

HFH Series

High Flow Housing

ASME Code Vessel for Water & Liquids



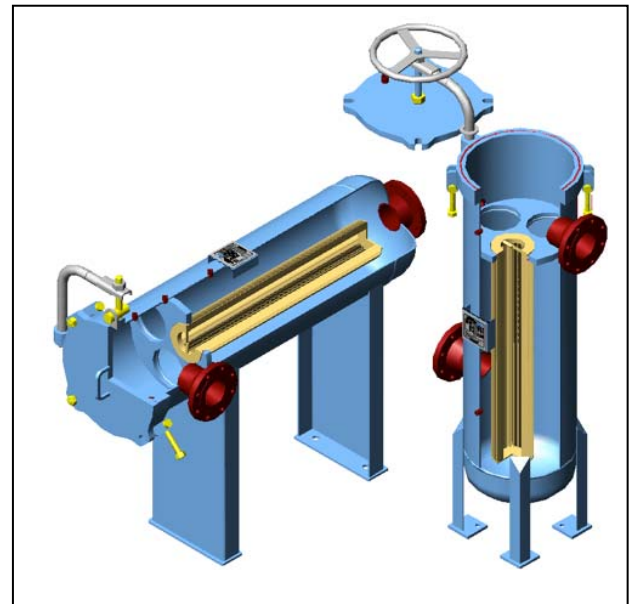
The Delta Pure HFH range of High Flow Filter Housings accepts the Delta Pure DHF High Flow 6" diameter filter cartridge to pre-filter or polish water and other liquids at a typical flow range of 100-3600 gpm (662-13,600 lpm or 6,000-123,400 US bpd).

These quality filter vessels, optionally available to ASME Section VIII Div 1 (U Stamp) and other standards, are available in CS, 304SS, 316SS and can even be made in nickel alloys. They are available in single-round and multi-round configurations, and in both horizontal and vertical orientations.

The combination of Delta Pure DHF High Flow filters and a HFH High Flow filter housing enables smaller-diameter filter vessels, lower capital cost, and reduced filter change-out expense, as compared to assemblies using typical 2 3/4" (70 mm) diameter filter cartridges.

Swing bolts and pivoting-cover are maintenance-friendly and facilitate filter change-out. Single O-ring filters load-in easily. Because fewer filters are needed as compared to smaller-diameter filter cartridges, change-outs require a fraction of the time.

Delta Pure offers a choice of fittings, vents, drains, configurations, materials and special options.



The HFH series filter housing range handles 100 - 3600 GPM* and includes horizontal and vertical designs.

**typical flow ranges*

Benefits

- Smaller-diameter vessels reduce capital cost.
- High Flow configuration increases filter life.
- Swing bolts and pivoting cover simplify maintenance.
- Flexible and standard designs speed delivery.
- User-friendly design reduces change-out labor.
- Optimal design lowers filtration cost per gallon/liter of water.

Applications

- RO Pre-filtration
- Process Water
- Potable Water
- Water for Oil and Gas Production
- Food and Beverage
- Ground Water Remediation

HFH Series High Flow Housing for Water & Liquids



Above: Newly fabricated and hydro-tested single-round housings await crating.

Housing Specifications

Design Code: ASME Section VIII, Division 1

Design Pressure: 150 PSIG / 1034 KPAG

Design Temperature: -20° F/250° F
(-29°C /121°C)

M.O.C: CS, 304SS, 316SS; special alloys are quoted on request

Closure: Swing Bolt with EPDM O-ring seal

Exterior Finish:

(SS) Electro-polish

(CS) Blue Enamel

Standard Housing Models

HFH-1 – accepts one DHF filter cartridge
Typical Inlet/Outlet Sizes: 2", 3", 4"

HFH-3 – accepts three DHF filter cartridges
Typical Inlet/Outlet Sizes: 6", 8"

HFH-5 – accepts five DHF filter cartridges
Typical Inlet/Outlet Sizes: 6", 8", 10"

HFH-7 – accepts seven DHF filter cartridges
Typical Inlet/Outlet Sizes: 8", 10", 12"

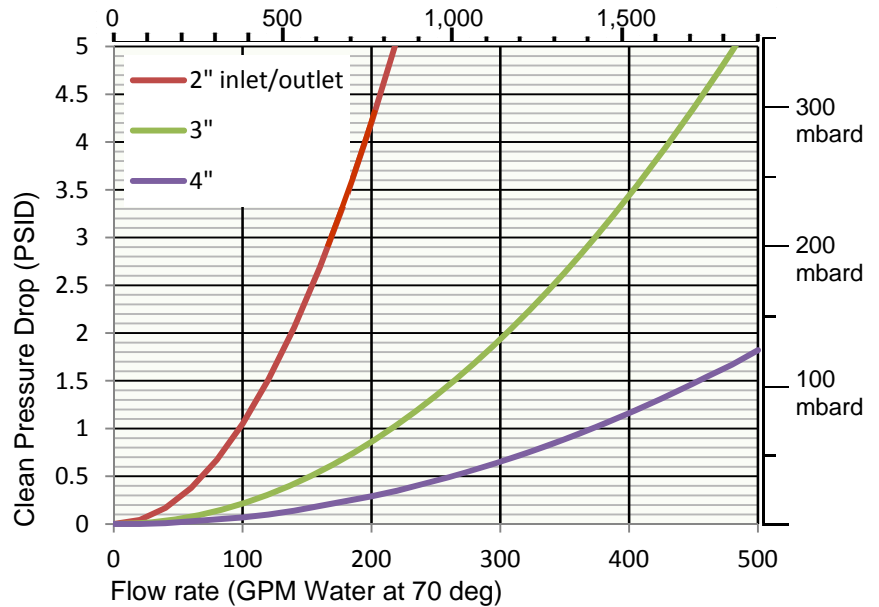
HFH-12 – accepts twelve DHF filter cartridges
Typical Inlet/Outlet Sizes: 10", 12"

Pressure Drop vs. Flow Rate

(Housing Only - add filter pressure drop to obtain total ΔP)

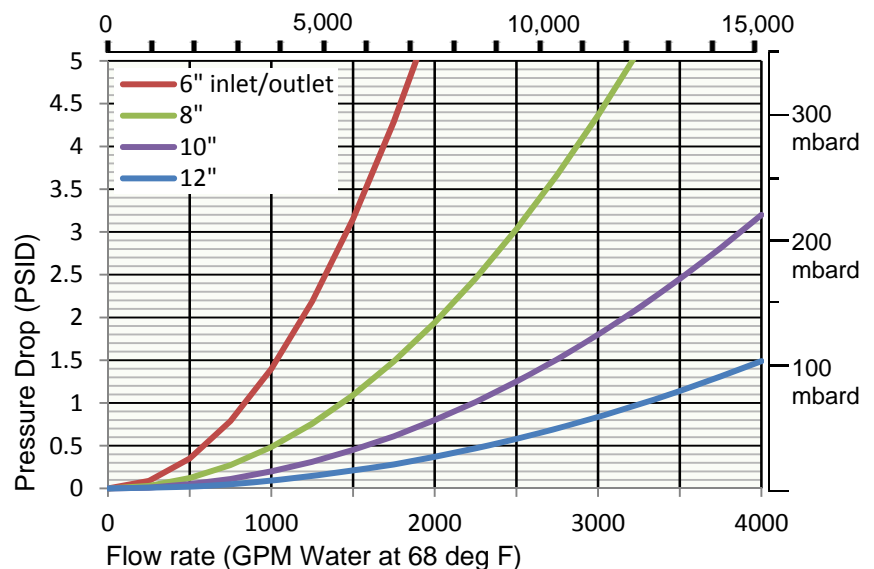
Single-Element Housings

Flow rate (LPM Water at 20 deg C)



Multi-Element Housings

Flow rate (LPM Water at 20 deg C)



Note: Refer to Delta Pure DFH High Flow filter cartridge specification sheet. To get a quick estimate of the number of 60" tall High Flow filters you will need, simply divide your flow in GPM by 300! For example, for 900 GPM water, one might use three 60" tall High Flow filters in a three-element HFH-series housing ("three-round housing"). This may be adjusted based on filter micron rating and individual system requirements. More filters can be used for longer filter life.

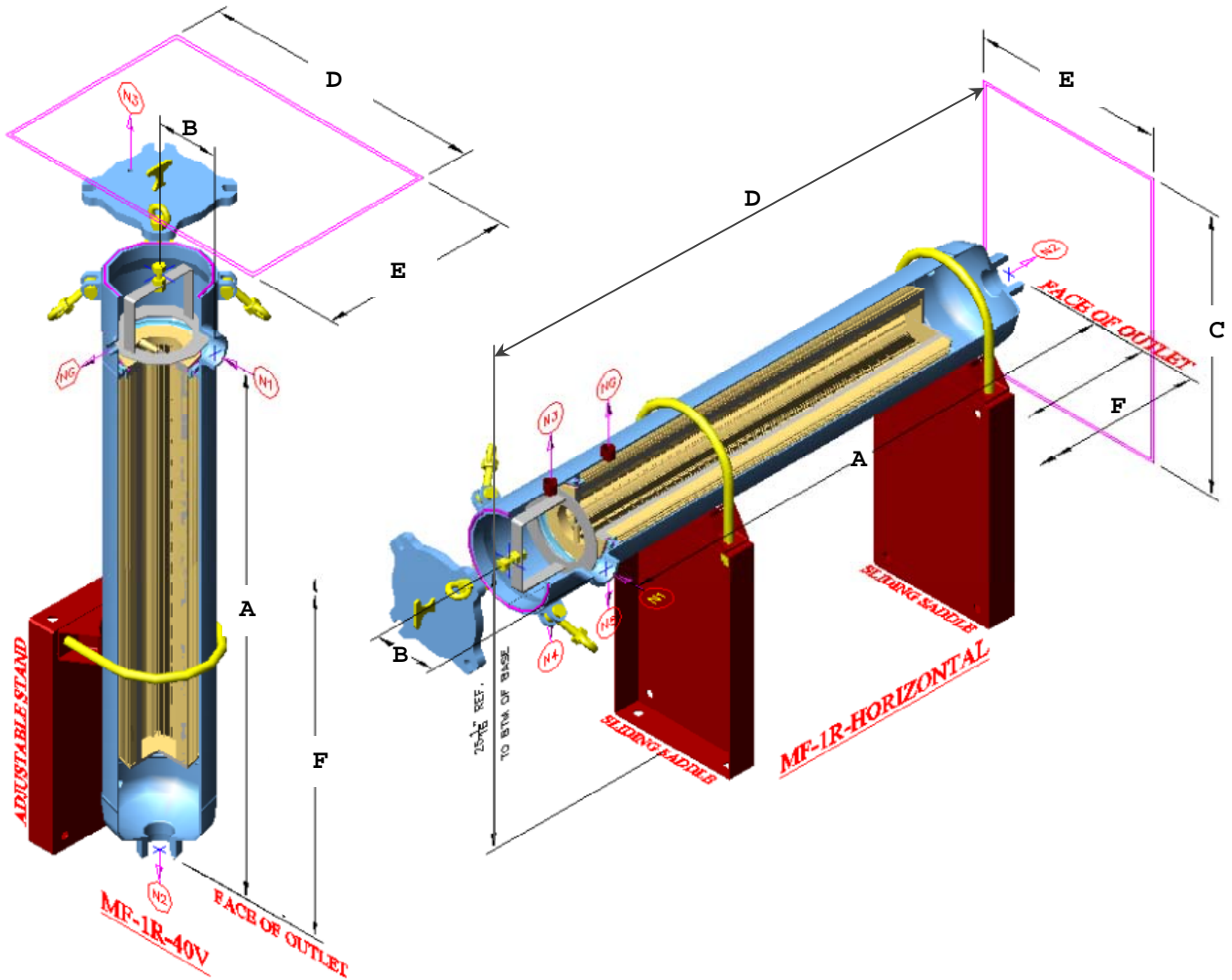
Standard Single-Filter-Element Housing Specifications

MODEL NUMBER	DIA. (NOM.)	INLET /OUTLET SIZE	VENT	DRAIN	GAUGE PORT	APPROX EMPTY WEIGHT		TYPICAL MAX. FLOW RATE		IN & OUTLET CONFIG. STYLE/ ORIENT.	ELEMENT (QTY) SIZE
						N1/2 (FLG)	N3 (FNPT)	N4/5 (FNPT)	NG (FNPT)		
HFH-1-40V	8 "	3 " FLG	1/4 "	N/A	1/2 "	165	75	175	662	STYLE A / Vertical	(1) 6 Dia. x 40" Lg
HFH-1-40H	8 "	3" FLG	1/2 "	(2) 1/2 "	1/2 "	185	84	175	662	STYLE A / Horizontal	(1) 6 Dia. x 40" Lg
HFH-1-60H	8 "	3" FLG	1/2 "	(2) 1/2 "	1/2 "	215	98	300	1136	STYLE A / Horizontal	(1) 6 Dia. x 60" Lg

Standard Multiple-Filter-Element Housing Specifications

MODEL NUMBER	DIA.	INLET /OUTLET	VENT	DRAIN	GAUGE PORT	WEIGHT EMPTY (APPROX.)		TYPICAL MAX. FLOW RATE		IN/OUT. CONFIG STYLE / ORIENTATION (V=vertical, H=horizontal)	ELEMENT (QTY)-SIZE
						N1/2 (FLANGE)	N3(FNPT)	N4/5 (FNPT)	N6/7 (FNPT)		
HFH-3-40V	16"	4"- 150#	1/2"	(2) 1"	(2) 1/2"	525	239	525	1987	STYLE B / V	(3) 6" Dia. x 40"Lg
HFH-3-40H	16"	4"- 150#	1/2"	(2) 1"	(2) 1/2"	540	245	525	1987	STYLE A / H	(3) 6" Dia. x 40"Lg
HFH-3-60H	16"	6"- 150#	1/2"	(2) 1"	(2) 1/2"	660	300	900	3407	STYLE B / H	(3) 6" Dia. x 60"Lg
HFH-5-40V	20"	6"- 150#	1/2"	(2) 1"	(2) 1/2"	780	355	875	3312	STYLE B / V	(5) 6" Dia. x 40"Lg
HFH-5-40H	20"	6"- 150#	1/2"	(2) 1"	(2) 1/2"	800	364	875	3312	STYLE A / H	(5) 6" Dia. x 40"Lg
HFH-5-60H	20"	8"- 150#	1/2"	(2) 1"	(2) 1/2"	970	441	1500	5678	STYLE B / H	(5) 6" Dia. x 60"Lg
HFH-7-40V	24"	8"- 150#	1/2"	(2) 1.5"	(2) 1/2"	980	445	1225	4637	STYLE B / V	(7) 6" Dia. x 40"Lg
HFH-7-40H	24"	8"- 150#	1/2"	(2) 1.5"	(2) 1/2"	1000	455	1225	4637	STYLE A / H	(7) 6" Dia. x 40"Lg
HFH-7-60H	24"	10"- 150#	1/2"	(2) 1.5"	(2) 1/2"	1200	545	2100	7949	STYLE B / H	(7) 6" Dia. x 60"Lg
HFH-12-40V	30"	10"- 150#	1/2"	(2) 1.5"	(2) 1/2"	1300	591	2100	7949	STYLE B / V	(12) 6" Dia. x 40"Lg
HFH-12-40H	30"	10"- 150#	1/2"	(2) 1.5"	(2) 1/2"	1330	605	2100	7949	STYLE A / H	(12) 6" Dia. x 40"Lg
HFH-12-60H	30"	12"- 150#	1/2"	(2) 1.5"	(2) 1/2"	1620	736	3600	13627	STYLE B / H	(12) 6" Dia. x 60"Lg

HFH Series High Flow Housing

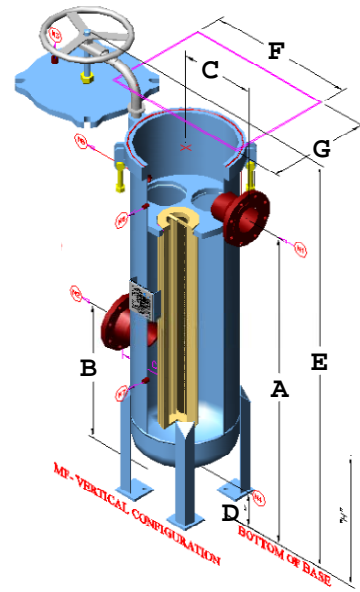
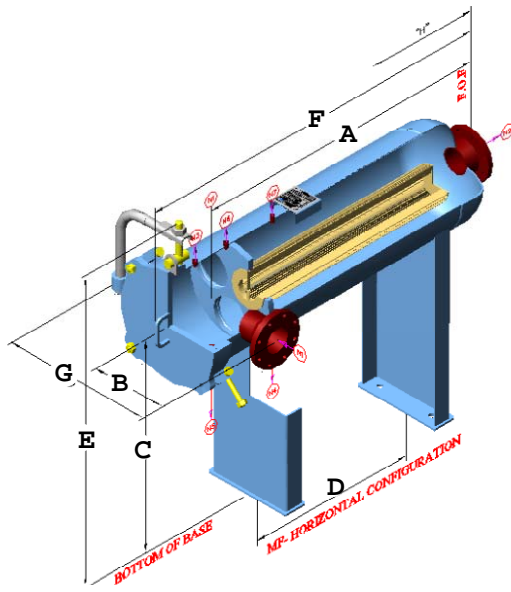


Single Element HFH Filter Housings – Selected Dimensions*

MODEL NUMBER	INLET CENTERLINE TO OUTLET FACE		VESSEL CENTERLINE TO INLET FACE		HOUSING OAH OPERATING		HOUSING OAL OPERATING		HOUSING OAW OPERATING		ELEMENT REMOVAL CLEARANCE	
	A (IN)	A (mm)	B (IN)	B (mm)	C (IN)	C (mm)	D (IN)	D (mm)	E (IN)	E (mm)	F (IN)	F (mm)
HFH-1R-40V	47.375	1203	5.750	146	54.500	1384	13.000	330	13.000	330	91.000	2311
HFH-1R-40H	47.375	1203	5.750	146	30.500	775	54.500	1384	12.000	305	91.000	2311
HFH-1R-60H	68.500	1740	9.313	237	30.500	775	75.500	1918	15.500	394	111.000	2819

* The dimensions shown in these marketing materials are for preliminary assessment only. Please request certified drawings from Delta Pure when required.

HFH Series High Flow Housing



Multi-Element HFH Filter housings – Selected Dimensions*

Vertical

MODEL NUMBER	FLOOR TO INLET CENTERLINE		FLOOR TO OUTLET CENTERLINE		VESSEL CENTERLINE TO IN/OUTLET FACE		FLOOR TO DRAIN FACE		HOUSING OAH OPERATING		HOUSING OAL OPERATING		HOUSING OAW OPERATING		ELEMENT REMOVAL CLEARANCE	
	A (IN)	A (mm)	B (IN)	B (mm)	C (IN)	C (mm)	D (IN)	D (mm)	E (IN)	E (mm)	F (IN)	F (mm)	G (IN)	G (mm)	H (IN)	H (mm)
HFH-3-40V	55.000	1397	24.000	610	13.000	330	6.063	154	74.000	1880	26.500	673	18.500	470	102.000	2591
HFH-5-40V	56.000	1422	25.000	635	15.000	381	6.563	167	75.250	1911	30.500	775	23.000	584	103.000	2616
HFH-7-40V	59.000	1499	26.000	660	18.000	457	6.063	154	84.500	2146	36.500	927	28.000	711	109.000	2769
HFH-12-40V	62.000	1575	28.000	711	23.000	584	6.625	168	91.500	2324	46.500	1181	35.500	902	114.000	2896

Horizontal

MODEL NUMBER	INLET C-LINE TO OUTLET FACE		VESSEL C-LINE TO INLET FACE		FLOOR TO VESSEL C-LINE		SADDLE CENTERLINE TO CENTERLINE		HOUSING OAH OPERATING		HOUSING OAL OPERATING		HOUSING OAW OPERATING		ELEMENT REMOVAL CLEARANCE	
	A (IN)	A (mm)	B (IN)	B (mm)	C (IN)	C (mm)	D (IN)	D (mm)	E (IN)	E (mm)	F (IN)	F (mm)	G (IN)	G (mm)	H (IN)	H (mm)
HFH-3-40H	50.813	1291	13.000	330	36.000	914	29.000	737	53.000	1346	62.000	1575	25.500	648	98.000	2489
HFH-3-60H	71.063	1805	14.000	356	36.000	914	49.000	1245	53.000	1346	82.500	2096	26.500	673	138.000	3505
HFH-40H	51.625	1311	15.000	381	36.000	914	29.000	737	55.250	1403	63.250	1607	26.500	673	99.000	2515
HFH-5R-60H	73.000	1854	15.000	381	36.000	914	49.000	1245	55.250	1403	85.750	2178	26.500	673	140.000	3556
HFH-7-40H	55.250	1403	18.000	457	36.000	914	32.000	813	58.500	1486	74.250	1886	32.250	819	105.000	2667
HFH-7-60H	76.000	1930	20.000	508	36.000	914	52.000	1321	58.500	1486	96.000	2438	34.250	870	147.000	3734
HFH-12-40H	57.563	1462	23.000	584	36.000	914	34.000	864	61.500	1562	80.750	2051	41.000	1041	110.000	2794
HFH-12-60H	78.875	2003	23.000	584	36.000	914	54.000	1372	61.500	1562	102.000	2591	41.000	1041	150.000	3810

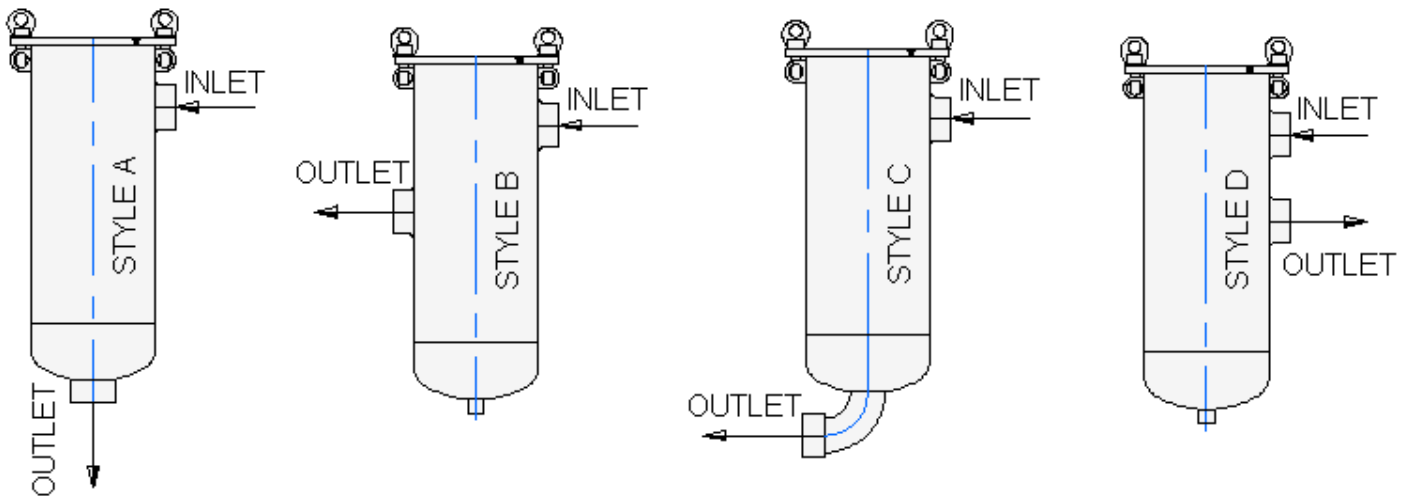
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Part Number Configuration

HFH	Number of Elements	Element Length	Orientation	Housing Material	Inlet/Outlet Connections	Configuration*	Code Stamp
	1	40 40"	H horizontal	304 304 sst	2NPT 2" fNPT	A Style A	U U Stamp
	3	60 60"	V vertical	316 316 sst	3NPT 3" fNPT	B Style B	UM UM Stamp
	5			C carbon steel	2FLG 2" flange	C Style C	NC Non-code (no stamp)
	7				3FLG 3" flange	D Style D	
	12			<i>Please consult Delta Pure for other materials, such as nickel alloys.</i>	4FLG 4" flange	<i>Please see diagrams below.</i>	
					6FLG 6" flange		
					8FLG 8" flange		
					10FLG 10" flange		
					12FLG 12" flange		
					<i>Flanges are 150# ANSI.</i>		

We also provide custom housings. If you don't see what you need, please ask!

*Housing Configurations



Example: Part Code HFH-3-60-H-316-6FLG-A-U High Flow Housing, accepts three elements, each 60" tall, horizontally oriented, 316 stainless steel, 6" flange inlet and outlet, flow configuration A, ASME U stamp.