

FPA-MDM

PRESSURE FILTERS



MATERIALS

Housing: Anodized aluminium alloy
Bypass valve: Brass
Seals: NBR Nitrile (FKM Fluoroelastomer - on request)
Indicator housing: Brass

PRESSURE

Max working: 11 MPa (110 bar)
Collapse, differential for the filter element (ISO 2941):
8 MPa (80 bar)

BYPASS VALVE

Setting: 600 kPa (6 bar) \pm 10%

WORKING TEMPERATURE

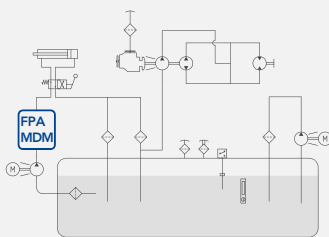
From -25° to +110° C

COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG
(according to ISO 6743/4)
For fluids different than the above mentioned,
please contact our Customer Service.



HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website.



ORDERING AND OPTION CHART

| F | P | A | COMPLETE FILTER FAMILY | | | FILTER ELEMENT FAMILY | E | P | A |
|---|---|---|--|----|----|-----------------------|---|---|---|
| | | | SIZE & LENGHT | 11 | 12 | SIZE & LENGHT | | | |
| | | | PORT TYPE | | | | | | |
| | | | B = BSP thread | B | B | | | | |
| | | | N = NPT thread * | N | N | | | | |
| | | | S = SAE thread * | S | S | | | | |
| | | | PORT SIZE | | | | | | |
| | | | 04 = 1/2" (N04 not available) | 04 | 04 | | | | |
| | | | BYPASS VALVE | | | | | | |
| | | | W = without | W | W | | | | |
| | | | C = 600 kPa (6 bar) | C | C | | | | |
| | | | SEALS | | | SEALS | | | |
| | | | N = NBR Nitrile | N | N | | | | |
| | | | F = FKM Fluoroelastomer | F | F | | | | |
| | | | FILTER MEDIA | | | FILTER MEDIA | | | |
| | | | FA = fibreglass 5 µm(c) β>1.000 | FA | FA | | | | |
| | | | FB = fibreglass 7 µm(c) β>1.000 | FB | FB | | | | |
| | | | FC = fibreglass 12 µm(c) β>1.000 | FC | FC | | | | |
| | | | FS = fibreglass 16 µm(c) β>1.000 | FS | FS | | | | |
| | | | FD = fibreglass 21 µm(c) β>1.000 | FD | FD | | | | |
| | | | FE = fibreglass 30 µm(c) β>1.000 | FE | FE | | | | |
| | | | CLOGGING INDICATOR** | | | | | | |
| | | | 03 = port, plugged | 03 | 03 | | | | |
| | | | 5E = visual differential 500 kPa (5 bar) | 5E | 5E | | | | |
| | | | 6E = electrical differential 500 kPa (5 bar) | 6E | 6E | | | | |
| | | | 7E = indicator 6E with LED | 7E | 7E | | | | |
| | | | T2 = elect. diff. 500 kPa (5 bar) with thermostat 30°C | T2 | T2 | | | | |
| X | X | | ACCESSORIES | | | | | | |
| | | | XX = no accessory available | XX | XX | | | | |

SPARE PARTS ELEMENTS

| FILTER HOUSING | | | | | | | | | | FILTER ELEMENT | | | | | CLOGGING INDICATOR | | | | |
|----------------|---|---|--|--|--|---|---|--|--|----------------|--|--|--|--|--------------------|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
| B | P | A | | | | 0 | 4 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |



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ORDERING AND OPTION CHART

| M | D | M | COMPLETE FILTER FAMILY | | | FILTER ELEMENT FAMILY | C | D | M |
|---|---|---|--|-----|-----|-----------------------|---|---|---|
| | | | SIZE & LENGHT | 101 | 102 | SIZE & LENGHT | | | |
| | | | FILTER MEDIA | | | FILTER MEDIA | | | |
| | | | FT = fibreglass 5 µm(c) β>1.000 | FT | FT | | | | |
| | | | FC = fibreglass 7 µm(c) β>1.000 | FC | FC | | | | |
| | | | FD = fibreglass 12 µm(c) β>1.000 | FD | FD | | | | |
| | | | FS = fibreglass 16 µm(c) β>1.000 | FS | FS | | | | |
| | | | FV = fibreglass 21 µm(c) β>1.000 | FV | FV | | | | |
| | | | SEALS | | | SEALS | | | |
| | | | 1 = NBR Nitrile | 1 | 1 | | | | |
| | | | 2 = FKM Fluoroelastomer | 2 | 2 | | | | |
| | | | BYPASS VALVE | | | | | | |
| | | | S = without | S | S | | | | |
| | | | C = 600 kPa (6 bar) | C | C | | | | |
| | | | PORT TYPE | | | | | | |
| | | | B = BSP thread | B | B | | | | |
| | | | N = NPT thread * | N | N | | | | |
| | | | S = SAE thread * | S | S | | | | |
| | | | PORT SIZE | | | | | | |
| | | | 3 = 1/2" (N3 not available) | 3 | 3 | | | | |
| | | | CLOGGING INDICATOR ** | | | | | | |
| | | | 03 = port, plugged | 03 | 03 | | | | |
| | | | 5E = visual differential 500 kPa (5 bar) | 5E | 5E | | | | |
| | | | 6E = electrical differential 500 kPa (5 bar) | 6E | 6E | | | | |
| | | | 7E = indicator 6E with LED | 7E | 7E | | | | |
| | | | T2 = elect. diff. 500 kPa (5 bar) with thermostat 30°C | T2 | T2 | | | | |
| X | X | | ACCESSORIES | | | | | | |
| | | | XX = no accessory available | XX | XX | | | | |

SPARE SEAL KIT

| | NBR | FKM |
|-----------------|------------|------------|
| FPA11 MDM101 | 521.0001.2 | 521.0062.2 |
| FPA12 MDM102 | 521.0001.2 | 521.0062.2 |

* Not standard version, please check availability with our Customer Service

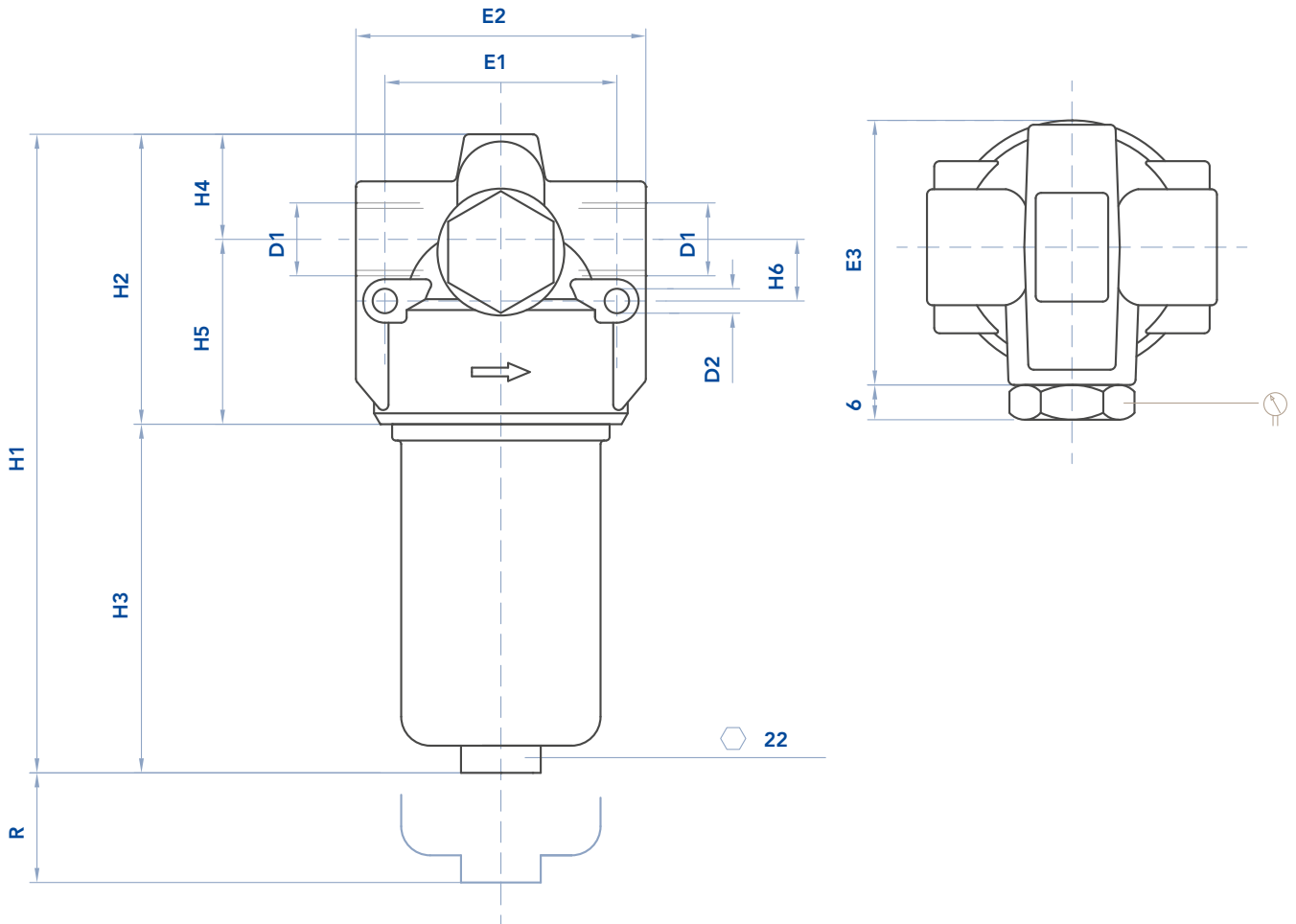
** When the filter is ordered with FKM seals, the first digit of the indicator code is a letter (please see Clogging Indicator Chapter for further details)

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PRESSURE FILTERS



INSTALLATION DRAWING



FILTER HOUSING

| | D1 | D2 | H1 | H2 | H3 | H4 | H5 | H6 | E1 | E2 | E3 | R | Kg |
|-----------------|------|-----|-----|----|-----|----|----|----|----|----|----|----|------|
| FPA11 MDM101 | 1/2" | 6,5 | 157 | 78 | 79 | 28 | 50 | 17 | 64 | 76 | 75 | 60 | 0,65 |
| FPA12 MDM102 | 1/2" | 6,5 | 244 | 78 | 166 | 28 | 50 | 17 | 64 | 76 | 75 | 60 | 0,85 |

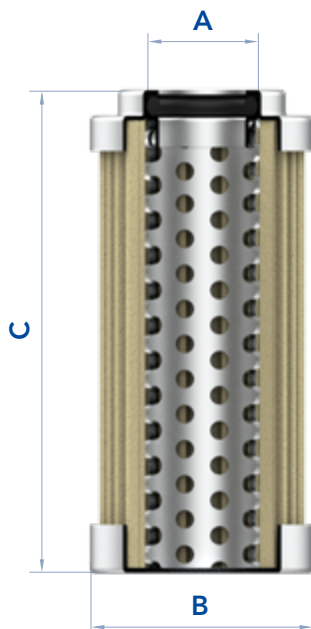


MAINTENANCE

The best time to change your filter element is just before it reaches its maximum dirt-holding capacity. For this reason, we recommend to monitor the pressure of the hydraulic oil flowing through the filter with a clogging indicator. When it is time to change the filter element, switch off the system before opening the filter housing and make sure there is no pressure in the filter. Unscrew the bowl and remove the dirty filter element. Replace it with an original UFI element, verifying the part number on the filter label or on the catalogue. Clean the bowl;

check the gaskets conditions and replace if necessary. Insert the clean element into his seat, handling with care and cleanliness. Screw the housing until it stops, with a tightening torque of 50 Nm +5/0. We recommend the stocking of a spare UFI filter element for timely replacement when required.

N.B. The used filter elements cannot be cleaned and are classified as "Dangerous waste material": they must be disposed according to the local laws by authorized Companies.



FILTER ELEMENT

| | | | | | AREA (cm ²) |
|-----------------|----|----|-----|------|-------------------------|
| | A | B | C | Kg | Media F+ |
| EPA11 CDM101 | 22 | 42 | 91 | 0,15 | 295 |
| EPA12 CDM102 | 22 | 42 | 179 | 0,25 | 600 |

The used filter elements cannot be cleaned and are classified as "Dangerous waste material". They must be disposed according to local laws by authorized Companies.

Verify that the Company you choose has the expertise and authorization to dispose this type of waste material.

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PRESSURE DROP CURVES (ΔP)

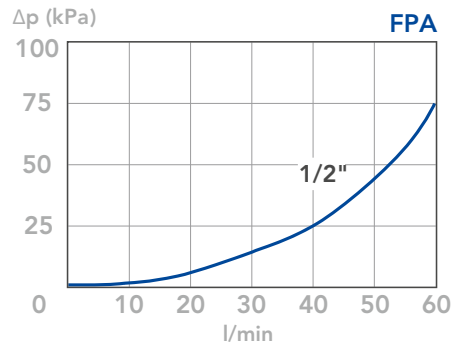
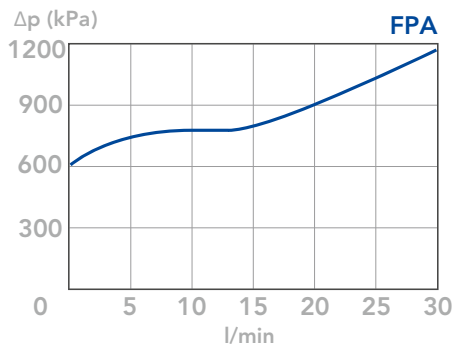
The “Assembly Pressure Drop (Δp)” is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow Rate and it must

be lower than 80 kPa (0,8 bar) and should never exceed 1/3 of the bypass valve setting.

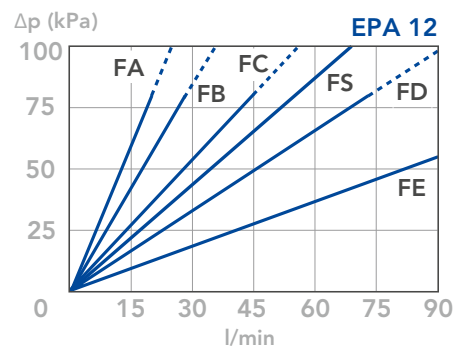
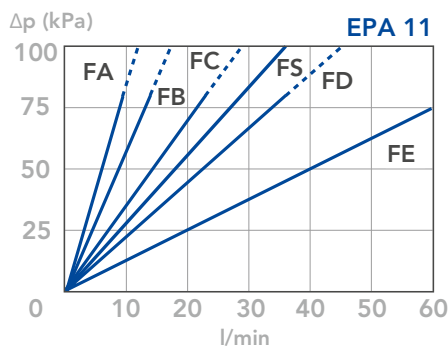
BYPASS VALVE PRESSURE DROP

When selecting the filter size, these curves must be taken into account if it is foreseen that any flow peak is to be absorbed by the bypass valve, it also must be of proper configuration to avoid pressure peaks. The valve pressure drop is directly proportional to fluid specific gravity.

FILTER HOUSING PRESSURE DROP
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP WITH F+ MEDIA
(depending both on the internal diameter of the element and on the filter media)



N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 Kg/dm³; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI HYDRAULIC DIVISION Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.