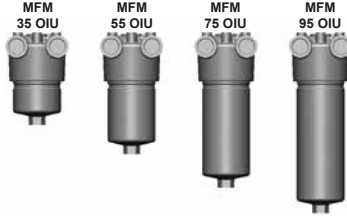




## Inline Filter MFM

### Inlet and Outlet on Same Side

up to 100 l/min, up to 280 bar



## 1. TECHNICAL SPECIFICATIONS

### 1.1 FILTER HOUSING

#### Construction

The filter housings are designed in accordance with international regulations. They consist of a filter head and a screw-in filter bowl.

Standard equipment:

- bypass valve
- without clogging indicator port (3 mounting holes)
- filters are supplied phosphated and primed

### 1.2 FILTER ELEMENTS

HYDAC filter elements are validated and their quality is constantly monitored according to the following standards:

- ISO 2941, ISO 2942, ISO 2943, ISO 3724, ISO 3968, ISO 11170, ISO 16889

### Contamination retention capacities in g

	Betamicon® (BN4HC)			
MFM	3 µm	5 µm	10 µm	20 µm
35	7.2	8.1	8.6	8.8
55	14.0	15.8	16.6	17.2
75	21.6	24.3	25.7	26.5
95	27.5	30.9	32.7	33.7

Filter elements are available with the following pressure stability values:

Betamicon® (BN4HC): 20 bar  
Other filtration ratings on request.

### 1.3 SEALS

Perbunan (=NBR)

### 1.4 INSTALLATION

Inline filter

### 1.5 SPECIAL MODELS AND ACCESSORIES

Connection for a clogging indicator in the head

### 1.6 FILTER SPECIFICATIONS

Nominal pressure	280 bar
Temperature range	-10 °C to +100 °C (-30 °C to -10 °C: p <sub>max</sub> = 140 bar)
Material of filter head	EN-GJS 400-15
Material of filter bowl	Cold extruded steel
Type of clogging indicator	VD (differential pressure measurement up to 420 bar operating pressure)
Pressure setting of the clogging indicator	5 bar (others on request)
Bypass cracking pressure	7 bar (others on request)

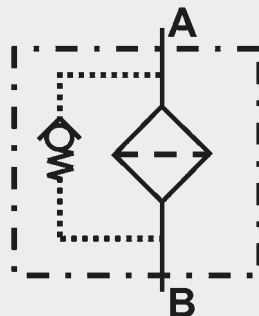
### 1.7 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

- Hydraulic oils H to HLPD DIN 51524
- Lubrication oils DIN 51517, API, ACEA, DIN 51515, ISO 6743
- Compressor oils DIN 51506
- Biodegradable operating fluids VDMA 24568 HETG, HEES, HEPG
- Operating fluids with high water content (> 50 % water content) on request

### 1.8 MAINTENANCE INSTRUCTIONS

- Filter housings must be earthed.
- When using electrical clogging indicators, the electrical power supply to the system must be switched off before removing the clogging indicator connector.

### Symbol for hydraulic systems



### 1.9 FILTER CALCULATION / SIZING

The total pressure drop of a filter at a certain flow rate Q is the sum of the housing Δp and the element Δp and is calculated as follows:

$$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}$$

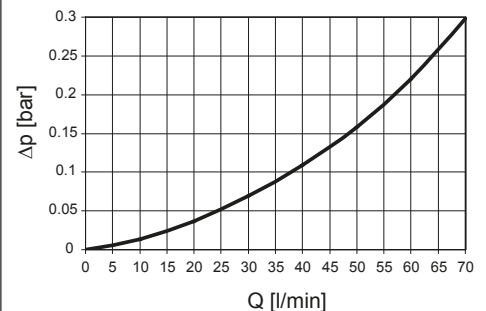
$$\Delta p_{\text{housing}} = \text{please refer to the housing curve}$$

$$\Delta p_{\text{element}} = Q \cdot SK^*/1000 \cdot \text{viscosity}/30$$

(\*gradient coefficient)

#### HOUSING CURVE

The housing curve applies to mineral oil with a density of 0.86 kg/dm<sup>3</sup> and a kinematic viscosity of 30mm<sup>2</sup>/s.



The gradient coefficients in mbar/(l/min) apply to mineral oils with a kinematic viscosity of 30 mm<sup>2</sup>/s. The pressure drop changes proportionally to the change in viscosity.

	(BN4HC)			
	3 µm	5 µm	10 µm	20 µm
35	23.6	19.0	14.8	9.3
55	13.7	11.0	8.1	4.8
75	9.3	7.5	5.3	3.1
95	7.5	6.0	4.1	2.4

## 2. MODEL CODE

### 2.1 COMPLETE FILTER

Type	Filter material	Size	Pressure range	Type of connection	Filtration rating [µm]	Type of clogging indicator*	Type code	Modification number	Supplementary details
<b>MFM</b>	<b>BN/HC =</b> Betamicon®	<b>35</b> <b>55</b> <b>75</b> <b>95</b>	<b>O = 280 bar</b>	<b>B = G 1/2</b> <b>D = M22x1.5</b> <b>H = G 3/4</b>  <b>Z = customer-specific</b>	<b>3</b> <b>5</b> <b>10</b> <b>20</b>	<b>W = without port</b> <b>A = steel plug in indicator port</b>  <b>B = visual</b> <b>C = electrical</b> <b>D = visual/ electrical</b>	<b>3 = 3</b> mounting holes	<b>.x =</b> The latest version is always supplied	<b>B7 = standard</b> cracking pressure of bypass 7 bar  <b>OIU = standard:</b> outlet and inlet on same side It is essential to include this information!  <b>V = FPM seal</b>

\* for other clogging indicators see brochure no. 7.050../..

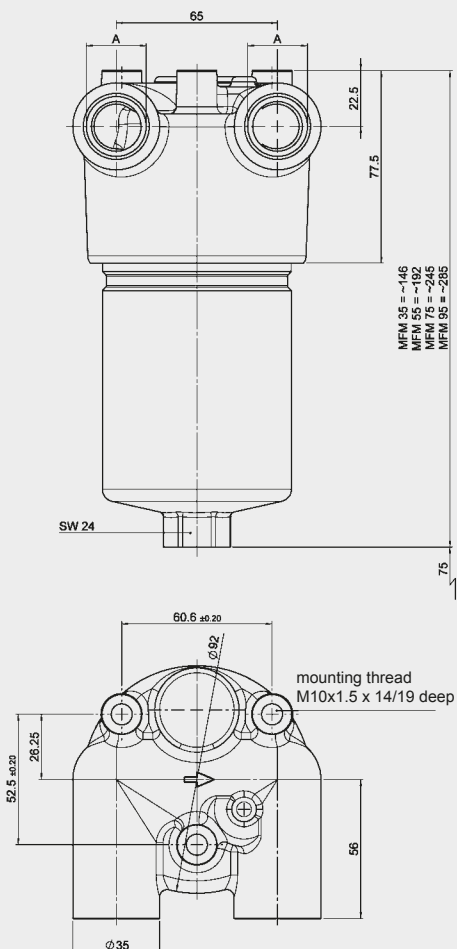
### 2.2 REPLACEMENT ELEMENT

Size	Type	Filtration rating [µm]	Filter material	Supplementary details
<b>0035</b> <b>0055</b> <b>0075</b> <b>0095</b>	<b>D</b>	<b>003</b> <b>005</b> <b>010</b> <b>020</b>	<b>BN4HC =</b> Betamicon®	<b>V =</b> FPM seal

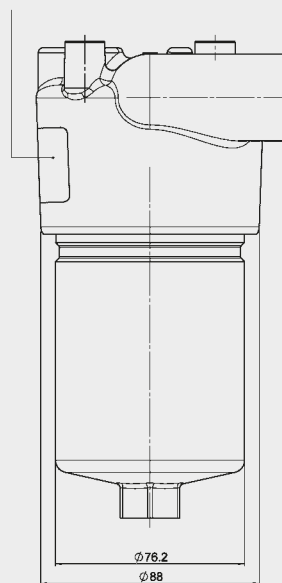
### 2.3 REPLACEMENT CLOGGING INDICATOR

Type	Pressure setting	Type of clogging indicator*	Modification number	Supplementary details
<b>VD</b>	<b>5 =</b> standard 5 bar	<b>A = steel plug in indicator port</b> <b>B = visual</b> <b>C = electrical</b> <b>D = visual/ electrical</b>	<b>.x =</b> The latest version is always supplied	<b>V =</b> FPM seal

## 3. DIMENSIONS



type code label affixed



MFM	A	Weight incl. element [kg]	Volume of pressure chamber [l]
35	G 1/2 M22 x 1.5 G 3/4	3.7	0.24
55		4.2	0.39
75		4.7	0.56
95		5.1	0.69

## NOTE

The information in this brochure relates to the operating conditions and applications described.  
For applications or operating conditions not described, please contact the relevant technical department.  
Subject to technical modifications.

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