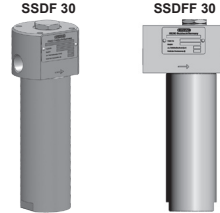




Pressure Filter SSDF Pressure Filter for Reversible Oil Flow SSDF

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

Filter elements are available with the following pressure stability values:

Optimicon® (ON):	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 and 1.4404
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

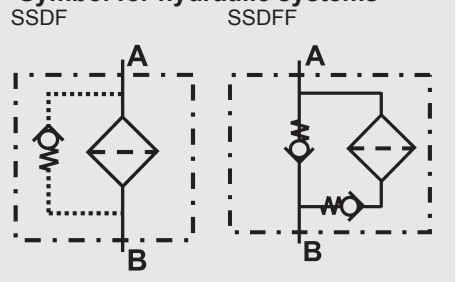
1.9 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

- 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

ON Optimicon®
 BN/HC Betamicon® (BN4HC) only to be used for water-glycol applications with "-SS-SO361"
 BH/HC Betamicon® (BH4HC)
 BH/HC Betamicon® (BH4HC) only to be used for water-glycol applications with "-SS-SO361"

Size of filter or element

30

Operating pressure

T 420 bar
 X 700 bar

Type and size of connection

Type	Connection	Filter size
B	1/2" NPT	30

Filtration rating in µm

ON: 1, 3, 5, 10, 15, 20
 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
 C electrical For other clogging indicators see brochure no. 7.050../..

Type code

1

Modification number

X the latest version is always supplied

Supplementary details

5 inlet/outlet NPT thread – **required data!**
 2GC for visual clogging indicator with ATEX certificate – **required data for clogging indicator "B"**
 2GEXDIIC can be used for electric display in zone 1 (category 2), gas atmosphere, category d (flameproof enclosure), explosion subgroup IIC in acc. with ATEX Directive – **required data for clogging indicator "C"**
 B. bypass cracking pressure (e.g. B6 = 6 bar); no entry = no bypass valve
 L... lamp with appropriate voltage (24, 48, 110, 220 volts) only for clogging indicators
 LED 2 light-emitting diodes up to 24 volts type "D"
 V FPM seals (no entry = NBR seal)
 E EPDM seals
 W suitable for HFA and HFC emulsions
 SS-SO361 stainless steel element with polyamide support fibre, optimised for water-glycol (only for BN/HC and BH/HC material)

2.2 REPLACEMENT ELEMENT

0030 D 010 BH4HC /-V-SS-SO361

Size

0030

Type

D

Filtration rating in µm

ON: 001, 003, 005, 010, 015, 020
 BH4HC: 003, 005, 010, 020 BN4HC, BH4HC /-SS-SO361: 003, 010

Filter material

ON, 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)

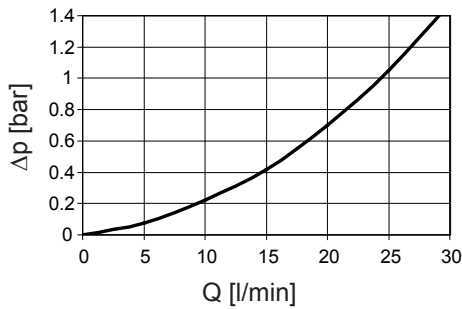
For ease of calculation, our Filter Sizing Program is available on request free of charge.

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

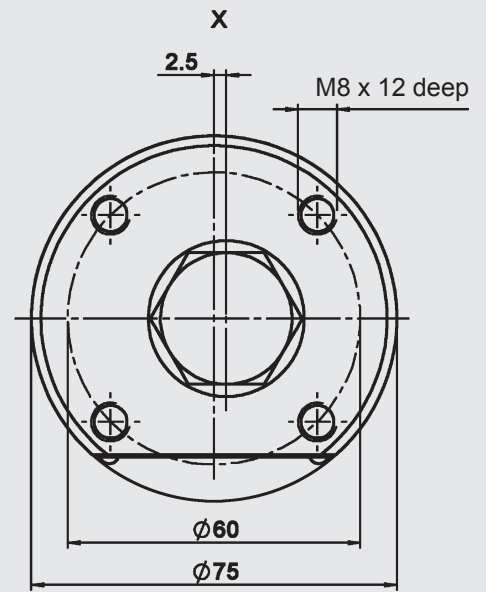
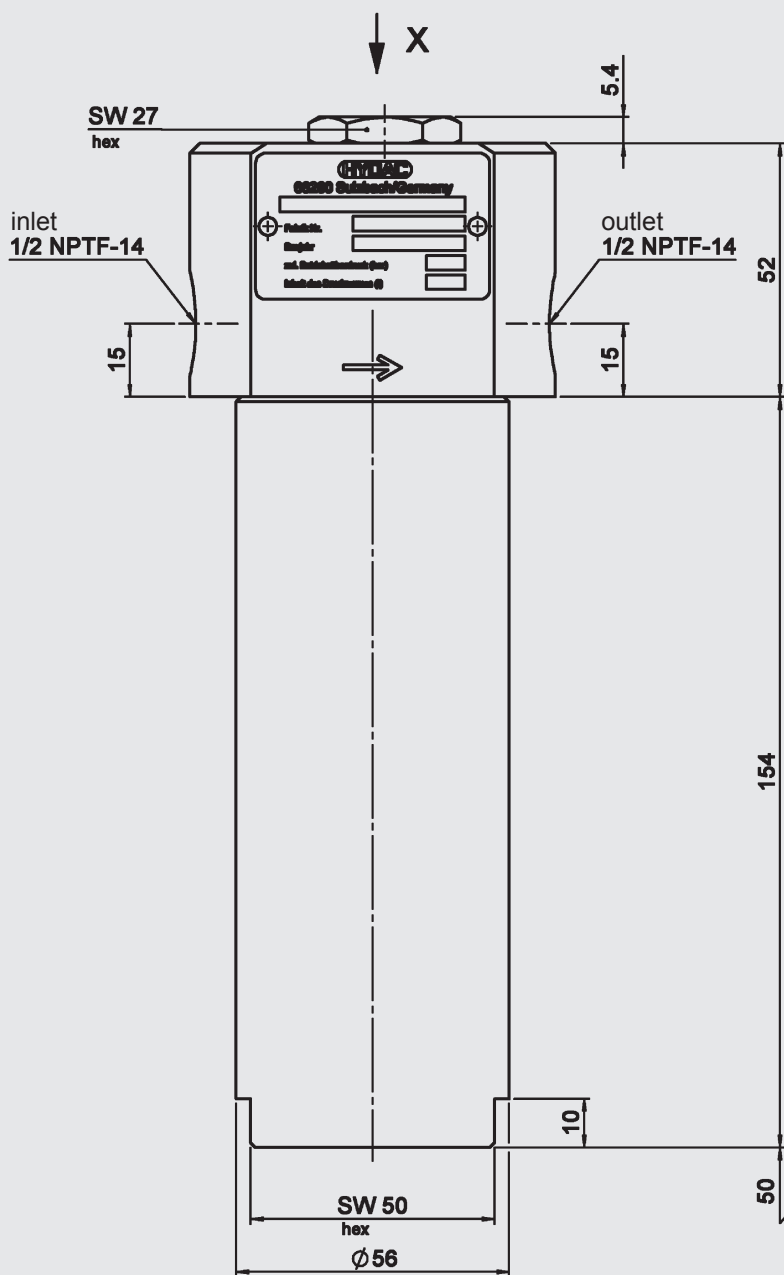
The gradient coefficients in mbar/(l/min) apply to mineral oils with a kinematic viscosity of 30 mm²/s. The pressure drop changes proportionally to the change in viscosity.

SSDF/ SSDFF	ON					
	1 μm	3 μm	5 μm	10 μm	15 μm	20 μm
30	77.8	63.9	43.3	22.8	14.0	11.3

SSDF/ SSDFF	BN4HC		BH4HC			
	3 μm	10 μm	3 μm	5 μm	10 μm	20 μm
30	63.9	22.8	91.2	50.7	36.3	19.0

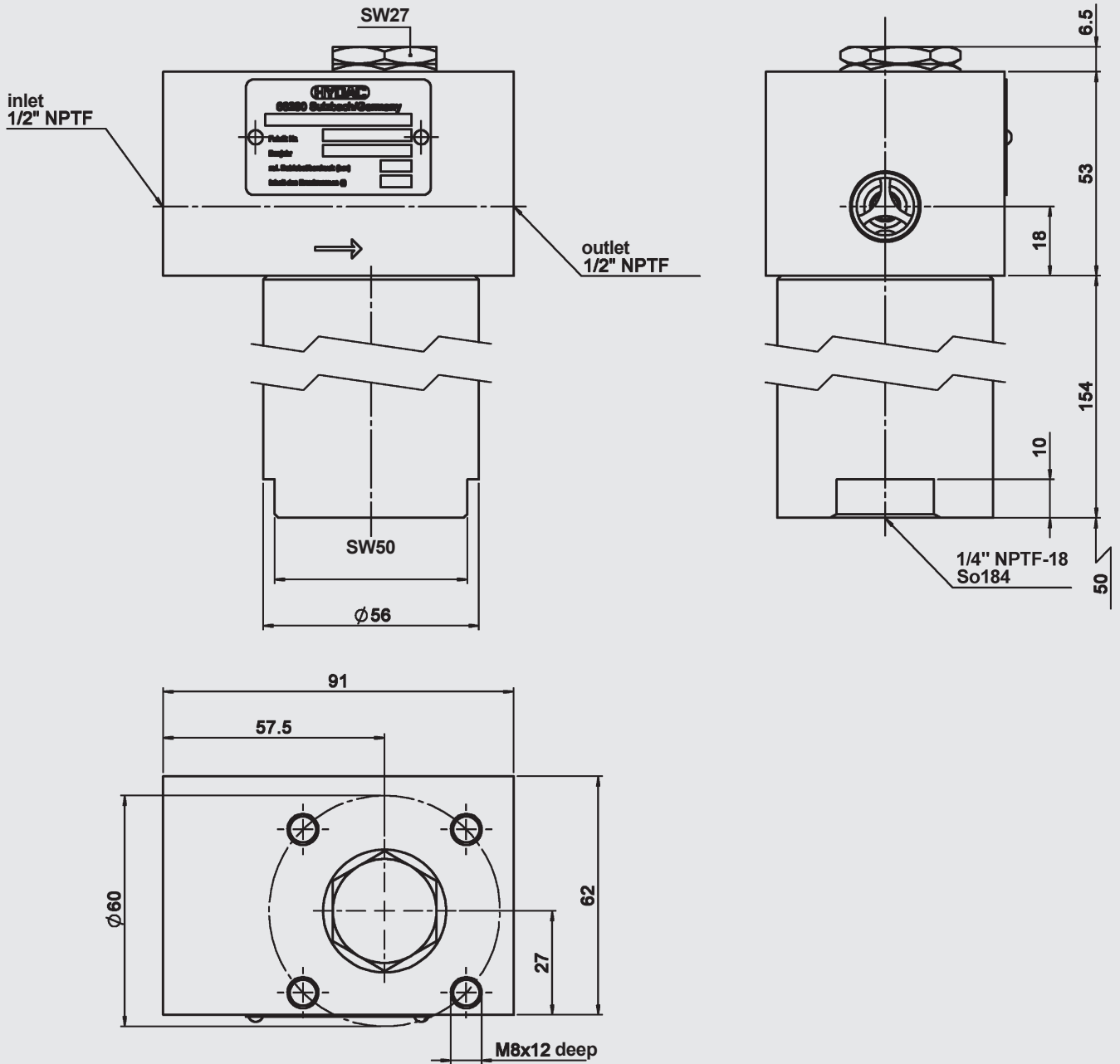
4. DIMENSIONS

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

