



Return Inline / Recirculation Filter EMLF up to 150 l/min, up to 40 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 bolt-on filter bowl.

Standard equipment:

- bypass valve
- connection for a clogging indicator
- oil drain plug in filter bowl

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

Filter elements are available with the following pressure stability values:

Betamicron® (BN4HC):	20 bar
Betamicron®/	
Aquamicon®(BN/AM):	10 bar
Wire mesh (W/HC):	20 bar
ECOMICRON (ECON2):	10 bar

1.3 FILTER SPECIFICATIONS

Nominal pressure	40 bar
Test pressure	66 bar (Design pressure 44 bar)
Temperature range	-20 °C to +100 °C
Material of filter head	316S11 EN 1.4404 stainless steel
Material of filter bowl	316S11 EN 1.4404 stainless steel
Type of clogging indicator	VD (differential pressure indicator)
Pressure setting of clogging indicator	2 bar (others on request)
Bypass cracking pressure	3 bar (others on request)

1.4 SEALS

FPM (Viton)

1.5 INSTALLATION

Inline filter

1.6 SPECIAL MODELS AND ACCESSORIES

- Seals in NBR, NLT, EPDM, HNBR, Kalrez®
- Without bypass valve
- Without port for clogging indicator
- With gauge ports (for external piping of pressure sensors)
- Reverse flow check
- Twin indicator version
- Ex or IS differential indicators available
- Flanged versions available (SAE, RF, RTJ, Destec®)

1.7 SPARE PARTS

See Original Spare Parts List

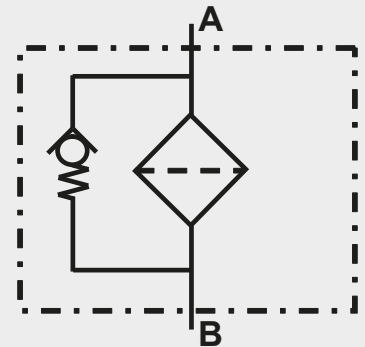
1.8 CERTIFICATES AND APPROVALS

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 HFA, HFB, HFC und HFD
- Operating fluids with high water content (> 50 % water content) on request

Symbol for hydraulic systems



2. MODEL CODE (also order example)

2.1 COMPLETE FILTER

EMLF40 BN/HC 660 N4 005 B X /-V

Filter type _____
EMLF40 40 bar

Filter material of element _____
BN/HC Betamicon® (BN4HC); "SS-SO361" must be used for water-glycol applications!
BN/AM Betamicon®/Aquamicron® (BN4AM)
ECO ECOMicon (ECON2)
W/HC Wire mesh

Size of filter _____
330, 660

Type and size of connection _____

Type	Port (thread)	Filter size	
		330	660
B4	1"-BSPP	●	●
B5	1¼"-BSPP	●	●
N4	1"-NPT	●	●
N5	1¼"-NPT	●	●
F32	SAE 32	●	●

Filtration rating in µm _____
BN/HC, ECO : 003, 005, 010, 020
BN/AM : 003, 010
W/HC : 025, 050, 100, 200

Type of clogging indicator _____
W without port (no clogging indicator)
A stainless steel blanking plug in indicator port
B visual
C electrical
D visual and electrical
UE vacuum gauge
BM+C visual with manual reset + electrical (= 2 indicators)
E 1/4"-NPT gauge ports for external connection of pressure sensors

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

Modification number _____
X the latest version is always supplied

Supplementary details

- B. bypass cracking pressure (e.g. B6 = 6 bar); without details = without bypass valve
EX electrical clogging indicator EX version (Eexd IIC T6; cable length 0.25 m standard)
EX/ENC electrical clogging indicator EX version (Eexd IIC T6; with IP66 junction box, M20x1.5 cable entry)
IS intrinsically safe electrical clogging indicator with cable length 0.25 m (standard)
IS/ENC intrinsically safe electrical clogging indicator with IP66 junction box (M20x1.5 cable entry)
IS2GBC intrinsically safe electrical clogging indicator with gold contacts (e. g. suitable for PLC)
L... light with appropriate voltage (24, 48, 110, 220 Volt)
LED 2 light emitting diodes up to 24 Volt
N NBR seals
V FPM seals
NLT nitrile low temperature seals
HNBR hydrogenated nitrile (high temperature) seals
EPDM EPDM seals
K Kalrez® seals
SS-SO361 stainl. steel core and end caps, polyamide support fibre, optimised for water-glycol
-] only for clogging indicators
type "D"

2.2 REPLACEMENT ELEMENT

0660 D 005 BN4HC /-V

Size _____
0330, 0660

Type _____
D

Filtration rating in µm _____
BN4HC, ECON2 : 003, 005, 010, 020
BN/AM : 003, 010
W/HC : 025, 050, 100, 200

Filter material _____
BN4HC, ECON2, BN/AM, W/HC

Supplementary details _____
SS-SO361 stainl. steel core and end caps, polyamide support fibre, optimised for water-glycol
N, V, NLT, HNBR, EPDM, K (for descriptions, see Point 2.1)

2.3 REPLACEMENT CLOGGING INDICATOR

VD 2 D . X /-V-L24

Type _____
VD differential pressure indicator

Pressure setting _____
2 standard 2 bar, others on request

Type of clogging indicator _____
(see Point 2.1)

Modification number _____
X the latest version is always supplied

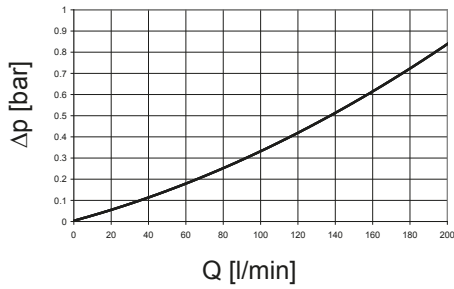
Supplementary details _____
L..., LED, V, W (for descriptions, see Point 2.1)

3. FILTER CALCULATION / SIZING

3.1 Δp -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.

EMLF

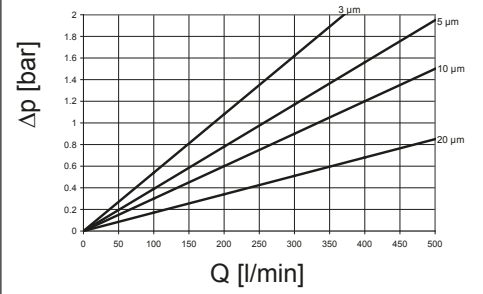


3.2 GRADIENT COEFFICIENTS (SK) FOR FILTER ELEMENTS

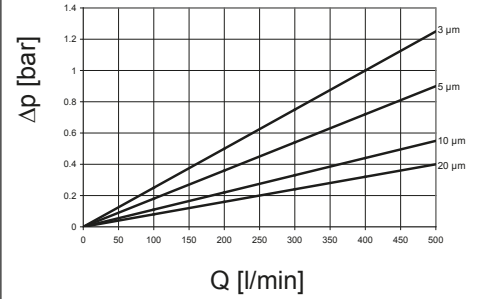
The gradient coefficients in mbar/(l/min) apply to mineral oils with a kinematic viscosity of 30 mm²/s. The pressure drop changes proportionally to the change in viscosity.

	ECON2		W/HC
	3 μm	10 μm	-
330	4.2	1.7	0.138
660	1.9	0.8	0.069

BN4HC: 330

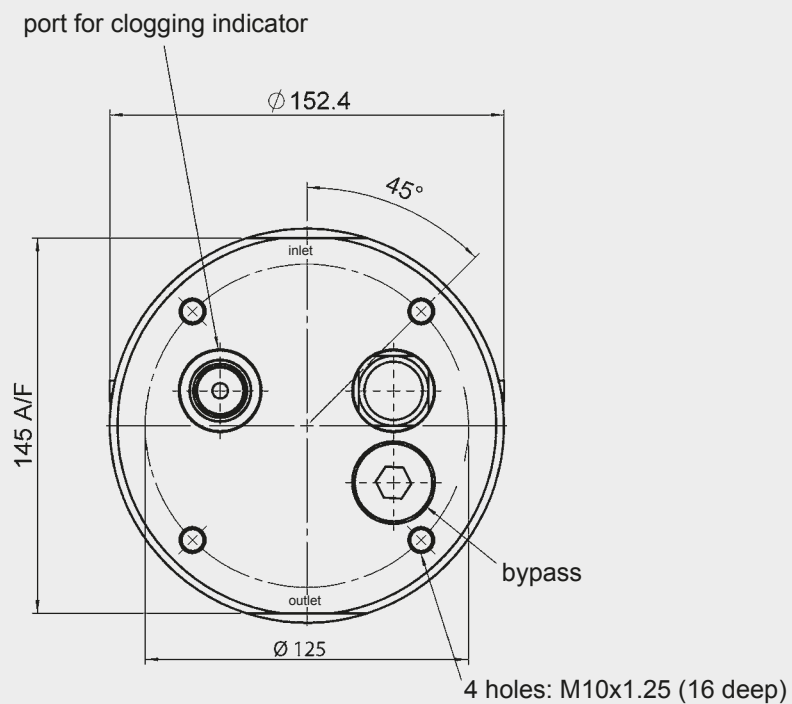
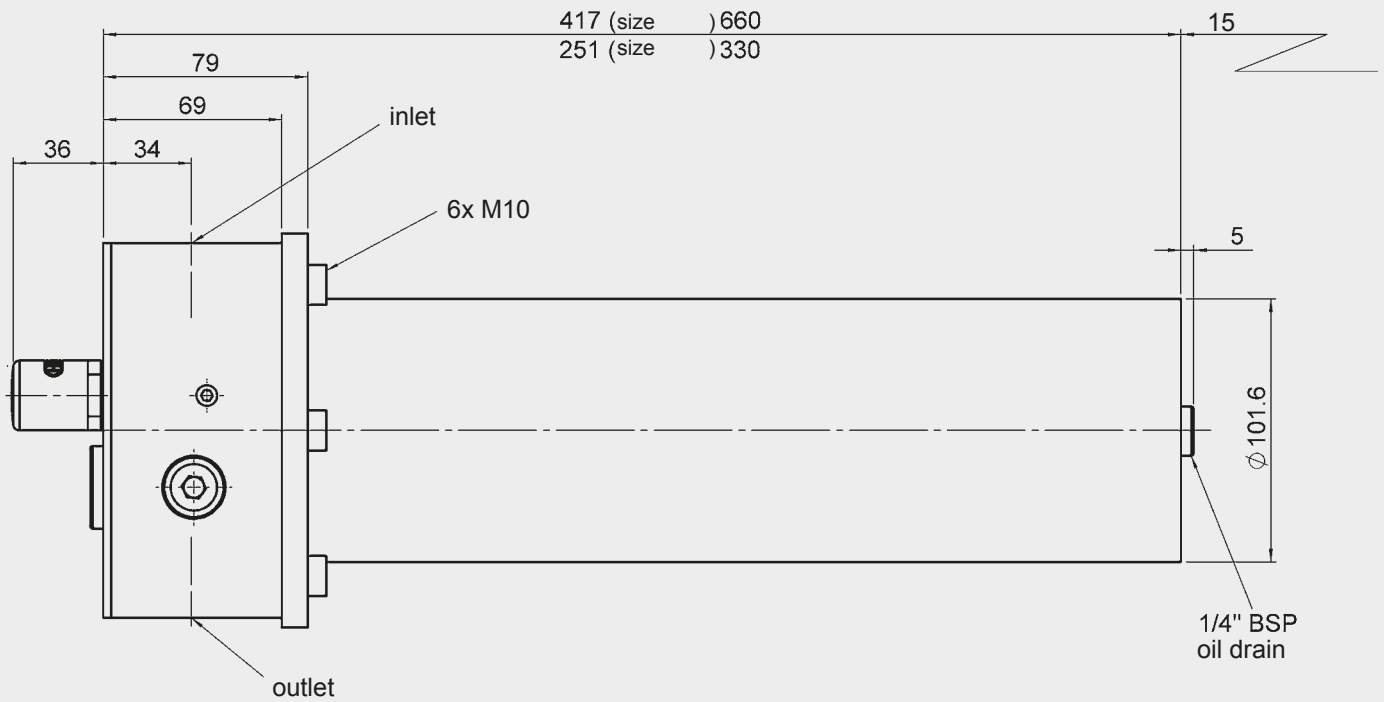


BN4HC: 660



4. DIMENSIONS

EMLF 330/660



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.

HYDAC Filtrertechnik GmbH
Industriegebiet
D-66280 Sulzbach/Saar
Tel.: 0 68 97 / 509-01
Fax: 0 68 97 / 509-300
Internet: www.hydac.com
E-Mail: filter@hydac.com