

FHF 325 series

Maximum working pressure up to 35 MPa (350 bar) - Flow rate up to 550 l/min

Filter housing according to SAE J2066 for HF4 filter elements



INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



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FHF 325 GENERAL INFORMATION

Filter housing according to SAE J2066 for HF4 filter elements

Description

High Pressure filters

Manifold

Maximum working pressure up to 35 MPa (350 bar)

Flow rate up to 550 l/min

FHF 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 lines of the system through the hydraulic fittings or the proper flanged interface.

Available features:

- 1 1/2" female threaded connections, 1 1/2" flanged connections and manifold connections up to 1 1/2", for a maximum flow rate of 550 l/min
- Base-mounting design, for ease of the replacement of the filter element
- Filter element designed in accordance with SAE J2066 HF4 regulation
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Low collapse filter element "N", for use with filters provided with bypass valve
- Visual, electrical and electronic differential clogging indicators

Common applications:

Delivery lines, in any high pressure industrial equipment

Technical data

Filter housing materials

- Head: Phosphatized cast iron
- Housing: Phosphatized steel
- Cover: Cast iron (chemical heat treatment)
- Bypass valve: Brass - Steel

Pressure

- Working pressure: 35 MPa (350 bar)
- Test pressure: 52.5 MPa (525 bar)
- Burst pressure: 105 MPa (1050 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 35 MPa (350 bar)

Bypass valve

- Opening pressure 600 kPa (6 bar) $\pm 10\%$
- Other opening pressures on request.

Δp element type

- Microfibre filter elements - series N: 20 bar
- 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

FHF 325: In-line threaded connection
FHF 325: In-line flanged connection
FHF 325: Manifold mounting

Note

FHF filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]				Volumes [dm ³]			
	Length	1	2	3	Length	1	2	3
FHF 325		23.90	32.68	41.47		3.50	5.80	8.11

GENERAL INFORMATION FHF 325

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Flow rates [l/min]

Filter series	Length	Filter element design - N Series					
		A03	A06	A10	A16	A25	M25
FHF 325	1	302	339	348	419	500	556
	2	401	424	434	457	505	557
	3	416	451	460	469	510	559

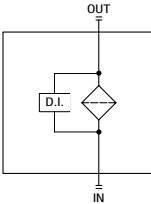
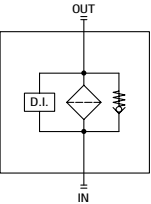
Maximum flow rate for a complete pressure filter with a pressure drop $\Delta p = 1.5$ bar.

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.

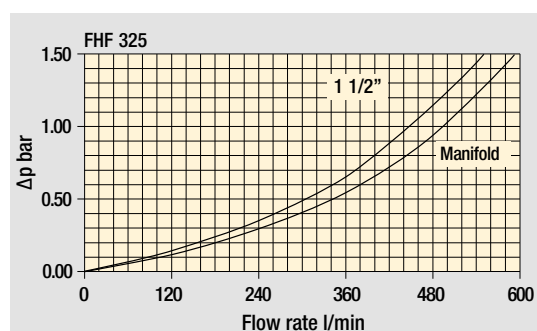
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

Hydraulic symbols

Filter series	Style S	Style B
FHF 325	•	•
		

Pressure drop

Filter housings Δp pressure drop



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

FHF 325

Designation & Ordering code

COMPLETE FILTER

Series and size	Configuration example:	FHF325	2	S	A	H	7	A10	N	P01
FHF325										
Length										
1	2	3								
Valves										
S	Without bypass									
B	With bypass 6 bar									
Seals										
A	NBR									
V	FPM									
Connections										
A	G 1 1/2"									
B	1 1/2" NPT									
C	SAE 24 - 1 7/8" - 12 UN									
G	1 1/2" SAE 6000 psi/M									
H	1 1/2" SAE 6000 psi/UNC									
M	Manifold ø1.38"									
N	Manifold ø1.50"									
Connection for differential pressure indicator										
7	With two connections plugged on both sides									
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		Execution					
			N		20 bar		P01 MP Filtri standard			
							Pxx Customized			

FILTER ELEMENT

Element series and size	Configuration example:	HF325	2	A10	A	N	P01
HF325							
Element length							
1	2	3					
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		P01 MP Filtri standard
			V		FPM		Pxx Customized

CLOGGING INDICATORS

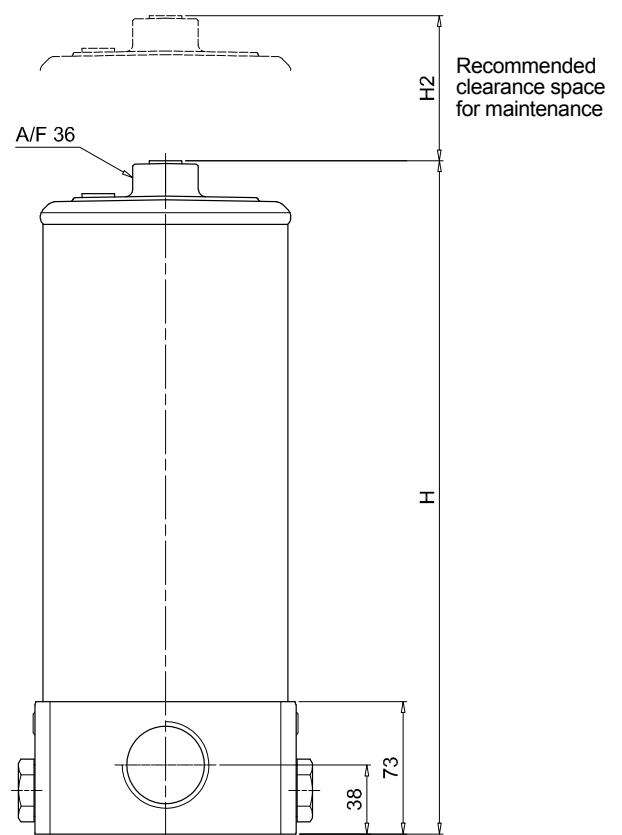
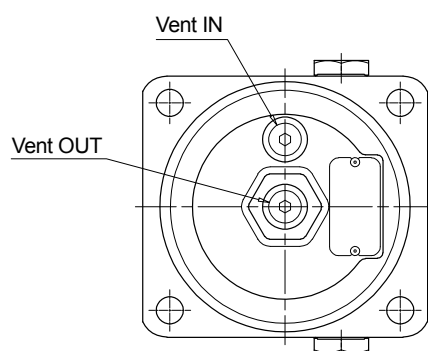
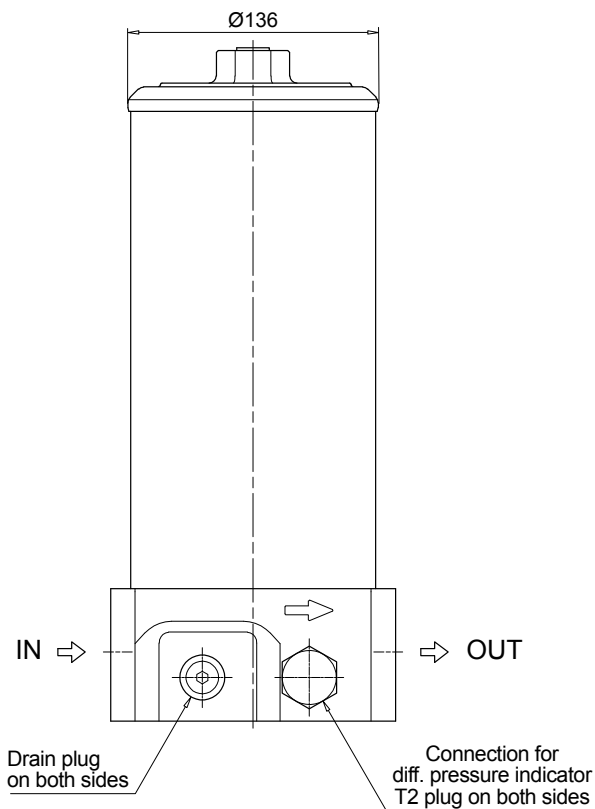
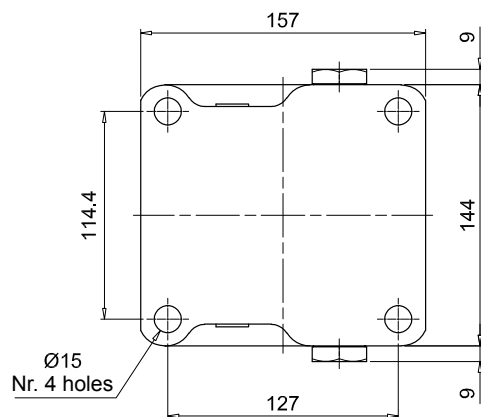
See page 727

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 747

T2 Plug (not included)

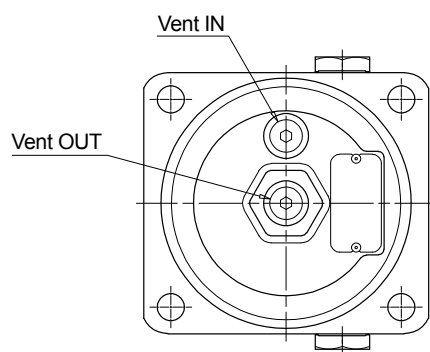
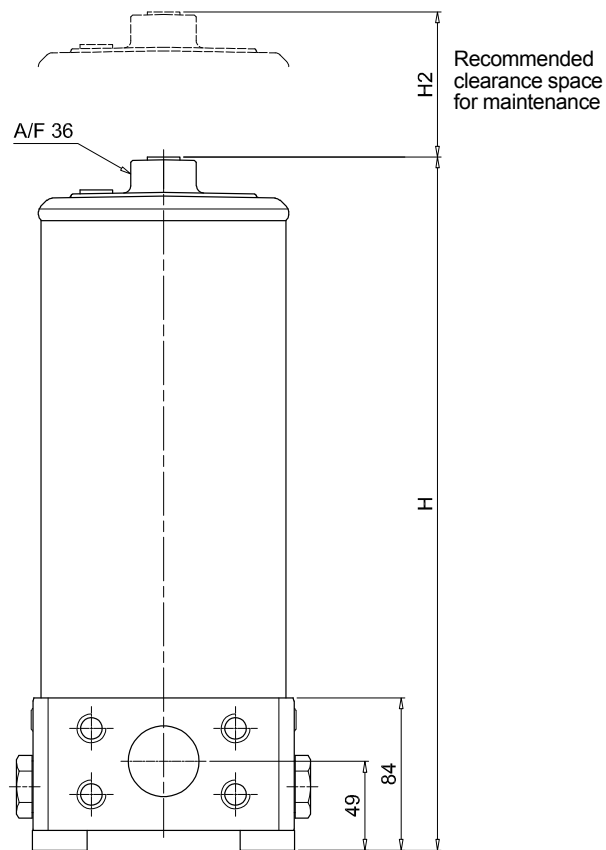
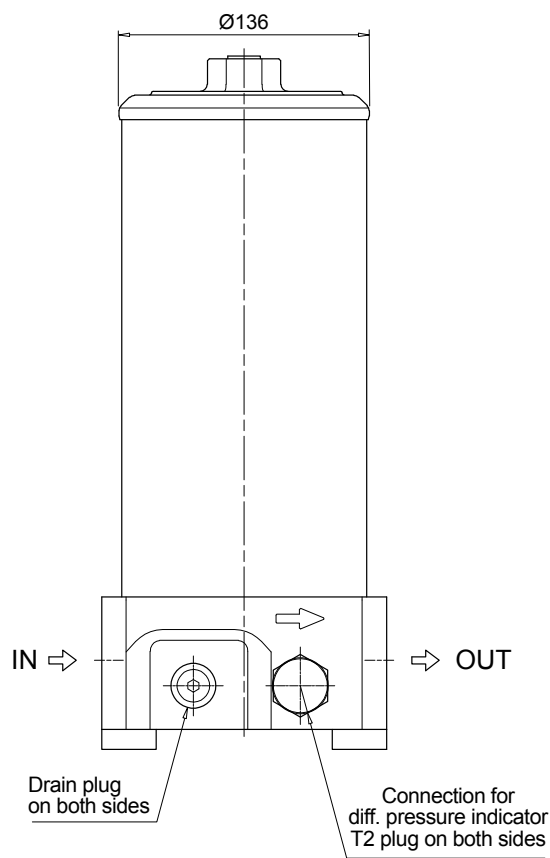
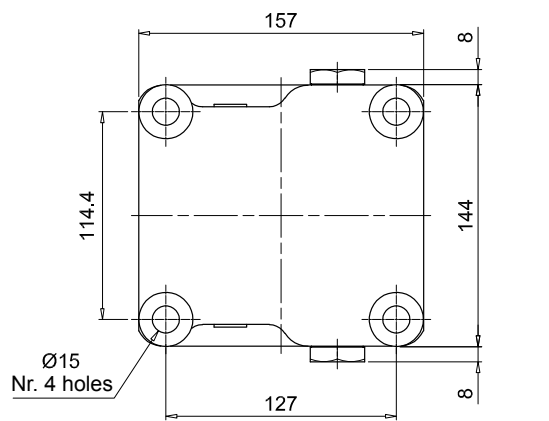


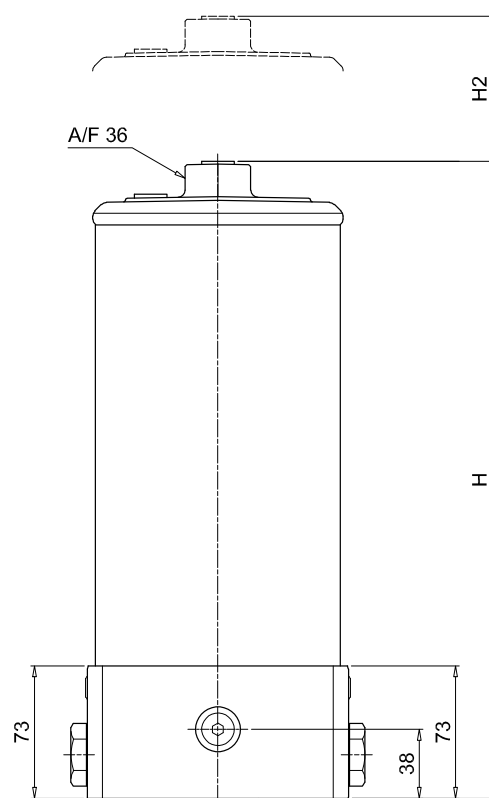
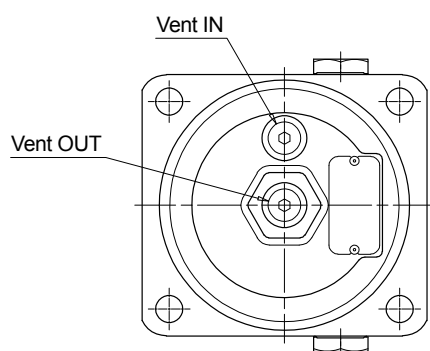
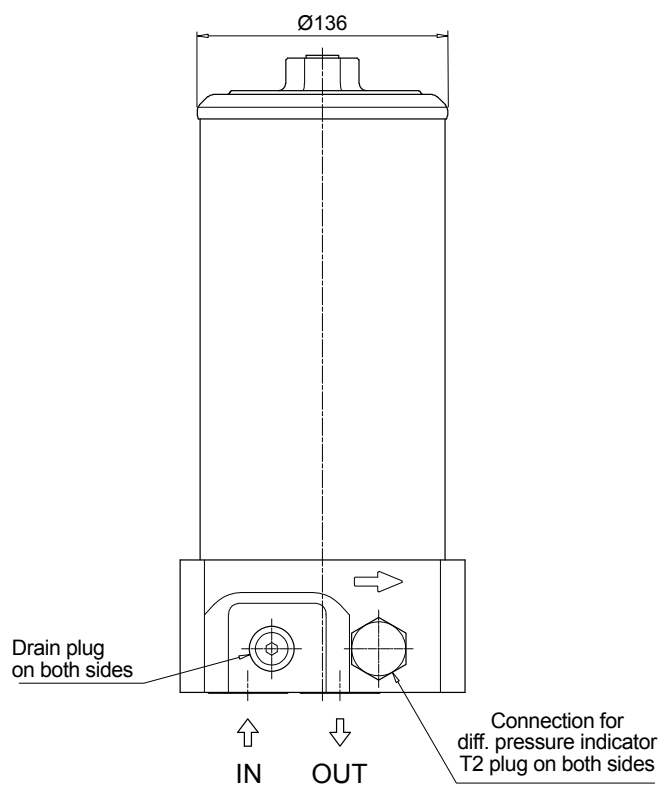
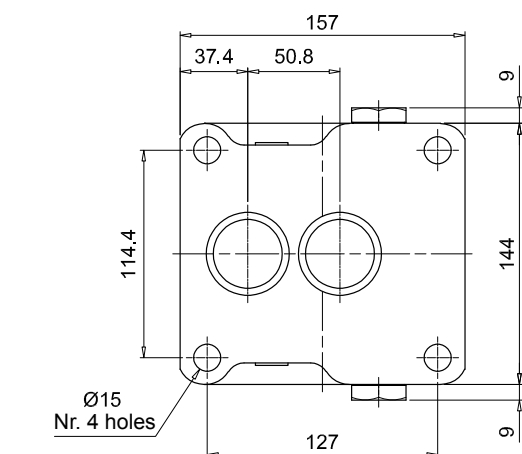
FHF325		
Connection A - B - C		
Filter length	H [mm]	H2 [mm]
1	452	250
2	690	485
3	928	725

FHF 325

Dimensions

FHF325		
Connection G - H		
Filter length	H [mm]	H2 [mm]
1	463	250
2	701	485
3	939	725





Recommended clearance space for maintenance

FHF325		
Connection M - N		
Filter length	H [mm]	H2 [mm]
1	452	250
2	690	485
3	928	725

FHF 325 SPARE PARTS

Filter housing according to SAE J2066 for HF4 filter elements

Order number for spare parts

FHF 325
Connections
A - B - C - G - H

Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	Q.ty: 2 pc.
	2	3 (3a ÷ 3f)	4
Filter series	Filter element	Seal Kit code number NBR FPM	Indicator connection plug NBR FPM
FHF 325 A-B-C-G-H	See order table	02050588 02050589	T2H T2V

FHF 325
Connections
M - N

Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	Q.ty: 2 pc.
	2	3 (3a ÷ 3h)	4
Filter series	Filter element	Seal Kit code number NBR FPM	Indicator connection plug NBR FPM
FHF 325 M-N	See order table	02050590 02050591	T2H T2V

DIFFERENTIAL PRESSURE INDICATORS

Series				Configuration example 1:									
DE Electrical differential pressure indicator				Configuration example 2:		DE	U	50	V	A	50	P01	UL
DL Electrical/Visual differential pressure indicator				Configuration example 3:		DL	E	20	V	A	71	P01	
DT Electronic differential pressure indicator				Configuration example 4:		DT	A	50	H	F	70	P01	
DV Visual differential pressure indicator				Configuration example 5:		DV	M	70	V		P01		
Type				DE	DL	DT	DV						
A Standard type				•	•	•	A With automatic reset						
M With wired electrical connection				•	-	-	M With manual reset						
U Standard type 210 bar, UL certified				•	-	-							
E For high power supply				-	•	-							
Pressure setting				DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM		
50 5.0 bar				•	•	•	•	•	•	•	•		
70 7.0 bar				•	•	•	•	•	•	•	•		
95 9.5 bar				•	•	-	•	•	•	•	•		
Seals				DEA	DEM	DEU	DLA	DLE	DTA	DVA	DVM		
H HNBR				•	•	-	•	•	•	•	•		
V FPM				•	•	•	•	•	•	•	•		
Thermostat				DEA	DEM	DEU	DLA	DLE	DT				
A Without thermostat				•	•	•	•	•	-				
F With thermostat				-	•	-	-	•	•				
Electrical connections				DEA	DEM	DEU	DLA	DLE	DT				
10 Connection AMP Superseal series 1.5				-	•	-	-	-	-				
20 Connection AMP Timer Junior				-	•	-	-	-	-				
30 Connection Deutsch DT-04-2-P				-	•	-	-	-	-				
35 Connection Deutsch DT-04-3-P				-	•	-	-	-	-				
50 Connection EN 175301-803				•	-	•	-	•	-				
51 Connection EN 175301-803, transparent base with lamps 24 Vdc				-	-	-	•	-	-				
52 Connection EN 175301-803, transparent base with lamps 110 Vdc				-	-	-	•	-	-				
70 Connection IEC 61076-2-101 D (M12)				-	-	-	-	-	•				
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc				-	-	-	•	-	-				
Option													
P01 MP Filtri standard													
Pxx Customized													

PLUGS

Series		Configuration example	
T2 Plug		T2	H
Seals			
H HNBR			
V FPM			