

**303/383 Series ASME Filter Assemblies**

### **Description**

Featuring Coreless Element Technology

**Flows to** 400 gpm (1510 lpm), 303 Series; 700 gpm (2650 lpm), 383 Series

**Pressures to** 675 psig (46.5 bar)

**Port Sizes:** 2", 3", 4" and 6" ANSI Flange Connections

### **Specifications**

#### **Maximum Acceptable Working Pressure:**

Class 150: 260 psig (18 bar);

Class 300: 675 psig (46.5 bar) at 200 °F (93 °C)

#### **Temperature Range:**

-20 °F to 200 °F (-29 °C to 93 °C);

140 °F (60 °C) maximum in HWCF or water-glycol fluids

#### **Filter Element Collapse Pressure:**

150 psid (10 bar)

#### **Hydrostatic Test Pressure:**

Class 150: 390 psig (26.9 bar)

Class 300: 1013 psig (69.8 bar)

#### **Materials of Construction:**

Carbon steel option: carbon steel housing, nozzles, and flanges; carbon steel transfer valve body with stainless steel 304L valve ball and stem on "D" duplex model

Stainless steel option: 304L stainless steel housing, nozzles, and flanges; 316 stainless steel transfer valve body, valve ball, and stem on "D" duplex model

#### **Finish:**

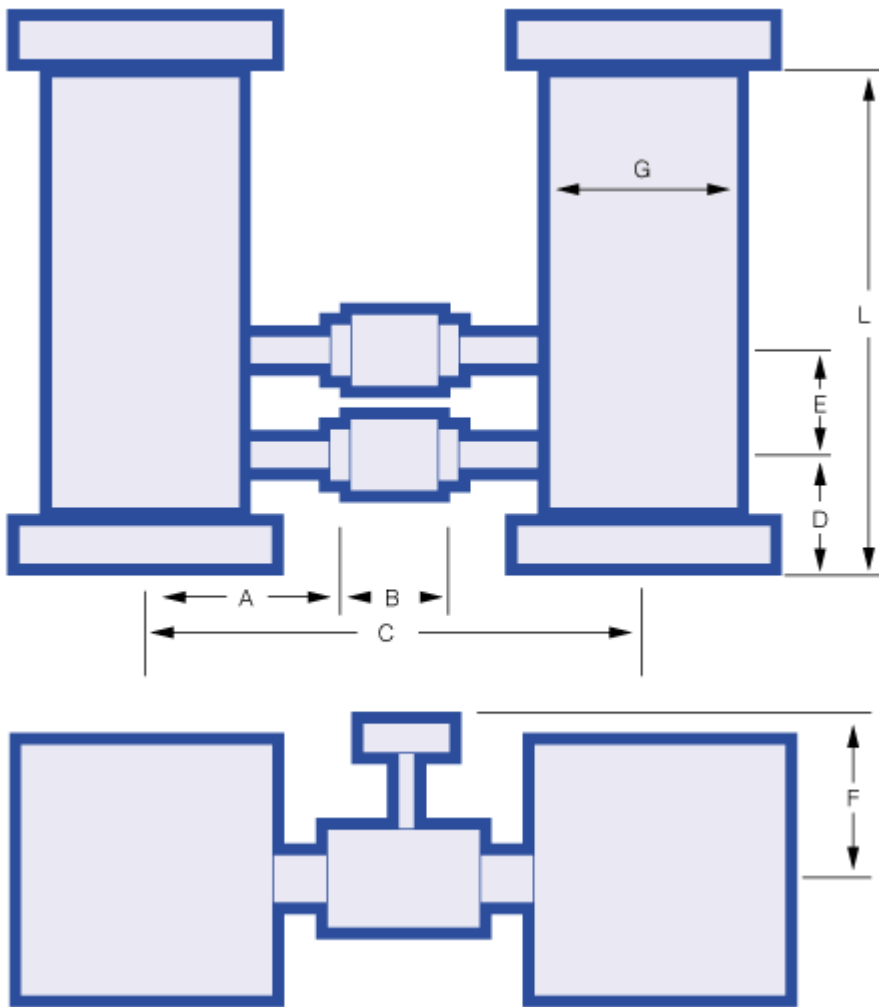
Interior finish: coated with rust preventative

Permanent cores: tin plated

Exterior finish: two coats of zinc primer on carbon steel option

Housings are designed, manufactured, and stamped in accordance with ASME BPVC Section VIII Div. 1, including latest addenda.

## Dimensional Drawings



Dimensions (303 Series)

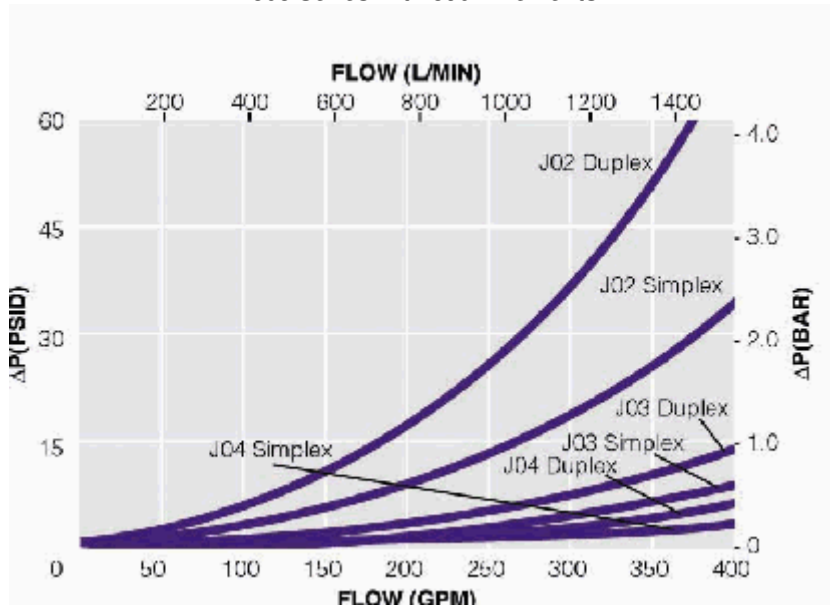
Port Size	'A' Simplex Only	'B' Duplex Only	'C' Duplex Only	'D'	'E'	'F' Duplex Only	'G'	'L' V-Length	'L' X-Length
JO2	10.00	3.94	23.94	8.00	8.66	5.12	10.75	50.06	63.06
JO3	10.00	5.12	25.12	8.00	11.42	6.89	10.75	50.06	63.06
JO4	10.00	5.90	25.90	8.00	13.78	7.28	10.75	50.06	63.06

Dimensions (383 Series)

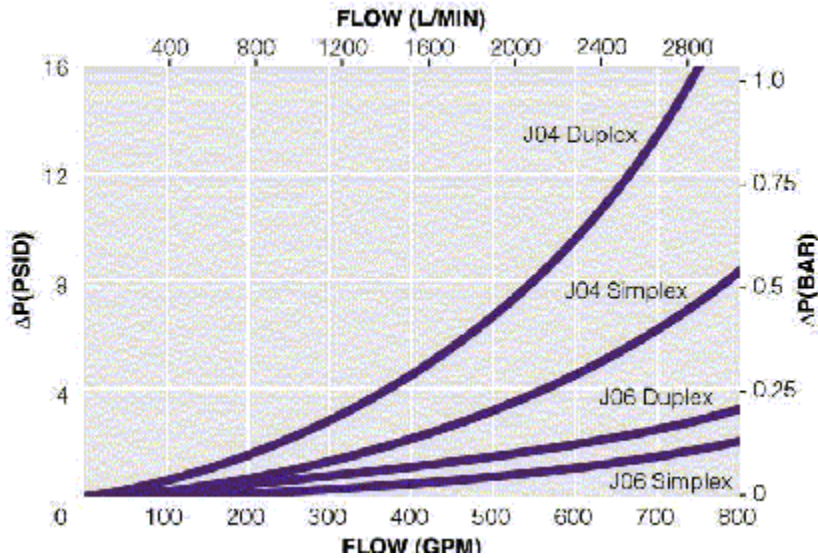
Port Size	'A' Simplex Only	'B' Duplex Only	'C' Duplex Only	'D'	'E'	'F' Duplex Only	'G'	'L' V-Length	'L' X-Length
JO4	14.10	5.90	34.20	8.00	13.78	7.28	16.00	N/A	61.75
JO6	14.10	11.81	40.00	8.00	23.62	8.46	16.00	N/A	61.75

## Performance

**Figure 1. Housing Pressure Drop using fluid with 0.9 S.G.**  
 Housing Pressure drop is directly proportional to specific gravity.  
**303 Series with 8904 Elements**



**383 Series with 8314 Elements**



### Element Pressure Drop Factor.

Multiply actual flow rate times factor to determine pressure drop with fluid at 150 SUS (32 cSt), 0.9 S.G. Correct for other viscosities by multiplying new viscosity in SUS/150 x new S.G./0.9.

*8904 Series Element $\Delta P$ factor (psid/gpm)					
Length	KZ	KP	KN	KS	KT
26"	0.033	0.015	0.012	0.009	0.006
39"	0.021	0.010	0.008	0.006	0.004

**\*8314 Series Element  $\Delta P$  factor (psid/gpm)**

Length	KZ	KP	KN	KS	KT
39"	0.011	0.006	0.005	0.004	0.003

\*Factors listed above have been adjusted to represent the total number of elements per housing.

## Maximum Clean Element Pressure Drop for Bypass Valves

Calculated clean element pressure drop should not exceed the values listed in the table for the selected bypass valve option.

Bypass Option	'E' (5 psid)	'F' (12 psid)	'D' (18 psid)	'A' (25 psid)	'B' (50 psid)	'W' (non-bypass)
Max. Clean $\Delta P$	1 psid	2 psid	3 psid	4 psid	8 psid	15% of max $\Delta P$

## Ordering Information

**Assembly P/N:** H  3           
Table1 Table2 Table3 Table4 Table5 Table6 Table7 Table8 Table9

**Replacement Element P/N:** HC 8904F     
Table5 Table6 Table1  
 HC 8314F     
Table5 Table6 Table1

**Note:** Choose from the options in the following tables to compile the specific Product Number.

**TABLE 1: SEAL OPTIONS**

Code	Seals
H	Nitrile
Z	Fluorocarbon

**TABLE 2: HOUSING OPTION\***

Code	Option
03	8904 element
83	8314 element

\*Housings accept 3 elements.

**TABLE 3: HOUSING STYLE OPTIONS**

Code	Style
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S	Simplex - ports on same side
D	Duplex

**TABLE 4: PORT OPTIONS**

Code	Port	Availability
J02	2" ANSI B16.5 class 150 flanges	303 series
J03	3" ANSI B16.5 class 150 flanges	303 series
J04	4" ANSI B16.5 class 150 flanges	303 and 383 series
J06	6" ANSI B16.5 class 150 flanges	383 series
N02	2" ANSI B16.5 class 300 flanges	303 series
N03	3" ANSI B16.5 class 300 flanges	303 series
N04	4" ANSI B16.5 class 300 flanges	303 and 383 series
N06	6" ANSI B16.5 class 300 flanges	383 series

**TABLE 5: FILTER ELEMENT OPTIONS**

Code	$\beta_x \geq 200$	$\beta_{x(c)}=1000$
KZ	<1	2.5
KP	3	5
KN	6	7
KS	12	12
KT	25	22

**TABLE 6: LENGTH OPTIONS\***

Assembly Code	Element Code**	Availability
V	26	303 series only
X	39	303 and 383 series

\* Use code in second column for element part no.

\*\* Nominal length in inches.

**TABLE 7: BYPASS VALVE OPTIONS**

<b>Code</b>	<b>Cracking Pressure</b>
A	25 psid
B	50 psid
D	18 psid
E	5 psid
F	12 psid
W	Non-bypass

**TABLE 8: DIFFERENTIAL PRESSURE DEVICE OPTIONS**

<b>Code</b>	<b>Description</b>
O	No indicator
B	Bleed plug and seal in place of indicator
P	Visual indicator with thermal lockout
S	Electrical switch with MS receptacle
L	Electrical switch with 6" leads
V	Electrical/visual indicator

**TABLE 9: HOUSING MATERIAL OPTIONS**

<b>Code</b>	<b>Option</b>
7	Carbon steel
9	304L stainless steel

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**Contact Information**

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