

98 Series Filters

Accessories

D98XX1846X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

98-1010 Mini In-Line Series

Maximum Rated Operating Pressure

6000 psig / 414 bar

Design Maximum Proof Pressure

9000 psig / 621 bar

Materials of Construction

Body: 304 Stainless Steel

Internal Filter - 10 micron: Pleated 304 Stainless Steel

Porting

See Part Number Selector

Operating Temperature

-320°F to 550°F / -196°C to 288°C

98-1110 TEE-Type Series

Maximum Rated Operating Pressure

6000-10,000 psig / 414-690 bar

Design Maximum Proof Pressure

9000-15,000 psig / 621-1034 bar

Materials of Construction

Body: 303 Stainless Steel

Internal Filter - 10 micron: Pleated 304 Stainless Steel

O-rings: Buna, Teflon®, or Viton®

Porting

See Part Number Selector

Operating Temperature

Buna O-ring: -20°F to 165°F / -29°C to 74°C

Teflon® O-ring: -40°F to 165°F / -40°C to 74°C

Viton® O-ring: 0°F to 220°F / -18°C to 104°C

98-1210 In-Line Series

Maximum Rated Operating Pressure

3000-10,000 psig / 207-690 bar

Design Maximum Proof Pressure

4500-15,000 psig / 310-1034 bar

Materials of Construction

Body

3000 psig / 207 bar: 303 Stainless Steel

6000 and 10,000 psig / 414 and 690 bar: 17-4 Stainless Steel

Internal Filter, 10 micron: Pleated 304 Stainless Steel

O-rings: Buna, Teflon®, or Viton®

Porting

See Part Number Selector

Operating Temperature

Buna O-ring: -20°F to 165°F / -29°C to 74°C

Teflon® O-ring: -40°F to 165°F / -40°C to 74°C

Viton® O-ring: 0°F to 220°F / -18°C to 104°C

Ethylene Propylene O-ring: -40°F to 225°F / -40°C to 107°C

Teflon® and Viton® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM 98 Series high pressure filters offer operating pressure ratings up to 10,000 psig / 690 bar with Mini In-line and TEE-Type designs.

Application

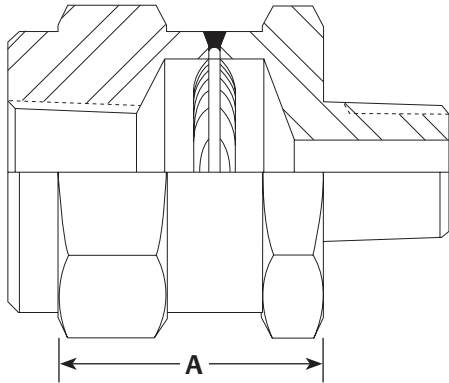
- Filtration prior to pressure control components, protects from particulate contamination

Features and Benefits

- Operating pressure ratings up to 10,000 psig / 690 bar
- In-line, Mini In-line and TEE-Type styles
- Pleated, 10 micron, 304 Stainless Steel internal filter material for maximum contaminant control
- Cleanable element reduces operating cost

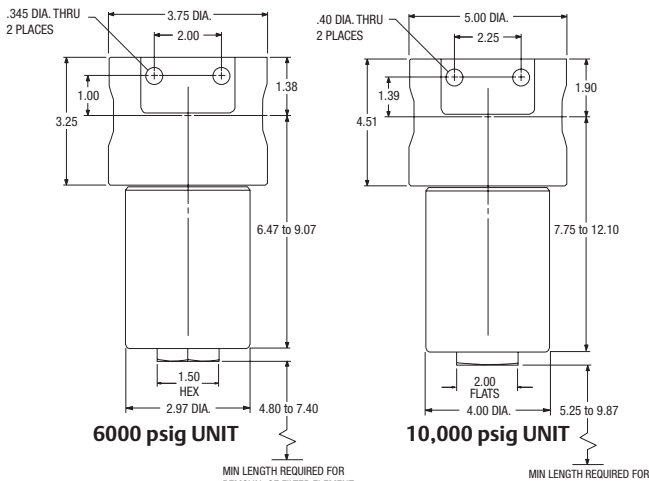
98 Series Drawings

98-1010 SERIES MINI IN-LINE



PART NUMBER	DIMENSION A
98-1010-T-2PM	1.10"
98-1010-T-2PP	1.58"
98-1010-T-2BT	1.10"
98-1010-T-3PP	1.58"
98-1010-T-3BT	1.10"
98-1010-T-4PM	1.42"
98-1010-T-4PP	1.58"
98-1010-T-4BT	1.10"

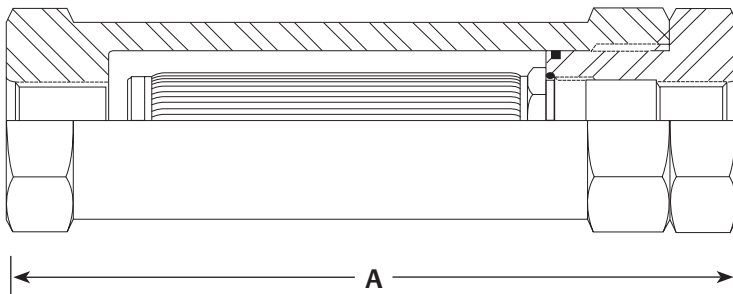
98-1110 SERIES TEE-TYPE



PART NUMBER	DIAMETER	LENGTH	ELEMENT REPLACEMENT
98-1110-T-2P	3.75"	7.85"	61667-1
98-1110-T-2B	3.75"	7.85"	61667-1
98-1110-T-2F	3.75"	7.85"	61667-1
98-1110-T-3P	3.75"	7.85"	61667-1
98-1110-T-3B	3.75"	7.85"	61667-1
98-1110-T-3F	3.75"	7.85"	61667-1
98-1110-T-4P	3.75"	7.85"	61667-1
98-1110-T-4B	3.75"	7.85"	61667-1
98-1110-T-4F	3.75"	7.85"	61667-1
98-1110-S-2P	5.00"	9.65"	61667-1
98-1110-S-2B	5.00"	9.65"	61667-1
98-1110-S-2F	5.00"	9.65"	61667-1
98-1110-S-3P	5.00"	9.65"	61667-1
98-1110-S-3B	5.00"	9.65"	61667-1
98-1110-S-3F	5.00"	9.65"	61667-1
98-1110-S-4P	5.00"	9.65"	61667-1
98-1110-S-4B	5.00"	9.65"	61667-1
98-1110-S-4F	5.00"	9.65"	61667-1

1. See O-ring material table on page 6.

98-1210 SERIES IN-LINE



All dimensions are reference & nominal

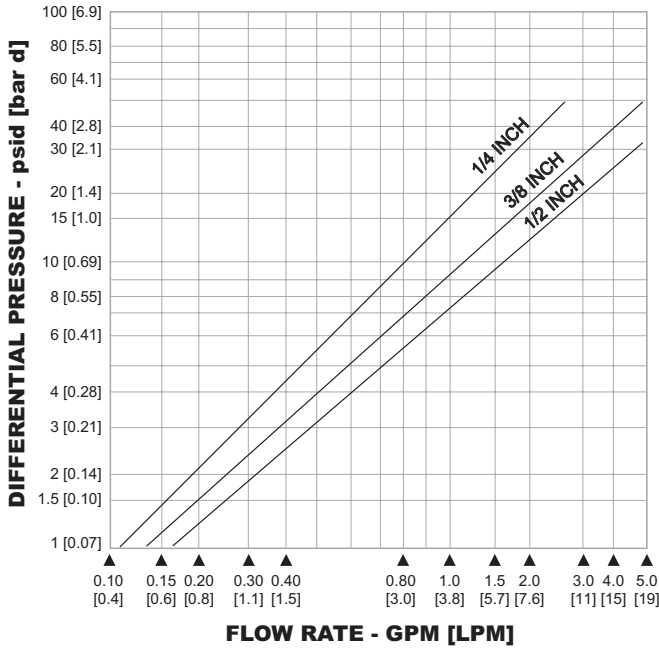
PART NUMBER	DIMENSION A	ELEMENT REPLACEMENT
98-1210-U-2PP	6.00"	61666-413
98-1210-U-2BB	4.19"	61666-411
98-1210-U-4PP	7.75"	61666-415
98-1210-U-4BB	6.00"	61666-413
98-1210-T-2PP	6.00"	61666-413
98-1210-T-2BB	4.19"	61666-411
98-1210-T-4PP	7.75"	61666-415
98-1210-T-4BB	6.00"	61666-413
98-1210-S-2BB	4.19"	61666-411
98-1210-S-2PP	6.00"	61666-411

98 Series Flow Charts

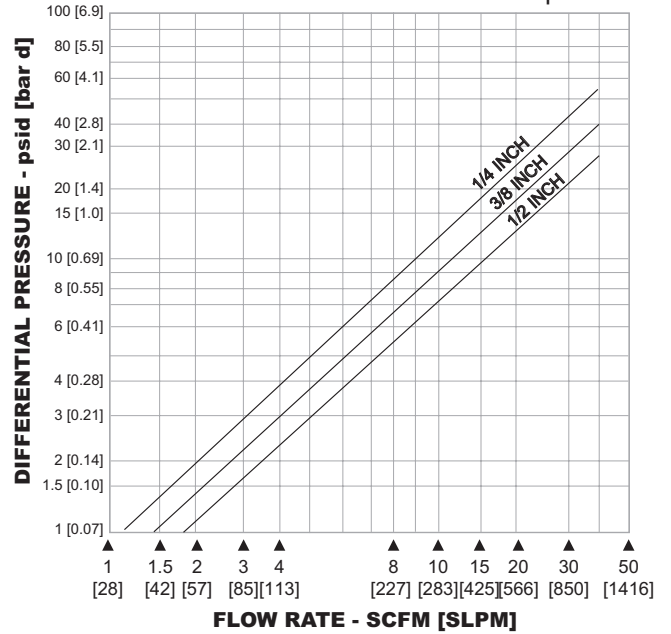
For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.

98-1010 SERIES MINI IN-LINE

Typical Flow Curve - Oil
98-1010 (10 Micron nominal)
100 Saubolt Second Unit

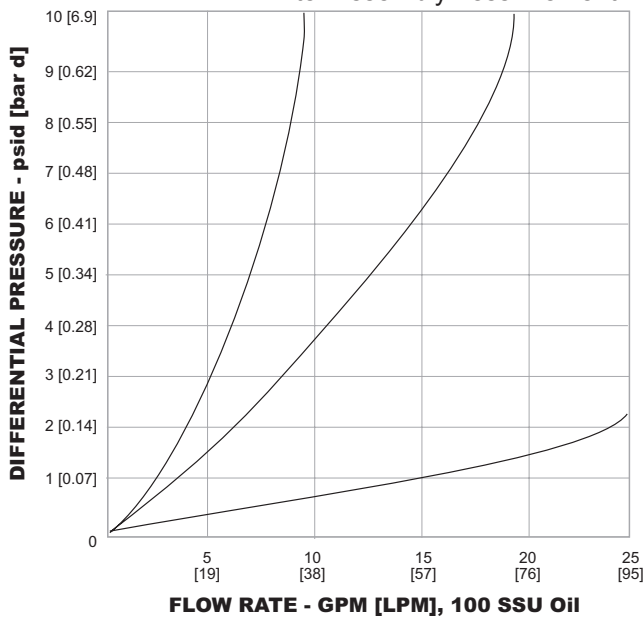


Typical Flow Curve - Air
98-1010 (10 Micron nominal)
100 psi inlet

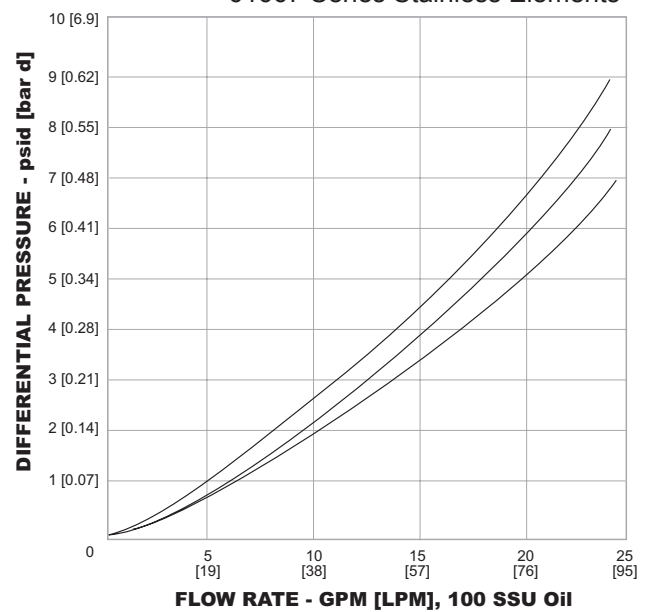


98-1110 SERIES TEE-TYPE

Filter Assembly Less Element



61667 Series Stainless Elements

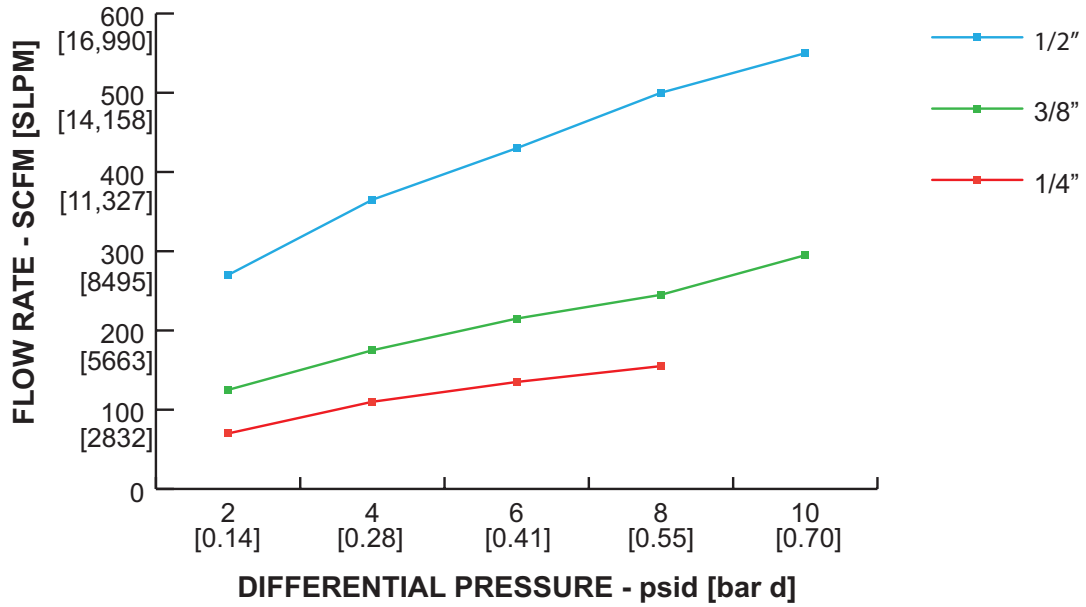


98 Series Flow Charts

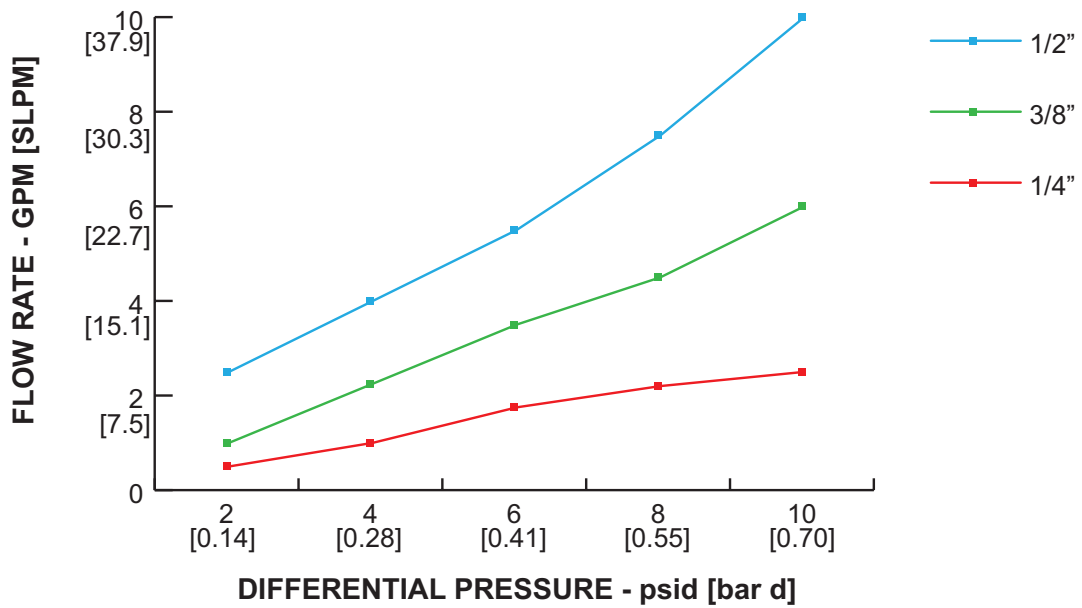
For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.

98-1210 SERIES IN-LINE

AIR 3000 PSI

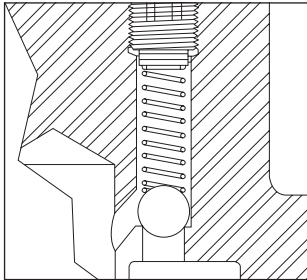


OIL 150 SSU



98 Series Optional Accessories

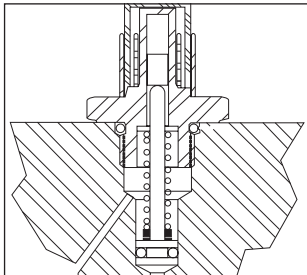
CODE R



CODE R - Bypass Relief Valve

At a predetermined setting, the system fluid bypasses the element assembly until the element is either cleaned or replaced. Standard setting: 50 psid / 3.4 bar d cracking pressure.

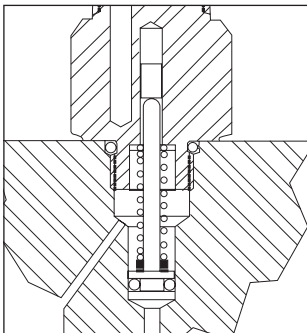
CODE V



CODE V - ΔP Indicator

A Visual Differential Pressure Indicator enables an operator to read contaminant buildup before the element is plugged. The indicator is mounted on the head of the filter unit. It has an automatic reset. Stainless steel construction is standard. Standard setting is 40 psid / 2.8 bar d.

CODE E



CODE E - Electrical ΔP Indicator

This electrical Visual Differential Pressure Indicator is ideal for applications where visual inspections are difficult due to location or when centralized process equipment monitoring is desired. By wiring the indicator into a central control panel, the filter can be remotely monitored quickly and easily. The Electrical ΔP Indicator is designed to be mounted on top of the filter unit. It is constructed of 303 Stainless Steel. An adjustable electric, normally open, reed switch ΔP indicator can operate signal devices. The contacts close when the ΔP increases and automatically resets when ΔP decreases. There is a 3/4" male pipe connection for the electrical hook-up. Voltage requirements: 10W-DC resistive 110 VA-AC resistive. The switch current is 0.5 amps. Relay required for heavier loads.

98 Series Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

98-1010 SERIES MINI IN-LINE

98-1010 - T - 2 PP

BASIC SERIES	PRESSURE RATING	INLET PORT SIZE	INLET AND OUTLET PORT TYPE
98-1010	T - 6000 psig / 414 bar	2 - 1/4" 3 - 3/8" 4 - 1/2"	PP - Female NPTF PM - Female/Male NPTF (1/4" and 1/2" only) BT - MS33649 Female/MS33656 Male

98-1110 SERIES TEE-TYPE

98-1110 - T - 2 B - L VR

BASIC SERIES	PRESSURE RATING	INLET PORT SIZE	INLET AND OUTLET PORT TYPE	O-RING MATERIAL ¹	HOUSING OPTIONS
98-1110	T - 6000 psig 414 bar S - 10,000 psig 690 bar	2 - 1/4" 3 - 3/8" 4 - 1/2"	P - Female NPTF B - MS33649 F - SAE	STANDARD: L - Buna OPTIONAL: N - Teflon® M - Viton®	E - Electrical V - Visual R - Bypass Valve VR - Visual ΔP Indicator and Bypass Relief Valve ER - Electrical/Bypass

¹. See SPECIFICATIONS for operating temperatures for O-rings.

98-1210 SERIES IN-LINE

98-1210 - U - 2 BB - L

BASIC SERIES	PRESSURE RATING	INLET PORT SIZE	INLET AND OUTLET PORT TYPE	O-RING MATERIAL ¹
98-1210	U - 3000 psig 207 bar T - 6000 psig 414 bar S - 10,000 psig 690 bar	2 - 1/4" 3 - 3/8" 4 - 1/2" (3000 and 6000 psig / 207 and 414 bar only)	PP - Female NPTF BB - Male MS33649	STANDARD: L - Buna OPTIONAL: N - Teflon® M - Viton® Z - Ethylene Propylene

¹. See SPECIFICATIONS for operating temperatures for O-rings.

TEE Type Filters

Accessories

DFILTER10123XEN2

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Operating Pressures

Up to 10,150 psig / 700 bar

Operating Temperature

-40°F to 392°F / -40°C to 200°C

Flow Capacity

See Flow Rates Table

MEDIA CONTACT MATERIALS

Housing

316L Stainless Steel or Brass

Filter Element

316L Stainless Steel

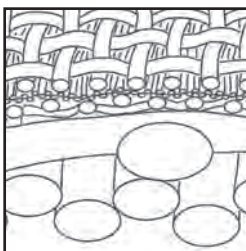
Gaskets

Viton®

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Stainless Steel Filter Elements

Stainless Steel filter elements are made up of several layers of 316 mesh that are sintered together to form an integrated porous element. The middle mesh is of very fine gauge and determines the filtration rates. This layer is then overlaid with inner and outer layers of coarser mesh to give support and protection.



These filter elements are a typical surface filter and the contaminants are retained on the surface of the filtration layer, which makes cleaning and back flushing very easy. These filter elements should be ultrasonically cleaned for best results.



TESCOM TEE Type Filters offer a high quality filter housing and internal elements that provide the effective and efficient removal of contaminants from both gas and liquid applications.

Application

- TEE Type Filters are particularly suitable for the performance of the following TESCOM pressure regulator series: 26-1700, 44-1100, 44-1300, 44-2200, 44-4600, and DH

Features and Benefits

- Protects pressure system components from contaminants
- Operating pressure ratings up to 10,150 psig / 700 bar
- Pleated, 20-40 micron, 316L Stainless Steel internal filter material for maximum contaminant control
- Cleanable element reduces operating cost
- Housing available in 316 Stainless Steel and Brass

TEE Type Filters Air Flow Rates – In Nm³/h at Stated Line Pressure and 0.1 bar Pressure Drop

Flow rates will depend on which filter element grade is installed in the filter housing. Use the chart below to read the flow rate at the desired pressure against the element grade.

FILTER ELEMENT	FILTER RATE [µm]	AIR PRESSURE / bar											
		0.1	1	2	4	7	10	16	34	100	200	340	700
12.32	20	3.9	7.0	11	18	28	39	60	-	350	700	1200	2050
12.32	40	5.3	9.5	14	24	38	52	81	-	480	960	1620	2730
12.57	20	5.1	9.3	14	23	37	51	79	-	470	940	1590	2390
12.57	40	6.1	11	17	28	45	61	95	-	560	1120	1900	3250
25.64	20	8.5	16	23	39	62	85	130	-	780	1560	2320	4700
25.64	40	10	18	27	44	71	97	150	-	890	1780	2466	5350
38.152	20	27	50	75	122	197	275	425	850	-	-	-	-
38.152	40	30	52	80	132	210	287	450	900	-	-	-	-

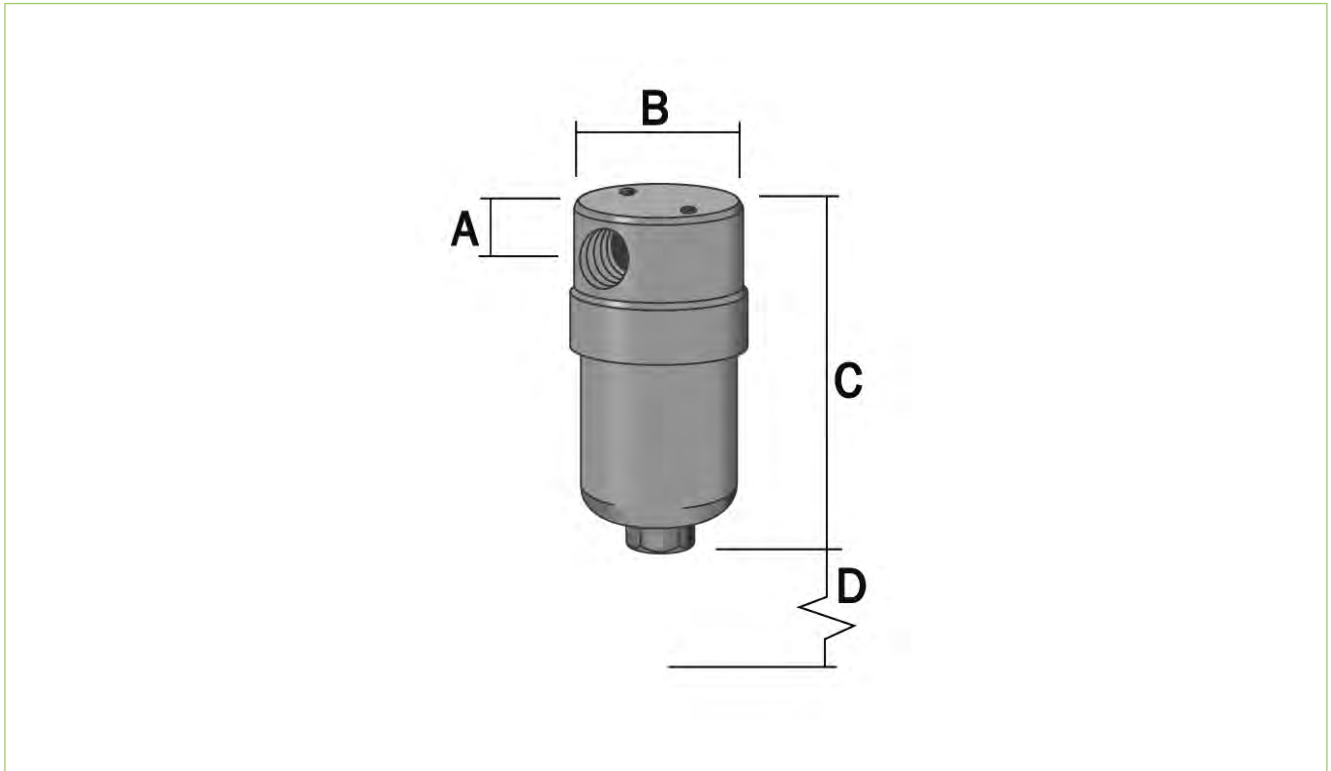
TEE Type Filters Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

BASIC SERIES	MATERIAL	FILTER ELEMENT	MAXIMUM PRESSURE	NPT CONNECTION SIZE	FILTER RATE
D51170	S – Stainless Steel B – Brass	1 – 12.32 2 – 12.57 3 – 25.64 4 – 38.152	700 – 10,150 psig 700 bar 340 – 4930 psig 340 bar 100 – 1450 psig 100 bar	4 – 1/4" 6 – 3/8" 8 – 1/2" 12 – 3/4" 16 – 1"	20 – 20 µm 40 – 40 µm

TEE Type Filters Drawing



TESCOM PART NUMBER	MATERIAL	A	B	C	D
		Inch / mm			
D51170-B2700420	Brass	0.39 / 10	2.56 / 65	5.32 / 135	1.58 / 40
D51170-B2700440	Brass	0.39 / 10	2.56 / 65	5.32 / 135	1.58 / 40
D51170-S2700420	316L	0.39 / 10	2.56 / 65	5.32 / 135	1.58 / 40
D51170-S2700440	316L	0.39 / 10	2.56 / 65	5.32 / 135	1.58 / 40
D51170-B1340420	Brass	0.47 / 12	1.58 / 40	3.15 / 80	1.77 / 45
D51170-B1340440	Brass	0.47 / 12	1.58 / 40	3.15 / 80	1.77 / 45
D51170-S1340420	316L	0.39 / 10	1.42 / 36	2.91 / 74	1.58 / 40
D51170-S1340440	316L	0.39 / 10	1.42 / 36	2.91 / 74	1.58 / 40
D51170-B3340820	Brass	0.79 / 20	3.54 / 90	7.87 / 200	3.94 / 100
D51170-B3340840	Brass	0.79 / 20	3.54 / 90	7.87 / 200	3.94 / 100
D51170-B33401220	Brass	0.98 / 25	3.94 / 100	8.27 / 210	3.94 / 100
D51170-B33401240	Brass	0.98 / 25	3.94 / 100	8.27 / 210	3.94 / 100
D51170-S3340820	316L	0.79 / 20	3.54 / 90	7.87 / 200	3.94 / 100
D51170-S3340840	316L	0.79 / 20	3.54 / 90	7.87 / 200	3.94 / 100
D51170-S33401220	316L	0.98 / 25	3.94 / 100	8.27 / 210	3.94 / 100
D51170-S33401240	316L	0.98 / 25	3.94 / 100	8.27 / 210	3.94 / 100

TEE Type Filters Drawing



TESCOM PART NUMBER	MATERIAL	A	B	C	D
		Inch / mm			
D51170-B3340620	Brass	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-B3340640	Brass	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-B3340820	Brass	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-B3340840	Brass	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-B33401220	Brass	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-B33401240	Brass	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-B33401620	Brass	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-B33401640	Brass	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-S3340620	316L	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-S3340640	316L	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-S3340820	316L	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-S3340840	316L	0.59 / 15	2.52 / 64	5.08 / 129	2.76 / 70
D51170-S33401220	316L	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-S33401240	316L	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-S33401620	316L	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-S33401640	316L	0.98 / 25	3.94 / 100	5.91 / 150	2.76 / 70
D51170-S2340440	316L	0.39 / 10	1.42 / 36	3.98 / 101	0.79 / 20
D51170-B4100820	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-B4100840	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-B41001220	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-B41001240	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-B41001620	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-B41001640	Brass	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S4100820	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S4100840	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S41001220	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S41001240	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S41001620	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S41001640	316L	1.18 / 30	3.94 / 100	10.39 / 264	8.27 / 210
D51170-S2700640	316L	0.87 / 22	2.56 / 65	5.31 / 135	1.57 / 40