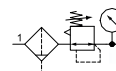


PARTICULATE FILTER/REGULATOR

- High flow with a wide range of adjustable output pressure ranges
- Optional low profile gauge, round gauge, digital gauge or digital pressure switch
- Optional extended temperature range of -40 °F to 176 °F (-40 °C to 80 °C)
- Sintered polyethylene elements, with centrifugal separator, include 5, 25 and 40 Microns
- Threaded ports allow for individual or modular mounting
- Innovative two position plastic drain with manual and semi-automatic functions. Additional drains include an automatic style (brass) and manual (stainless steel)
- Polycarbonate and Aluminum bowls with a selection of sight gauge materials that meet industry and application requirements
- Key lockable and tamper resistant models
- Air purity class according to ISO 8573-1: 2010



Performance Data					
Series			651	652	653
Port Sizes			1/8, 1/4	1/4, 3/8, 1/2	1/2, 3/4, 1
Thread Type			NPTF, G & Rc		
Nominal Flow - Per ISO 6358 P1 = 145 PSI (10 bar) Setpoint P2 = 91.4 PSI (6.3 bar) ΔP = 14.5 PSI (1 bar)		Micron Rating	SCFM (L/min ANR)		
	1/8	5μ	25.1 (710)	-	-
		25μ	25.8 (730)	-	-
		40μ	28.5 (800)	-	-
	1/4	5μ	79.1 (2240)	133.0 (3800)	-
		25μ	83.4 (2360)	144.2 (4120)	-
		40μ	100.1 (2840)	150.5 (4300)	-
	3/8	5μ	-	155.8 (4450)	-
		25μ	-	189.7 (5420)	-
		40μ	-	196.0 (5590)	-
	1/2	5μ	-	157.2 (4490)	275.4 (7800)
		25μ	-	192.5 (5500)	278.9 (7900)
		40μ	-	203.0 (5800)	307.2 (8700)
	3/4	5μ	-	-	314.3 (8900)
		25μ	-	-	317.1 (9000)
		40μ	-	-	353.1 (10000)
	1	5μ	-	-	317.8 (9000)
		25μ	-	-	353.1 (10000)
		40μ	-	-	370.8 (10500)
	Maximum Inlet Pressure PSIG (bar) P1		Polycarbonate Bowl	232 (16)	
Aluminum Bowl			232 (16)		290 (20)
Adjustable Pressure Ranges PSIG (bar) P2			3 to 45 (0.2 to 3)		
			3 to 60 (0.2 to 4)		
			7 to 125 (0.5 to 8)		
			7 to 145 (0.5 to 10)		
			-	-	7 to 232 (0.5 to 16)*
Ambient Temperature Range °F (°C)			-4 to 122 (-20 to 50)		
Fluid Temperature Range °F (°C)			-4 to 122 (-20 to 50)		
Fluid			Air or Inert Gas		
Weight lbs. (kg)		w/Polycarbonate Bowl	0.62 (0.304)	1.20 (0.546)	2.90 (1.315)
		w/Aluminum Bowl	0.99 (0.449)	1.52 (0.688)	3.45 (1.565)/3.90 (1.769)

* High pressure assisted version

Materials in Contact with Fluid	
Body	Aluminum
Seals	NBR/FKM
Springs	Stainless Steel
Filter Element	Sintered Polyethylene
Bowl	Polycarbonate or Aluminum
Poppet	Brass
Stem	PA

Air Purity Class - ISO 8573-1: 2010	
5μ	(5:8:4)
25μ	(6:8:4)
40μ	(7:8:4)

How to Order - Particulate Filter/Regulator

8 651 A P B P 2 F A00 G N

Port Type

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

Product Series

- 651
- 652
- 653

Revision

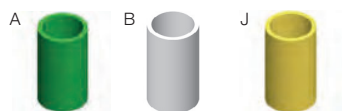
- A

Product Type

- K = Filter/Regulator - Particulate with Internal Flow Check (652 only)
- P = Filter/Regulator - Particulate

Elements

- A = 40 Micron (Green)
- B = 5 Micron (White)
- J = 25 Micron (Yellow)



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

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)

Gauge Type

- B = Digital Pressure Switch - PNP (Rated Pressure - 0-145 PSIG/0-10 bar)
- C = Digital Pressure Switch - NPN (Rated Pressure - 0-145 PSIG/0-10 bar)
- D = Digital Gauge (Rated Pressure - 0-145 PSIG/0-10 bar)
- F = Low Profile Gauge PSI/bar
- G = Low Profile Gauge bar/PSI
- H = Low Profile Gauge PSI/bar with Pressure Range Indicator
- J = Low Profile Gauge bar/PSI with Pressure Range Indicator
- N = No Gauge with Port Plate (1/8 NPTF)
- P = No Gauge with Port Plate (1/8 ISO 7/1 Rc)
- Q = Round Gauge bar/PSI
- R = Round Gauge PSI/bar
- 0 = No Gauge Port



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



Pressure Range

- D = 3-45 PSIG/0.2-3 bar
- E = 3-60 PSIG/0.2-4 bar
- G = 7-125 PSIG/0.5-8 bar
- H = 7-145 PSIG/0.5-10 bar
- ² N = 7-232 PSIG/0.5-16 bar (653 only)

Options

- A00 = No Options
- 101 = Side Mounting Brackets
- 102 = Panel Nut (651 and 652 only)
- 103 = Tamper Resistant
- 104 = Key Lockable
- 105 = High Temperature (80 °C/176 °F)
- ⁴ 106 = Low Temperature (-40 °C/-40 °F)
- 109 = FKM Seals
- 113 = Stainless Steel Fasteners (652 and 653 only)
- 114 = Provision for Key Lockable Option
- 117 = ATEX Zones 1-21
- 119 = Panel Bracket with Panel Nut (651 and 652 only)
- 121 = Non-relieving
- 123 = Gauge Type Mounted for Right-to-Left Flow
- 202 = 105 + 109
- 2A9 = 105 + 106



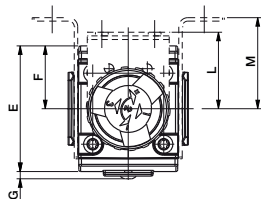
1 Conforms to ISO standards 1179-1

2 Metal Bowl Types K, L, or M only

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

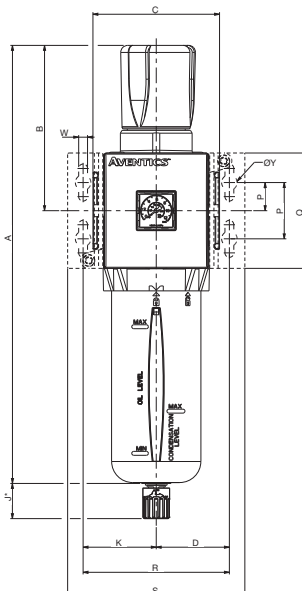
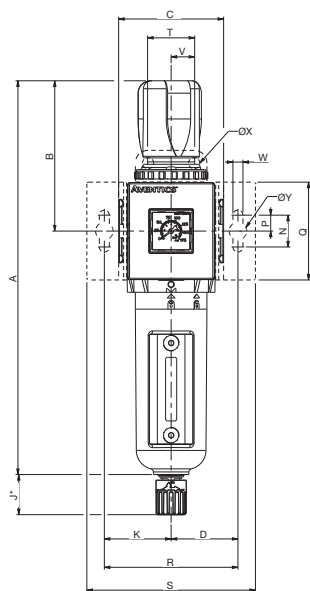
4 Compressed air must be dry enough so no ice formation is present on the product. All bowls should be emptied prior to ambient temperatures dropping below 32 °F (0 °C)

Dimensions: mm (inches) Series 651/652/653 Particulate Filter/Regulator



Series 651/652

Series 653

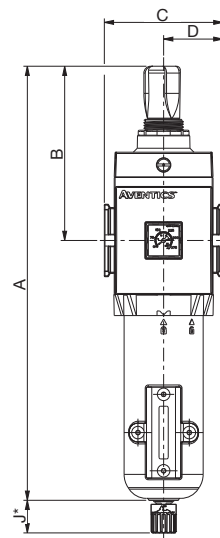


	A	B	C	D	E	F	G	H	J*	K	L	M
651	215.5 (8.48)	77.5 (3.05)	50 (1.97)	25 (0.98)	58 (2.28)	29 (1.14)	3.4 (0.13)	116 (4.57)	25 (0.98)	35 (1.38)	42 (1.65)	44.5 (1.75)
652	248 (9.76)	94.5 (3.72)	66 (2.60)	33 (1.30)	69 (2.72)	30.5 (1.20)	4 (0.16)	135 (5.31)	25 (0.98)	41.75 (1.64)	42 (1.65)	50 (1.97)
653	315.2 (12.41)	117.5 (4.63)	90 (3.54)	45 (1.77)	93.6 (3.69)	46.8 (1.84)	2.7 (0.11)	155.4 (6.12)	25 (0.98)	52 (2.05)	-	62 (2.44)

	N	P	Q	R	S	T	V	W	ØX	ØY	ZB
651	20 (0.79)	10 (0.39)	50 (1.97)	70 (2.76)	92 (3.62)	29 (1.14)	14.5 (0.57)	6.3 (0.25)	7 (0.28)	11 (0.43)	M30 x 2
652	20 (0.79)	10 (0.39)	61.5 (2.42)	84 (3.31)	105.5 (4.15)	29 (1.14)	14.5 (0.57)	6.3 (0.25)	7 (0.28)	11 (0.43)	M37 x 2
653	40 (1.57)	20 (0.79)	82 (3.23)	104 (4.09)	126 (4.96)	-	-	6.3 (0.25)	-	11 (0.43)	-

* Variable dimension based on type of drain that is specified;
if an Automatic Drain is specified, add another 5mm to J dimension.

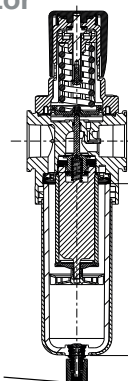
**Series 653 High Pressure
232 PSIG (16 bar)**



	A	B	C	D	E
653 High Pressure	329.5 (12.97)	132 (6.20)	90 (3.54)	45 (1.77)	93.6 (3.69)

	F	G	H	J*
653 High Pressure	46.2 (1.84)	2.7 (0.11)	158.9 (6.26)	25 (0.98)

**Cross Section -
Series 651/652/653
Particulate Filter/
Regulator**



To remove bowl allow:
651 - 44mm (1.8in)
652 - 75mm (3.0in)
653 - 100mm (4.0in)
from the bottom of the bowl drain

SERIES
651/652/653

Particulate Filter/Regulator Flow Charts

