



MP Filter
FHB Series



 HYDRAULIC
COMPONENTS
& FLUID CONTAMINATION
CONTROL

FHB series

Maximum working pressure up to 32 MPa (320 bar) - Flow rate up to 485 l/min



INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



Please scan or click the QR codes to get updated electronic version of the related document:



FHB050



FHB065



FHB135



FHB320

For all the QR codes: Scan or click me!

Description

Technical data

High Pressure filters

Manifold

Maximum working pressure up to 32 MPa (320 bar)

Flow rate up to 485 l/min

FHB is a range of high pressure filter for protection of sensitive components in high pressure hydraulic systems in the mobile machines. They are directly connected to the side of the manifold, through the proper flanged interface.

Available features:

- Manifold connections up to Ø30 mm, for a maximum flow rate of 485 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Check valve, to protect the system against reverse flow
- Low collapse filter element "N", for use with filters provided with bypass valve
- High collapse filter element "H", for use with filters not provided with bypass valve
- High collapse filter element with external support "S", for filter element protection against the back pressure caused by the check valve in filters not provided with the bypass valve
- Visual, electrical and electronic differential clogging indicators

Common applications:

Delivery lines, in any high pressure industrial equipment or mobile machines

Filter housing materials

- Head: Phosphatized cast iron
- Housing: Phosphatized steel
- Bypass valve: Steel
- Check valve: Steel

Pressure

- Test pressure: 48 MPa (480 bar)
- Min. Burst pressure: 96 MPa (960 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 32 MPa (320 bar)

Bypass valve

- Opening pressure 0.6 MPa (6 bar) ±10%
- Other opening pressures on request.

Filter element features

Filter FHB		Filter element HP	
Δp Element type			
Element media	Construction	Δp Series	Δp
A - Microfiber	Standard	N	20 bar
	High Δp	H	210 bar
	High Δp with external support	S	210 bar
M - Wire mesh	Standard	N	20 bar

Please see ordering code tables to check element Δp series availability based on filter features.

Flow direction through the filter element:
From OUT to IN

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

From -25 °C to +110 °C

Connections

Manifold mounting

Note

FHB filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm ³]						
	Length	1	2	3	4	5	Length	1	2	3	4	5
FHB 050		2.61	2.98	3.39	3.86	5.04		0.21	0.30	0.40	0.52	0.81
FHB 065		3.33	3.69	4.90	-	-		0.20	0.27	0.49	-	-
FHB 135		6.61	8.21	9.21	-	-		0.40	0.73	0.94	-	-
FHB 320		12.95	15.08	17.37	26.77	-		0.91	1.63	2.40	3.59	-

Flow rates [l/min]

Filter series	Length	Filter element design - N Series						Filter element design - S Series				
		A03	A06	A10	A16	A25	M25	A03	A06	A10	A16	A25
FHB 050	1	43	42	79	81	101	131	30	40	58	60	74
	2	53	58	84	93	112	132	46	50	76	86	108
	3	67	70	94	101	119	133	59	62	87	95	115
	4	82	87	106	108	122	134	74	80	101	103	119
	5	102	104	119	122	127	136	90	92	105	113	126

Filter series	Length	Filter element design - N Series						Filter element design - H Series				
		A03	A06	A10	A16	A25	M25	A03	A06	A10	A16	A25
FHB 065	1	25	33	55	62	87	133	23	25	49	58	81
	2	33	51	70	76	101	134	33	38	66	75	94
	3	60	71	97	103	118	138	60	68	95	102	116
FHB 135	1	67	72	120	129	177	212	49	55	97	100	160
	2	109	116	152	154	224	250	90	110	137	140	182
	3	153	155	201	205	226	253	126	142	175	187	207
FHB 320	1	130	143	238	286	343	442	110	117	192	201	304
	2	259	281	391	409	454	468	200	230	319	325	392
	3	332	368	441	455	463	476	269	312	381	389	432
	4	368	390	446	462	481	488	311	334	388	394	437

Maximum flow rate for a complete pressure filter with a pressure drop $\Delta p = 1.5$ bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

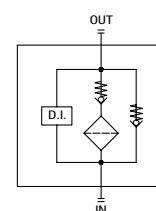
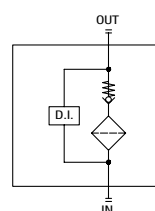
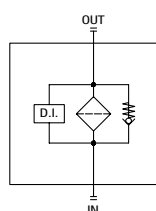
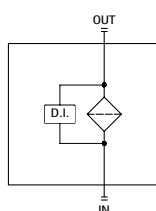
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.

Please, contact our Sales Department for further additional information.

Hydraulic symbols

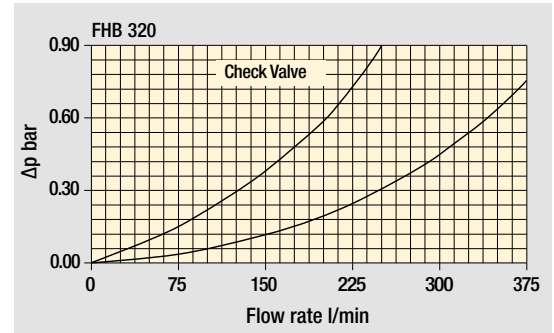
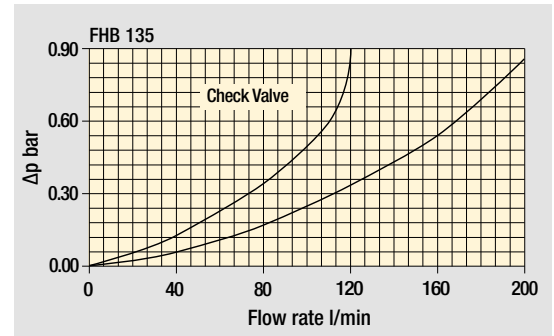
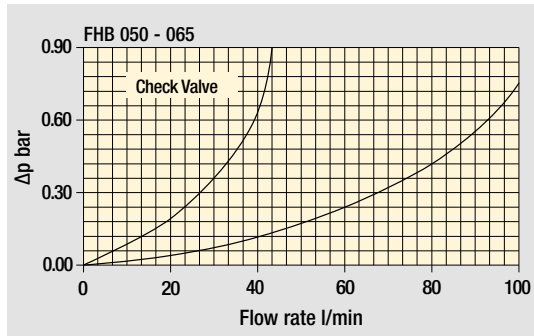
Filter series	Style S	Style B	Style T	Style D
FHB 050	•	•	•	•
FHB 065	•	•	•	•
FHB 135	•	•	•	•
FHB 320	•	•	•	•



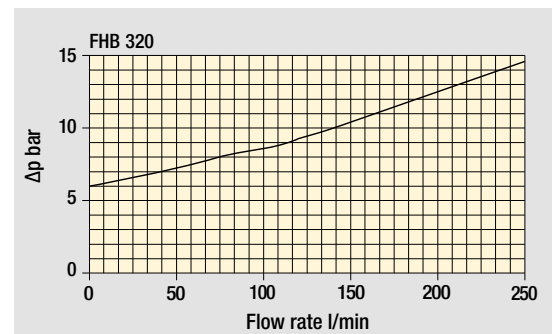
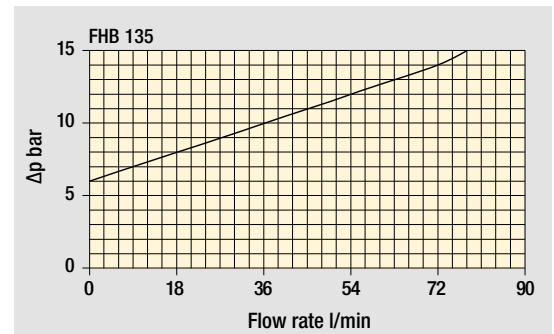
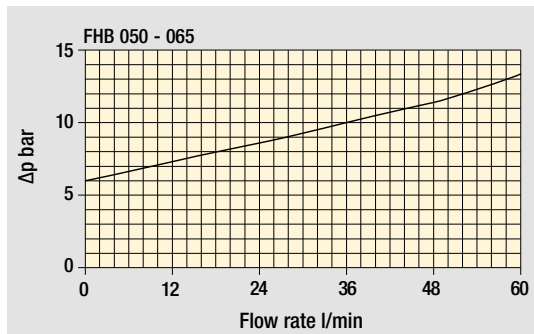
FHB GENERAL INFORMATION

Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968. Δp varies proportionally with density.

FHB FHB050 - FHB065 - FHB135 - FHB320

Designation & Ordering code

COMPLETE FILTER

Series and size					Configuration example: FHB320 4 S A F1 A06 H P01												
FHB050 FHB065 FHB135 FHB320																	
Length	FHB050	FHB065	FHB135	FHB320													
1	•	•	•	•													
2	•	•	•	•													
3	•	•	•	•													
4	•	-	-	•													
5	•	-	-	-													
Valves																	
S Without bypass																	
B With bypass 6 bar																	
T With check valve, without bypass																	
D With check valve, with bypass 6 bar																	
Seals																	
A NBR																	
V FPM																	
Connections																	
F1 Manifold																	
Filtration rating (filter media)																	
A03 Inorganic microfiber 3 µm																	
A06 Inorganic microfiber 6 µm																	
A10 Inorganic microfiber 10 µm																	
A16 Inorganic microfiber 16 µm																	
A25 Inorganic microfiber 25 µm																	
M25 Wire mesh 25 µm																	
					Valves				Execution								
					Element Δp	S	B	T	D	050		065		135		320	
					N 20 bar	-	•	-	•	P01	•	•	•	•	•	•	•
					S 210 bar (only for size 050)	•	-	•	-	P02	-	-	-	-	-	-	•
					H 210 bar (for sizes 065-135-320)	•	-	•	-	Pxx	•	•	•	•	•	•	•

FILTER ELEMENT

Element series and size					Configuration example: HP320 4 A06 A H P01											
HP050 HP065 HP135 HP320																
Element length	HP050	HP065	HP135	HP320												
1	•	•	•	•												
2	•	•	•	•												
3	•	•	•	•												
4	•	-	-	•												
5	•	-	-	-												
Filtration rating (filter media)																
A03 Inorganic microfiber 3 µm																
A06 Inorganic microfiber 6 µm																
A10 Inorganic microfiber 10 µm																
A16 Inorganic microfiber 16 µm																
A25 Inorganic microfiber 25 µm																
M25 Wire mesh 25 µm																
					Seals		Element Δp				Filter size				Execution	
					A	NBR	N	20 bar	050	065	135	320	P01	MP Filtri standard		
					V	FPM	S	210 bar (only for size 050)	•	-	-	-	Pxx	Customized		
							H	210 bar (for sizes 065-135-320)	-	•	•	•				

CLOGGING INDICATORS

See page 721

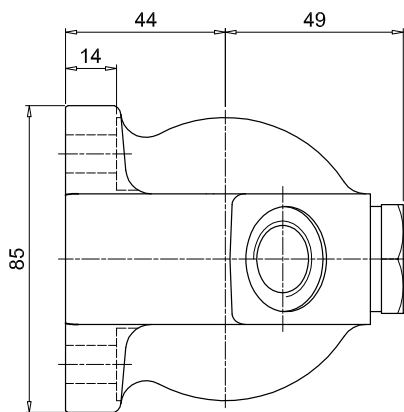
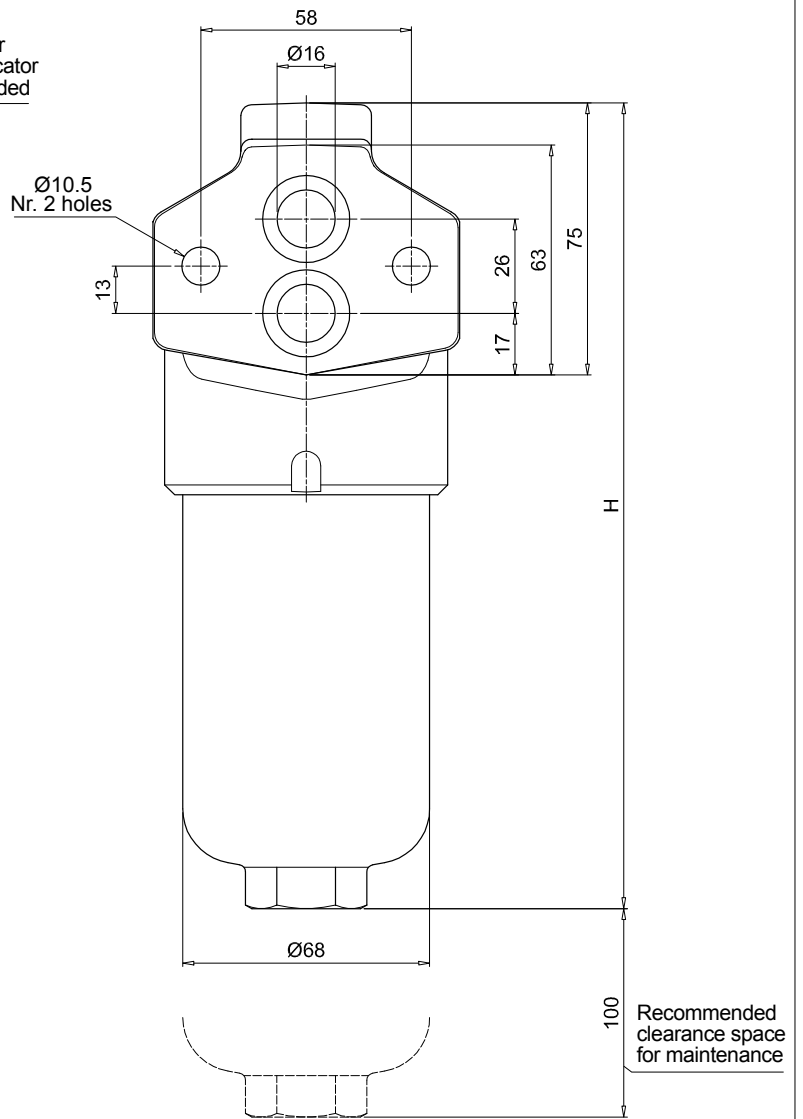
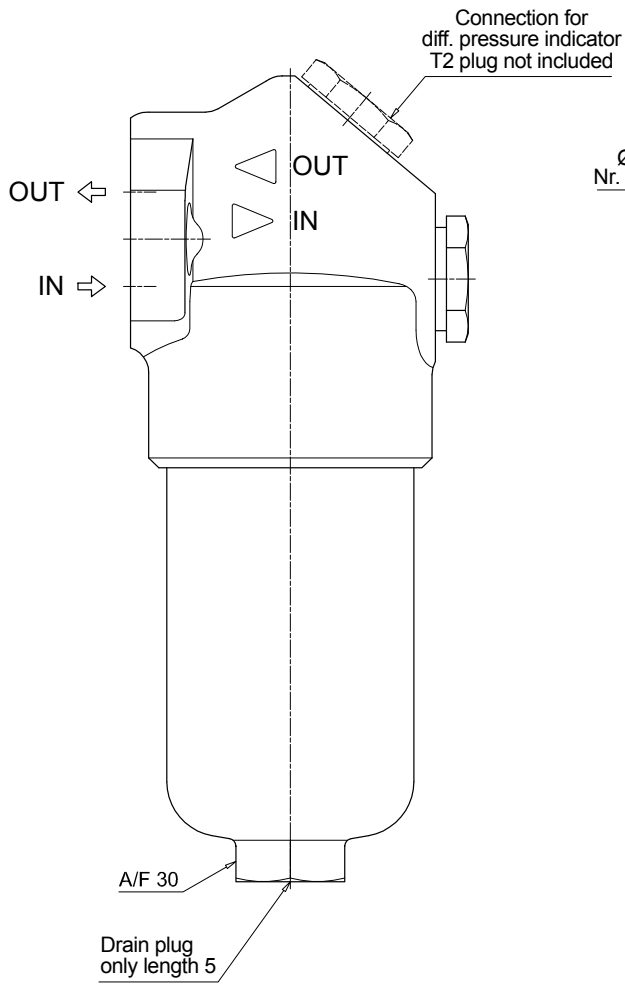
DEA Electrical differential pressure indicator	DLE Electrical / visual differential pressure indicator
DEM Electrical differential pressure indicator	DTA Electronic differential pressure indicator
DEU Electrical differential pressure indicator	DVA Visual differential pressure indicator
DLA Electrical / visual differential pressure indicator	DVM Visual differential pressure indicator

PLUGS

See page 741

T2 Plug (not included)

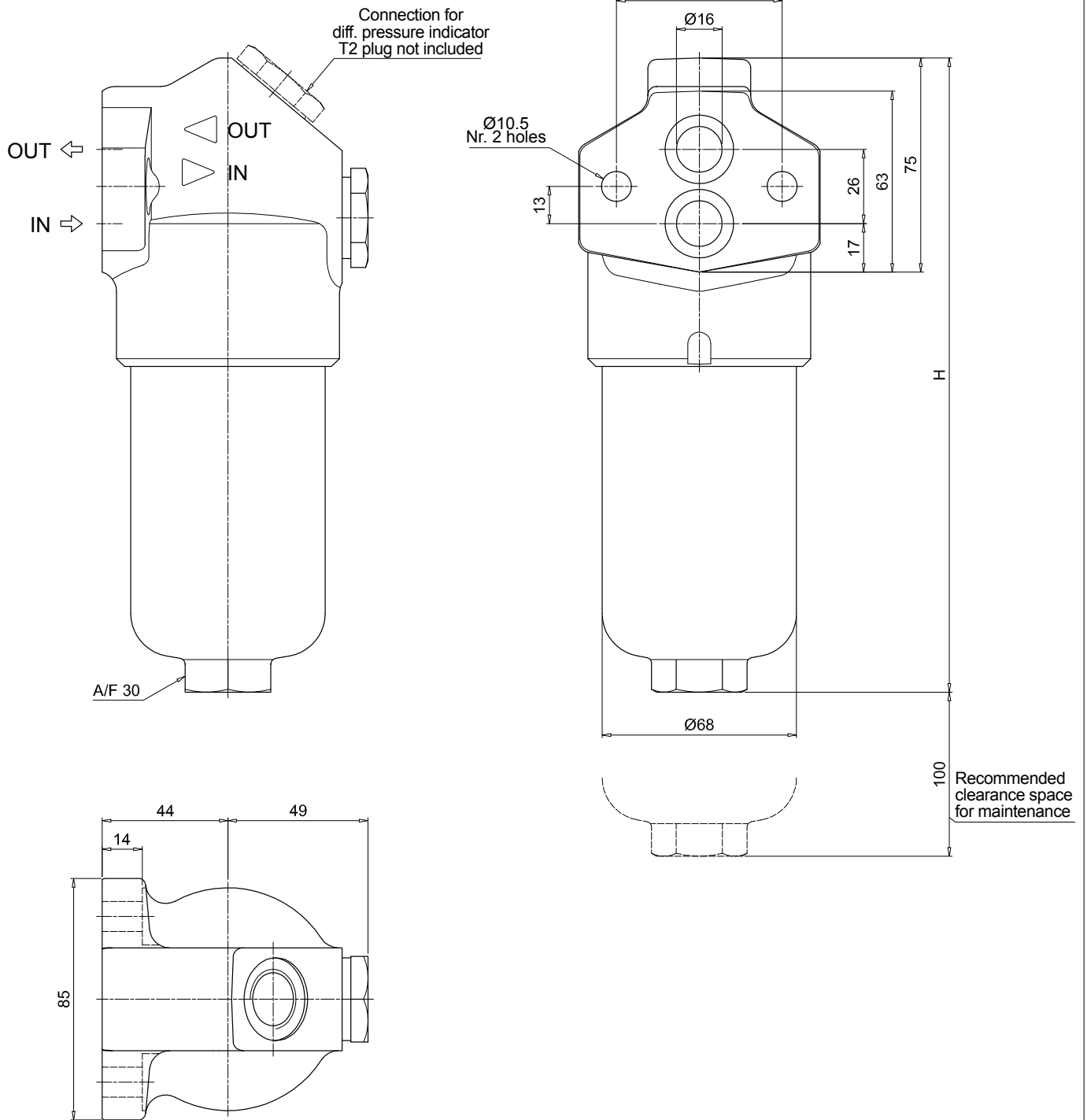
FHB050	
Filter length	H [mm]
1	187
2	224
3	266
4	314
5	436



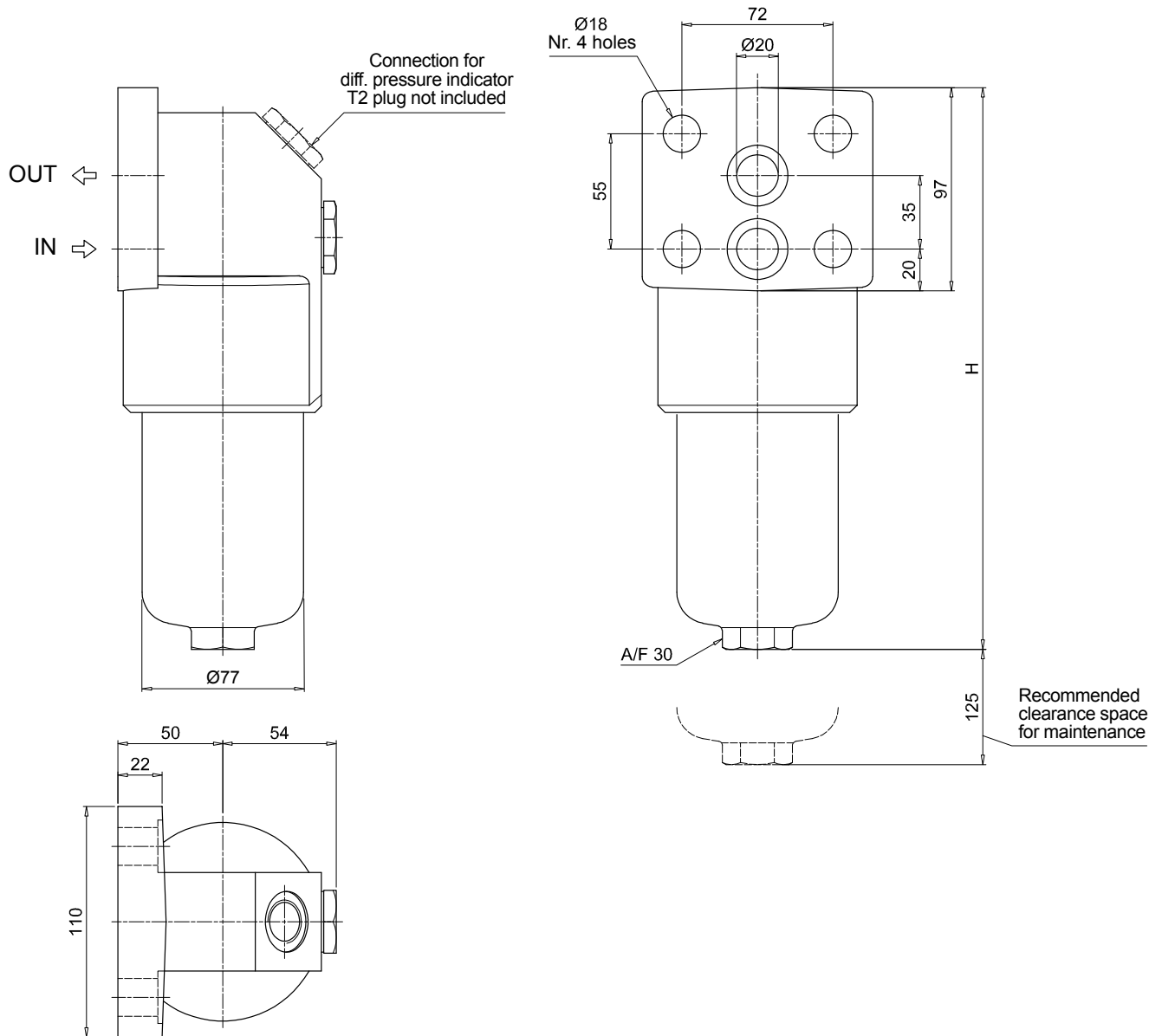
Dimensions

FHB065

Filter length	H [mm]
1	196
2	227
3	329

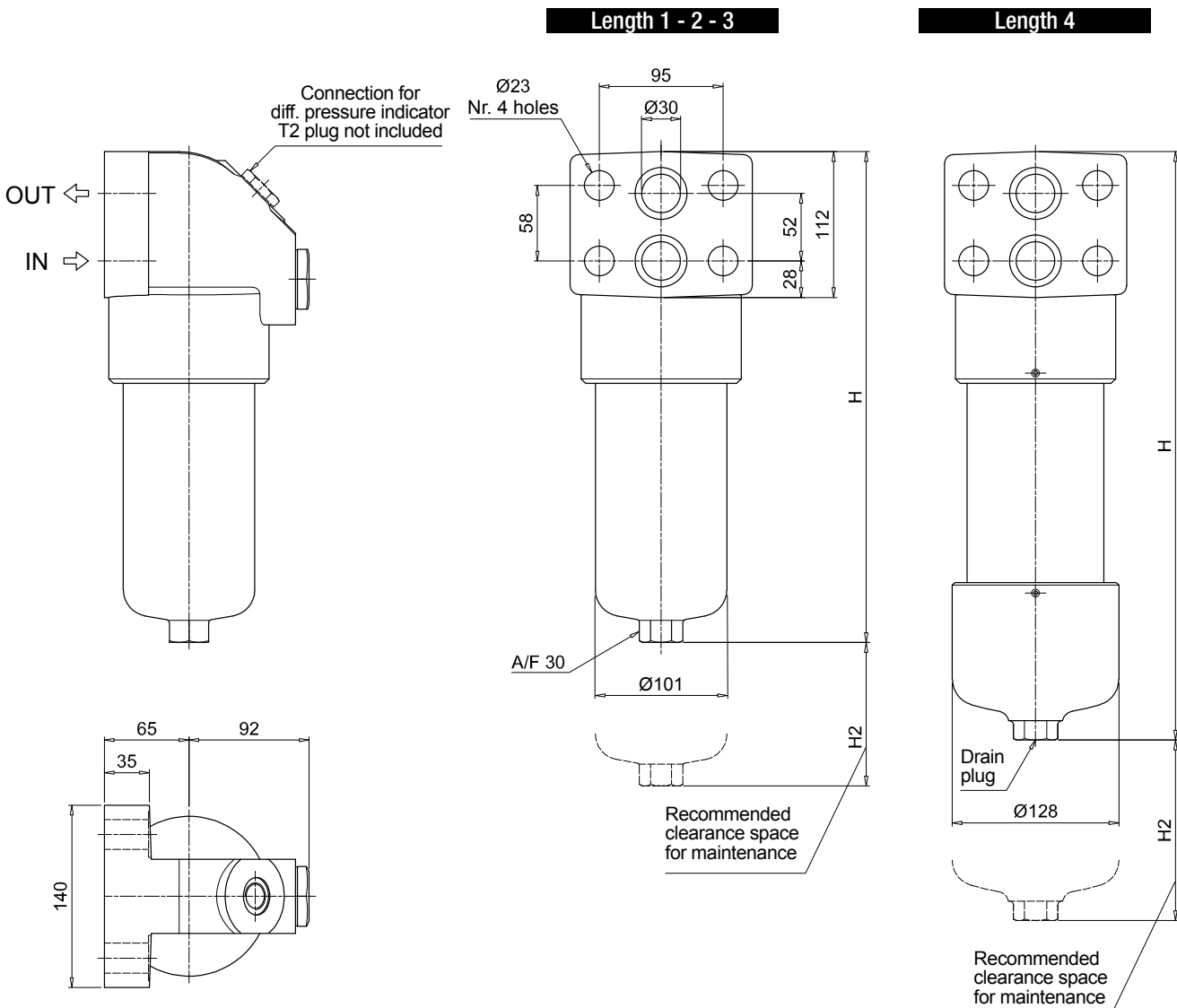


FHB135	
Filter length	H [mm]
1	268
2	381
3	456

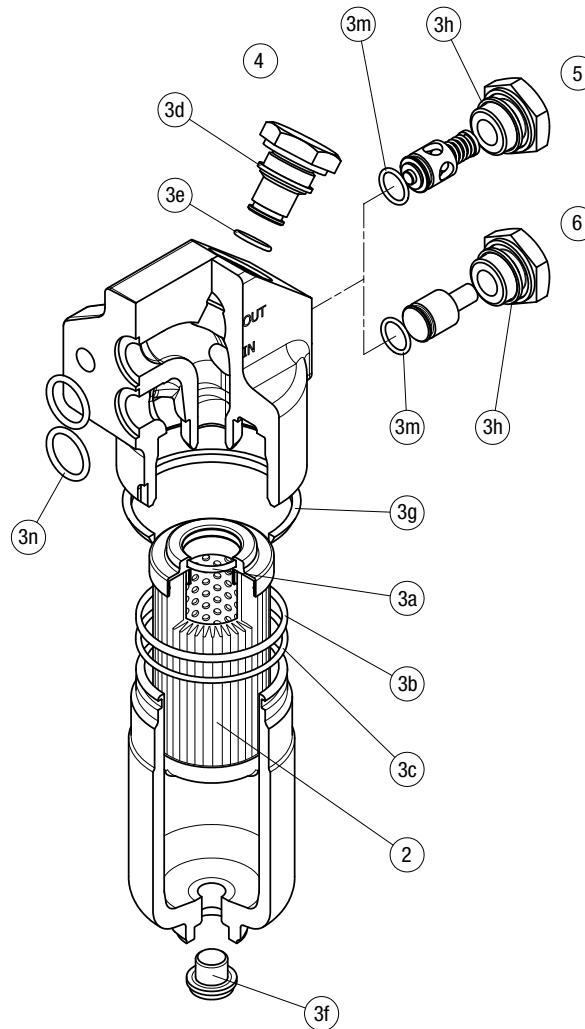


FHB320

Filter length	H [mm]	H2 [mm]	
		Execution P01	Execution P02
1	301	150	-
2	424	150	-
3	556	150	-
4	709	150	550



FHB 050 - 065 - 135 - 320



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug		Bypass assembly		Non-bypass assembly	
		NBR	FPM	NBR	FPM	NBR	FPM	NBR	FPM
FHB 050	See order table	02050412	02050413	T2H	T2V	02001312	02001385	02001314	02001386
FHB 065		02050266	02050277			02001312	02001385	02001314	02001386
FHB 135		02050270	02050281			02001312	02001385	02001314	02001386
FHB 320		02050273	02050284			02001381	02001382	02001383	02001384

LubeTeam Hydraulic S.r.l.

Administration and Headquarter:

Via Tufara Scautieri, 6
83018 - San Martino Valle Caudina (AV)

Office and Warehouse:

S.S. 7 Appia, Km. 237,00
82011 - Airola BN
ITALY

Tel. +39 0823 950 994

Fax +39 0823 412 546

www.lubeteam.it info@lubeteam.it

Italian VAT / C.F. e P.IVA: 01251720627

Follow us



This document is the property of LubeTeam Hydraulic S.r.l. All data reported here are for the exclusive use of the Receiver. Reproduction is not authorized without writing permission, in all or in part of the content of this document, in accordance to Law 633 art. 171, dated April 22, 1941.

Il presente documento è di proprietà della LubeTeam Hydraulic S.r.l. I dati riportati sono per esclusivo del destinatario. La riproduzione, di tutto o in parte, non è autorizzata senza permesso scritto secondo l'art. 171 della L. 633 del 22 Aprile 1941.