

# HFS and HFD Series

High Flow Single and Duplex Filters  
Max. 11200 l/min. 10 bar



## Heavy Duty Reliability

New High Flow Single and Duplex Filters ensure reliability in industrial, marine, and power generation applications up to DN350 and flow rates up to 11200 l/min. One filter element size allows standardisation in multi-element housings. Equalising valve eases changeover of flow direction in filter housings. Parker's angular sealing arrangement aids installation of elements.



## Contact Information:

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## Applications:

- Steel industry, paper mills, marine applications and power generation
- Lubricating systems
- Fuel filtration
- Coolant filtration

**Specifications:****Assembly:**

In-line filter or a duplex filter. Single filters are available with connections on the same side or on opposite sides. Duplex filters are available either with a L-bore ball valve in upstream and downstream lines or with two butterfly valves in the upstream line and two flap-type check valves in the downstream line.

**Maximum operating pressure:**

10 bar

**Nominal flow rate (30 cSt):**

Up to 11200 l/min (672 m<sup>3</sup>/h).

**Connections:**

Flanges: DN50 – DN350 / PN10  
ANSI flanges upon request.

**Seal material:**

Nitrile  
Other seal materials upon request.

**Operating temperature:**

0°C...+100°C

**Housing material:**

Steel  
Stainless steel upon request.

**Weight:**

See a table on page 241.

**Bypass valve:**

Opening pressure 3,5 bar or without a bypass.

**Filter elements:**

Environmentally friendly Ecoglass III.  
Resin impregnated heavy duty cellulose paper  
15 µm nominal.  
Cleanable wire mesh.

**Differential pressure indicators:**

Filter can be equipped with a visual, electrical or electronic indicator with setting 2,5 bar.

**Fluid compatibility:**

Suitable for use with regular hydraulic and lubrication oils. For suitability with other fluids consult Parker Filtration.



Filter vessels with multiple standardized elements. Bypass valves are fixed on the center tube inside the housing.

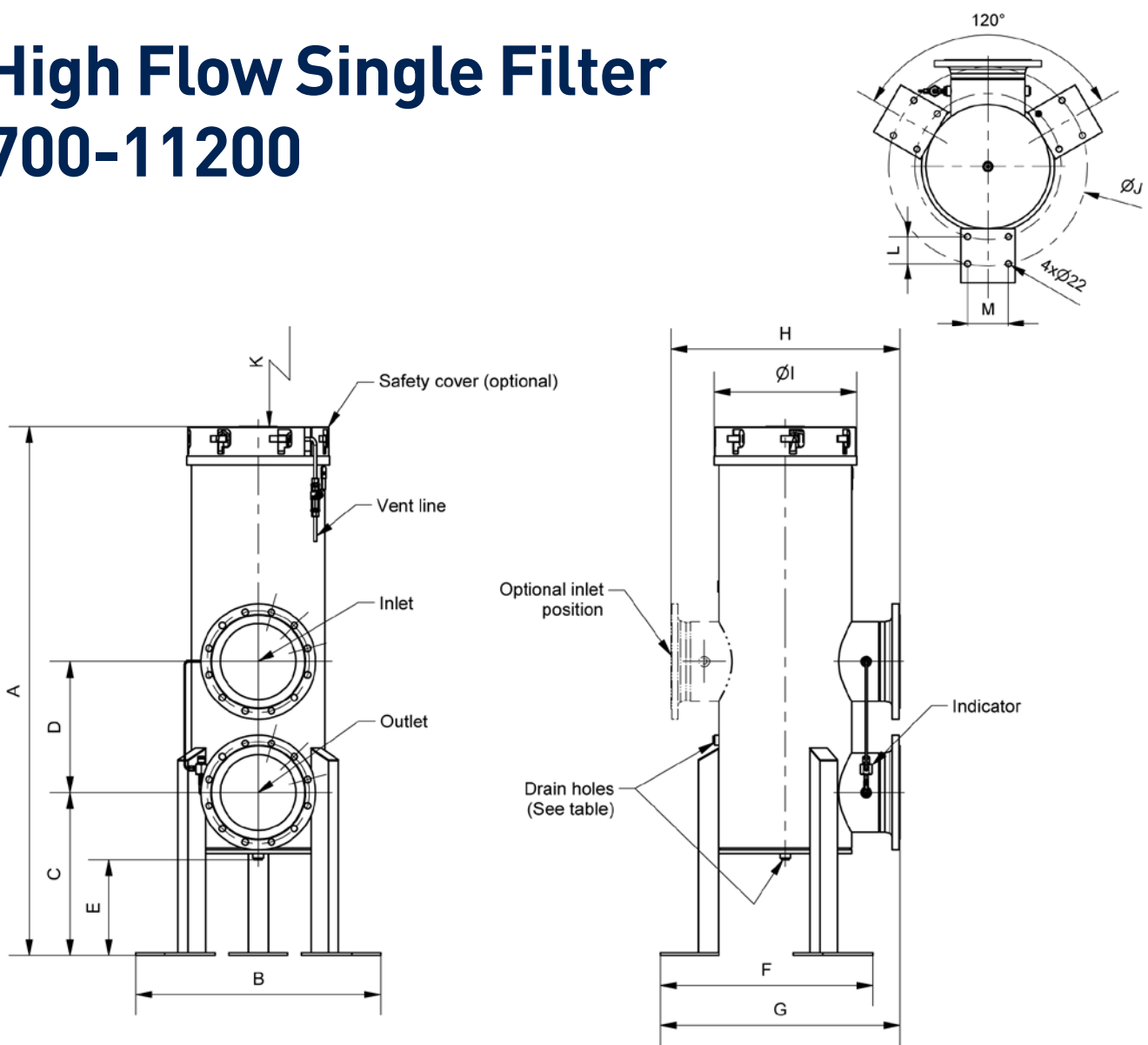


Optional safety cover prevents opening of a pressurized housing. Vent line comes with a ball valve.

In large connection sizes the change-over is made with a hand wheel that operates two butterfly valves. Either valve is always open to ensure flow to the system.



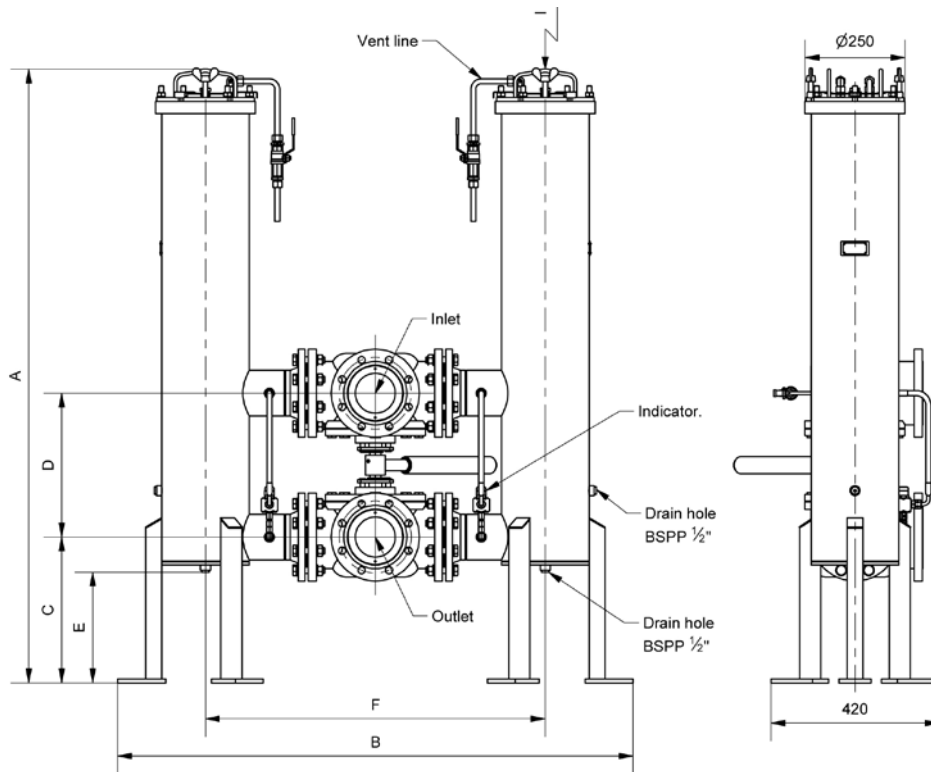
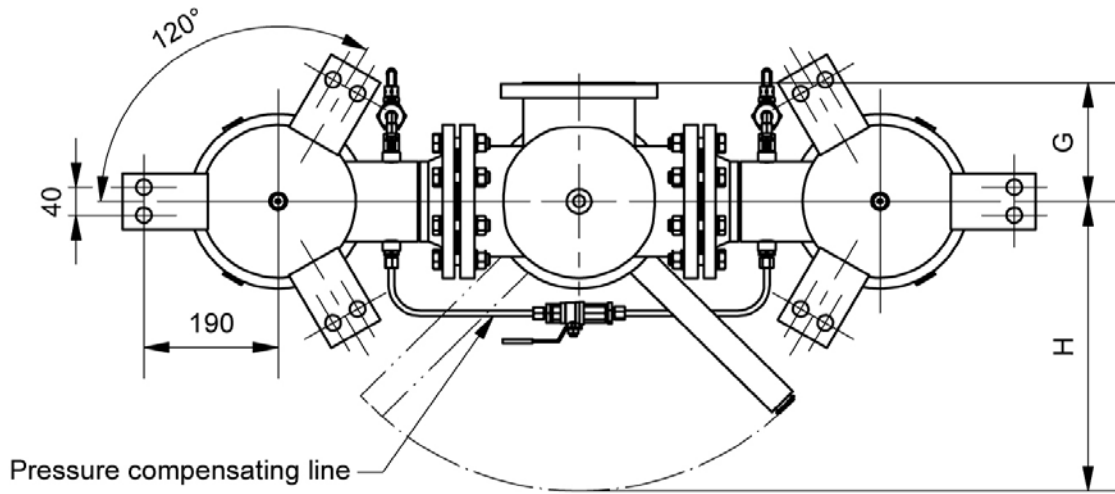
# High Flow Single Filter 700-11200



Max.Flow L/min (30cSt)	Elements		Flange size	A	B	C	D	E	F	G	H	ØI	ØJ	K	L	M
	Qty	Size														
700	1	2	DN50	985	420	320	260	232	364	455	470	250	381	500	-	40
			DN65	985	420	320	300	232	364	455	470	250	381	500	-	40
			DN80	985	420	320	320	232	364	470	500	250	381	500	-	40
1400	1	3	DN80	1534	420	355	320	282	364	470	500	250	381	950	-	40
			DN100	1534	420	365	360	282	364	472	504	250	381	950	-	40
			DN125	1534	420	385	300	282	364	475	510	250	381	950	-	40
4200	3	3	DN125	1668	798	385	300	270	691	758	710	438	683	950	100	150
			DN150	1748	798	525	365	350	691	758	710	438	683	950	100	150
			DN200	1748	798	525	365	350	691	765	724	438	683	950	100	150
5600	4	3	DN150	1817	842	515	365	341	729	809	760	490	733	950	100	150
			DN200	1817	842	525	365	341	729	816	774	490	733	950	100	150
			DN250	1818	842	560	450	329	729	822	786	490	733	950	100	150
11200	8	3	DN250	1981	1018	655	450	402	882	1088	1116	700	932	950	100	150
			DN300	1996	1018	670	515	417	882	1088	1116	700	932	950	100	150
			DN350	1966	1018	640	550	387	882	1088	1116	700	932	950	100	150

# High Flow Duplex Filter 700-1400

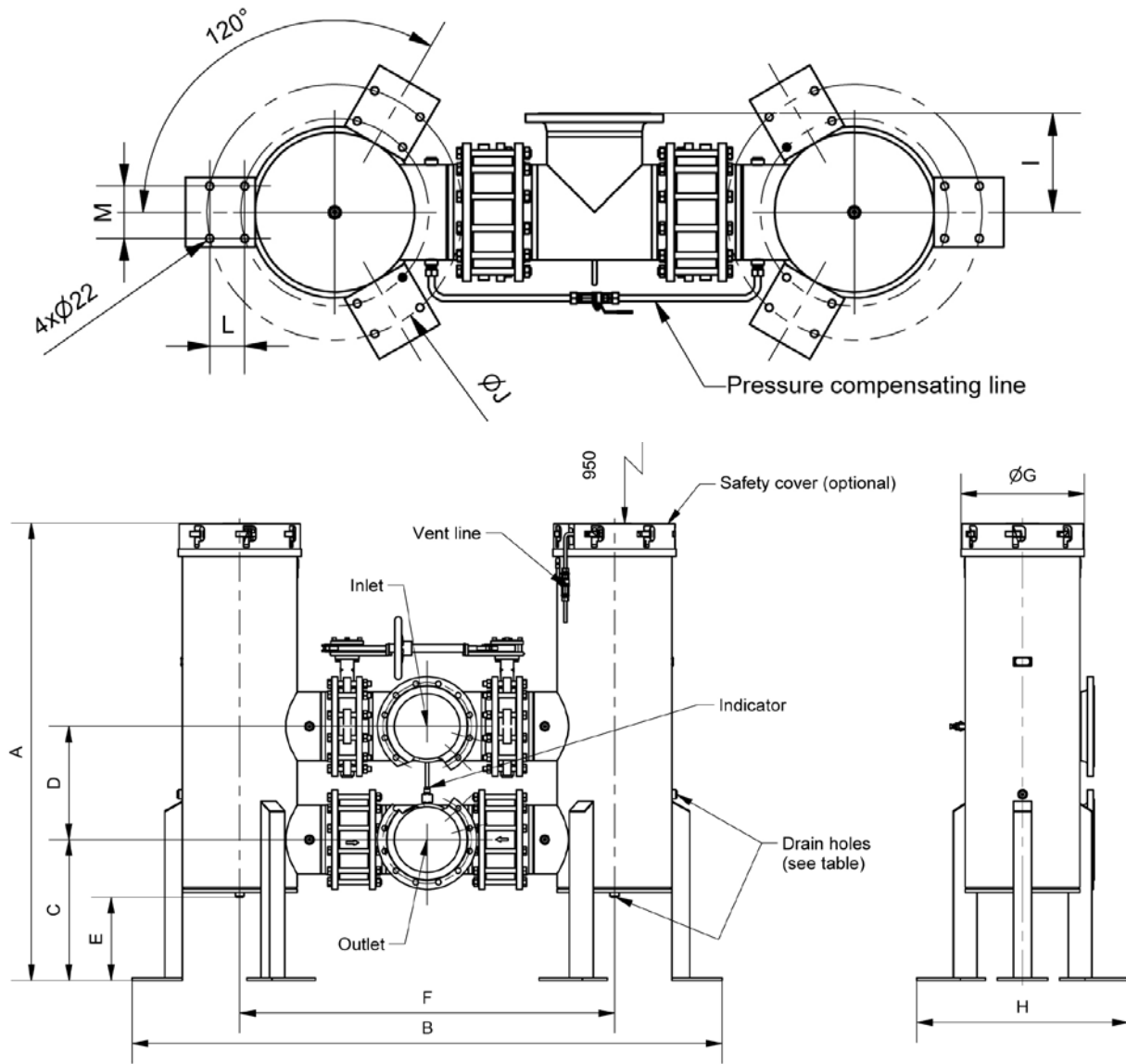
With ballvalves



Max.Flow L/min (30cSt)	Elements		Flange size	A	B	C	D	E	F	G	H	I
	Qty	Size										
700	1	2	DN50	985	1135	260	220	232	696	110	315	500
			DN65	985	1165	300	222	232	726	125	415	500
			DN80	985	1205	355	400	232	766	130	415	500
1400	1	3	DN80	1534	1205	355	320	282	766	130	415	950
			DN100	1534	1289	365	360	282	850	170	611	950

# High Flow Duplex Filter 1400-11200

With butterfly valves



Max.Flow L/ min (30cSt)	Elements		Flange size	A	B	C	D	E	F	ØG	H	I	ØJ	L	M
	Qty	Size													
1400	1	3	DN125	1534	1461	385	300	282	1022	250	420	190	381	-	40
4200	3	3	DN125	1668	2028	385	300	270	1222	438	798	190	683	100	150
			DN150	1748	2130	525	365	350	1354	438	798	271	683	100	150
			DN200	1748	2226	525	365	350	1354	438	798	278	683	100	150
5600	4	3	DN150	1817	2231	525	365	341	1439	490	842	271	733	100	150
			DN200	1817	2327	525	365	341	1507	490	842	278	733	100	150
			DN250	1818	2347	560	450	329	1491	490	842	284	733	100	150
11200	8	3	DN250	1981	2880	655	450	402	1986	700	1018	284	932	100	150
			DN300	1996	3000	670	515	417	1986	700	1018	315	932	100	150
			DN350	1966	3078	640	550	387	1986	700	1018	348	932	100	150



# HFS and HFD Series

## Pressure Drop Curves

$$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}$$

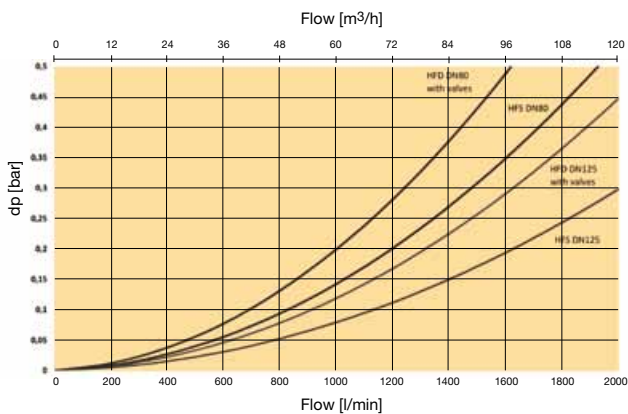
The recommended level of the initial pressure drop for the filter is maximum 0.8 bar.

$\Delta p$ -curves are measured at 30 cSt.

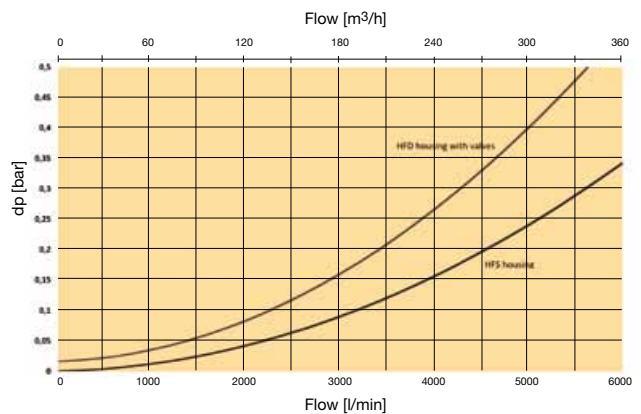
If the medium used has a viscosity different from 30 cSt, pressure drop over the filter can be estimated as follows:

$$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}} \times \frac{\text{working viscosity}}{30 \text{ cSt}}$$

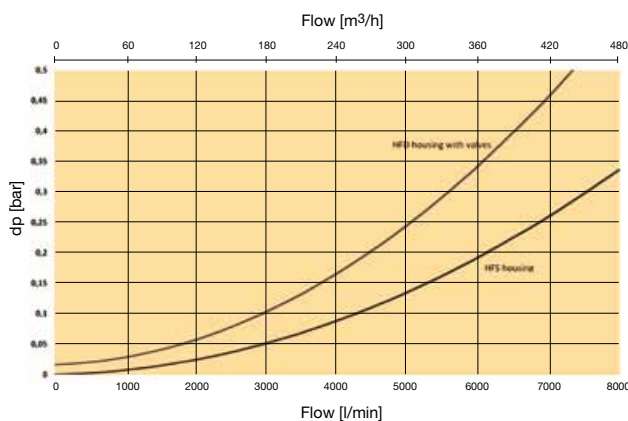
**HFS/HFD12 DN80 and HFS/HFD13 DN125 (1 element) Housing dp-curves**



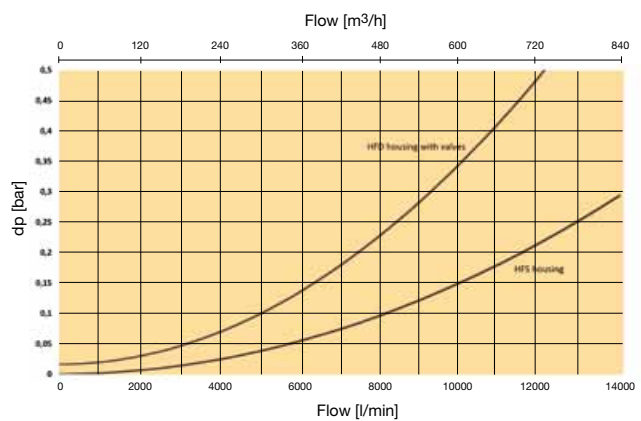
**HFS/HFD33 DN200 (3 elements) Housing dp-curves**



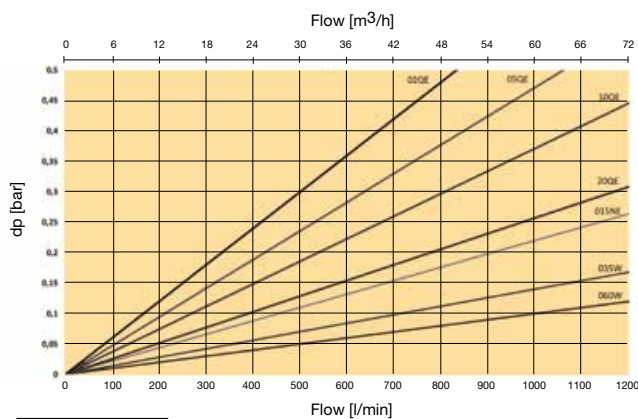
**HFS/HFD43 DN250 (4 elements) Housing dp-curves**



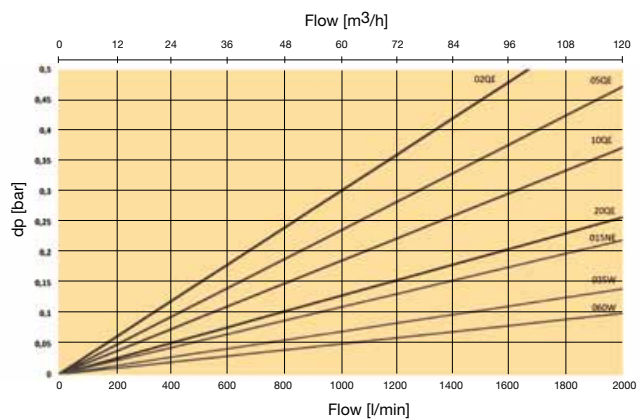
**HFS/HFD83 DN350 (8 elements) Housing dp-curves**



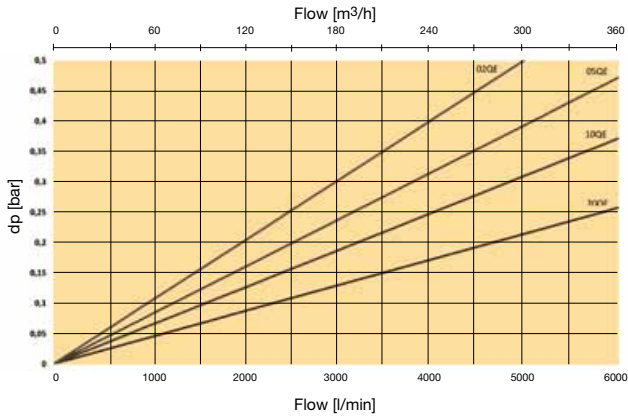
**Single element: Length 2 Element dp-curves**



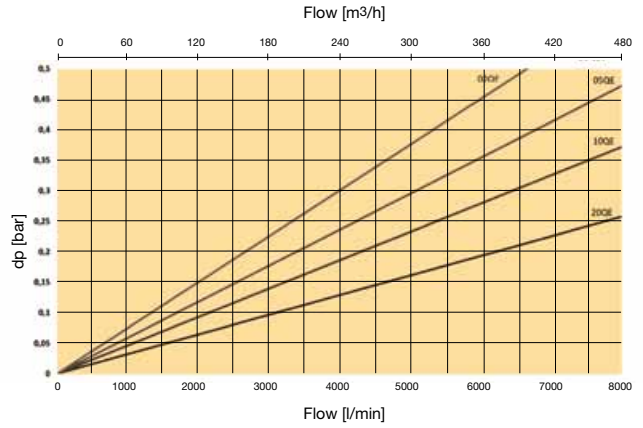
**Single element: Length 3 Element dp-curves**



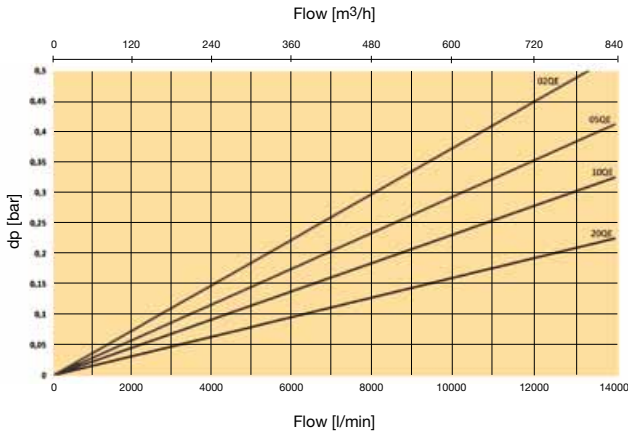
**HFS/HFD33 (3 elements)  
QE element dp-curves**



**HFS/HFD43 (4 elements)  
QE element dp-curves**



**HFS/HFD83 (8 elements)  
QE element dp-curves**



Single Filters	Mass (kg)	Duplex Filters	Mass (kg)
11200		11200	
DN350	527	DN350	1701
DN300	518	DN300	1508
DN250	507	DN250	1329
5600		5600	
DN250	270	DN250	858
DN200	264	DN200	784
DN150	257	DN150	681
4200		4200	
DN200	217	DN200	691
DN150	208	DN150	589
DN125	205	DN125	526
1400		1400	
DN125	74	DN125	260
DN100	69	DN100	287
DN80	68	DN80	236
700		700	
DN80	53	DN80	206
DN65	51	DN65	165
DN50	50	DN50	111

Butterfly valves

Ball valves

**REPLACEMENT ELEMENTS WITH NITRILE SEALS**

Media	Length 2	Length 3
02QE	939240Q	939244Q
05QE	939241Q	939245Q
10QE	939242Q	939246Q
20QE	939243Q	939247Q
<b>Metal mesh</b>		
035W	939248	939250
060W	939249	939251

**WARNING – USER RESPONSIBILITY**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCT DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

- This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalogue and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable of the components or systems.



# HFS and HFD Series

## Ordering information

Table 1    Table 2    Table 3    Table 4    Table 5    Table 6    Table 7    Table 8    Table 9    Table 10

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**Table 1: SERIES**

Model	CODE
Single	HFS
Duplex	HFD

**Table 2: HOUSING SIZE**

Elements	CODE
1 element	1
3 elements	3
4 elements	4
8 elements	8

1 element vessel available with length 2 and 3  
Other vessels available with length 3 only

**Table 3: LENGTH**

Element length	CODE
Length 2	2
Length 3	3

**Table 4: MICRON RATING**

Elements	CODE
Ecoglass III	
Glassfibre 2 µm	02QE
Glassfibre 5 µm	05QE
Glassfibre 10 µm	10QE
Glassfibre 20 µm	20QE
Cellulose 15 µm (nom)	015N
Metal mesh 35 µm	035W
Metal mesh 60 µm	060W

**Table 5: SEALS**

Seal material	CODE
Nitrile	B

**Table 6: INDICATOR**

Indicator	CODE
No indicator	N
Plugged indicator block	P
Visual indicator	M3
Electrical indicator	T1
Electronic indicator PNP/N.O.	F1
Electronic indicator NPN/N.O.	F2
Electronic indicator PNP/N.C.	F3
Electronic indicator NPN/N.C.	F4

**Table 7: BYPASS & INDICATOR SETTING**

Bypass / indicator setting	CODE
3,5 bar / 2,5 bar	K

**Table 8: CONNECTIONS**

Port size	Available housing size	CODE
DN50	1 element (Length 2)	D50
DN65	1 element (Length 2)	D65
DN80	1 element (Length 2 and 3)	D80
DN100	1 element (Length 3)	D100
DN125	1 element (Length 3) and 3 elements	D125
DN150	3 and 4 elements	D150
DN200	3 and 4 elements	D200
DN250	4 and 8 elements	D250
DN300	8 elements	D300
DN350	8 elements	D350

All flanges PN10

**Table 9: DIRECTION OF CONNECTIONS**

For HFS	CODE
On same side	C
Opposite sides	T

For HFD	CODE
2 x Ball valves	A
Butterfly + check valves	U

**Table 10: OPTIONS**

Options	CODE
Standard with bypass	1
No bypass	2

Other options	CODE
Safety cover	C