MPC1M, MPC2M and MPC2AM
High Efficiency Compressed Air Filter/Regulators

Description

The MPC range of (self-relieving) high efficiency oil removing filter/regulators provide very high quality compressed air, with accurate pressure control, for pneumatic actuators and general purpose systems.

Principal features

- Compact miniature oil removing filter/regulator.
- Self-relieving.
- High efficiency - Exceeding 99.95% against D.O.P. tests.
- Efficiency testing carried out in accordance with ISO 12500 at 51 mg/m^3 (40 ppm) inlet concentration.
- Oil carryover less than 0.0255 mg/m3 (0.02 ppm).
- 100% water removal at line temperature.
- Polycarbonate bowl.
- External black anodised finish.
- Particle effiency: 99.96%
- Inlet dry pressure drop: 1.5 psi d.

MPC2M
shown with optional pressure gauge.

Available types supplied as standard

MPC1M	Metal bowl with manual drain and tamper-proof cap.
MPC2M	Polycarbonate bowl with manual drain.
MPC2AM	Metal bowl with autodrain.

Applications

The MPC_M is used to provide very high quality compressed air. There are many applications where compressed air of a particularly high quality is required. Typical examples include air bearings on machine tools, air gauging equipment, instrument air supplies, fluidic systems, breathing air, pneumatic positioners, etc.

Sizes and pipe connections

¼" screwed BSP (BS 21-Rp, ISO 7).

Spring range (operating pressure range)

All regulators can be adjusted to zero pressure, or above the figures shown. The operating range is marked on the unit.

Standard spring	0.7 - 9.0 bar g
Optional spring	0.2 - 2.0 bar g
	0.3 - 4.0 bar g

Note: The MPC will be supplied with the standard spring unless an alternative option has been specified when placing an order.

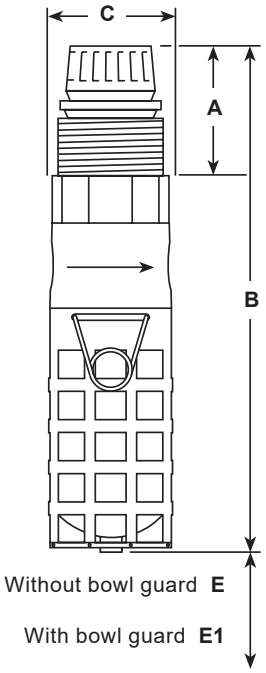
Operating limits

Maximum pressure/temperature	Polycarbonate bowl	10 bar g @ 50°C
	Metal bowl	17 bar g @ 80°C

Materials

No.	Part	Material
1	Body	Aluminium - anodised
2	Bowl	Polycarbonate or aluminium alloy
3	Bonnet assembly	Aluminium
4	Filter element	Microfibre/stainless steel
5	Valve	Nitrile

Dimensions (approximate) in mm and kg



Unit	Size	A	B	C	Withdrawal distance E	E1	Weight
MPC1M	¼"	75	167	38	25	-	0.2
MPC2M	¼"	67	156	38	25	45	0.2
MPC2AM	¼"	75	167	38	25	-	0.2

Optional extras

Airsets

The MPC2M, MP2AM filter/regulators are also available as airsets, consisting of Type 8 or FK21 bracket, mounting ring and pressure gauge (see the 'MPC optional extras' table below).

MPC optional extras - Selection table

Feature		MPC1M	MPC2M	MPC2AM
Polycarbonate bowl	Without drain		OE	
	With manual drain		S	
Bowl guard			OE	
Metal bowl (no sight glass)	With manual drain	S	OE	
	With autodrain			S
Tamper-proof cap	With locking seal	S	OE	OE
Pressure gauge	50 mm Ø		OE	OE
	40 mm Ø	S	OE	OE
Type 8 mounting bracket			OE	OE
FK21 fixing kit		S	OE	OE
Aluminium locking ring		S	OE	OE

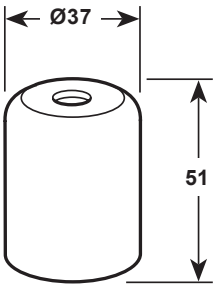
S = Supplied as standard
OE = optional extra
= not available

Note: A tamper-proof cap with locking seal is recommended as an optional extra for MPC2M and MPC2AM airsets.

Tamper-proof cap

(Standard on MPC1M)

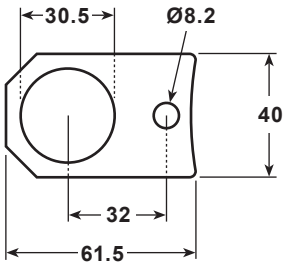
Dimensions
(approximate) in millimetres



FK21 fixing kit

The FK21 fixing kit is required to mount the MPC_M onto the Spirax Sarco range of PN pneumatic actuators. The aluminium mounting ring must also be specified.

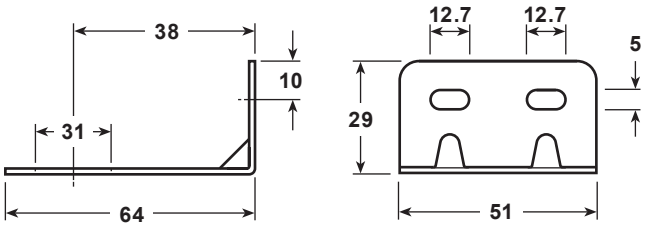
Dimensions
(approximate) in millimetres



Type 8 mounting bracket and mounting ring

For general installation. The filter/regulator can be mounted using this zinc plated mild steel bracket and aluminium mounting ring. Both items must be specified when placing an order.

Dimensions (approximate) in millimetres

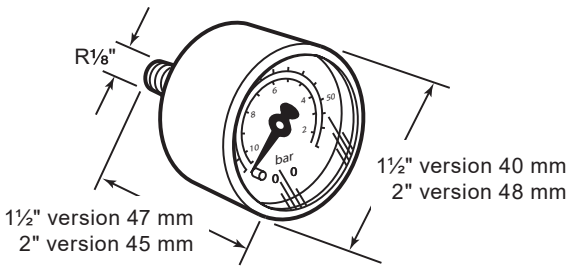


Optional pressure gauge (Not for MPC2AM)

Available in two sizes (1½" and 2"), with 3 pressure ranges. The face is marked in both bar and psi. Please state, size and pressure range when placing an order.

Pressure ranges	0 to 2 bar	0 to 30 psi
	0 to 7 bar	0 to 100 psi
	0 to 11 bar	0 to 160 psi

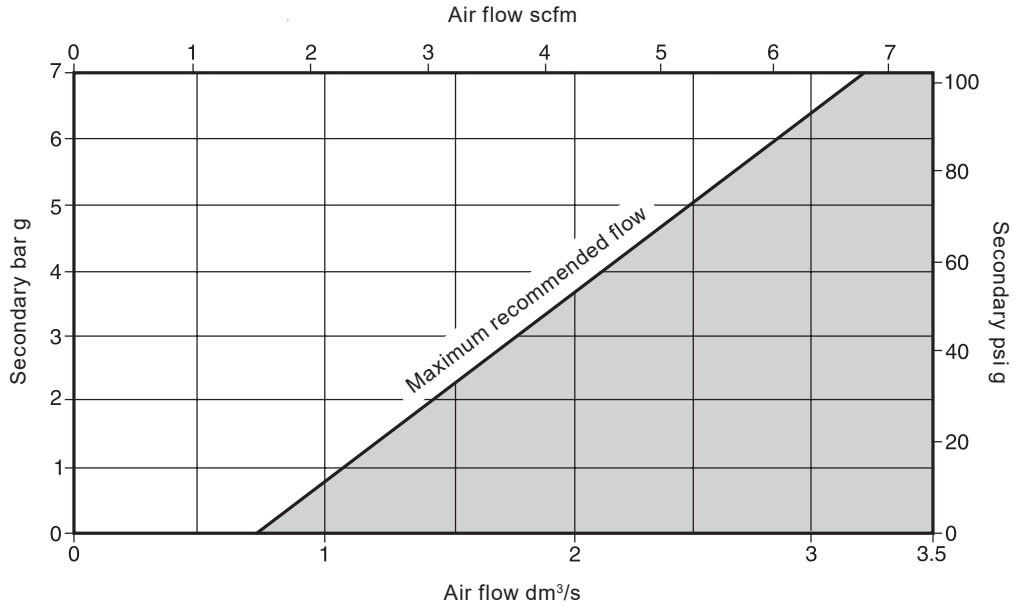
Dimensions (approximate) in millimetres



Performance selection (with primary pressure 10 bar)

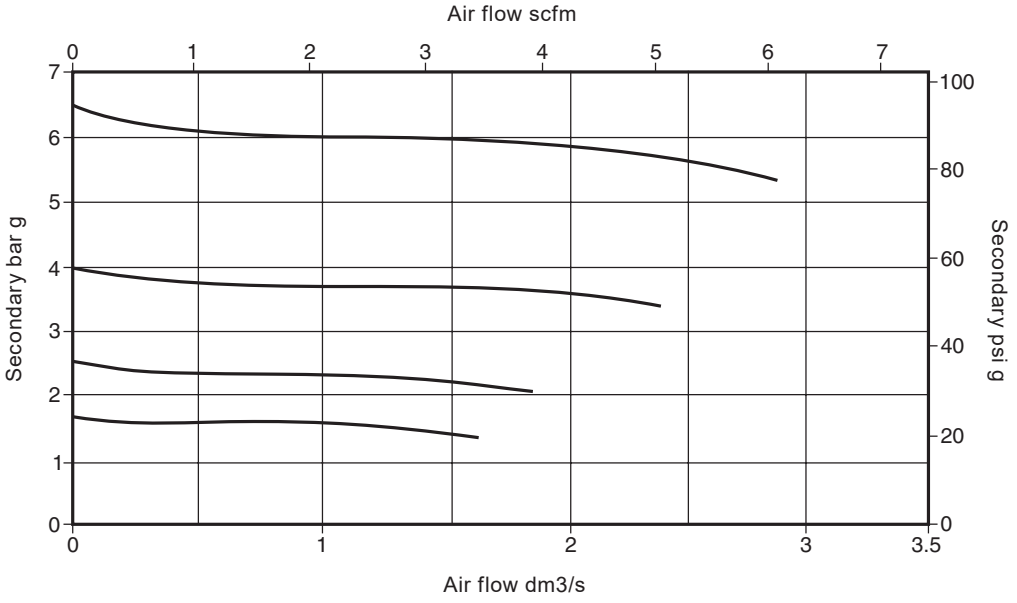
For any specified primary filtration pressure, there is a maximum recommended air flowrate. Keeping within this, will ensure that the element performance maintains the stated high efficiency levels, particularly for the removal of oli and water contaminants.

Maximum secondary flow at peak performance



Use of the product in this region may reduce the oil removing efficiency.

Droop characteristics



Graph utilises some typical values for secondary flow/pressure to demonstrate droop

$$\text{Droop} = \frac{\text{Pressure droop}}{\text{Set point}} \text{ @ Relevant flowrate}$$

Safety information, installation and maintenance
For full details see the Installation and Maintenance Instructions (IM-P504-08) supplied with the product.

How to order
Please state quantity, size and type and any options which are required. Unless otherwise stated, the filter/regulator will be supplied with the 0.7 - 9.0 bar g control spring and a polycarbonate bowl with drain.

Example:
1 off ¼" MPC2M high efficiency compressed air filter/regulator having a 0.3 - 4.0 bar g control spring.

1 off Airset kit for fitting an MPC2M onto a Spirax Sarco PN pneumatic actuator.

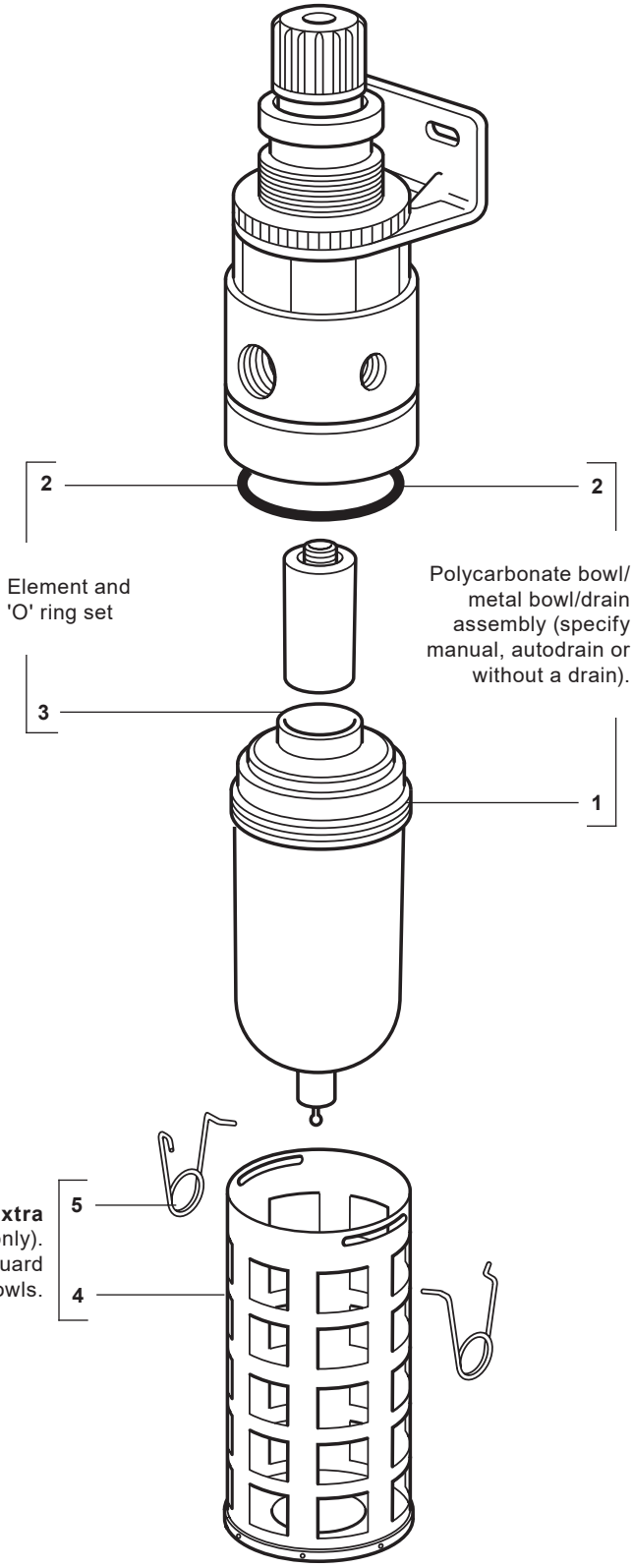
Spare parts
The spare parts available are detailed below.
No other parts are supplied as spares.

Available spares

Polycarbonate bowl/metal bowl/drain assembly (specify with or without drain)	**1, 2**
Element and 'O' ring set	**2, 3**
Bowl guard assembly (optional extra)	**4, 5**

How to order spares
Always order spares by using the description given in the column headed 'Available spares' and state the size and type of unit.

Example: 1 - Element and 'O' ring set for a ¼" MPC2M high efficiency compressed air filter/regulator.



Optional extra
Bowl guard (MPC2M only).
In the interest of safety Spirax Sarco recommend that a bowl guard should be fitted to polycarbonate bowls.