

FHP series

Maximum pressure up to 420 bar - Flow rate up to 750 l/min



Technical data

High Pressure filters Maximum pressure up to 420 bar - Flow rate up to 750 l/min

Filter housing materials

- Head: Phosphatized cast iron
- Housing: Phosphatized steel
- Bypass valve:
 - AISI 316L (FHP 010 - 011)
 - Brass (FHP 065 - 135 - 320)
 - Steel (FHP 500)
- Reverse Flow: Steel (FHP 320 - FHP 500)
- Check valve: Steel

Pressure

- Working pressure: 42 MPa (420 bar)
- Test pressure: 63 MPa (630 bar)
- Burst pressure: 126 MPa (1260 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 42 MPa (420 bar)

Bypass valve

- Opening pressure 600 kPa (6 bar)
- Other opening pressures on request.

Δp element type

- Microfibre filter elements - series N: 20 bar
- Microfibre filter elements - series R: 20 bar (not available for FHP 010-011 and FHP 500)
- Microfibre filter elements - series H: 210 bar
- Microfibre filter elements - series S: 210 bar (only for FHP 500)
- 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

Temperature

From -25 °C to +110 °C

Connections

FHP 010 - 065 - 135 - 500:
In-line Inlet/Outlet
FHP 011 - 320:
90° Inlet/Outlet

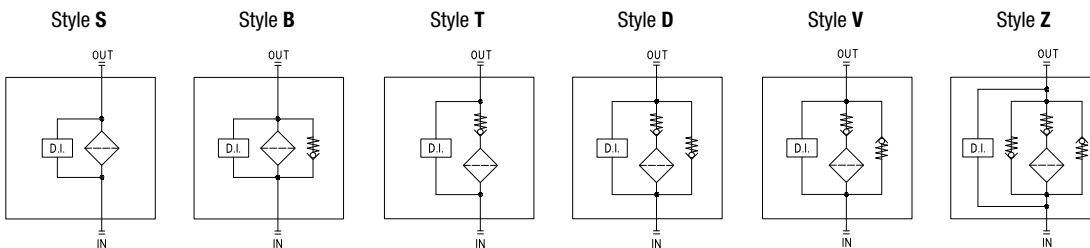
Note

FHP filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

	Weights [kg]					Volumes [dm ³]						
	Lenght	1	2	3	4	5	Lenght	1	2	3	4	5
FHP 010		2.05	2.18	2.64	3.13	-		0.10	0.12	0.15	0.20	-
FHP 065		4.26	4.62	5.83	-	-		0.25	0.30	0.50	-	-
FHP 135		7.11	8.71	9.76	-	-		0.43	0.76	0.97	-	-
FHP 320		13.95	16.08	18.37	20.85	-		1.00	1.72	2.49	3.32	-
FHP 500		27.00	31.17	34.69	46.70	52.5		1.71	2.43	3.04	5.18	6.51

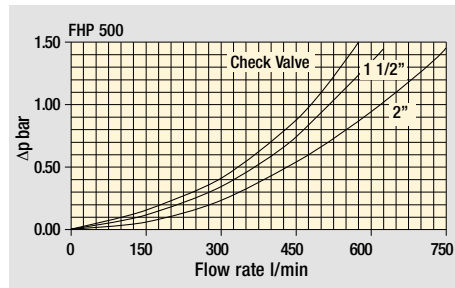
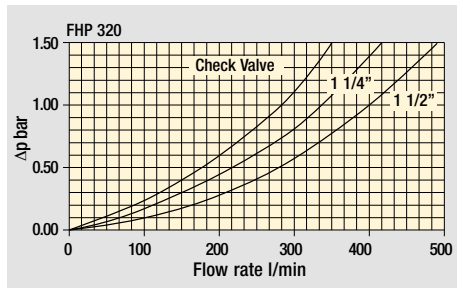
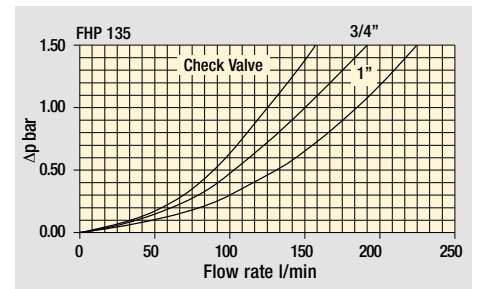
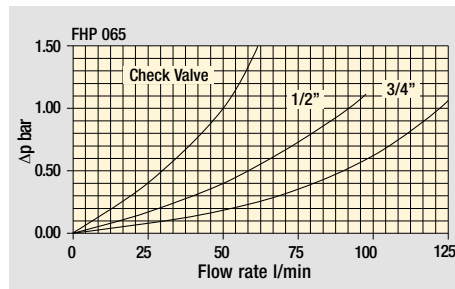
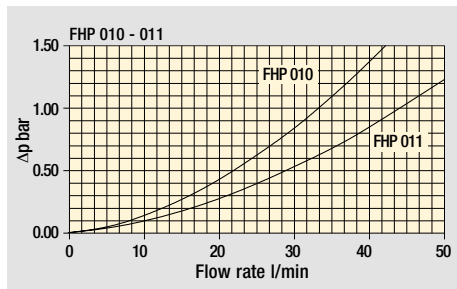
Hydraulic symbols



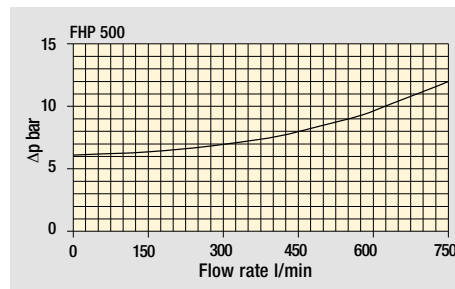
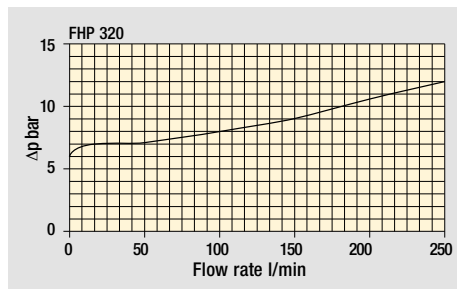
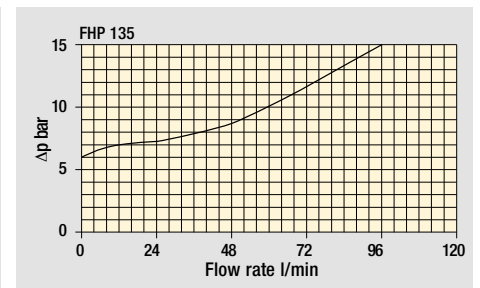
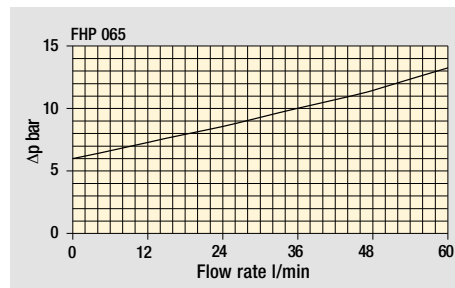
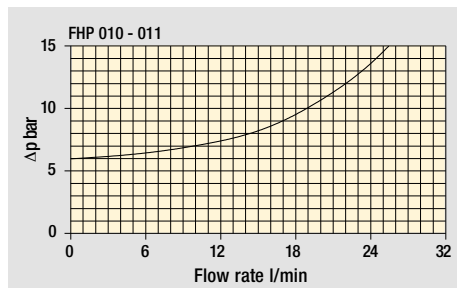
The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968.
 Δp varies proportionally with density.

Pressure drop

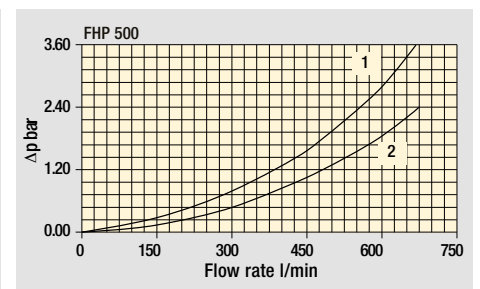
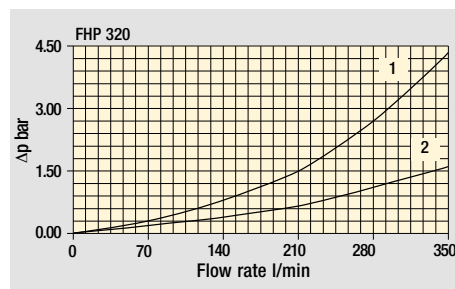
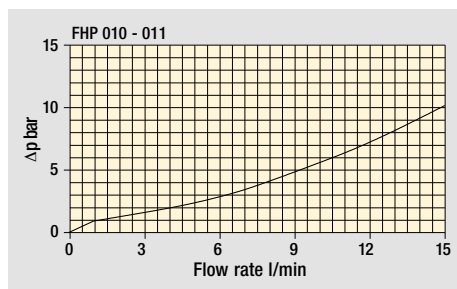
Filter housings Δp pressure drop



Bypass valve pressure drop



Valves



Filter housing with check valve

Pressure drop in reverse flow valves

Pressure drop in reverse flow valves

- 1 - Reverse flow
- 2 - In filter direction

FHP FHP010 - FHP011

Designation & Ordering code

COMPLETE FILTER

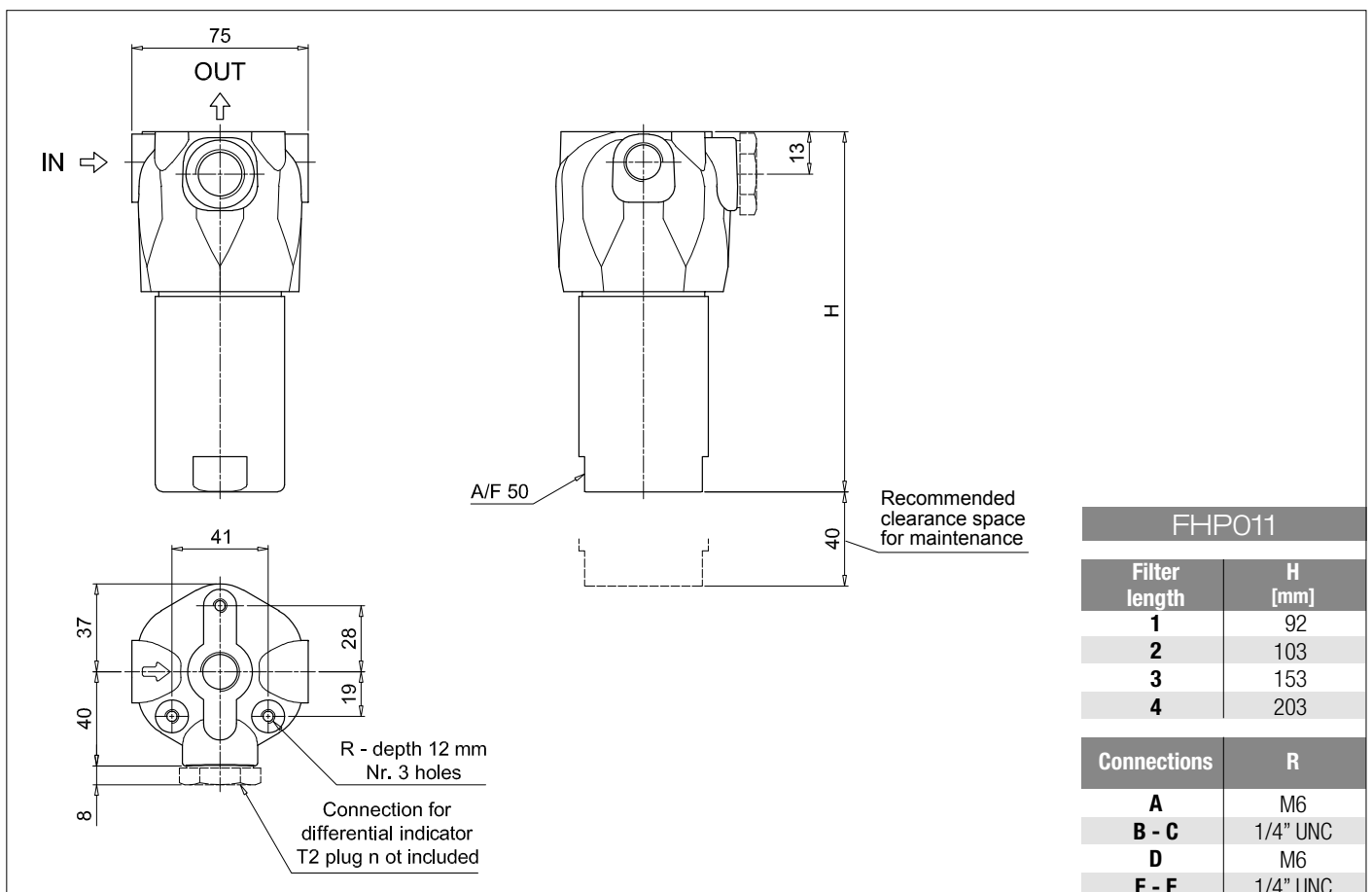
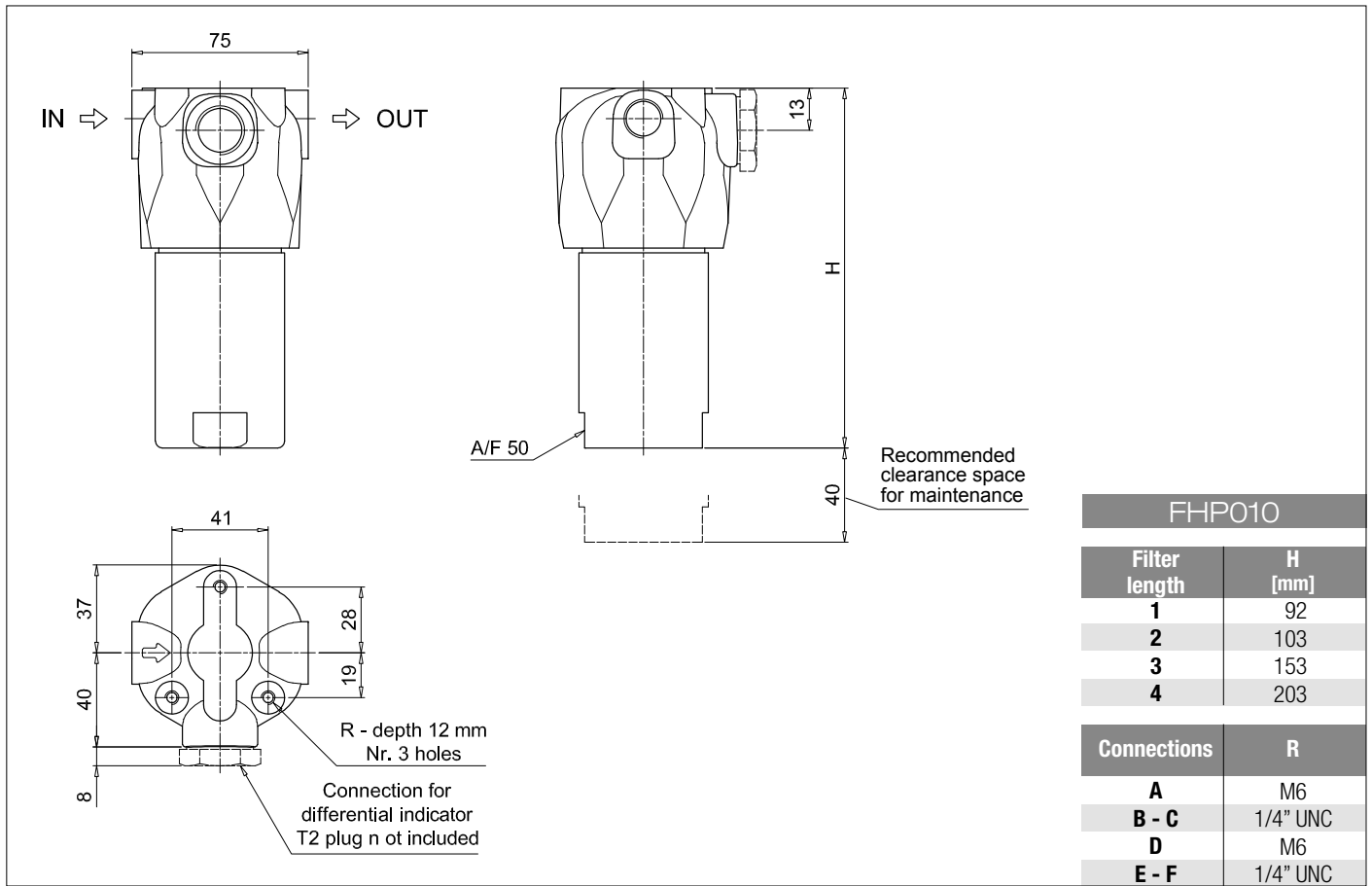
Series and size	Configuration example: FHP010 2 B A B 2 A03 N P01																																			
FHP010 FHP011																																				
Length	1 2 3 4																																			
Valves	S Without bypass B With bypass 6 bar V With reverse flow, without bypass Z With reverse flow, with bypass 6 bar																																			
Seals	A NBR V FPM																																			
Connections	A G1/4" B 1/4" NPT C SAE 5 - 1/2" - 20 UNF D G3/8" E 3/8" NPT F SAE 6 - 9/16" - 18 UNF																																			
Connection for differential indicator	1 Without 2 With connection																																			
Filtration rating (filter media)	<table border="0"> <tr> <td>A03 Inorganic microfiber 3 µm</td> <td>A16 Inorganic microfiber 16 µm</td> </tr> <tr> <td>A06 Inorganic microfiber 6 µm</td> <td>A25 Inorganic microfiber 25 µm</td> </tr> <tr> <td>A10 Inorganic microfiber 10 µm</td> <td>M25 Wire mesh 25 µm</td> </tr> </table>										A03 Inorganic microfiber 3 µm	A16 Inorganic microfiber 16 µm	A06 Inorganic microfiber 6 µm	A25 Inorganic microfiber 25 µm	A10 Inorganic microfiber 10 µm	M25 Wire mesh 25 µm																				
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FILTER ELEMENT

Element series and size	Configuration example: HP011 2 A03 A N P01														
HP011															
Element length	1 2 3 4														
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Seals	A NBR V FPM														
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ACCESSORIES

Accessories	page	Accessories	page
DEA Electrical differential indicator	517	DTA Electronic differential indicator	520
DEM Electrical differential indicator	517-518	DVA Visual differential indicator	520
DLA Electrical / visual differential indicator	518-519	DVM Visual differential indicator	520
DLE Electrical / visual differential indicator	519		
Additional features	page		
T2 Plug	521		



FHP FHP065 - FHP135 - FHP320

Designation & Ordering code

COMPLETE FILTER

Series and size Configuration example: **FHP320** | **4** | **V** | **A** | **G1** | **A06** | **S** | **P01**
FHP065 | **FHP135** | **FHP320**

Length	FHP065	FHP135	FHP320
1	•	•	•
2	•	•	•
3	•	•	•
4			•

Valves	FHP065	FHP135	FHP320
S Without bypass	•	•	•
B With bypass 6 bar	•	•	•
T With check valve, without bypass	•	•	•
D With check valve, with bypass 6 bar			•
V With reverse flow, without bypass			•
Z With reverse flow, with bypass 6 bar			•

Seals	FHP065	FHP135	FHP320
A NBR			•
V FPM			•

Connections	FHP065	FHP135	FHP320
G1	G1/2"	G3/4"	G1 1/4"
G2	G3/4"	G1"	G1 1/2"
G3	1/2" NPT	3/4" NPT	1 1/4" NPT
G4	3/4" NPT	1" NPT	1 1/2" NPT
G5	SAE 8 - 3/4" - 16 UNF	SAE 12 - 1 1/16" - 12 UN	SAE 20 - 1 5/8" - 12 UN
G6	SAE 12 - 1 1/16" - 12 UN	SAE 16 - 1 5/16" - 12 UN	SAE 24 - 1 7/8" - 12 UN
F1	-	3/4" SAE 3000 psi/M	1 1/4" SAE 3000 psi/M
F2	-	1" SAE 3000 psi/M	1 1/2" SAE 3000 psi/M
F3	-	3/4" SAE 3000 psi/UNC	1 1/4" SAE 3000 psi/UNC
F4	-	1" SAE 3000 psi/UNC	1 1/2" SAE 3000 psi/UNC
F5	-	3/4" SAE 6000 psi/M	1 1/4" SAE 6000 psi/M
F6	-	3/4" SAE 6000 psi/UNC	1 1/4" SAE 6000 psi/UNC

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

Element Δp	Valves					
	S	B	T	D	V	Z
N 20 bar		•				
R 20 bar				•		•
H 210 bar	•					
S 210 bar		•			•	

Execution	Filter length			
	1	2	3	4
P01 MP Filtri standard	•	•	•	•
P02 Maintenance from the bottom of the housing				•
Pxx Customized				

FILTER ELEMENT

Element series and size Configuration example: **HP320** | **4** | **A06** | **A** | **S** | **P01**
HP065 | **HP135** | **HP320**

Element length	HP065	HP135	HP320
1	•	•	•
2	•	•	•
3	•	•	•
4			•

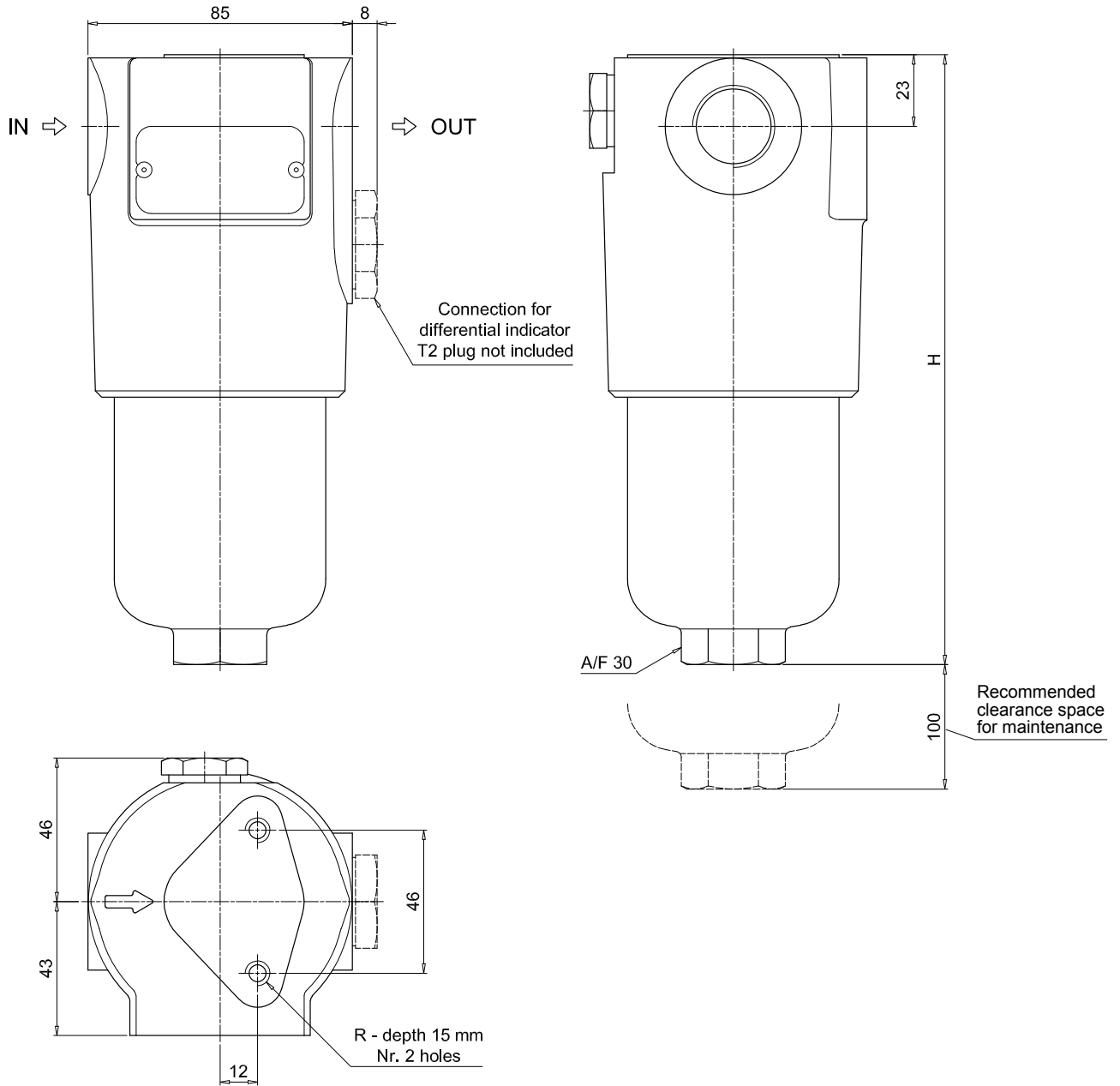
Filtration rating (filter media)	
A03 Inorganic microfiber	3 µm
A06 Inorganic microfiber	6 µm
A10 Inorganic microfiber	10 µm
A16 Inorganic microfiber	16 µm
A25 Inorganic microfiber	25 µm
M25 Wire mesh	25 µm

Seals	Element Δp	Execution
A NBR	N 20 bar	P01 MP Filtri standard
V FPM	R 20 bar	Pxx Customized
	H 210 bar	
	S 210 bar	

ACCESSORIES

Differential indicators	page		page
DEA Electrical differential indicator	517	DTA Electronic differential indicator	520
DEM Electrical differential indicator	517-518	DVA Visual differential indicator	520
DLA Electrical / visual differential indicator	518-519	DVM Visual differential indicator	520
DLE Electrical / visual differential indicator	519		

Additional features	page
T2 Plug	521



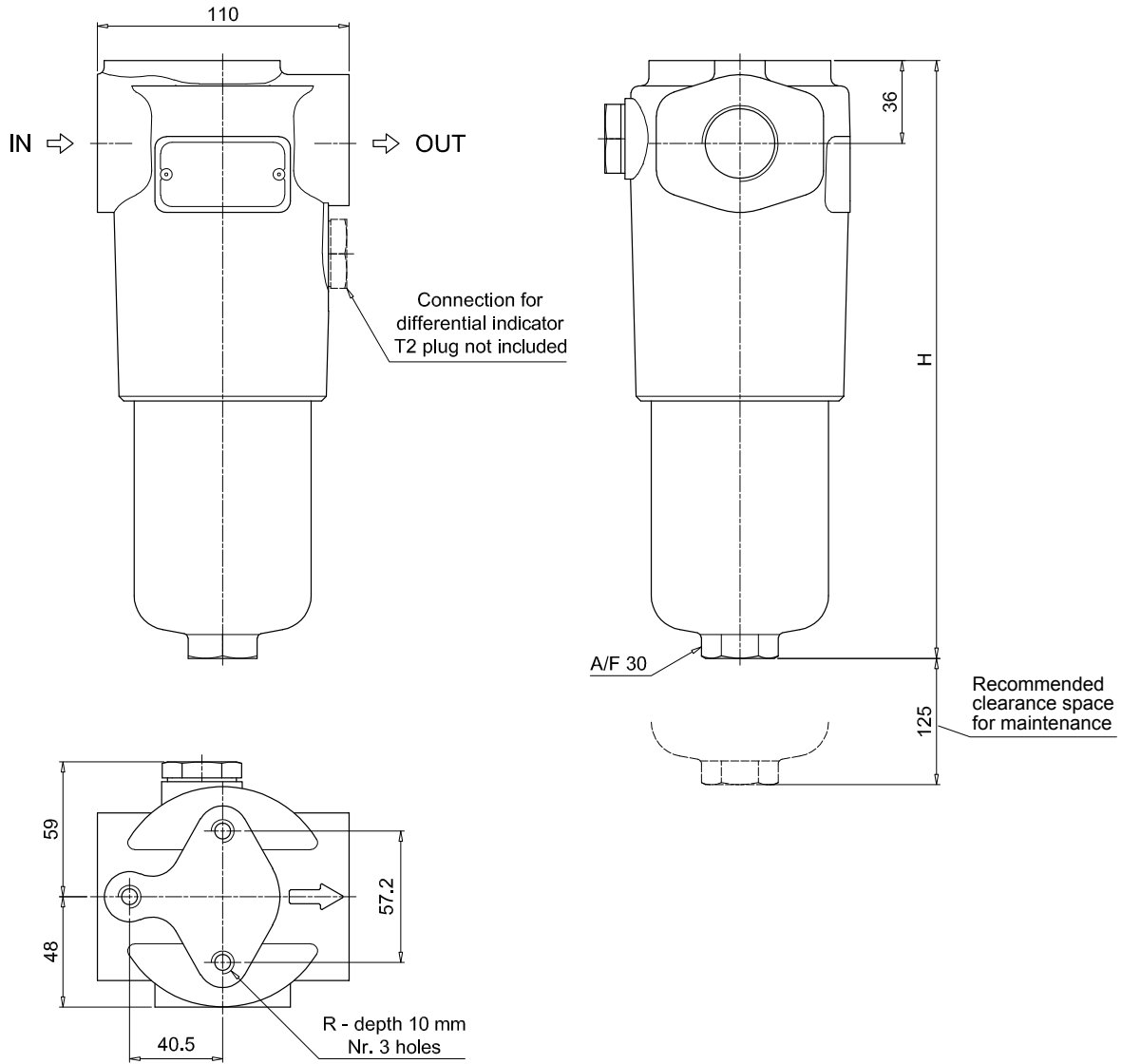
FHP065

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

Connections	R
G1-G2	M8
G3-G4-G5-G6	5/16" UNC

FHP FHP065 - FHP135 - FHP320

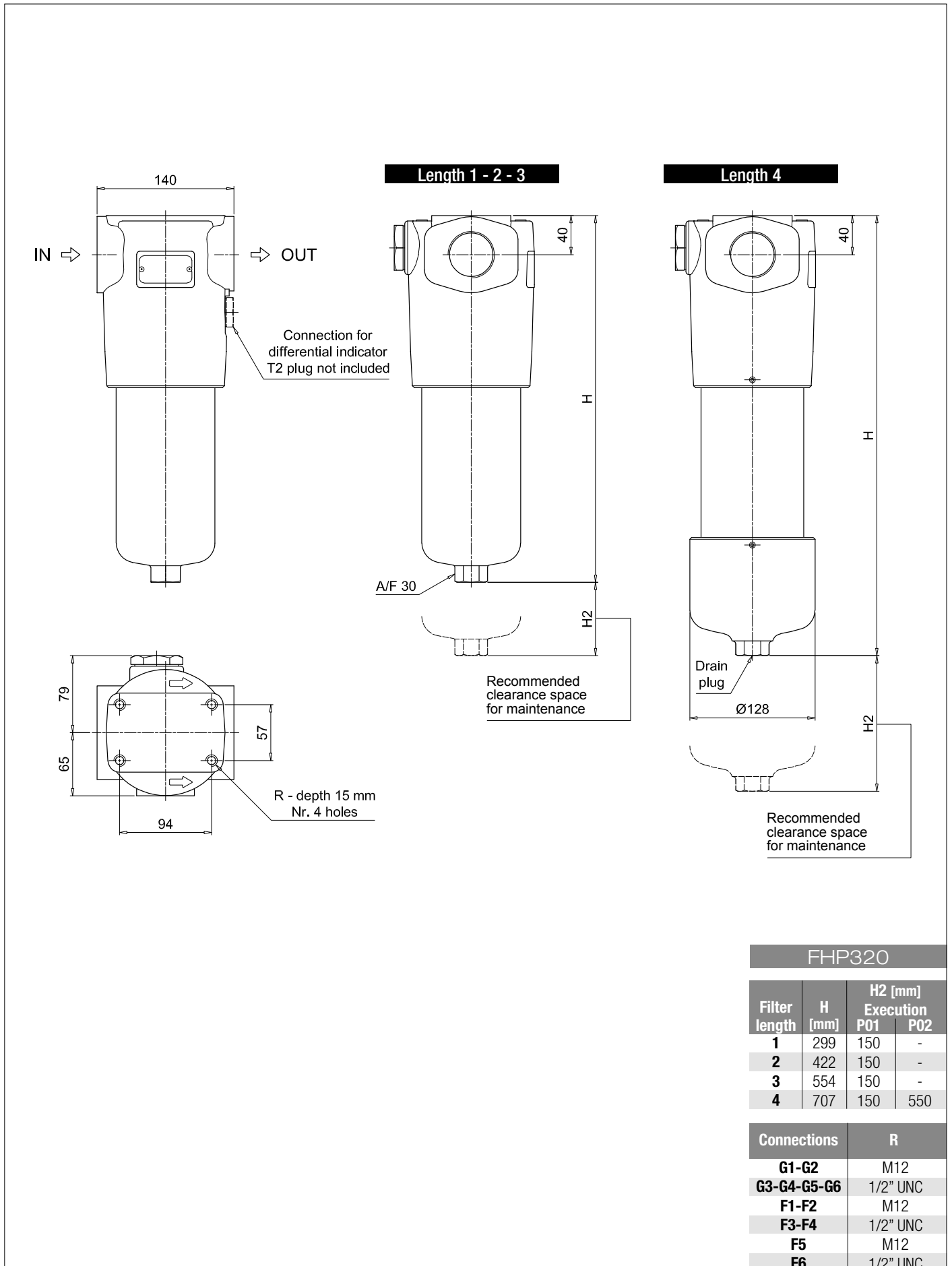
Dimensions



FHP135

Filter length	H [mm]
1	260
2	373
3	448

Connections	R
G1-G2	M10
G3-G4-G5-G6	3/8" UNC
F1-F2	M10
F3-F4	3/8" UNC
F5	M10
F6	3/8" UNC



FHP320			
Filter length	H [mm]	H2 [mm]	
		Execution P01	Execution P02
1	299	150	-
2	422	150	-
3	554	150	-
4	707	150	550

Connections	R
G1-G2	M12
G3-G4-G5-G6	1/2" UNC
F1-F2	M12
F3-F4	1/2" UNC
F5	M12
F6	1/2" UNC

Designation & Ordering code

COMPLETE FILTER

Series and size **FHP500** Configuration example: **FHP500** **4** **V** **A** **G1** **A06** **S** **P01**

Length
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
V With reverse flow, without bypass
Z With reverse flow, with bypass 6 bar

Seals
A NBR
V FPM

Connections
G1 G1 1/2"
G2 1 1/2" NPT
G3 SAE 24 - 1 7/8" - 12 UN
F1 1 1/2" SAE 3000 psi/M
F2 1 1/2" SAE 3000 psi/UNC
F3 2" SAE 3000 psi/M
F4 2" SAE 3000 psi/UNC
F5 1 1/2" SAE 6000 psi/M
F6 1 1/2" SAE 6000 psi/UNC
F7 2" SAE 6000 psi/M
F8 2" SAE 6000 psi/UNC

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

Element Δp	Valves					
	S	B	T	D	V	Z
N 20 bar		•		•		•
S 210 bar	•		•		•	

Execution	Filter length				
	1	2	3	4	5
P01 MP Filtri standard	•	•	•	•	•
P02 Maintenance from the bottom of the housing				•	•
P03 Drain plug on length 1 - 2 - 3	•	•	•		
Pxx Customized					

FILTER ELEMENT

Element series and size **HP500** Configuration example: **HP500** **4** **A06** **A** **S** **P01**

Element length
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	
A	NBR
V	FPM

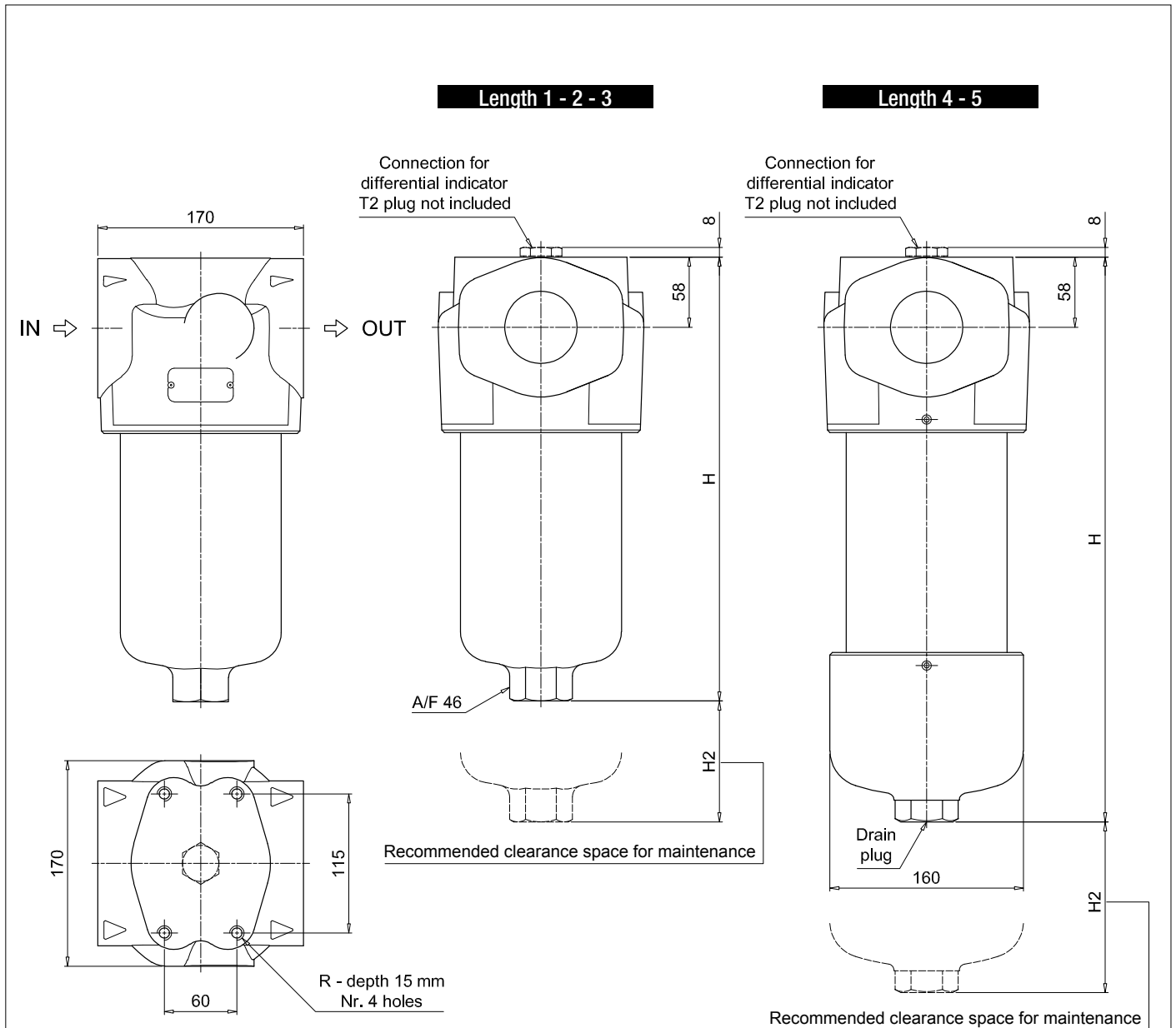
Element Δp	
N	20 bar
S	210 bar

Execution	
P01	MP Filtri standard
Pxx	Customized

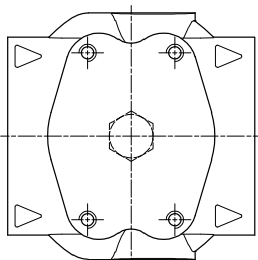
ACCESSORIES

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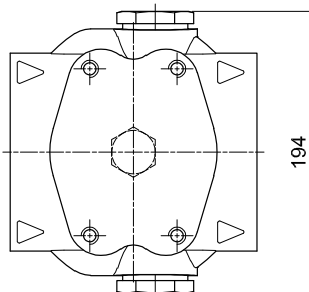
Additional features	page
T2 Plug	521



Valves S - B - T - D



Valves V - Z



FHP500

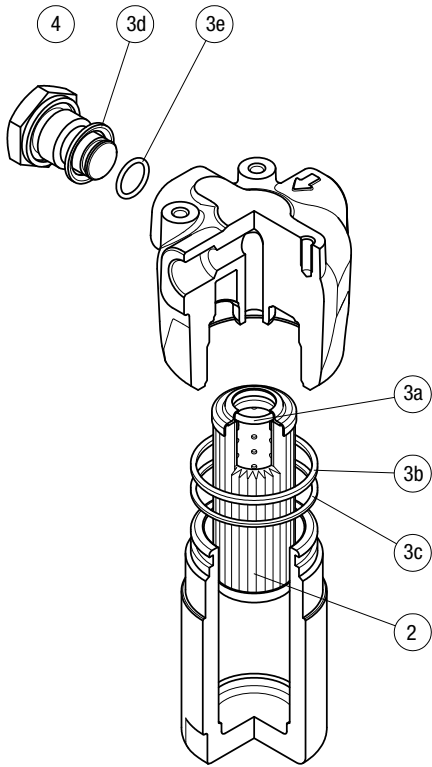
Filter length	H [mm]	H2 [mm]	
		Execution P01	Execution P02
1	330	150	-
2	420	150	-
3	496	150	-
4	654	150	480
5	820	150	650

Connections	R
G1	M12
G2-G3	1/2" UNC
F1	M12
F2	1/2" UNC
F3	M12
F4	1/2" UNC
F5	M12
F6	1/2" UNC
F7	M12
F8	1/2" UNC

FHP SPARE PARTS

Order number for spare parts

FHP 010 - 011

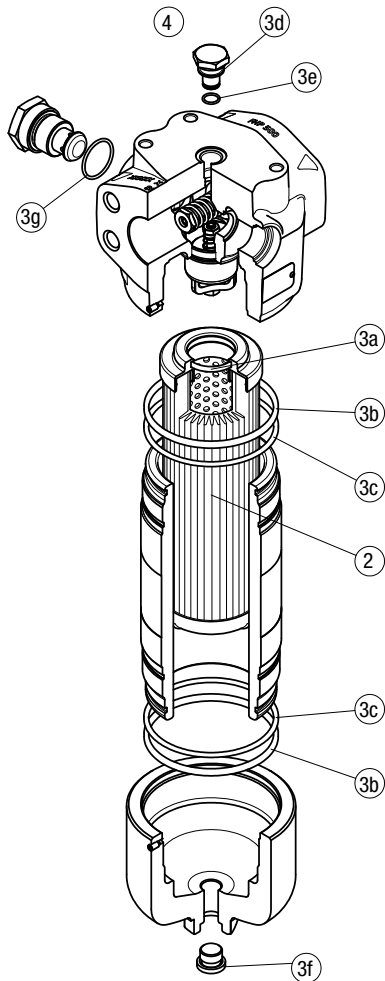


Q.ty:
nr. 0 pcs. for version 1
(without indicator port)

nr. 1 pc. for version 2
(with indicator port)

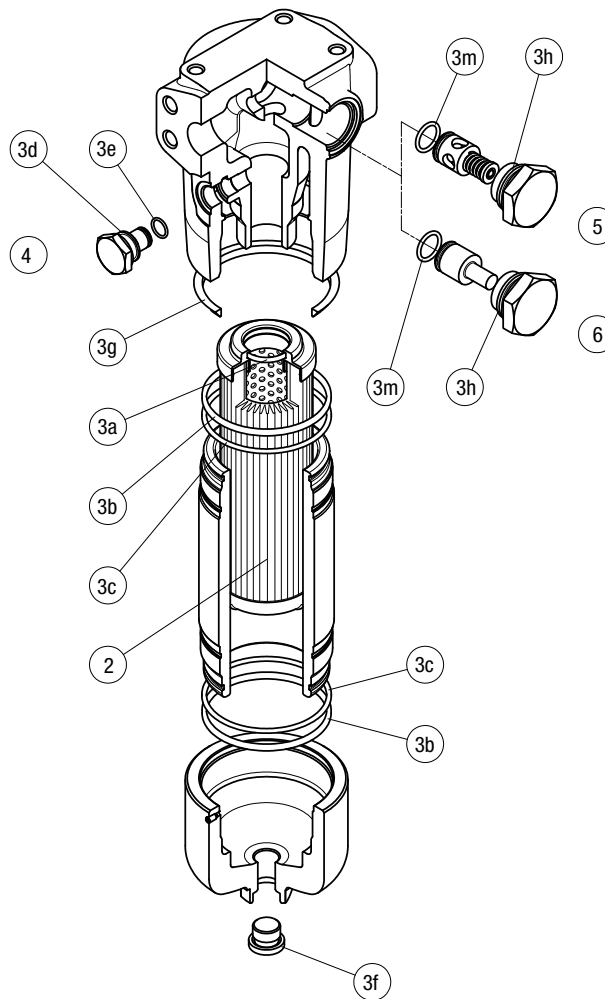
Filter series	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
	2	3 (3a ÷ 3e)		4	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
		NBR	FPM	NBR	FPM
FHP 010 - 011	See order table	02050501	02050492	T2H	T2V

FHP 500



Filter series	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
	2	3 (3a ÷ 3g)		4	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
		NBR	FPM	NBR	FPM
FHP 500	See order table	02050330	02050331	T2H	T2V

FHP 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
FHP 065	See order table	02050265	02050276			02001116	02001136	02001142	02001139
FHP 135		02050269	02050280	T2H	T2V	02001117	02001137	02001143	02001392
FHP 320		02050272	02050283			02001118	02001138	02001144	02001395