

Description

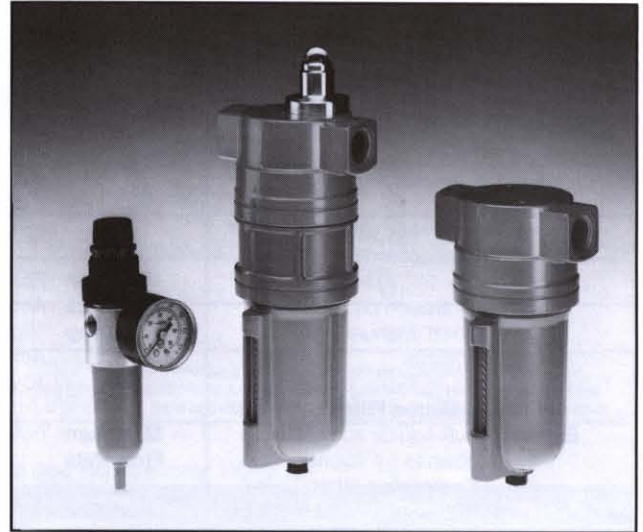
Moore Industries' instrument air filters eliminate problems in pneumatic instruments caused by oil, condensible liquids and particulates that are often present in process plant instrument air supplies.

Available filters are designed for use with a wide range of pneumatic instruments—such as Moore Industries' IPT and IPF Current-to-Pressure Transmitters—and for both single and multiple unit applications. This includes pneumatic instruments installed in racks, cabinets, and other multiple unit enclosures. Moore Industries offers two levels of instrument air filters.

The 5-Micron Filter is for service in normal environments using instrument grade air. This filter removes bulk liquids and reduces particulates down to 5 microns.

The Coalescing Filter removes condensible liquids as well as particulate materials. It provides assured clean, dry air in even the most severe environments.

Ensure instrument reliability, reduce maintenance and increase product life with Moore Industries' air filters. They exceed ISA air quality requirements for instrument grade air.



Moore Industries' offers a wide range of instrument air filters ideal for single- and multiple-unit applications.

Table 1. ISA Air Quality Requirements for Instrument Grade Air (ISA-S73, 1975; ANSI MC11.1 - 1975)

Condition	Requirements
Dew Point	<p>Outdoor installations: Must be at least 8°C (18°F) below the minimum local ambient temperature.</p> <p>Indoor Installations: Must be at least 8°C below the minimum temperature, or +2°C (35°F), whichever is greater.</p>
Particle Size	Maximum particle size allowed is 3 microns.
Oil Content	Maximum total oil or hydrocarbon content of condensible products should be as close to zero as possible, but in no circumstances should they exceed 1 PPM W.W or VN under normal conditions.

Features

- **Service life indicators.** All coalescing filters have a color-coded service life indicator which visually shows when the filter element needs changing.
- **Automatic drains.** Eliminate the need to manually drain filters. This reduces maintenance requirements and makes them ideal for use in inaccessible areas.
- **Metal bowls.** Provide maximum strength, service life and chemical resistance.
- **Pyrex sight glasses.** Allow easy visual checking of filter liquid levels.

FILTERS

Instrument Air Filters

Specifications

Maximum Rated Operating Conditions 250 psig (17.2 bar); 175°F (79°C); (for 800-801-43, 0 to 150°F / -18 to 66°C).

Fluid Compressed air.

Drain Automatic with 1/8" NPTF connection (800-801-43 has 1/4" ID flexible tubing protrusion on bottom of bowl). Manual drain is optional.

Filter Element **5-Micron Filter:** Removes bulk liquids and solids down to 5 microns.
Coalescing Filter: Removes over 99.999% of particles down to 0.01 micron size by D.O.P. test; maximum oil content remaining is 0.01 PPM @ 70°F (21°C).

Bowl Metal with sight glass.*
Service Life Indicator Color Code (Coalescing Filters Only): Rotating ball shows green side when element is new; more red than green indicates element should be replaced.

Maximum Pressure Drop For Efficient Operation Across 5-Micron Filter: 15psig (1bar).
Across Coalescing Filter: 10 psig (0.7 bar).

Maximum Flow Rate Refer to Table 2.

Port Size Refer to Table 2.

Replacement Filter Elements Refer to Table 3.

Materials of Construction **5-Micron Filters**
Body: zinc
Bowl: zinc w/pyrex sight glass.
Element: polypropylene
Elastomers: neoprene, nitrile.
Coalescing Filters
Body: 1" Port: aluminum
All others: zinc.
Bowl:* 1" Port: aluminum w/pyrex sight glass.
All others: zinc w/pyrex sight glass.
Element: synthetic fiber & polyurethane foam
Elastomers: neoprene, nitrile.

Weight Refer to Table 3.

Ordering Specifications

To order filters, order from Tables 2 and 3 and from tables in Figures 1 and 2.

* 800-801-43 has a zinc bowl without pyrex sight glass; plus acetal bonnet and brass valve; no manual drain available.

Filter Selection

Filter selection is based on the capacity requirements of the system (i.e., the number of IPT or IPF Current-to-Pressure Transmitters to be protected). filter combinations offered by Moore Industries for various IPT/IPF installations are listed in Table 2 on right page. To select the appropriate filter assemblies, first determine the maximum number of units required for the application; then follow the respective row across the table and select the appropriate filter combination.

Combined filter/regulator unit also available. A unit that combines both a coalescing filter and a miniature supply line regulator is also offered by Moore Industries (Model #800-801-43) for use in low flow, compressed air applications that require regulated, high quality air virtually free of oil aerosols. This space-saving unit has 1/4-inch NPT

female ports and a 4 SCFM maximum flow at 90 psig inlet pressure. It also comes furnished with an integrally mounted pressure gauge that reads in both psi (0-60) and bars (0-4).

Replacement Filter Elements

Filter elements must be replaced periodically. A service life indicator on the filter indicates when the element should be replaced. Refer to Table 3 for a complete listing of ordering part numbers for replacement filter elements.

Installation

Installation dimensions for filter assemblies are presented in Figures 1 and 2 (on right and back page). Wall mounting brackets are also available.

Table 2. Recommended Filter Combinations for IPT and IPF Transmitters*

Max. No. of Units	5-Micron Filter			Coalescing Filter		
	Ordering Part Number	Port Size, Female NPT (In.)	Max. Flow @ 100 psig (SCFM)	Ordering Part Number	Port Size, Female NPT (In.)	Max. Flow @ 100 psig (SCFM)
2	800-802-43**	1/4	18	800-806-43** ††	1/4	4
10	800-803-43	1/4	50	800-824-43	1/4	15
17	800-804-43	1/2	70	800-826-43	1/2	35
30	800-804-43	1/2	70	800-809-43	1/2	60
62	800-805-43	1	445	800-810-43	1	125

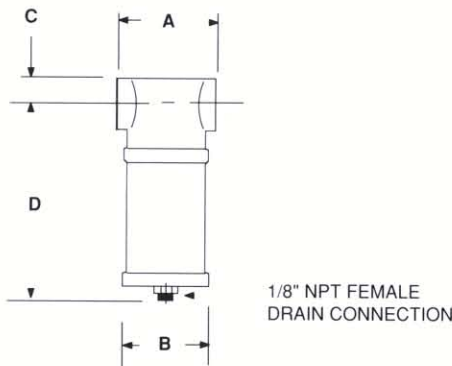
*All filters are based on maximum (full) air flow from the transmitter.
 ** These filters do not have sight glasses on the bowls.
 †Use 800-805-43 with reducing bushing.

††For a combined coalescing filter/regulator unit with gauge for use in low flow compressed air applications that require regulated, high quality air virtually free of oil aerosols, order 800-801-43. Gauge reads in both psi (0-60) and bars (0-4).

Table 3. Replacement Filter Elements and Approximate Weights

Existing Filter Element (P/N)	Weight	Replacement Filter Element (P/N)	Weight
800-801-43*	10 oz.	800-812-43	1 oz.
800-802-43	1 lb.	800-813-43	3 oz.
800-803-43	3 lbs.	800-814-43	5 oz.
800-804-43	3 lbs.	800-814-43	5 oz.
800-805-43	4 lbs.	800-815-43	5 oz.
800-806-43	1 lb.	800-812-43	1 oz.
800-824-43	4 lbs.	800-825-43	8 oz.
800-826-43	4 lbs.	800-827-43	8 oz.
800-809-43	4 lbs.	800-818-43	8 oz.
800-810-43	5 lbs.	800-819-43	8 oz.

*This is a combination filter/regulator. To rebuild regulator portion, order 800-811-43 rebuild kit.



Typical Unit
(Model 800-805-43 shown)

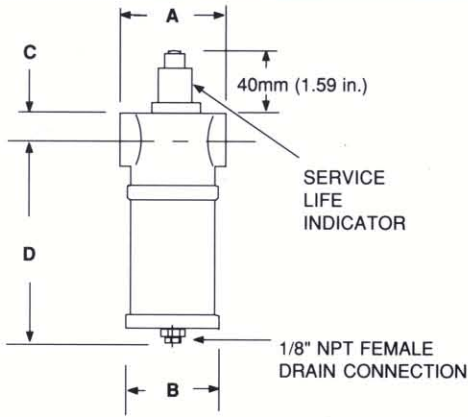
NOTE
1. Install vertically (as shown).

Figure 1. Installation Dimensions for 5-Micron Filters

Filter Unit	Dimensions: mm (in.)			
	A	B Max. Dia.	C	D
800-802-43	42 (1.63)	39 (1.53)	10 (0.38)	97 (3.81)
800-803-43	70 (2.75)	77 (2.86)	18 (0.69)	145 (5.70)
800-804-43	70 (2.75)	77 (2.86)	18 (0.69)	145 (5.70)
800-805-43	121 (4.75)	140 (5.52)	32 (1.25)	256 (10.06)

FILTERS

Instrument Air Filters

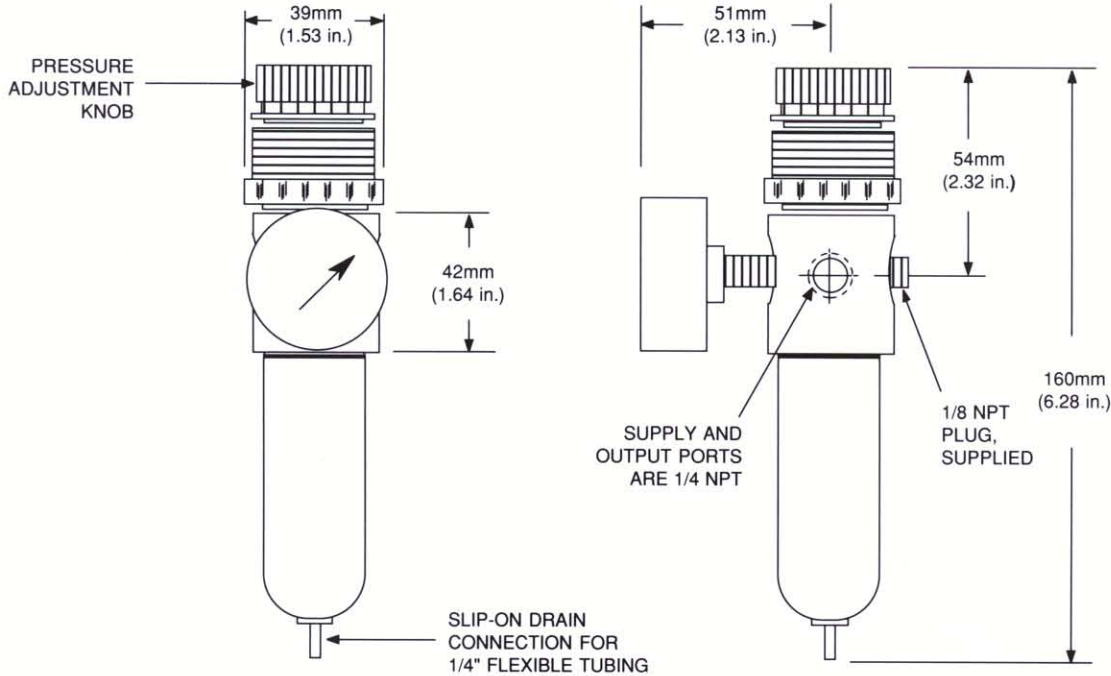


Typical Unit
(shown with Model 800-808-43)

Filter Unit	Dimensions: mm (in.)			
	A	B Max. Dia.	C	D
800-806-43	42 (1.63)	39 (1.53)	10 (0.38)	97 (3.81)
800-807-43	99 (3.91)	89 (3.50)	17 (0.67)	160 (6.31)
800-808-43	99 (3.91)	89 (3.50)	17 (0.67)	160 (6.31)
800-809-43	99 (3.91)	89 (3.50)	17 (0.67)	208 (8.21)
800-810-43	121 (4.75)	140 (5.52)	32 (1.25)	256 (10.06)

NOTE
1. Install vertically (as shown).

Figure 2. Installation Dimensions for Coalescing Filters



NOTES
1. Gage comes unassembled to allow flow left to right or right to left.
2. Install vertically (as shown).

Figure 3. Filter Regulator with Gauge: Model 800-801-43



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<p>United States • info@miinet.com Tel: (818) 894-7111 • FAX: (818) 891-2816</p>	<p>Belgium • mil.belgium@pandora.be Tel: 03/448.10.18 • FAX: 03/440.17.97</p>	<p>China • sales@mooreind.com.cn Tel: 86-21-58313053 • FAX: 86-21-68752927</p>
<p>Australia • sales@mooreind.com.au Tel: (02) 9525-9177 • FAX: (02) 9525-7296</p>	<p>The Netherlands • sales@mooreind.demon.nl Tel: (0)344-617971 • FAX: (0)344-615920</p>	<p>United Kingdom • sales@mooreind.com Tel: 01293 514488 • FAX: 01293 536852</p>