

90-403* (revised 07/05)

Questions regarding this form should be directed to one of the following:

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MINIATURE SERIES FILTER AND COALESCING FILTER

Operating Instructions and Parts List

Application:

The Miniature Series Filters and Coalescing Filters are designed for applications where space is limited and flow requirements are low such as in control panels and miniature circuitry.

Features and Benefits:

- Available in 1/8" or 1/4" ports.
- Manual drain for quick and easy fluid removal.

Options and Accessories:

Options*:	Suffix
Metal Bowl .....	.M
Filter Element (5 Micron) .....	.X

*Add a dash followed by the suffix(es) in alphabetical order to the model number.

Accessories:	Model No.
Polycarbonate Bowl (1.5 oz.) .....	.MF140-41L
Polycarbonate Bowl (2 oz.) .....	.8722-41L
Metal Bowl .....	.MF140-41M

Technical Data:

Maximum Supply Pressure:

Polycarbonate Bowl	150 PSI
Metal Bowl	250 PSI

Maximum Operating Temperature:

Polycarbonate Bowl	120° F
Metal Bowl	250° F

Filter Element:

Standard .....	.20 micron
Option .....	.5 micron
Coalescing .....	.0.1 micron

Material:

Body	Die cast zinc
Filter Element (Standard)	Porous polypropylene
Filter Element (Optional)	Sintered bronze
Filter Element (Coalescing)	Synthetic fiber
Standard Bowl (1.5 oz.)	Transparent polycarbonate
Optional Bowl (2 oz.)	Transparent polycarbonate
Metal Bowl	Die cast zinc

Dimensions and Weights:

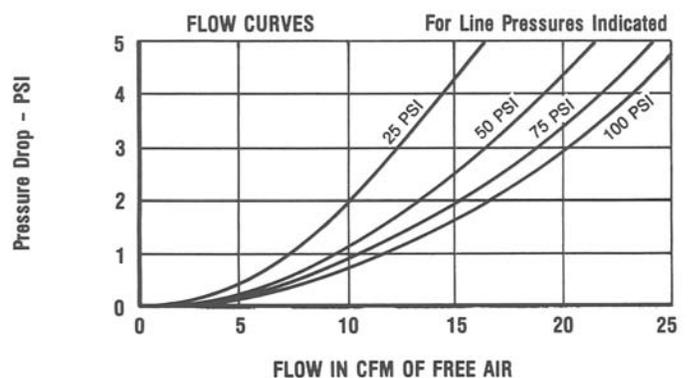
Height .....	.4"
Maximum Diameter .....	.1 1/2"
Weight .....	.1/4 lb.

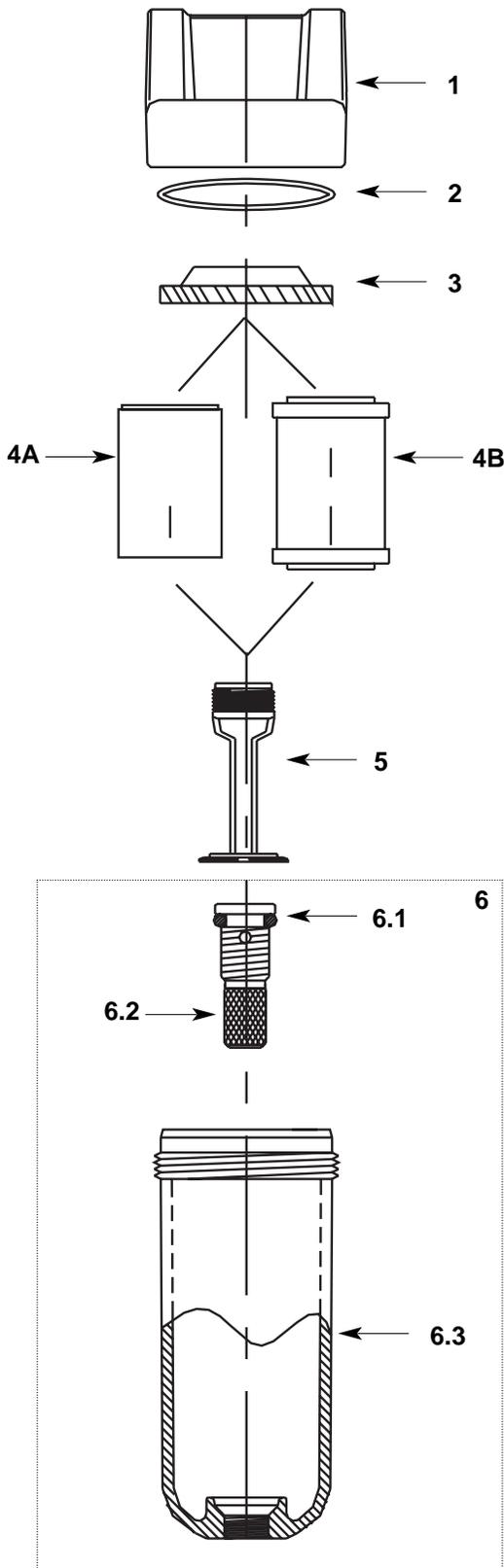
Bowl Volume:

Standard	1.5 oz.
Metal	1.5 oz.
Optional .....	.2 oz.



Performance Data:





General Description of Operation:

Filter –

Pressurized air enters the inlet port and flows through the deflector vane plate (3) directing the incoming air in a downward swirling pattern. Centrifugal force pushes the dense particles and liquid drops outward where they collect on the interior wall of the filter bowl (6.3). The retainer baffle (5) separates the lower portion of the bowl (6.3) into a "quiet" zone and prevents the collected contaminants from being carried downstream.

After the large particles and liquids are removed in the first stage of filtration, the air flows through the filter element (4A), where the finer particles are retained. Clean, dry air is then passed downstream.

Coalescing Filter –

Contaminated compressed air enters through the center of the graded porous element (4B). Solid particles are captured and held by direct impact, interception or diffusion, depending on their size. Liquid aerosols are also captured, but are forced through the filter matrix by the compressed air.

Cleaning and Maintenance:

It is necessary to keep the filter clean in order to sustain peak filtering efficiency and avoid excessive pressure drop. A coating of dirt or condensation build-up on the filter element or pressure drop of 10 PSID or more indicates that cleaning is required.

Removal of the filter from the line for cleaning is not necessary. Disassembly requires no tools and the parts drawing on this page can be used as a guide. *Air supply must be shut off and the filter must be depressurized prior to disassembly.* The filter element should be replaced and all other parts should be cleaned with nothing stronger than household detergent. Before reassembly, the body should be blown out to remove any remaining debris.

To drain off any accumulations in the bowl, the draincock is opened by turning it in a clockwise direction. This should be done before the collected fluid reaches the lower baffle.

Components:

Chart No.	Description	Model No.
1	1/8" Filter Body	MF180-1
–	1/4" Filter Body	MF140-1
2	Bowl Gasket	8722-31
3	Deflector Vane Plate	8722-32
4A	20 Micron Filter Element	MF140-7
–	5 Micron Filter Element	MF147-7X
4B	Coalescing Filter Element	MC140-7
5	Retainer Baffle	8722-34
6	Polycarbonate Bowl and Draincock	MF140-41L
6.1	Draincock O-ring	26F-17
6.2	Brass Draincock	26F-18
6.3	Polycarbonate Bowl	MF140-40L

Rebuilding Kit:

Filter Bowl Repair Kit (includes items 2 and 6)MF2RK

We reserve the right to make engineering changes in design or materials without notification.