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		12
		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

G 651 A P B P 2 G A00 H N

Configurator - CAD Files

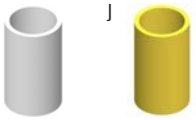
Thread connection
G = ISO 228/1-G (1)
8 = NPTF

Product series
651
652
653

Revision letter
A

Product type
P = Filter/Regulator - Particulate

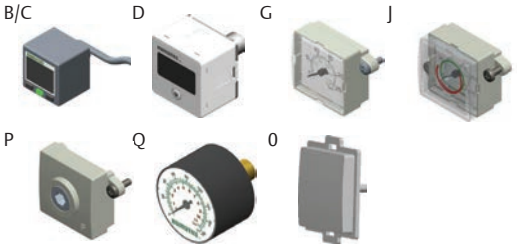
Elements
B = 5 µm (White)
J = 25 µm (Yellow)



Bowl type
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 = 1/8 (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)

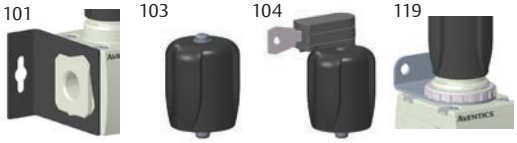
Gauge type
B = Digital pressure switch - PNP
C = Digital pressure switch - NPN
D = Digital gauge
G = Low profile integrated gauge bar/PSI
J = Low profile integrated gauge bar/PSI with pressure range indicators
Q = Round gauge bar/PSI
0 = No gauge port
P = Port Plate Rc 1/8



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)

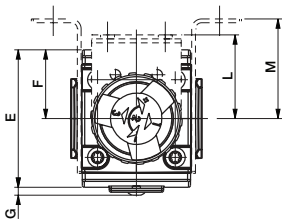
Options (3)
A00 = No option
101 = Side Mounting Brackets
102 = Panel Nut (651 or 652)
103 = Tamper resistant
104 = Key lockable
105 = High temperature (+80°C)
106 = Low temperature (-40°C) (4)
109 = FPM seals
113 = Stainless steel fasteners
114 = Provision for key lock
117 = ATEX zones 1-21
119 = Panel 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



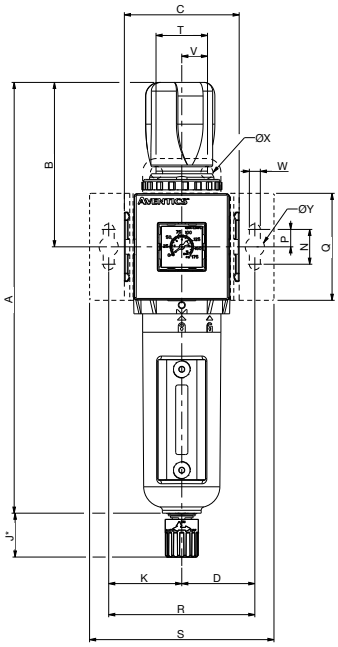
(1) Conforms to ISO standards 1179-1.
(2) Metal Bowl Types K or L only.
(3) If multiple options are required, please use the on-line CAD configurator on the website to generate the part number (www.emerson.com).
(4) Compressed air must be dry enough so no ice formation is present on the product. All bowls should be emptied prior to ambient temperatures dropping below 0°C.

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

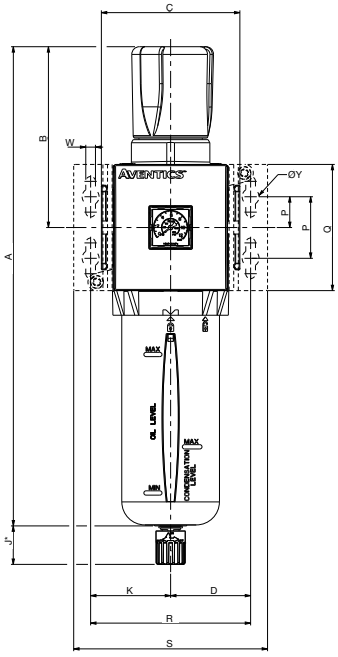
Configurator - CAD Files



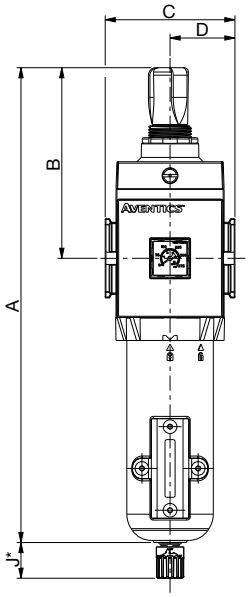
Series 651/652



Series 653



Series 653 High Pressure
(16 bar)



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

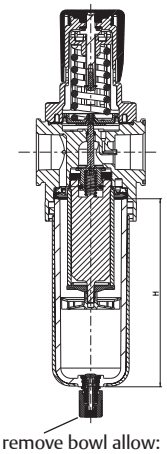
	F	G	H	J*
653 High Pressure	46,2	2,7	158,9	25

	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	M30 x 2
652	20	10	61.5	84	105.5	29	14.5	6.3	7	11	M37 x 2
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.

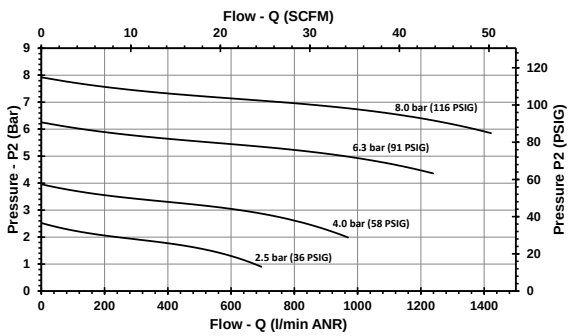
Cross Section - Series 651/652/653 Particulate Filter/Regulator



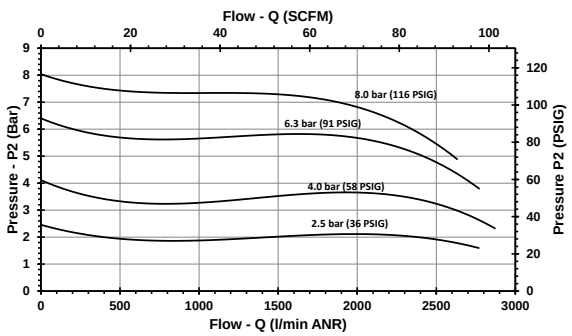
To remove bowl allow:
651 - 44 mm
652 - 75 mm
653 - 100 mm
from the bottom
of the bowl drain.

Particulate Filter/Regulator Flow Charts

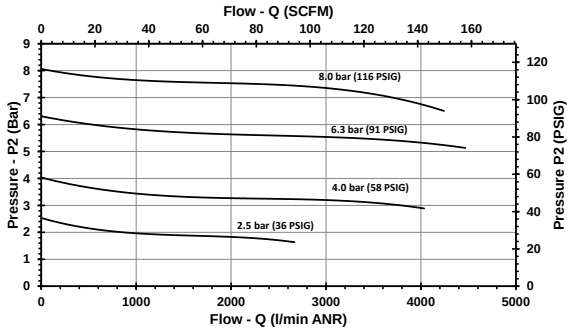
651 Filter-Regulator | 25µ Filtration | 1/8 Ports
P1 = 10 Bar (145 PSIG)



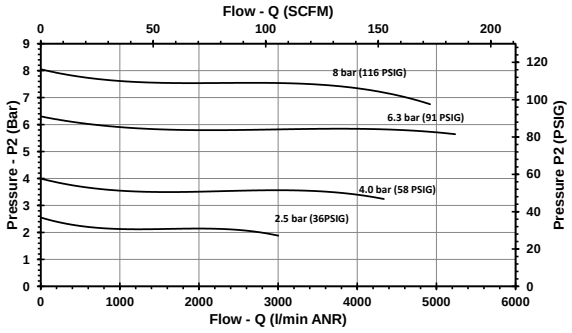
651 Filter-Regulator | 25µ Filtration | 1/4 Ports
P1 = 10 Bar (145 PSIG)



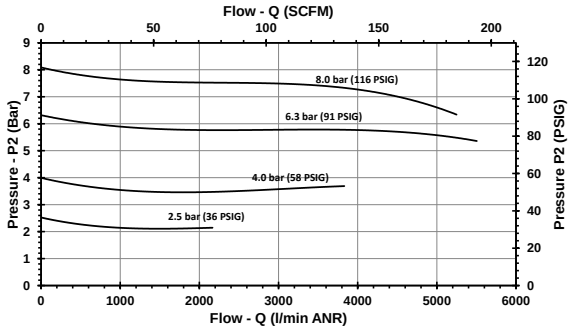
652 Filter-Regulator | 25µ Filtration | 1/4 Ports
P1 = 10 Bar (145 PSIG)



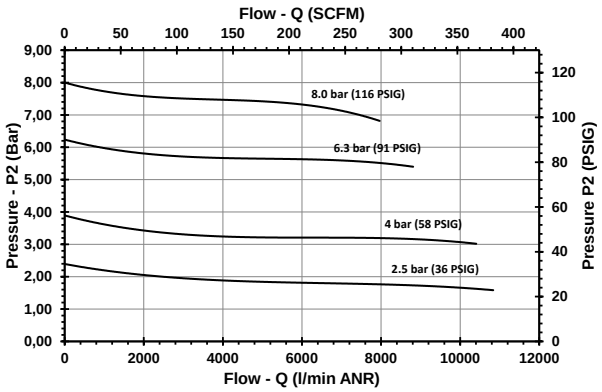
652 Filter-Regulator | 25µ Filtration | 3/8 Ports
P1 = 10 Bar (145 PSIG)



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



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



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