

# FHA 051



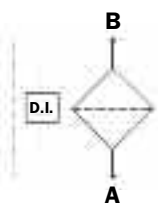
# FHA **S**ERIES **051**

*Working pressure*

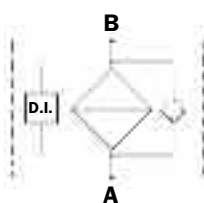
**560 bar**



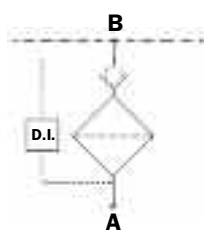
Style S



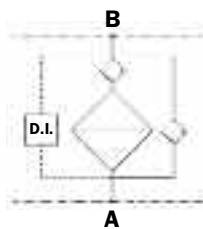
Style B



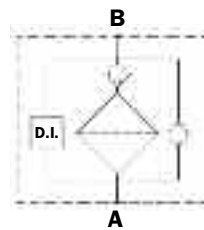
Style T



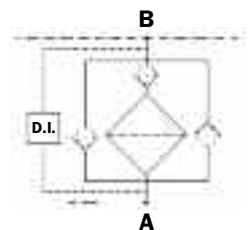
Style D



Style V



Style Z



# Technical data

## Filter body (Materials)

- Head: Steel (chemical heat treatment)
- Housing: Steel (chemical heat treatment)
- Bypass valve: Steel

## Pressure

- Maximum operating pressure: 560 bar (56 MPa)
- Test pressure: 630 bar (63 MPa)
- Burst pressure: 1250 bar (125 MPa)
- Pulsed pressure fatigue test 1,000,000 of cycles from 0 to 560 bar (56 MPa)

## Temperature

- From -25 °C to +110 °C

## Bypass valve

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

## Elements type $\Delta p$

- Elements in microfibre series N-R: 20 bar
- Elements in microfibre series H-S: 210 bar
- Elements in stainless steel mesh series N: 20 bar
- Oil flow from exterior to interior.

## Seals

- Standard Nitrile (NBR) series A
- Optional FPM series V

## Weights without filter elements (kg.)

### Length

- FHA051 -1 3.0
- FHA051 -2 3.6
- FHA051 -3 3.9
- FHA051 -4 4.5
- FHA051 -5 6.1

## Filter internal volumes (dm<sup>3</sup>)

### Length

- FHA051 -1 0.38
- FHA051 -2 0.47
- FHA051 -3 0.57
- FHA051 -4 0.68
- FHA051 -5 0.88

## Connections

In-line Inlet/Outlet

## Compatibility

- Bodies compatible with: Mineral oils to ISO 2943 - aqueous emulsions synthetic fluids, water/glycol.
- Filter elements compatible with: Mineral oils to ISO 2943 - aqueous emulsions synthetic fluids, water/glycol.

- Nitrile (NBR) seals series A, compatible with: Mineral oils to ISO 2943 - aqueous emulsions synthetic fluids, water/glycol.
- V series FPM seals, compatible with: Synthetic fluids type HS-HFDR-HFDS-HFDU To ISO 2943

## Filter Element Area

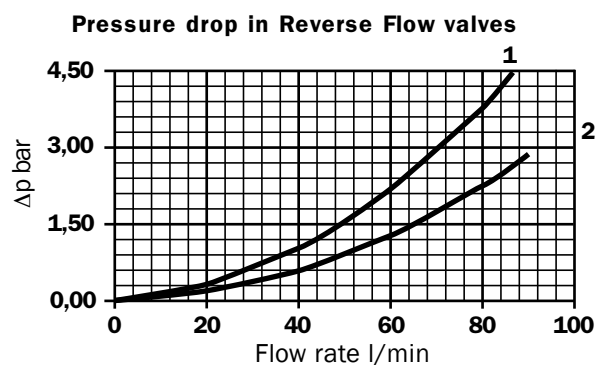
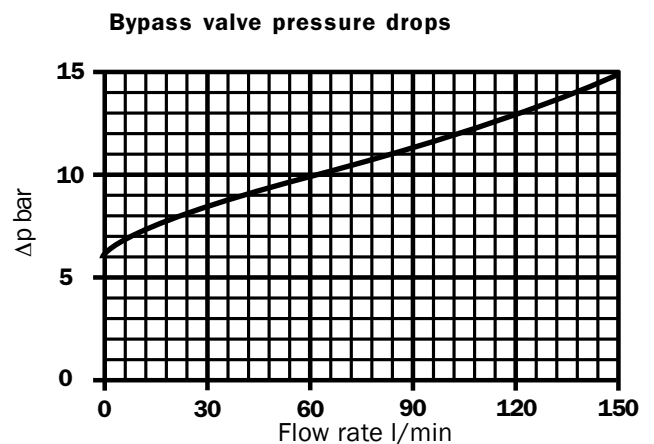
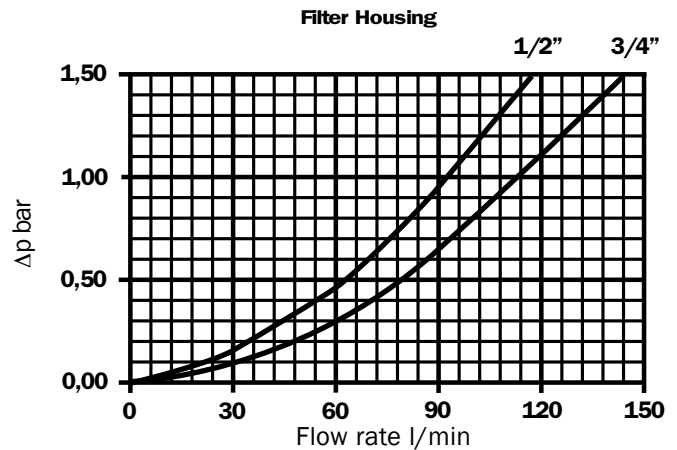
Filter element in stainless steel mesh

Type	Length				
	1	2	3	4	5
HP050	450	700	1000	1300	2100
Values expressed in cm <sup>2</sup>					

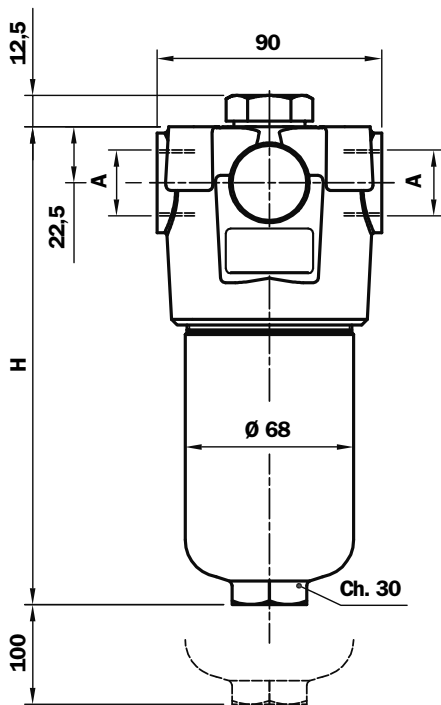
## Pressure drops $\Delta p$ Housing

The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> to ISO 3968.

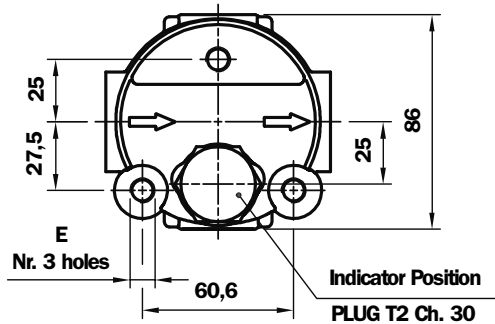
$\Delta p$  Varies proportional with density.



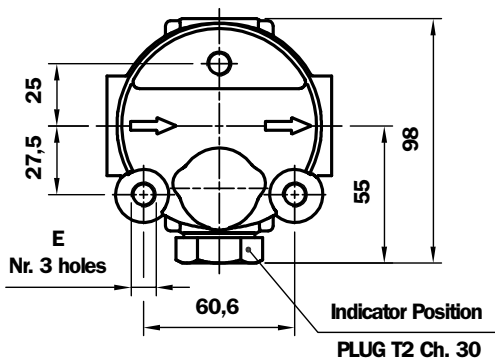
- 1 - Reverse Flow
- 2 - In filter direction



### With standard indicator



### Option P03 with 90° indicator



**NB.** Versions with differential indicator are supplied with plug T2.

### Recommended maximum flow rate

- Pressure drop of complete filter equal to  $\Delta p$  1.5 bar.
- Oil kinematic viscosity 30 mm<sup>2</sup>/s (cSt).
- Density 0.86 kg/dm<sup>3</sup>.
- Connections of filter under test G 3/4".

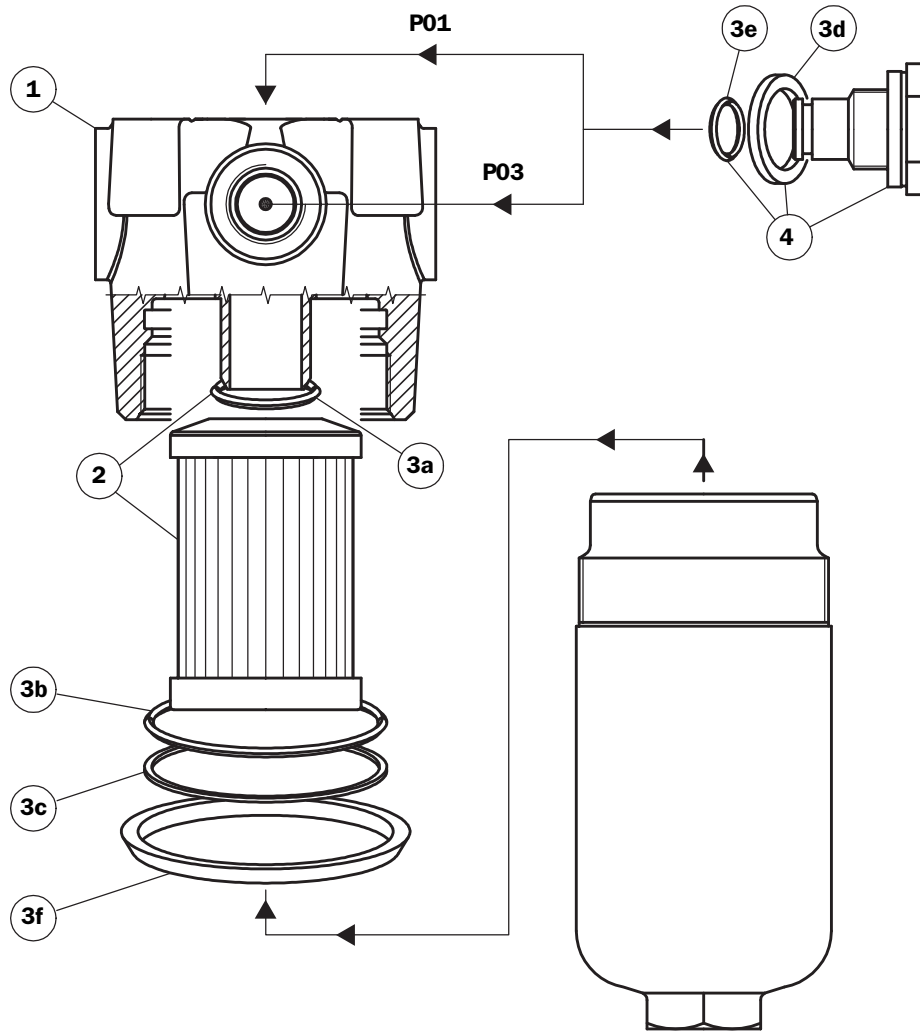
Filter element type	Flow rate l/min Series N	Flow rate l/min Series H	Filter Length
A03	42	30	1
A06	44	39	
A10	77	57	
A16	78	58	
A25	98	72	
M25	132	-	2
A03	52	45	
A06	55	49	
A10	82	74	
A16	91	84	
A25	112	105	3
M25	135	-	
A03	66	58	
A06	68	61	
A10	92	85	
A16	100	93	4
A25	118	112	
M25	135	-	
A03	80	75	
A06	85	78	
A10	105	98	5
A16	108	105	
A25	120	115	
M25	135	-	
A03	102	87	
A06	105	90	5
A10	120	105	
A16	124	112	
A25	130	115	
M25	140	-	

### A Threaded Connections E Depth 15 mm

M18x1,5	ISO 6149	M10
M22x1,5	ISO 6149	M10
G 1/2"		M10
G 3/4"		M10
1/2" NPT		3/8" UNC
3/4" NPT		3/8" UNC
SAE 8 (3/4" - 16 UNF)		3/8" UNC
SAE 12 (1 1/16" - 12 UN)		3/8" UNC

Filter Length	H mm
1	157
2	192
3	234
4	282
5	409

# Spare parts FHA051



Pos.	Description	Qty.	Series FHA 051 FILTER 051 1 - 2 - 3 - 4 - 5	
1	Complete filter	1	See order table	
2	Filter element	1	See order table	
3	Seal kits	1	NBR 02050288	FPM 02050305
3a	O-Ring for filter element	1	OR 3093 Ø 23.67 x 2.62	
3b	O-Ring for housing	1	O-R 3237 Ø 60 x 2.62	
3c	Anti-extrusion ring	1	Parbak 141 Ø 59.21 x 2.18	
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring	1	OR 2050 Ø 12.42 x 1.78	
3f	Protection seal	1	01026521	
4	Indicator plug	1	T2H	T2V
-	Indicator	1	See order table	

# Ordering information FHA 051

## Filter assembly

### FHA 051

Example: FHA051

## Filter element

### HP 050

Example: HP050

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7<sub>a</sub></b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2</b>	<b>B</b>	<b>A</b>	<b>C</b>	<b>A10</b>	<b>N</b>	<b>P01</b>
<b>1</b>	<b>5</b>	<b>3</b>	<b>6</b>	<b>7<sub>b</sub></b>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>2</b>	<b>A10</b>	<b>A</b>	<b>N</b>	<b>P01</b>		

## 1 - Filter lengths

<b>1</b>
<b>2</b>
<b>3</b>
<b>4</b>
<b>5</b>

## 2 - Bypass valve

<b>S</b>	Without bypass
<b>B</b>	With bypass
<b>D</b>	With bypass + check valve*
<b>V</b>	With Reverse Flow*
<b>Z</b>	With Reverse Flow + bypass*
<b>T</b>	Without bypass + check valve*

\*Reduced cross-section oilways

## 3 - Seals

<b>A</b>	NBR
<b>V</b>	FPM

## 4 - Threaded connections

<b>A</b>	M18x1.5 ISO 6149
<b>B</b>	M22x1.5 ISO 6149
<b>C</b>	G 1/2"
<b>D</b>	G 3/4"
<b>E</b>	1/2" NPT
<b>F</b>	3/4" NPT
<b>G</b>	SAE 8 (3/4" - 16 UNF)
<b>H</b>	SAE 12 (1 1/16" - 12 UN)

## 5 - Filter elements

<b>A03</b>	Inorganic microfibre 3 µ
<b>A06</b>	Inorganic microfibre 6 µ
<b>A10</b>	Inorganic microfibre 10 µ
<b>A16</b>	Inorganic microfibre 16 µ
<b>A25</b>	Inorganic microfibre 25 µ
<b>M25</b>	Stainless steel mesh 25 µ (style N only)

β<sub>x</sub> (c) ≥ 1000  
see page 10

## 6 - Filter elements collapse pressure

<b>N</b>	20 bar
<b>R</b>	20 bar (Filter with reverse flow + bypass)
<b>S</b>	210 bar

## 7 - Options

### a) Filter

<b>P01</b>	Standard threaded connection for indicator
<b>P02</b>	Without threaded connection for indicator
<b>P03</b>	Threaded connection for 90° indicator
<b>Pxx</b>	Customer request

### b) Filter element

<b>P01</b>	MP Filtri standard
<b>Pxx</b>	Customer request

DIFFERENTIAL INDICATORS (see page 15)

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