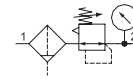


PARTICULATE FILTER/REGULATOR

- High flow with a wide range of adjustable output pressure ranges
- Optional low profile integrated gauge, round gauge, digital gauge or digital pressure switch
- Optional extended temperature range of -40°C to +80°C
- Sintered polyethylene elements include 5 and 25 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	3/4, 1
Thread type			G (NPTF in option)		
Nominal flow - ISO 6358 P1 = 10 bar Setpoint P2 = 6.3 bar ΔP = 1 bar		Micron Rating	l/min (ANR)	l/min (ANR)	
	1/8	5 µm	710	-	-
		25 µm	730	-	-
	1/4	5 µm	2240	3800	-
		25 µm	2360	4120	-
	3/8	5 µm	-	4450	-
		25 µm	-	5420	-
	1/2	5 µm	-	4490	-
		25 µm	-	5500	-
	3/4	5 µm	-	-	8900
		25 µm	-	-	9000
	1	5 µm	-	-	9000
		25 µm	-	-	10000
	Maximum inlet pressure (bar) P1		Polycarbonate bowl	16	
Aluminium bowl			16		20
Adjustable pressure ranges (bar) P2			0.2 to 3		
			0.5 to 10		
			-	-	0.5 to 16 *
Hysteresis (bar)			0.3	0.5	0.4
Ambient temperature range (°C)			-20 to +50		
Fluid temperature range (°C)			-20 to +50		
Fluid			air or inert gas		
Weight (kg)		w/Polycarbonate bowl	0.304	0.546	1.315
		w/Aluminium bowl	0.449	0.688	1.565/1.769

* High pressure assisted version.

Materials in contact with fluid

Body	Aluminium
Seals	NBR/FPM
Springs	Stainless steel
Filter element	Sintered polyethylene
Bowl	Polycarbonate or aluminium
Poppet	Brass
Cover / Stem	PA (Polyamide)

Air Purity Class - ISO 8573-1: 2010

5 µm	(5:8:4)
25 µm	(6:8:4)

How to Order - Particulate Filter/Regulator

Thread connection G
 G = ISO 228/1-G ⁽¹⁾
 8 = NPTF

Product series 651
 651
 652
 653

Revision letter A
 A

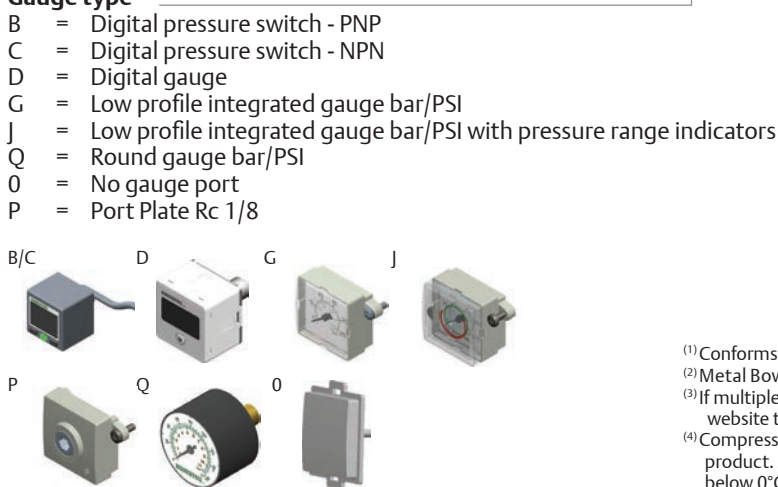
Product type P
 P = Filter/Regulator - Particulate

Elements B
 B = 5 µm (White)
 J = 25 µm (Yellow)

Bowl type K
 K = Metal bowl without sight gauge
 L = Metal bowl with sight gauge (glass)
 M = Metal bowl with sight gauge (Polyamide)
 P = Polycarbonate bowl with bowl guard

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

Gauge type B
 B = Digital pressure switch - PNP
 C = Digital pressure switch - NPN
 D = Digital gauge
 G = Low profile integrated gauge bar/PSI
 J = Low profile integrated gauge bar/PSI with pressure range indicators
 Q = Round gauge bar/PSI
 0 = No gauge port
 P = Port Plate Rc 1/8



Configurator - CAD Files

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 = 0.2..3 bar
- H = 0.5..10 bar
- N = 0.5..16 bar (653 only) ⁽²⁾

Options ⁽³⁾

- A00 = No option
- 101 = Side Mounting Brackets
- 102 = Panel Nut (651 or 652)
- 103 = Tamper resistant
- 104 = Key lockable
- 105 = High temperature (+80°C)
- 106 = Low temperature (-40°C) ⁽⁴⁾
- 109 = FPM seals
- 113 = Stainless steel fasteners
- 114 = Provision for key lock
- 117 = ATEX zones 1-21
- 119 = Panel Bracket with Panel Nut (651 or 652)
- 121 = Non-relieving
- 123 = Gauge type mounted for right-to-left flow
- 124 = CUTR Certification (EAC)
- 125 = CUTR Ex
- 202 = 105 + 109
- 2A9 = 105 + 106



⁽¹⁾ Conforms to ISO standards 1179-1.

⁽²⁾ Metal Bowl Types K or L only.

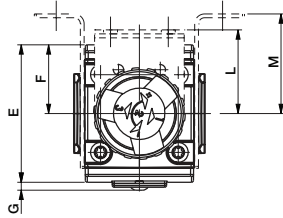
⁽³⁾ If multiple options are required, please use the on-line CAD configurator on the website to generate the part number (www.emerson.com).

⁽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 0°C.

Dimensions : mm - Series 651/652/653 Particulate Filter/Regulator

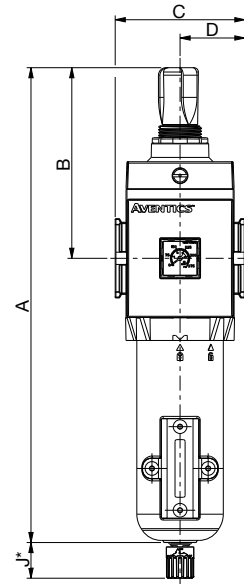
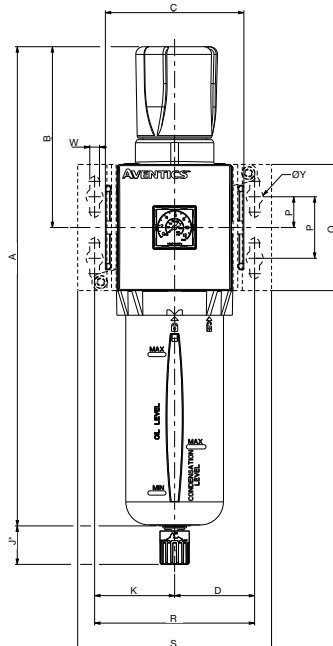
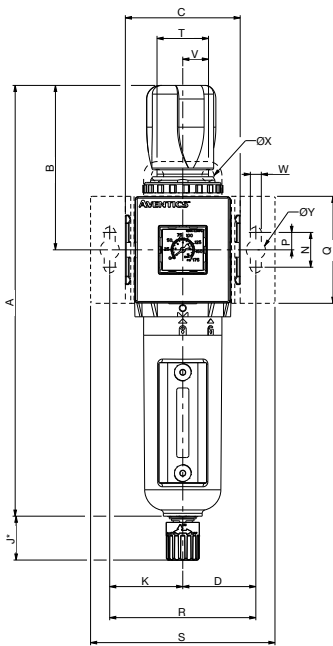
Configurator - CAD Files

Series 653 High Pressure
(16 bar)



Series 651/652

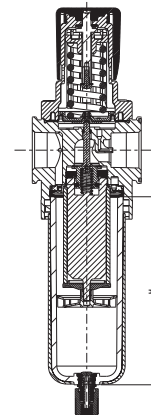
Series 653



	A	B	C	D	E
653 High Pressure	329,5	132	90	45	93,6

	F	G	H	J*
653 High Pressure	46,2	2,7	158,9	25

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



To remove bowl allow:
651 - 44 mm
652 - 75 mm
653 - 100 mm
from the bottom
of the bowl drain.

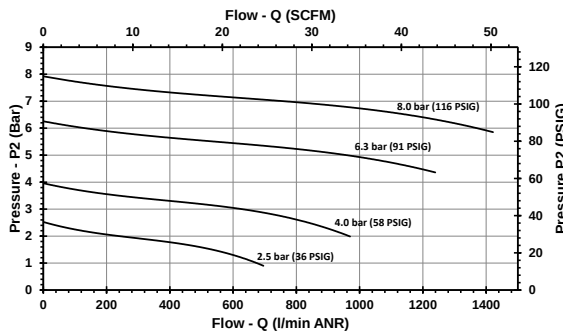
	A	B	C	D	E	F	G	H	J	K	L	M
651	215.5	77.5	50	25	58	29	3.4	116	25	35	42	44.5
652	248	94.5	66	33	69	30.5	4	135	25	41.75	42	50
653	315.2	117.5	90	45	93.6	46.8	2.7	155.4	25	52	-	62

	N	P	Q	R	S	T	V	W	ØX	ØY	ZB
651	20	10	50	70	92	29	14.5	6.3	7	11	M30x2
652	20	10	61.5	84	105.5	29	14.5	6.3	7	11	M37x2
653	40	20	82	104	126	-	-	6.3	-	11	-

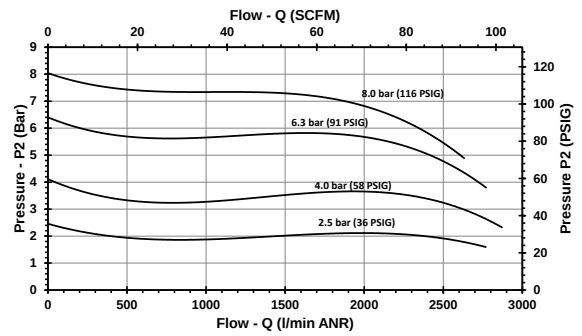
* Variable dimension based on type of drain that is specified.
If an Automatic Drain is specified, add another 5 mm to "J" dimension.

Particulate Filter/Regulator Flow Charts

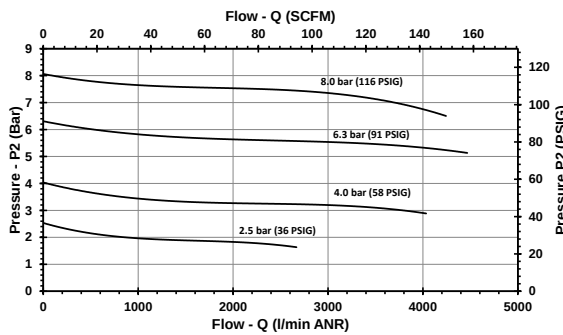
651 Filter-Regulator | 25µ Filtration | 1/8 Ports
P1 = 10 Bar (145 PSIG)



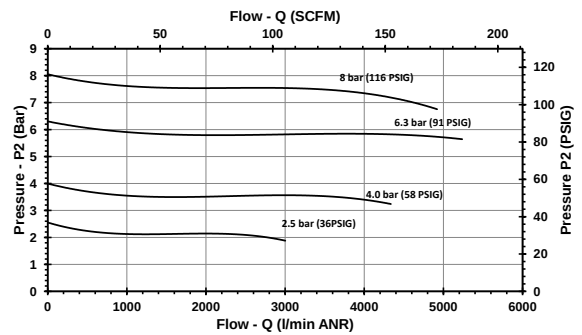
651 Filter-Regulator | 25µ Filtration | 1/4 Ports
P1 = 10 Bar (145 PSIG)



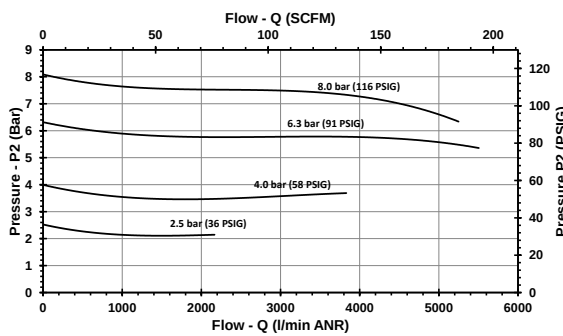
652 Filter-Regulator | 25µ Filtration | 1/4 Ports
P1 = 10 Bar (145 PSIG)



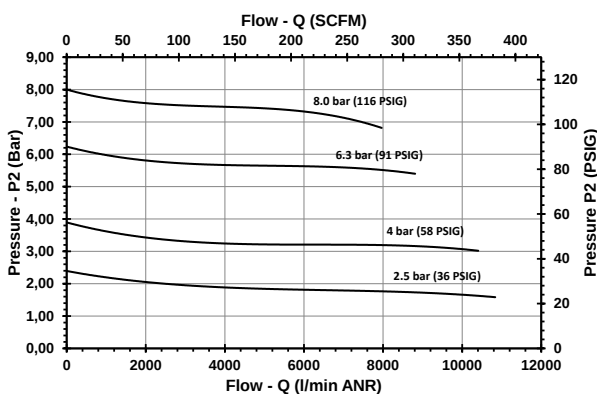
652 Filter-Regulator | 25µ Filtration | 3/8 Ports
P1 = 10 Bar (145 PSIG)



652 Filter-Regulator | 25µ Filtration | 1/2 Ports
P1 = 10 Bar (145 PSIG)



653 Filter-Regulator | 25µ Filtration | 3/4 Ports
P1 = 10 Bar (145 PSIG)



653 Filter-Regulator | 25µ Filtration | 1" Ports
P1 = 10 Bar (145 PSIG)

