



Pressure Filter SSDF Pressure Filter for Reversible Oil Flow SSDF

up to 15 l/min, up to 700 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.

SSDF filters are suitable for flow in both directions.

Standard equipment:

- without bypass valve
- connection for a clogging indicator

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 capacity in g

Betamicon® (BN4HC)				
SSDF/F	3 µm	5 µm	10 µm	20 µm
30	4.6	5.1	5.4	5.6

Betamicon® (BH4HC)				
SSDF/F	3 µm	5 µm	10 µm	20 µm
30	3.0	2.9	3.2	3.7

Filter elements are available with the following pressure stability values:

Betamicon® (BN4HC):	20 bar
Betamicon® (BN4HC)	
/-SS-SO361:	20 bar
Betamicon® (BH4HC):	210 bar
Betamicon® (BH4HC)	
/-SS-SO361:	210 bar

1.3 FILTER SPECIFICATIONS

Nominal pressure	700 bar
Temperature range	-10 °C to +100 °C
Material of housing and cover plate	Stainless steel 1.4462
Type of clogging indicator	VD (differential pressure indication up to 420 bar operating pressure) with ATEX directive Indication for higher differential pressures on request
Pressure setting of clogging indicator	SSDF: 5 bar SSDF: 8 bar (others on request)
Bypass cracking pressure (optional)	6 bar (others on request)

1.4 SEALS

FPM (Viton)

1.5 INSTALLATION

Inline filter

1.6 SPECIAL MODELS AND ACCESSORIES

- Seals in NBR, EPDM
- With bypass valve
- Without port for clogging indicator

1.7 SPARE PARTS

See Original Spare Parts List

1.8 CERTIFICATES AND APPROVALS

On request

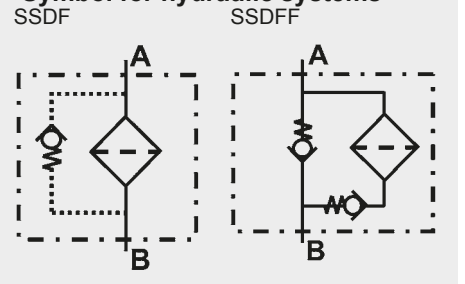
1.9 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

- 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 and HFD
- Operating fluids with high water content (> 50 % water content) on request

1.10 IMPORTANT INFORMATION

- 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



2. MODEL CODE (also order example)

2.1 COMPLETE FILTER

SSDF BH/HC 30 T B 10 B 1. X /-2GC-V-5

Filter type _____

SSDF, SSDF

Filter material of element _____

BN/HC Betamicon® (BN4HC)
 BN/HC.../-SS-SO361 Betamicon® (BN4HC) – stainl. steel core and end caps, polyamide support fibre
 BH/HC Betamicon® (BH4HC)
 BH/HC.../-SS-SO361 Betamicon® (BH4HC) – stainl. steel core and end caps, polyamide support fibre

Size of filter or element _____

30

Operating pressure _____

T 420 bar
 X 700 bar

Type and size of connection _____

Type	Connection	Filter size
		30
B	1/2" NPT	●

Filtration rating in µm _____

BN/HC, BH/HC: 3, 5, 10, 20
 BN/HC...,BH/HC... /-SS-SO361: 3, 10

Type of clogging indicator _____

W without port (no clogging indicator)
 A with steel blanking plug in indicator port
 B visual } For other clogging indicators
 C electrical } see brochure no. 7.050../..

Type code _____

1

Modification number _____

X the latest version is always supplied

Supplementary details _____

5 inlet/outlet NPT thread – **must be specified**
 2GC for visual clogging indicator with ATEX certificate - **must be specified for type "B" indicator**
 2GEXDIIC for electrical indicator suitable for use in Zone 1 (Category 2), gas atmosphere, Category d (Flameproof Enclosure), Explosive subdivision IIC to ATEX directive - **must be specified for type "C" indicator**
 B. bypass cracking pressure (e.g. B6 = 6 bar); without details = without bypass valve
 L... light with appropriate voltage (24, 48, 110, 220 Volt) } only for clogging indicators
 LED 2 light-emitting diodes up to 24 Volt } type "D"
 V FPM seals (no details = NBR seal)
 E EPDM seals
 W suitable for HFA and HFC emulsions

2.2 REPLACEMENT ELEMENT

0030 D 010 BH4HC /-V-SS-SO361

Size _____

0030

Type _____

D

Filtration rating in µm _____

BN4HC, BH4HC: 003, 005, 010, 020
 (Note: for /-SS-SO361 type only 003 and 010 µm)

Filter material _____

BN4HC, BH4HC

Supplementary details _____

SS-SO361 stainl. steel core and end caps, polyamide support fibre
 V, E (for descriptions, see Point 2.1)

2.4 REPLACEMENT CLOGGING INDICATOR

VD 5 B . X /-2GC-V

Type _____

VD differential pressure indicator up to 420 bar operating pressure (up to 700 bar operating pressure on request)

Pressure setting _____

5 standard 5 bar, others on request

Type of clogging indicator (see Point 2.1) _____

Modification number _____

X the latest version is always supplied

Supplementary details _____

2GC for visual clogging indicator with ATEX certificate - **must be specified for type "B" indicator**
 2GEXDIIC for electrical indicator suitable for use in Zone 1 (Category 2), gas atmosphere, Category d (Flameproof Enclosure), Explosive subdivision IIC to ATEX directive - **must be specified for type "C" indicator**
 V, W (for descriptions, see Point 2.1)

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:

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

$$\Delta p_{\text{housing}} = (\text{see Point 3.1})$$

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

(*see Point 3.2)

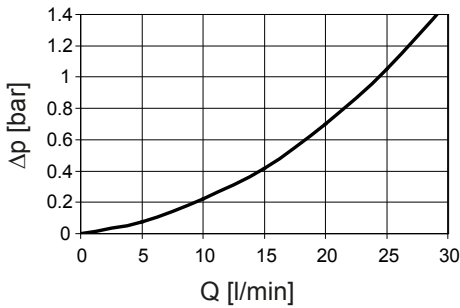
For ease of calculation, our Filter Sizing Program is available on request free of charge.

NEW: Sizing online at www.hydac.com

3.1 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.

SSDF 30



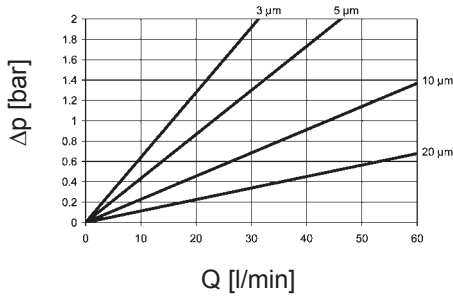
Housing curve for SSDF 30 filter on request

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.

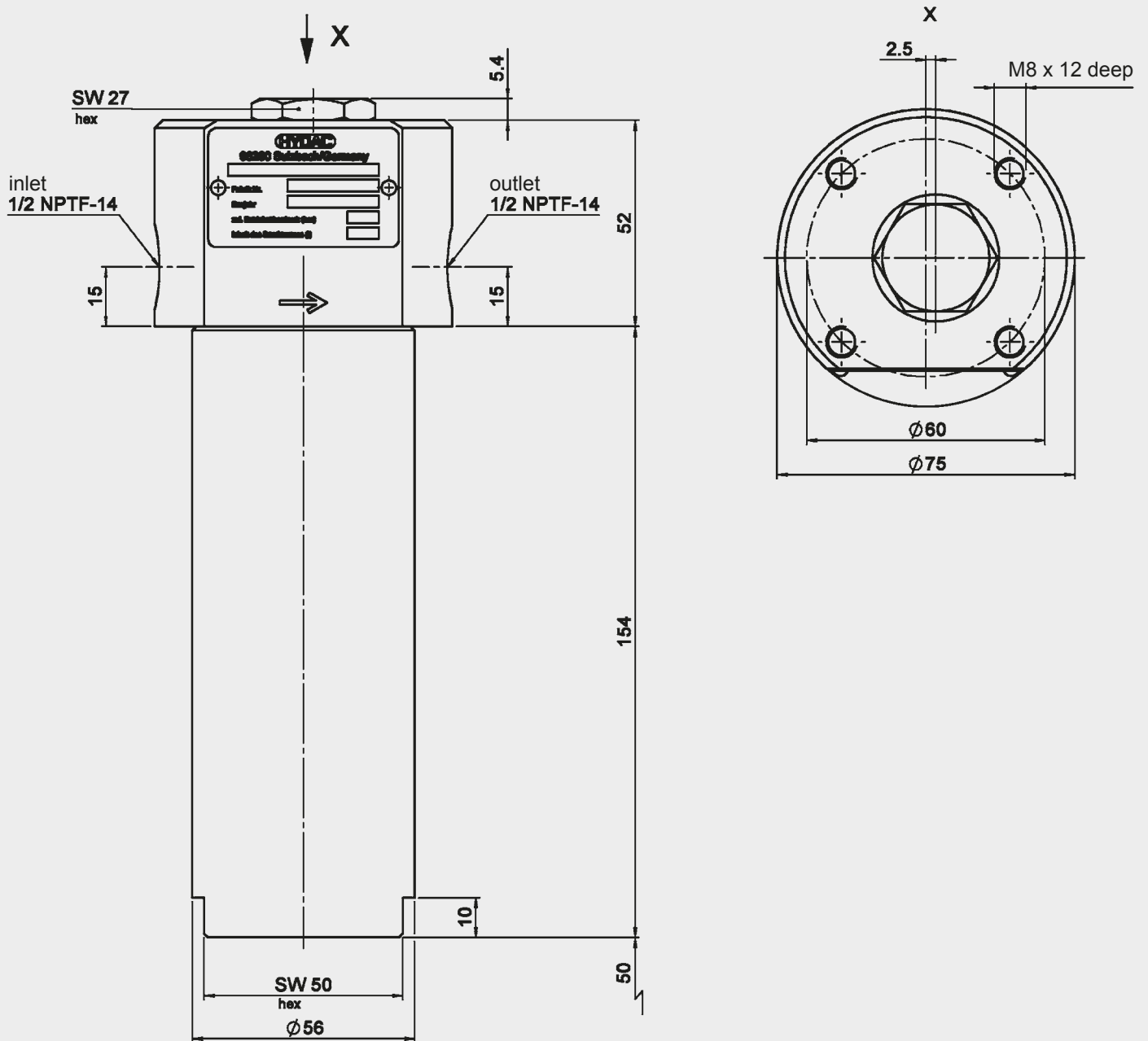
	BH4HC			
	3 μm	5 μm	10 μm	20 μm
30	91.2	50.7	36.3	19.0

BN4HC: 30



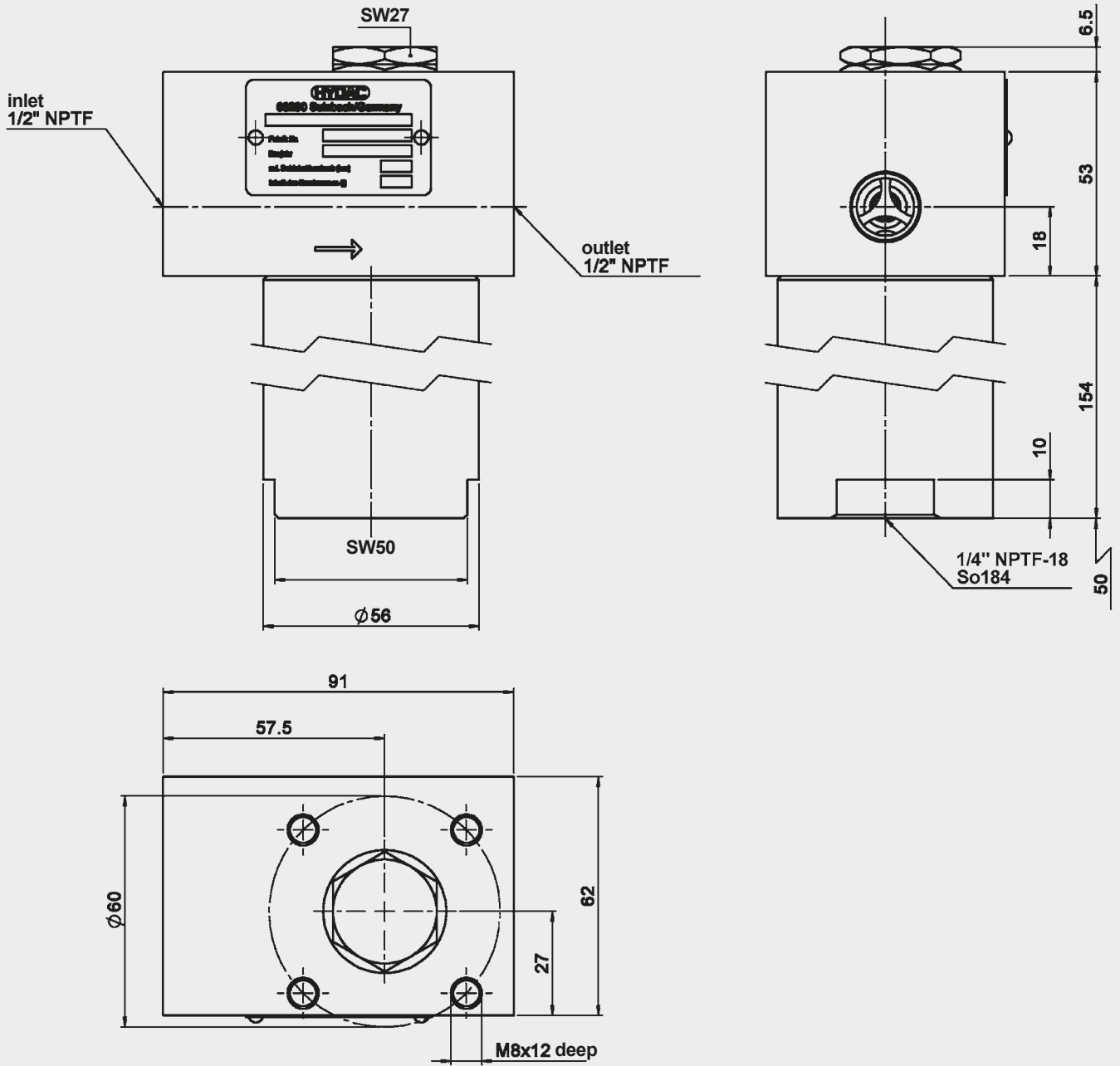
4. DIMENSIONS

SSDF 30



SSDF	Weight incl. element [kg]	Volume of pressure chamber [l]
30	3.65	0.17

SSDFF 30



SSDFF	Weight incl. element [kg]	Volume of pressure chamber [l]
30	4.3	0.17

