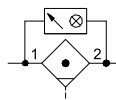


SERIES 651/652/653

COALESCING FILTER & ADSORBER

- Extensive range of coalescing filter elements to remove oil and sub-micron particles down to 0.01 microns. Air purity class according to ISO 8573-1: 2010
- Optional 3 micron pre-filter integrated in the coalescing element eliminates the need for a separate particulate element. Coalescing filter elements include 0.3 and 0.01 microns
- Adsorber filter (activated carbon) for removal of odors and hydrocarbon vapor
- 653 High Flow Coalescer optimizes overall 653 manifold flow; use transition adapters to step up from 651 to 652 or 652 to 653 filters when needed
- Polycarbonate and Aluminum bowls with a selection of sight gauge materials that meet industry and application requirements
- Optional extended temperature range of 176 °F (80 °C)
- Visual or electrical differential pressure Indicators for condition monitoring of filter element



651/652/653

653 High Flow

Performance Data								
Series			651	652	653	653 High Flow		
Port Sizes			1/8, 1/4	1/4, 3/8, 1/2	1/2, 3/4, 1	1		
Thread Type			NPTF, G & Rc					
Nominal Flow - Per ISO 6358 P1 = 91.4 PSI (6.3 bar) ΔP = 5 PSI (0.35 bar)			Micron Rating		SCFM (L/min ANR)			
			1/8	0.3 μm	15.3 (430)	-	-	-
				0.01 μm	10.9 (310)	-	-	-
			1/4	0.3 μm	17.0 (480)	28.0 (800)	-	-
				0.01 μm	12.4 (350)	25.0 (710)	-	-
			3/8	0.3 μm	-	28.6 (820)	-	-
				0.01 μm	-	27.5 (790)	-	-
			1/2	0.3 μm	-	30.5 (870)	81.2 (2300)	-
				0.01 μm	-	29.1 (830)	63.6 (1800)	-
			3/4	0.3 μm	-	-	90.0 (2550)	-
				0.01 μm	-	-	67.1 (1900)	-
			1	0.3 μm	-	-	91.8 (2600)	291.3 (8250)
				0.01 μm	-	-	79.5 (2250)	271.9 (7700)
			Maximum Inlet Pressure PSIG (bar)			Polycarbonate Bowl		232 (16)
Aluminum Bowl		232 (16)				290 (20)		
Ambient Temperature Range °F (°C)			35 to 122 (1.7 to 50)					
Fluid Temperature Range °F (°C)			35 to 122 (1.7 to 50)					
Fluid			Air or Inert Gas					
Weight lbs. (kg)			w/Polycarbonate Bowl	0.54 (0.245)	0.98 (0.442)	3.18 (1.442)	N/A	
			w/Aluminum Bowl	0.86 (0.390)	1.25 (0.569)	2.72 (1.234)	4.03 (1.828)	

Materials in Contact with Fluid	
Body	Aluminum
Seals	NBR/FKM
Coalescing Filter Element	Borosilicate Microfiber & Polyester
Filter Element End Cap	Polypropylene
Adsorber	Activated Carbon
Bowl	Polycarbonate or Aluminum

Air Purity Class - ISO 8573-1:2010*	
0.3 µm	(3:7:3)
0.01 µm	(2:7:2)

* Series 651 maximum flow at 91.4 PSI (6.3 bar) inlet pressure to maintain air purity class is 3.5 SCFM (100 L/min)

* Series 652 maximum flow at 91.4 PSI (6.3 bar) inlet pressure to maintain air purity class is 10.6 SCFM (303 L/min)

* Series 653 maximum flow at 91.4 PSI (6.3 bar) inlet pressure to maintain air purity class is 25.0 SCFM (707 L/min)

* Series 653 - High Flow maximum flow at 91.4 PSI (6.3 bar) inlet pressure to maintain air purity class is 58.0 SCFM (1,641 L/min)

How to Order - Coalescing Filter

8 651 A F D P 2 H A00 0 N

Port Type

- 8 = NPTF
- ¹ G = ISO 228/1-G
- J = ISO 7/1 Rc

Product Series

- 651
- 652
- 653

Revision

A

Product Type

- A = Adsorber - Activated Carbon (All Series)
- F = Filter - Coalescing (All Series)
- ² H = High Flow Version (Series 653 Filter only, Coalescing or Adsorber)

A/F



Elements

- D = 0.3 Micron - Coalescer (Green)
- E = 0.01 Micron - Coalescer (Red)
- F = Adsorber - Activated Carbon (Gray)
- M = 0.3 Micron Coalescer with 3 Micron Prefilter (Green)
- N = 0.01 Micron Coalescer with 3 Micron Prefilter (Red)

D/M



E/N



F

Bowl Type

- K = Metal Bowl without Sight Gauge
- L = Metal Bowl with Sight Gauge (Glass)
- M = Metal Bowl with Sight Gauge (Polyamide)
- N = Polycarbonate Bowl without Bowl Guard (651 only)
- P = Polycarbonate Bowl with Bowl Guard

K (High Flow)



K/L/M



N



P



Drain Type

- 0 = No Drain
- A = Auto Drain Normally Open
- N = Manual - Semi-automatic Drain
- Q = Manual Drain - Stainless Steel
- C = Auto Drain Normally Closed
- J = External Pulse Drain

A



N



Q



C



J



Options

- A00 = No Options
- 101 = Side Mounting Brackets
- 105 = High Temperature (80 °C/176 °F)
- 109 = FKM Seals
- 117 = ATEX Zones 1-21 ⚠
- 202 = 105 + 109

101



Indication Type

- H = Differential Pressure Visual Pop-up Indicator
- J = No Differential Pressure Indicator

H



Port Size

- 1 = 1/8 (Series 651)
- 2 = 1/4 (Series 651 or 652)
- 3 = 3/8 (Series 652)
- 4 = 1/2 (Series 652 or 653)
- 5 = 3/4 (Series 653)
- 6 = 1 (Series 653)

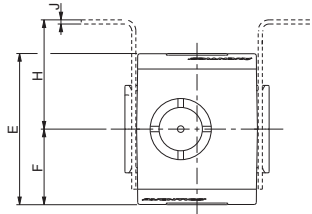
¹ Conforms to ISO standards 1179-1

² Only available in 1" Port Size and with Metal Bowl without Sight Gauge

³ If multiple options are required, please use the online CAD configurator on the website to generate the part number (www.emerson.com), or consult factory

SERIES
651/652/653

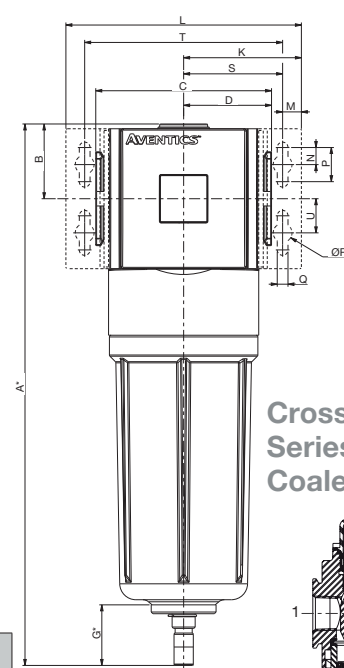
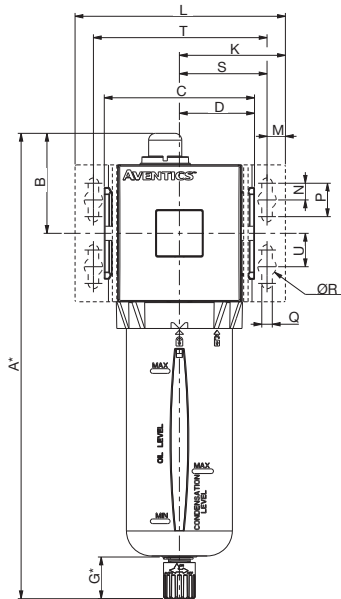
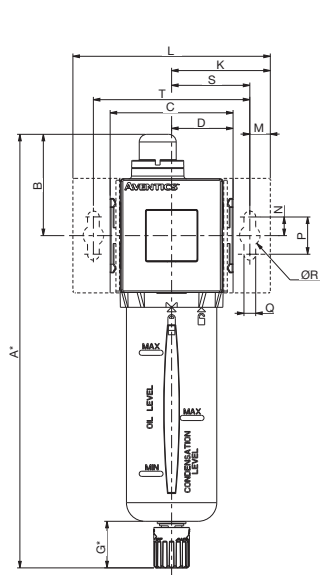
Dimensions: mm (inches) Series 651/652/653 Coalescing Filter and Adsorber



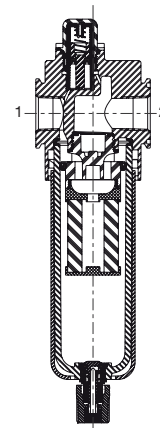
Series 651/652

Series 653

Series 653 High Flow



Cross Section -
Series 651/652/653
Coalescing Filter



	A*	B	C	D	E	F	G*	H	J
651	213	50	50	25	58	29	25	44.5	1.27
	(8.39)	(1.97)	(1.97)	(0.98)	(2.28)	(1.14)	(0.98)	(1.75)	(0.05)
652	233	54.4	66	33	69	34.5	25	50	1.9
	(9.17)	(2.14)	(2.60)	(1.30)	(2.72)	(1.36)	(0.98)	(1.97)	(0.07)
653	276.8	59.9	90	45	93.2	46.6	25	62	3
	(10.90)	(2.36)	(3.54)	(1.77)	(3.67)	(1.83)	(0.98)	(2.44)	(0.12)
653 High Flow	317.3	43.8	103	51.5	93.2	46.6	35.5	62	3
	(12.49)	(1.72)	(4.06)	(2.03)	(3.67)	(1.83)	(1.40)	(2.44)	(0.12)

	K	L	M	N	P	Q	ØR	S	T	U
651	46	92	11	10	20	6.3	11	35	70	-
	(1.81)	(3.62)	(0.43)	(0.39)	(0.79)	(0.25)	(0.43)	(1.38)	(2.76)	-
652	53	106	11	10	20	6.3	11	42	84	-
	(2.09)	(4.17)	(0.43)	(0.39)	(0.79)	(0.25)	(0.43)	(1.65)	(3.31)	-
653	62.5	125	11	10	20	6.3	11	51.5	103	20
	(2.46)	(4.92)	(0.43)	(0.39)	(0.79)	(0.25)	(0.43)	(2.03)	(4.06)	(0.79)
653 High Flow	69	138	11	10	20	6.3	11	58	116	20
	(2.72)	(5.43)	(0.43)	(0.39)	(0.79)	(0.25)	(0.43)	(2.28)	(4.57)	(0.79)

* Variable dimension based on type of drain that is specified; if an Automatic Drain is specified, add another 5mm to G dimension, which also adds 5mm to the A dimension.

To remove bowl allow:
651 - 60mm (2.4in)
652 - 80mm (3.2in)
653 - 105mm (4.2in)
653 High Flow - 125mm (4.9in)
from the bottom of
the bowl drain

Coalescing Filter and Adsorber Flow Charts

