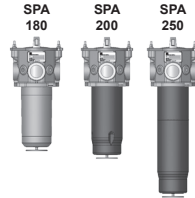




## Suction Filter SPA 180, 200, 250

Element flow direction from in to out  
up to 250 l/min



### 1. TECHNICAL SPECIFICATIONS

#### 1.1 FILTER HOUSING

##### Design

The HYDAC suction line filters in this series are designed to be installed inside the tank. The version with integrated foot valve enables horizontal installation and maintenance even below the oil level. The foot valve closes automatically when the cover is removed. The design of the filter head also enables residual oil to be drained from the housing space before the filter is opened. This allows maintenance to be performed without any environmental pollution. The filter housings are designed in accordance with international regulations. They consist of a cover, filter head and housing tube.

##### Standard equipment

- Mounting holes on the filter head
- Magnetic core built into cover plate
- Foot valve
- General port for a clogging indicator in filter head

#### 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 3968, ISO 11170, ISO 16889

Filter elements are available with the following pressure stability values:

Polyester (SOP): 6 bar  
Wire mesh (WPI): 6 bar

Other filter elements and filtration ratings on request.

#### 1.3 FILTERKENNDATEN

Temperature range	-30 °C to +100 °C	
Material of filter housing	SPA 180:	PA6 – GF30
	SPA 200, 250:	Steel DIN EN 10130-FE P04 A
Material of filter head	Chill casting EN AC 43300-F	
Material of cover	PA6 – GF30	
Type of clogging indicator	Threaded connection G1/8	
Response pressure of clogging indicator	- 0,25 bar (others on request)	

#### 1.4 SEALS

Perbunan (= NBR) on element and flange; Viton (= FKM) on cover; TPE-70 injected at foot valve; others on request

#### 1.5 INSTALLATION

An installation flange is provided in the tank so that the foot valve in the tank remains under the oil level in all operation conditions. The filter can be installed horizontally or vertically. The suction line is located in the housing of the filter head.

#### 1.6 SPECIAL MODELS AND ACCESSORIES

- Without port, no clogging indicator
- Without magnetic core
- Seals in FKM

#### 1.7 SPARE PARTS

See Original Spare Parts List

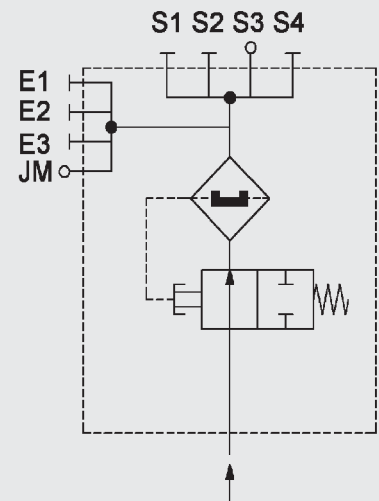
#### 1.8 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

- 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

#### 1.9 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



## 2. MODEL CODE (also order example)

SPA 200 SOP 010 V M W F N J0 VX X 1 /-XXX

### 2.1 FILTER ASSEMBLY

#### Filter type

SPA

#### Size

180, 200, 250

#### Filter material

SOP polyester  
WPI wire mesh

#### Filtration rating in $\mu\text{m}$

SOP 010  
WPI 100  
others on request

#### Inlet valve

V with inlet valve  
X without inlet valve

#### Magnetic core

M with magnetic core  
X without magnetic core

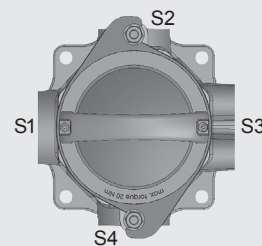
#### Setting range

W suction operation

#### Type and size of port

Type	Port	Size of filter		
		180	200	250
F	S1, S3 = G1 1/2 S2, S4 = G1	●	●	●
I	S1, S3 = G1 1/2 S2, S4 = G1 1/4	●	●	●
L	S1 = G1 1/2 S3 = SAE DN 50 S2, S4 = G1	●	●	●

others on request



#### Seals

N NBR (Perbunan)  
V FKM

#### Position of clogging indicator

J0 without clogging indicator, unbored  
JA closed with screw plugs  
JM, JP see point 2.4

#### Clogging indicator

VX without clogging indicator, unbored  
VG without clogging indicator, threaded hole  
VO visual  
VE electrical

#### Response pressure of clogging indicator

T -0.18 bar  
U -1 to 0.6 bar (only for visual clogging indicator "VO")  
S -0.25 bar  
X no clogging indicator

#### Modification number

X the latest version is always supplied

#### Supplementary details

## 2.2 REPLACEMENT ELEMENT

SOP-0010-xxx-xxxx-x-N-RT /-XXX

### Filter material

SOP, WPI

### Filtration rating in $\mu\text{m}$

SOP 0010

WPI 0100

### RT code

### Seals

N NBR (Perbunan)

V FKM

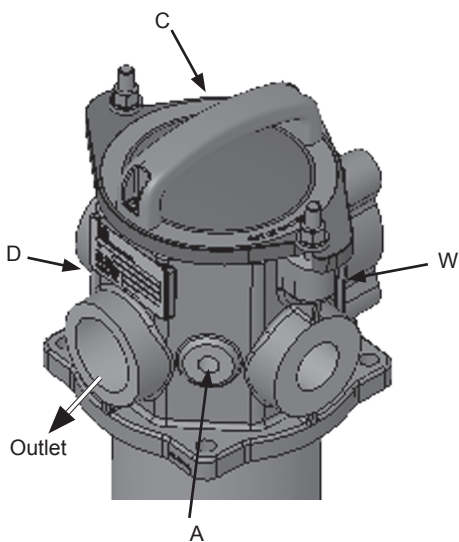
### Packaging

### Supplementary details

## 2.3 REPLACEMENT CLOGGING INDICATOR

(on request)

## 2.4 POSITION OF CLOGGING INDICATOR



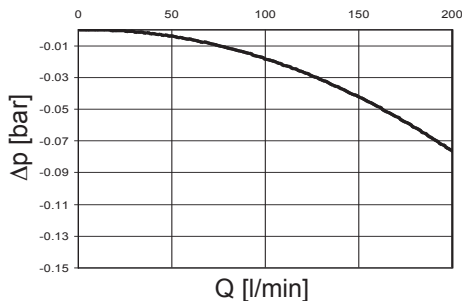
Position	Mounting position of clogging indicator
J0	Unbored
JA	All bored, closed with screw plugs
JP	$C = G1/4$ ; $A+B+D = G3/8$
JM	$A = G1/4$ ; $B+C+D = G3/8$

### 3. FILTER CALCULATION / SIZING

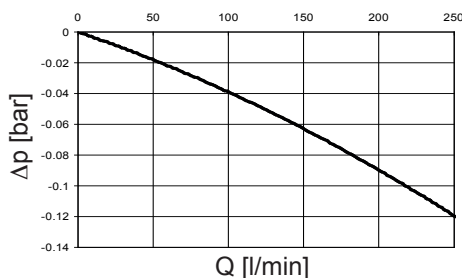
#### 3.1 PERFORMANCE CURVES FOR FILTER ASSEMBLY

The total performance curves with element SOP-0010... apply to mineral oil with a density of 0.86 kg/dm<sup>3</sup> and a kinematic viscosity of 30 mm<sup>2</sup>/s.

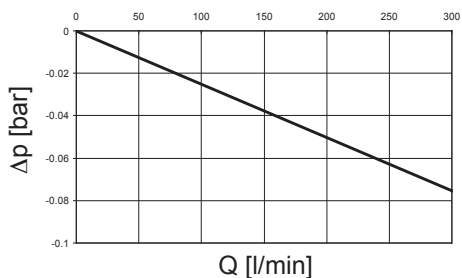
##### SPA 180



##### SPA 200



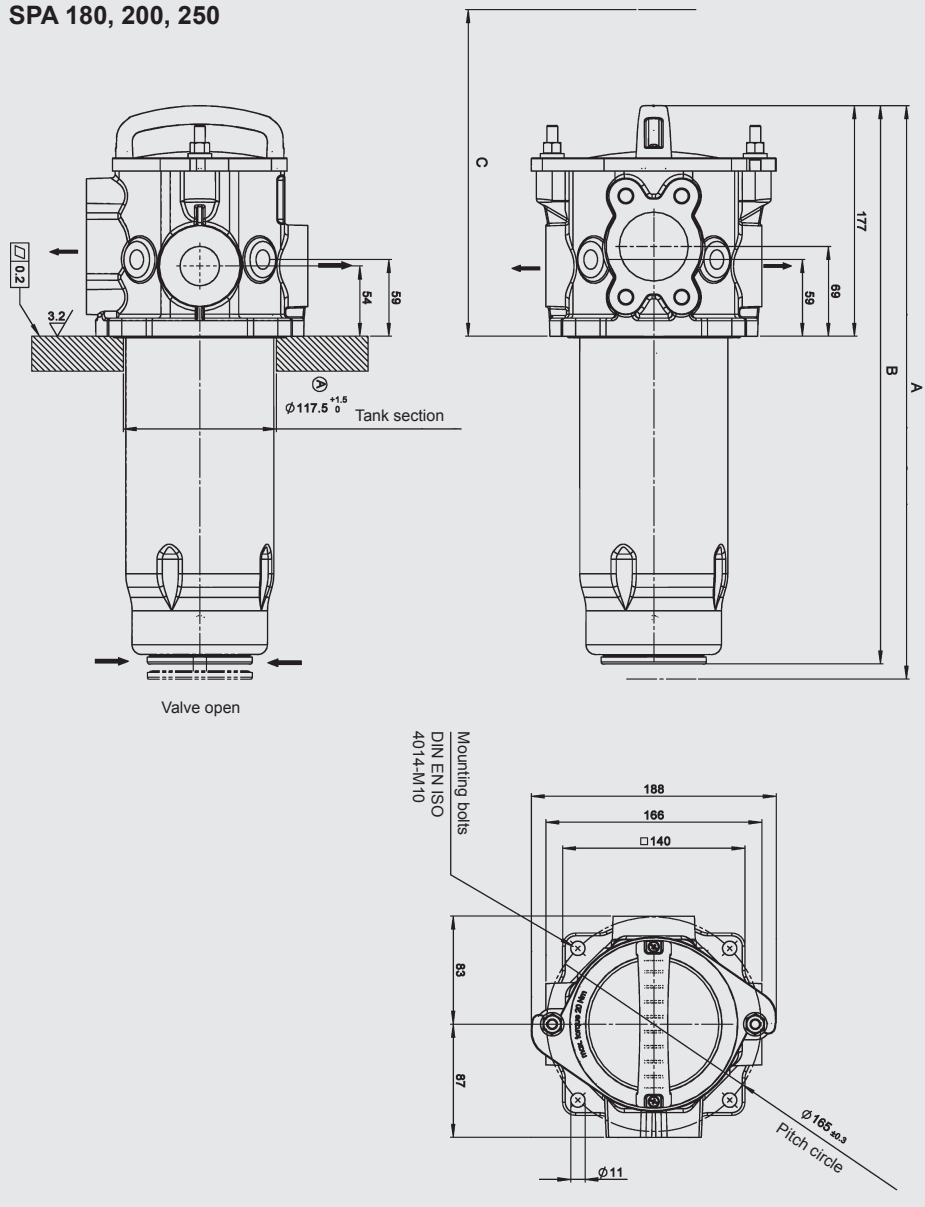
##### SPA 250



### 4. DIMENSIONS

1. In the filter mounting interface, the tank flange should have a maximum flatness of 0.3 mm and maximum roughness of Ra 3.2 μm.
2. In addition, the mounting interface should be free from damage and scratches.
3. The fixing holes of the flange must be blind, or stud bolts with threadlocker must be used to fix the filter. As an alternative, the tank flange can be continuously welded from the inside.
4. Both the tank sheet metal and the filter mounting flange must be sufficiently robust so that neither deform when the seal is compressed during tightening.

#### SPA 180, 200, 250



Type	A	B	C	Weight incl. element [kg]
SPA 180	404	396	520	3.63
SPA 200	441	429	580	4.68
SPA 250	583	571	690	5.38

### 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. All technical details are subject to change without notice.

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