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MF2M

Monnier Miniature

Compressed Air Filter

TI-P504-01

CH Issue 2

Manual Drain

International Symbol

Description

The MF2M Monnier miniature compressed air filter provides high quality compressed air for general purpose pneumatic applications.

Principal features:

- Compact unit suitable where space is limited and air flow is small.
- Multi-bladed whirl disc for improved moisture separation.
- Polycarbonate bowl.
- Long life 5 µm element.
- External black anodised finish.

Optional extras

For further technical information regarding the following options see page 2:

- Type 3 mounting bracket.
- Easy fit stainless steel bowl guard.

Sizes and pipe connections

¼" screwed BSP (BS 21-Rp).

Operating limits

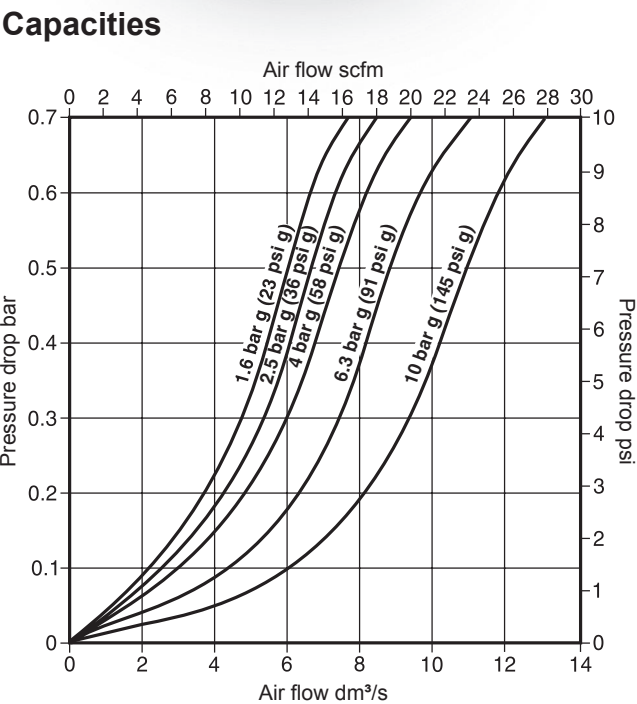
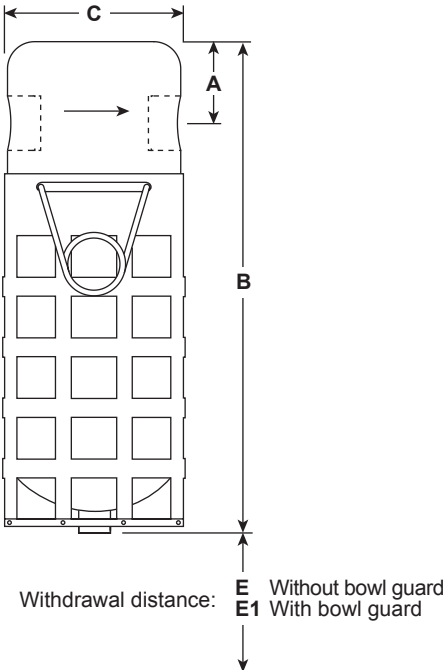
Maximum working pressure	10 bar g
Maximum working temperature	50°C

Materials

Part	Material
Bowl	Polycarbonate
Head	Aluminium
Element	Sintered polypropylene
Seals	Nitrile rubber
Bowl guard	Stainless steel

Dimensions (approximate) in mm and kg

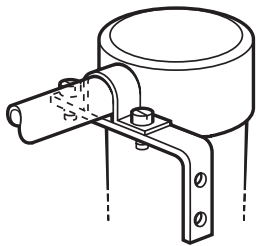
A	B	C	E	E1	Weight
10	98	38	25	76	0.155



Optional extras

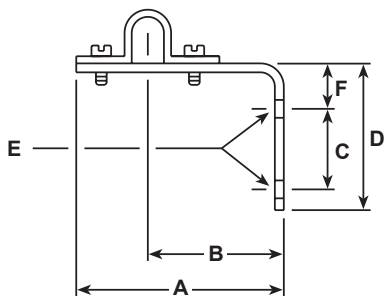
Type 3 mounting bracket

This is a zinc plated, mild steel angle bracket which can be attached to any flat surface by means of screws or bolts.



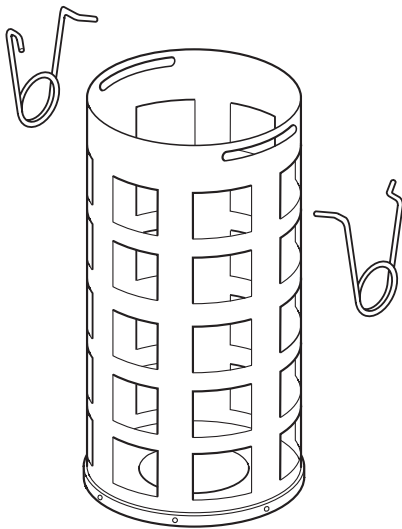
Dimensions (approximate) in mm

A	B	C	D	E	F
75	50	25	65	13	20



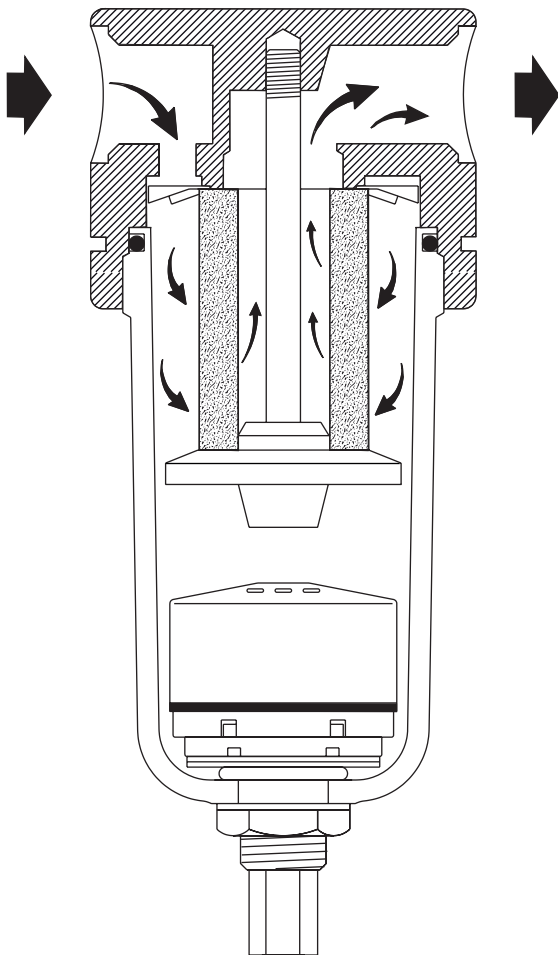
Bowl guard

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



Principle of operation

Monnier air line filters are built to ensure solid and liquid contaminants are removed from compressed air. All Monnier filters are engineered with the exclusive Whirl-Away design which creates high centrifugal force with low pressure drop. The whirling action forces all liquids and solids against the bowl wall causing them to run down below the quiet-zone baffle where they can be drained out. The air then flows through the element where the smaller particles are removed and the filtered air passes downstream. The leak proof drain valve has an o-ring seal that can be opened and closed without tools.



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P504-02) supplied with the product.

Warning:

Polycarbonate bowls are 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 bowl guard should be fitted.

Installation note:

Fit into a horizontal pipeline with the air flow in the direction of the arrow and the bowl vertically downwards, as close as possible to the equipment it is protecting.

How to order

**Example:** 1 off MF2M Monnier miniature compressed air filter having 1/4" screwed BSP connections.

**Note:** If any optional extras are required they must be clearly specified when placing an order.

Spare parts

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

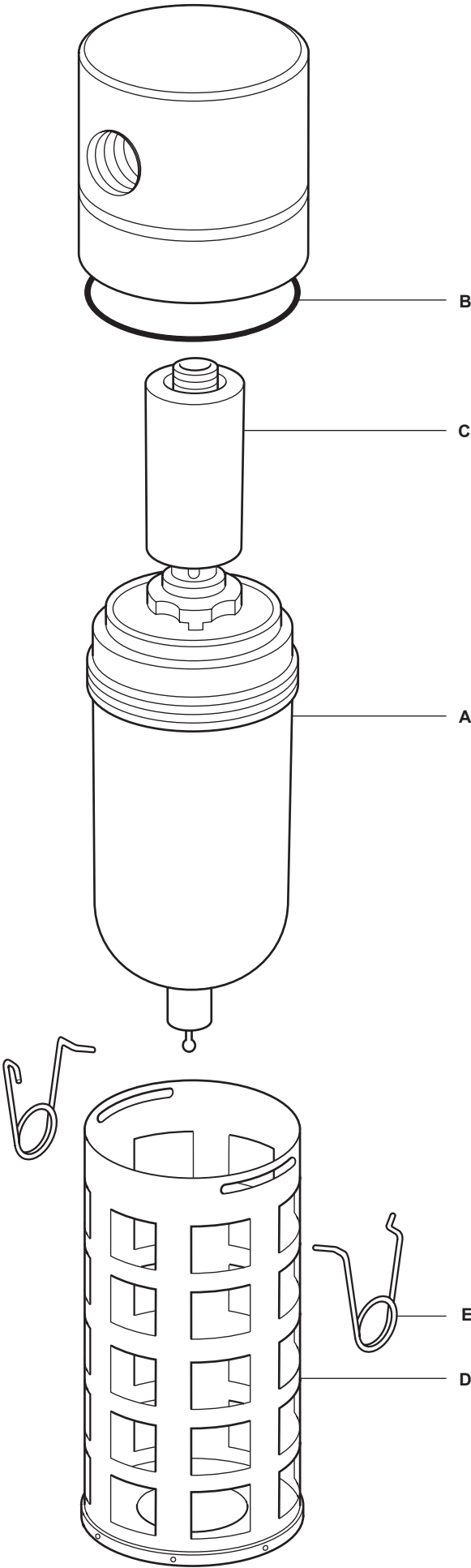
Available spares

Bowl assembly	A, B
Element set 5 micron (packet of 3)	B, C
Bowl guard assembly	D, E

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 set (5 microns) for a 1/4" MF2M Monnier miniature compressed air filter.



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IF2M, IF2AM and IF2DM

Monnier

TI-P504-11

CH Issue 2



International Compressed Air Filters

Description

The IF Monnier international range of filters provides high quality compressed air (free from liquid and solid contaminants) for general purpose pneumatic systems.

Available types:

- IF2M Only available with a metal bowl and having a manual drain.
- IF2AM Having a pilot operated automatic drain.
- IF2DM Having a semi-automatic dump valve with quick action manual override.

Principal features:

- Internal and external high quality black anodised finish.
- Large filter element for long life and low pressure drop.
- Shrouded whirl disc for efficient separation.
- 5 micron large surface area element.
- Options of metal bowl with sight level.

Optional extras

- For further technical information regarding the following options see below:
- Metal bowl with /without sight glass.
  - Bowl guard.

Sizes and pipe connections

¼", ⅜" and ½" screwed BSP (BS 21 - Rp).

Operating limit

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

Materials

No.	Part	Material
1	Bowl	Polycarbonate or aluminium (anodised)
2	Head	Anodised aluminium
3	Element 5 µm	Melamine impregnated cellulose
4	'O' rings	Nitrile rubber
5	Auto-drain	Plastic



IF2DM shown

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Compressed air products

Filters

Optional extras

Metal bowl  
with sight level



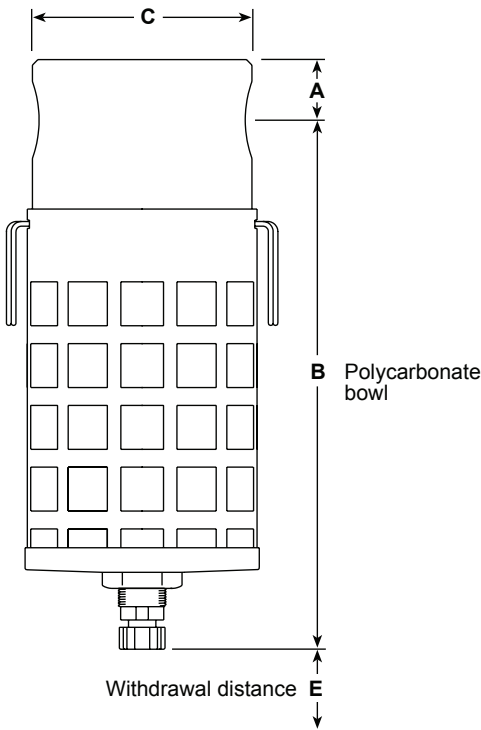
Bowl guard

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'.

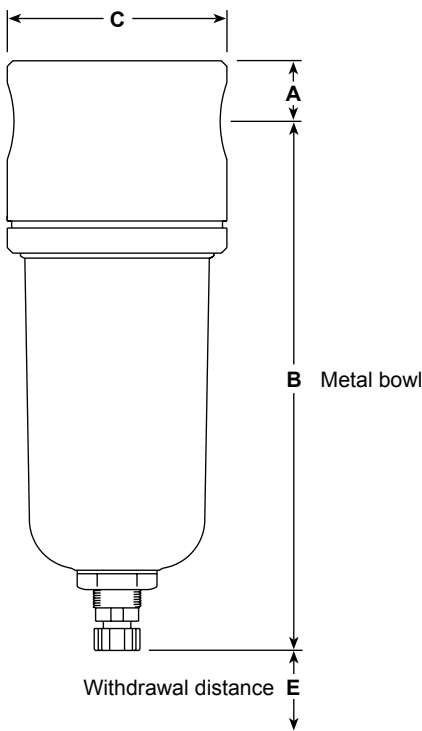


Dimensions/weights (approximate) in mm and kg

Polycarbonate bowl					
Unit	A	B	C	E	Weight
IF2AM	17	152	64	55	0.463
IF2DM	17	152	64	55	0.670



Metal bowl					
Unit	A	B	C	E	Weight
IF2M	17	152	64	39	0.606
IF2AM	17	152	64	39	0.626
IF2DM	17	152	64	39	0.670

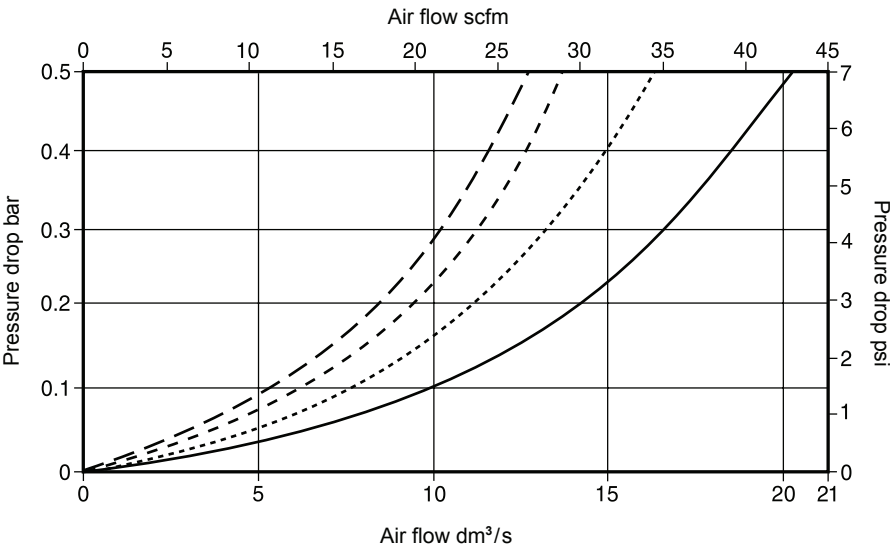


Capacities

5 µm element

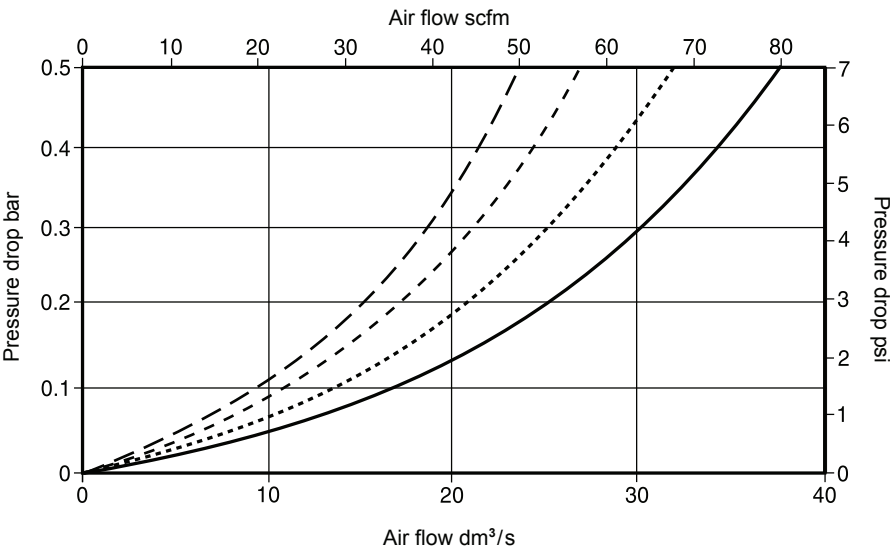
1/4"

- 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)



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)

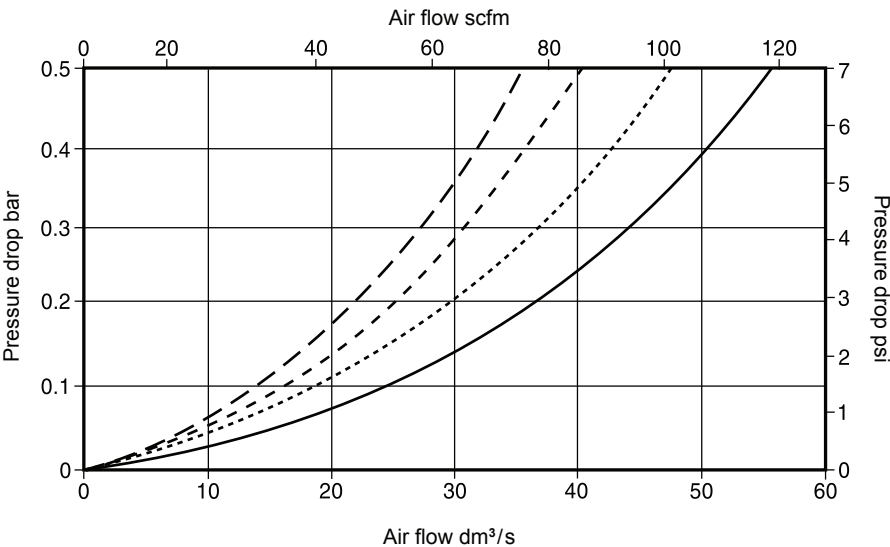


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1/2"

- 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)



### Principle of operation

Monnier air line filters are built to ensure solid and liquid contaminants are removed from compressed air. All Monnier filters are engineered with the exclusive Whirl-Away design which creates high centrifugal force with low pressure drop. The whirling action forces all liquids and solids against the bowl wall causing them to run down below the quiet-zone baffle where they can be drained out. The air then flows through the elements where the smaller particles are removed and the filtered air passes downstream. The leak proof drain valve has an 'O' ring seal that can be opened and closed without tools.

### Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P504-12) supplied with the product.

#### Warning:

Polycarbonate bowls are 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 synthetic and standard 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 a bowl guard should be fitted.

#### Installation note:

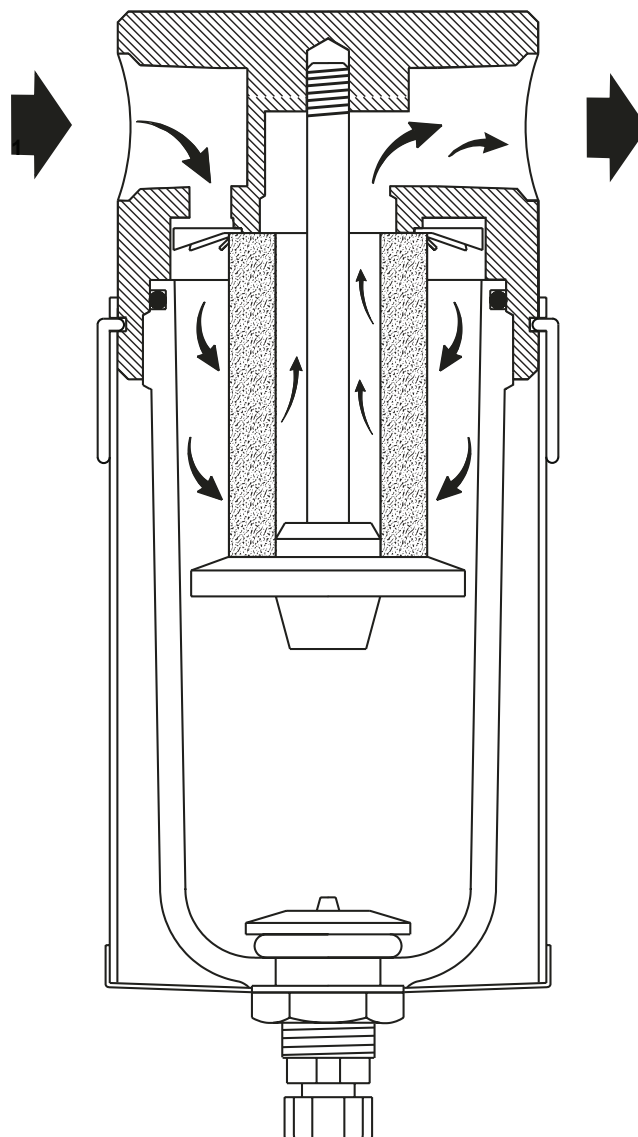
Fit into a horizontal pipeline with the air flow in the direction of the arrow and the bowl vertically downwards, as close as possible to the equipment it is protecting.

### How to order

**Example:** 1 off IF2AM Monnier international compressed air filter having a female 1/2" screwed BSP (BS 21 - Rp) connection.

**Note 1:** The product will be supplied with a 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 IF2M manual drain is available with metal bowl only.

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



IF2DM

Spare parts

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

Available spares

Bowl assembly including the appropriate drain - state polycarbonate or metal (with or without sight level)	A, B
Element set (packet of 3 of each) 5 µm	B, C
Auto-drain (IF2AM only)	Not shown

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 Polycarbonate bowl assembly for a ½" IF2DM Monnier international compressed air filter.

Metal bowl with sight level  
(Standard for the IF2M)



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IX1M

TI-P504-21  
CH Issue 2

Monnier

International Compressed Air Filter

Description

The Monnier IX1M international compressed air filter contains an activated carbon filter for the removal of hydrocarbon vapour and odour often found in compressed air.

Applications

Breathing air supply to masks, helmets and suits, air bearings, fluidic systems, pneumatic gauging, food and pharmaceutical industry, and instrumentation products.

Principal features:

- Element life exceeds 59000 m<sup>3</sup> at 21°C and 7 bar g.
- Blue dye indicator to warn of oil carryover.
- High quality black anodised finish on head (internal and external).
- Complies with BS 4275 for removal of odours and vapours.
- All air passes through entire depth of activated carbon.
- Polycarbonate bowl.
- No service tools required.

Optional extras:

- Stainless steel bowl guard.
- Metal bowl.
- Metal bowl with sight level.
- Type 21 mounting bracket.

Sizes and pipe connections

¼", ⅜" and ½" screwed BSP (BS 21 -Rp).

Operating limits

Maximum recommended air flow at 7 bar g:	¼" and ⅜"	6 dm <sup>3</sup> /s
	½"	12 dm <sup>3</sup> /s
Maximum pressure/temperature	Polycarbonate bowl	10 bar g @ 50°C
	Metal bowl	17 bar g @ 70°C

Materials

Part	Material
* Bowl	Polycarbonate or aluminium
Head	Zinc alloy - Epoxy finish
Element	Activated carbon
'O' ring	Nitrile rubber

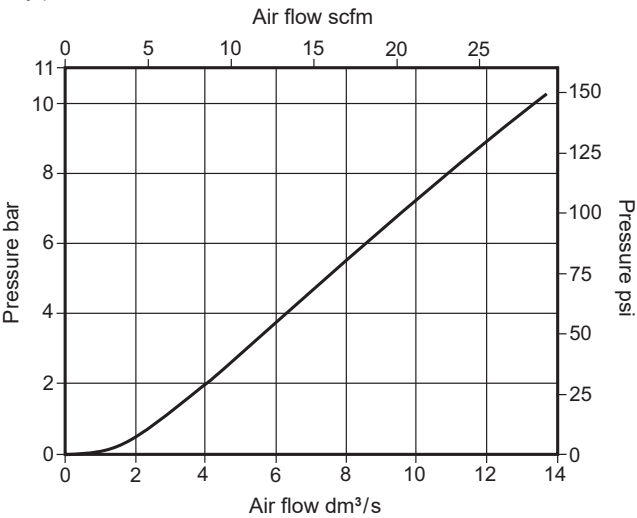
\* Selection of a suitable bowl

Polycarbonate bowls are attacked by phosphate ester fluids, solvents, paint thinners and carbon tetrachloride. 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 a guard should be fitted.



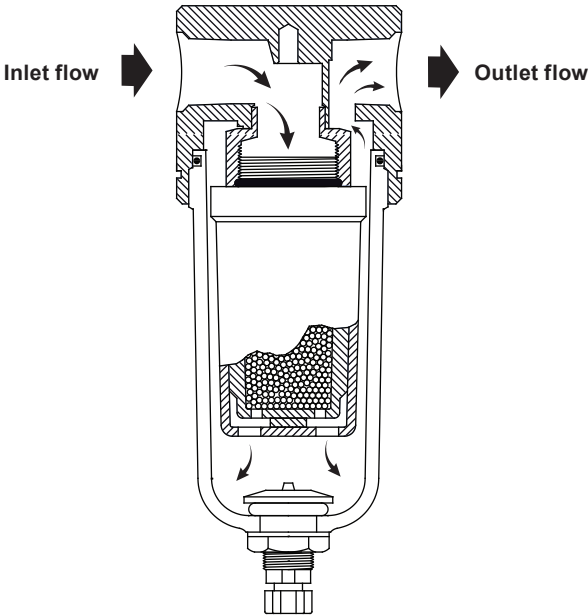
Capacities

Do not exceed the flowrates shown on the performance curves at any pressure.



Principle of operation

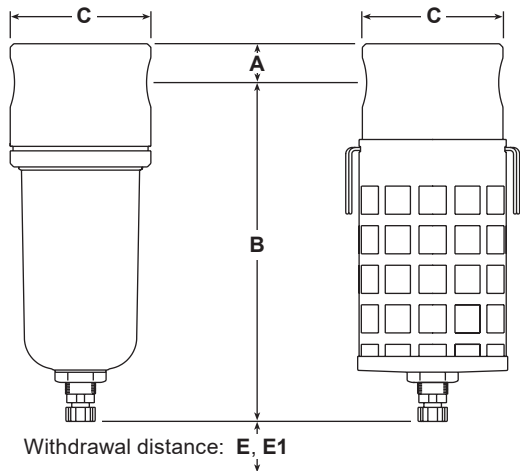
Monnier air line filters are built to ensure solid and liquid contaminants are removed from compressed air. All Monnier filters are engineered with the exclusive Whirl-Away design which creates high centrifugal force with low pressure drop. The whirling action forces all liquids and solids against the bowl wall causing them to run down below the quiet-zone baffle where they can be drained out. The air then flows through the element where the smaller particles are removed and the filtered air passes downstream. The leak proof drain valve has an 'O' ring seal that can be opened and closed without tools.



Dimensions / weights (approximate) in mm and kg

Polycarbonate bowl					
A	B	C	E	E1	Weight
17	152	64	49	73	0.6

Metal bowl					
A	B	C	E	E1	Weight
25	170	64	38	-	0.7



Withdrawal distance: E, E1

Withdrawal distance: E without bowl guard , E1 with bowl guard

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P504-22) supplied with the product.

Installation note:

Fit in a horizontal pipework with the air flow in the direction of the arrow and the bowl vertically downwards, as close as possible to the equipment it is protecting.

How to order

Example: 1 off IX1M Monnier international compressed air filter having ¼" screwed BSP connections.

Note: If any optional extras are required they must be clearly specified when placing an order.

Spare parts

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

Available spares

Bowl assembly	Polycarbonate bowl	A, B
	Metal bowl (with or without sight level)	B, H
Element set		B, C, D
Bowl guard assembly		F, G (2 pieces)

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 - Polycarbonate bowl assembly for a ½" IX1M Monnier international compressed air filter.



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IC3AM, IC3DM, IC4AM and IC4DM

Monnier

International Ultraclean Compressed Air Filters

TI-P504-13  
CH Issue 2



Description

The Monnier International Ultraclean high efficiency oil removing filters have been designed to provide high quality compressed air (free from liquid and solid contaminants) for pneumatic systems.  
For use in 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, breathing air, etc.

Principal features:

- Internal and external high quality black anodised finish.
- Maximum flow 15.57 dm³/s (33 scfm).
- Efficiency testing carried out in accordance with ISO 12500 at 51 mg/m³ (40 ppm) inlet concentration.
- Oil efficiency = 99.95%.
- Oil carryover less than 0.0255 mg/m³ (0.02 ppm).
- Particle efficiency = 99.6%.
- 100% water removal in liquid or aerosol form at line temperature.
- Polycarbonate bowl.

Available types:

IC3AM	With pilot operated automatic drain.
IC3DM	With semi-automatic dump valve for quick action manual override.
IC4AM	With pilot operated automatic drain and a unique colour change indicator (changes from white to <b>yellow</b> ) fitted to show the condition of the element.
IC4DM	With semi-automatic dump valve for quick action manual override. This filter is supplied complete with a unique colour change indicator (changes from white to <b>yellow</b> ) fitted to show the condition of the element.

Optional extras

For further technical information regarding the following options see page 2:

- Metal bowl with or without sight level.
- Easy fit stainless steel bowl guard.

Sizes and pipe connections

¼", ⅜" and ½" screwed BSP (BS 21-Rp).

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

Materials

No.	Part	Material
1	Bowl	Polycarbonate or aluminium (anodised)
2	Head	Anodised aluminium
3	Element	Borosilicate glass with polypropylene support core
4	Auto-drain	Plastic



IC4AM

Optional extras

Metal bowl  
with sight level

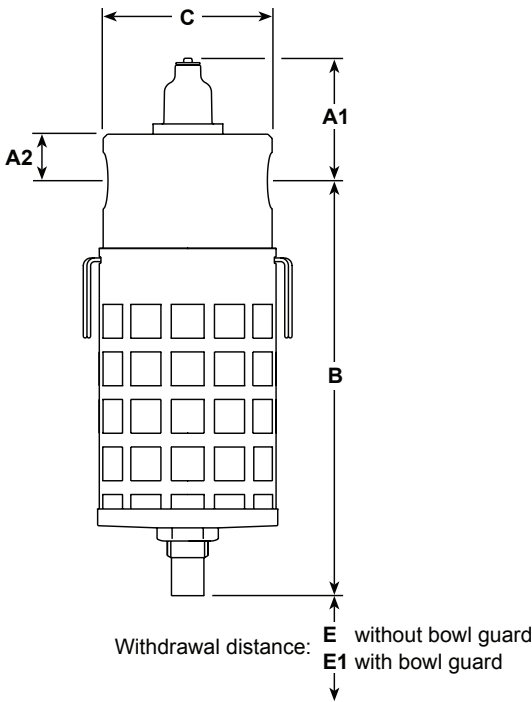


Bowl guard  
In the interest of safety Spirax Sarco recommend that a bowl guard should be fitted to polycarbonate bowls - see the 'Warning' under 'Safety information, installation and maintenance'.

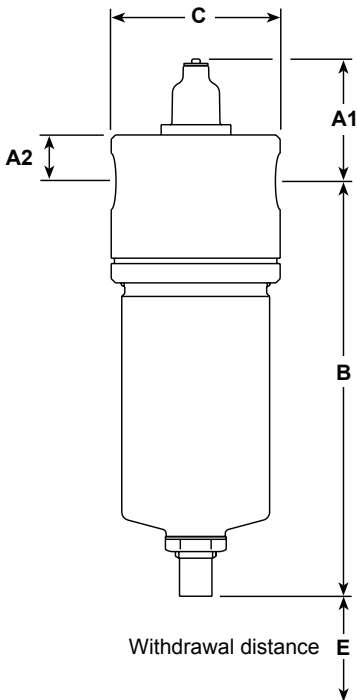


Dimensions/weights (approximate) in mm and kg

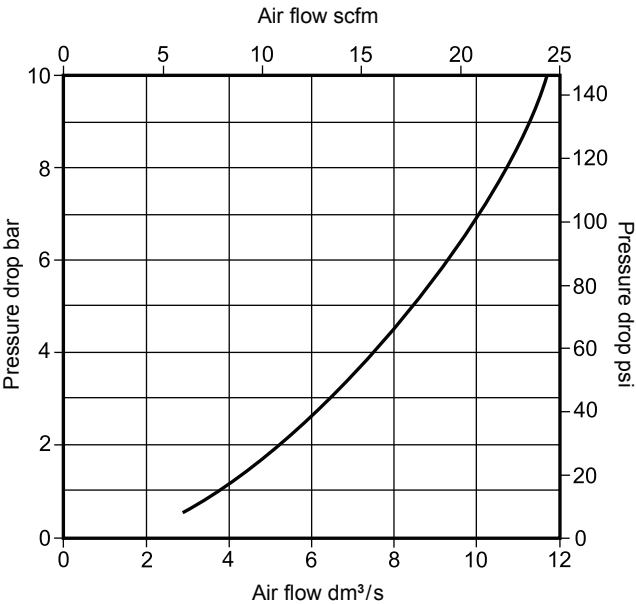
Polycarbonate bowl with bowl guard							
Unit	A1	A2	B	C	E	E1	Weight
IC3AM	-	17	152	64	39	82	0.90
IC3DM	-	17	152	64	39	79	0.88
IC4AM	50	-	152	64	39	82	0.97
IC4DM	50	-	152	64	39	79	0.95



Metal bowl						
Unit	A1	A2	B	C	E	Weight
IC3AM	-	17	152	64	39	0.95
IC3DM	-	17	152	64	39	0.93
IC4AM	50	-	152	64	39	1.02
IC4DM	50	-	152	64	39	1.00



Capacities - For all sizes  
5 µm element



**Application**

Monnier Oil-Coalescing Filters remove more than 99.95% of all oil and dirt from the air you use. Oil vapors and aerosols are removed by coalescent action, forming them into drops heavy enough to be separated by gravity. Unlike absorption filters, they do not become filled with oil, and will not clog on oil alone. If dirt particles are removed upstream, these filters will separate oil from air indefinitely.

**Safety information, installation and maintenance**

For full details see the Installation and Maintenance Instructions (IM-P504-14) supplied with the product.

**Warning:**

Polycarbonate bowls are 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 a bowl guard should be fitted.

**Installation note:**

Fit into a horizontal pipeline with the air flow in the direction of the arrow and the bowl vertically downwards, as close as possible to the equipment it is protecting.

It is advisable to fit a conventional pneumatic auto-filter, (International IF2M) immediately upstream of the coalescing filter to extend the life of the filter cartridge. On new installations, it is as well to blow through the pipework before fitting the filter to ensure that the initial pipescale and dirt is removed.

**Points to note:**

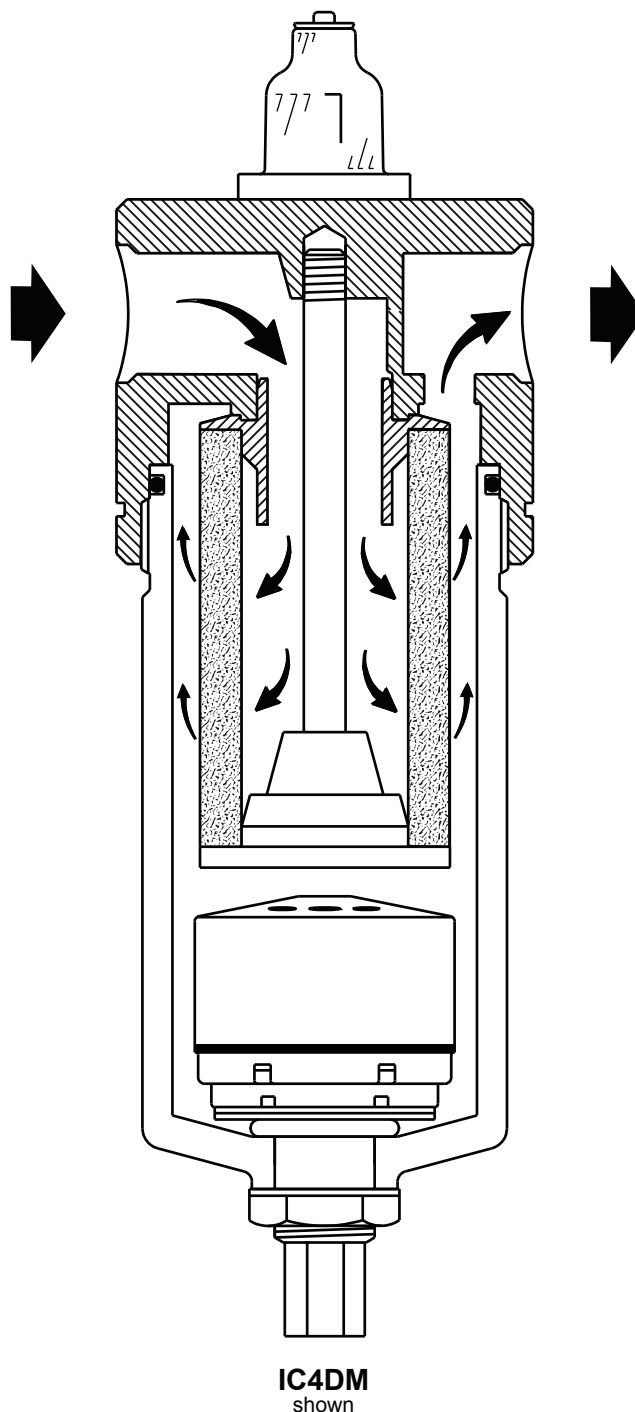
1. Coalescing filters should be installed as close as possible to the equipment they are protecting.
2. Do not exceed the maximum flowrate (for any given pressure) as shown on the graphs or there is chance that some of the coalesced liquids will be re-entrained and carried on downstream.
3. Do not overload the filter cartridge or there will be a reduction in its efficiency and/or life. It is advisable to fit a conventional pneumatic auto-filter (International IF2AM) immediately in front of the coalescing filter for maximum efficiency and life.
4. For hydrocarbon vapour and odour removal use the Monnier IX1M International compressed air filter - For specific product data see Technical Information sheet TI-P504-21.

**How to order**

**Example:** 1 off IC3AM Monnier international ultraclean compressed air filter having a female ½" screwed BSP (BS 21 - Rp) connection.

**Note 1:** The product will be supplied with a polycarbonate bowl as standard. If a metal bowl is required (with or without sight level) it must be clearly specified on the order.

**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

Bowl assembly including the appropriate drain - state polycarbonate or metal (with or without sight level)	A, B
Element set 5 µm	B, C
Flow indicator assembly (IC4DM and IC4AM only)	D, E, F
Auto-drain (IC3AM and IC4AM only)	Not shown

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 Polycarbonate bowl assembly for a ¼" IC4DM Monnier international ultraclean compressed air filter.

