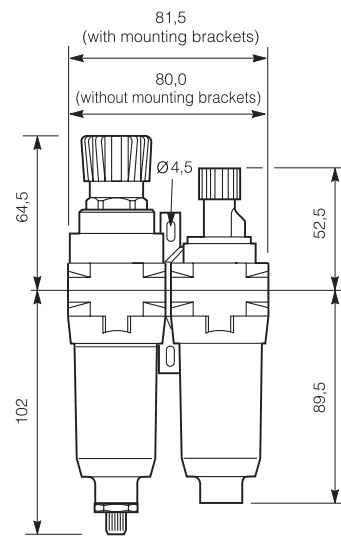


## Combination dimensions

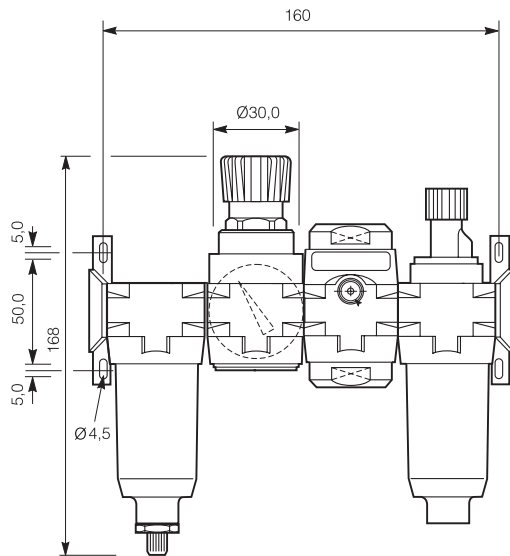
### Filter, Regulator, Lubricator



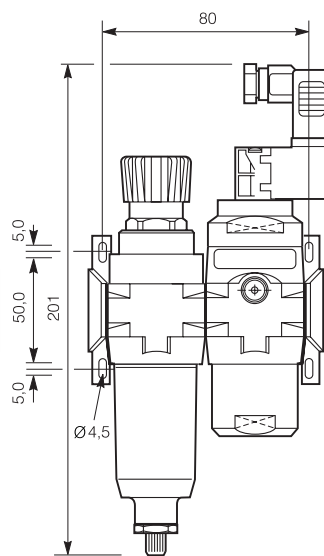
### Filter/Regulator, Lubricator



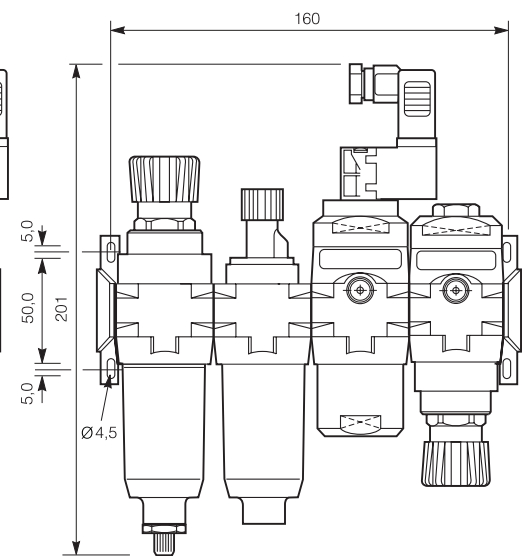
### Filter, Regulator, Manifold, Lubricator.



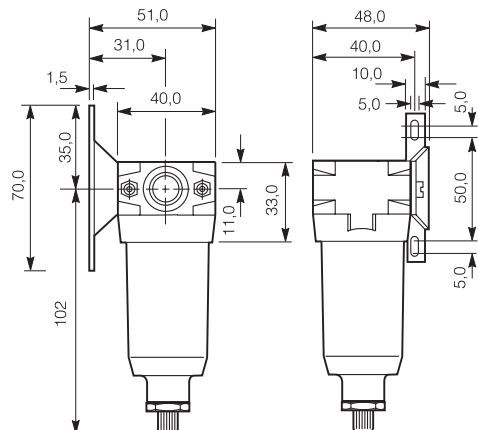
### Filter/Regulator & Dump Valve



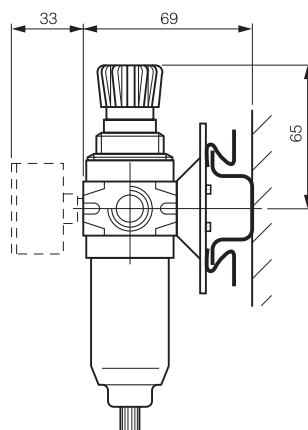
### Filter/Regulator, Lubricator, Dump valve, Soft start valve



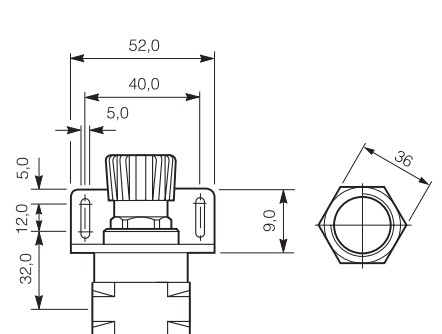
### Wall mountings



### DIN rail



### Neck mounting



# Mini FRLs

## 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



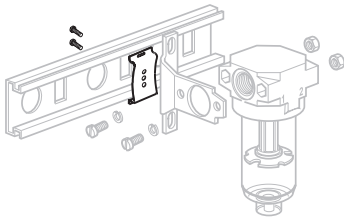
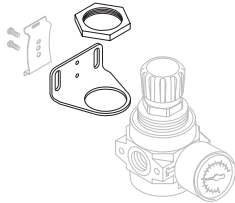

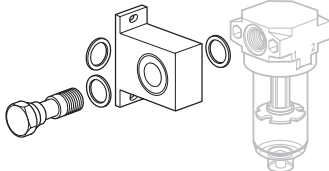
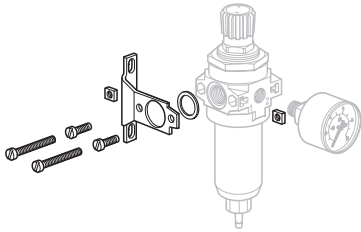
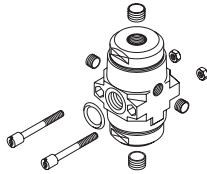

Wall brackets mounted inside an assembly



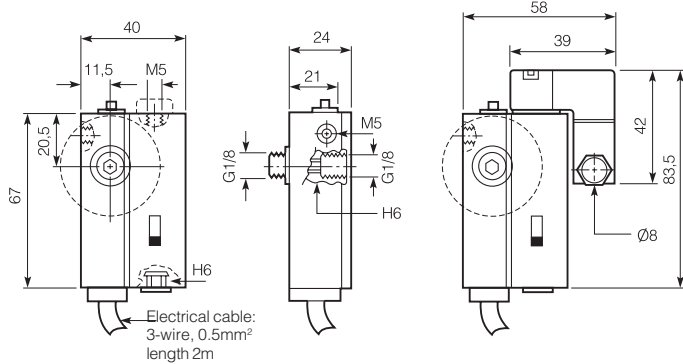
Wall brackets mounted inside an assembly



## Mounting Kits

	Part no.	Mounting Style	
DIN rail Mounting kit	<b>P3A-KA00MKN</b>	DIN rail clip for wall mounting P3A-KA00CWN or P3A-KA00MRN	
	Part no.	Mounting Style	
Angle Bracket Mounting	<b>P3A-KA00MRN</b>	Regulator and Filter/Regulator bracket mounting	
	Part no.	Part no.	
Plastic panel mounting ring	<b>P3A-KA00MPN</b>	Metal panel mounting ring	<b>P3A-KA00MMN</b> 
	Part no.	Mounting Style	
Rear Entry Connector	<b>P3A-KA12CRN</b>	Direct G <sup>1</sup> / <sub>4</sub> ported or may be mounted to butt directly to machine bulkhead	
	Part no.	Mounting Style	
Wall Mounting kit	<b>P3A-KA00CWN</b>	Basic kit for wall mounting individual Regulator or Filter/Regulator units	
	Part no.	Mounting Style	
Modular Manifold Block	<b>P3A - MA1V</b>	Provides 5 outlets May be connected in series	
	Part no.	Mounting Style	
Regulator Tamperproof Kit	<b>P3A - KA00ATN</b>	Prevents unauthorised adjustment	 <b>x5 per kit</b>

## 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 <sup>o</sup> to +55 <sup>o</sup> 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
<b>P3E-KA11SAN</b>	Pneumatic output, manual reset.
<b>P3E-KA11SBN</b>	Pneumatic output, reset.
<b>P3E-KA11SCN</b>	Electrical and pneumatic outputs, manual resets.
<b>P3E-KA11SDN</b>	Electrical and pneumatic outputs, pneumatic reset.
<b>P3E-KA11SEN</b>	Electrical and pneumatic outputs, electrical reset

**Note:** Micro-solenoid not included.

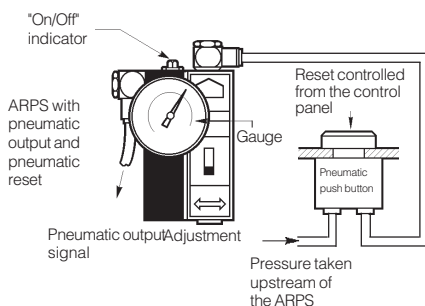
Micro-solenoid valve must be ordered separately.

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

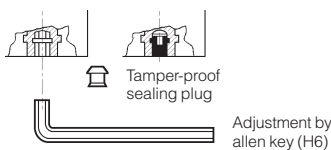
Part no.	Description
<b>P2E-LV32B1</b>	12V. D.C.
<b>P2E-LV32C1</b>	24V. D.C.
<b>P2E-LV32D1</b>	48V. D.C.
<b>P2E-LV34B1</b>	12V. 50/60Hz
<b>P2E-LV31C1</b>	24V. 50Hz
<b>P2E-LV33C1</b>	24V. 60Hz
<b>P2E-LV34D1</b>	48 V. 50/60Hz
<b>P2E-LV31F1</b>	115V. 50Hz / 120V. 60Hz
<b>P2E-LV31J1</b>	230V. 50Hz / 240V.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

See cable plugs Page 16

### Pneumatic remote controlled reset

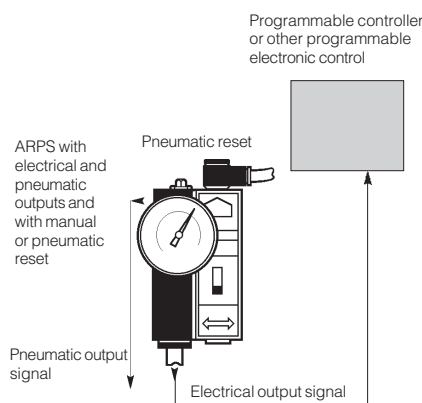


### Adjusting the cut-off pressure

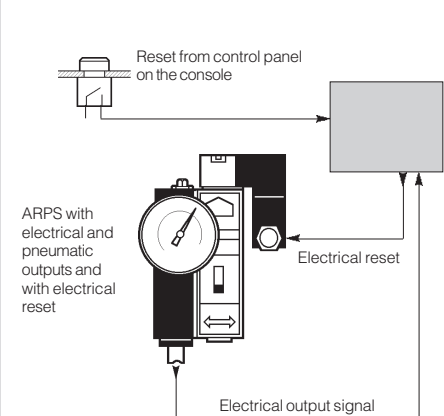


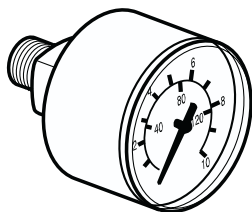
On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

### 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
- Integrated thread sealing ring

## Pressure gauges

Symbol	Description	Pressure range, bar	Port size	Dial mm	Weight Kg	Order code
	Rear entry	0-2,	G1/8	40	0,062	<b>P3D-KAB1AYN</b>
		0-4	G1/8	40	0,062	<b>P3D-KAB1ALN</b>
		0-10	G1/8	40	0,062	<b>P3D-KAB1ANN</b>
		0-20	G1/8	40	0,062	<b>P3D-KAB1AHN</b>
	Rear Entry	0-4	G1/8	50	0,068	<b>P6G-ERB1040</b>
		0-11	G1/8	50	0,068	<b>P6G-ERB1110</b>
		0-14	G1/8	50	0,068	<b>P6G-ERB1140</b>
	Rear entry	0-4	G1/4	50	0,074	<b>P6G-ERB2040</b>
		0-14	G1/4	50	0,074	<b>P6G-ERB2140</b>
		0-20	G1/4	50	0,074	<b>P6G-ERB2200</b>
	Bottom entry	0-11	G1/8	50	0,065	<b>P6G-EBB1110</b>
	Panel Mounted - Rear Entry	0-14	G1/8	50	0,066	<b>P6G-EPA1140</b>
		0-11	G1/8	63	0,080	<b>P6G-FPA1V10</b>
		0-10	G1/4	85	0,180	<b>P6G-HPA1100</b>
	Square - Panel Mounted - Rear Entry	0-10	G1/8	50x50	0,100	<b>P6G-RPA1100</b>
		0-4	G1/8	75x75	0,200	<b>P6G-TPA1040</b>
		0-10	G1/8	75x75	0,190	<b>P6G-TPA1100</b>
	Rear Entry - BackPressure (Reclassifiers)	0-2	G1/8	40	0,062	<b>P6G-DEB1020</b>

## Panel mounting gauges

Panel mounting gauges have a threaded body and are supplied complete with a plastic mounting collar.

<b>Filter Spare Kits Model</b>	<b>Mini Series P3A</b>	<b>Junior Series P3D</b>	<b>Maxi Series P3E</b>	<b>G1 Series P3N</b>
--------------------------------	------------------------	--------------------------	------------------------	----------------------

## 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			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			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			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	

## 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	

Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
<b>Filter/Regulator Spare Kits</b>				
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				

## Lubrication of airlines

Satisfactory operation of airline equipment and effective lubrication depends upon the proper selection of lubrication oil. Oils having a viscosity below ISO3448 Grade 10 to 22 will satisfy most high-speed pneumatic tools and other light duty requirements.

Heavy duty tools and pneumatic valves and cylinders will normally require oils in the viscosity ISO3448 Grade 32 to 68.

Only Paraffinic based oils can be used and the following recommendations are given as a general guide to types of oil that are suitable for use with Parker airline equipment.

Oil Company	High speed tools and systems		Air Cylinders and valves	
	ISO Grade	Grade	ISO Grade	Grade
Century Oils	Century P - 198	15	P.W.L.A	32
Alexander Duckham	Zurcon 2	15	Zurcon 4 32	
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Mobile			VPI-A	32
Silkolene	Silkair GP22	22	Derwent 32	32
Silkolene	Dove 15	15		

Most Parker Pneumatic valves and cylinders are designed for use in non-lube operation. However airline lubrication will increase the service life.

**Note!** If oil lubrication is used, it must be maintained for the service life of the product.

Some specialised lubricants, particular synthetic reclaimed oils and low temperature additives, may contain compounds which are incompatible with certain materials, internal 'O' rings and seals. They may also attack plastic piping or the transparent bowls of the airline lubricator. Attention is drawn to BS6005 (Specification for moulded transparent polycarbonate bowls used in compressed air filters and lubricators).

**Do not use oils with additives, compounds oils containing solvents, graphite, detergents or synthetic oils.**



# Modular Junior FRLs

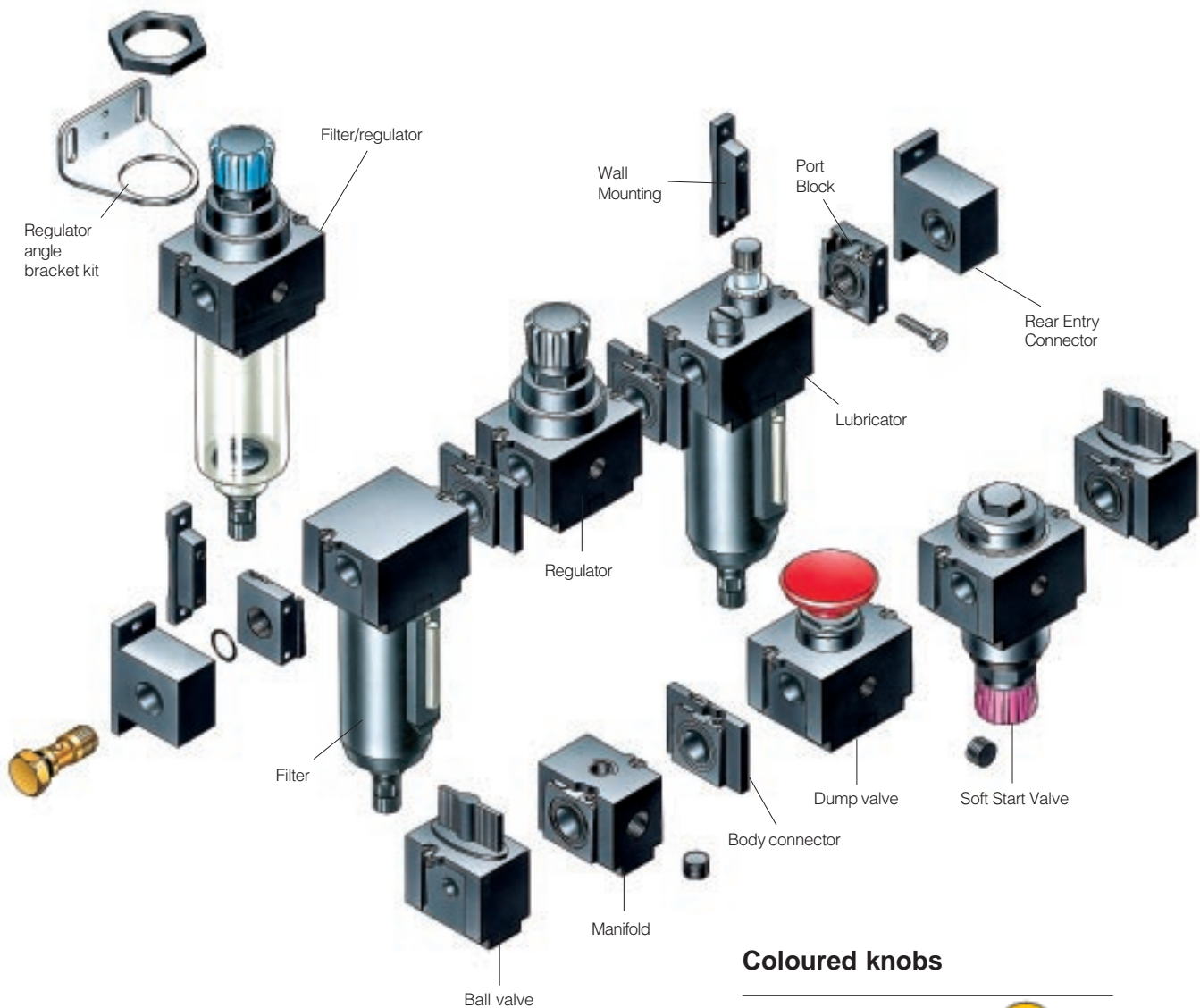
## The System

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.



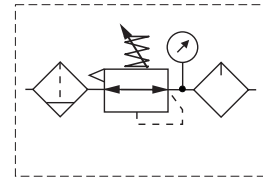
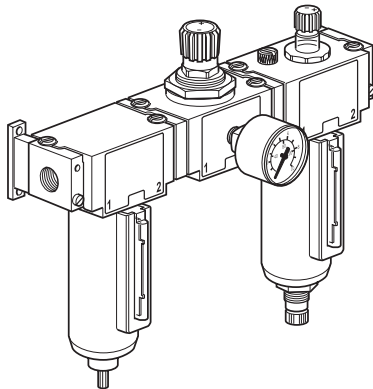
### Coloured knobs

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



P3D-CB12BGB

Ports	Bowl - Drain				Flow @ 6 bar	
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Metal Bowl Manual Drain	Metal Bowl Semi-Auto Drain	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3D-CB12BGB</b>	<b>P3D-CB12CGB</b>	<b>P3D-CB12KGB</b>	<b>P3D-CB12LGB</b>	1200	20
G <sup>3</sup> / <sub>8</sub>	<b>P3D-CB13BGB</b>	<b>P3D-CB13CGB</b>	<b>P3D-CB13KGB</b>	<b>P3D-CB13LGB</b>	1200	20

## Options:

Part no.	<b>P3D-</b>								<b>B</b>	
Options:	Upstream Ball Valve as first unit	<b>A</b>	F/R+L combination	<b>A</b>	G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	No Gauge	<b>N</b>
	Downstream Ball Valve as last unit	<b>B</b>	F+R+L combination	<b>B</b>	G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	With Gauge	<b>G</b>
	Combination without Ball Valve	<b>C</b>	F/R L Combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Filter/Regulator	<b>J</b>			Metal Bowl Manual Drain	<b>K</b>		
			F/R L Combination + Manifold after Filter/Regulator	<b>H</b>			Metal Bowl Semi Auto Drain	<b>L</b>		
			FRL combination + Manifold after Regulator	<b>K</b>						
			FRL combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Regulator	<b>L</b>						

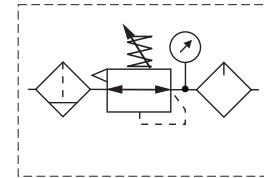
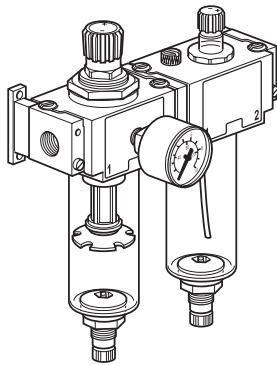
**Note:** For customised combinations consult Technical Sales Department.

# Modular Junior FRLs

## Popular combinations

### Filter/Regulator - Lubricator Combinations

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



P3D-CA12BGB

Ports	Bowl - Drain				Flow @ 6 bar	
	Transparent Bowl Manual Drain	Transparent Bowl Semi -Auto Drain	Metal Bowl Manual Drain	Metal Bowl Semi-Auto Drain	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3D-CA12BGB</b>	<b>P3D-CA12CGB</b>	<b>P3D-CA12KGB</b>	<b>P3D-CA12LGB</b>	1300	21.7
G <sup>3</sup> / <sub>8</sub>	<b>P3D-CA13BGB</b>	<b>P3D-CA13CGB</b>	<b>P3D-CA13KGB</b>	<b>P3D-CA13LGB</b>	1300	21.7

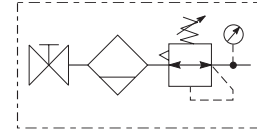
## Options:

<b>Part no.</b>	<b>P3D-</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>B</b>
<b>Options:</b>	Upstream Ball Valve as first unit	<b>A</b>	F/R+L combination	<b>A</b>	G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	No Gauge	<b>N</b>
	Downstream Ball Valve as last unit	<b>B</b>	F+R+L combination	<b>B</b>	G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	With Gauge	<b>G</b>
	Combination without Ball Valve	<b>C</b>	F/R L Combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Filter/Regulator	<b>J</b>			Metal Bowl Manual Drain	<b>K</b>		
			F/R L Combination + Manifold after Filter/Regulator	<b>H</b>			Metal Bowl Semi Auto Drain	<b>L</b>		
			FRL combination + Manifold after Regulator	<b>K</b>						
			FRL combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Regulator	<b>L</b>						

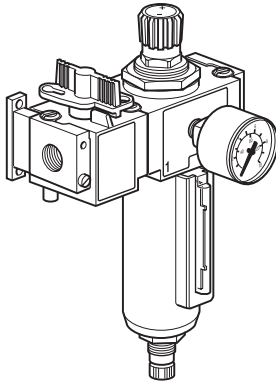
**Note:** For customised combinations consult Technical Sales Department.

## Popular combinations

Filter/Regulator and Ball valve combinations with wall mounting brackets and port connectors, 5µ element, 8 bar secondary pressure



P3D-AN12KGB



Ports	Pressure max, bar	Metal Bowl		Transparent bowl		Flow @ 6 bar	
		Manual	Semi-Auto	Manual	Semi-Auto	l/min	dm³/s
G <sup>1</sup> / <sub>4</sub>	17	<b>P3D-AN12KGB</b>	<b>P3D-AN12LGB</b>			1100	18.3
G <sup>3</sup> / <sub>8</sub>	17	<b>P3D-AN13KGB</b>	<b>P3D-AN13LGB</b>			1380	23
G <sup>1</sup> / <sub>4</sub>	10			<b>P3D-AN12BGB</b>	<b>P3D-AN12CGB</b>	1100	18.3
G <sup>3</sup> / <sub>8</sub>	10			<b>P3D-AN13BGB</b>	<b>P3D-AN13CGB</b>	1380	23

## Options:

<b>P</b>	<b>3</b>	<b>D</b>	-		<b>N</b>				<b>B</b>
----------	----------	----------	---	--	----------	--	--	--	----------

	Ball valve
<b>A</b>	Upstream Ball Valve as first unit
<b>B</b>	Downstream Ball Valve as last unit

	Thread
<b>12</b>	G1/4
<b>13</b>	G3/8

	Bowl / drain
<b>B</b>	Transparent Bowl Manual Drain
<b>C</b>	Transparent Bowl Semi-Auto Drain
<b>K</b>	Metal Bowl Manual Drain
<b>L</b>	Metal Bowl Semi Auto Drain

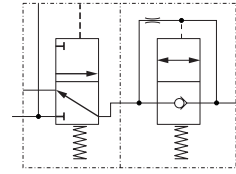
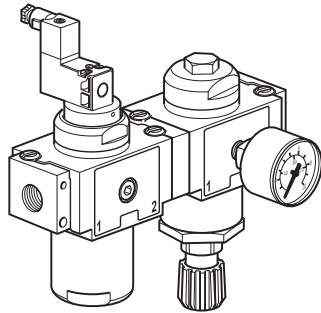
	Gauge
<b>N</b>	Without gauge
<b>G</b>	With gauge

**Note:**  
For customised combinations consult Technical Sales Department.

# Modular Junior FRLs

## Popular combinations

### Dump valve and soft start valve combinations with wall mounting brackets



P3D-CS12QMS

Ports	Solenoid operated dump valve + manual set point soft start valve		Flow @ 6 bar	
	24V DC	Valve without Solenoid	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3D-CS12GMB2CC</b>	<b>P3D-CS12GMB000</b>	2500	41.7
G <sup>3</sup> / <sub>8</sub>	<b>P3D-CS13GMB2CC</b>	<b>P3D-CS13GMB000</b>	2500	41.7

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	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>4</sub>	<b>P3D-CS12QMB</b>	2500	41.7
G <sup>3</sup> / <sub>8</sub>	<b>P3D-CS13QMB</b>	2500	41.7

## Options:

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

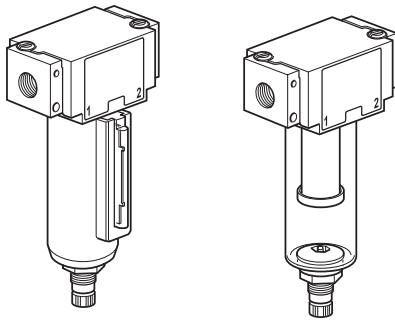
**Options:**

G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Solenoid operated dump valve	<b>G</b>	24V DC	<b>2CC</b>
G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Air pilot operated dump valve	<b>Q</b>	Valve without solenoid	<b>000</b>

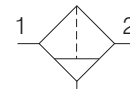
**Note:** For customised combinations consult Technical Sales Department.

# Modular Junior FRLs

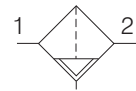
## Filters



## Symbols



Manual drain



Semi auto drain

- 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° increments.
- Elastomeric 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:

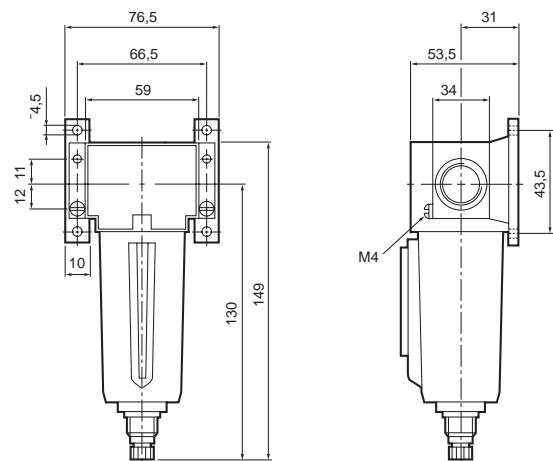
<b>P3D - FA</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>N</b>
G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	5 Micron Element Std	<b>E</b>	
G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Semi Auto Drain	<b>C</b>	40 Micron Element	<b>G</b>	
Without Port blocks	<b>00</b>	Metal Bowl Manual Drain	<b>K</b>			
		Metal Bowl Semi Auto Drain	<b>L</b>			

**Note:** For customised combinations consult Technical Sales Department.

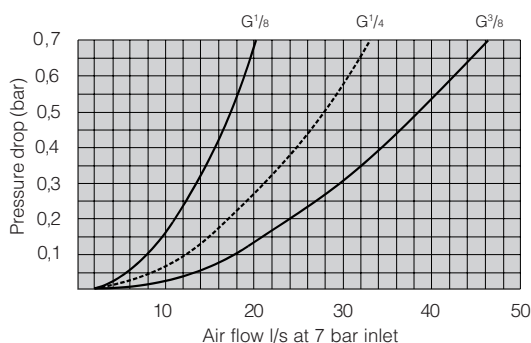
## Technical information

Filter element grade:	Standard 5 micron
	Option 40 micron
Flow @ 7 bar	1200 l/min - G <sup>1</sup> / <sub>8</sub> 20 dm <sup>3</sup> /s
Inlet 0.7 bar	1980 l/min - G <sup>1</sup> / <sub>4</sub> 33 dm <sup>3</sup> /s
pressure drop	2760 l/min - G <sup>3</sup> / <sub>8</sub> 46 dm <sup>3</sup> /s
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)	276g Nylon bowl
without port blocks	450g Metal bowl

## Dimensions (mm)



## Flow characteristics

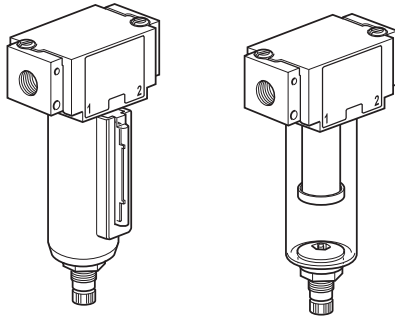


For accessories and port blocks see page 37.

For Repair Kits and Spares see page 62 and 63.

# Modular Junior FRLs

## Coalescing filters and Adsorbers



### Coalescing filters

- Removes oil and water aerosols.
- Maximum oil carry over 0.02 mg/m<sup>3</sup>
- 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/m<sup>3</sup>

### Options:

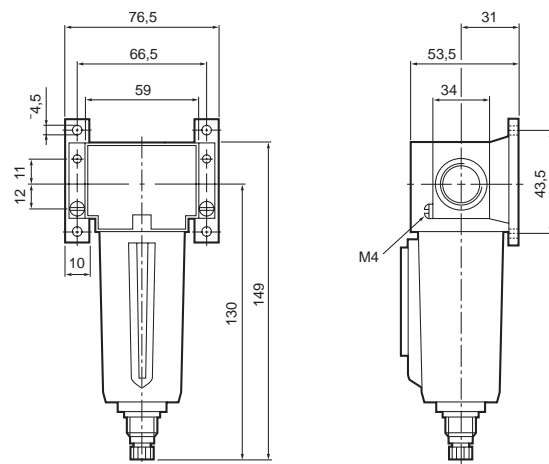
<b>P3D - FA</b>					<b>N</b>
G <sup>1/4</sup>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	Coalescing filter	<b>C</b>
G <sup>3/8</sup>	<b>13</b>	Transparent Bowl Semi Auto Drain	<b>C</b>	Adsorber filter	<b>A</b>
Without Port blocks	<b>00</b>	Metal Bowl Manual Drain	<b>K</b>		
		Metal Bowl Semi Auto Drain	<b>L</b>		

**Note:** For customised combinations consult Technical Sales Department.

### Technical information

Temperature range:	0°C to +50°C max.
Pressure range:	10 bar max Nylon bowl 17 bar max Metal bowl
Weight (g)	276g Transparent bowl without port blocks 450g Metal bowl
Maximum recommended flow	240 l/min - 4 dm <sup>3</sup> /s at 7 bar inlet
Efficiency	99.97% D.O.P. USA Federal standard
Maximum particle passed	0,3 microns

### Dimensions (mm)



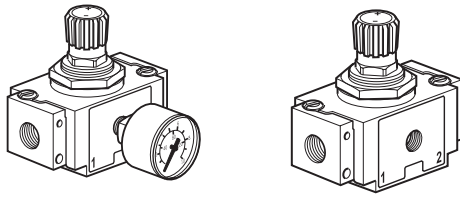
For accessories and port blocks see page 37.

For Repair Kits and Spares see page 62 and 63.

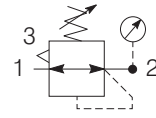


# Modular Junior FRLs

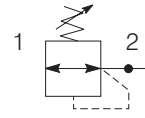
## Regulators



## 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:

<b>P3D - RA</b>					<b>P</b>
G <sup>1/4</sup>	<b>12</b>	Relieving	<b>B</b>	0,4 - 8 bar + Gauge	<b>G</b>
G <sup>1/4</sup>	<b>12</b>	Non-relieving	<b>N</b>	0,4 - 8 bar No Gauge	<b>N</b>
G <sup>3/8</sup>	<b>13</b>			0,2 - 2 bar + Gauge	<b>Z</b>
Without Port blocks	<b>00</b>			0,2 - 2 bar No Gauge	<b>Y</b>
				0,2 - 4 bar + Gauge	<b>M</b>
				0,2 - 4 bar No Gauge	<b>L</b>
				0,4 - 16 bar + Gauge	<b>J</b>
				0,4 - 16 bar No Gauge	<b>H</b>

**Note:** For customised combinations consult Technical Sales Department.

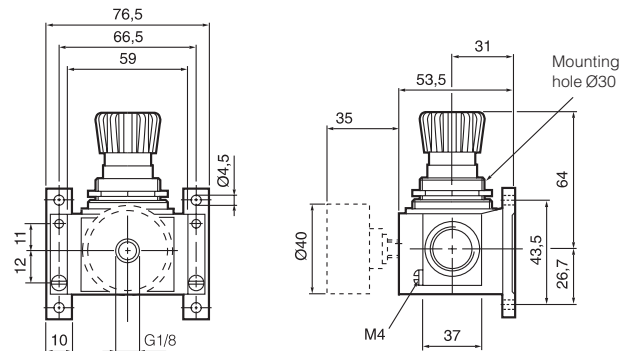
## Technical information

Gauge port size	G <sup>1/8</sup>
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

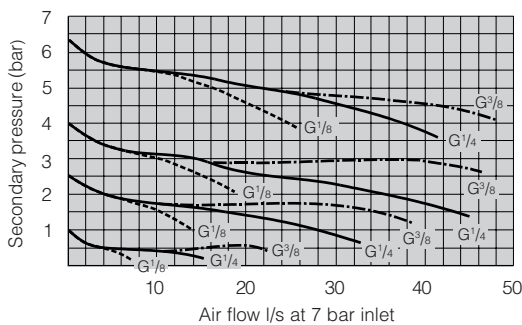
For accessories and port blocks see page 37.

For Gauges see page 61.

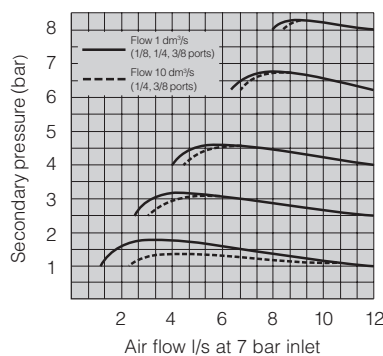
## Dimensions (mm)



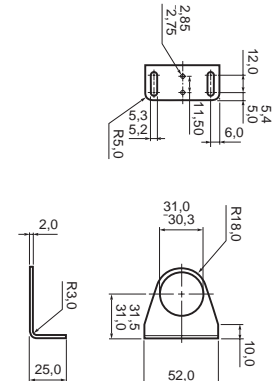
## Flow characteristics



## Regulation characteristics

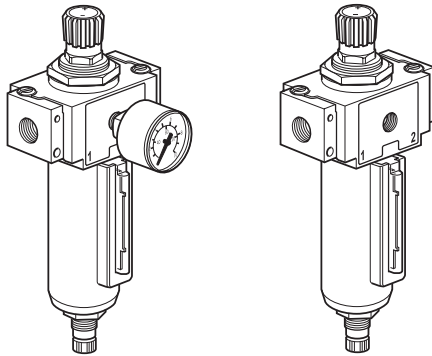


## Regulator angle bracket

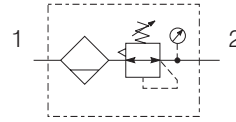


# Modular Junior FRLs

## Filter/Regulators



## Symbol



- Choice of metal bowl with convex sight glass or transparent nylon bowl.
- Elastomeric 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

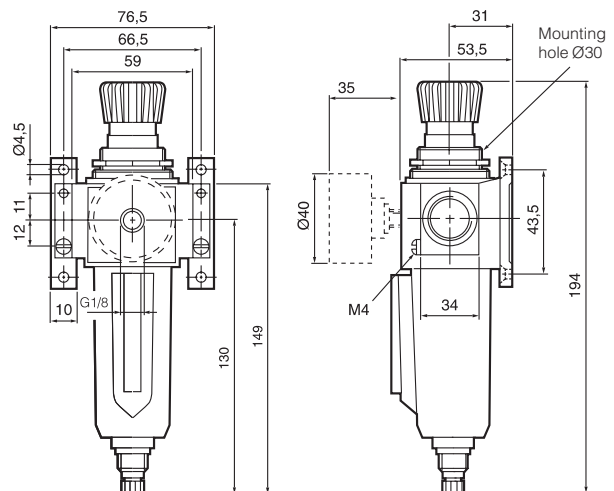
## Options:

<b>P3D - EA</b>								<b>P</b>		
G <sup>1/8</sup>	<b>11</b>	Transparent Bowl Manual Drain	<b>B</b>	5 Micron Element Std	<b>E</b>	Relieving	<b>B</b>	0,4 - 8 bar + Gauge	<b>G</b>	
G <sup>1/4</sup>	<b>12</b>	Transparent Bowl Semi Auto Drain	<b>C</b>	40 Micron Element	<b>G</b>	Non- relieving	<b>N</b>	0,4 - 8 bar No Gauge	<b>N</b>	
G <sup>3/8</sup>	<b>13</b>	Metal Bowl Manual Drain	<b>K</b>					0,2 - 2 bar + Gauge	<b>Z</b>	
Without Port blocks	<b>00</b>	Metal Bowl Semi Auto Drain	<b>L</b>	<b>Note:</b> For customised combinations consult Technical Sales Department.				0,2 - 2 bar No Gauge	<b>Y</b>	
									0,2 - 4 bar + Gauge	<b>M</b>
									0,2 - 4 bar No Gauge	<b>L</b>
									0,4 - 16 bar + Gauge	<b>J</b>
									0,4 - 16 bar No Gauge	<b>H</b>

## Technical information

Gauge port size	G <sup>1/8</sup>	
Maximum inlet pressure	Metal bowls	17 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	

## Dimension (mm)



For performance graphs see Regulator page 27.

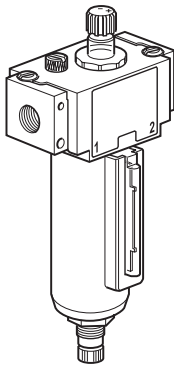
For accessories and port blocks see page 37.

For Gauges see page 61.

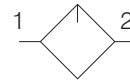
For Repair Kits and Spares see page 62 and 63.

# Modular Junior FRLs

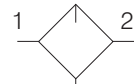
## Lubricators



## 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° increments.
- Constant density lubrication with fingertip adjustment.
- Low flow oil pick up capability.
- 360° drip rate sight glass gives all round visibility, contained in separately serviceable cartridge.

## Options:

**P 3 D - L A**      **F N**

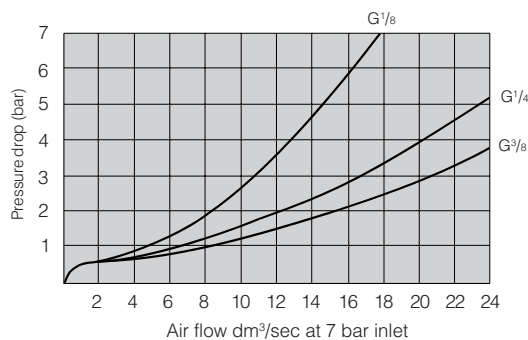
	Thread
<b>11</b>	G1/8
<b>12</b>	G1/4
<b>13</b>	G3/8
<b>00</b>	Without

	Bowl / drain
<b>A</b>	Transparent Bowl Without Drain
<b>B</b>	Transparent Bowl Manual Drain
<b>K</b>	Metal Bowl Manual Drain

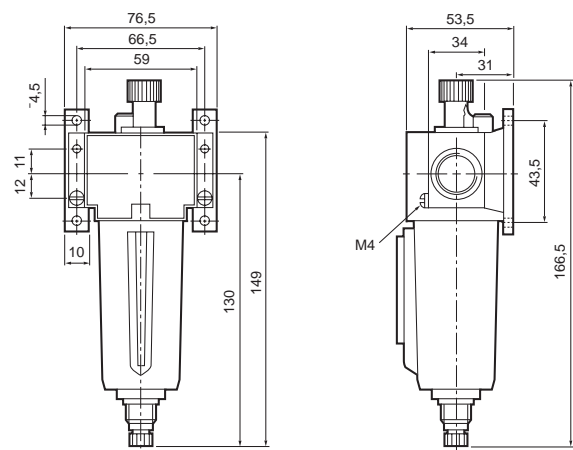
## Technical information

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 456g Metal bowl
without port blocks	
Minimum flow for oil pick up	0,25 dm <sup>3</sup> /s
Bowl capacity	55 cm <sup>3</sup>
Recommended lubricants	See page 63

## Flow characteristics



## Dimensions (mm)



For accessories and port blocks see page 37.

For Repair Kits and Spares see page 62 and 63.

# Modular Junior FRLs

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:-  
 $\varnothing 1,5\text{mm}$ ,  $\varnothing 2,2\text{mm}$ ,  $\varnothing 3\text{mm}$ , and  $\varnothing 3,8\text{mm}$ .

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

## Typical combinations

Fig. 1.

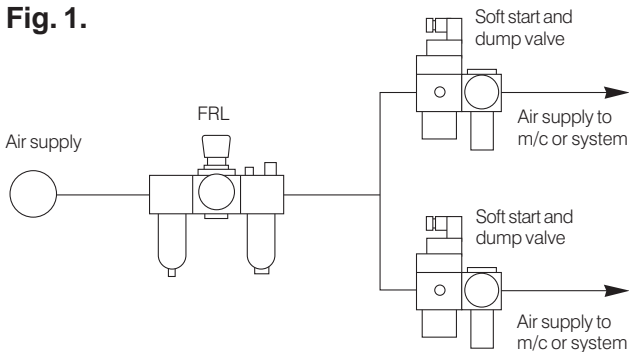


Fig. 1. enables part of a system to be isolated and the air dumped to atmosphere whilst operating another part normally.

Fig. 2.

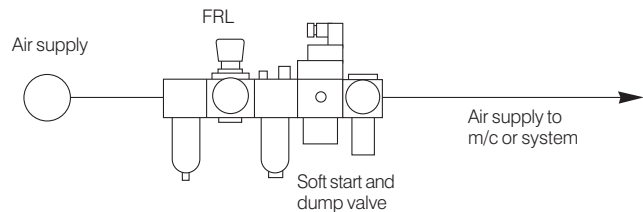
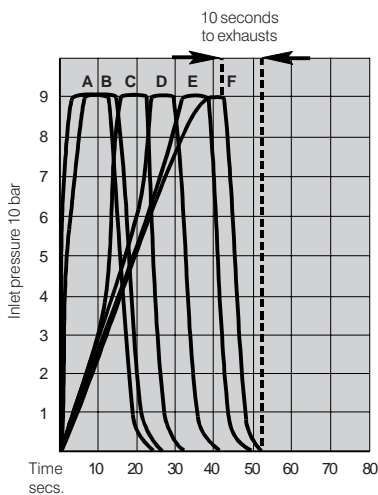


Fig. 2. shows the Soft Start and Dump valve assembled as part of the main 1/4" Modular FRL combination feeding an entire system.

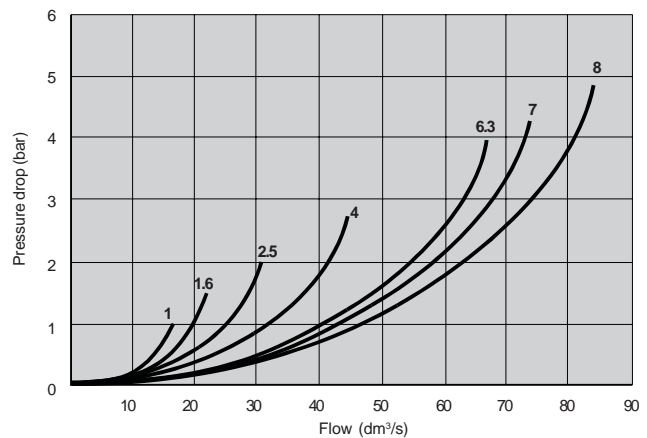
## Effect of orifice on flow characteristics of pneumatic switch (with 1.5mm bleed orifice)



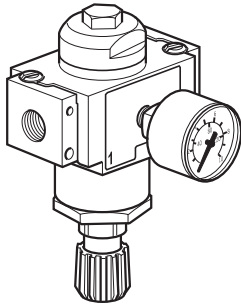
10 bar inlet  
 10 litre volume

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

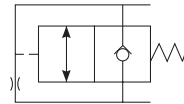
## Flow characteristics for ('Soft Start' valve)



## Soft Start Valves



## Symbol



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

## Options:

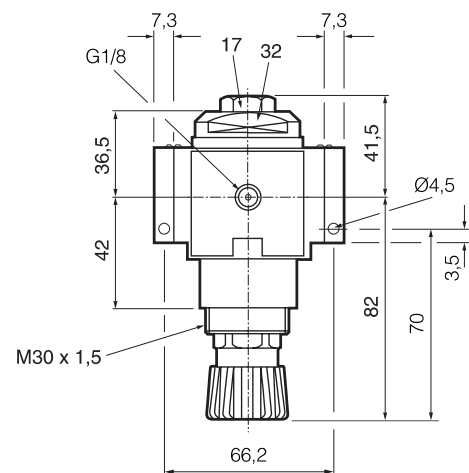
P	3	D	-	S	A				0	N	
						<b>Thread</b>		<b>Gauge</b>			
						11	G1/8	M	Without		
						12	G1/4	G	With		
						13	G3/8				
						00	Without				

## Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	2500 l/min - 41.7 dm <sup>3</sup> /s
Weight	428g

**Note:** For materials see page 34.

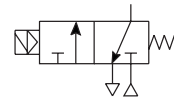
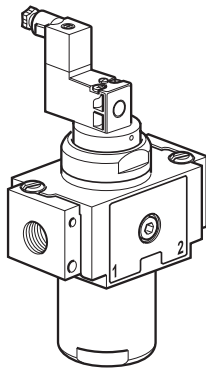
## Dimensions



# Modular Junior FRLs

## 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:

<b>P</b>	<b>3</b>	<b>D</b>	-	<b>D</b>	<b>A</b>			<b>N</b>																																	
				<table border="1"> <thead> <tr> <th></th> <th>Thread</th> </tr> </thead> <tbody> <tr> <td><b>11</b></td> <td>G1/8</td> </tr> <tr> <td><b>12</b></td> <td>G1/4</td> </tr> <tr> <td><b>13</b></td> <td>G3/8</td> </tr> <tr> <td><b>00</b></td> <td>Without</td> </tr> </tbody> </table>			Thread	<b>11</b>	G1/8	<b>12</b>	G1/4	<b>13</b>	G3/8	<b>00</b>	Without	<table border="1"> <thead> <tr> <th></th> <th>Piloting</th> </tr> </thead> <tbody> <tr> <td><b>SG</b></td> <td>Solenoid</td> </tr> <tr> <td><b>SC</b></td> <td>CNOMO Solenoid</td> </tr> <tr> <td><b>PQ</b></td> <td>Air pilot</td> </tr> </tbody> </table>			Piloting	<b>SG</b>	Solenoid	<b>SC</b>	CNOMO Solenoid	<b>PQ</b>	Air pilot	<table border="1"> <thead> <tr> <th></th> <th>Solenoid</th> </tr> </thead> <tbody> <tr> <td><b>0</b></td> <td>None</td> </tr> <tr> <td><b>2</b></td> <td>DC</td> </tr> </tbody> </table>			Solenoid	<b>0</b>	None	<b>2</b>	DC	<table border="1"> <thead> <tr> <th></th> <th>Voltage</th> </tr> </thead> <tbody> <tr> <td><b>CN</b></td> <td>24 VDC</td> </tr> <tr> <td><b>00</b></td> <td>Without Solenoid</td> </tr> </tbody> </table>			Voltage	<b>CN</b>	24 VDC	<b>00</b>	Without Solenoid
	Thread																																								
<b>11</b>	G1/8																																								
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<b>00</b>	Without Solenoid																																								
										For alternative solenoids see page 16.																															

## Technical information

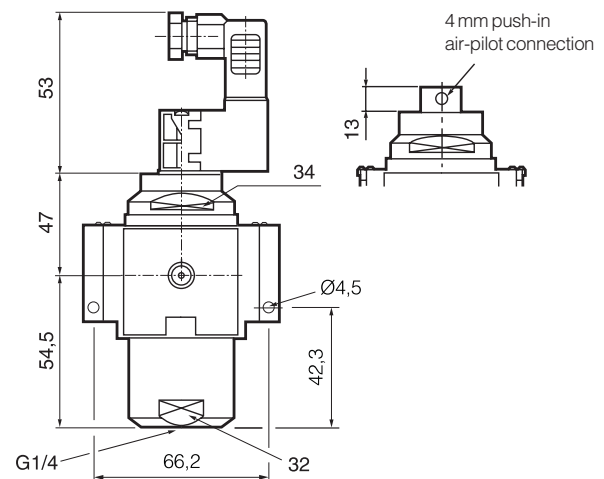
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	
Through valve	to exhaust
2500 l/min - 41.7 dm <sup>3</sup> /s	2000 l/min - 33.3 dm <sup>3</sup> /s
Weight	484g

**Note:** For materials see page 34.

## 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 must be maintained. The valve will automatically dump when the holding signal is removed.

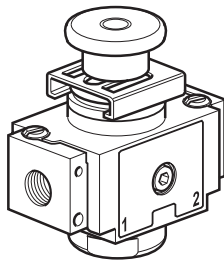
## Dimensions



Muffler included with each product.



## Manually Operated Dump Valves

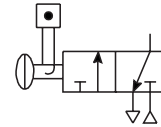


- Shuts off upstream and dumps downstream pressure.
- Choice of red or black knobs.
- G<sup>1</sup>/<sub>8</sub>, G<sup>1</sup>/<sub>4</sub> or G<sup>3</sup>/<sub>8</sub> ports.
- Ventral G<sup>1</sup>/<sub>4</sub> exhaust port.
- Padlockable version.
- 2 position or latching versions.

### Options:

P	3	D	-	D	A				N
		<b>Thread</b>		<b>Knob / Function</b>		<b>Locking Clip</b>			
		11	G1/8	B	Black - 2 position	N	Without Locking Clip		
		12	G1/4	R	Red - 2 position	L	With Locking Clip		
		13	G3/8	N	Red - Latching				
		00	Without	M	Black - Latching				

## Symbol



### BISTABLE version

The dumping of downstream pressure is manually actuated by depressing the knob. To reset, both effective upstream pressure and a manual lift of the knob is required.

### MONOSTABLE version . 2 exhaust dump functions

Manually, by maintaining the button thrust down during time required to dump the downstream pressure. Automatically, when the upstream pressure falls below the set pressure threshold. To reset, effective upstream pressure and a manual lift of the knob is required.

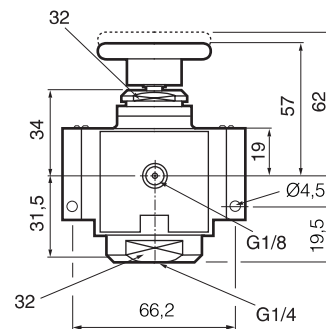
MONOSTABLE dump valves are an important element in machine safety considerations. After a unexpected upstream pressure failure, e.g compressor break down), system pressure reset will be only be obtained by lifting the knob combined with having an effective upstream pressure.

## Technical information

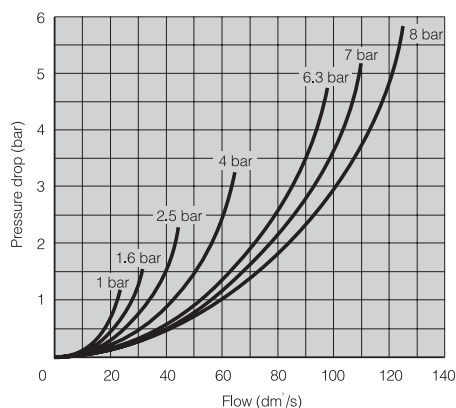
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	
Through valve	to exhaust
2600 l/min - 43.3 dm <sup>3</sup> /s	2800 l/min - 46.7 dm <sup>3</sup> /s
Weight	360g

**Note:** For materials see page 34.

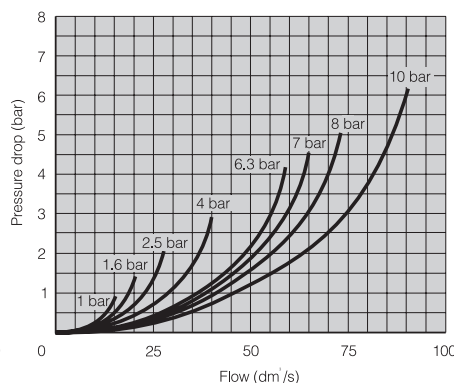
## Dimensions



### Flow characteristics: Inlet to secondary



### Flow characteristics: Secondary to exhaust




Muffler included with each product.






# Solenoids for Soft Start and Dump Valves

## Solenoids for Dump Valves (15mm solenoid)

Supplied with cable plug and non-locking flush manual override


	Voltage	Order code
	12VDC	<b>P2E-KV32BN</b>
	24VDC	<b>P2E-KV32CN</b>
	12V 50Hz/60Hz	<b>P2E-KV34BN</b>
	24V 50Hz	<b>P2E-KV31CN</b>
	115V 50Hz/120VAC 60Hz	<b>P2E-KV31FN</b>
	230V 50Hz/240VAC 60Hz	<b>P2E-KV31JN</b>

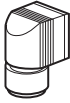
## Cable plugs 15 mm (8 mm pin spacing) IP 65

	Description	Order code
	Large headed screw for inaccessible or recess position	
	Standard to be wired universal	<b>P8C-C</b>
	To be wired LED+protection 24 VDC	<b>P8C-C26C</b>
	With standard screw	
	Standard to be wired universal	<b>P8C-D</b>
	To be wired LED+protection 24 VDC	<b>P8C-D26C</b>
	With cable and standard screw	
	Standard with 2 m cable	<b>P8L-C2</b>
	Standard with 5 m cable	<b>P8L-C5</b>
	LED+protection 24 VAC/DC, 2 m	<b>P8L-C226C</b>
	LED+protection 24 VAC/DC, 5 m	<b>P8L-C526C</b>

## Solenoids for Dump Valves (CNOMO solenoid)

Supplied with cable plug and non-locking override

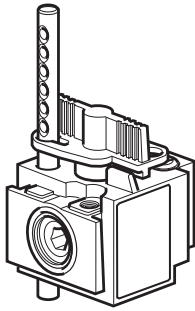
	Voltage	Order code
	<b>CNOMO-Solenoids</b>	
	24VDC (48V 50Hz)	<b>P2G-PV32C1</b>
	24V/50Hz/60Hz (11VDC)	<b>P2G-PV34C1</b>
	110V/50Hz/60Hz (50VDC)	<b>P2G-PV34E1</b>
	230V/50Hz/60Hz (120VDC)	<b>P2G-PV34J1</b>
	12V/50Hz/60Hz (6VDC)	<b>P2G-PV34B1</b>

	Description	Order code
	<b>Cable plug, for CNOMO solenoid</b>	
	24V, LED+Diode	<b>9125 9980-04</b>
	24V AC/DC, LED+VDR	<b>9125 9980-06</b>
	110V AC/DC, LED+VDR	<b>9125 9980-08</b>
	240V AC/DC, LED+VDR	<b>9125 9980-10</b>
	Black	<b>451B</b>

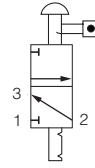


# Modular Junior FRLs

## Junior Modular Ball Valve



## Symbol



- Positive bubble tight shut-off.
- Upstream and downstream versions.
- Padlockable version.
- Ventral G<sup>1</sup>/<sub>4</sub> exhaust port.

Connection	Pressure max, bar	Actuation	Note	Weight Kg	Order code	Flow @ 6 bar	
						l/min	dm <sup>3</sup> /s
Upstream	10	Hand	Standard	0,230	<b>P3D-VA00A0N</b>	1400	23.3
Downstream	10	Hand	Standard	0,230	<b>P3D-VA00B0N</b>	1400	23.3
Upstream	10	Hand	3 Padlock Facility	0,255	<b>P3D-VA00P0N</b>	1400	23.3
Downstream	10	Hand	3 Padlock Facility	0,255	<b>P3D-VA00R0N</b>	1400	23.3
Upstream	10	Hand	6 Padlock Facility	0,260	<b>P3D-VA00Q0N</b>	1400	23.3
Downstream	10	Hand	6 Padlock Facility	0,260	<b>P3D-VA00S0N</b>	1400	23.3

**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.

**Note!** Cannot be used separately.

## 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

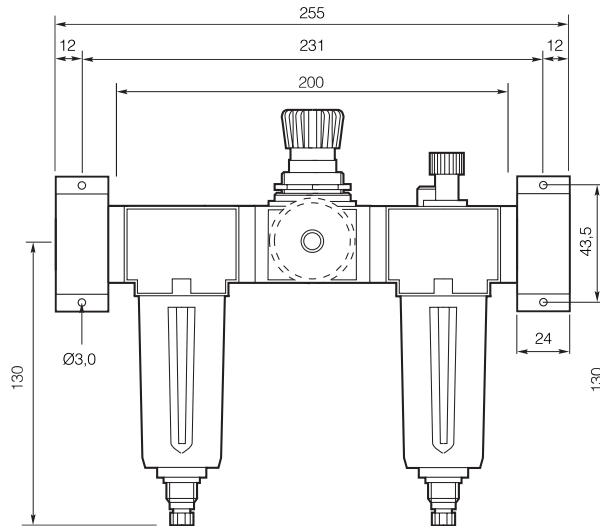
### Accessory Products

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

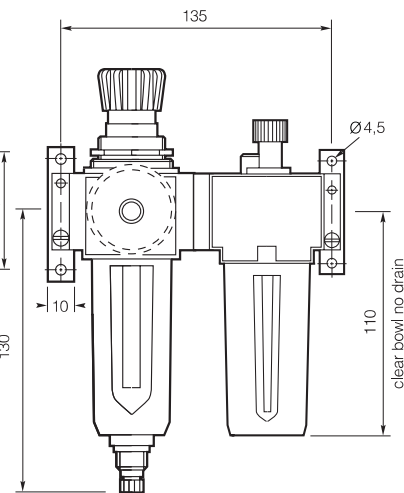
## Dimensions

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

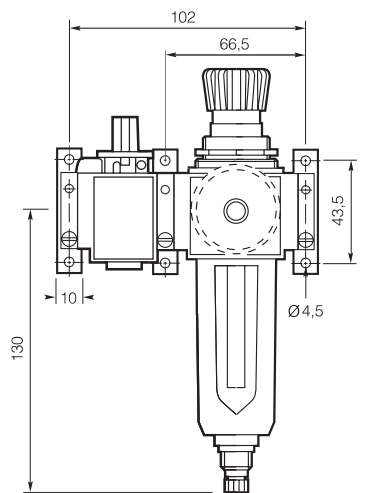
**Filter, Regulator, Lubricator**



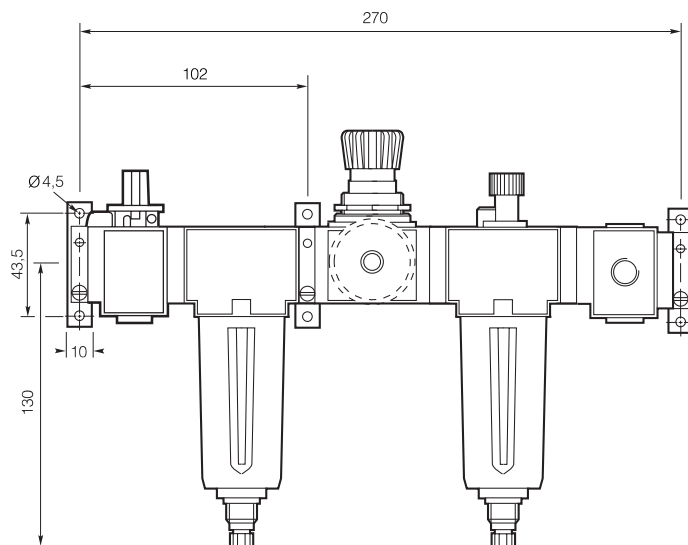
**Filter/Regulator, Lubricator**



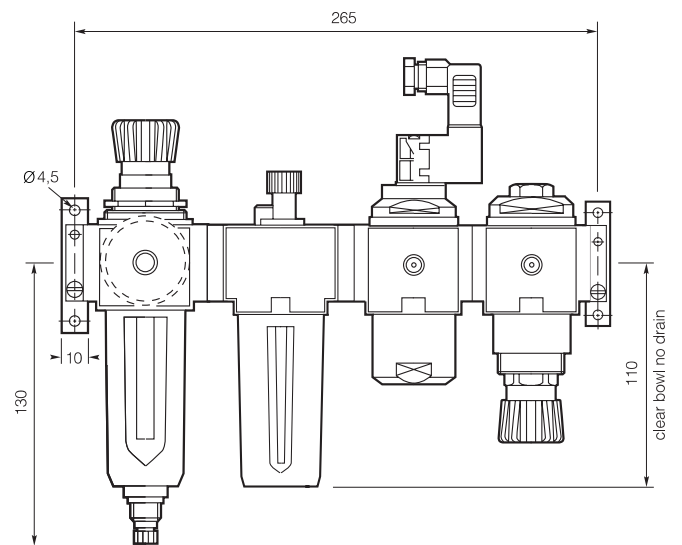
**Ball Valve + Filter/Regulator**



**Ball valve, Filter, Regulator, Lubricator, Manifold**



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



All dimensions in (mm).

# Modular Junior FRLs

## 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



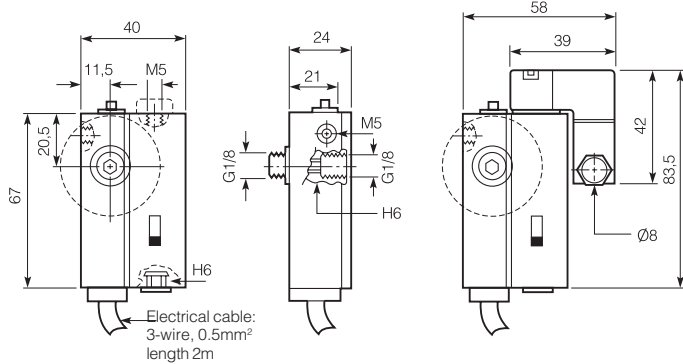
Neck mounting bracket on Filter/Regulator



Popular combination with wall mounting brackets



## 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 <sup>o</sup> to +55 <sup>o</sup> 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
<b>P3E-KA11SAN</b>	Pneumatic output, manual reset.
<b>P3E-KA11SBN</b>	Pneumatic output, reset.
<b>P3E-KA11SCN</b>	Electrical and pneumatic outputs, manual resets.
<b>P3E-KA11SDN</b>	Electrical and pneumatic outputs, pneumatic reset.
<b>P3E-KA11SEN</b>	Electrical and pneumatic outputs, electrical reset

**Note:** Micro-solenoid not included.

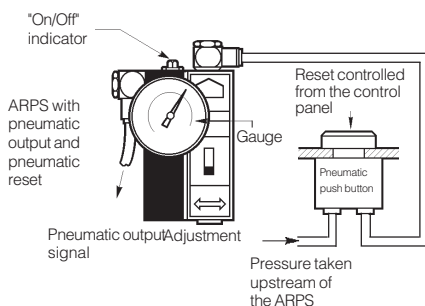
Micro-solenoid valve must be ordered separately.

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

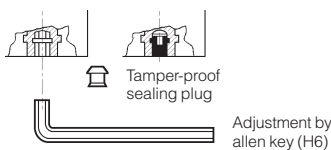
Part no.	Description
<b>P2E-LV32B1</b>	12V. D.C.
<b>P2E-LV32C1</b>	24V. D.C.
<b>P2E-LV32D1</b>	48V. D.C.
<b>P2E-LV34B1</b>	12V. 50/60Hz
<b>P2E-LV31C1</b>	24V. 50Hz
<b>P2E-LV33C1</b>	24V. 60Hz
<b>P2E-LV34D1</b>	48 V. 50/60Hz
<b>P2E-LV31F1</b>	115V. 50Hz / 120V. 60Hz
<b>P2E-LV31J1</b>	230V. 50Hz / 240V.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

See cable plugs Page 16

### Pneumatic remote controlled reset

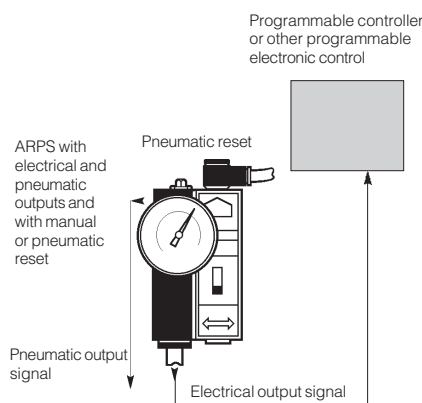


### Adjusting the cut-off pressure

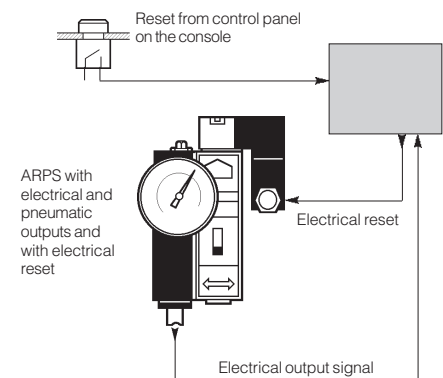


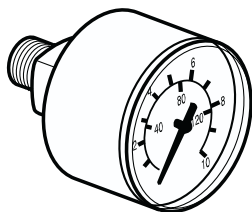
On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

### 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
- Integrated thread sealing ring

## Pressure gauges

Symbol	Description	Pressure range, bar	Port size	Dial mm	Weight Kg	Order code
	Rear entry	0-2,	G1/8	40	0,062	<b>P3D-KAB1AYN</b>
		0-4	G1/8	40	0,062	<b>P3D-KAB1ALN</b>
		0-10	G1/8	40	0,062	<b>P3D-KAB1ANN</b>
		0-20	G1/8	40	0,062	<b>P3D-KAB1AHN</b>
	Rear Entry	0-4	G1/8	50	0,068	<b>P6G-ERB1040</b>
		0-11	G1/8	50	0,068	<b>P6G-ERB1110</b>
		0-14	G1/8	50	0,068	<b>P6G-ERB1140</b>
	Rear entry	0-4	G1/4	50	0,074	<b>P6G-ERB2040</b>
		0-14	G1/4	50	0,074	<b>P6G-ERB2140</b>
		0-20	G1/4	50	0,074	<b>P6G-ERB2200</b>
	Bottom entry	0-11	G1/8	50	0,065	<b>P6G-EBB1110</b>
	Panel Mounted - Rear Entry	0-14	G1/8	50	0,066	<b>P6G-EPA1140</b>
		0-11	G1/8	63	0,080	<b>P6G-FPA1V10</b>
		0-10	G1/4	85	0,180	<b>P6G-HPA1100</b>
	Square - Panel Mounted - Rear Entry	0-10	G1/8	50x50	0,100	<b>P6G-RPA1100</b>
		0-4	G1/8	75x75	0,200	<b>P6G-TPA1040</b>
		0-10	G1/8	75x75	0,190	<b>P6G-TPA1100</b>
	Rear Entry - BackPressure (Reclassifiers)	0-2	G1/8	40	0,062	<b>P6G-DEB1020</b>

## Panel mounting gauges

Panel mounting gauges have a threaded body and are supplied complete with a plastic mounting collar.

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			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			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			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	

## 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	

Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
<b>Filter/Regulator Spare Kits</b>				
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				

## Lubrication of airlines

Satisfactory operation of airline equipment and effective lubrication depends upon the proper selection of lubrication oil. Oils having a viscosity below ISO3448 Grade 10 to 22 will satisfy most high-speed pneumatic tools and other light duty requirements.

Heavy duty tools and pneumatic valves and cylinders will normally require oils in the viscosity ISO3448 Grade 32 to 68.

Only Paraffinic based oils can be used and the following recommendations are given as a general guide to types of oil that are suitable for use with Parker airline equipment.

Oil Company	High speed tools and systems		Air Cylinders and valves	
	ISO Grade	Grade	ISO Grade	Grade
Century Oils	Century P - 198	15	P.W.L.A	32
Alexander Duckham	Zurcon 2	15	Zurcon 4 32	
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Mobile			VPI-A	32
Silkolene	Silkair GP22	22	Derwent 32	32
Silkolene	Dove 15	15		

Most Parker Pneumatic valves and cylinders are designed for use in non-lube operation. However airline lubrication will increase the service life.


**Note!** If oil lubrication is used, it must be maintained for the service life of the product.

Some specialised lubricants, particular synthetic reclaimed oils and low temperature additives, may contain compounds which are incompatible with certain materials, internal 'O' rings and seals. They may also attack plastic piping or the transparent bowls of the airline lubricator. Attention is drawn to BS6005 (Specification for moulded transparent polycarbonate bowls used in compressed air filters and lubricators).

**Do not use oils with additives, compounds oils containing solvents, graphite, detergents or synthetic oils.**

# Modular Junior FRLs

## Accessories

Description	Connection	Weight	Order code Kg	
Port connector kits (2 port blocks + 2 seals)	G1/8	0,150	<b>P3D-KA11CPN</b>	
	G1/4	0,150	<b>P3D-KA12CPN</b>	
	G3/8	0,150	<b>P3D-KA13CPN</b>	
Body connector	Without port	0,088	<b>P3D-KA00CBN</b>	
	With G1/4 ventral port	0,088	<b>P3D-KA12CAN</b>	
Wall mounting kit (2 brackets + 2 screws)		0,048	<b>P3D-KA00MWN</b>	
DIN rail mounting kit for P3A-KA00MRN		0,010	<b>P3A-KA00MKN</b>	
Regulator angle bracket kit (Angle bracket + mounting ring)		0,020	<b>P3A-KA00MRN</b>	
Plastic panel mounting ring		0,010	<b>P3A-KA00MPN</b>	
Metal panel mounting ring		0,016	<b>P3A-KA00MMN</b>	
Regulator Tamperproof kit (Kit contains 5 pieces)		0,010	<b>P3A-KA00ATN</b>	
Modular manifold block* (Includes port plugs)	1 x G1/8 2 x G1/4	0,208	<b>P3D-MA1V</b>	
Rear entry connector kit	G1/4	0,120	<b>P3D-KA12CRN</b>	

\*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

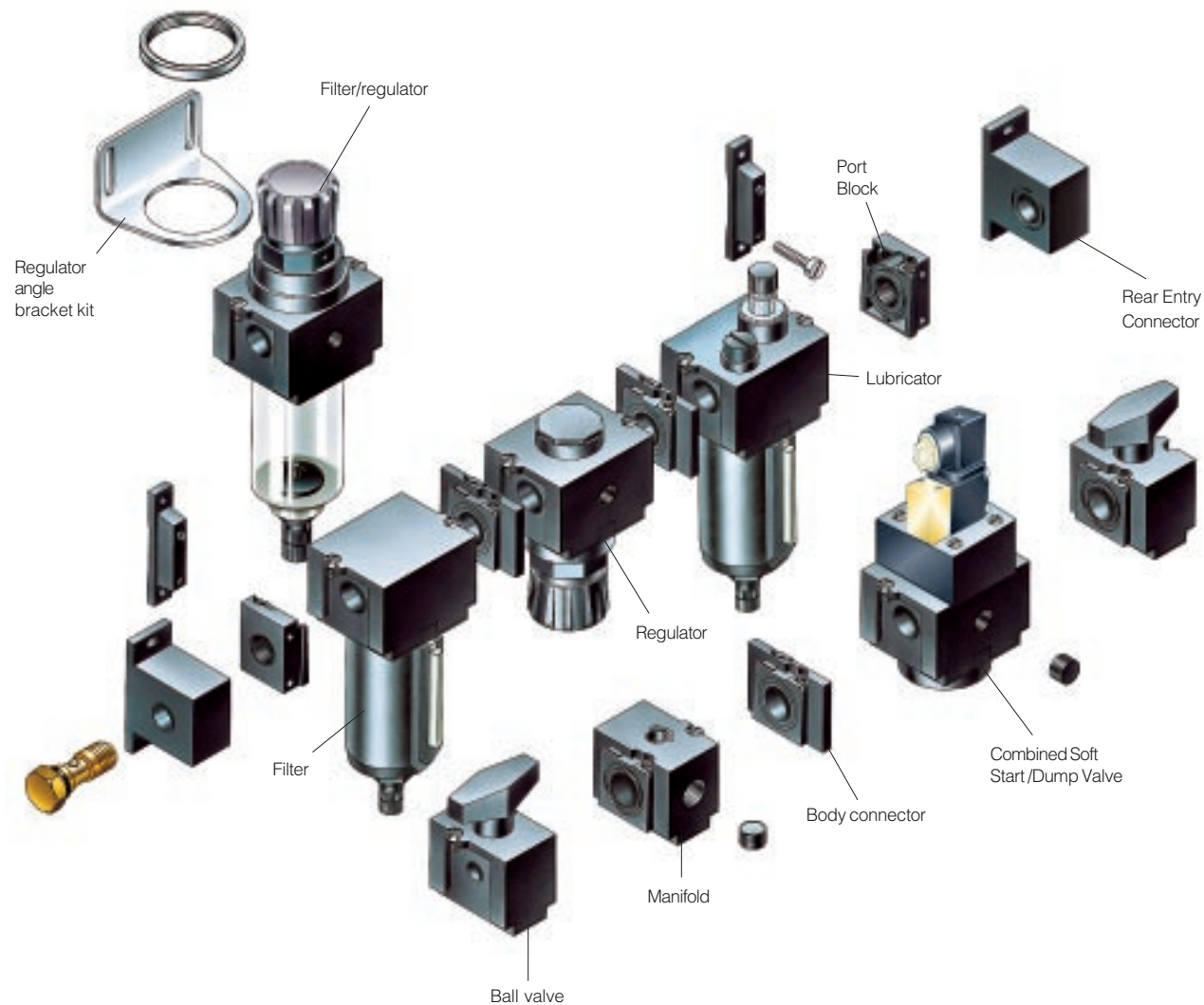
## The System

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



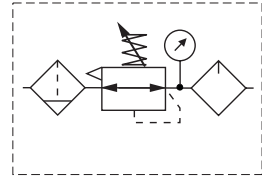
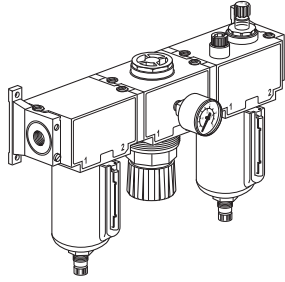
8 bar Black



4 bar Grey



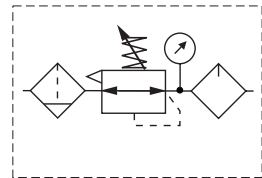
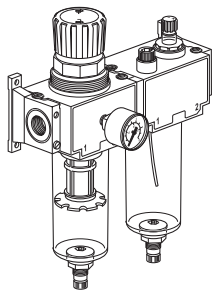
## Popular combinations



## 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 Semi-Auto Drain	High Flow Metal Bowl Auto Drain	Transparent Bowl + Manual Drain	Transparent Bowl + Semi-Auto Drain	Transparent Bowl + Auto Drain	Flow @ 6 bar l/min dm <sup>3</sup> /s
G <sup>3</sup> / <sub>8</sub>	<b>P3E-CB13KGB</b>	<b>P3E-CB13LGB</b>	<b>P3E-CB13MGB</b>	<b>P3E-CB13BGB</b>	<b>P3E-CB13CGB</b>	<b>P3E-CB13DGB</b>	3600 60
G <sup>1</sup> / <sub>2</sub>	<b>P3E-CB14KGB</b>	<b>P3E-CB14LGB</b>	<b>P3E-CB14MGB</b>	<b>P3E-CB14BGB</b>	<b>P3E-CB14CGB</b>	<b>P3E-CB14DGB</b>	3800 63.3
G <sup>3</sup> / <sub>4</sub>	<b>P3E-CB16KGB</b>	<b>P3E-CB16LGB</b>	<b>P3E-CB16MGB</b>	<b>P3E-CB16BGB</b>	<b>P3E-CB16CGB</b>	<b>P3E-CB16DGB</b>	3800 63.3



## 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 Semi-Auto Drain	High Flow Metal Bowl Auto Drain	Transparent Bowl + Manual Drain	Transparent Bowl + Semi-Auto Drain	Transparent Bowl + Auto Drain	Flow @ 6 bar l/min dm <sup>3</sup> /s
G <sup>3</sup> / <sub>8</sub>	<b>P3E-CA13KGB</b>	<b>P3E-CA13LGB</b>	<b>P3E-CA13MGB</b>	<b>P3E-CA13BGB</b>	<b>P3E-CA13CGB</b>	<b>P3E-CA13DGB</b>	3600 60
G <sup>1</sup> / <sub>2</sub>	<b>P3E-CA14KGB</b>	<b>P3E-CA14LGB</b>	<b>P3E-CA14MGB</b>	<b>P3E-CA14BGB</b>	<b>P3E-CA14CGB</b>	<b>P3E-CA14DGB</b>	3600 60
G <sup>3</sup> / <sub>4</sub>	<b>P3E-CA16KGB</b>	<b>P3E-CA16LGB</b>	<b>P3E-CA16MGB</b>	<b>P3E-CA16BGB</b>	<b>P3E-CA16CGB</b>	<b>P3E-CA16DGB</b>	3600 60

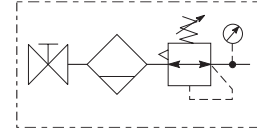
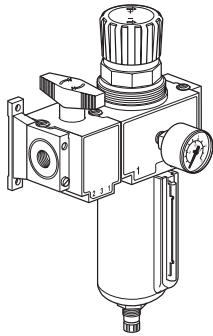
<b>Part no.</b>	<b>P3E-</b>							<b>G</b>	<b>B</b>
<b>Options:</b>	Upstream Ball Valve as first unit	<b>A</b>	F/R+L combination	<b>A</b>	G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Manual Drain	<b>B</b>	
	Downstream Ball Valve as last unit	<b>B</b>	F+R+L combination	<b>B</b>	G <sup>1</sup> / <sub>2</sub>	<b>14</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	
	No Ball Valve	<b>C</b>	F/R L Combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Filter/Regulator	<b>J</b>	G <sup>3</sup> / <sub>4</sub>	<b>16</b>	Transparent Bowl Auto Drain	<b>D</b>	
			F/R L Combination + Manifold after Filter/Regulator	<b>H</b>	Without port blocks	<b>00</b>	High Flow Metal Bowl Manual Drain	<b>K</b>	
			FRL combination + Manifold after Regulator	<b>K</b>			High Flow Metal Bowl Semi Auto Drain	<b>L</b>	
			FRL combination + G <sup>1</sup> / <sub>4</sub> ported body connector after Regulator	<b>L</b>			High Flow Metal Bowl Auto Drain	<b>M</b>	
							Compact Metal Bowl Manual Drain	<b>T</b>	
							Compact Metal Bowl Semi Auto Drain	<b>V</b>	
							Compact Metal Bowl Auto Drain	<b>W</b>	

**Note:** For customised combination consult Technical Sales Department.

# Modular Maxi FRLs

## Popular combinations

### Filter/Regulator and Ball valve combinations with wall mounting brackets



Ports	Pressure max, bar	Metal Bowl			Transparent bowl			Flow @ 6 bar	
		Manual	Semi-Auto	Auto	Manual	Semi-Auto	Auto	l/min	dm <sup>3</sup> /s
G <sup>1</sup> / <sub>2</sub>	17	<b>P3E-AN14KGB</b>	<b>P3E-AN14LGB</b>	<b>P3E-AN14MGB</b>				4000	66.7
G <sup>3</sup> / <sub>4</sub>	17	<b>P3E-AN16KGB</b>	<b>P3E-AN16LGB</b>	<b>P3E-AN16MGB</b>				4000	66.7
G <sup>1</sup> / <sub>2</sub>	10				<b>P3E-AN14BGB</b>	<b>P3E-AN14CGB</b>	<b>P3E-AN14DGB</b>	4000	66.7
G <sup>3</sup> / <sub>4</sub>	10				<b>P3E-AN16BGB</b>	<b>P3E-AN16CGB</b>	<b>P3E-AN16DGB</b>	4000	66.7

## Options:

<b>P</b>	<b>3</b>	<b>E</b>	<b>-</b>		<b>N</b>				<b>B</b>
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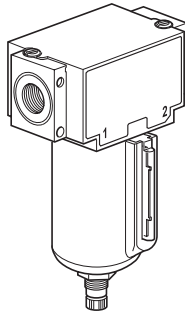
  

	Ball valve		Thread		Transparent Bowl		Gauge
<b>A</b>	Upstream Ball Valve as first unit	<b>13</b>	G3/8		Transparent Bowl Manual Drain	<b>B</b>	<b>N</b> Without gauge
<b>B</b>	Downstream Ball Valve as last unit	<b>14</b>	G1/2		Transparent Bowl Semi-Auto Drain	<b>C</b>	<b>G</b> With gauge
		<b>16</b>	G3/4		Transparent Bowl Auto Drain	<b>D</b>	
					High Flow Metal Bowl Manual Drain	<b>K</b>	
					High Flow Metal Bowl Semi Auto Drain	<b>L</b>	
					High Flow Metal Bowl Auto Drain	<b>M</b>	
					Compact Metal Bowl Manual Drain	<b>T</b>	
					Compact Metal Bowl Semi Auto Drain	<b>V</b>	
					Compact Metal Bowl Auto Drain	<b>W</b>	

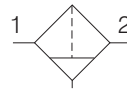
**Note!**  
For customised combinations consult Technical Sales Department.

# Modular Maxi FRLs

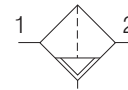
## Filters



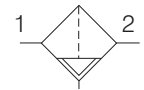
## Symbols



Manual drain



Semi auto drain



Auto drain

- 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.
- Elastomeric 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:

<b>P3E - FA</b>								<b>N</b>
G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	High Flow Metal Bowl Auto Drain	<b>M</b>	5 Micron Element Std	<b>E</b>	
G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	Compact Metal Bowl Manual Drain	<b>T</b>	5 Micron Element	<b>G</b>	
G <sup>1</sup> / <sub>2</sub>	<b>14</b>	Transparent Bowl Auto Drain	<b>D</b>	Compact Metal Bowl Semi Auto Drain	<b>V</b>			
G <sup>3</sup> / <sub>4</sub>	<b>16</b>	High Flow Metal Bowl Manual Drain	<b>K</b>	Compact Metal Bowl Auto Drain	<b>W</b>			
Without Port blocks	<b>00</b>	High Flow Metal Bowl Semi Auto Drain	<b>L</b>					

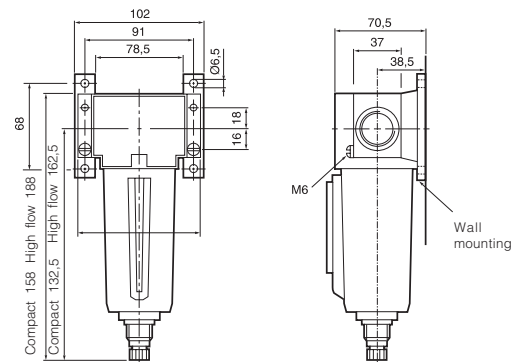
**Note:** For customised combinations consult Technical Sales Department.

## Technical information

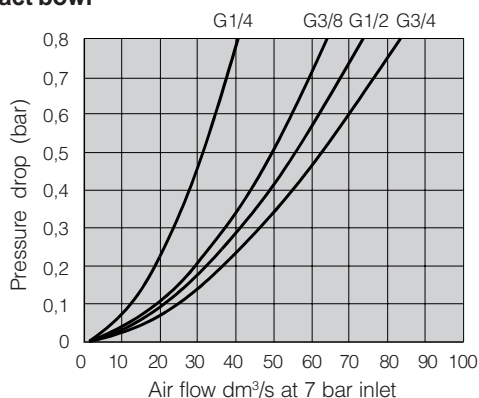
Filter element grade:	Standard 5 micron	
	Option 40 micron	
Flow	See flow graphs below	
Pressure range:	10 bar max Nylon bowl	
	17 bar max Metal bowl	
Temperature range:	-10°C to +50°C Nylon bowl	
	-10°C to +75°C Metal bowl	
Weight (g)	Transparent Bowl	560
without port blocks	Compact Metal Bowl	832
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

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

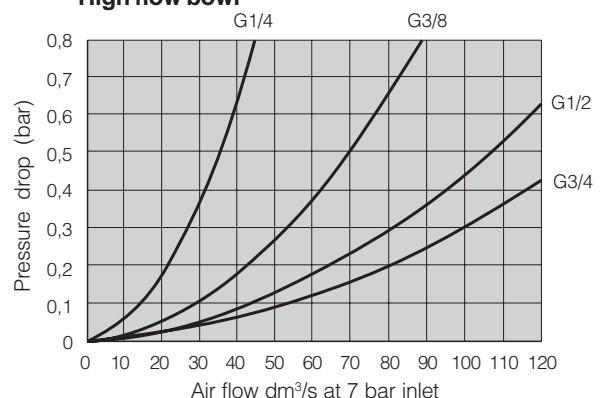
## Dimensions (mm)



## Flow characteristics: Compact bowl

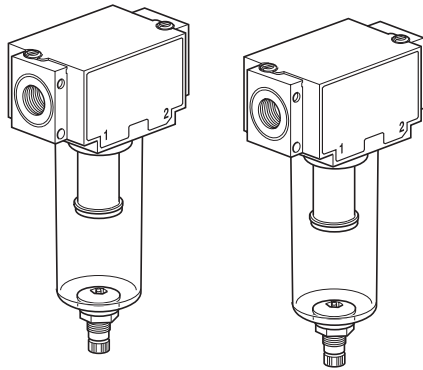


## Flow characteristics: High flow bowl



# Modular Maxi FRLs

## Coalescing filters and Adsorbers



### Coalescing filters

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

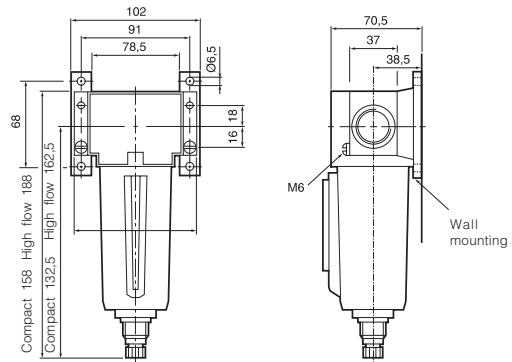
### Options:

<b>P3E - FA</b>					<b>C</b>	<b>N</b>
G <sup>1/4</sup>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	High Flow Metal Bowl Auto Drain	<b>M</b>	Coalescing <b>C</b>
G <sup>3/8</sup>	<b>13</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	Compact Metal Bowl Manual Drain	<b>T</b>	Adsorber <b>A</b>
G <sup>1/2</sup>	<b>14</b>	Transparent Bowl Auto Drain	<b>D</b>	Compact Metal Bowl Semi Auto Drain	<b>V</b>	<b>Note:</b> For customised combinations consult Technical Sales Department. Adsorber filters only available with K, T or B bowl options
G <sup>3/4</sup>	<b>16</b>	High Flow Metal Bowl Manual Drain	<b>K</b>	Compact Metal Bowl Auto Drain	<b>W</b>	
Without port blocks	<b>00</b>	High Flow Metal Bowl Semi Auto Drain	<b>L</b>			

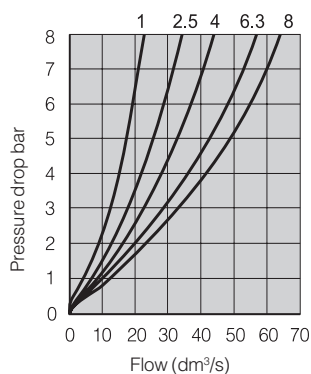
### Technical information

Maximum recommended flow	Compact 420 l/min - 7 dm <sup>3</sup> /s at 6 bar High flow 720 l/min - 12 dm <sup>3</sup> /s at 6 bar @0.7 bar pressure drop
Temperature range:	0°C to +50°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

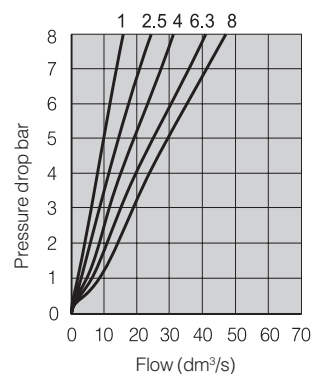
### Dimensions (mm)



### Flow characteristics: Element dry - inlet 10 bar



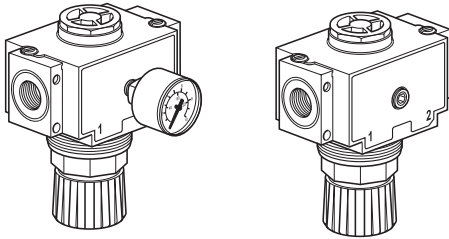
### Flow characteristics: Element fully saturated - inlet 10 bar



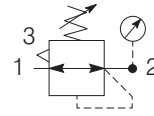
For Repair Kits and Spares see page 62 and 63.  
For Accessories and Port Blocks see page 51.

# Modular Maxi FRLs

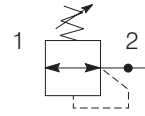
## Regulators



## 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

## Options:

<b>P3E - RA</b>					<b>N</b>
G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Relieving	<b>B</b>	0,4 - 8 bar + Gauge	<b>G</b>
G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Non-relieving	<b>N</b>	0,4 - 8 bar No Gauge	<b>N</b>
G <sup>1</sup> / <sub>2</sub>	<b>14</b>			0,2 - 4 bar + Gauge	<b>M</b>
G <sup>3</sup> / <sub>4</sub>	<b>16</b>			0,2 - 4 bar No Gauge	<b>L</b>
Without Port blocks	<b>00</b>			0,4 - 16 bar + Gauge	<b>J</b>
				0,4 - 16 bar No Gauge	<b>H</b>

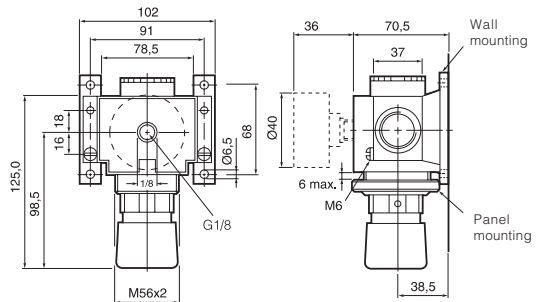
**Note:** For customised combinations consult Technical Sales Department.

## Technical information

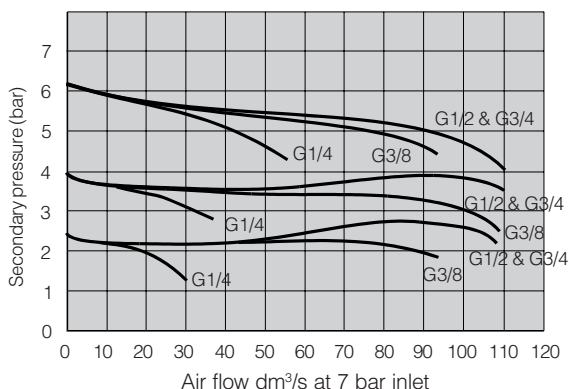
Gauge port size	G <sup>1</sup> / <sub>8</sub>
Maximum inlet pressure	20 bar max
Flow	See performance characteristics
Secondary pressure range	Low 0,2 to 4 bar max Medium 0,4 to 8 bar max High 0,4 to 16 bar max
Temperature range	-10°C to +75°C
Weight (g) without port blocks	756

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

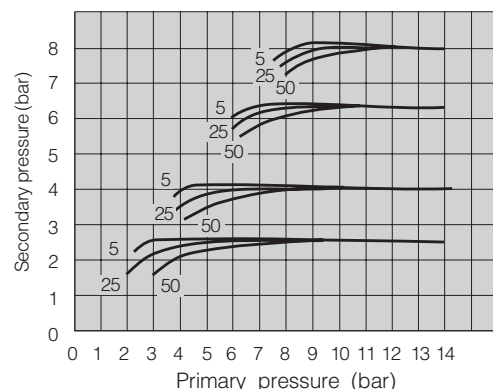
## Dimensions (mm)



## Flow characteristics

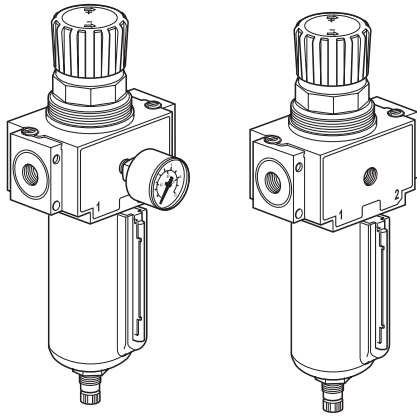


## Regulation characteristics: (G1/2)

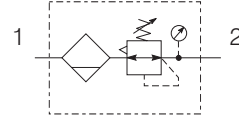


# Modular Maxi FRLs

## 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:

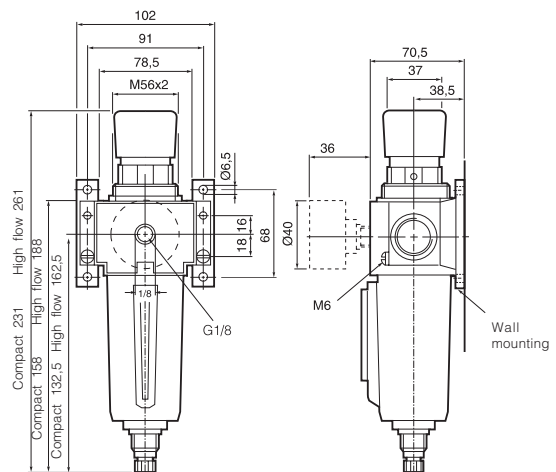
<b>P3E - EA</b>								<b>N</b>	
G <sup>1</sup> / <sub>4</sub>	<b>12</b>	Transparent Bowl Manual Drain	<b>B</b>	High Flow Metal Bowl Auto Drain	<b>M</b>	Relieving	<b>B</b>	0,4 - 8 bar + Gauge	<b>G</b>
G <sup>3</sup> / <sub>8</sub>	<b>13</b>	Transparent Bowl Semi-Auto Drain	<b>C</b>	Compact Metal Bowl Manual Drain	<b>T</b>	Non-Relieving	<b>N</b>	0,4 - 8 bar No Gauge	<b>N</b>
G <sup>1</sup> / <sub>2</sub>	<b>14</b>	Transparent Bowl Auto Drain	<b>D</b>	Compact Metal Bowl Semi Auto Drain	<b>V</b>			0,2 - 4 bar + Gauge	<b>M</b>
G <sup>3</sup> / <sub>4</sub>	<b>16</b>	High Flow Metal Bowl Manual Drain	<b>K</b>	Compact Metal Bowl Auto Drain	<b>W</b>			0,2 - 4 bar No Gauge	<b>L</b>
Without Port blocks	<b>00</b>	High Flow Metal Bowl Semi Auto Drain	<b>L</b>			5 Micron Element Std	<b>E</b>	0,4 - 16 bar + Gauge	<b>J</b>
						40 Micron Element	<b>G</b>	0,4 - 16 bar No Gauge	<b>H</b>

**Note:** For customised combinations consult Technical Sales Department.

## Technical information

Gauge port size	G <sup>1</sup> / <sub>8</sub>
Filter element grade:	Standard 5 micron Option 40 micron
Flow	See characteristics of Regulators page 43
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)	Transparent Bowl 808
without port blocks	Compact Metal Bowl 1154
	High flow Metal Bowl 1196

## Dimensions (mm)

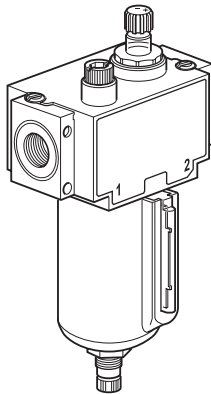


For Accessories and Port Blocks see page 51.  
For Repair Kits and Spares see pages 62 and 63.  
For Gauges see page 61.

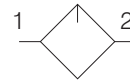


# Modular Maxi FRLs

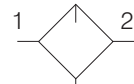
## Lubricators



## Symbols



Lubricator



Lubricator with drain

- Choice of metal bowls with integral sight glasses or transparent nylon bowls.
- Sight glass can be located in 90° increments.
- Constant density lubrication with fingertip adjustment.
- Low flow oil pick up capability.
- 360° 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:

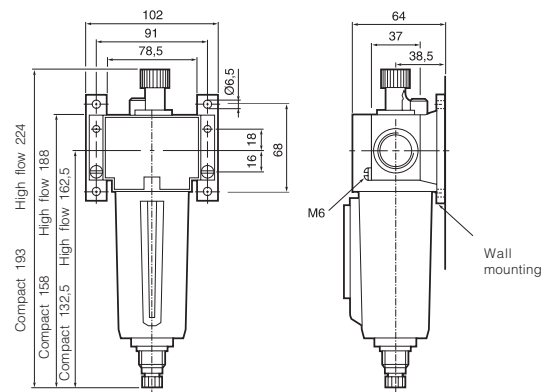
P
3
E
-
L
A
 
 
 
F
N

	Thread	Bowl / drain
12	G1/4	A Transparent Bowl Without Drain
13	G3/8	B Transparent Bowl Manual Drain
14	G1/2	K Metal Bowl Manual Drain
16	G3/4	T Compact Metal Bowl Manual Drain
00	Without	

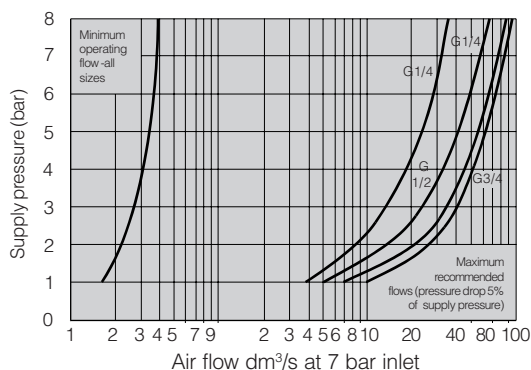
## Technical information

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 100cm <sup>3</sup> .
	High capacity 200cm <sup>3</sup> .
Recommended lubricants	See page 63

## Dimensions (mm)



## Flow characteristics



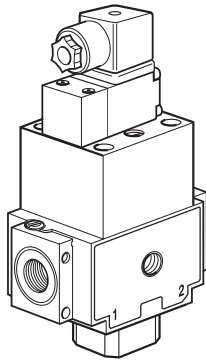
For Accessories and Port Blocks see page 51.

For Repair Kits and Spares see page 62 and 63.

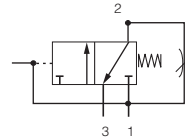


# Modular Maxi FRLs

## 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 G<sup>1</sup>/<sub>2</sub> exhaust
- Integral gauge ports

## Options:

<b>P</b>	<b>3</b>	<b>E</b>	-	<b>T</b>	<b>A</b>				<b>N</b>		
<b>Thread</b>			<b>Piloting / gauge</b>			<b>Pilot options</b>			<b>Voltage</b>		
<b>13</b>	G3/8		<b>S</b>	Solenoid, without gauge		<b>G</b>	15 mm solenoid		<b>00</b>	Without Solenoid	
<b>14</b>	G1/2		<b>R</b>	Solenoid, with gauge		<b>C</b>	CNOMO solenoid		<b>CN</b>	24 VDC	
<b>16</b>	G3/4		<b>P</b>	Air pilot, without gauge		<b>P</b>	Pilot port threaded G1/8 for air pilot		<b>Solenoid</b>		
<b>00</b>	Without		<b>Q</b>	Air pilot, with gauge		<b>Q</b>	Pilot port Push-in for air pilot version		<b>0</b>	None	
									<b>2</b>	DC	

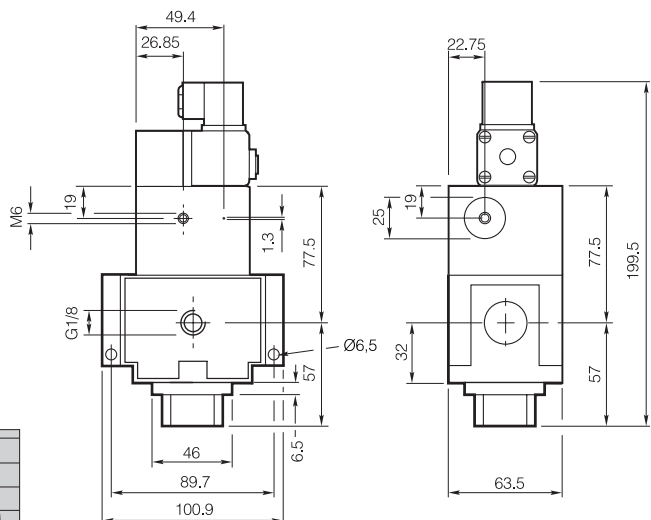
For alternative solenoids see page 16.

## 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.

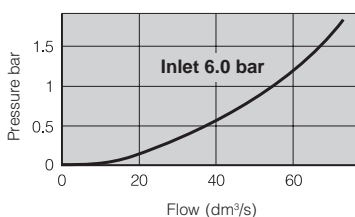
## Dimensions



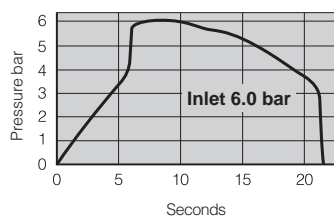
Muffler included with each product.



## Flow characteristics: Inlet - Secondary




## Function: Secondary exhaust






# Solenoids for Soft Start and Dump Valves

## Solenoids for Dump Valves (15mm solenoid)

Supplied with cable plug and non-locking flush manual override


	Voltage	Order code
	12VDC	<b>P2E-KV32BN</b>
	24VDC	<b>P2E-KV32CN</b>
	12V 50Hz/60Hz	<b>P2E-KV34BN</b>
	24V 50Hz	<b>P2E-KV31CN</b>
	115V 50Hz/120VAC 60Hz	<b>P2E-KV31FN</b>
	230V 50Hz/240VAC 60Hz	<b>P2E-KV31JN</b>

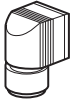
## Cable plugs 15 mm (8 mm pin spacing) IP 65

	Description	Order code
	Large headed screw for inaccessible or recess position	
	Standard to be wired universal To be wired LED+protection 24 VDC	<b>P8C-C</b> <b>P8C-C26C</b>
	With standard screw	
	Standard to be wired universal To be wired LED+protection 24 VDC	<b>P8C-D</b> <b>P8C-D26C</b>
	With cable and standard screw	
	Standard with 2 m cable	<b>P8L-C2</b>
	Standard with 5 m cable	<b>P8L-C5</b>
	LED+protection 24 VAC/DC, 2 m LED+protection 24 VAC/DC, 5 m	<b>P8L-C226C</b> <b>P8L-C526C</b>

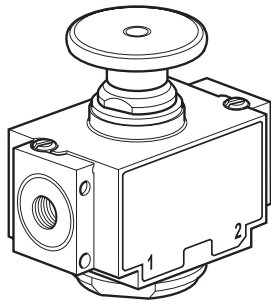
## Solenoids for Dump Valves (CNOMO solenoid)

Supplied with cable plug and non-locking override

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

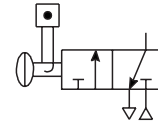
	Description	Order code
	<b>Cable plug, for CNOMO solenoid</b>	
	24V, LED+Diode	<b>9125 9980-04</b>
	24V AC/DC, LED+VDR	<b>9125 9980-06</b>
	110V AC/DC, LED+VDR	<b>9125 9980-08</b>
	240V AC/DC, LED+VDR	<b>9125 9980-10</b>
	Black	<b>451B</b>

## Manually Operated Dump Valves



- Shuts off upstream and dumps downstream pressure.
- Air latching or 2 position versions.
- Choice of red or black knobs.
- Ventral G<sup>1</sup>/<sub>4</sub> exhaust port.
- Padlockable version.

## Symbol



### BISTABLE version

The dumping of downstream pressure is manually actuated by depressing the knob. To reset, both effective upstream pressure and a manual lift of the knob is required.

### MONOSTABLE version . 2 exhaust dump functions

Manually, by maintaining the button thrust down during time required to dump the downstream pressure. Automatically, when the upstream pressure falls below the set pressure threshold. To reset, effective upstream pressure and a manual lift of the knob is required.

MONOSTABLE dump valves are an important element in machine safety considerations. After a unexpected upstream pressure failure, e.g compressor break down), system pressure reset will be only be obtained by lifting the knob combined with having an effective upstream pressure.

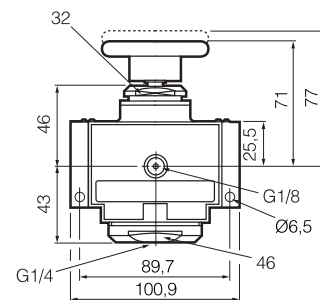
## Options:

P	3	E	-	D	A					N																						
				<table border="1"> <thead> <tr><th>Thread</th></tr> </thead> <tbody> <tr><td>13</td><td>G3/8</td></tr> <tr><td>14</td><td>G1/2</td></tr> <tr><td>16</td><td>G3/4</td></tr> <tr><td>00</td><td>Without</td></tr> </tbody> </table>		Thread	13	G3/8	14	G1/2	16	G3/4	00	Without	<table border="1"> <thead> <tr><th>Knob / Function</th></tr> </thead> <tbody> <tr><td>B</td><td>Black 2 Position</td></tr> <tr><td>R</td><td>Red 2 Position</td></tr> <tr><td>N</td><td>Red Latching</td></tr> <tr><td>M</td><td>Black Latching</td></tr> </tbody> </table>		Knob / Function	B	Black 2 Position	R	Red 2 Position	N	Red Latching	M	Black Latching	<table border="1"> <thead> <tr><th>Locking Clip</th></tr> </thead> <tbody> <tr><td>N</td><td>Without Locking Clip</td></tr> <tr><td>L</td><td>With Locking Clip</td></tr> </tbody> </table>		Locking Clip	N	Without Locking Clip	L	With Locking Clip
Thread																																
13	G3/8																															
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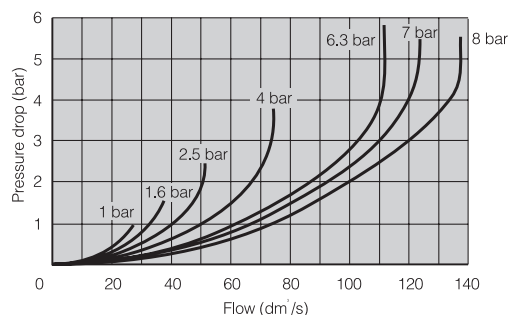
## Technical information

Max. inlet pressure	20 bar max.
Operating pressure	7 bar max
Temperature range	-10°C +75°C
Flow @ 6 bar	
Through valve	to exhaust
3300 l/min - 55 dm <sup>3</sup> /s	2700 l/min - 45 dm <sup>3</sup> /s
Weight (g)	720g

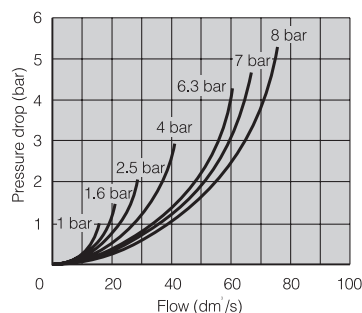
## Dimensions



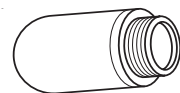
### Flow characteristics: Inlet to secondary



### Flow characteristics: Secondary to exhaust

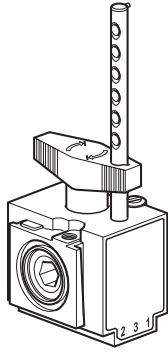


Muffler included with each product.

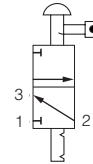


# Modular Maxi FRLs

## Maxi Modular Ball Valve



## Symbol



- Positive bubble tight shut-off.
- Upstream and downstream versions.
- Key lockable versions.
- Padlockable version.
- Ventral G<sup>3/8</sup> exhaust port.

Connection	Pressure max, bar	Actuation	Note	Weight Kg	Order code	Flow @ 6 bar	
						l/min	dm <sup>3</sup> /s
Upstream	10	Hand	Standard	0,470	<b>P3E-VA00A0N</b>	4000	66.7
Downstream	10	Hand	Standard	0,470	<b>P3E-VA00B0N</b>	4000	66.7
Upstream	10	Hand	Key Locking	0,670	<b>P3E-VA00K0N</b>	4000	66.7
Upstream	10	Hand	3 Padlock Facility	0,532	<b>P3E-VA00P0N</b>	4000	66.7
Downstream	10	Hand	3 Padlock Facility	0,532	<b>P3E-VA00R0N</b>	4000	66.7
Upstream	10	Hand	6 Padlock Facility	0,542	<b>P3E-VA00Q0N</b>	4000	66.7
Downstream	10	Hand	6 Padlock Facility	0,542	<b>P3E-VA00S0N</b>	4000	66.7

\* **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.  
**Note!** Cannot be used separately.

## 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

### 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

### 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

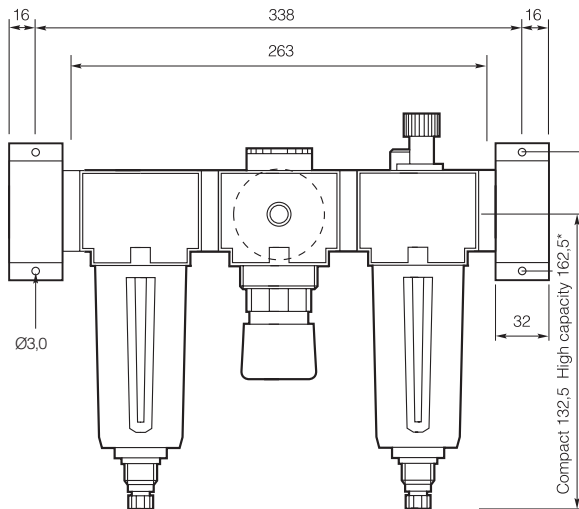
### Accessory Products

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

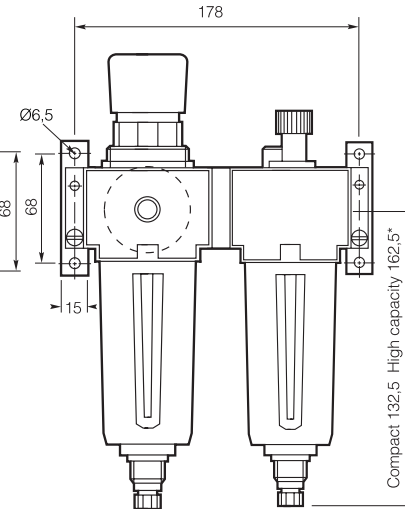
## Dimensions

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

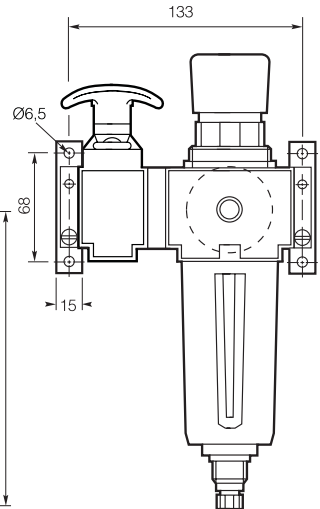
### Filter, Regulator, Lubricator



### Filter/Regulator, Lubricator

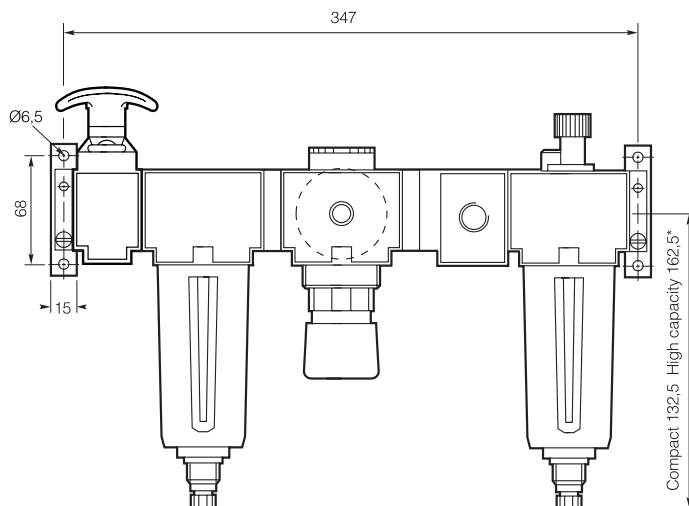


### Ball Valve + Filter/Regulator

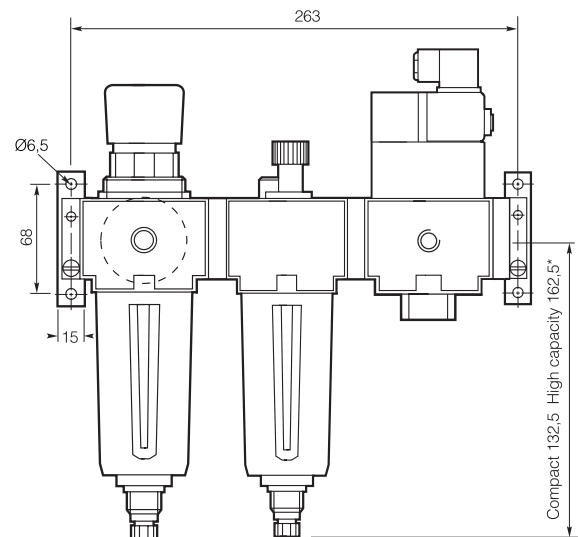


\* Transparent bowl option dimensions identical to high capacity version.

### Ball valve, Filter, Regulator, Manifold, Lubricator.



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



All dimensions in (mm).

# Modular Maxi FRLs

## Mounting assemblies

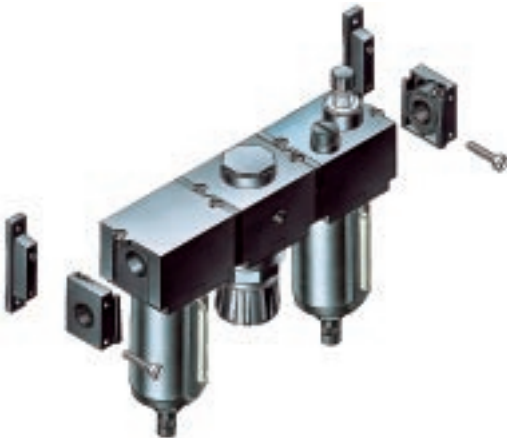
Assembly containing a regulator or filter regulator



Assembly without regulator or filter regulator



Wall brackets mounted at the ends of an assembly



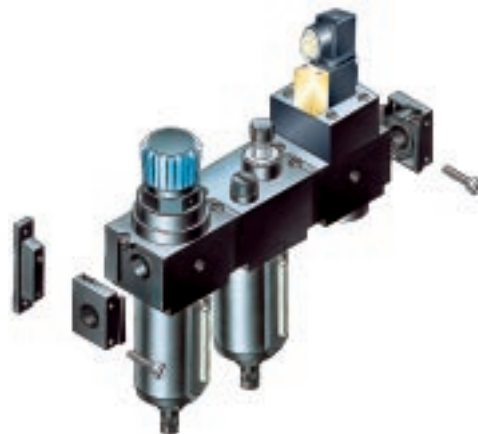
Wall brackets mounted at the ends of an assembly



Neck mounting bracket on Filter/Regulator




Popular combination with wall mounting brackets



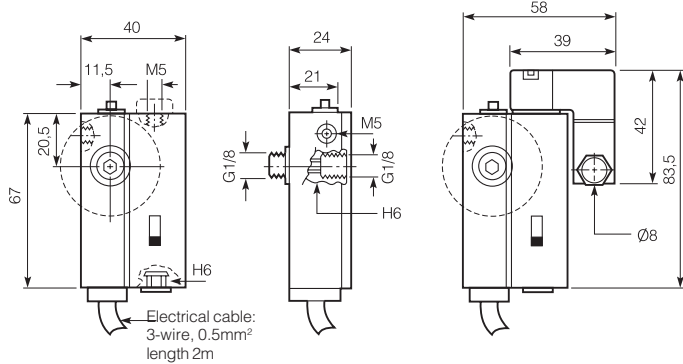
# Modular Maxi FRLs

## Accessories

Description	Connection	Weight Kg	Order code	
Port connector kits (2 port blocks + 2 seals)	G1/4	0,144	<b>P3E-KA12CPN</b>	
	G3/8	0,144	<b>P3E-KA13CPN</b>	
	G1/2	0,134	<b>P3E-KA14CPN</b>	
	G3/4	0,124	<b>P3E-KA16CPN</b>	
Body connector	Without port	0,156	<b>P3E-KA00CBN</b>	
	With G1/4 ventral port	0,156	<b>P3E-KA12CAN</b>	
Wall mounting kit (2 brackets + 2 screws)		0,140	<b>P3E-KA00MWN</b>	
Regulator angle bracket kit (Angle bracket + mounting ring)		0,800	<b>P3E-KA00MSN</b>	
Panel mounting ring only		0,400	<b>P3E-KA00MMN</b>	
Regulator Tamperproof kit (Kit contains 5 pieces)		0,010	<b>P3E-KA00ATN</b>	
Modular manifold block* (Includes port plugs)	1 x G1/8 1 x G1/4 2 x G1/2	0,340	<b>P3E-MA1V</b>	
Rear entry connector kit	G1/2	0,240	<b>P3E-KA14CRN</b>	

\*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.

## 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° to +55°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
<b>P3E-KA11SAN</b>	Pneumatic output, manual reset.
<b>P3E-KA11SBN</b>	Pneumatic output, reset.
<b>P3E-KA11SCN</b>	Electrical and pneumatic outputs, manual resets.
<b>P3E-KA11SDN</b>	Electrical and pneumatic outputs, pneumatic reset.
<b>P3E-KA11SEN</b>	Electrical and pneumatic outputs, electrical reset

**Note:** Micro-solenoid not included.

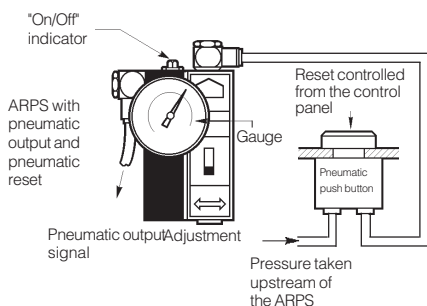
Micro-solenoid valve must be ordered separately.

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

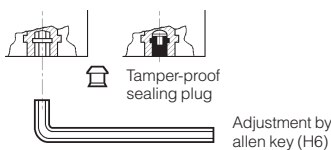
Part no.	Description
<b>P2E-LV32B1</b>	12V. D.C.
<b>P2E-LV32C1</b>	24V. D.C.
<b>P2E-LV32D1</b>	48V. D.C.
<b>P2E-LV34B1</b>	12V. 50/60Hz
<b>P2E-LV31C1</b>	24V. 50Hz
<b>P2E-LV33C1</b>	24V. 60Hz
<b>P2E-LV34D1</b>	48 V. 50/60Hz
<b>P2E-LV31F1</b>	115V. 50Hz / 120V. 60Hz
<b>P2E-LV31J1</b>	230V. 50Hz / 240V.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

See cable plugs Page 16

### Pneumatic remote controlled reset

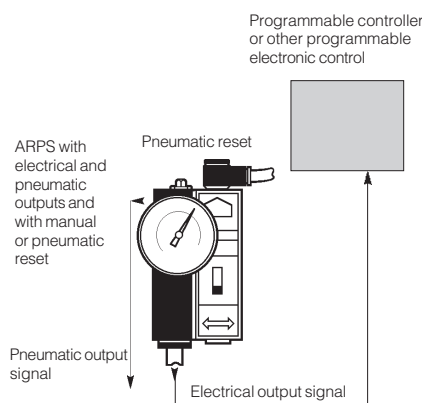


### Adjusting the cut-off pressure

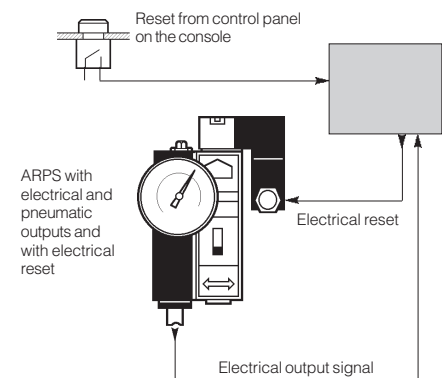


On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

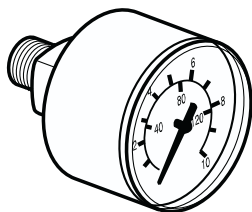
### Direct pressure return



### 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
- Integrated thread sealing ring

## Pressure gauges

Symbol	Description	Pressure range, bar	Port size	Dial mm	Weight Kg	Order code
	Rear entry	0-2,	G1/8	40	0,062	<b>P3D-KAB1AYN</b>
		0-4	G1/8	40	0,062	<b>P3D-KAB1ALN</b>
		0-10	G1/8	40	0,062	<b>P3D-KAB1ANN</b>
		0-20	G1/8	40	0,062	<b>P3D-KAB1AHN</b>
	Rear Entry	0-4	G1/8	50	0,068	<b>P6G-ERB1040</b>
		0-11	G1/8	50	0,068	<b>P6G-ERB1110</b>
		0-14	G1/8	50	0,068	<b>P6G-ERB1140</b>
	Rear entry	0-4	G1/4	50	0,074	<b>P6G-ERB2040</b>
		0-14	G1/4	50	0,074	<b>P6G-ERB2140</b>
		0-20	G1/4	50	0,074	<b>P6G-ERB2200</b>
	Bottom entry	0-11	G1/8	50	0,065	<b>P6G-EBB1110</b>
	Panel Mounted - Rear Entry	0-14	G1/8	50	0,066	<b>P6G-EPA1140</b>
		0-11	G1/8	63	0,080	<b>P6G-FPA1V10</b>
		0-10	G1/4	85	0,180	<b>P6G-HPA1100</b>
	Square - Panel Mounted - Rear Entry	0-10	G1/8	50x50	0,100	<b>P6G-RPA1100</b>
		0-4	G1/8	75x75	0,200	<b>P6G-TPA1040</b>
		0-10	G1/8	75x75	0,190	<b>P6G-TPA1100</b>
	Rear Entry - BackPressure (Reclassifiers)	0-2	G1/8	40	0,062	<b>P6G-DEB1020</b>

## Panel mounting gauges

Panel mounting gauges have a threaded body and are supplied complete with a plastic mounting collar.

<b>Filter Spare Kits Model</b>	<b>Mini Series P3A</b>	<b>Junior Series P3D</b>	<b>Maxi Series P3E</b>	<b>G1 Series P3N</b>
--------------------------------	------------------------	--------------------------	------------------------	----------------------

## 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			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			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			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	

## 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	

Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
<b>Filter/Regulator Spare Kits</b>				
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				

## Lubrication of airlines

Satisfactory operation of airline equipment and effective lubrication depends upon the proper selection of lubrication oil. Oils having a viscosity below ISO3448 Grade 10 to 22 will satisfy most high-speed pneumatic tools and other light duty requirements.

Heavy duty tools and pneumatic valves and cylinders will normally require oils in the viscosity ISO3448 Grade 32 to 68.

Only Paraffinic based oils can be used and the following recommendations are given as a general guide to types of oil that are suitable for use with Parker airline equipment.

Oil Company	High speed tools and systems		Air Cylinders and valves	
	ISO Grade	Grade	ISO Grade	Grade
Century Oils	Century P - 198	15	P.W.L.A	32
Alexander Duckham	Zurcon 2	15	Zurcon 4 32	
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Mobile			VPI-A	32
Silkolene	Silkair GP22	22	Derwent 32	32
Silkolene	Dove 15	15		

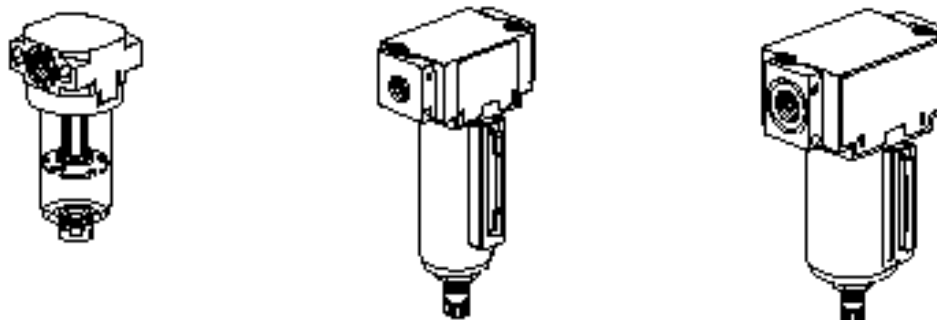
Most Parker Pneumatic valves and cylinders are designed for use in non-lube operation. However airline lubrication will increase the service life.

**Note!** If oil lubrication is used, it must be maintained for the service life of the product.

Some specialised lubricants, particular synthetic reclaimed oils and low temperature additives, may contain compounds which are incompatible with certain materials, internal 'O' rings and seals. They may also attack plastic piping or the transparent bowls of the airline lubricator. Attention is drawn to BS6005 (Specification for moulded transparent polycarbonate bowls used in compressed air filters and lubricators).

**Do not use oils with additives, compounds oils containing solvents, graphite, detergents or synthetic oils.**

# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Filters

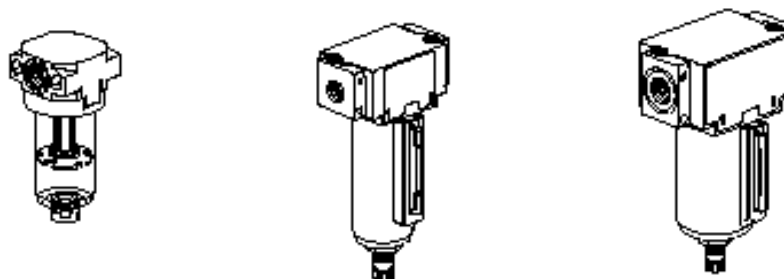
### Filter Elements

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
5 micron element (standard)	P3A-KA00EEN	P3D-KA00EEN	P3E-KA00EEN
5 micron compact element	Not used	Not used	P3E-KA00ERN
40 micron element	P3A-KA00EGN	P3D-KA00EGN	P3E-KA00EGN
40 micron compact element	Not used	Not used	P3E-KA00ESN
Coalescing element	P3A-KA00ECN	P3D-KA00ECN	P3E-KA00ECN
Coalescing compact element	Not used	Not used	P3E-KA00EPN
Adsorber element	P3A-KA00EAN	P3D-KA00EAN	P3E-KA00EAN
Adsorber compact element	Not used	Not used	P3E-KA00ENN

### Replacement Bowl Kits (Metal)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
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			P3E-KA00BMA
Compact bowl/manual drain	Not used	Not used	P3E-KA00BTA
Compact bowl/semi-auto drain	Not used	Not used	P3E-KA00BVA
Compact bowl/auto drain	Not used	Not used	P3E-KA00BWA

# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Filters

Replacement Bowl Kits (Polyamide)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Polyamide bowl with manual drain	P3A-KA00BBA	P3D-KA00BBA	P3E-KA00BBA
Polyamide bowl with semi-auto drain	P3A-KA00BCA	P3D-KA00BCA	P3E-KA00BCA
Polyamide bowl with auto drain			P3E-KA00BDA

Bowl Seal Kits (Contains 10 replacement Seals)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Metal bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00RWN
Polyamide bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00RZN

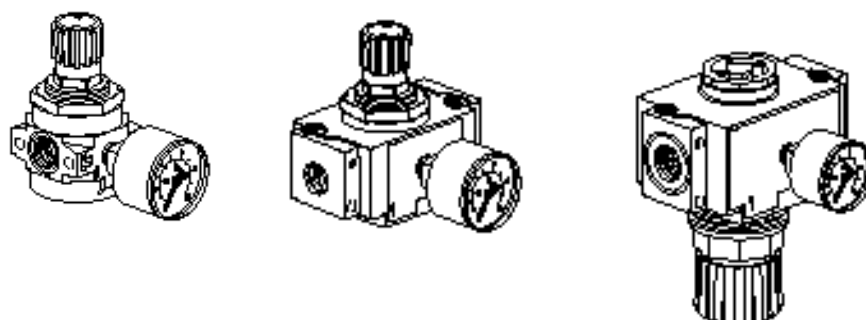
Drain Kits

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Manual drain	P3E-KA00DBN	P3E-KA00DBN	P3E-KA00DBN
Semi-Auto Drain	P3A-KA00DCN	P3A-KA00DCN	P3A-KA00DCN
Auto-Drain	Available 2001	Available 2001	P3E-KA00DDN

Seal Kits

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Replacement seals	1539R	2539R	4539R

# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Pressure Regulators

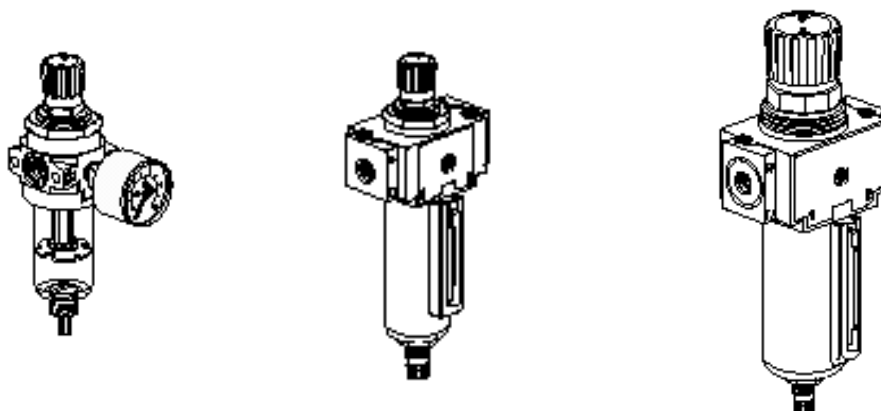
Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Repair Kit, Self-bleed	Non-repairable	P3D-KA00RRN	P3E-KA00RRN
Repair Kit, Non-bleed	Non-repairable	P3D-KA00RNN	P3E-KA00RRN
Panel Mounting Ring (metal)	P3A-KA00MMN	P3A-KA00MMN	P3E-KA00MMN
Panel Mounting Ring (plastic)	P3A-KA00MPN	P3A-KA00MPN	Not available
Tamperproof Kit ( 5 circlips)	P3A-KA00ATN	P3A-KA00ATN	P3E-KA00ATN
Gauge Port Plug (10 plugs)	P3D-KAB1APN	P3D-KAB1APN	P3D-KAB1APN



## Pressure Gauges

Pressure Range	Gauge Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
0 – 10 bar (standard)	P3D-KAB1ANN	P3D-KAB1ANN	P3D-KAB1ANN
0 – 2 bar	P3D-KAB1AYN	P3D-KA001AYN	Not required
0 – 4 bar	P3D-KAB1ALN	P3D-KAB1ALN	P3D-KAB1ALN
0 – 20 bar	Not required	P3D-KAB1AHN	P3D-KAB1AHN

# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Filter- Regulators

### Filter Elements

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
5 micron element (standard)	P3A-KA00EEN	P3D-KA00EFA	P3E-KA00EFA
5 micron compact element	Not used	Not used	P3E-KA00ETA
40 micron element	P3A-KA00EGN	P3D-KA00EHA	P3E-KA00EHA
40 micron compact element	Not used	Not used	P3E-KA00EVA

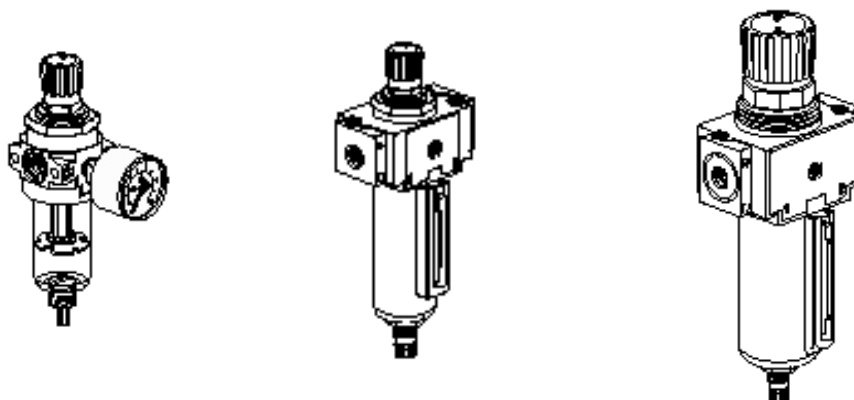
### Replacement Bowl Kits (Metal)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
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			P3E-KA00BMA
Compact bowl/manual drain	Not used	Not used	P3E-KA00BTA
Compact bowl/semi-auto drain	Not used	Not used	P3E-KA00BVA
Compact bowl/auto drain	Not used	Not used	P3E-KA00BWA

### Replacement Bowl Kits (Polyamide)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Polyamide bowl with manual drain	P3A-KA00BBA	P3D-KA00BBA	P3E-KA00BBA
Polyamide bowl with semi-auto drain	P3A-KA00BCA	P3D-KA00BCA	P3E-KA00BCA
Polyamide bowl with auto drain			P3E-KA00BDA

# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Filter- Regulators

Bowl Seal Kits (Contains 10 replacement Seals)

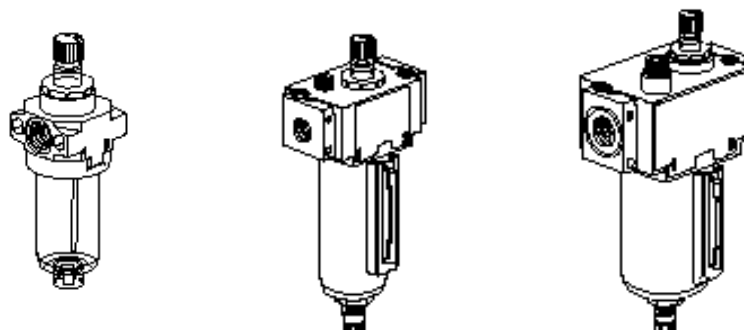
Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Metal bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00BRWN
Polyamide bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00RZN

Drain Kits

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Manual drain	P3E-KA00DBN	P3E-KA00DBN	P3E-KA00DBN
Semi-Auto Drain	P3A-KA00DCN	P3A-KA00DCN	P3A-KA00DCN
Auto-Drain	Available 2001	Available 2001	P3E-KA00DDN



# Service and Replacement Parts



## P3A, P3D & P3E Series Modular Lubricators

### Replacement Bowl Kits

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Polyamide Bowl, no drain	P3A-KA00BAA	P3D-KA00BAA	P3E-KA00BAA
Polyamide Bowl, manual drain	P3A-KA00BBA	P3D-KA00BBA	P3E-KA00BBA
Metal Bowl, manual drain	P3A-KA00BPA	P3D-KA00BKA	P3E-KA00BKA
Compact Metal Bowl, Man. Dr.	Not used	Not used	P3E-KA00BTA

### Bowl Seal Kits (Contains 10 replacement Seals)

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Metal bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00RWN
Polyamide bowl	P3A-KA00RZN	P3D-KA00RWN	P3E-KA00RZN

### Seal Kits

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Replacement seals	1589R	2589R	4589R

### Drip Control Assembly

Description	Kit Part Number		
	P3A Mini Series	P3D Junior Series	P3E Maxi Series
Oil drip control assembly	5589-200	5589-200	5589-200

# 1" Modular FRLs

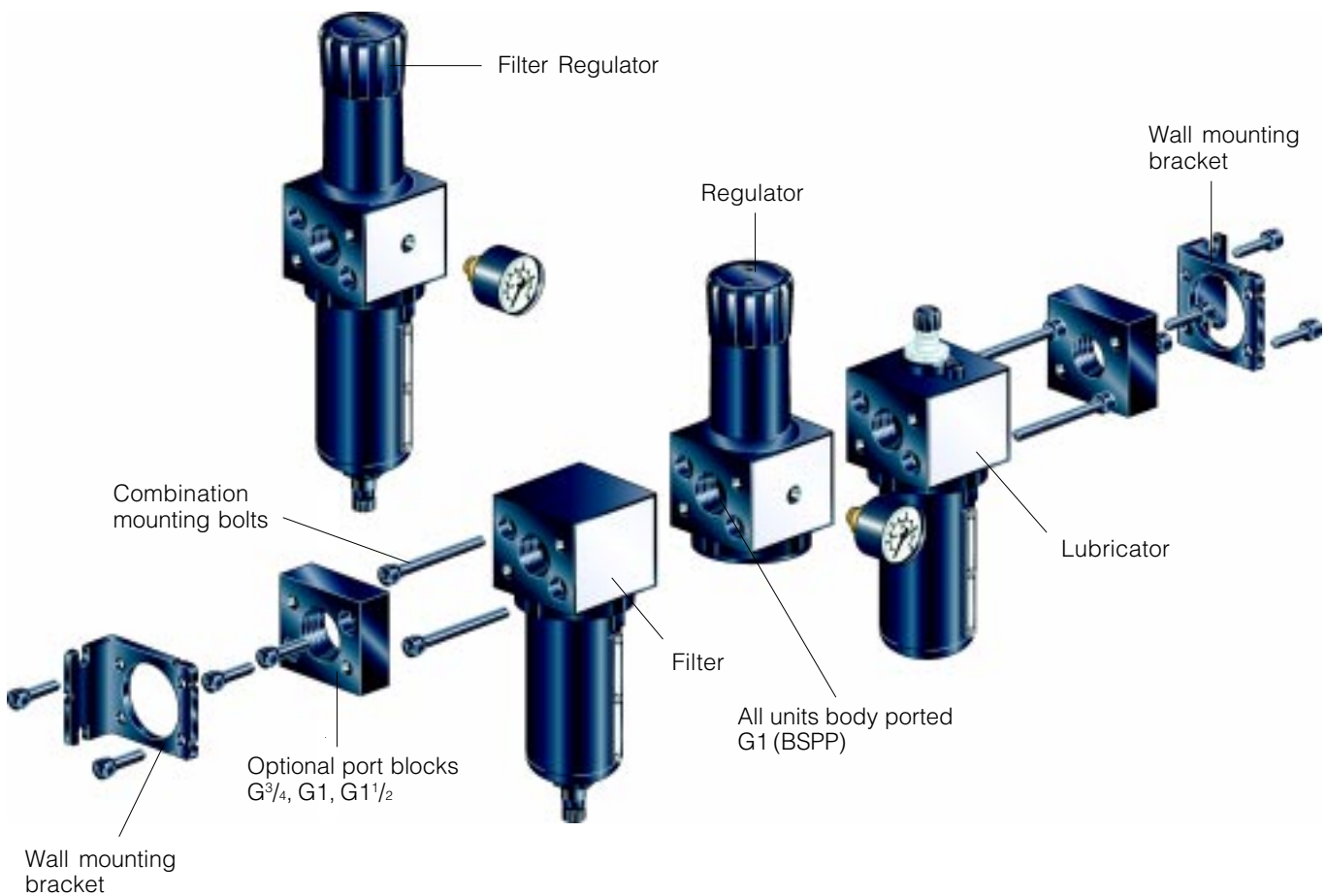
## The System

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.

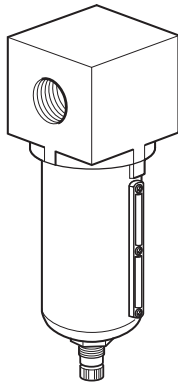
The 1" Series mist lubricators are designed to provide lubrication for many general purpose applications in a pneumatic system.



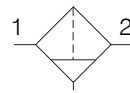


# 1" Modular FRLs

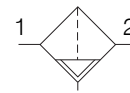
## Filters



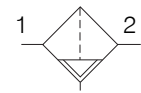
## Symbols



Manual drain



Semi auto drain



Auto drain

- Port blocks available to provide G<sup>3/4</sup> and G<sup>1 1/2</sup> 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:

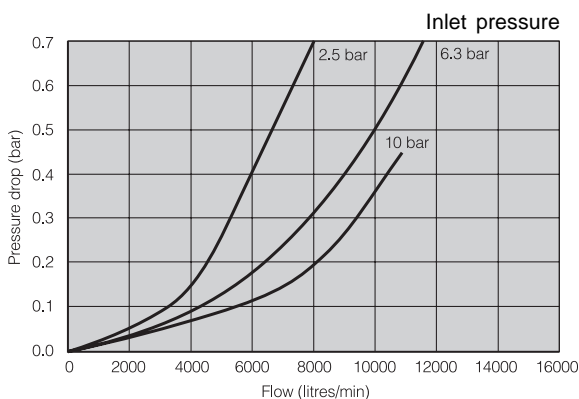
<b>P3N</b>	<b>F</b>	<b>A</b>				
	Filter					
		<b>Port type</b>				
		'G' Thread (BSPP)	<b>1</b>			
		<b>Port size</b>				
		<b>3/4" ports</b> (1" units with 3/4" port extensions)	<b>L</b>			
		<b>1" ports</b> (without port extensions)	<b>8</b>			
		<b>1.1/2" ports</b> (1" units with 1.1/2" port extensions)	<b>P</b>			
		<b>Filter elements</b>				
		40 micron element (Standard)	<b>G</b>			
		5 micron element (Optional)	<b>E</b>			
		<b>Bowl/drain options</b>				
		Metal bowl Manual drain	<b>SM</b>			
		Metal bowl Semi-auto drain	<b>SS</b>			
		Metal bowl Auto drain	<b>SA</b>			

## Technical information

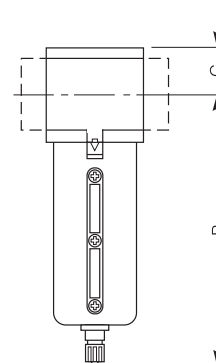
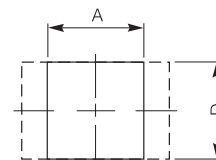
Port size	G1
Filter element grade:	Standard 40 micron Option 5 micron
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C

**Note:** For materials see page 59.

## Flow characteristics



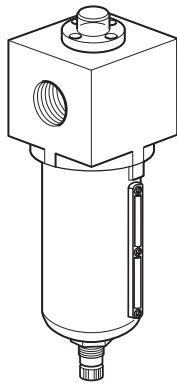
## Dimensions (mm)



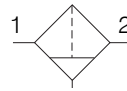
Port size	A	B	C	D	Weight (kg)
G1	92	254	35	92	1.6

For accessories and port blocks see page 59.

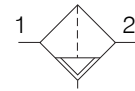
## Coalescing filters



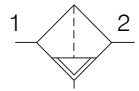
## Symbols



Manual drain



Semi auto drain



Auto drain

- DPI indicator as standard
- Port blocks available to provide G<sup>3/4</sup> and G1<sup>1/2</sup> 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:

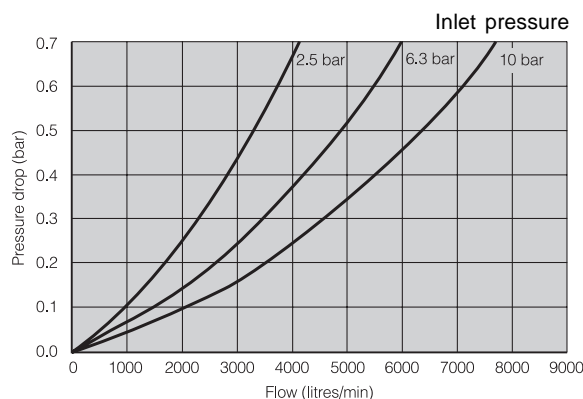
<b>P3N</b>	<b>F</b>	<b>A</b>				
Coalescing Filter	Port type	Port size	Filter elements	Bowl/drain options		
	'G' Thread (BSPP)	<b>3/4" ports</b> (1" units with 3/4" port extensions)	Coalescing Grade 6 with pressure drop indicator (Standard)	<b>D</b>	Metal bowl Manual drain	<b>SM</b>
	<b>1</b>	<b>1" ports</b> (without port extensions)	Coalescing Grade 10 with pressure drop indicator	<b>Q</b>	Metal bowl Semi-auto drain	<b>SS</b>
		<b>1.1/2" ports</b> (1" units with 1.1/2" port extensions)	Adsorber element with pressure drop indicator	<b>B</b>	Metal bowl Semi-auto drain	<b>SA</b>
			Adsorber element without pressure drop indicator	<b>A</b>		

## Technical information

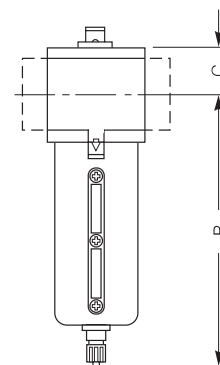
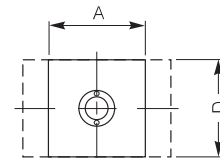
Port size	G1
Coalescing element grade:	0.3 micron Grade 6
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C

**Note:** For materials see page 59.

## Flow characteristics



## Dimensions (mm)

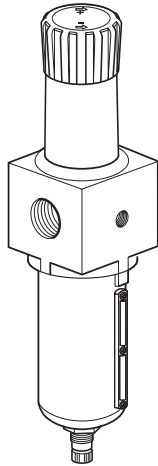


Port size	A	B	C	D	Weight (kg)
G1	92	254	35	92	1.6

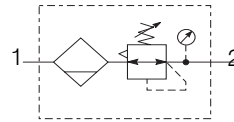
For accessories and port blocks see page 59.



## Filter/Regulators



## Symbol



- Port blocks are available to provide G<sup>3</sup>/<sub>4</sub> and G1<sup>1</sup>/<sub>2</sub> 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:

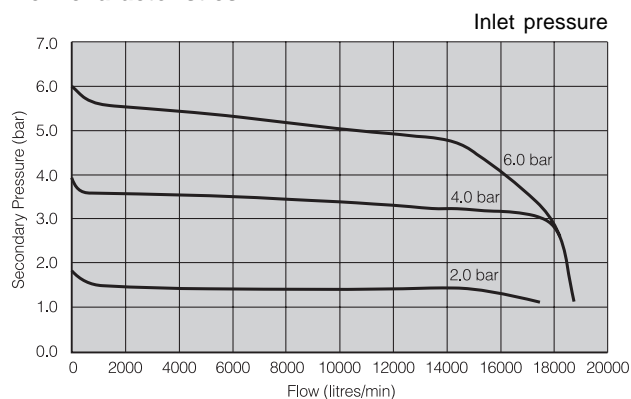
<b>P3N</b>	<b>E</b>	<b>A</b>	<b>1</b>					<b>B</b>	<b>N</b>	
Filter/ Regulator									Relieving	
<b>Port type</b>	<b>Port size</b>			<b>Filter elements</b>		<b>Bowl/drain options</b>			<b>Spring rating</b>	
'G' Thread (BSPP)	3/4" ports (1" units with 3/4" port extensions)			40 micron element (Standard)		Metal bowl Manual drain			Without gauge	
<b>1</b>	1" ports (without port extensions)			5 micron element (Optional)		Metal bowl Semi-auto drain			0 - 2 bar	
	1.1/2" ports (1" units with 1.1/2" port extensions)					Metal bowl Auto drain			0 - 4 bar	
									0 - 8 bar	
									0 - 16 bar	
									0 - 2 bar	
									0 - 4 bar	
									0 - 8 bar	
									0 - 16 bar	

## Technical information

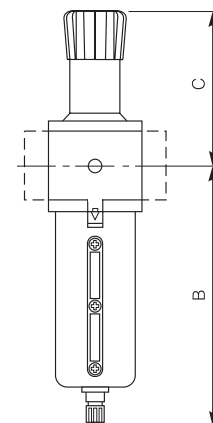
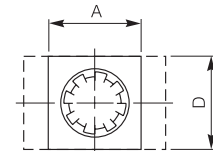
Port size	G1
Gauge ports:	G <sup>1</sup> / <sub>4</sub>
Max inlet pressure (p1):	17 bar max
Secondary pressure range:	Standard: 0.1 to 8 bar
(p2)	Option 1: 0.1 to 2 bar
	Option 2: 0.1 to 4 bar
	Option 3: 0.3 to 16 bar
Temperature range:	-20°C to +80°C

**Note:** For materials see page 59.

## Flow characteristics



## Dimensions (mm)

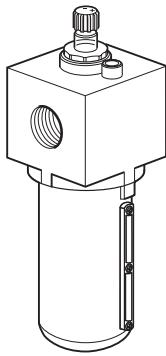


Port size	A	B	C	D	Weight (kg)
G1	92	243	162	92	2.4

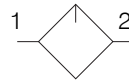
For accessories and port blocks see page 59.

# 1" Modular FRLs

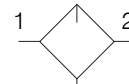
## Lubricators



## Symbols



Lubricator



Lubricator with drain

- Port blocks available to provide G<sup>3/4</sup> and G1<sup>1/2</sup> 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° visibility.

## Options:

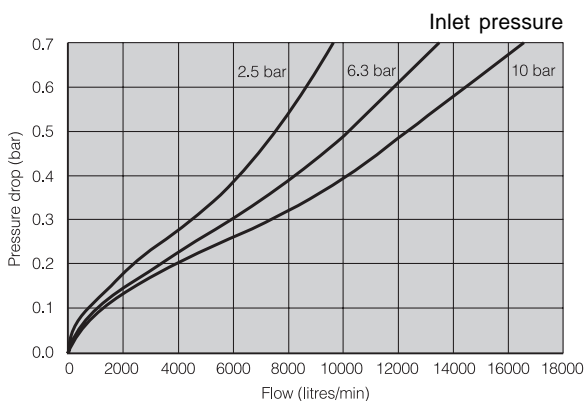
<b>P3N</b>	<b>L</b>	<b>A</b>			<b>L</b>		
	Lubricator		<b>Port type</b>	<b>Port size</b>		<b>Bowl/drain options</b>	
			'G' Thread (BSPP)	3/4" ports (1" units with 3/4" port extensions)	<b>1</b>	Metal bowl Manual drain	<b>SM</b>
				1" ports (without port extensions)	<b>8</b>	Metal bowl No drain	<b>SN</b>
				1.1/2" ports (1" units with 1.1/2" port extensions)	<b>P</b>		

## Technical information

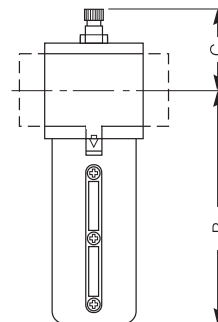
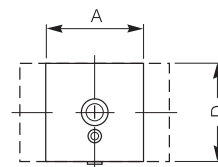
Port size	G1
Max inlet pressure (p1):	17 bar max
Min flow oil pickup:	3.7 l/sec
Bowl capacity:	300cc
Recommended lubricant:	See page 63
Temperature range:	-20°C to +80°C

**Note:** For materials see page 59.

## Flow characteristics



## Dimensions (mm)

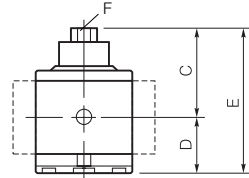
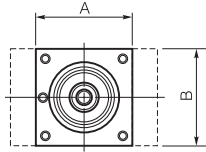
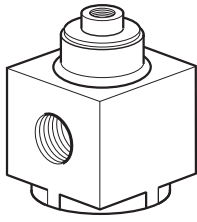


Port size	A	B	C	D	Weight (kg)
G1	92	230	71.3	92	1.6

For accessories and port blocks see page 59.



## Air pilot regulators



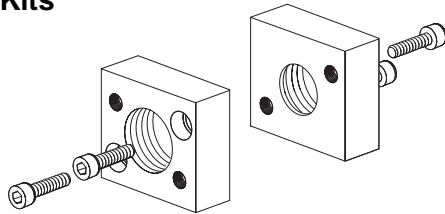
- Port blocks available to provide G<sup>3</sup>/<sub>4</sub> and G1<sup>1</sup>/<sub>2</sub> port extension to G1 ported bodies.
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

Order code

**P3NRA18BPP**

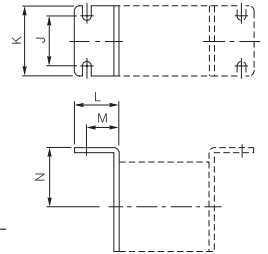
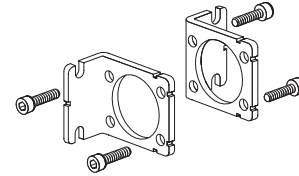
A	A (PB)	B	C	D	E	F
92	142	92	86	53	139	G <sup>1</sup> / <sub>4</sub>

## Port Block Kits



Description	Connection	Weight Kg	Order Code
Kits for single Units or Combinations without Lubricators (2 port blocks + 2 seals)	G <sup>3</sup> / <sub>4</sub>	574	<b>P3NKB16CP</b>
	G1	554	<b>P3NKB18CP</b>
	G1 <sup>1</sup> / <sub>2</sub>	534	<b>P3NKB1BCP</b>
Kits for Combinations with Lubricators (2 port blocks + 2 seals)	G <sup>3</sup> / <sub>4</sub>	574	<b>P3NKB16CL</b>
	G1	554	<b>P3NKB18CL</b>
	G1 <sup>1</sup> / <sub>2</sub>	534	<b>P3NKB1BCL</b>

## Mounting brackets



Order code

**P3NKA00MW** For 3/4 & 1" sizes

**P3NKB00MW** For 1.1/2" port size

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

### Lubricator

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

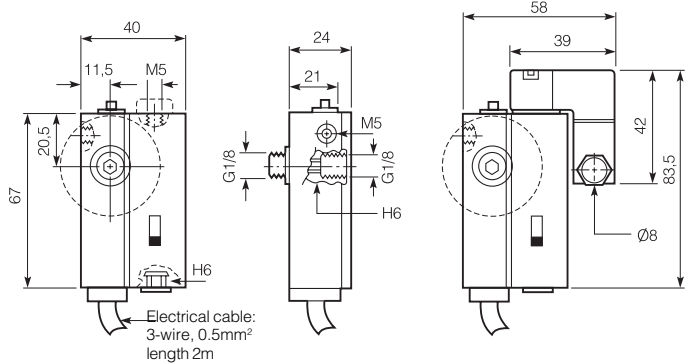
### Regulator

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

### 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° to +55°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
<b>P3E-KA11SAN</b>	Pneumatic output, manual reset.
<b>P3E-KA11SBN</b>	Pneumatic output, reset.
<b>P3E-KA11SCN</b>	Electrical and pneumatic outputs, manual resets.
<b>P3E-KA11SDN</b>	Electrical and pneumatic outputs, pneumatic reset.
<b>P3E-KA11SEN</b>	Electrical and pneumatic outputs, electrical reset

**Note:** Micro-solenoid not included.

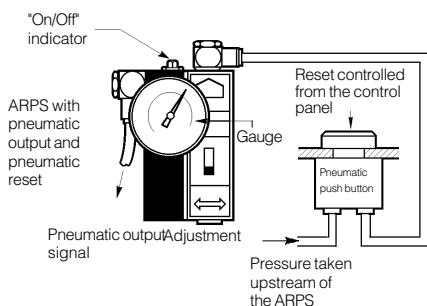
Micro-solenoid valve must be ordered separately.

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

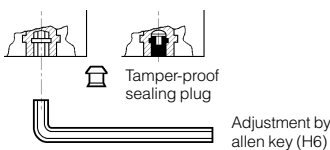
Part no.	Description
<b>P2E-LV32B1</b>	12V. D.C.
<b>P2E-LV32C1</b>	24V. D.C.
<b>P2E-LV32D1</b>	48V. D.C.
<b>P2E-LV34B1</b>	12V. 50/60Hz
<b>P2E-LV31C1</b>	24V. 50Hz
<b>P2E-LV33C1</b>	24V. 60Hz
<b>P2E-LV34D1</b>	48 V. 50/60Hz
<b>P2E-LV31F1</b>	115V. 50Hz / 120V. 60Hz
<b>P2E-LV31J1</b>	230V. 50Hz / 240V.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

See cable plugs Page 16

### Pneumatic remote controlled reset

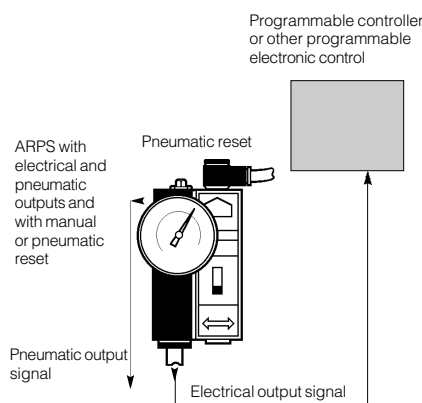


### Adjusting the cut-off pressure

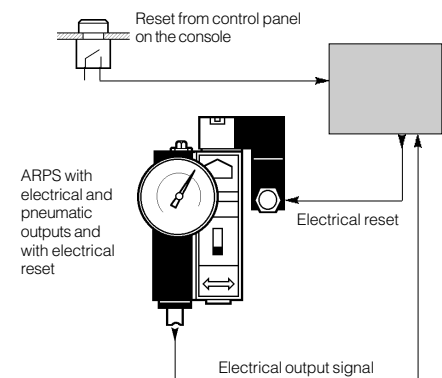


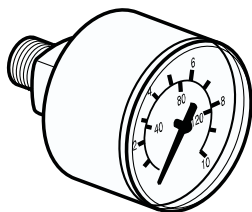
On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

### 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
- Integrated thread sealing ring

## Pressure gauges

Symbol	Description	Pressure range, bar	Port size	Dial mm	Weight Kg	Order code
	Rear entry	0-2	G1/8	40	0,062	<b>P3D-KAB1AYN</b>
		0-4	G1/8	40	0,062	<b>P3D-KAB1ALN</b>
		0-10	G1/8	40	0,062	<b>P3D-KAB1ANN</b>
		0-20	G1/8	40	0,062	<b>P3D-KAB1AHN</b>
	Rear Entry	0-4	G1/8	50	0,068	<b>P6G-ERB1040</b>
		0-11	G1/8	50	0,068	<b>P6G-ERB1110</b>
		0-14	G1/8	50	0,068	<b>P6G-ERB1140</b>
	Rear entry	0-4	G1/4	50	0,074	<b>P6G-ERB2040</b>
		0-14	G1/4	50	0,074	<b>P6G-ERB2140</b>
		0-20	G1/4	50	0,074	<b>P6G-ERB2200</b>
	Bottom entry	0-11	G1/8	50	0,065	<b>P6G-EBB1110</b>
	Panel Mounted - Rear Entry	0-14	G1/8	50	0,100	<b>P6G-EPA1140</b>
		0-11	G1/8	63	0,080	<b>P6G-FPA1V10</b>
		0-10	G1/4	85	0,180	<b>P6G-HPA1100</b>
	Square - Panel Mounted - Rear Entry	0-10	G1/8	50x50	0,100	<b>P6G-RPA1100</b>
		0-4	G1/8	75x75	0,200	<b>P6G-TPA1040</b>
		0-10	G1/8	75x75	0,190	<b>P6G-TPA1100</b>
	Rear Entry - BackPressure (Reclassifiers)	0-2	G1/8	40	0,062	<b>P6G-DEB1020</b>

## Panel mounting gauges

Panel mounting gauges have a threaded body and are supplied complete with a plastic mounting collar.

<b>Filter Spare Kits Model</b>	<b>Mini Series P3A</b>	<b>Junior Series P3D</b>	<b>Maxi Series P3E</b>	<b>G1 Series P3N</b>
<b>Drain Kits</b>				
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			P3E-KA00DDN	P3E-KA00DDN
<b>Bowl Kits</b>				
<b>Poly bowl</b>				
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			P3E-KA00BDA	
<b>Metal bowl</b>				
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			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	
<b>Filter Element Kits</b>				
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	
<b>Seal Kits</b>				
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	
<b>Regulator Spare Kits</b>				
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	

Model	Mini Series P3A	Junior Series P3D	Maxi Series P3E	G1 Series P3N
<b>Filter/Regulator Spare Kits</b>				
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				

## Lubrication of airlines

Satisfactory operation of airline equipment and effective lubrication depends upon the proper selection of lubrication oil. Oils having a viscosity below ISO3448 Grade 10 to 22 will satisfy most high-speed pneumatic tools and other light duty requirements.

Heavy duty tools and pneumatic valves and cylinders will normally require oils in the viscosity ISO3448 Grade 32 to 68.

Only Paraffinic based oils can be used and the following recommendations are given as a general guide to types of oil that are suitable for use with Parker airline equipment.

Oil Company	High speed tools and systems		Air Cylinders and valves	
	ISO Grade	Grade	ISO Grade	Grade
Century Oils	Century P - 198	15	P.W.L.A	32
Alexander Duckham	Zurcon 2	15	Zurcon 4 32	
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Mobile			VPI-A	32
Silkolene	Silkair GP22	22	Derwent 32	32
Silkolene	Dove 15	15		

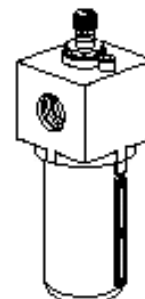
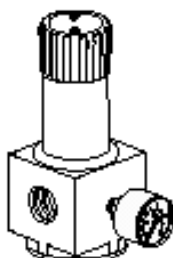
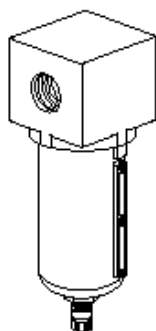
Most Parker Pneumatic valves and cylinders are designed for use in non-lube operation. However airline lubrication will increase the service life.

**Note!** If oil lubrication is used, it must be maintained for the service life of the product.

Some specialised lubricants, particular synthetic reclaimed oils and low temperature additives, may contain compounds which are incompatible with certain materials, internal 'O' rings and seals. They may also attack plastic piping or the transparent bowls of the airline lubricator. Attention is drawn to BS6005 (Specification for moulded transparent polycarbonate bowls used in compressed air filters and lubricators).

**Do not use oils with additives, compounds oils containing solvents, graphite, detergents or synthetic oils.**

# Service and Replacement Parts



## P3N 1" Series

### Filter Elements

Description	Kit Part Number
5 micron	P3NKA00ESE
40 micron	P3NKA00ESG
Coalescing	P3NKA00ESC
Adsorber	P3NKA00ESA

### Pressure Regulator

Part Number	Pressure Gauge	Repair Kit
P3NRA18BNL	P6G-ERB2040	P3NKA00RR
P3NRA18BNN	P6G-ERB2140	
P3NRA18BNH	P6G-ERB2200	
P3NRA18BPP	P6G-ERB2140	

### Lubricator

Part Number	Repair Kit	Drip Control Assembly	Fill Cap Kit
P3NLA18LSN	P3NKA00RL	PS740P	P3NKA00PK
P3NLA18LSM			

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We reserve the right to make  
alterations without prior notification.  
Edition YY.MM