



301/381 Series ASME Filter Assemblies

Description

Featuring Coreless Element Technology

Flows to 150 gpm (570 lpm), 301 Series; 300 gpm (1135 lpm), 381 Series

Pressures to 675 psig (46.5 bar)

Port Sizes: 2", 3", and 4"

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:

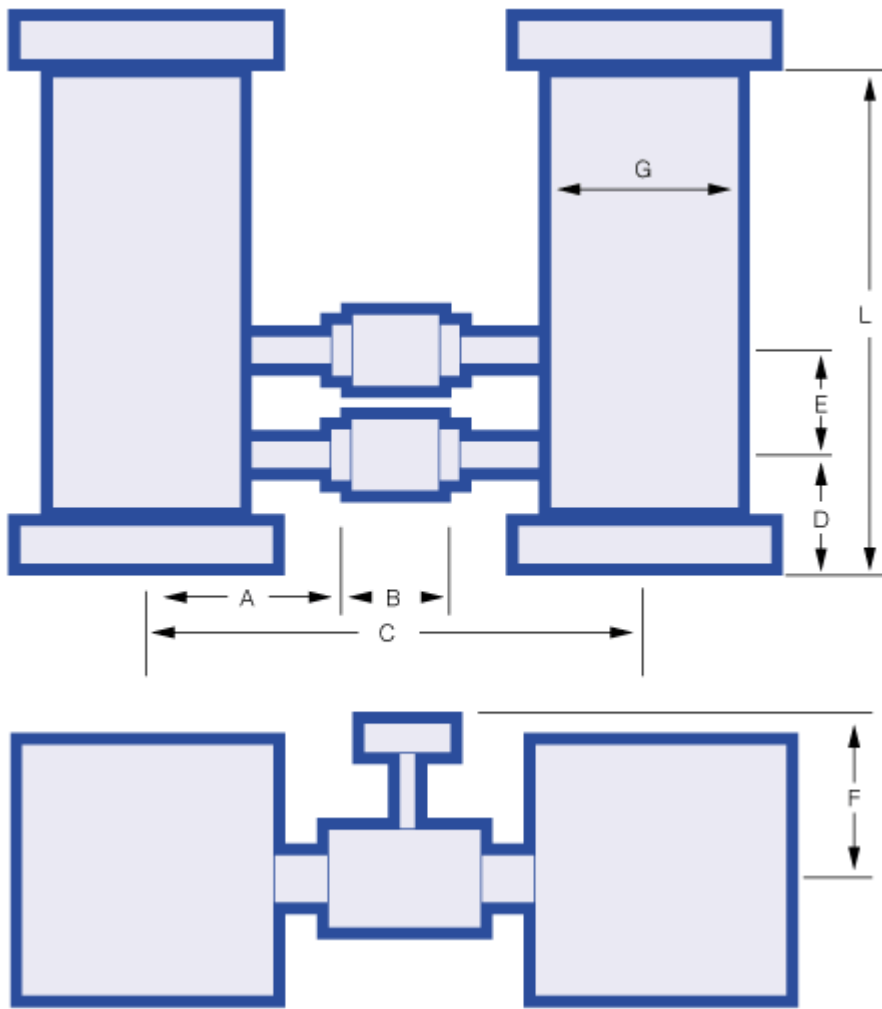
Interior finish: coated with rust preventative

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 (301 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	7.88	3.94	19.69	6.00	8.66	5.12	6.63	46.06	59.06
J03	7.88	5.12	20.87	6.00	11.42	6.89	6.63	46.06	59.06

Dimensions (381 Series)

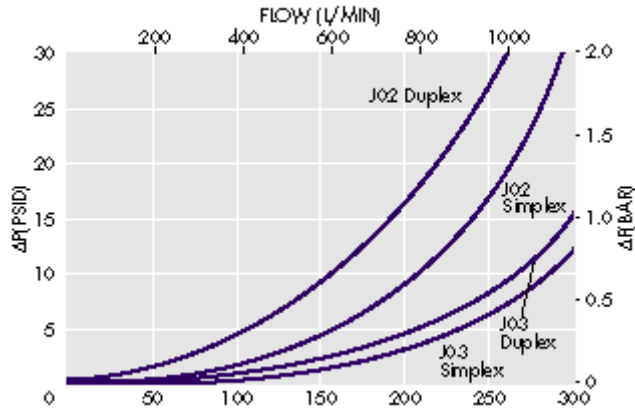
Port Size	'A' Simplex Only	'B' Duplex Only	'C' Duplex Only	'D'	'E'	'F' Duplex Only	'G'	'L' V- Length	'L' X- Length
JO3	10.00	5.12	25.12	8.00	11.42	6.89	8.63	N/A	61.75
J04	10.00	5.90	25.90	6.00	13.78	7.28	8.63	N/A	61.75

Performance

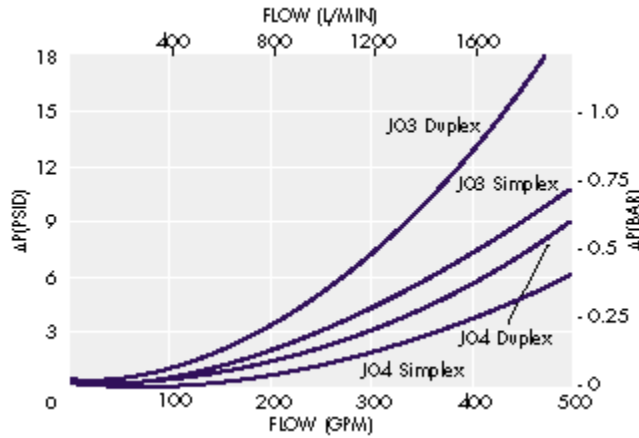
Figure 1. Housing Pressure Drop using fluid with 0.9 S.G.

Housing Pressure drop is directly proportional to specific gravity.

301 Series with 8904 Elements



381 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 ΔP factor (psid/gpm)

Length	KZ	KP	KN	KS	KT
26"	0.10	0.044	0.037	0.028	0.019
39"	0.062	0.029	0.024	0.018	0.013

8314 Series Element ΔP factor (psid/gpm)

Length	KZ	KP	KN	KS	KT
39"	0.034	0.018	0.015	0.012	0.008

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 ΔP	1 psid	2 psid	3 psid	4 psid	8 psid	15% of max ΔP

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
01	8904 element
81	8314 element

*Housings accept a single element.

TABLE 3: HOUSING STYLE OPTIONS

Code	Style
S	Simplex - ports on same side
D	Duplex

TABLE 4: PORT OPTIONS

Code	Port	Availability
J02	2" ANSI B16.5 class 150 flanges	301 series
J03	3" ANSI B16.5 class 150 flanges	301 and 381 series
J04	4" ANSI B16.5 class 150 flanges	381 series
N02	2" ANSI B16.5 class 300 flanges	301 series
N03	3" ANSI B16.5 class 300 flanges	301 and 381 series
N04	4" ANSI B16.5 class 300 flanges	381 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	301 series only
X	39	301 and 381 series

* Use code in second column for element part no.
 ** Nominal length in inches.

TABLE 7: BYPASS VALVE OPTIONS

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

TABLE 8: DIFFERENTIAL PRESSURE DEVICE OPTIONS

Code	Description
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

Code	Option
7	Carbon steel
9	304L stainless steel

Contact Information

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