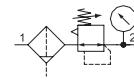


## PARTICULATE FILTER/REGULATOR

- 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		651	652	653
Series				
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)	174 (12)
		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)
		w/Aluminum Bowl	0.99 (0.449)	1.52 (0.688)
				2.90 (1.315)
				3.45 (1.565)/3.90 (1.769)*

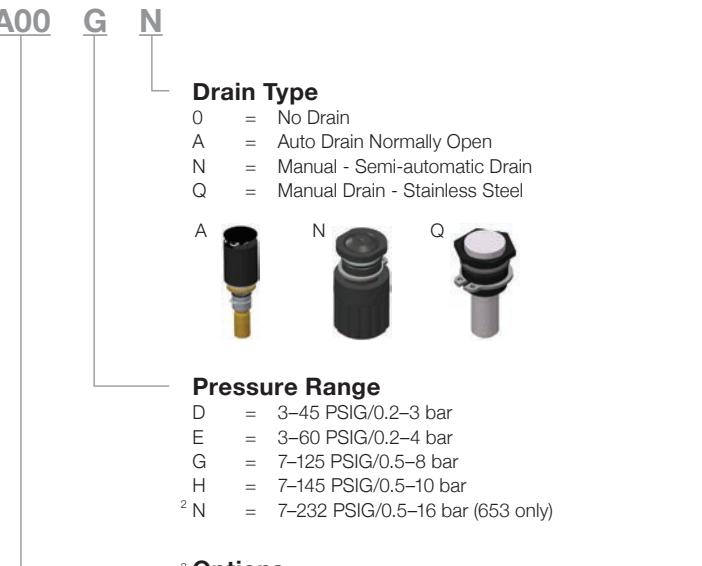
\* High pressure assisted version

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

<b>Port Type</b>	8	651	A	P	B	P	2	F	A00	G	N
8	= NPTF										
<sup>1</sup> G	= ISO 228/1-G										
J	= ISO 7/1 Rc										
<b>Product Series</b>											
651											
652											
653											
<b>Revision</b>											
A											
<b>Product Type</b>											
K	= Filter/Regulator - Particulate with Internal Flow Check (652 only)										
P	= Filter/Regulator - Particulate										
<b>Elements</b>											
A	= 40 Micron (Green)										
B	= 5 Micron (White)										
J	= 25 Micron (Yellow)										
A		B		J							
<b>Bowl Type</b>											
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										
<b>Port Size</b>											
1	= 1/8 (651 Series)										
2	= 1/4 (651 or 652 Series)										
3	= 3/8 (652 Series)										
4	= 1/2 (652 or 653 Series)										
5	= 3/4 (653 Series)										
6	= 1 (653 Series)										
<b>Gauge Type</b>											
B	= Digital Pressure Switch - PNP										
C	= Digital Pressure Switch - NPN										
D	= Digital Gauge										
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										
O	= No Gauge Port										
B/C		D		F/G		H/J					
N/P		Q/R		O							

<sup>3</sup> 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)
<sup>4</sup> 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



123



1 Conforms to ISO standards 1179-1

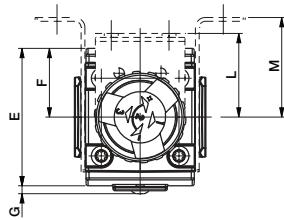
2 Metal Bowl Types K, L, or M only

3 If multiple options are required, please use the online CAD configurator on the website to generate the part number ([www.asco.com](http://www.asco.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)

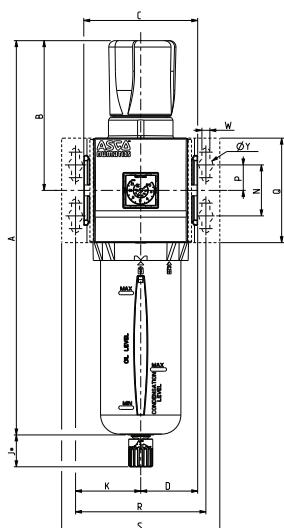
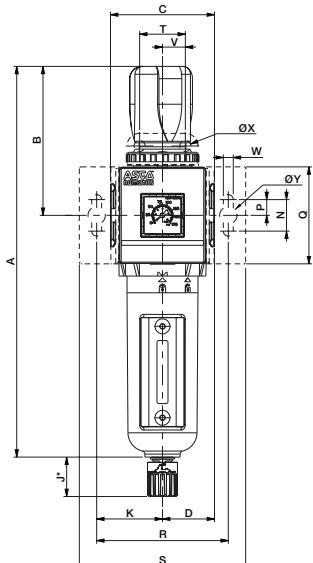
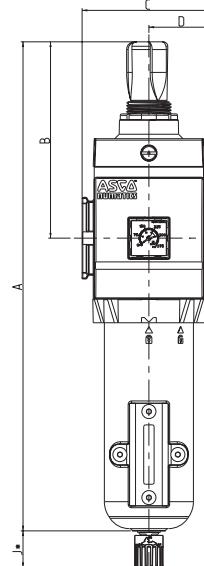


## Dimensions: mm (inches) 651/652/653 Series Particulate Filter/Regulator



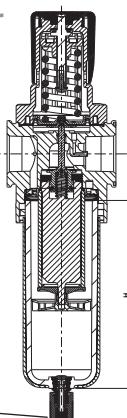
651/652 Series

653 Series

653 Series High Pressure  
232 PSIG (16 bar)

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

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

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

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

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

\* Variable dimension based on type of drain that is specified;

if an Automatic Drain is specified, add another 5mm to J dimension.

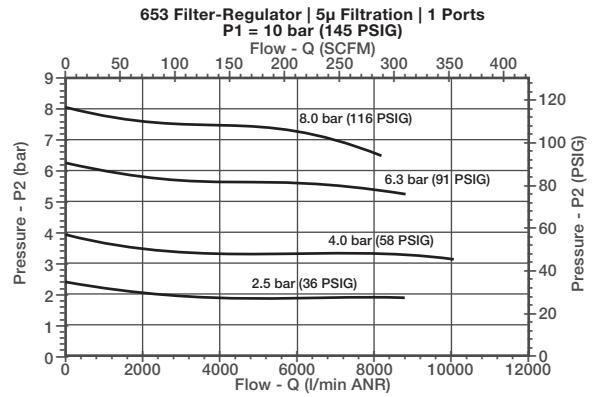
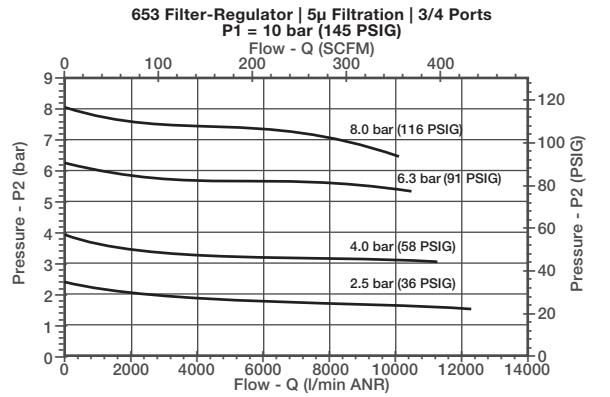
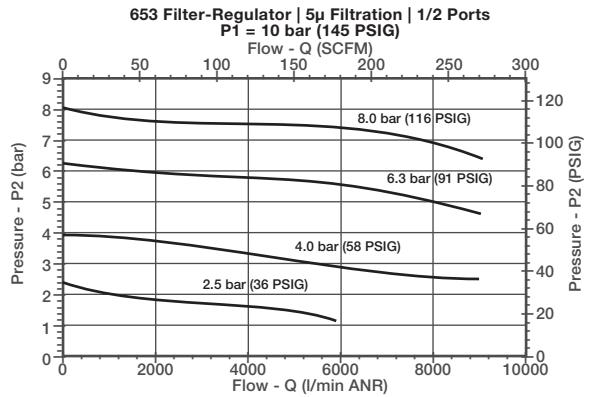
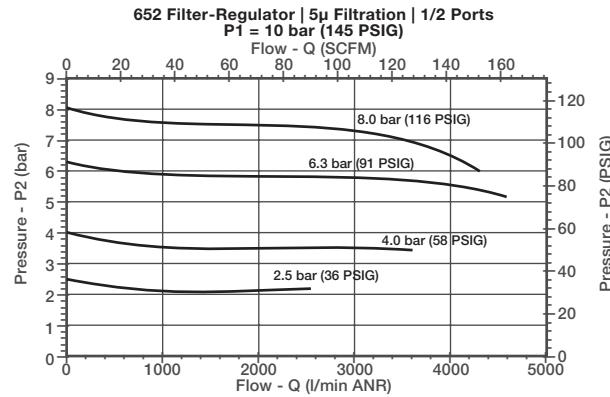
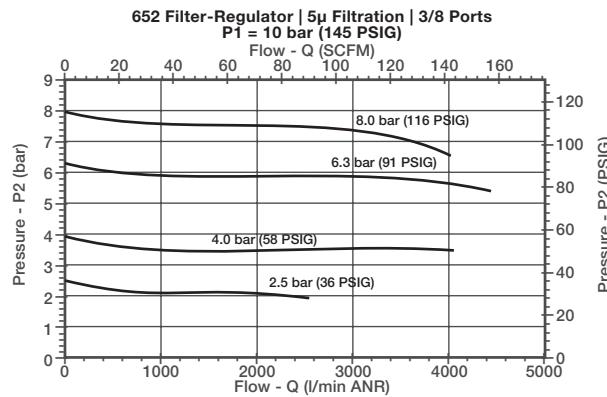
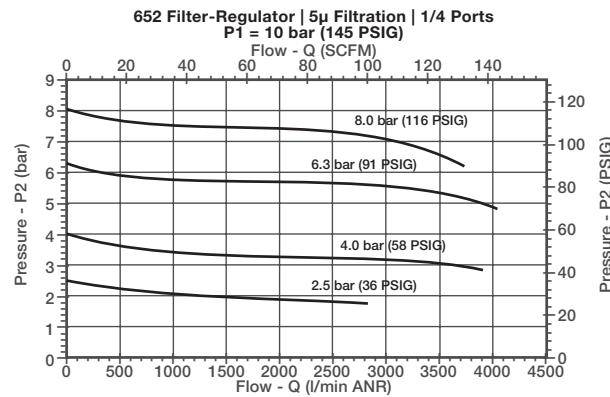
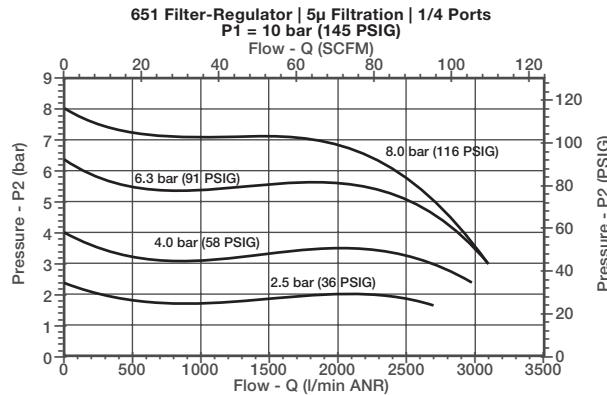
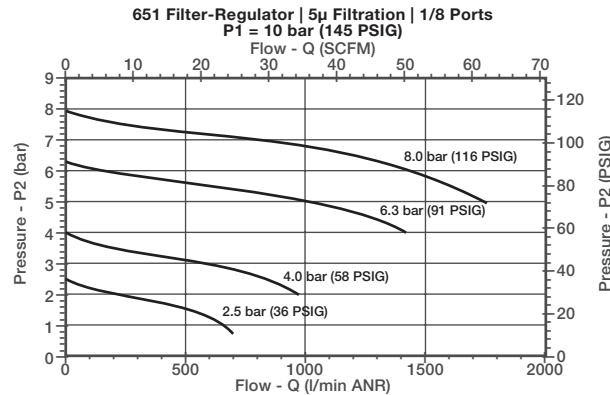
To remove bowl allow:

651 - 44mm (1.8in)

652 - 75mm (3.0in)

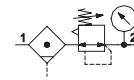
653 - 100mm (4.0in)

from the bottom of the bowl drain

**Particulate Filter/Regulator Flow Charts**

## COALESCING FILTER/REGULATOR

- 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
- Optional low profile gauge, round gauge, digital gauge or digital pressure switch
- Optional extended temperature range up to 176 °F (80 °C)
- 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 proof models



### 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		
	Micron Rating		SCFM (L/min ANR)	
Nominal Flow - Per ISO 6358  P1 = 145 PSI (10 bar) Setpoint P2 = 91.4 PSI (6.3 bar) ΔP = 5 PSI (0.35 bar)	1/8	0.3 µm 0.01 µm	8.5 (240) 5.9 (170)	- -
	1/4	0.3 µm 0.01 µm	10.3 (290) 7.2 (200)	11.3 (320) 10.2 (290)
	3/8	0.3 µm 0.01 µm	- -	20.5 (580) 18.9 (540)
	1/2	0.3 µm 0.01 µm	- -	20.8 (590) 19.1 (540)
	3/4	0.3 µm 0.01 µm	- -	26.5 (750) 21.2 (600)
	1	0.3 µm 0.01 µm	- -	26.5 (750) 21.2 (600)
		Polycarbonate Bowl Aluminum Bowl	232 (16) 232 (16)	174 (12) 290 (20)
			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)*
				35 to 122 (1.7 to 50)
				35 to 122 (1.7 to 50)
Fluid			Air or Inert Gas	
Weight lbs. (kg)		w/Polycarbonate Bowl w/Aluminum Bowl	0.68 (0.308) 1.00 (0.453)	1.24 (0.564) 1.55 (0.705)
				2.90 (1.315) 3.50 (1.588)/3.95 (1.792)*

\* High pressure assisted version

### Materials in Contact with Fluid

Body	Aluminum
Seals	NBR/FKM
Springs	Stainless Steel
Filter Element	Borosilicate Microfiber & Polyester
Filter Element End Cap	Polypropylene
Bowl	Polycarbonate or Aluminum
Poppet	Brass

### Air Purity Class - ISO 8573-1: 2010\*

0.3 µm	(3:7:3)
0.01 µm	(2:7:2)

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

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

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

## How to Order - Coalescing Filter/Regulator

<b>Port Type</b>	8	651	A	C	D	P	2	F	A00	G	N
8	= NPTF										
<sup>1</sup> G	= ISO 228/1-G										
J	= ISO 7/1 Rc										
<b>Product Series</b>											
651											
652											
653											
<b>Revision</b>											
A											
<b>Product Type</b>											
C	= Filter/Regulator - Coalescing										
K	= Filter/Regulator - Coalescing with Internal Flow Check (652 only)										
<b>Elements</b>											
D	= 0.3 Micron - Coalescer (Green)										
E	= 0.01 Micron - Coalescer (Red)										
M	= 0.3 Micron Coalescer with 3 Micron Prefilter (Green)										
N	= 0.01 Micron Coalescer with 3 Micron Prefilter (Red)										
D/M											
E/N											
<b>Bowl Type</b>											
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										
<b>Port Size</b>											
1	= 1/8 (651 Series)										
2	= 1/4 (651 or 652 Series)										
3	= 3/8 (652 Series)										
4	= 1/2 (652 or 653 Series)										
5	= 3/4 (653 Series)										
6	= 1 (653 Series)										
<b>Gauge Type</b>											
B	= Digital Pressure Switch - PNP										
C	= Digital Pressure Switch - NPN										
D	= Digital Gauge										
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										
O	= No Gauge Port										

**Drain Type**

- 0 = No Drain
- A = Auto Drain Normally Open
- N = Manual - Semi-automatic Drain
- Q = Manual Drain - Stainless Steel

**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
- <sup>2</sup> N = 7–232 PSIG/0.5–16 bar (653 only)

<sup>3</sup> **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)
- 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

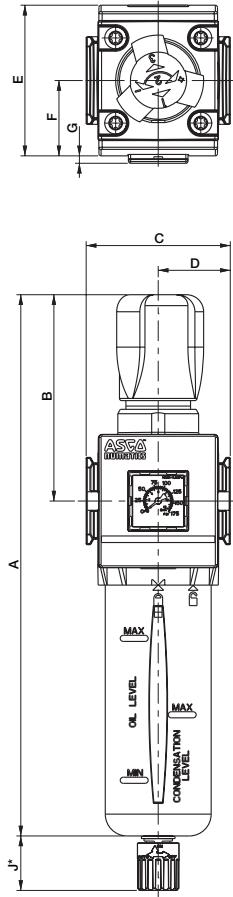


1 Conforms to ISO standards 1179-1

2 Metal Bowls 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.asco.com](http://www.asco.com)), or consult factory

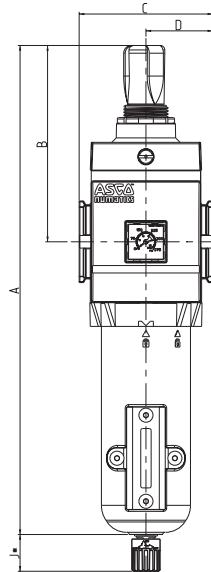
## Dimensions: mm (inches) 651/652/653 Series Coalescing Filter/Regulator



	A	B	C	D	E
<b>651</b>	215.5 (8.48)	77.5 (3.05)	50 (1.97)	25 (0.98)	58 (2.28)
<b>652</b>	248 (9.76)	94.5 (3.72)	66 (2.60)	33 (1.30)	69 (2.72)
<b>653</b>	311.8 (12.28)	117.5 (4.63)	90 (3.54)	45 (1.77)	93.6 (3.69)

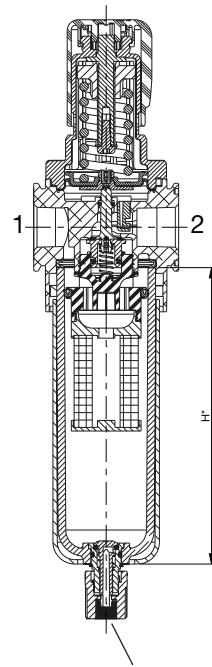
	F	G	H	J*
<b>651</b>	29 (1.14)	5 (0.20)	116 (4.57)	25 (0.98)
<b>652</b>	30.5 (1.20)	2.5 (0.10)	135 (5.31)	25 (0.98)
<b>653</b>	46.8 (1.84)	2.7 (0.11)	155.4 (6.12)	25 (0.98)

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

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


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

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

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


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

## Coalescing Filter/Regulator Flow Charts

