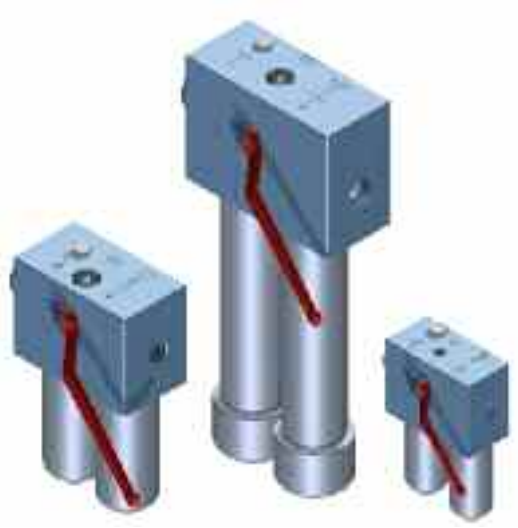
FHD

Maximum pressure 350 bar
Flow rates to 345 l/min



Technical data

Filter housing (Materials)
- Head: Cast iron (chemical heat treatment)
- Housing: Steel (chemical heat treatment)
- Bypass valve: Steel

Pressure
- Working pressure: 350 bar (35 MPa)
- Test pressure: 525 bar (52,5 MPa)
- Burst pressure: 1050 bar (105 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 350 bar (35 MPa)

Temperature
- From -25 °C to +110 °C

Bypass valve
- Opening pressure 6 bar ±10%
- Other opening pressures on request.

Δp Elements type
- Microfibre filter elements — series R: 20 bar
- Microfibre filter elements — series H: 210 bar (only for FHD 021)
- Microfibre filter elements — series S: 210 bar (excluded FHD 021)
- Wire mesh filter elements — series N: 20 bar
- Fluid flow through the filter element from OUT to IN

Seals
- Standard NBR — series A
- Optional FPM — series V

FHD FILTERS ARE PROVIDED FOR VERTICAL MOUNTING

Weights (kg)

Length	1	2	3	4	5
• FHD021	-	6,66	7,15	8,15	-
• FHD051	13,41	13,78	14,19	14,66	-
• FHD326	36,35	39,48	10,77	-	-
• FHD333	-	64,48	66,77	69,25	-

Volumes (dm^3)

Length	1	2	3	4	5
• FHD021	-	0,06	0,12	0,22	-
• FHD051	0,22	0,31	0,41	0,53	-
• FHD326	0,88	1,60	2,37	-	-
• FHD333	-	1,75	2,52	3,35	-

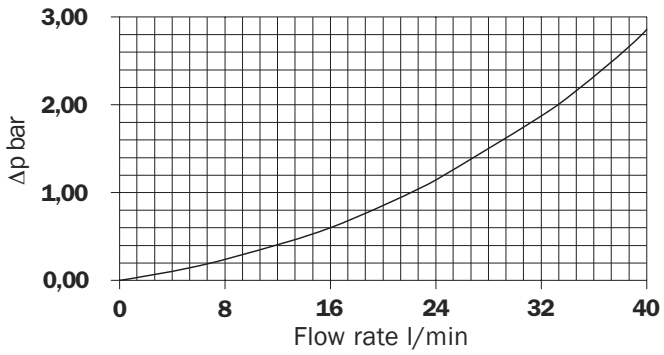
Connections
- FHD: In-line Inlet/Outlet 90°

Filter housings Δp pressure drop

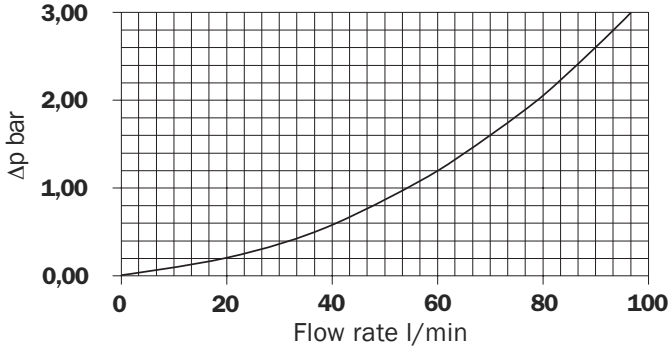
The curves are plotted utilising mineral oil with density of 0,86 kg/dm^3 to ISO 3968.

Δp varies proportionally with density.

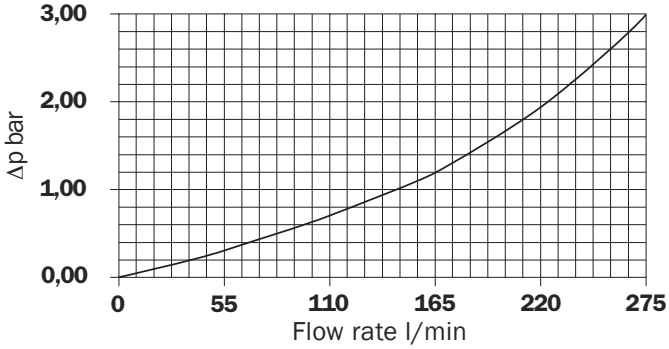
FHD 021

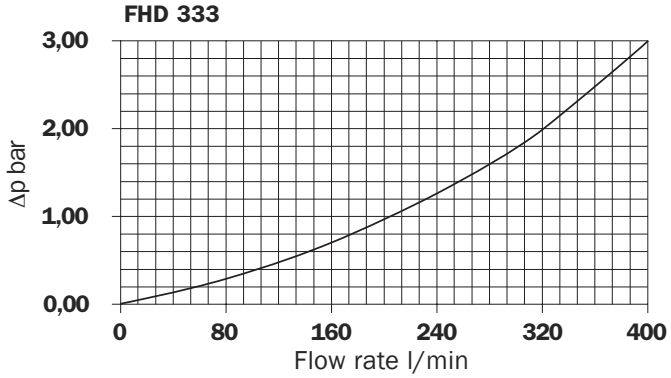


FHD 051



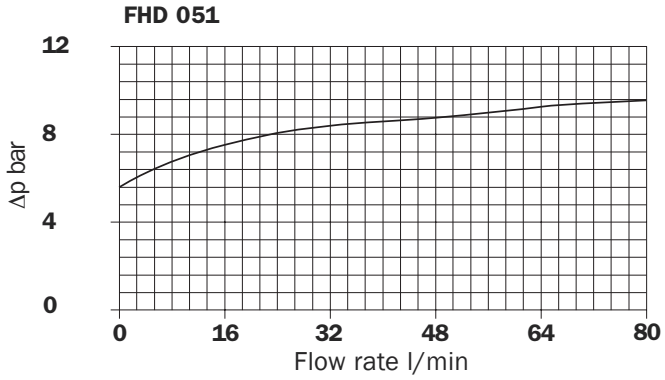
FHD 326

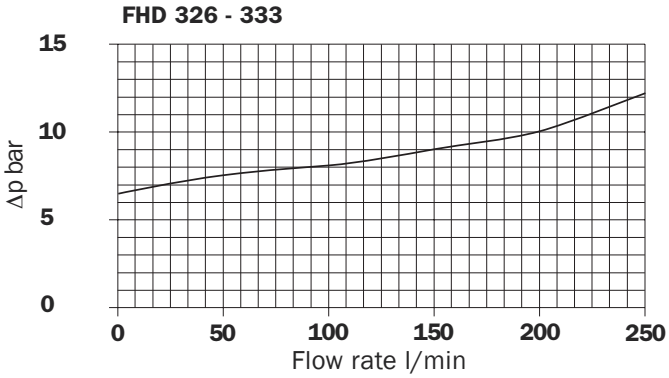




Valves

Bypass valve pressure drop





Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 2,5 bar.
- Oil kinematic viscosity 30 mm^2/s (cSt).
- Density 0,86 kg/dm^3.

Filtration

	Length	A03	A06	A10	A16	A25	M25
FHD 021	2	7,5	10	18	20	25	30
	3	14	17	26	28	31	35
	4	16	19	27	29	32	35

Serie H - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25	M25
FHD 051	2	56	59	70	74	80	84
	3	63	65	74	76	81	85
	4	70	72	78	79	82	86
	5	76	77	81	82	84	87

Serie R - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25
FHD 051	2	52	55	67	71	78
	3	60	61	72	74	80
	4	67	69	76	77	81
	5	73	74	78	80	83

Serie S - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25	M25
FHD 326	1	141	149	188	201	215	234
	2	194	200	224	228	233	236
	3	212	220	233	236	238	239

Serie R - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25
FHD 326	1	128	133	172	175	206
	2	175	185	210	211	225
	3	197	208	223	224	232

Serie S - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25	M25
FHD 333	2	254	265	311	318	332	338
	3	288	302	329	333	336	340
	4	302	311	331	336	342	345

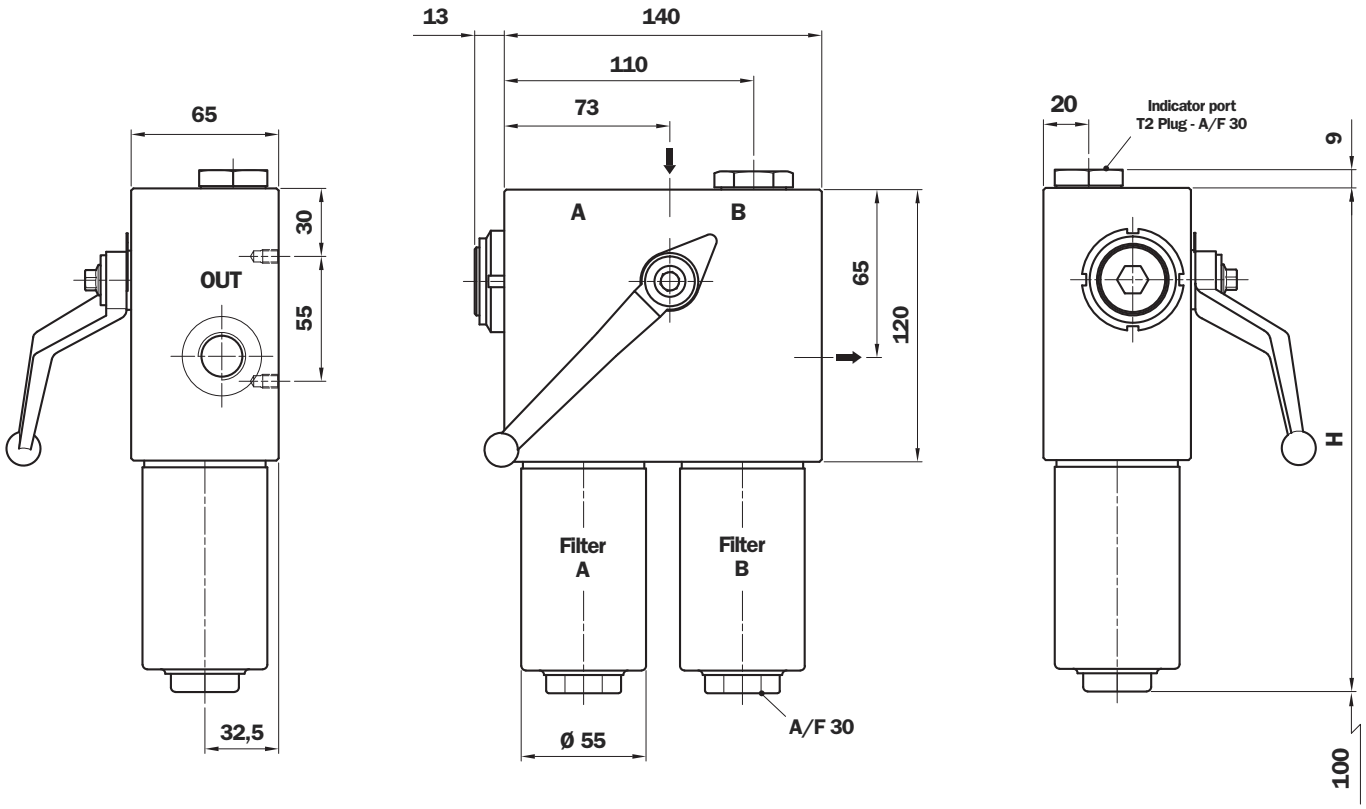
Serie R - Flow rate l/min

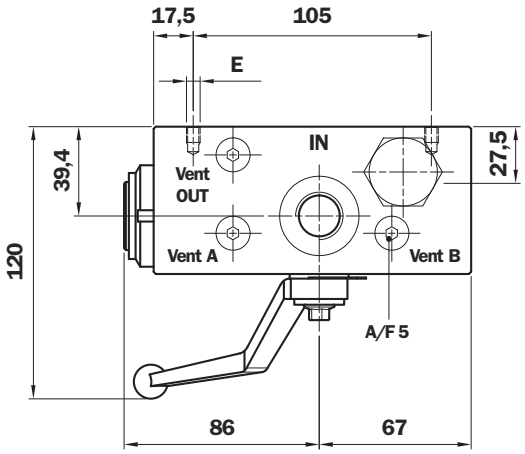
Filtration

	Length	A03	A06	A10	A16	A25
FHD 333	2	220	238	282	285	312
	3	260	280	307	311	325
	4	279	289	310	312	327

Serie S - Flow rate l/min

FHD 021





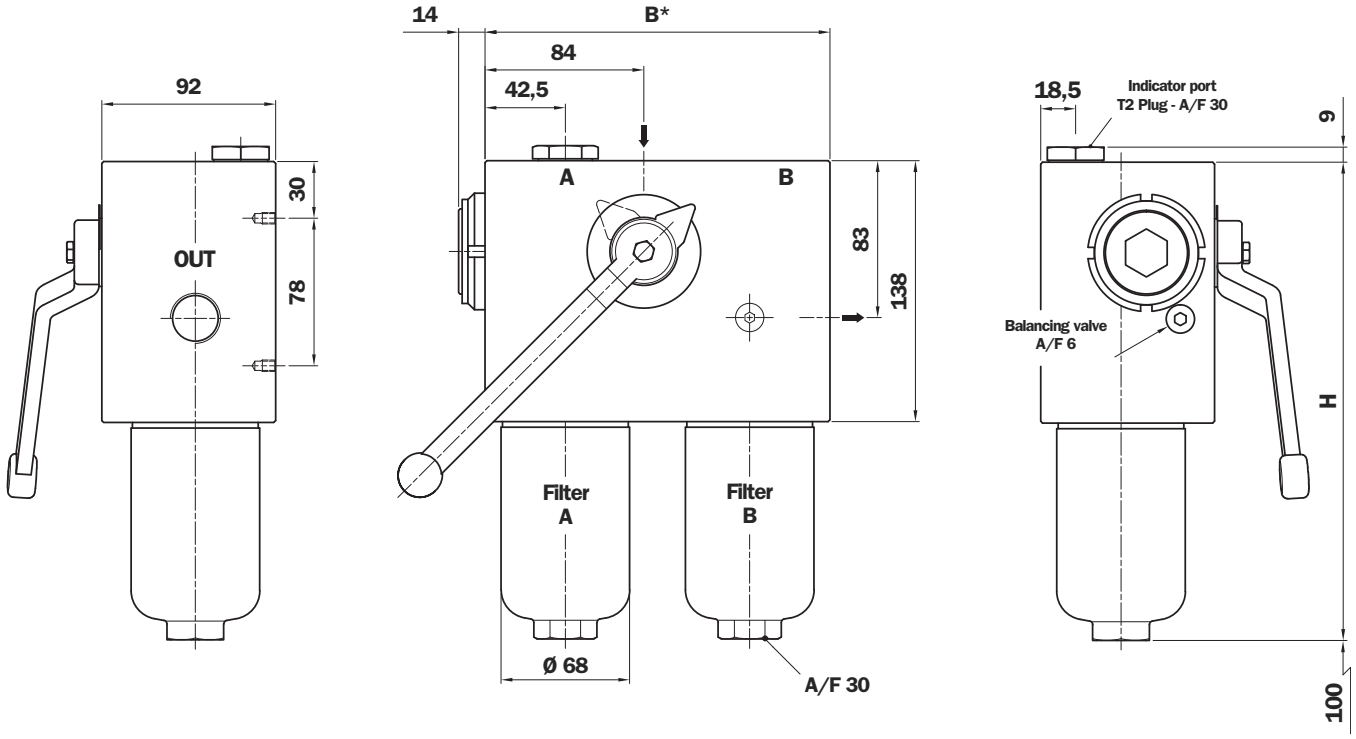
FHD 021

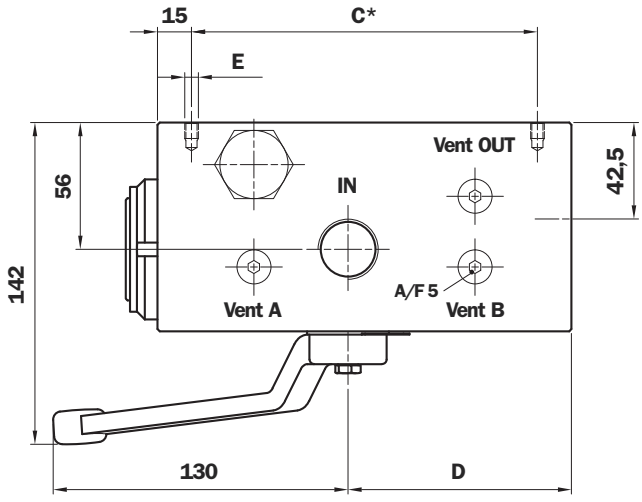
Filter Length	H mm
2	172
3	222
4	272

Thread connections

Type	Size	E Depth 7 mm
G1	G 1/2"	M6
G2	1/2" NPT	1/4" UNC
G3	SAE 8 - 3/4" - 16 UNF	1/4" UNC

FHD 051





FHD 051

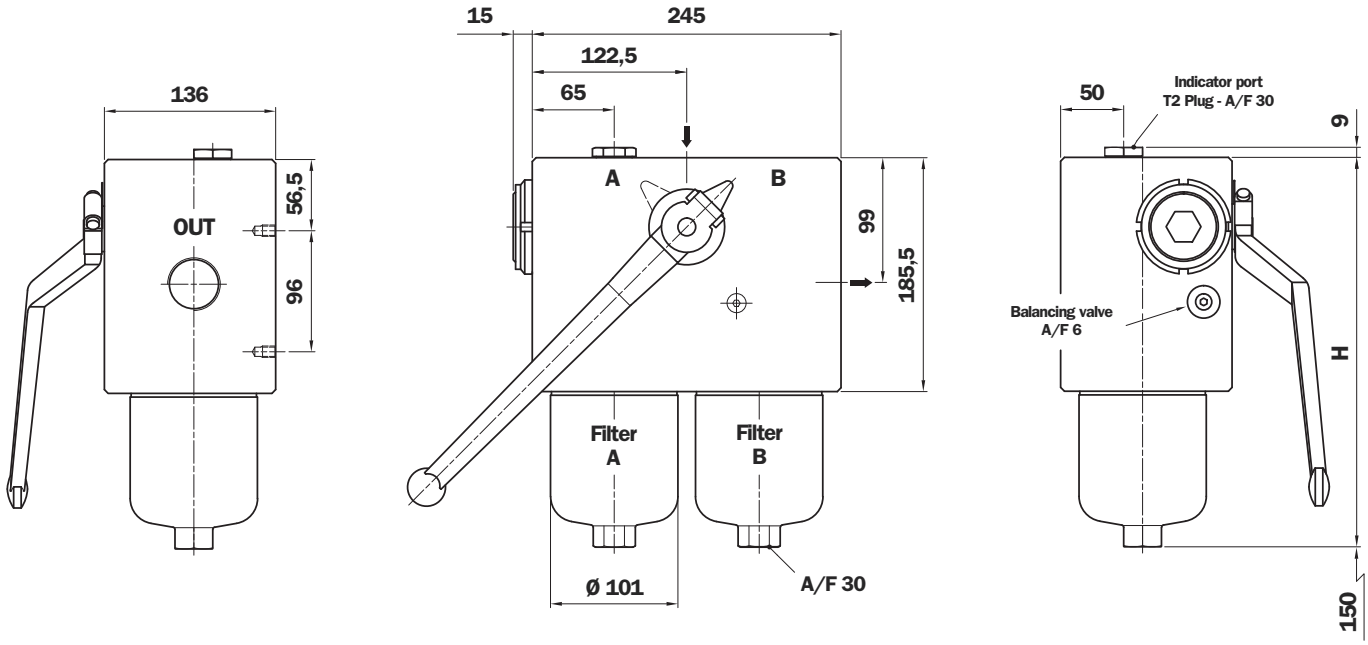
Filter Length	H mm
2	253
3	295
4	343
5	465

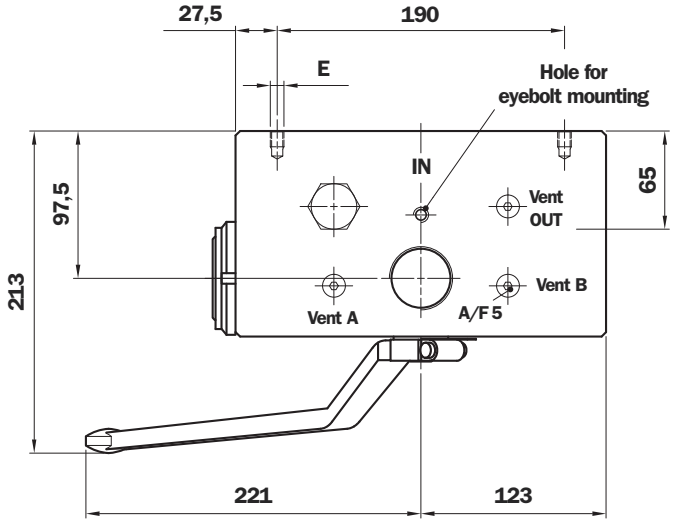
	B	C	D
With bypass	182,5	152,5	98,5
Without bypass	168	138	84

Thread connections

Type	Size	E Depth 7 mm
G1	G 3/4"	M6
G2	3/4" NPT	1/4" UNC
G3	G 1/2"	M6
G4	1/2" NPT	1/4" UNC
G5	SAE 8 - 3/4" - 16 UNF	1/4" UNC
G6	SAE 12 - 1 1/16" - 12 UN	1/4" UNC

FHD 326





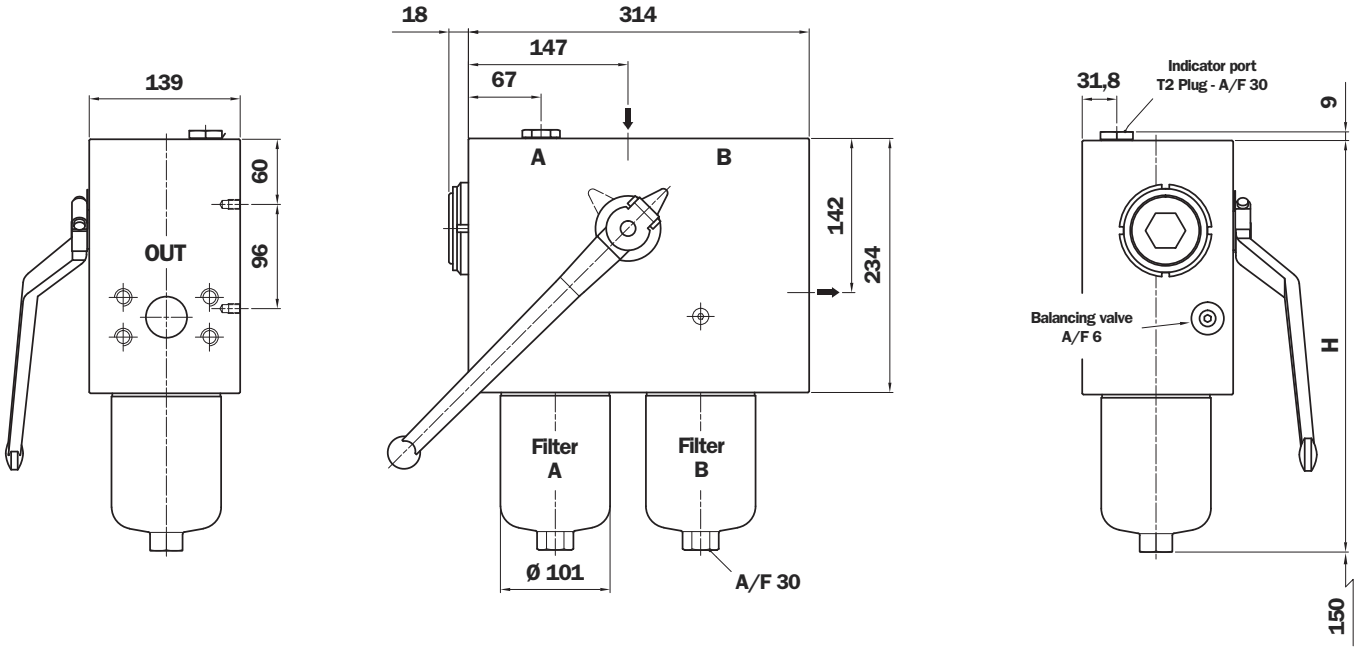
FHD 326

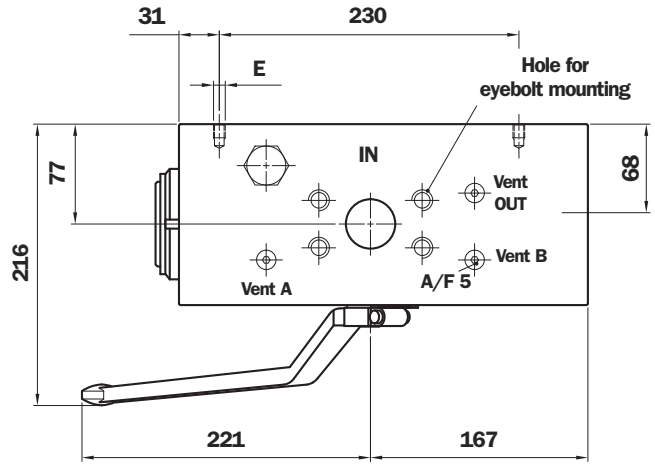
Filter Length	H mm
1	309
2	432
3	564

Thread connections

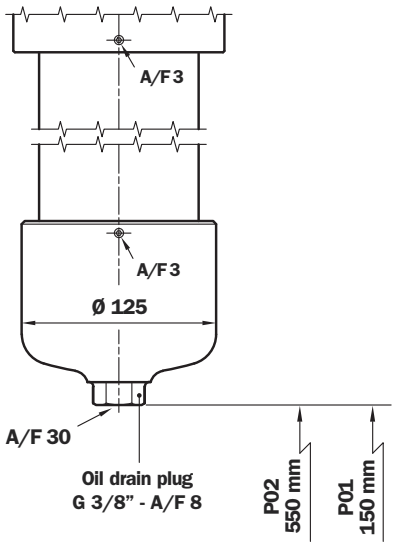
Type	Size	E Depth 11 mm
G1	G 1 1/4"	M10
G2	1 1/4" NPT	3/8" UNC
G3	SAE 20 - 1 5/8" - 12 UN	3/8" UNC

FHD 333





FHD 333 length 4



Style P01
Standard maintenance from head.

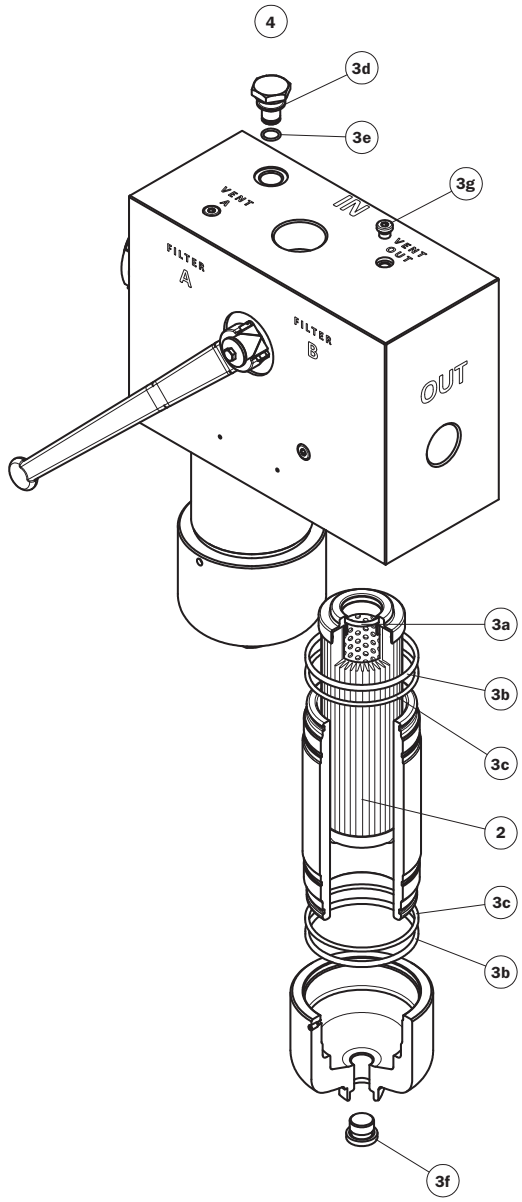
Style P02
Maintenance option from housing base.

FHD 333

Filter Length	H mm
2	479
3	612
4	765

Flanged connections

Type	Size	E Depth 11 mm
F1	1 1/2" 6000 psi/M	M10
F2	1 1/2" 6000 psi/UNC	3/8" UNC



Item	Description	Q.ty	FILTER Series FHD 021		FHD 051		FHD 326 - 333	
1	Filter assembly	1	See order table					
2	Filter element	1	See order table					
3	Seal Kit	1	NBR 02050511	FPM 02050512	NBR 02050420	FPM 02050421	NBR 02050377	FPM 02050378
3a	Filter element seal	2	O-R 121 Ø 15,88 x 2,62		O-R 3093 Ø 23,67 x 2,62		O-R 144 Ø 39,69 x 2,62	
3b	Bowl seal	2	O-R 3168 Ø 42,52 x 2,62		O-R 3225 Ø 56,82 x 2,62		4 pcs	O-R 3350 Ø 88,57 x 2,62
3c	Bowl anti-extrusion ring	2	Parbak 131 Ø 43,33 x 2,18		Parbak 139 Ø 56,03 x 2,18		4 pcs	Parbak 153 Ø 89,36 x 2,18
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring indicator	1	O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78	
3f	Drain plug	2	G 1/8" with seal		G 1/4" with seal		G 3/8" with seal	
3g	Air vent	3	01029124 (HNBR)	01029094 (FPM)	01029124 (HNBR)	01029094 (FPM)	01029124 (HNBR)	01029094 (FPM)
4	Indicator connection plug	1	T2H	T2V	T2H	T2V	T2H	T2V

Ordering information FHD 021 - 051

Filter assembly **FHD**	1	2	3	4	5	6	7	8a
	☐	☐	☐	☐	☐	☐	☐	☐
Example: FHD	**051**	**4**	**S**	**A**	**G1**	**A10**	**S**	**P01**

Filter element **HP**	1	2	6	4	7	8b
	☐	☐	☐	☐	☐	☐
Example: HP	**050**	**4**	**A10**	**A**	**S**	**P01**

1 - Style

Filter	Filter element
021	**011**
051	**050**

2 - Filter length

021	**2**	**3**	**4**	
051	**2**	**3**	**4**	**5**

3 - Valves

S	Without bypass
B	With bypass (only for FHD 051)

4 - Filter seals

A	NBR
V	FPM

5 - Connections

Threaded

FHD 021

Type	Size
G1	G 1/2"
G2	1/2" NPT
G3	SAE 8 - 3/4" - 16 UNF

FHD 051

Type	Size
G1	G 3/4"
G2	3/4" NPT
G3	G 1/2"
G4	1/2" NPT
G5	SAE 8 - 3/4" - 16 UNF
G6	SAE 12 - 1 1/16" - 12 UN

6 - Filter element

A03	Inorganic microfibre 3 μm	Absolute filtration Inorganic Microfibre ßx (c) ≥ 1000
A06	Inorganic microfibre 6 μm	
A10	Inorganic microfibre 10 μm	
A16	Inorganic microfibre 16 μm	
A25	Inorganic microfibre 25 μm	
M25	Wire mesh 25 μm	Nominal Filtration

7 - Max filter element differential pressure

N	Δp 20 bar (only for element M25)
R	Δp 20 bar (excluded FHD 021)
H	Δp 210 bar (only for FHD 021)
S	Δp 210 bar (excluded FHD 021)

8 - Option

a - Filter

P01	MP Filtri standard
P02	MP with replacemente of the filter element from the cap (only for length 4)
Pxx	Customer request

b - Filter element

P01	MP Filtri standard
Pxx	Customer request

For Clogging Indicator:
See page 324

Ordering information FHD 326 - 333

Filter assembly **FHD**	1	2	3	4	5	6	7	8a
Example: FHD	**333**	**4**	**S**	**A**	**G1**	**A10**	**S**	**P01**

Filter element **HP**	1	2	6	4	7	8b
Example: HP	**320**	**4**	**A10**	**A**	**S**	**P01**

1 - Style

Filter	Filter element
326	**320**
333	**320**

2 - Filter length

326	**1**	**2**	**3**	
333		**2**	**3**	**4**

3 - Valves

S	Without bypass
B	With bypass

4 - Filter seals

A	NBR
V	FPM

5 - Connections

Threaded

FHD 326

Type	Size
G1	G 1 1/4"
G2	1 1/4" NPT
G3	SAE 20 - 1 5/8" - 12 UN

Flanged

FHD 333

Type	Size
F1	1 1/2" 6000 psi/M
F2	1 1/2" 6000 psi/UNC

6 - Filter element

A03	Inorganic microfibre 3 µm	Absolute filtration Inorganic Microfibre ßx (c) ≥ 1000
A06	Inorganic microfibre 6 µm	
A10	Inorganic microfibre 10 µm	
A16	Inorganic microfibre 16 µm	
A25	Inorganic microfibre 25 µm	
M25	Wire mesh 25 µm	Nominal Filtration

7 - Max filter element differential pressure

N	Δp 20 bar (only for element M25)
R	Δp 20 bar
S	Δp 210 bar

8 - Option

a - Filter

P01	MP Filtri standard
P02	MP with replacemente of the filter element from the cap (only for length 4)
Pxx	Customer request

b - Filter element

P01	MP Filtri standard
Pxx	Customer request

For Clogging Indicator:
See page 324