

# spirax sarco

## IP2M, IP2AM and IP2DM Monnier

# International Compressed Air Filter/Regulators

### Description

The IP\_M range of Monnier international compressed air filter/regulators provide high quality compressed air with accurate pressure control for general purpose pneumatic systems.

### Principal features:

- Internal and external black anodised finish.
- Compact combined filter/regulator.
- Shrouded whirl disc for efficient separation.
- Option of sight level on metal bowled units.
- 5 micron large surface area element.
- Good flow and regulation characteristics.
- For line, bracket or panel mounting.
- Easy fit stainless steel bowl guard available.

### Available types

**IP2AM** Having a pilot operated automatic drain.

**IP2DM** Having a semi-auto dump valve.

**IP2M** Having a manual drain (metal bowl only).

Note: The IP2\_M Monnier range are supplied self-relieving as standard (the non-relieving version is available on request).

### Optional extras

For further technical information regarding the following options see page 3:

- Tamper-proof cap.
- Type 21 mounting bracket.
- Pressure gauges.
- Discharge tube adaptor - IP2AM only.
- Metal bowl.
- Bowl guard.



## Sizes and pipe connections

¼", ⅜" and ½" screwed BSP (BS 21-Rp).

## 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	0.5 - 10 bar g
Optional spring	0.2 - 3.5 bar g

**Note:** The IP2\_M Monnier range will be supplied with the standard spring unless an alternative option has been specified when placing an order.

## Operating limits

Maximum working pressure	Polycarbonate bowl	10 bar g
	Metal bowl	17 bar g
Maximum working temperature	Polycarbonate bowl	50 °C
	Metal bowl	80 °C
	Metal bowl with sight level	70 °C

## Materials



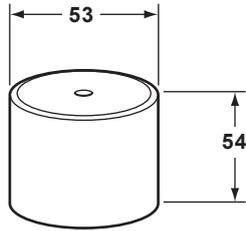
Part	Material
Body	Machined aluminium (anodised)
Valve	Brass rubber faced
Bowl	Polycarbonate or aluminium (anodised)
Element (5 µm)	Melamine impregnated cellulose
Diaphragm	Reinforced nitrile rubber

## Optional extras

### Tamper-proof cap

An aluminium tamper-proof cap can be fitted to prevent unauthorised pressure adjustment.

#### Dimensions (approximate) in mm

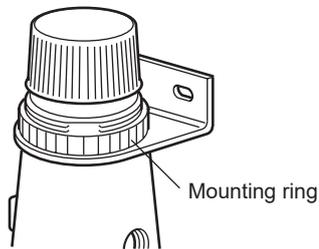
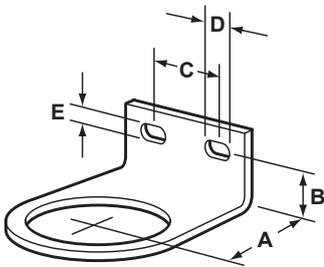


### Type 21 mounting bracket

A plated mild steel bracket which can be attached to the filter/regulator by the plastic mounting ring supplied.

Note: An aluminium mounting ring can be supplied at extra cost, and must be specified, if required, on order placement.

#### Dimensions (approximate) in mm



A	B	C	D	E
44	19	32	12	6

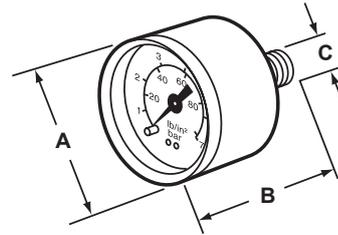
If the regulator is to be panel mounted a hole is required in the panel 48 mm diameter, and the panel thickness must not exceed 8 mm.

### Pressure gauge

Available in two sizes, with 4 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
	0 to 20 bar	0 to 300 psi (2" size only)

#### Dimensions (approximate) in mm



Size	A	B	C
1½"	40	47	R½"
2"	49	45	R½"

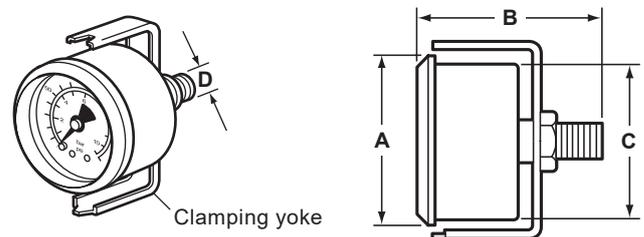
### Pressure gauges for panel mounting

With chromium plated bezel available in two ranges, the face being marked in bar and psi as follows:-

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

#### Dimensions (approximate) in mm

A	B	C	D
53	56	48	R½"

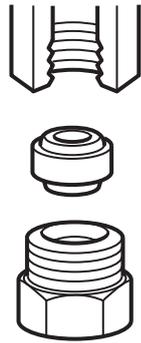


Optional extras continued on next page

## Optional extras (continued)

### Discharge tube adaptor IP2AM only

An adaptor can be supplied for the auto-drain on the IP2AM models, to accept 8 mm O/D copper or plastic tube.



### Bowl guard

In the interest of safety Spirax Sarco recommend that a bowl guard should be fitted to polycarbonate bowls - see the 'Warning' under 'Safety information, installation and maintenance' page 8.



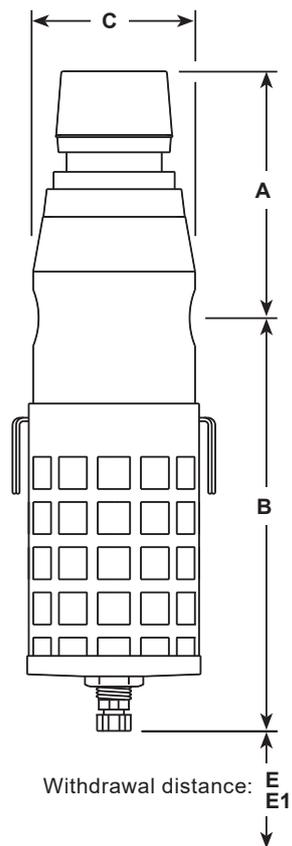
### Metal bowl with sight level



**Dimensions/weights (approximate) in mm and kg**

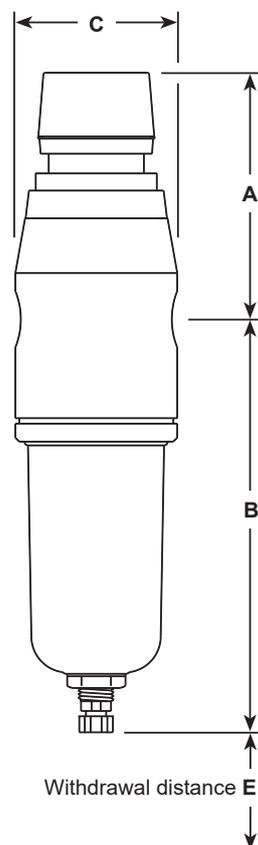
**Polycarbonate bowl**

Unit	A	B	C	E		Weights	
				Without bowl guard	With bowl guard	IP_M	IP_M + bowl guard
IP2AM	95	165	64	39	82	0.730	0.808
IP2DM	95	165	64	39	79	0.730	0.808



**Metal bowl**

Unit	A	B	C	E	Weight
IP2M	82	143	76	39	0.913
IP2AM	82	152	76	39	0.913
IP2DM	82	145	76	39	0.913

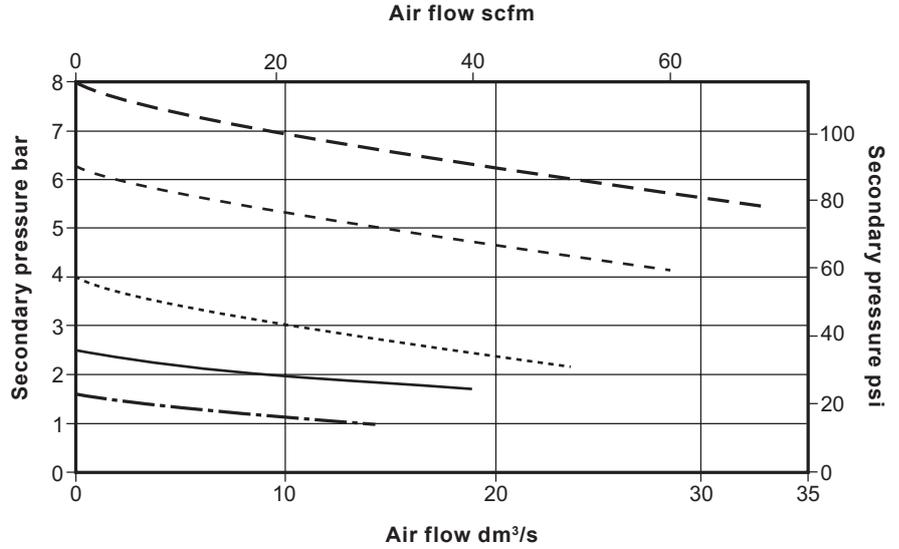


## Capacities

With primary pressure 10 bar and 5 µm element

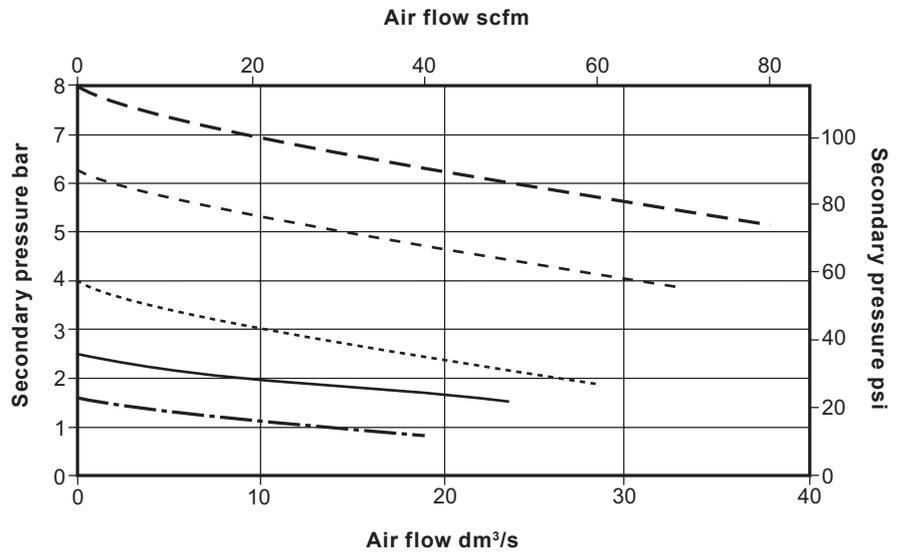
### 1/4"

- 1.6 bar g (23 psi g)
- - - 2.5 bar g (36 psi g)
- · · 4.0 bar g (58 psi g)
- 6.3 bar g (91 psi g)
- · - 8.0 bar g (116 psi g)



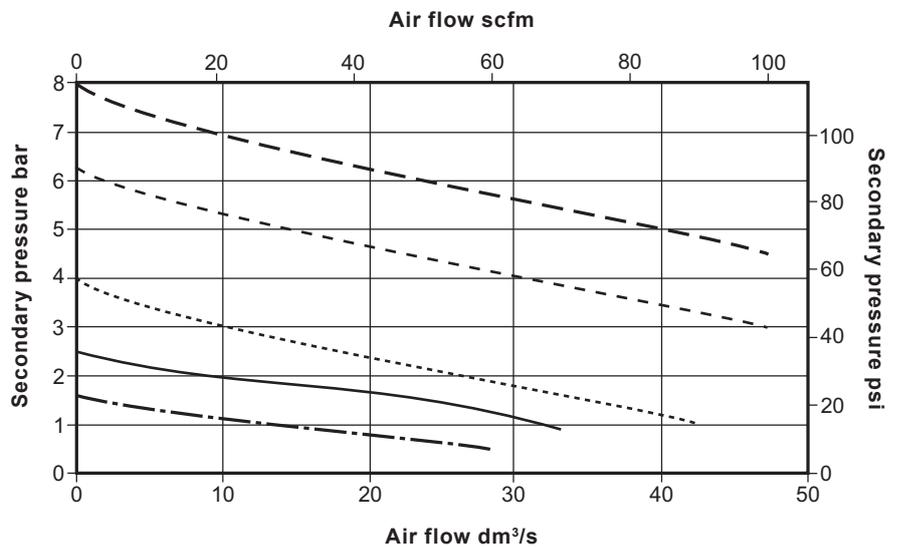
### 3/8"

- 1.6 bar g (23 psi g)
- - - 2.5 bar g (36 psi g)
- · · 4.0 bar g (58 psi g)
- 6.3 bar g (91 psi g)
- · - 8.0 bar g (116 psi g)



### 1/2"

- 1.6 bar g (23 psi g)
- - - 2.5 bar g (36 psi g)
- · · 4.0 bar g (58 psi g)
- 6.3 bar g (91 psi g)
- · - 8.0 bar g (116 psi g)



## Principle of operation

With system pressure on, the regulator poppet valve assembly is in the closed position when the adjusting knob is turned fully counter clockwise (no spring load). By turning the adjusting knob clockwise, the diaphragm/piston moves downward allowing filtered air to flow in through the orifice created between the poppet assembly and seat.

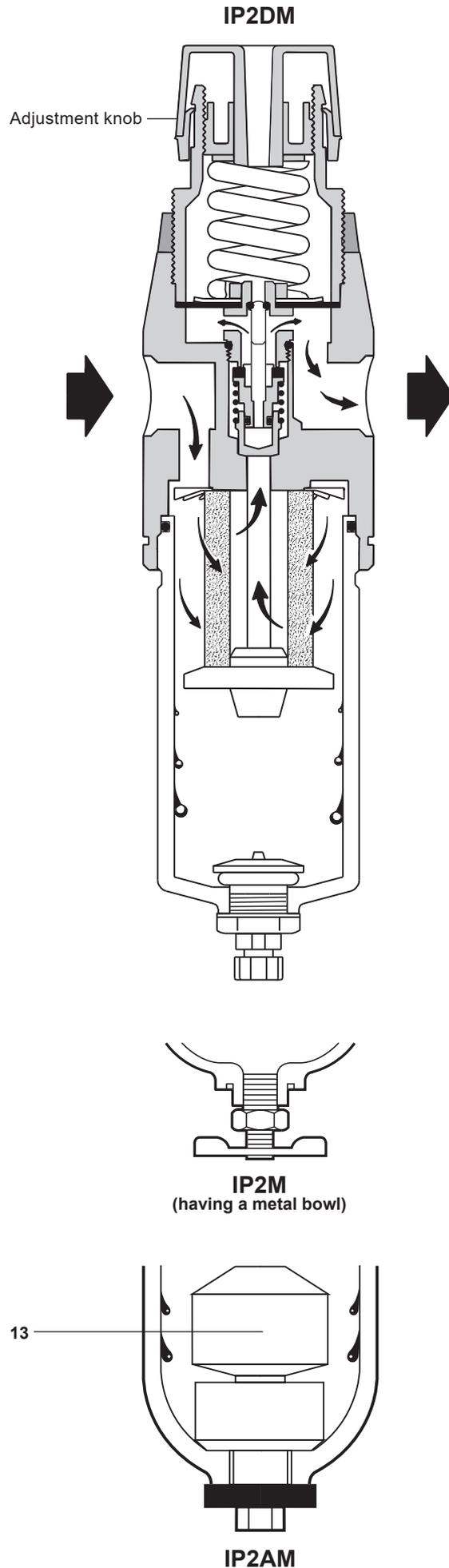
## Auto-drain - IP2AM

The Monnier internal auto-drain is a pilot operated unit. As the water level in the bowl rises, the float (13) lifts, allowing line pressure to act on a piston, which opens the main discharge valve. As the liquid level falls, the float closes and line pressure shuts the main valve. Under zero pressure conditions, the automatic drain will be in the open position, allowing any liquid to drain away.

## Automatic dump valve - IP2DM

This is a spring loaded valve which will allow the filter/regulator to automatically drain when the pressure in the bowl drops below 0.06 bar (i.e. when air to the plant is shut off).

The units can also be drained manually by pushing the protruding valve stem sideways or upwards.



## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P504-18) supplied with the product.

### Warning:

Polycarbonate bowls and sight levels on metal bowls can be attacked by phosphate ester fluids, solvents, paint thinners and carbon tetrachloride. These and similar substances should never be allowed to come into contact with the bowl. Certain compressor lubricating oils also contain additives harmful to polycarbonate and where there is any doubt we recommend, in the interests of safety that a metal bowl or bowl guard should be fitted.

### Installation note:

Fit into a horizontal pipeline, with the bowl vertically downwards, as close as possible to the equipment it is serving. Connect the unit so that the air flow is in the direction shown by the arrow cast on the body. A pressure gauge fitted to one of the ports is recommended (to show the secondary pressure). The port(s) not in use should be blanked off with the plugs supplied (P).

### How to order

**Example:** 1 off IP2AM Monnier international compressed air filter / regulator having a female ½" screwed BSP (BS 21 - Rp) connection.

**Note 1:** Unless otherwise instructed, the filter / regulator will be supplied with a polycarbonate bowl, 0.5 to 10 bar control spring, 5 µm element and polycarbonate bowl as standard. If a metal bowl is required (with or without sight level) it must be clearly specified on the order. The IP2M manual drain is available with metal bowl only.

**Note 2:** If any optional extras are required, they must be clearly specified on the order.

## Spare parts

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

### Available spares

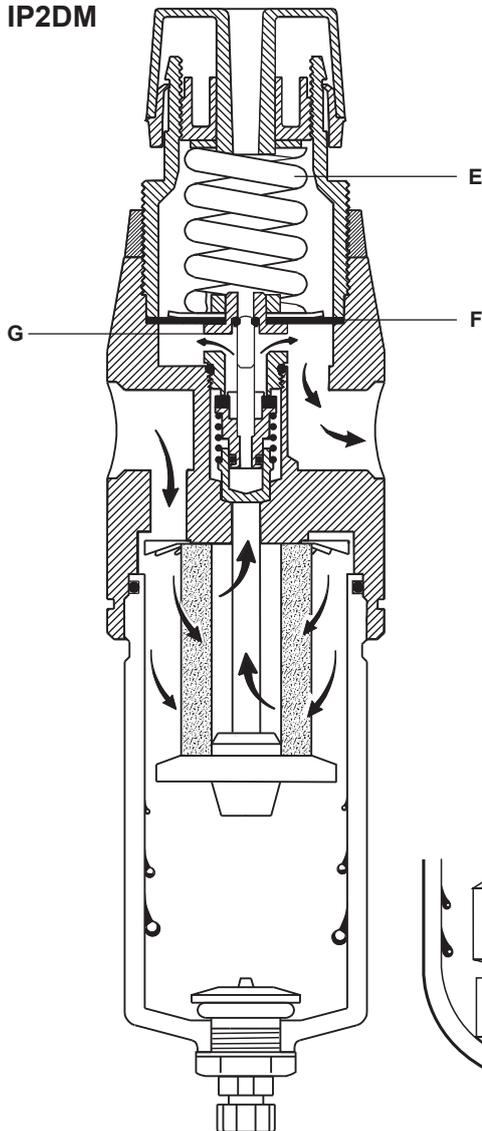
Pressure control spring set - State pressure range	E
Valve and diaphragm assembly	F, G
Polycarbonate bowl assembly including appropriate drain	A, B
Metal bowl (with or without sight level)	B, D
Element set (packet of 3 of each)	B, C, (IP2M, IP2AM and IP2DM only)
Auto-drain (IP2AM only)	H

### 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 off Pressure control spring set (0.5 - 10 bar) for a ½" IP2M Monnier international compressed air filter/regulator.

#### IP2DM



#### Metal bowl with sight level for IP2M, IP2AM and IP2DM

