

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 G¹/₈ or G¹/₄ 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

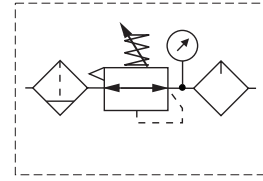
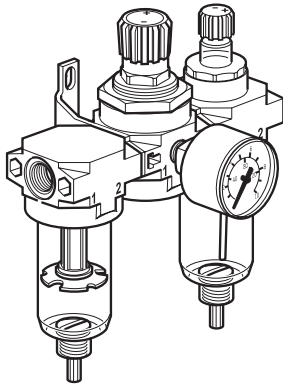


Coloured knobs

8 bar	Black	
4 bar	Grey	
2 bar	Blue	

Mini FRLs

Popular combinations

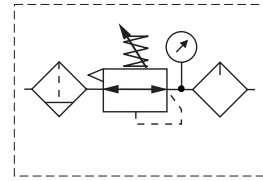
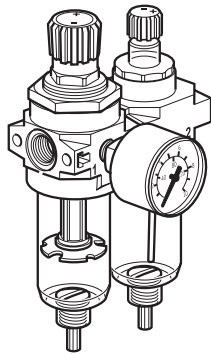


P3A-CB11BGB

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 ³ /sec
G ¹ / ₈	P3A-CB11BGB	P3A-CB11CGB	420	7
G ¹ / ₄	P3A-CB12BGB	P3A-CB12CGB	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 ³ /sec
G ¹ / ₈	P3A-CA11BGB	P3A-CA11CGB	420	7
G ¹ / ₄	P3A-CA12BGB	P3A-CA12CGB	480	8

Part numbers.

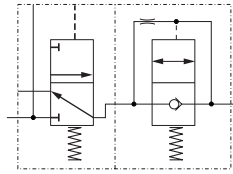
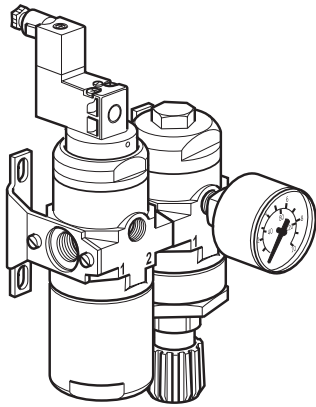
P3A-	C					B	
Filter/Reg + Lub combo	A	G ¹ / ₈	11	Transparent Bowl Manual Drain	B	No Gauge	N
FR L combo	B	G ¹ / ₄	12	Transparent Bowl Semi-Auto Drain	C	Gauge	G
FRL combo + Manifold after Regulator	K						
F/R L combo + Manifold after Filter/Regulator	H						

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

Mini FRLs

Popular combinations

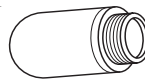
Dump valve and soft start valve combinations with wall mounting brackets and muffler



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 ³ /s
G ¹ / ₄	P3A-CS12GMB2CC	P3A-CS12GMB000	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 ³ /s
G ¹ / ₄	P3A-CS12QMB		1100	18.3

Part numbers.

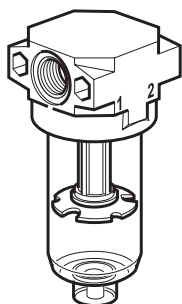
P3A-	C	S	□	□	□	M	B	□	□	□
			G ¹ / ₄ 12		15mm solenoids 8mm PIN centres on opposite side			24V DC		2CC
					Pilot port push-in			Without Solenoid		000
						G				Q

Note: For customised combinations consult Technical Sales Department.

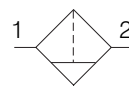
Note: For materials see page 16
For dimensions see page 17

For solenoids see page 16

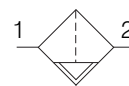
Filters



Symbols



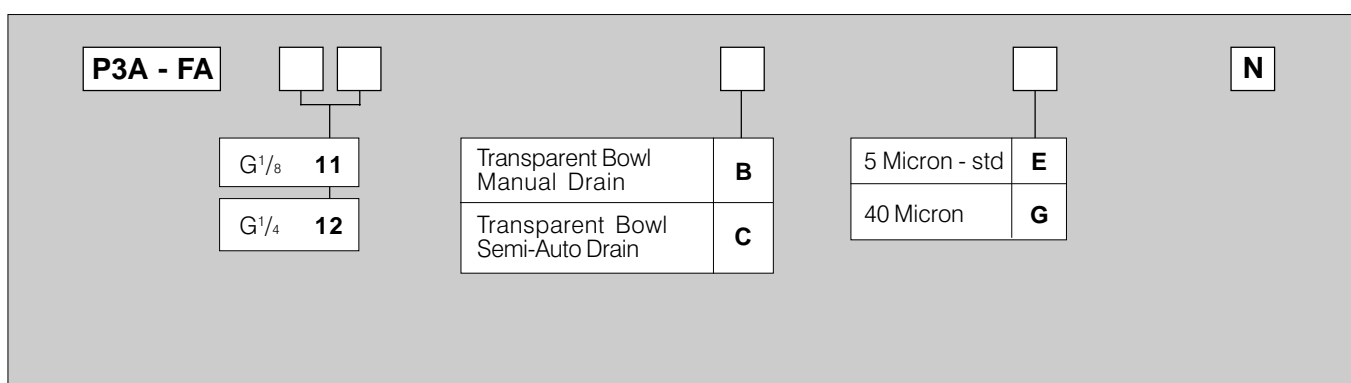
Manual drain



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:

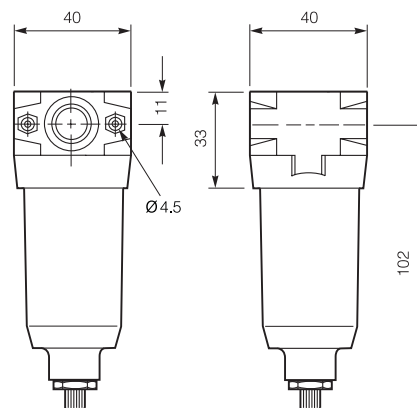


Technical information

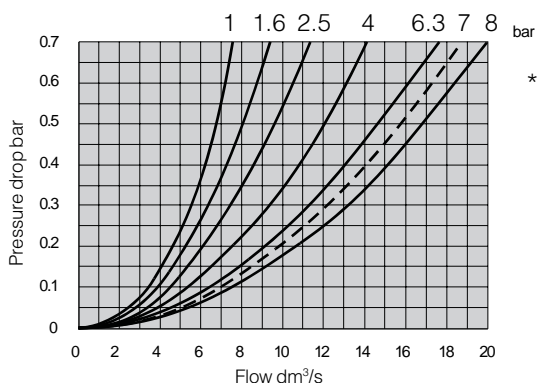
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm ³
High capacity bowl	33 cm ³
Flow*	
G ¹ / ₈	870 l/min - 14.5 dm ³ /s
G ¹ / ₄	1050 l/min - 17.5 dm ³ /s
Weight	75g

Note: For materials see page 16

Dimensions (mm)

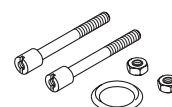


Flow characteristics



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

* Modular connection kit
with each product

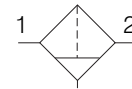
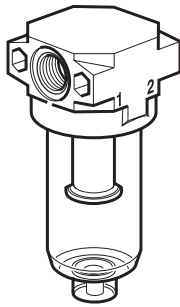


For Repair Kits and Spares
see pages 62 and 63.

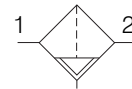
Mini FRLs

Coalescing Filters and Adsorbers

Symbols



Manual drain



Semi auto drain

Part numbers:

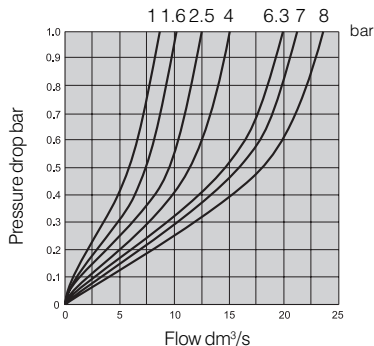
P3A - FA					N	
	G ^{1/8}	11	Transparent Bowl Manual Drain	B	Coalescing	C
	G ^{1/4}	12	Transparent Bowl Semi-Auto Drain	C	Adsorber	A

Technical information

Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm ³
High capacity bowl	33 cm ³
Max flow*	150 l/min - 2.5 dm ³ /s (Adsorber)
Max flow*	150 l/min - 2.5dm ³ /s (Coalescer)
Weight	75g

Note: For materials see page 16

Flow characteristics



Coalescing filters

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

Adsorbers

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

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

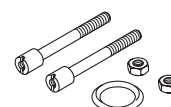
Features: Coalescing filters

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

Features: Adsorbers

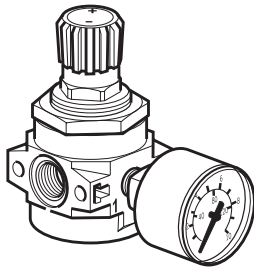
- Removes hydro-carbon vapours.
- Removes oil vapour carry-over.
- Activated carbon element
- For "breathable air" applications.

* Modular connection kit with each product

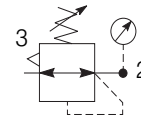


For Repair Kits and Spares see page 62 and 63.

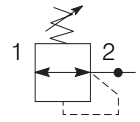
Regulators



Symbols



Self bleed regulator with gauge



Non bleed regulator

- 3 secondary pressure ranges available, 0.2 - 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:

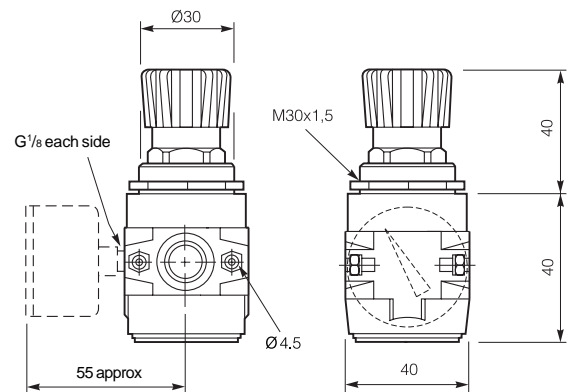
P3A - RA					P	
	G ^{1/8}	11	Relieving	B	0,2 - 8 bar + Gauge	G
	G ^{1/4}	12	Non -relieving	N	0,2 - 8 bar No Gauge	N
					0,2 - 2 bar + Gauge	Z
					0,2 - 2 bar No Gauge	Y
					0,2 - 4 bar + Gauge	M
					0,2 - 4 bar No Gauge	L

Technical information

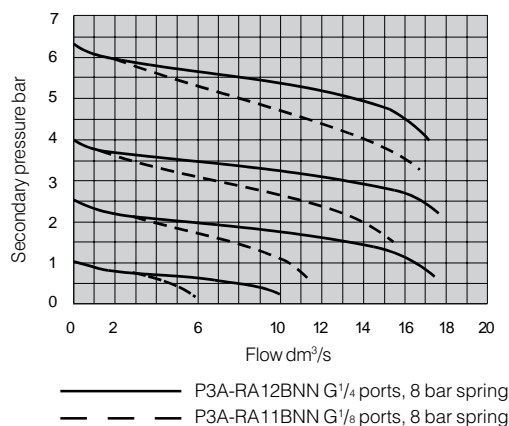
Max. inlet pressure	10 bar max.
Temperature range	-10°C + 50°C
Flow	
4 - 8 bar	760 l/min - 12,7 dm ³ /s
2 bar	390 l/min - 6,5 dm ³ /s
Weight	85g

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

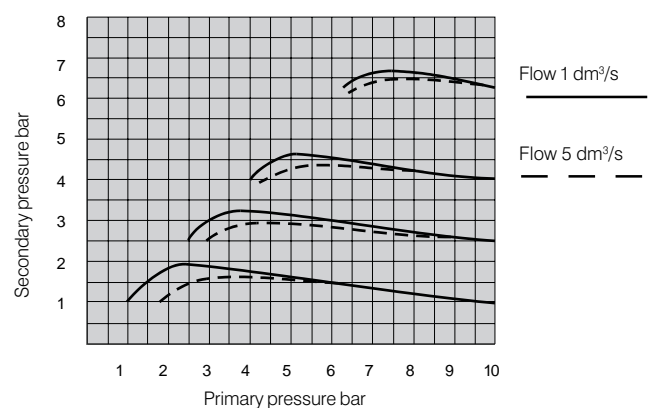
Dimensions (mm)



Flow characteristics

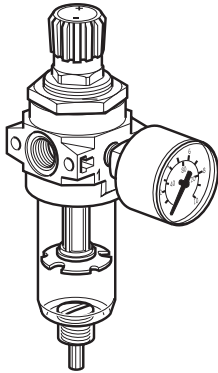


Regulation characteristics

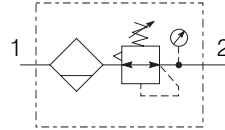


Mini FRLs

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:

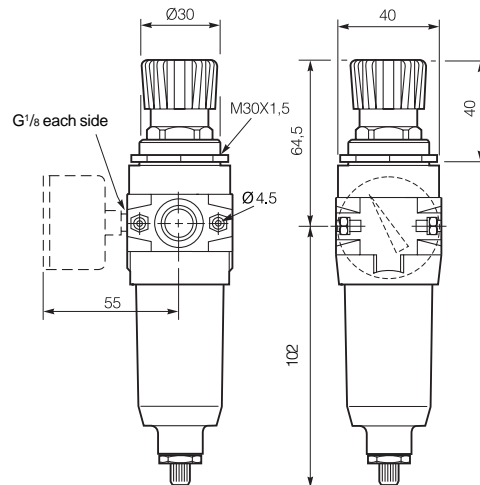
P3A - EA								P	
G ^{1/8}	11	Transparent Bowl Manual Drain	B	5 Micron-std	E	Relieving	B	0,2 - 8 bar + Gauge	G
G ^{1/4}	12	Transparent Bowl Semi-Auto Drain	C	40 Micron	G	Non-Relieving	N	0,2 - 8 bar No Gauge	N
								0,2 - 2 bar + Gauge	Z
								0,2 - 2 bar No Gauge	Y
								0,2 - 4 bar + Gauge	M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

Technical information

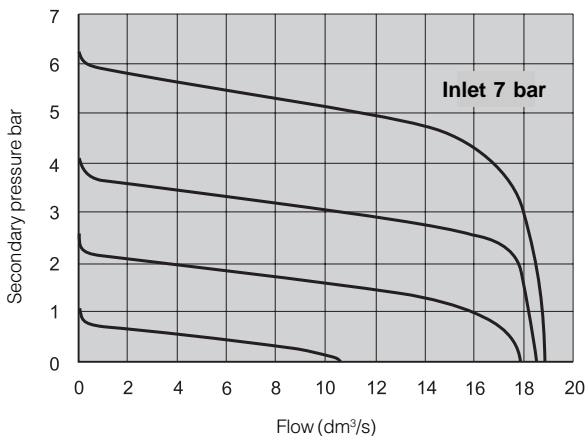
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	11 cm ³
High capacity bowl	33 cm ³
Weight	132g

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

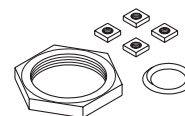
Dimensions (mm)



Flow characteristics

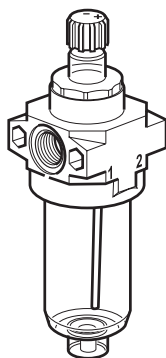


* Modular connection kit
with each product

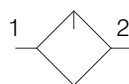


For Repair Kits and Spares
see page 62 and 63.

Lubricators



Symbols



Lubricator



Lubricator with drain

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

Part numbers:

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

Technical information

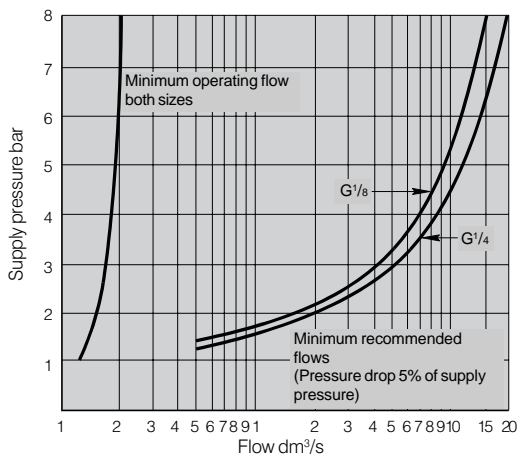
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Bowl capacity	26 cm ³
High capacity bowl	48 cm ³
Flow* Pre lubricants	G ¹ / ₈ 780 l/min - 13 dm ³ /s
	G ¹ / ₄ 1080 l/min - 18 dm ³ /s

For preferred lubricants see page 63.

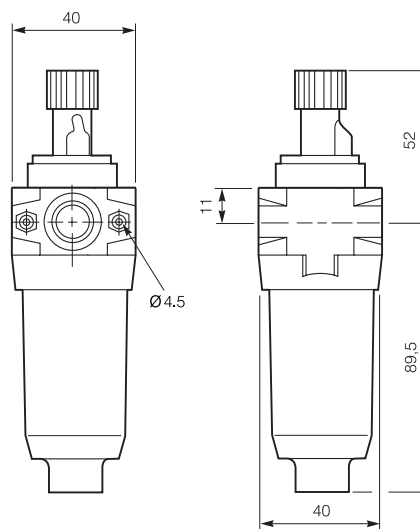
* At 7 bar inlet 5% pressure drop

Note: For materials see page 16.

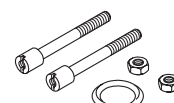
Flow characteristics



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.

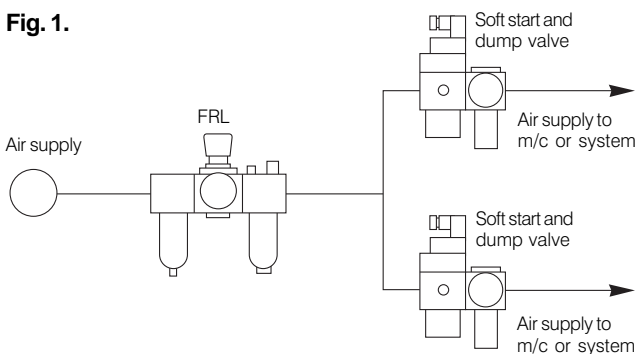


Fig.1. enables part of a system to be isolated and the air dumped to atmosphere whilst operating another part normally.

Fig. 2.

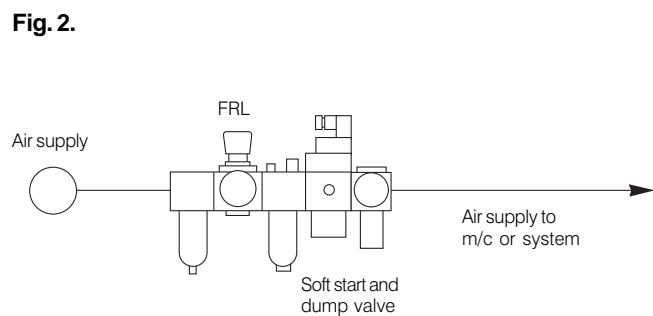
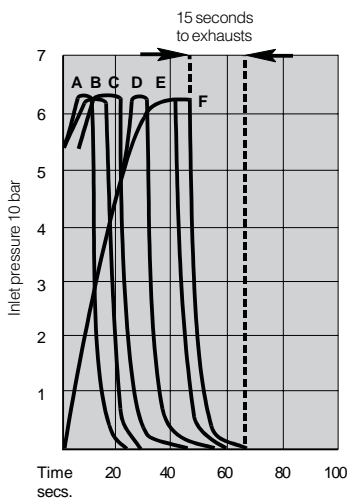


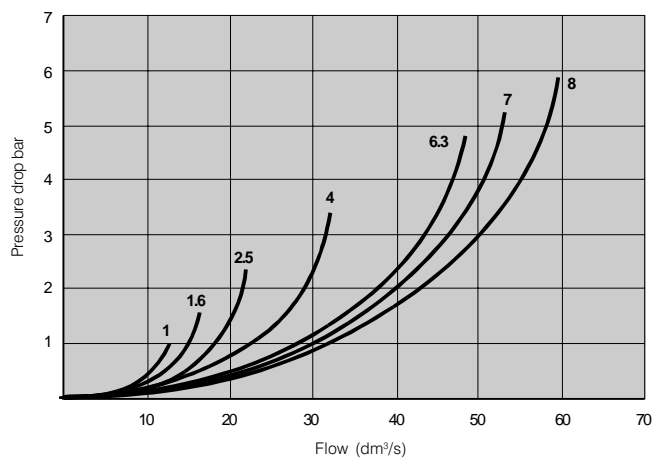
Fig. 2. shows the Soft Start and Dump valve assembled as part of the main Mini FRL combination feeding an entire system.

Effect of orifice on flow characteristics of pneumatic switch

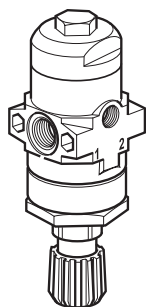


- 6 bar inlet
- 10 litre volume
- 1.5mm dia orifice
- A zero switch point
- B 1 turn
- C 2 turns
- D 3 turns
- E 4 turns
- F 5 turns

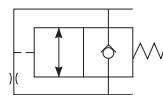
Flow characteristics for ('Soft Start' valve)



Soft Start Valves



Symbol



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

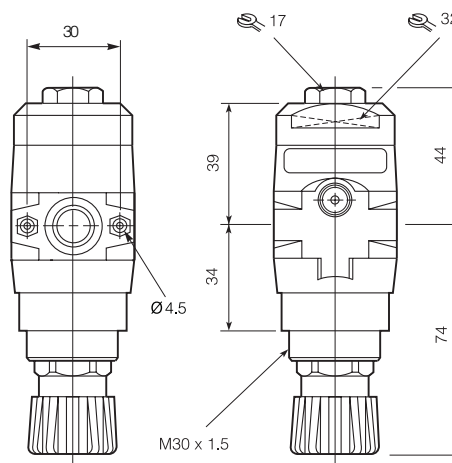
Part numbers:

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

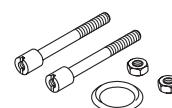
Technical information

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

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

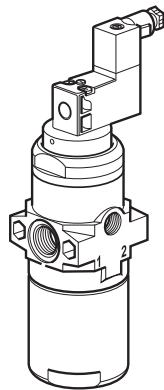


* Modular connection kit with each product

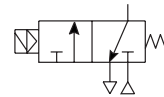


Mini FRLs

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:

P3A - DA				N	
G ^{1/4} 12	Pilot Monostable 4mm Push-in	PQ	No Solenoid		
	Solenoid (15mm) Monostable	SG	24V. D.C.	2CN	
			Less Solenoid	000	

For alternative solenoids see page 16.

Technical information

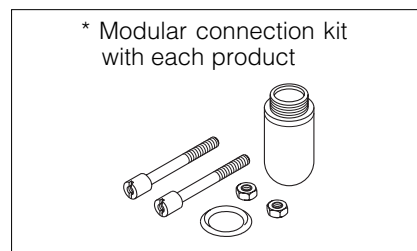
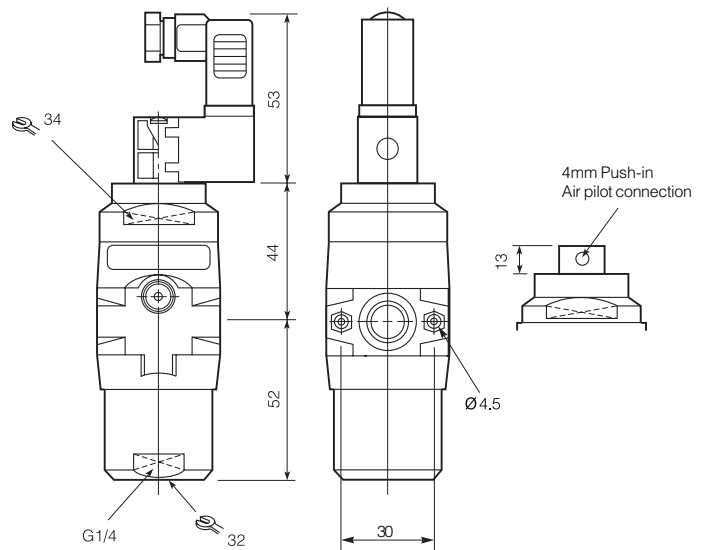
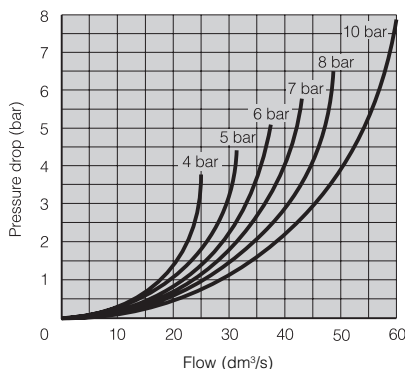
Max. inlet pressure	10 bar max.
Temperature range	-10°C +50°C
Flow @ 6 bar	
Through valve	to exhaust
1300 l/min - 22 dm ³ /s	1000 l/min - 17 dm ³ /s
Weight	85g

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	P2E-KV32BN
	24VDC	P2E-KV32CN
	12V 50Hz/60Hz	P2E-KV34BN
	24V 50Hz	P2E-KV31CN
	115V 50Hz/120VAC 60Hz	P2E-KV31FN
	230V 50Hz/240VAC 60Hz	P2E-KV31JN


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	P8C-C P8C-C26C
	With standard screw	
	Standard to be wired universal To be wired LED+protection 24 VDC	P8C-D P8C-D26C
	With cable and standard screw	
	Standard with 2 m cable	P8L-C2
	Standard with 5 m cable	P8L-C5
	LED+protection 24 VAC/DC, 2 m LED+protection 24 VAC/DC, 5 m	P8L-C226C P8L-C526C

Solenoids for Dump Valves (CNOMO solenoid)

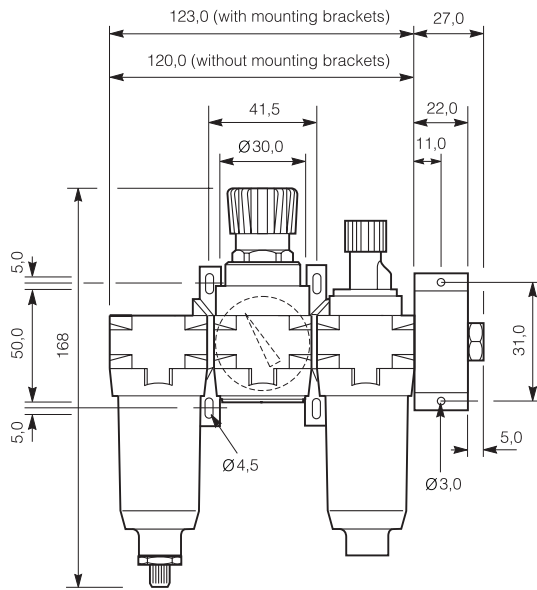
Supplied with cable plug and non-locking override

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

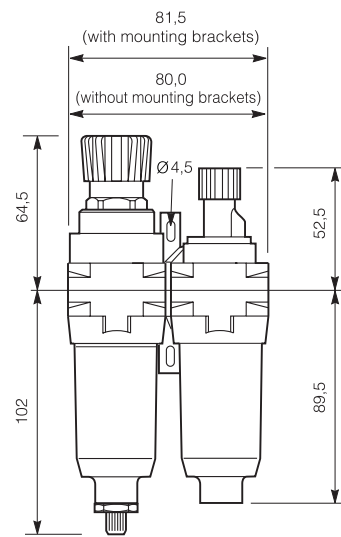
	Description	Order code
	Cable plug, for CNOMO solenoid	
	24V, LED+Diode	9125 9980-04
	24V AC/DC, LED+VDR	9125 9980-06
	110V AC/DC, LED+VDR	9125 9980-08
	240V AC/DC, LED+VDR	9125 9980-10
	Black	451B

Combination dimensions

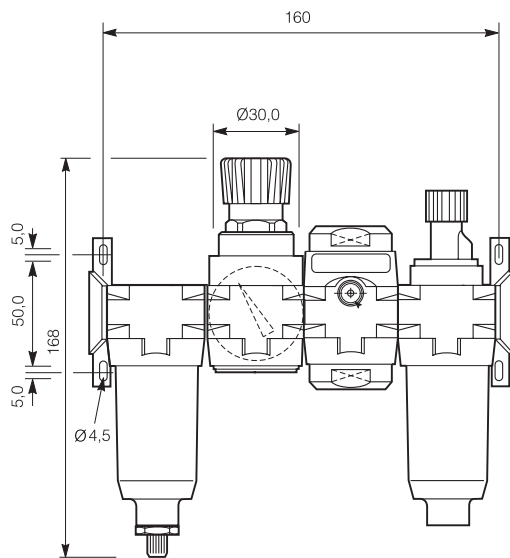
Filter, Regulator, Lubricator



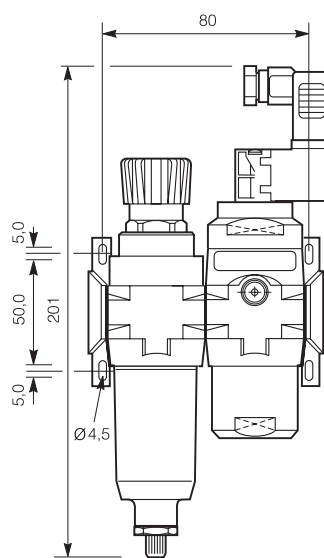
Filter/Regulator, Lubricator



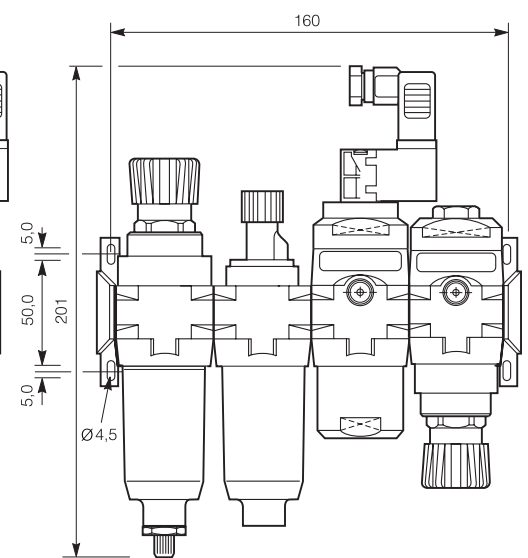
Filter, Regulator, Manifold, Lubricator.



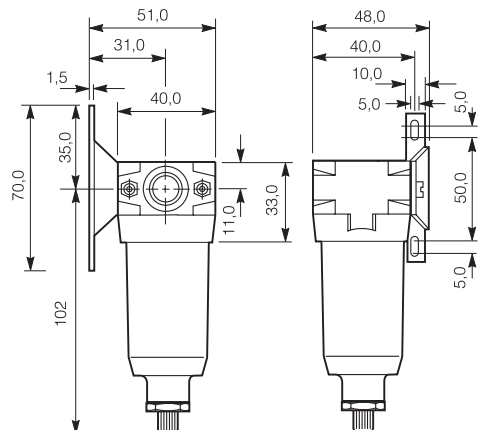
Filter/Regulator & Dump Valve



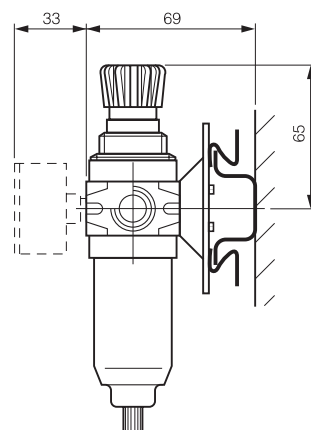
Filter/Regulator, Lubricator, Dump valve, Soft start valve



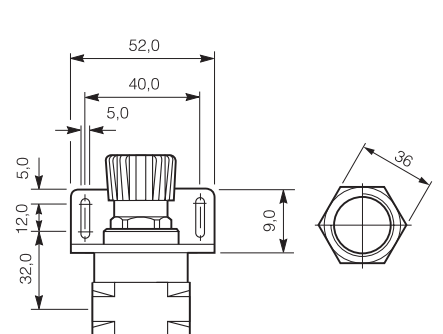
Wall mountings



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



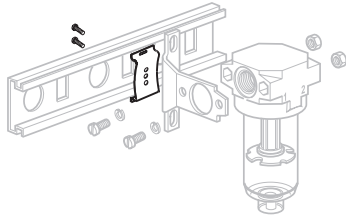
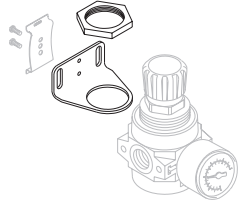

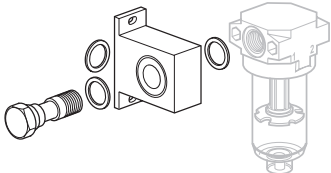
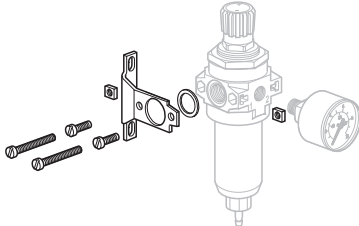
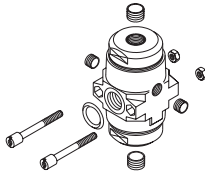

Wall brackets mounted inside an assembly



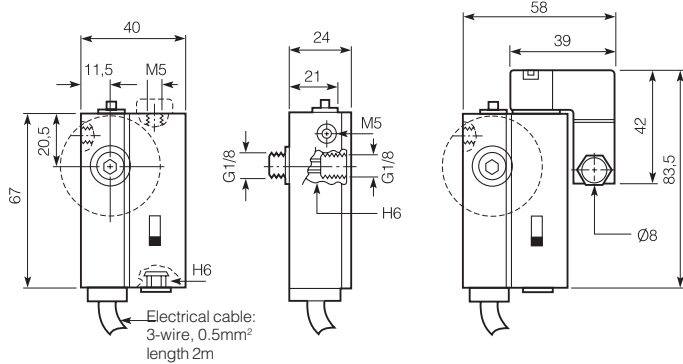
Wall brackets mounted inside an assembly



Mounting Kits

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

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
P3E-KA11SAN	Pneumatic output, manual reset.
P3E-KA11SBN	Pneumatic output, reset.
P3E-KA11SCN	Electrical and pneumatic outputs, manual resets.
P3E-KA11SDN	Electrical and pneumatic outputs, pneumatic reset.
P3E-KA11SEN	Electrical and pneumatic outputs, electrical reset

Note: Micro-solenoid not included.

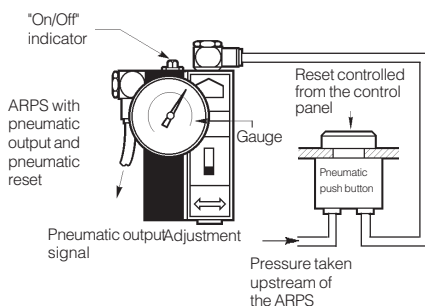
Micro-solenoid valve must be ordered separately.

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

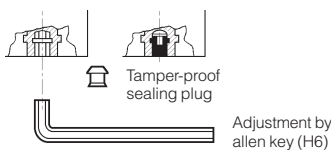
Part no.	Description
P2E-LV32B1	12V. D.C.
P2E-LV32C1	24V. D.C.
P2E-LV32D1	48V. D.C.
P2E-LV34B1	12V. 50/60Hz
P2E-LV31C1	24V. 50Hz
P2E-LV33C1	24V. 60Hz
P2E-LV34D1	48 V. 50/60Hz
P2E-LV31F1	115V. 50Hz / 120V. 60Hz
P2E-LV31J1	230V. 50Hz / 240V. 60Hz

See cable plugs Page 16

Pneumatic remote controlled reset

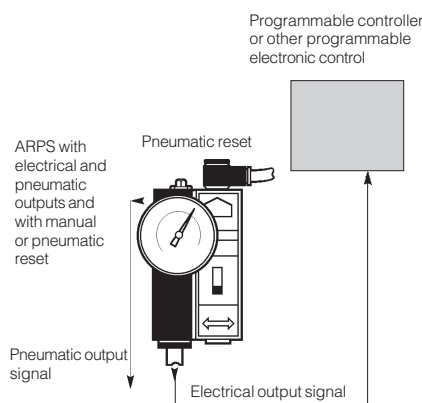


Adjusting the cut-off pressure

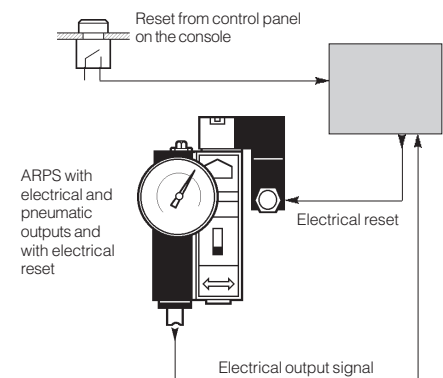


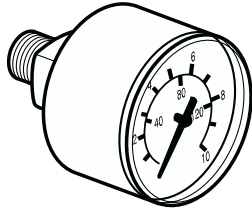
On all ARPS, the tripping pressure is adjusted by an allen key. Tamper proof sealing plug prevents unauthorised adjustment.

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	P3D-KAB1AYN
		0-4	G1/8	40	0,062	P3D-KAB1ALN
		0-10	G1/8	40	0,062	P3D-KAB1ANN
		0-20	G1/8	40	0,062	P3D-KAB1AHN
	Rear Entry	0-4	G1/8	50	0,068	P6G-ERB1040
		0-11	G1/8	50	0,068	P6G-ERB1110
		0-14	G1/8	50	0,068	P6G-ERB1140
	Rear entry	0-4	G1/4	50	0,074	P6G-ERB2040
		0-14	G1/4	50	0,074	P6G-ERB2140
		0-20	G1/4	50	0,074	P6G-ERB2200
	Bottom entry	0-11	G1/8	50	0,065	P6G-EBB1110
	Panel Mounted - Rear Entry	0-14	G1/8	50	0,066	P6G-EPA1140
		0-11	G1/8	63	0,080	P6G-FPA1V10
		0-10	G1/4	85	0,180	P6G-HPA1100
	Square - Panel Mounted - Rear Entry	0-10	G1/8	50x50	0,100	P6G-RPA1100
		0-4	G1/8	75x75	0,200	P6G-TPA1040
		0-10	G1/8	75x75	0,190	P6G-TPA1100
	Rear Entry - BackPressure (Reclassifiers)	0-2	G1/8	40	0,062	P6G-DEB1020

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
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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
Filter/Regulator Spare Kits				
5 micron element	P3A-KA00EEN	P3D-KA00EFA	P3E-KA00EFA	P3NKA00ESE
5 micron element (compact bowl)			P3E-KA00ETA	
40 micron element	P3A-KA00EGN	P3D-KA00EHA	P3E-KA00EHA	P3NKA00ESG
40 micron element (compact bowl)			P3E-KA00EVA	
Repair kit (self-relieving)		P3D-KA00RRN	P3E-KA00REN	P3NKA00RR
Repair kit (non-relieving)		P3D-KA00RNN	P3E-KA00RGN	P3NKA00RN
Tamperproof kit	P3A-KA00ATN	P3A-KA00ATN	P3E-KA00ATN	
For Drain Kits - see Filters on page 62				
For Bowl Kits - see Filters on page 62				
For Bowl Seal Kit - see Filters on page 62				

Lubricator Spare Kits

Plastic bowl without drain	P3A-KA00BAA	P3D-KA00BAA	P3E-KA00BAA	
For Manual Drain Kits - see Filters on page 62				
For Bowl Kits with Manual Drain - see Filters on page 62				
For Bowl Seal Kit - see Filters on page 62				

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.