



MIS-1500

MIS Series Features

- Low pressure differential P 0.5 - 1.0 psi @ rated capacity under typical conditions.
- Long service life.
- Pressure vessel ASME U Stamped National Board Registered.
- CRN available upon request.
- Low pressure drop, maximum filter area and dirt capacity.
- Hinged flange and lift lug standard on closure flanges.
- Service access without breaking connections.
- Rugged enameled steel.
- Connections sizes from 2 to 10-inch ANSI flange.
- Standard differential pressure gauge on all models.
- Optional zero-loss auto drain.
- White enamel interior coating.

MIS Series Elements

- High efficiency pleated construction.
- High efficiency needled polyester outer layer particulate removal.
- Two stage borosilicate glass coalescing media.
- Unique threaded element "design" (patent pending) requires no internal loose parts and no internal housing center core.
- The filter element will collect particles greater than 1 micron with 99.5% efficiency. Particles 0.5 micron in size will be filtered at an efficiency of 99.3%.
- Special HE (958 media) element available for 0.1 micron particles filtered at an efficiency of 99.99%.

The **Aircel MIS Mist Eliminator (300 - 8000 scfm)** provides a full line of mist eliminators to effectively remove oil, solids and water from your compressed air system. In addition, this technology can serve as an efficient prefilter and contaminant separator for refrigerated and desiccant compressed air dryers. By reducing the liquid loading potential and preventing liquid slugs from reaching the dryer, it will extend the life of your refrigerated dryer's heat exchanger or the life of desiccant in regenerative dryers.

The Aircel MIS Mist Eliminator features an element with patent pending urethane threaded end. This unique design requires no internal loose parts and no internal housing center core. This provides easy, hassle-free element changeout and reduces the overall initial unit shipping weight, saving on freight costs. The element is designed with optimum pleat spacing and fin depth to provide unsurpassed low differential pressure, dirt holding capacity, and efficiency. Filtration efficiency and permeability are based on independent laboratory testing by Interbasic Resources, Inc.

Sustainable Energy Savings

Pressure Drop Reduces Compressor HP 4% per 8 PSI Drop

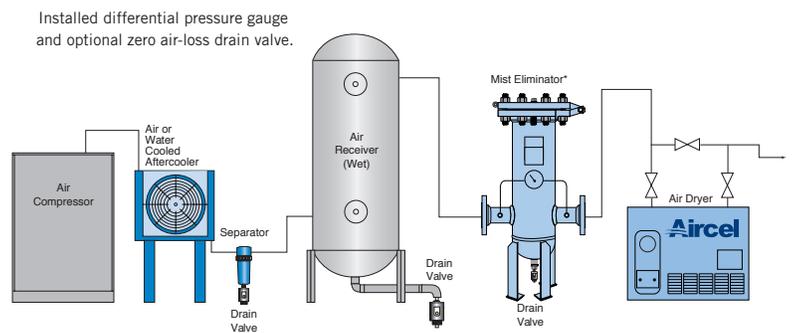
For every 8 psi pressure drop, compressor horsepower efficiency will be reduced by 4%. Therefore, the annual energy cost to run a typical 100 hp compressor with 85% efficiency compressor/motor can be figured as follows:

- Conventional Filter: \$0.07/KW-hr x 8760 hours x 103.3 KW x 4% = \$2533.74
- Mist Eliminator: \$0.07/KW-hr x 8760 hours x 103.3 KW x 0.5% = \$316.72
(1 psi pressure drop = 0.5% compressor HP reduced)

That's a savings of \$2217.02 per year.

MIS SERIES Recommended Installation

Locating a mist eliminator downstream from the compressor effectively lengthens the maintenance cycle on all elements, significantly reducing costs of system maintenance.

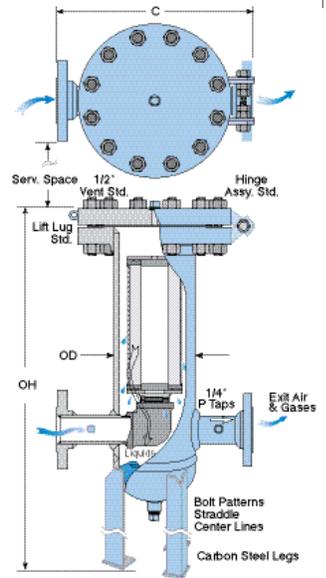


MIS SERIES TECHNICAL SPECIFICATIONS



MIS SERIES Model Comparison

Model	Capacity ¹ (SCFM)	Conn. (ANSI)	OH (in)	OD (in)	C (in)	Service Space (in)	Weight (lbs)	Maximum Pressure (psig)	Optional Zero Air- Loss Drain	Element Model Number
MIS-300	300	2"	36	8-5/8	16	10	120	250	C/F	MIS-300E
MIS-500	500	2"	40	8-5/8	16	16	150	250	C/F	MIS-500E
MIS-1000	1000	3"	48	8-5/8	20	20	180	250	C/F	MIS-1000E
MIS-1500	1500	4"	52	10-3/4	20	20	300	250	C/F	MIS-1500E
MIS-2000	2000	4"	54	10-3/4	20	24	325	250	C/F	MIS-2000E
MIS-3000	3000	6"	60	12-3/4	24	26	400	250	C/F	MIS-3000E
MIS-4500	4500	6"	64	12-3/4	24	26	500	250	C/F	MIS-4500E
MIS-6500	6500	8"	78	16	28	36	850	250	C/F	MIS-6500E
MIS-8000	8000	10"	88	20	32	36	1200	250	C/F	MIS-8000E



¹ Capacity rated at 100 psig operating pressure, 100°F inlet temperature.
 Maximum working pressure: 250 psig Cover style: Blind flange
 Operating temperature range: -20°F to 200°F Carbon steel leg height: 12" (included in OH dimension above)
 Due to a continuous program of product improvement, specification and dimensions are subject to change without notice.

C/F - Consult Factory

MIS SERIES Capacity Correction Factors

To Size the Mist Eliminator Capacity for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2$$

To calculate the capacity of a given mist eliminator based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor.

EXAMPLE:
 Mist Eliminator Model: MIS-1000
 Standard Capacity: 1000 scfm
 Actual Operating Conditions: 80 psig inlet pressure: C1 = 0.83
 120°F inlet temperature: C2 = 0.94
 Adjusted Capacity = 1000 scfm x 0.83 x 0.94 = **780 scfm**

To Select the Mist Eliminator for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2$$

To choose a mist eliminator based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factors.

EXAMPLE:
 Given Flow: 1000 scfm
 Actual Operating Conditions: 80 psig inlet pressure: C1 = 0.83
 120°F inlet temperature: C2 = 0.94
 Adjusted Capacity = 1000 scfm / 0.83 / 0.94 = **1282 scfm**
 Adjusted Mist Eliminator Model Size: MIS-1500

The published standard capacities for compressed air mist eliminators are based on 100 psig inlet pressure and 100°F inlet temperature. When these conditions vary, a given mist eliminator will be able to filter either more or less compressed air than its standard capacity. There are two ways in which this information can be used. The first is to start with a specific mist eliminator size and recalculate

its capacity based on the known operating conditions using the correction factors given below. The other, with a given set of operating conditions, is to select the proper mist eliminator size based on applying the correction factors to the flow rate. Examples based on applying the correction factors are shown below.

Capacity correction factors for differing system air pressure (C1)

System Pressure (psig)	20	40	60	80	100	12	140	160	180	200	220	240	250
Correction Factor	0.30	0.48	0.65	0.83	1.00	1.17	1.35	1.52	1.70	1.87	2.05	2.22	2.31

Capacity correction factors for differing system air temperature (C2)

System Temperature (°F)	-20	0	20	40	60	80	100	120	140	160	180	200
Correction Factor	1.52	1.41	1.31	1.22	1.14	1.07	1.00	0.94	0.88	0.83	0.79	0.75



Versatile Design

Aircel's AF series high efficiency filters include smart design features and innovative technology to provide a compressed air filtration solution for a wide range of applications. Aircel's unique AF series high efficiency filters are designed to combine high performance, energy savings, flexibility and optimum reliability.



Top Cap

Unique push-fit design and double O-ring seal for simple and secure installation.



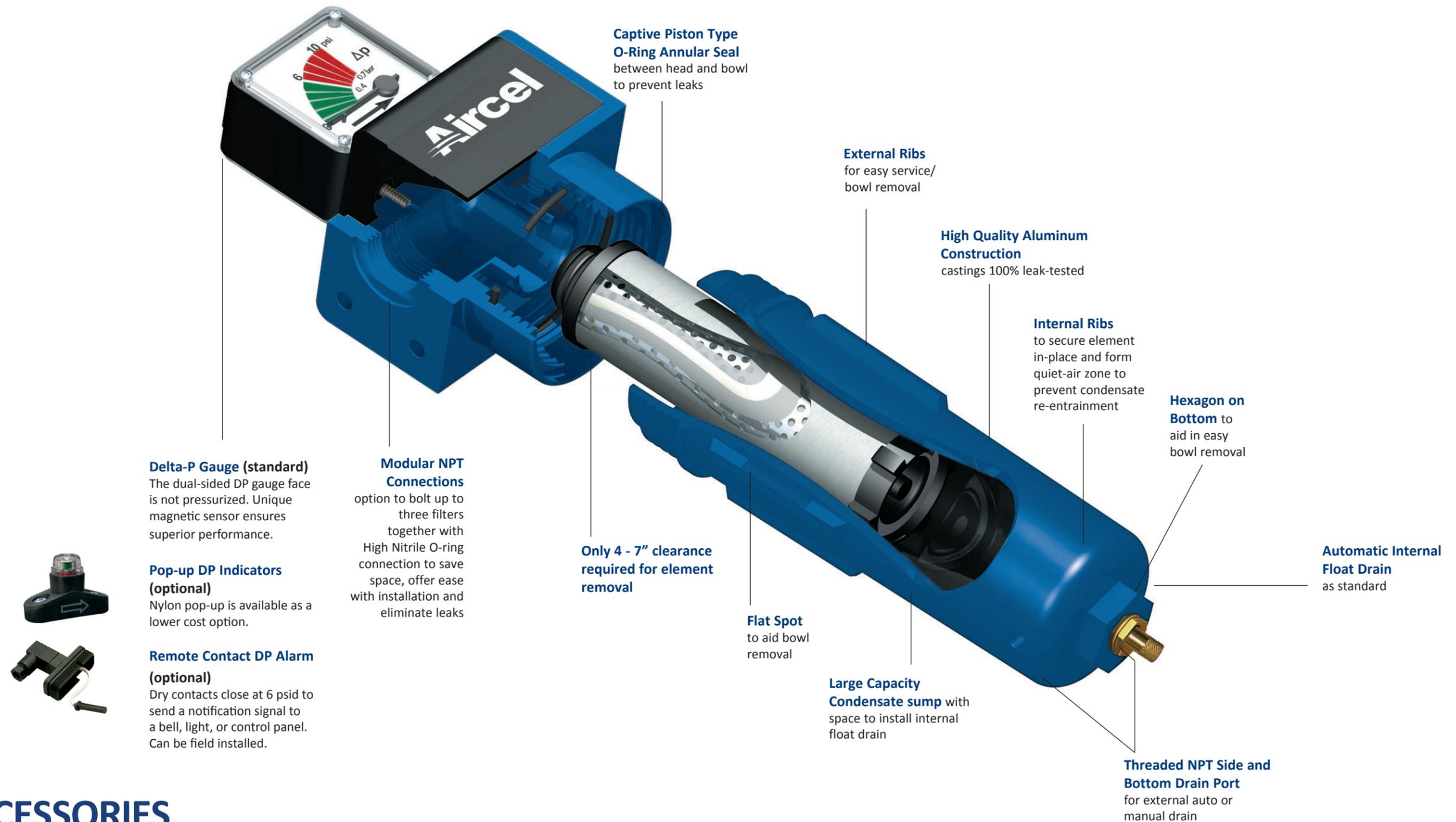
Multi-layer Filtration

Deep bed multi-wrap borosilicate glass microfiber with stainless steel support cylinders and a polyester needle felt sleeve.



End Cap

Durable and non-corrosive glass filled nylon cap which is attached to the element with a multi-part urethane resin.



ACCESSORIES

Bottom Drain Adapter Plate (1000-1500 scfm)

Removable drain adapter for ease of float drain maintenance.

Simple disconnect of external drain when element is changed.



Mounting Brackets

Allows convenient wall mounting of single or multiple filters.



Ring Spanner

Aids in easy bowl removal.



Manual Drain Valves

Available for all models.



Connecting Kits

Available for models 20-1500 scfm.



Port Plates

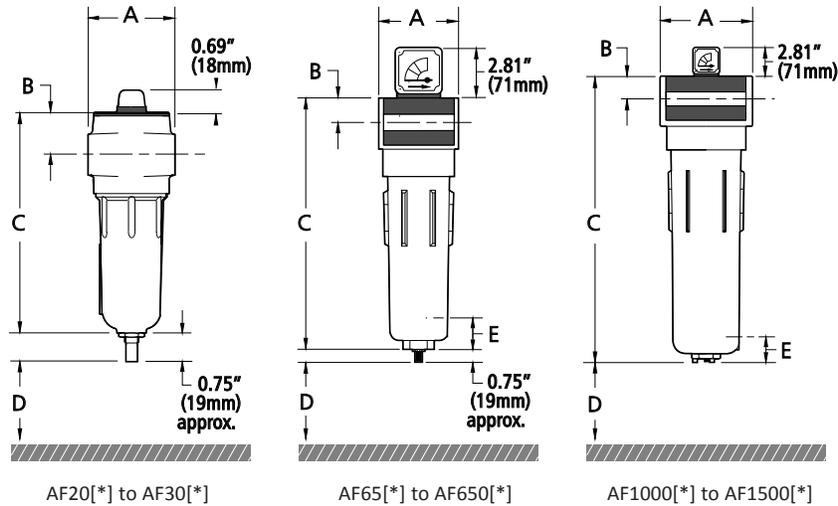
Allows for easy conversion from standard port size to match larger pipe size and reduce pipe fittings. Prevents costly oversizing of filters to pipe size.



Filter model	Flow rate		Dimensions inches (mm)					NPT connections			Weight lbs	Replacement element model
	scfm	Nm ³ /h	A	B	C	D	E	In/Out	Side	Bottom**		
AF20[*]	20	34	2.83 (72)	1.38 (35)	7.32 (186)	2.95 (75)	N/A	1/4"	N/A	1/4"	1.4	A20[*]E
AF30[*]	30	51	2.83 (72)	1.38 (35)	7.32 (186)	2.95 (75)	N/A	3/8"	N/A	1/4"	1.4	A30[*]E
AF65[*]	65	110	4.33 (110)	1.50 (38)	10.75 (273)	5.98 (152)	1.30 (33)	1/2"	1/4"	1/4"	5.4	A65[*]E
AF75[*]	75	128	4.33 (110)	1.50 (38)	10.75 (273)	5.98 (152)	1.30 (33)	3/4"	1/4"	1/4"	5.4	A75[*]E
AF100[*]	100	170	4.33 (110)	1.50 (38)	14.09 (358)	5.98 (152)	1.30 (33)	1"	1/4"	1/4"	6.1	A100[*]E
AF150[*]	150	255	4.33 (110)	1.50 (38)	14.09 (358)	5.98 (152)	1.30 (33)	1"	1/4"	1/4"	6.0	A150[*]E
AF225[*]	225	382	5.75 (146)	2.01 (51)	19.06 (484)	6.50 (165)	1.65 (42)	1 1/2"	1/2"	1/4"	12.2	A225[*]E
AF300[*]	300	510	5.75 (146)	2.01 (51)	19.06 (484)	6.50 (165)	1.65 (42)	1 1/2"	1/2"	1/4"	12.3	A300[*]E
AF450[*]	450	765	5.75 (146)	2.01 (51)	19.06 (484)	6.50 (165)	1.65 (42)	2"	1/2"	1/4"	12.3	A450[*]E
AF650[*]	650	1105	5.75 (146)	2.01 (51)	26.97 (685)	6.50 (165)	1.65 (42)	2"	1/2"	1/4"	14.8	A650[*]E
AF1000[*]	1000	1700	9.06 (230)	2.68 (68)	28.43 (722)	7.01 (178)	1.65 (42)	3"	1/2"	1/4"	40.6	A1000[*]E
AF1250[*]	1250	2125	9.06 (230)	2.68 (68)	33.23 (844)	7.01 (178)	1.65 (42)	3"	1/2"	1/4"	44.1	A1250[*]E
AF1500[*]	1500	2550	9.06 (230)	2.68 (68)	39.06 (992)	7.01 (178)	1.65 (42)	3"	1/2"	1/4"	48.3	A1500[*]E

Notes

* Fill in element grade (AFP5, PFC1, PFC01, AC and reverse flow RPFC1) to appropriate model number. ** With internal float drain removed.



Grade	Coalescing Filters			Vapor Filter
	AFP5	PFC1 / RPFC1 (reverse flow)	PFC01	AC
Particle removal	5.0 micron	1.0 micron	0.01 micron	0.01 micron
Maximum carryover at 68°F / 20°C	5 ppm	0.1 ppm	0.01 ppm	0.003 ppm
Recommended temperature	100°F / 38°C	100°F / 38°C	100°F / 38°C	77°F / 25°C
Maximum temperature	248°F / 121°C	248°F / 121°C	248°F / 121°C	122°F / 50°C
Pressure drop (clean and dry)	0.4 psid / 30 mbar	1.0 psid / 70 mbar	1.5 psid / 100 mbar	1.0 psid / 70 mbar
Pressure drop (saturated)	1.0 psid / 70 mbar	2 psid / 140 mbar	3.0 psid / 210 mbar	N/A
Pressure drop (change element)	6.0 psid / 400 mbar	6.0 psid / 400 mbar	6.0 psid / 400 mbar	see note
Element media	Borosilicate Glass Microfiber			Carbon impregnated paper
Maximum working pressure	232 psig / 16 barg (300 psig / 20 barg without auto float drain)			
Housing material	High quality aluminum			

Note: Activated charcoal (AC) filters must not operate in oil saturated conditions and will not remove certain types of gases including carbon monoxide and carbon dioxide. Change interval depends on application. Please contact your distributor.

Correction Factors

For maximum flow rate, multiply model flow rate shown in the specification chart by the correction factor corresponding to the working pressure. See specifications for maximum pressure. Note: To reduce pressure drop by 50%, reduce flow rate by 30%.

Operating Pressure (psig)	10	20	30	40	50	60	70	80	90	100	110	125	150	175	200	225	250	275	300
Correction Factor	0.32	0.45	0.55	0.64	0.71	0.78	0.84	0.90	0.95	1.00	1.05	1.12	1.22	1.32	1.41	1.49	1.58	1.65	1.73