

YDAC INTERNATIONAL

Inline Filter MFX up to 130 l/min, up to 50 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:

- 4 possible positions for a clogging indicator
- · bypass valve

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 16889
- Filter elements are available with the following pressure stability values:

Betamicron® (BN4HC): 20 bar Ecomicron® (ECON2): 10 bar 10 bar Mobilemicron® (MM):

1.3 FILTER SPECIFICATIONS

Nominal pressure	50 bar
Fatigue strength (without BF	At nominal pressure 106 cycles
clogging indicator)	from 0 to nominal pressure
	300,000 cycles at 70 bar
Temperature range	-10 °C to +80 °C
Material of filter head	Aluminium
Material of filter bowl	Aluminium
Type of clogging indicator	VM (Diff. pressure indicator up to 210 bar
	operating pressure)
	VL (Diff. pressure indicator up to 50 bar
	operating pressure)
Setting pressure of the clogging indicator	Standard 2.5 bar, optional 1 bar
	(others on request)
Bypass cracking pressure	Standard 3.5 bar, optional 1.7 bar
	(others on request)

1.4 SEALS

NBR (=Perbunan)

- 1.5 INSTALLATION **INLINE FILTER**
- 1.6 SPECIAL MODELS AND **ACCESSORIES**

Seals in EPDM (on request)

1.7 SPARE PARTS

See Original Spare Parts List

1.8 CERTIFICATES AND APPROVALS

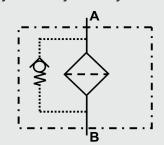
On request

1.9 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
- Fire-resistant fluids HFC and HFD
- Operating fluids with high water content (>50% water content) on request 1.10 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



E 7.123.2/11.16



I C	COMPLETE FILT	E (also		• ′								X /-B3
		IEK										
MFX	r type											
	r material											
	lC Betamicron® (l /N Ecomicron® (E											
	Mobilemicron (E	200112)										
	of filter or eleme	ent										
	:100, 200											
	r ating pressure 50 bar											
Гуре	and size of con	nection								╛╽		
Туре	e Connection	Filter size	e									
		100	200									
C	G 3/4	•	•	_								
D	G 1	•	•	_								
E	M26 x 1.5	•	•	_								
I K	1 1/16-12 UN 1 5/16-12 UN	•	•	_								
L	M33 x 2	•	•	_								
	ation rating in µr	1		_								
3N/H	IC, ECO/N: 5, 10), 20										
MM	: 8,	10, 15										
	of clogging ind											
	thout port (no clo											
	stic blanking plug	g in indicat	or_port									
	ual, manual		for other	clogging indicate	ors,							
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2.4 REPLACEMENT CLOGGING INDICATOR

VM 2.5 D . X /-L24

Type of indicator

VM Diff. pressure indicator up to 210 bar operating pressure
VL Diff. pressure indicator type "BF" up to 50 bar operating pressure and

max. operating temperature of -10 °C to +80 °C

Pressure setting

2.5 standard 2.5 bar, others on request

Type of clogging indicator (see Point 2.1)

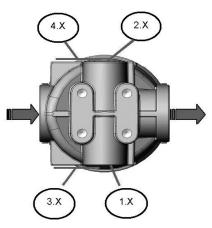
Modification number

X the latest version is always supplied

Supplementary details

L..., LED, W (for descriptions, see point 2.1)

2.5 TYPE CODE: INSTALLATION POSITION OF THE CLOGGING **INDICATOR**



Type code 3.X and 4.X only possible with indicator type "BF"!

3. 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:

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

$$\Delta p_{\text{housing}}$$
 = given in graphs (see point 3.1)

$$\Delta p_{\text{element}} = Q \cdot \frac{SK^*}{1000} \cdot \frac{\text{viscosity}}{30}$$
(*see 3.2)

For ease of calculation, our Filter Sizing Program is available on request free of charge.

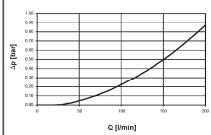
NEW: Sizing online at www.hydac.com

3.1 Ap-Q HOUSING CURVES BASED ON ISO 3968

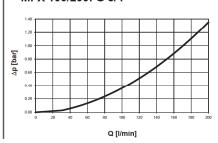
The housing curves apply to mineral oil with a density of 0.86 kg/dm³ and a kinematic viscosity of 30 mm²/s.

In this case, the differential pressure changes proportionally to the density.





MFX 100/200: G 3/4



3.2 GRADIENT COEFFICIENTS (SK) FOR FILTER ELEMENTS

The gradient coefficients in mbar/(I/min) apply to mineral oils with a kinematic viscosity of 30 mm²/s. The pressure drop changes proportionally to the change in viscosity.

MFX	BN4HC						
	3 µm	5 μm	10 μm	20 μm			
100	12.0	9.0	4.6	3.4			
200	7.0	5.3	2.7	2.0			

MFX		EC	N	/M*		
	3 µm	5 µm	10 µm	20 µm	10 µm	15 µm
100	13.00	10.00	6.50	4.80	2.70	2.20
200	8.00	5.90	3.80	2.80	1.60	1.30

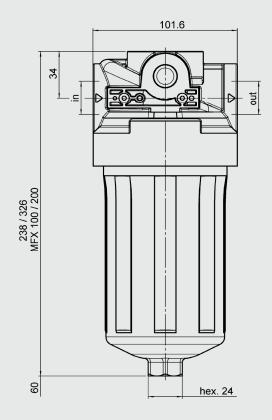
^{* 8} µm values on request!

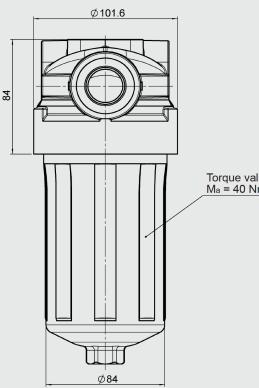
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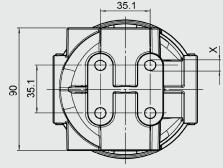
4. DIMENSIONS

MFX 100/200





Torque value for housing Ma = 40 Nm



MFX 100/200	Mounting x
G C	M10 – 13 [0.5] deep
G D	M10 – 13 [0.5] deep
G E	M10 – 13 [0.5] deep
G I	3/8 – 16 UNC, 13 [0.5] deep
G K	3/8 – 16 UNC, 13 [0.5] deep
G L	M 10 – 13 [0.5] deep

MFX W		Volume of pressure chamber [I]			
100	1.46	0.71			
200	1.74	1.12			

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.

4 HYDAC