

FHM series

Maximum pressure up to 320 bar - Flow rate up to 450 l/min



The correct filter sizing have to be based on the variable pressure drop depending by the application. For example, for the return filter the pressure drop have to be in the range 0.4 - 0.6 bar.

The pressure drop calculation is performed by adding together the value of the housing with the value of the filter element. The pressure drop in the housing is proportional to the fluid density (kg/dm³); all the graphs in the catalogue are referred to mineral oil with density of 0.86 kg/dm³.

The filter element pressure drop is proportional to its viscosity (mm²/s), the corrective factor Y is related to an oil viscosity different than 30 mm²/s.

Sizing data for single cartridge, head at top

Δp_c = Filter housing pressure drop [bar]

Δp_e = Filter element pressure drop [bar]

Y = Multiplication factor Y (see correspondent table), depending on the filter element size, on the filter element lenght and on the filter media

Q = flow rate (l/min)

V1 reference viscosity = 30 mm²/s (cSt)

V2 = operating viscosity in mm²/s (cSt)

$\Delta p_e = Y : 1000 \times Q \times (V2/V1)$

$\Delta p_{Tot.} = \Delta p_c + \Delta p_e$

Calculation examples with HLP Mineral oil Variation in viscosity

Application data:

Top tank return filter

Filter with in-line connections

Pressure Pmax = 10 bar

Flow rate Q = 120 l/min

Viscosity V2 = 46 mm²/s (cSt)

Oil viscosity = 0.86 kg/dm³

Required filtration efficiency = 25 µm with absolute filtration

With bypass valve and 1 1/4" inlet connection

From the working pressure and the flow rate we understand it should be possible using the following top tank return filter series: MPT, MPH and FRI. Let's proceed with MPT series.

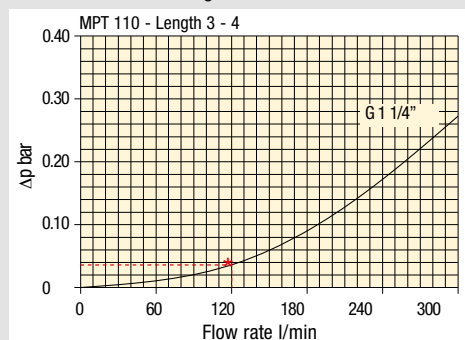
The size 20 doesn't achieve the required flow rate, therefore we have to consider the size 100. The final version of size 100 (101, 104, 110, 120 and 114) will be then defined in function of the mounting characteristics.

$\Delta p_c = 0.03 \text{ bar}$ (★ see graphic below, considering size 100 with the max available lenght to get the lowest pressure drop)

$\Delta p_e = (2.0 : 1000) \times 120 \times (46/30) = 0.37 \text{ bar}$

$\Delta p_{Tot.} = 0.03 + 0.37 = 0.4 \text{ bar}$

The selection is correct because the total pressure drop value is inside the admissible range for top tank return filters. It is of course possible trying to find a different solution, according to the mounting position or to other commercial need, repeating the previous steps while using a different series or lenght.



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.

Corrective factor Y, to be used for the filter element pressure drop calculation. The values depend to the filter size and lenght and to the filter media.

Reference viscosity 30 mm²/s

Return filters

| Filter element | Absolute filtration H Series | | | | | Nominal filtration N Series | | | |
|-------------------|---------------------------------|-------|-------|-------|-------|--------------------------------|------|------|----------------|
| | Type | A03 | A06 | A10 | A16 | A25 | P10 | P25 | M25 M60 M90 |
| MF 020 | 1 | 74.00 | 50.08 | 20.00 | 16.00 | 9.00 | 6.43 | 5.51 | 4.40 |
| | 2 | 29.20 | 24.12 | 8.00 | 7.22 | 5.00 | 3.33 | 2.85 | 2.00 |
| | 3 | 22.00 | 19.00 | 6.56 | 5.33 | 4.33 | 1.68 | 1.44 | 1.30 |
| MF 030 MFX 030 | 1 | 74.00 | 50.08 | 20.00 | 16.00 | 9.00 | 6.43 | 5.51 | 3.40 |
| MF 100 MFX 100 | 1 | 28.20 | 24.40 | 8.67 | 8.17 | 6.88 | 4.62 | 3.96 | 1.25 |
| | 2 | 17.33 | 12.50 | 6.86 | 5.70 | 4.00 | 3.05 | 2.47 | 1.10 |
| | 3 | 10.25 | 9.00 | 3.65 | 3.33 | 2.50 | 1.63 | 1.32 | 0.96 |
| | 4 | 6.10 | 5.40 | 2.30 | 2.20 | 2.00 | 1.19 | 0.96 | 0.82 |
| MF 180 MFX 180 | 1 | 3.67 | 3.05 | 1.64 | 1.56 | 1.24 | 1.18 | 1.06 | 0.26 |
| | 2 | 1.69 | 1.37 | 0.68 | 0.54 | 0.51 | 0.43 | 0.39 | 0.12 |
| MF 190 MFX 190 | 2 | 1.69 | 1.37 | 0.60 | 0.49 | 0.44 | 0.35 | 0.31 | 0.11 |
| MF 400 MFX 400 | 1 | 3.20 | 2.75 | 1.39 | 1.33 | 1.06 | 0.96 | 0.87 | 0.22 |
| | 2 | 2.00 | 1.87 | 0.88 | 0.85 | 0.55 | 0.49 | 0.45 | 0.13 |
| | 3 | 1.90 | 1.60 | 0.63 | 0.51 | 0.49 | 0.39 | 0.35 | 0.11 |
| MF 750 MFX 750 | 1 | 1.08 | 0.84 | 0.49 | 0.36 | 0.26 | 0.21 | 0.19 | 0.06 |
| CU 025 | | 78.00 | 48.00 | 28.00 | 24.00 | 9.33 | 9.33 | 8.51 | 1.25 |
| CU 040 | | 25.88 | 20.88 | 10.44 | 10.00 | 3.78 | 3.78 | 3.30 | 1.25 |
| CU 100 | | 15.20 | 14.53 | 5.14 | 4.95 | 2.00 | 2.00 | 0.17 | 1.10 |
| CU 250 | | 3.25 | 2.55 | 1.55 | 1.35 | 0.71 | 0.71 | 0.59 | 0.25 |
| CU 630 | | 1.96 | 1.68 | 0.85 | 0.72 | 0.42 | 0.42 | 0.36 | 0.09 |
| CU 850 | | 1.06 | 0.84 | 0.42 | 0.33 | 0.17 | 0.17 | 0.13 | 0.04 |
| MR 100 | 1 | 19.00 | 17.00 | 6.90 | 6.30 | 4.60 | 2.94 | 2.52 | 1.60 |
| | 2 | 11.70 | 10.80 | 4.40 | 4.30 | 3.00 | 2.94 | 2.52 | 1.37 |
| | 3 | 7.80 | 6.87 | 3.70 | 3.10 | 2.70 | 2.14 | 1.84 | 1.34 |
| | 4 | 5.50 | 4.97 | 2.60 | 2.40 | 2.18 | 1.72 | 1.47 | 1.34 |
| | 5 | 4.20 | 3.84 | 2.36 | 2.15 | 1.90 | 1.60 | 1.37 | 1.34 |
| MR 250 | 1 | 5.35 | 4.85 | 2.32 | 1.92 | 1.50 | 1.38 | 1.20 | 0.15 |
| | 2 | 4.00 | 3.28 | 1.44 | 1.10 | 1.07 | 0.96 | 0.83 | 0.13 |
| | 3 | 2.60 | 2.20 | 1.08 | 1.00 | 0.86 | 0.77 | 0.64 | 0.12 |
| | 4 | 1.84 | 1.56 | 0.68 | 0.56 | 0.44 | 0.37 | 0.23 | 0.11 |
| MR 630 | 1 | 3.10 | 2.48 | 1.32 | 1.14 | 0.92 | 0.83 | 0.73 | 0.09 |
| | 2 | 2.06 | 1.92 | 0.82 | 0.76 | 0.38 | 0.33 | 0.27 | 0.08 |
| | 3 | 1.48 | 1.30 | 0.60 | 0.56 | 0.26 | 0.22 | 0.17 | 0.08 |
| | 4 | 1.30 | 1.20 | 0.48 | 0.40 | 0.25 | 0.21 | 0.16 | 0.08 |
| | 5 | 0.74 | 0.65 | 0.30 | 0.28 | 0.13 | 0.10 | 0.08 | 0.04 |
| MR 850 | 1 | 0.60 | 0.43 | 0.34 | 0.25 | 0.13 | 0.12 | 0.09 | 0.03 |
| | 2 | 0.37 | 0.26 | 0.23 | 0.21 | 0.11 | 0.08 | 0.07 | 0.03 |
| | 3 | 0.27 | 0.18 | 0.17 | 0.17 | 0.05 | 0.04 | 0.04 | 0.02 |
| | 4 | 0.23 | 0.16 | 0.13 | 0.12 | 0.04 | 0.03 | 0.03 | 0.02 |

Corrective factor Y, to be used for the filter element pressure drop calculation.
The values depend to the filter size and lenght and to the filter media.

Reference viscosity 30 mm²/s

Suction filters

| Filter element | Nominal filtration N Series | |
|----------------|--------------------------------|-----|
| | P10 | P25 |
| SF 250 | 65 | 21 |

Return / Suction filters

| Filter element | Absolute filtration | | | |
|----------------|---------------------|------|------|------|
| | A10 | A16 | A25 | |
| RSX 116 | 1 | 5.12 | 4.33 | 3.85 |
| | 2 | 2.22 | 1.87 | 1.22 |
| RSX 165 | 1 | 2.06 | 1.75 | 1.46 |
| | 2 | 1.24 | 1.05 | 0.96 |
| | 3 | 0.94 | 0.86 | 0.61 |

Low & Medium pressure filters

| Filter element | Type | Absolute filtration N-W Series | | | | | Nominal filtration N Series | | |
|----------------|---------------|-----------------------------------|-------|------|------|------|--------------------------------|------|------|
| | | A03 | A06 | A10 | A16 | A25 | P10 | P25 | M25 |
| CU 110 | 1 | 16.25 | 15.16 | 8.75 | 8.14 | 5.87 | 2.86 | 2.65 | 0.14 |
| | 2 | 12.62 | 10.44 | 6.11 | 6.02 | 4.15 | 1.60 | 1.49 | 0.12 |
| | 3 | 8.57 | 7.95 | 5.07 | 4.07 | 2.40 | 1.24 | 1.15 | 0.11 |
| | 4 | 5.76 | 4.05 | 2.80 | 2.36 | 1.14 | 0.91 | 0.85 | 0.05 |
| CU 210 | 1 | 5.30 | 4.80 | 2.00 | 1.66 | 1.32 | 0.56 | 0.43 | 0.12 |
| | 2 | 3.44 | 2.95 | 1.24 | 1.09 | 0.70 | 0.42 | 0.35 | 0.09 |
| | 3 | 2.40 | 1.70 | 0.94 | 0.84 | 0.54 | 0.33 | 0.23 | 0.05 |
| DN | 016 | 7.95 | 7.20 | 3.00 | 2.49 | 1.98 | 0.84 | 0.65 | 0.18 |
| | 025 | 5.00 | 4.53 | 1.89 | 1.57 | 1.25 | 0.53 | 0.41 | 0.11 |
| | 040 | 3.13 | 2.66 | 1.12 | 0.98 | 0.63 | 0.38 | 0.32 | 0.08 |
| CU 400 | 2 | 3.13 | 2.55 | 1.46 | 1.22 | 0.78 | 0.75 | 0.64 | 0.19 |
| | 3 | 2.15 | 1.70 | 0.94 | 0.78 | 0.50 | 0.40 | 0.34 | 0.10 |
| | 4 | 1.60 | 1.28 | 0.71 | 0.61 | 0.40 | 0.34 | 0.27 | 0.08 |
| | 5 | 1.00 | 0.83 | 0.47 | 0.34 | 0.20 | 0.24 | 0.19 | 0.06 |
| | 6 | 0.82 | 0.58 | 0.30 | 0.27 | 0.17 | 0.22 | 0.18 | 0.05 |
| | CU 900 | 1 | 0.86 | 0.63 | 0.32 | 0.30 | 0.21 | - | - |
| CU 950 | 2 | 1.03 | 0.80 | 0.59 | 0.40 | 0.26 | - | - | 0.05 |
| | 3 | 0.44 | 0.40 | 0.27 | 0.18 | 0.15 | - | - | 0.02 |
| MR 630 | 7 | 0.88 | 0.78 | 0.36 | 0.34 | 0.16 | 0.12 | 0.96 | 0.47 |

FILTER SIZING Corrective factor

Corrective factor **Y**, to be used for the filter element pressure drop calculation.
The values depend to the filter size and lenght and to the filter media.

Reference viscosity 30 mm²/s

High pressure filters

| Filter element | Absolute filtration N - R Series | | | | | Nominal filtration N Series | |
|----------------|-------------------------------------|--------|--------|--------|--------|--------------------------------|------|
| | Type | A03 | A06 | A10 | A16 | | A25 |
| HP 011 | 1 | 332.71 | 250.07 | 184.32 | 152.36 | 128.36 | - |
| | 2 | 220.28 | 165.56 | 74.08 | 59.13 | 37.05 | - |
| | 3 | 123.24 | 92.68 | 41.48 | 33.08 | 20.72 | - |
| | 4 | 77.76 | 58.52 | 28.37 | 22.67 | 16.17 | - |
| HP 039 | 1 | 70.66 | 53.20 | 25.77 | 20.57 | 14.67 | 4.90 |
| | 2 | 36.57 | 32.28 | 18.00 | 13.38 | 8.00 | 2.90 |
| | 3 | 26.57 | 23.27 | 12.46 | 8.80 | 5.58 | 2.20 |
| HP 050 | 1 | 31.75 | 30.30 | 13.16 | 12.3 | 7.29 | 1.60 |
| | 2 | 24.25 | 21.26 | 11.70 | 9.09 | 4.90 | 1.40 |
| | 3 | 17.37 | 16.25 | 8.90 | 7.18 | 3.63 | 1.25 |
| | 4 | 12.12 | 10.75 | 6.10 | 5.75 | 3.08 | 1.07 |
| | 5 | 7.00 | 6.56 | 3.60 | 3.10 | 2.25 | 0.80 |
| HP 065 | 1 | 58.50 | 43.46 | 23.16 | 19.66 | 10.71 | 1.28 |
| | 2 | 42.60 | 25.64 | 16.22 | 13.88 | 7.32 | 1.11 |
| | 3 | 20.50 | 15.88 | 8.18 | 6.81 | 3.91 | 0.58 |
| HP 135 | 1 | 20.33 | 18.80 | 9.71 | 8.66 | 4.78 | 2.78 |
| | 2 | 11.14 | 10.16 | 6.60 | 6.38 | 2.22 | 1.11 |
| | 3 | 6.48 | 6.33 | 3.38 | 3.16 | 2.14 | 1.01 |
| HP 320 | 1 | 10.88 | 9.73 | 5.02 | 3.73 | 2.54 | 1.04 |
| | 2 | 4.40 | 3.83 | 1.75 | 1.48 | 0.88 | 0.71 |
| | 3 | 2.75 | 2.11 | 1.05 | 0.87 | 0.77 | 0.61 |
| | 4 | 2.12 | 1.77 | 0.98 | 0.78 | 0.55 | 0.47 |
| HP 500 | 1 | 4.44 | 3.67 | 2.30 | 2.10 | 1.65 | 0.15 |
| | 2 | 3.37 | 2.77 | 1.78 | 1.68 | 1.24 | 0.10 |
| | 3 | 2.22 | 1.98 | 1.11 | 1.09 | 0.75 | 0.08 |
| | 4 | 1.81 | 1.33 | 0.93 | 0.86 | 0.68 | 0.05 |
| | 5 | 1.33 | 1.15 | 0.77 | 0.68 | 0.48 | 0.04 |

| Filter element | Absolute filtration N Series | | | | | Nominal filtration N Series | |
|----------------|---------------------------------|------|------|------|------|--------------------------------|------|
| | Type | A03 | A06 | A10 | A16 | | A25 |
| HF 320 | 1 | 3.65 | 2.95 | 2.80 | 1.80 | 0.90 | 0.38 |
| | 2 | 2.03 | 1.73 | 1.61 | 1.35 | 0.85 | 0.36 |
| | 3 | 1.84 | 1.42 | 1.32 | 1.22 | 0.80 | 0.35 |

Stainless steel high pressure filters

| Filter element | Absolute filtration N Series | | | | | |
|----------------|---------------------------------|--------|--------|--------|--------|--------|
| | Type | A03 | A06 | A10 | A16 | A25 |
| HP 011 | 1 | 332.71 | 250.07 | 184.32 | 152.36 | 128.36 |
| | 2 | 220.28 | 165.56 | 74.08 | 59.13 | 37.05 |
| | 3 | 123.24 | 92.68 | 41.48 | 33.08 | 20.72 |
| | 4 | 77.76 | 58.52 | 28.37 | 22.67 | 16.17 |
| HP 039 | 2 | 70.66 | 53.20 | 25.77 | 20.57 | 14.67 |
| | 3 | 36.57 | 32.28 | 18.00 | 13.38 | 8.00 |
| | 4 | 26.57 | 23.27 | 12.46 | 0.88 | 5.58 |
| | 1 | 31.75 | 30.30 | 13.16 | 12.3 | 7.29 |
| HP 050 | 2 | 24.25 | 21.26 | 11.70 | 9.09 | 4.90 |
| | 3 | 17.37 | 16.25 | 8.90 | 7.18 | 3.63 |
| | 4 | 12.12 | 10.75 | 6.10 | 5.75 | 3.08 |
| | 5 | 7.00 | 6.56 | 3.60 | 3.10 | 2.25 |
| | 1 | 20.33 | 18.80 | 9.71 | 8.66 | 4.78 |
| HP 135 | 2 | 11.14 | 10.16 | 6.60 | 6.38 | 2.22 |
| | 3 | 6.48 | 6.33 | 3.38 | 3.16 | 2.14 |

| Filter element | Absolute filtration H - U Series | | | | | |
|----------------|-------------------------------------|--------|--------|--------|--------|--------|
| | Type | A03 | A06 | A10 | A16 | A25 |
| HP 011 | 1 | 424.58 | 319.74 | 235.17 | 194.44 | 163.78 |
| | 2 | 281.06 | 211.25 | 94.53 | 75.45 | 47.26 |
| | 3 | 130.14 | 97.50 | 43.63 | 34.82 | 21.81 |
| | 4 | 109.39 | 82.25 | 36.79 | 29.37 | 18.40 |
| HP 039 | 2 | 70.66 | 53.20 | 25.77 | 20.57 | 14.67 |
| | 3 | 36.57 | 32.28 | 18.00 | 13.38 | 8.00 |
| | 4 | 26.57 | 23.27 | 12.46 | 8.80 | 5.58 |
| | 1 | 47.33 | 34.25 | 21.50 | 20.50 | 14.71 |
| HP 050 | 2 | 29.10 | 25.95 | 14.04 | 10.90 | 5.88 |
| | 3 | 20.85 | 19.50 | 10.68 | 8.61 | 4.36 |
| | 4 | 14.55 | 12.90 | 7.32 | 6.90 | 3.69 |
| | 5 | 9.86 | 9.34 | 6.40 | 4.80 | 2.50 |
| | 1 | 29.16 | 25.33 | 13.00 | 12.47 | 5.92 |
| HP 135 | 2 | 14.28 | 11.04 | 7.86 | 7.60 | 4.44 |
| | 3 | 8.96 | 7.46 | 4.89 | 4.16 | 3.07 |

Step 1 Select "FILTERS"



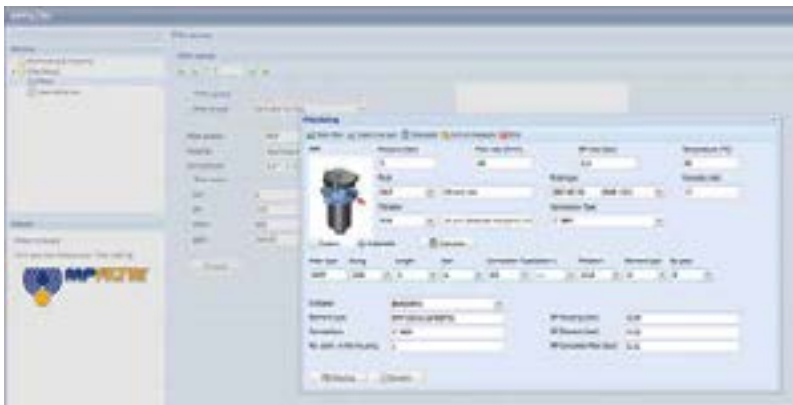
Step 2 Choose filter group (Return Filter, Pressure Filter, etc.)



Step 3 Choose filter type (MPF, MPT, etc.) in function of the max working pressure and the max flow rate



Step 4 Push "PROCEED"



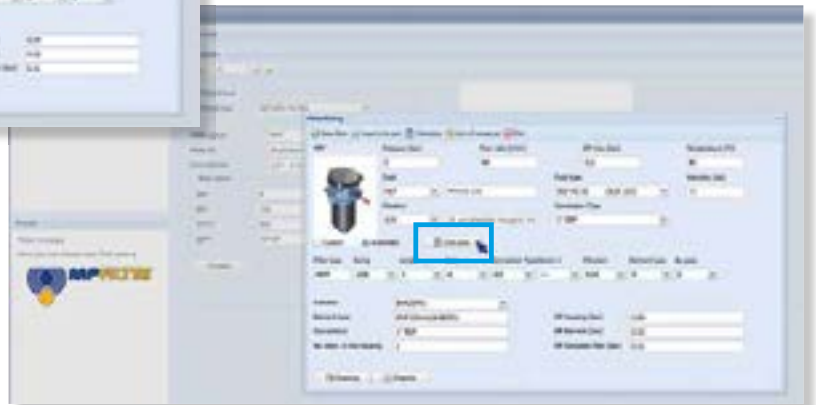
Step 5

Insert all application data to calculate the filter size following the sequence:

- working pressure
- working flow rate
- working pressure drop
- working temperature
- fluid material and fluid type
- filtration media
- connection type

Step 6

Push "CALCULATE" to have result; in case of any mistake, the system will advice which parameter is out of range to allow to modify/adjust the selection

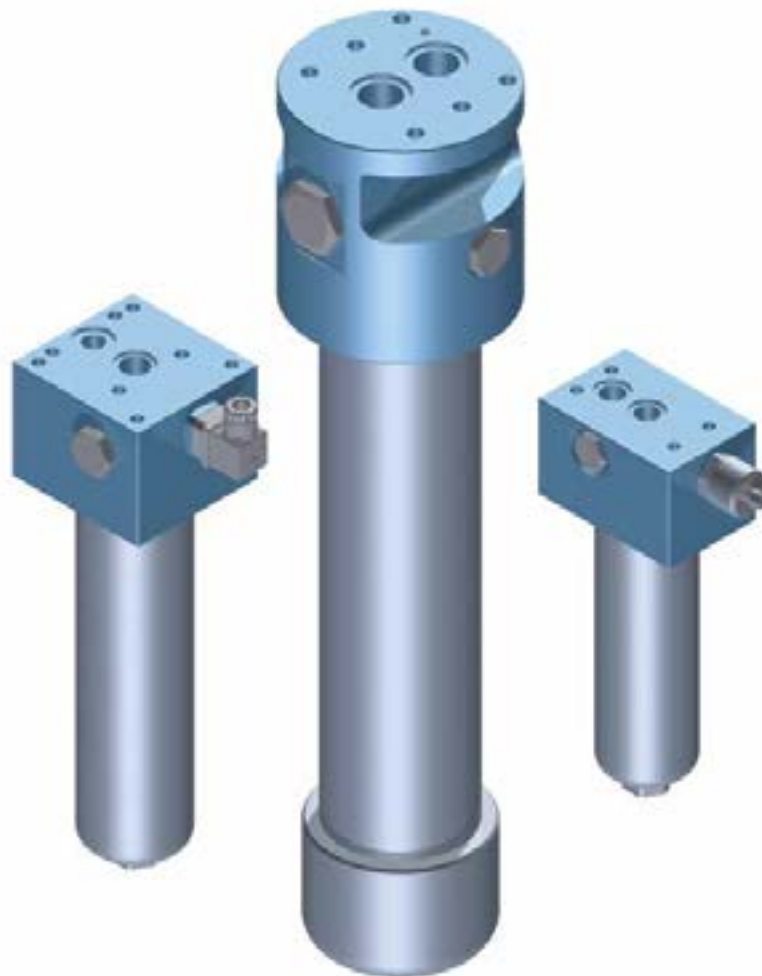


Step 7

Download PDF Datasheet "Report.aspx" pushing the button "Drawing"

FHM series

Maximum pressure up to 320 bar - Flow rate up to 450 l/min



Technical data

High Pressure filters Maximum pressure up to 320 bar - Flow rate up to 450 l/min

Filter housing materials

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

Pressure

- Working pressure: 32 MPa (320 bar)
- Test pressure: 48 MPa (480 bar)
- 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 600 kPa (6 bar)
- Other opening pressures on request.

Δp element type

- Microfibre filter elements - series N: 20 bar
- Microfibre filter elements - series H: 210 bar (not available for FHP 050 and FHP 500)
- Microfibre filter elements - series S: 210 bar (only for FHP050 and 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

Manifold mounting

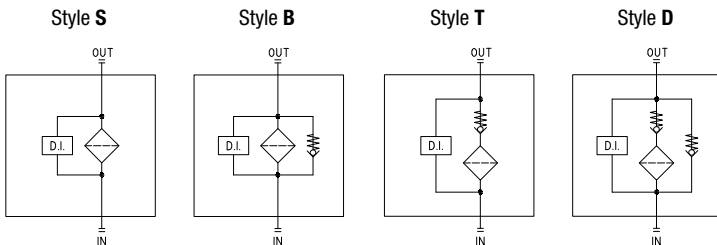
Note

FHM 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 |
| FHM 006 | | 2.17 | - | - | - | - | | 0.12 | - | - | - | - |
| FHM 007 | | - | 4.74 | 5.95 | - | - | | - | 0.30 | 0.50 | - | - |
| FHM 010 | | - | 4.74 | 5.95 | - | - | | - | 0.30 | 0.50 | - | - |
| FHM 050 | | 5.31 | 5.68 | 6.09 | 6.56 | 7.74 | | 0.29 | 0.38 | 0.48 | 0.60 | 0.89 |
| FHM 065 | | 5.47 | 5.83 | 7.04 | - | - | | 0.27 | 0.34 | 0.56 | - | - |
| FHM 135 | | 8.78 | 10.38 | 11.43 | - | - | | 0.49 | 0.82 | 1.03 | - | - |
| FHM 320 | | 19.80 | 21.93 | 24.22 | 26.70 | - | | 1.04 | 1.76 | 2.53 | 3.36 | - |
| FHM 500 | | 35.00 | 39.17 | 42.69 | 54.70 | 60.50 | | 1.63 | 2.35 | 2.96 | 5.11 | 6.44 |

Hydraulic symbols

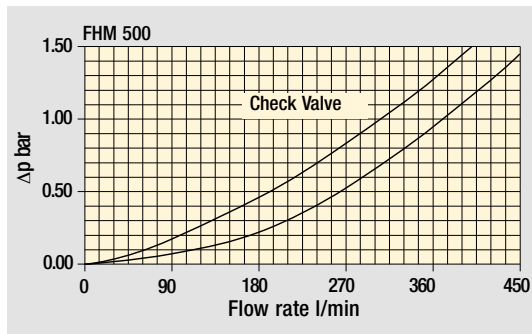
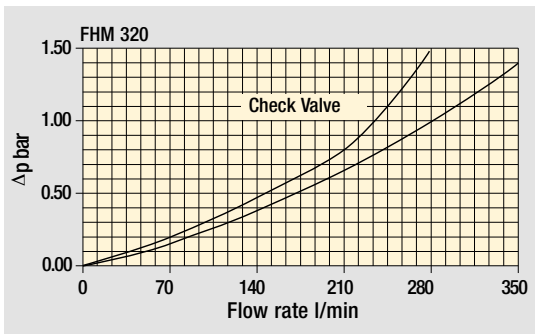
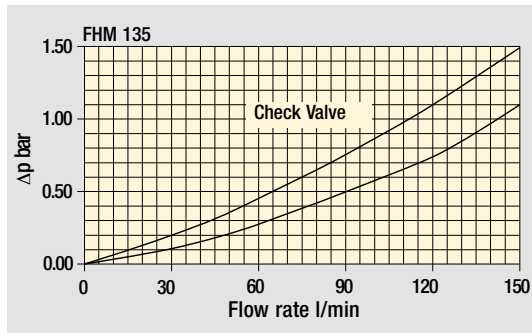
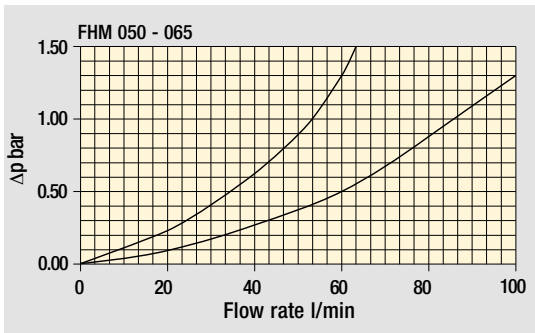
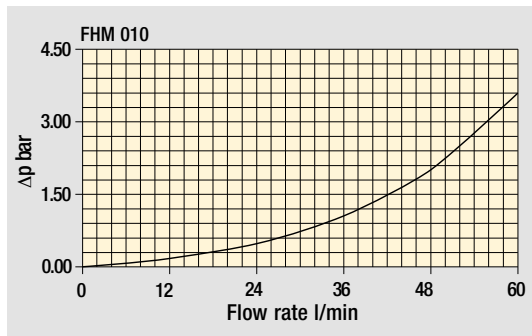
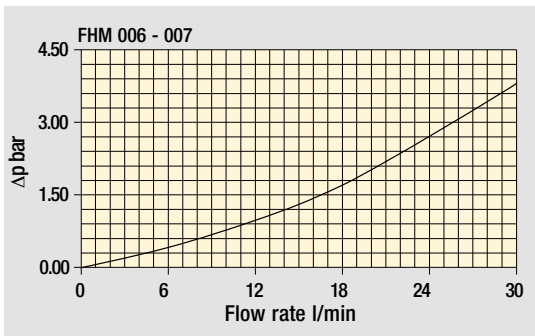


The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968.

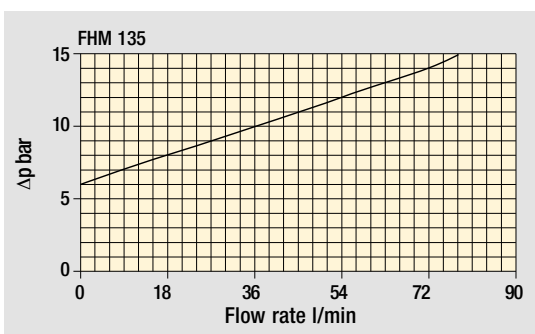
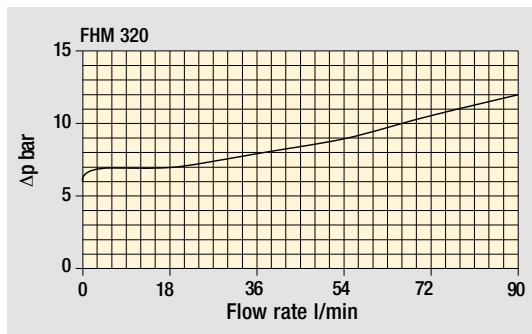
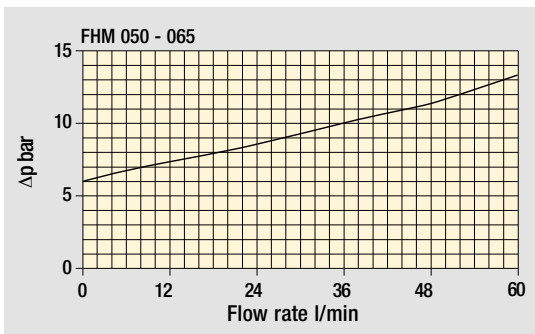
Δp varies proportionally with density.

Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop



Designation & Ordering code

COMPLETE FILTER

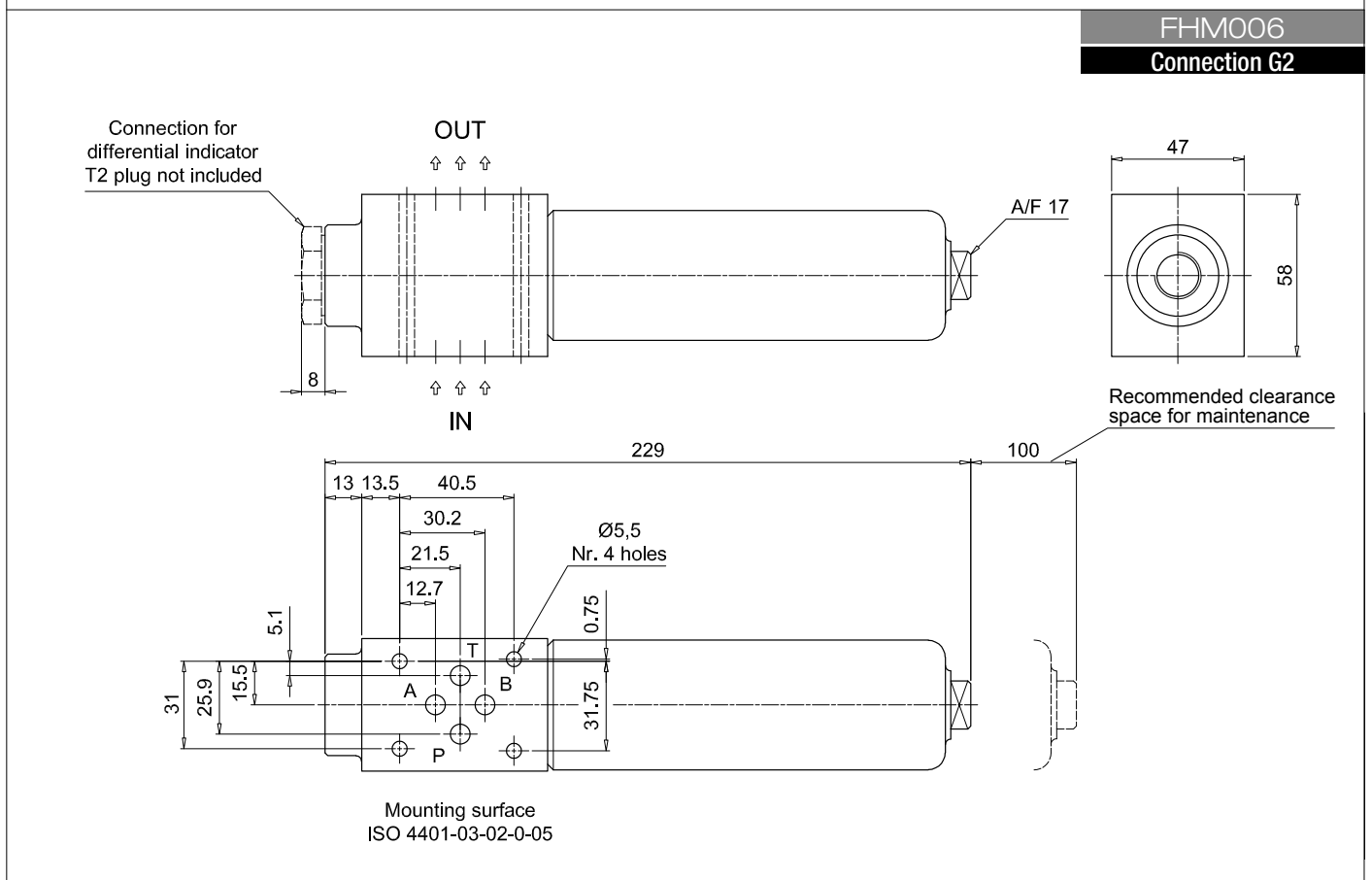
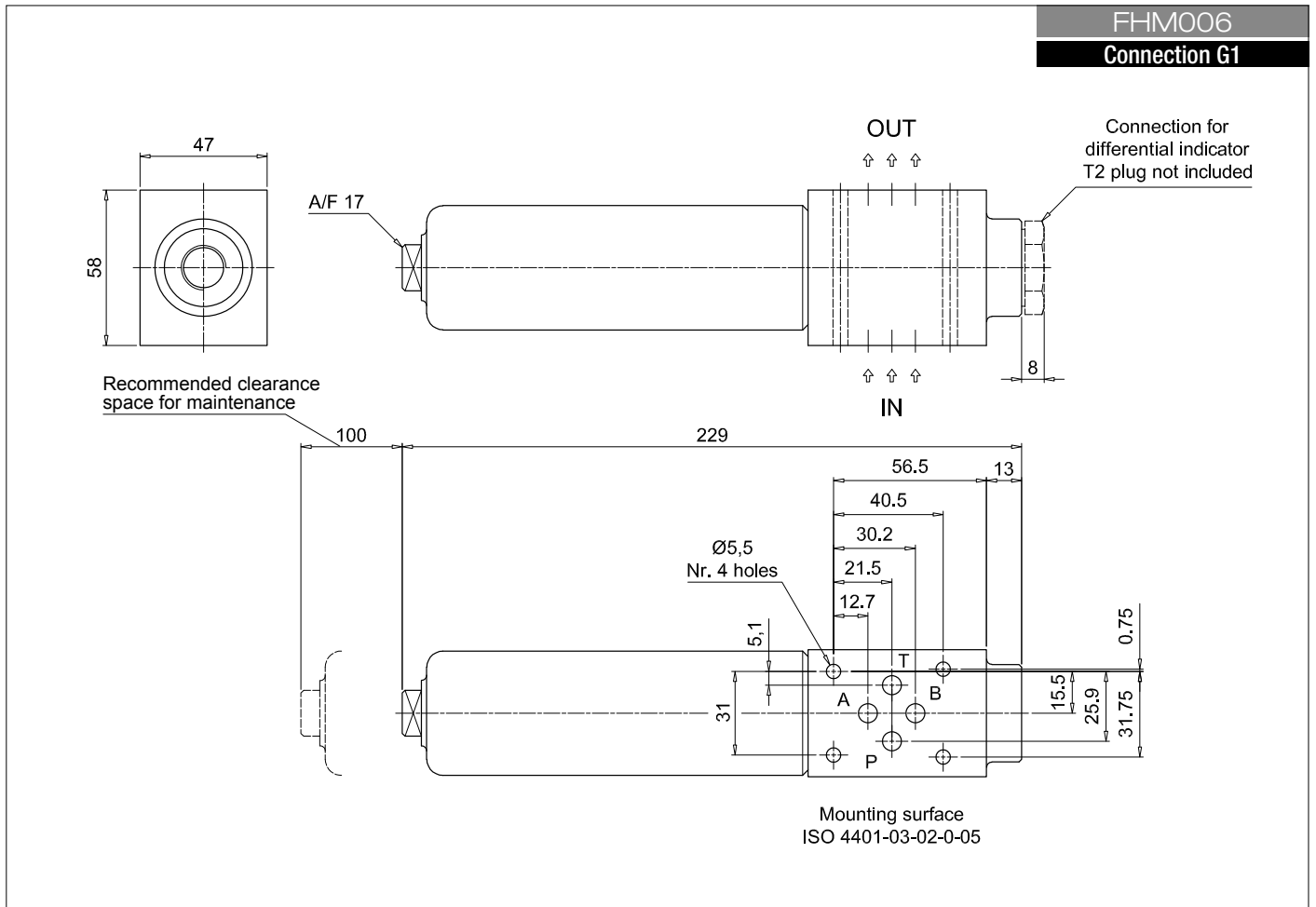
| Series and size | | | | Configuration example: FHM010 2 S V G1 A03 H P01 | | | | | | |
|----------------------------------|----------------------|--------|--------|--|-------|--|------------------------|--|--|--|
| FHM006 FHM007 FHM010 | | | | | | | | | | |
| Length | FHM006 | FHM007 | FHM010 | | | | | | | |
| 1 | • | | | | | | | | | |
| 2 | | • | • | | | | | | | |
| 3 | | • | • | | | | | | | |
| Valves | | | | | | | | | | |
| S Without bypass | | | | | | | | | | |
| Seals | | | | | | | | | | |
| A NBR | | | | | | | | | | |
| V FPM | | | | | | | | | | |
| Connections | | | | | | | | | | |
| G1 Manifold side "A" | | | | | | | | | | |
| G2 Manifold side "B" | | | | | | | | | | |
| Filtration rating (filter media) | | | | | | | | | | |
| 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 | | | | | |
| | | | | Element Δp | | | Execution | | | |
| | | | | H 210 bar | | | P01 MP Filtri standard | | | |
| | | | | | | | Pxx Customized | | | |

FILTER ELEMENT

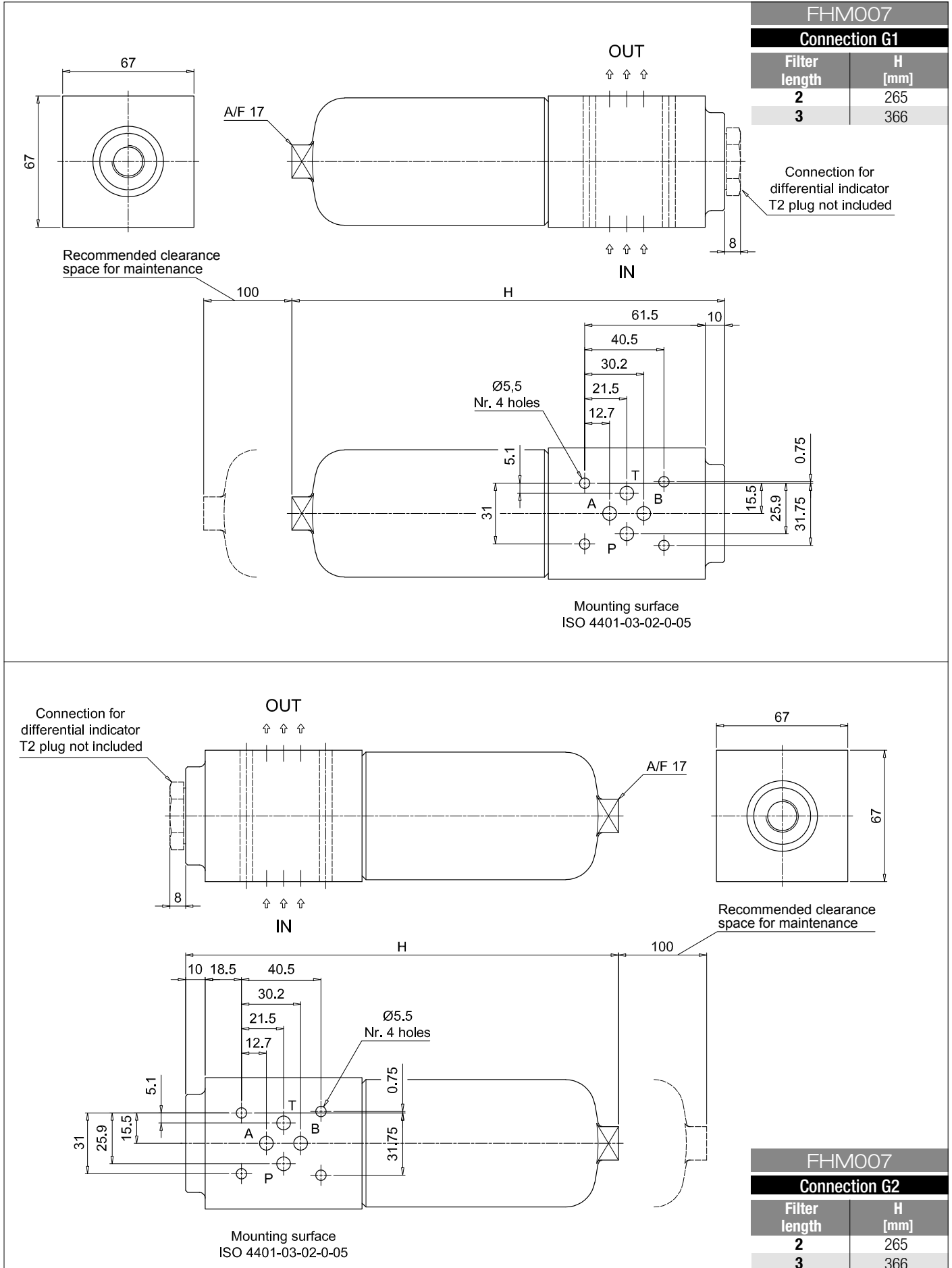
| Element series and size | | | | Configuration example: HP065 2 A03 A H P01 | | | | | | | |
|----------------------------------|----------------------|--------|--------|--|-------|------------|--|------------------------|--|--|--|
| FHM006 FHM007 FHM010 | | | | | | | | | | | |
| HP011 | • | | | | | | | | | | |
| HP065 | | • | • | | | | | | | | |
| Element length | FHM006 | FHM007 | FHM010 | | | | | | | | |
| 2 | | • | • | | | | | | | | |
| 3 | • | • | • | | | | | | | | |
| Filtration rating (filter media) | | | | | | | | | | | |
| 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 | | | | | | |
| | | | | Seals | | Element Δp | | Execution | | | |
| | | | | A NBR | | H 210 bar | | P01 MP Filtri standard | | | |
| | | | | V FPM | | | | Pxx Customized | | | |

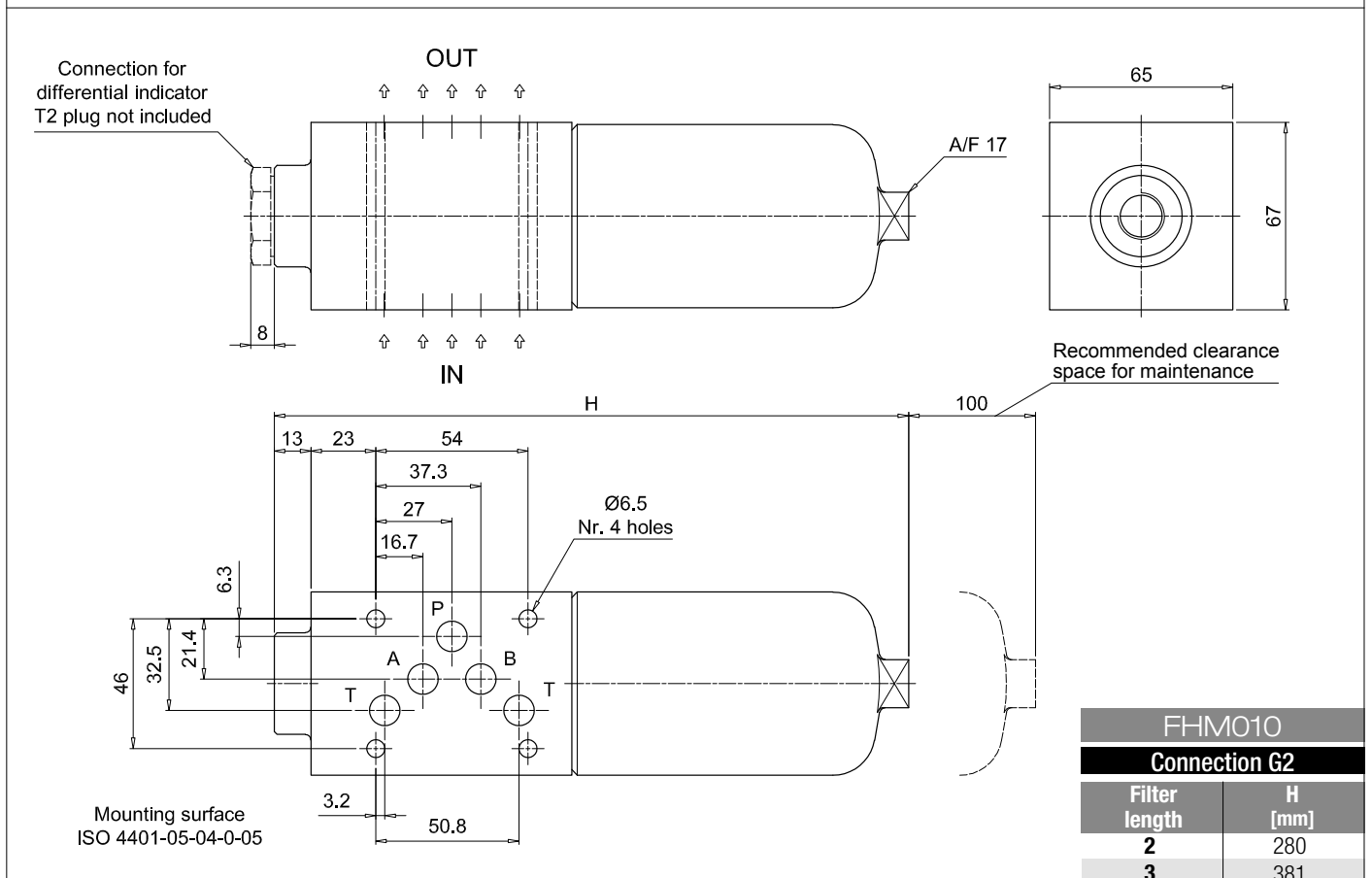
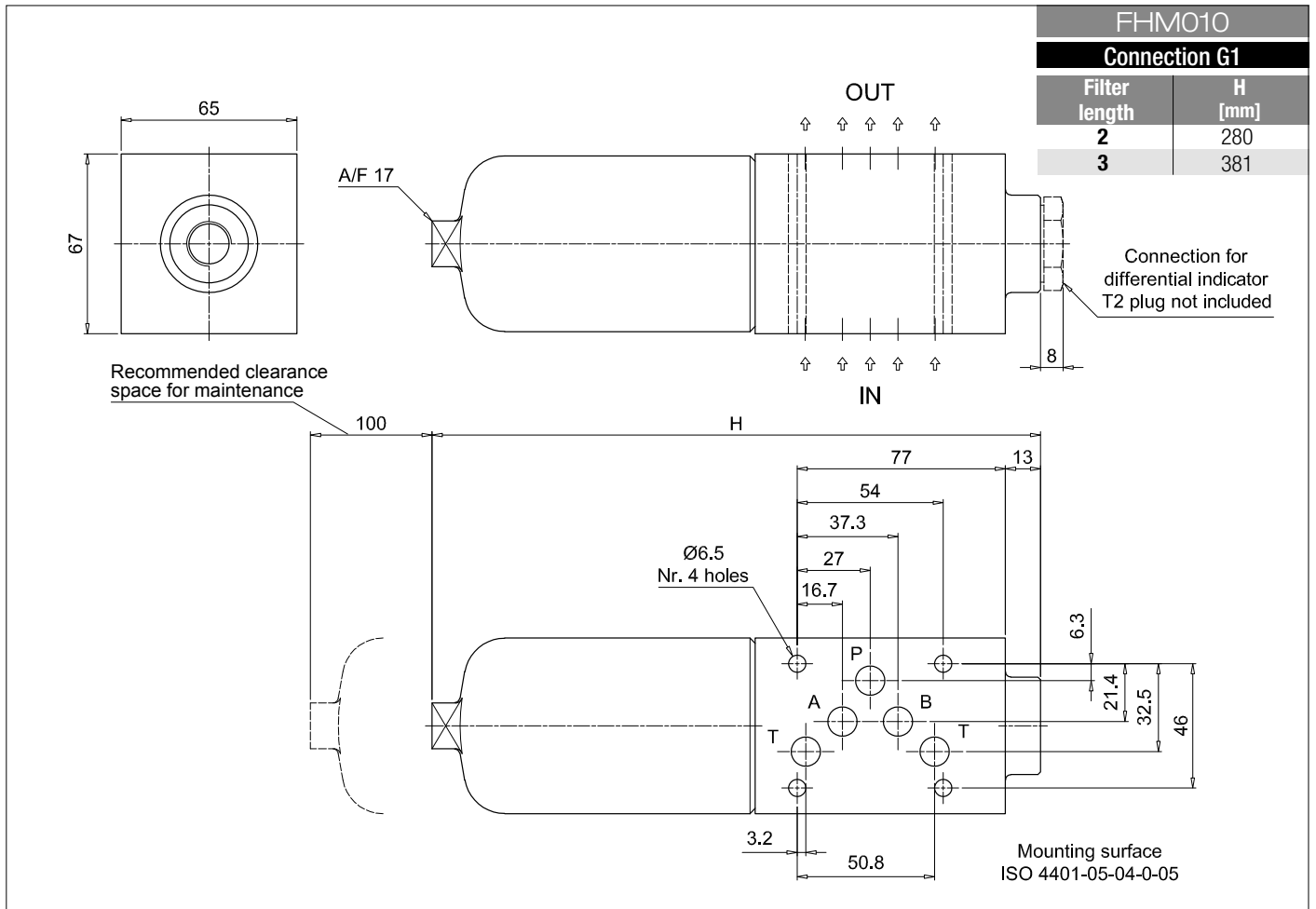
ACCESSORIES

| 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 | | | |

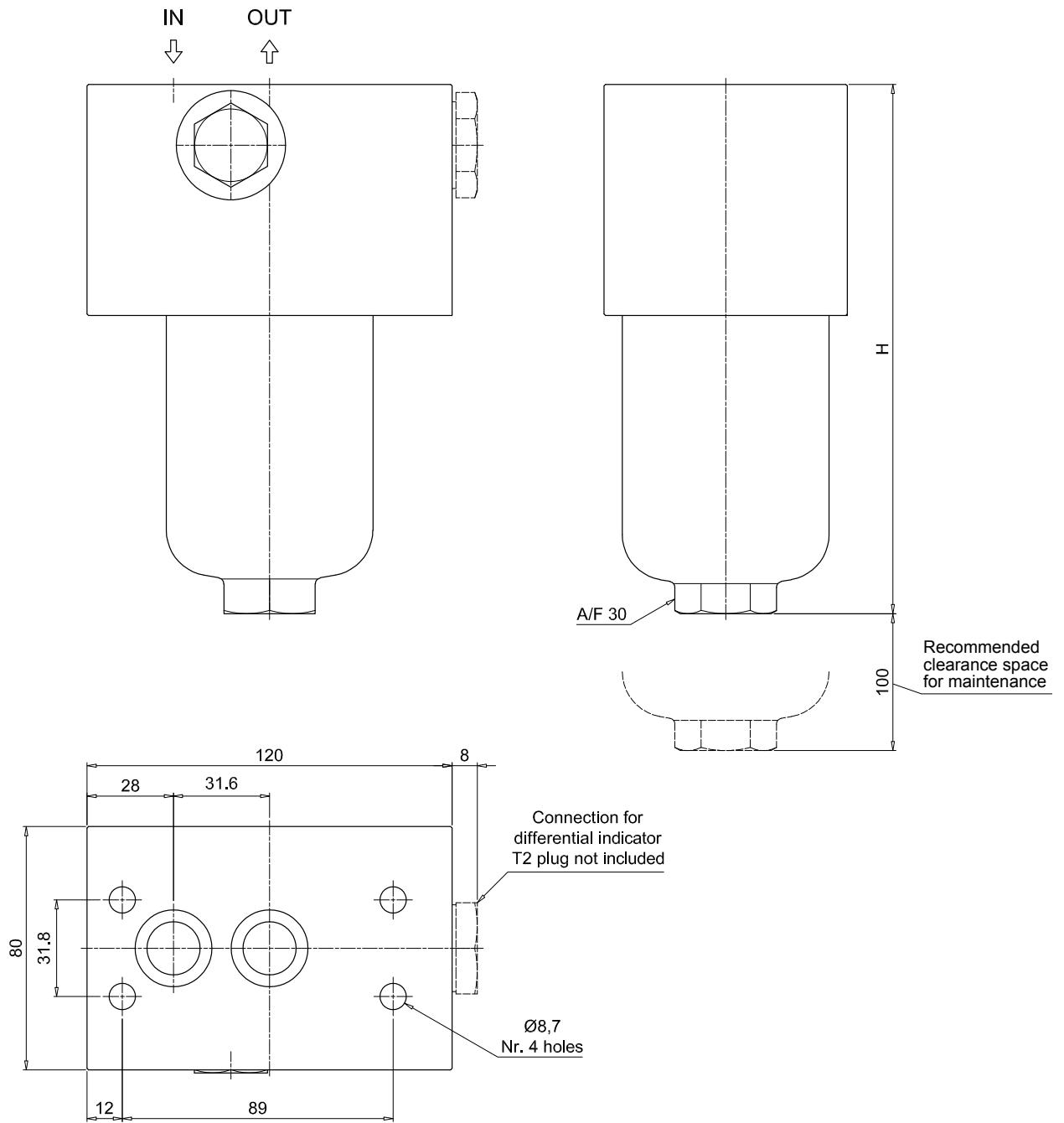


Dimensions



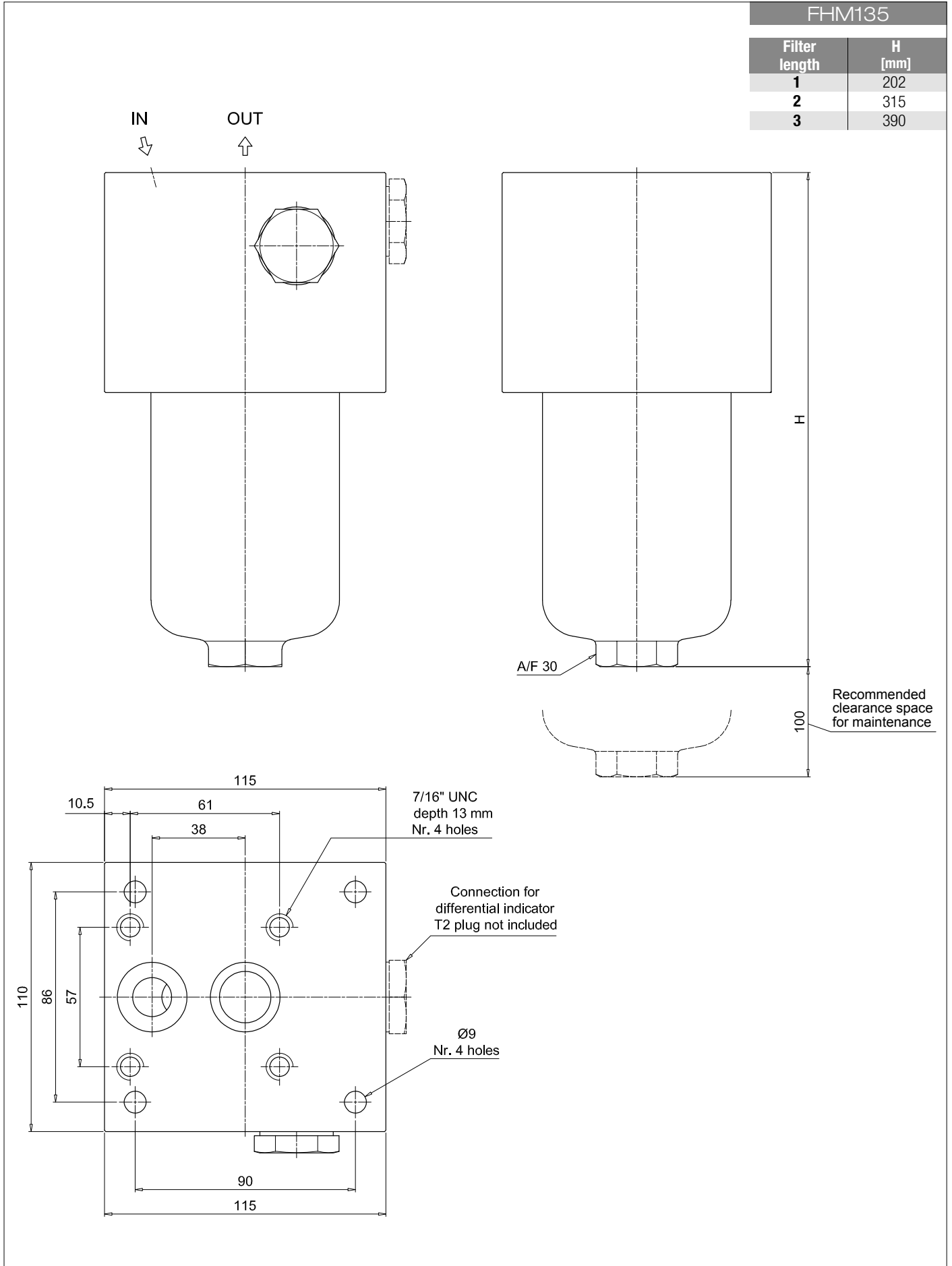


| FHM050 | | FHM065 | |
|---------------|--------|---------------|--------|
| Filter length | H [mm] | Filter length | H [mm] |
| 1 | 154 | 1 | 162 |
| 2 | 191 | 2 | 193 |
| 3 | 233 | 3 | 295 |
| 4 | 281 | | |
| 5 | 403 | | |



FHM FHM050 - FHM065 - FHM135

Dimensions



FHM FHM320 - FHM500

Designation & Ordering code

COMPLETE FILTER

Series and size **FHM320 | FHM500** Configuration example: **FHM320** **4** **D** **A** **F1** **A06** **N** **P01**

| Length | FHM320 | FHM500 |
|--------|--------|--------|
| 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 |

| Element Δp | Valves | | | | Execution | Filter length | | | | |
|--------------------|--------|---|---|---|---|---------------|---|---|---|---|
| | S | B | T | D | | 1 | 2 | 3 | 4 | 5 |
| N 20 bar | | • | | • | P01 MP Filtri standard | • | • | • | • | • |
| H 210 bar | • | | • | | P02 Maintenance from the bottom of the housing | | | | • | • |
| | | | | | Pxx Customized | | | | | |

FILTER ELEMENT

Element series and size **HP320 | HP500** Configuration example: **HP320** **4** **A06** **A** **N** **P01**

| Element length | HP320 | HP500 |
|----------------|-------|-------|
| 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 | Execution |
|--------------|--------------------|-------------------------------|
| A NBR | N 20 bar | P01 MP Filtri standard |
| V FPM | H 210 bar | Pxx Customized |

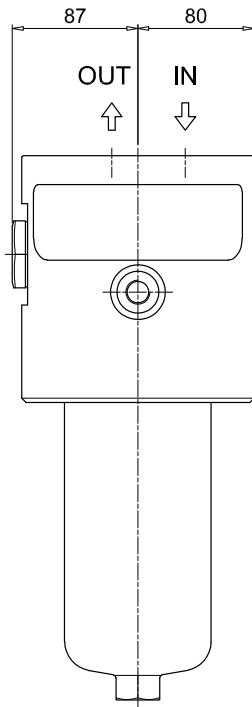
ACCESSORIES

| Differential indicators | page | Differential indicators | 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 | | |

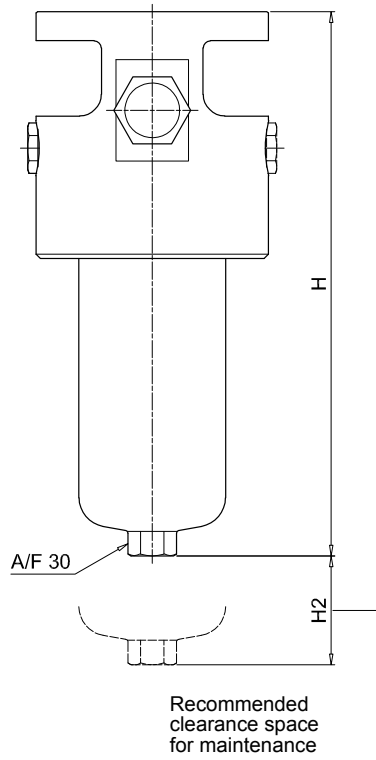
| Additional features | page |
|---------------------|------|
| T2 Plug | 521 |

FHM320

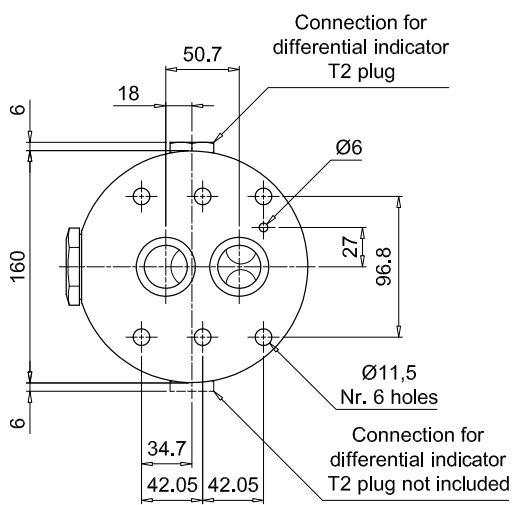
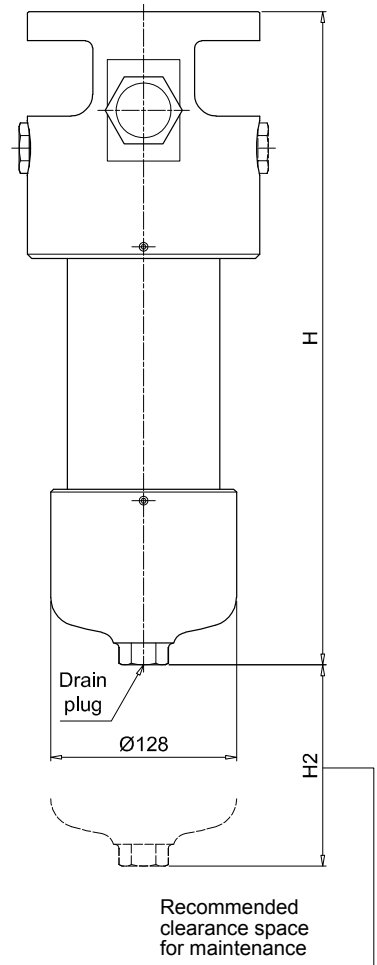
| Filter length | H [mm] | H2 [mm] | |
|---------------|--------|---------------|---------------|
| | | Execution P01 | Execution P02 |
| 1 | 293 | 150 | - |
| 2 | 416 | 150 | - |
| 3 | 548 | 150 | - |
| 4 | 702 | 150 | 550 |



Length 1 - 2 - 3



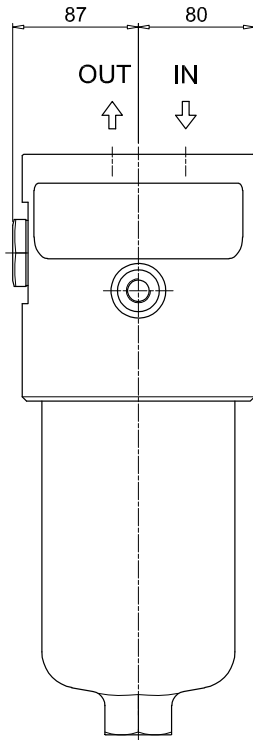
Length 4



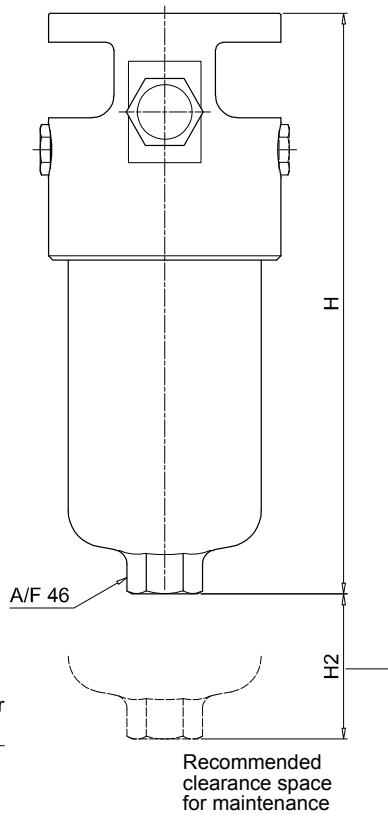
Dimensions

FHM500

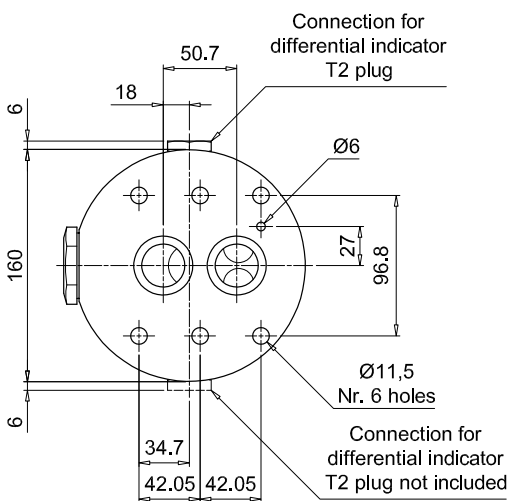
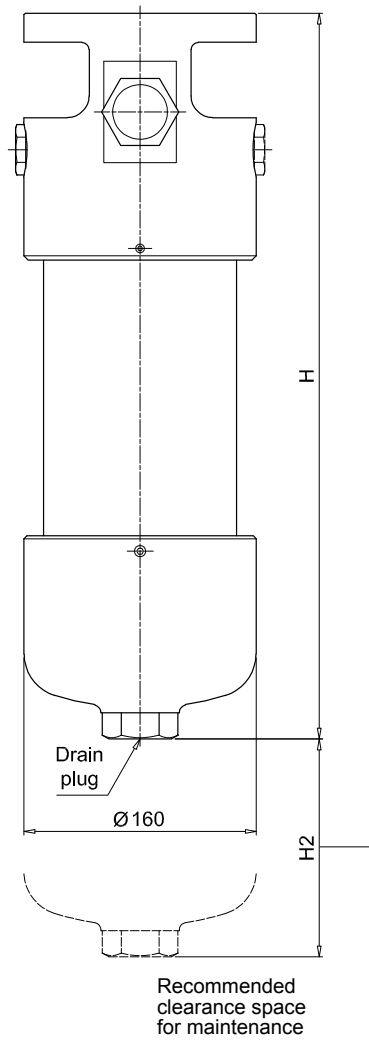
| Filter length | H [mm] | H2 [mm] | |
|---------------|--------|---------|-----|
| | | P01 | P02 |
| 1 | 355 | 150 | - |
| 2 | 445 | 150 | - |
| 3 | 521 | 150 | - |
| 4 | 679 | 150 | 480 |
| 5 | 845 | 150 | 650 |



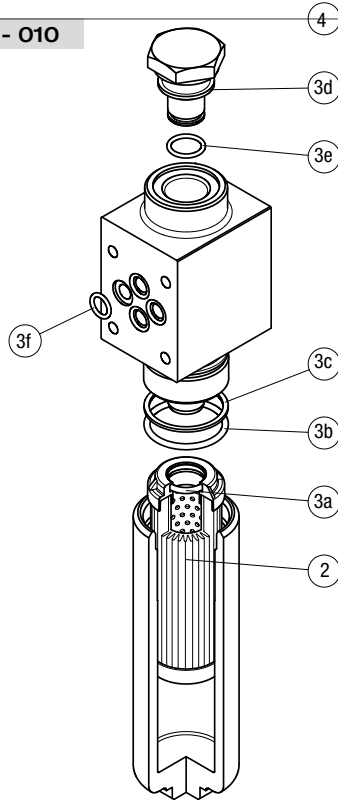
Length 1 - 2 - 3



Length 4 - 5

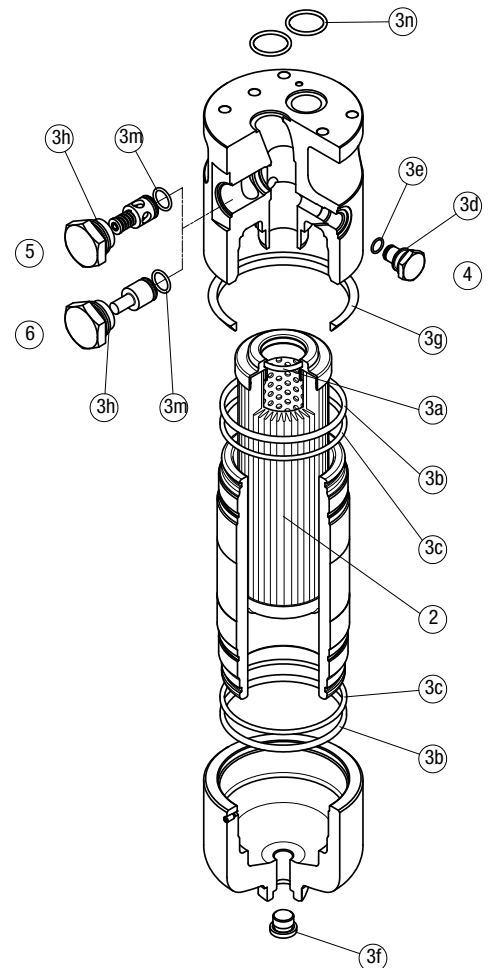


FHM 006 - 007 - 010



| Item: | Q.ty: 1 pc. 2 | Q.ty: 1 pc. 3 (3a ÷ 3f) | | Q.ty: 1 pc. 4 | |
|----------------|------------------|----------------------------|----------|---------------------------|-----|
| Filter series | Filter element | Seal Kit code number | | Indicator connection plug | |
| | | NBR | FPM | NBR | FPM |
| FHM 006 | See order table | 02050324 | 02050325 | | |
| FHM 007 | | 02050600 | 02050601 | T2H | T2V |
| FHM 010 | | 02050320 | 02050321 | | |

FHM 050 - 065 - 135 - 320 - 500



| Item: | Q.ty: 1 pc. 2 | Q.ty: 1 pc. 3 (3a ÷ 3m) | | Q.ty: 1 pc. 4 | | Q.ty: 1 pc. 5 | | Q.ty: 1 pc. 6 | |
|----------------|------------------|----------------------------|----------|---------------------------|-----|------------------|----------|---------------------|----------|
| Filter series | Filter element | Seal Kit code number | | Indicator connection plug | | Bypass assembly | | Non-bypass assembly | |
| | | NBR | FPM | NBR | FPM | NBR | FPM | NBR | FPM |
| FHM 050 | See order table | 02050410 | 02050411 | | | 02001400 | 02001401 | 02001402 | 02001403 |
| FHM 065 | | 02050268 | 02050279 | | | 02001400 | 02001401 | 02001402 | 02001403 |
| FHM 135 | | 02050271 | 02050282 | T2H | T2V | 02001404 | 02001405 | 02001406 | 02001407 |
| FHM 320 | | 02050275 | 02050286 | | | 02001408 | 02001409 | 02001410 | 02001411 |
| FHM 500 | | 02050332 | 02050333 | | | 02001408 | 02001409 | 02001410 | 02001411 |