SFMC 250 series

Flow rate up to 160 l/min

SFMC 250 GENERAL INFORMATION

Description

Suction filters

Flow rate up to 160 l/min

SFMC 250 is a range of suction filters with integrated shut-off valve for protection of the downstream pump against the coarse contamination.
They are placed below the minimum oil level, directly connected to the suction line of the pump.
They can be fitted on the side or below the tank, allowing a more flexible design of the tank.
The shut-off valve closes automatically when the cover is removed, allowing the filter element replacement without the fluid drop.

Available features:
- Female threaded connections up to 1" and flanged connections up to 1 1/2", for a maximum flow rate of 160 l/min
- Multiple connections, to connect several suction lines
- Bypass valve, to relieve excessive pressure drop across the filter media
- Magnetic filter, to hold the ferrous particles
- Visual, electrical and electronic clogging indicators

Common application:
- Mobile machines
- Industrial equipment

Technical data

Filter housing materials
- Filter body: Aluminium
- Cover: Polyamide, GF reinforced
- Valve: Polyamide, GF reinforced - Steel
- Anti-Emptying valve: Steel

Bypass valve
Opening pressure 30 kPa (0.3 bar) ±10%

Elements
Fluid flow through the filter element from IN to OUT

Seals
- Standard NBR series A or W
- Optional FPM series V or Z

Temperature
From -25 °C to +110 °C

Note
SFMC 250 filters mounting, see the drawings on page 54 and following.

Weights [kg] and volumes [dm^3]

Filter series	Weights [kg]	Volumes [dm^3]
SFMC 250	2.8	2.3
SFMC 250	2.8	2.4

GENERAL INFORMATION SFMC 250

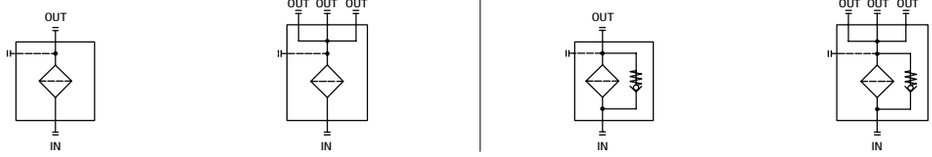
Flow rates [l/min]

	Filter element design - N Series					
Filter series	M0025	M0060	M0090	M0250	P0010	P0025
SFMC 250	147	151	155	160	85	132

Maximum flow rate for a complete suction filter with a pressure drop Δp = 0.08 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.
Please, contact our Sales Department for further additional information.

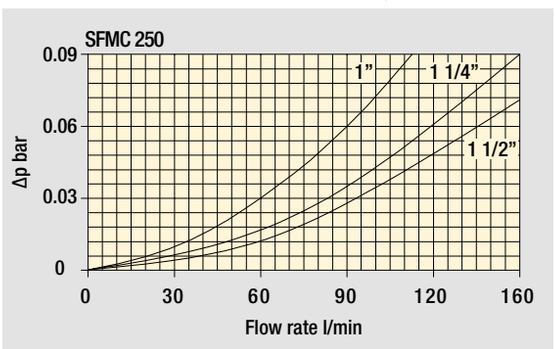
Hydraulic symbols

Filter series	0 - without additional connections	1 - with smaller additional connections	0 - without additional connections	1 - with smaller additional connections
SFMC 250 without bypass	•	•	-	-
SFMC 250 with bypass	-	-	•	•

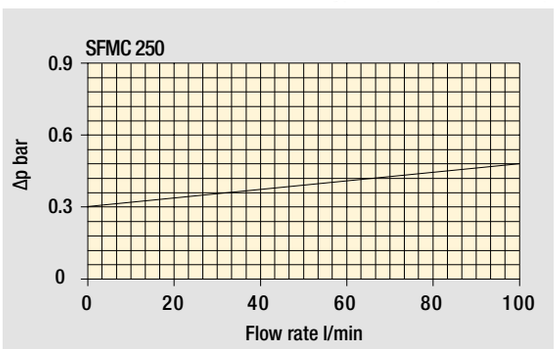


Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968. Δp varies proportionally with density.

Corrective factors "Y" for filter element Δp calculation

Filter element		Nominal filtration Collapse ΔP : A = 1 bar					
Type	Length	P0010	P0025	M0025	M0060	M0090	M0250
SMC 250	10	0.65	0.20	0.10	0.08	0.05	0.03

See page 22 for the complete information regarding filter element Δp calculation.

Maximum total pressure drop (Δp max) allowed by a new and clean filter

Filter family	Δp max	
Suction	0.08 bar	1.15 psi

SFMC 250

Designation & Ordering code

COMPLETE FILTER

Example 1:	SFMC	250	10	M0025	A	A	00	FF112	0	5T	MA	P01	NN
Example 2:	SFMC	250	10	P0010	A	V	00	FG112	0	5T	NN	P01	NN

Series
SFMC

Size
250

Length
10

Filtration rating (filter media)

M0025	Wire mesh 25 µm	**P0010**	Resin-impregnated paper 10 µm
M0060	Wire mesh 60 µm	**P0025**	Resin-impregnated paper 25 µm
M0090	Wire mesh 90 µm		
M0250	Wire mesh 250 µm		

Element Δp
A 1 bar

Seals and treatments		M0xxx	P0xxx
A	NBR	•	•
V	FPM	•	•
W	NBR with filter housing and components surface treatment	•	-
Z	FPM with filter housing and components surface treatment	•	-

Bypass
00 Without bypass
03 With bypass 30 kPa (0.3 bar)

Connections

FG100	G 1”		**FS016**	SAE 16 - 1 5/16” - 12 UN	
FG114	G 1 1/4”		**FS020**	SAE 20 - 1 5/8” - 12 UN	
FG112	G 1 1/2”	G 1”	**FS024**	SAE 24 - 1 7/8” - 12 UN	SAE 16 - 1 5/16” - 12 UN
FN100	1” NPT		**FE112**	1 1/2” SAE 3000 psi/M	
FN114	1 1/4” NPT		**FF112**	1 1/2” SAE 3000 psi/UNC	
FN112	1 1/2” NPT				

Available additional connections

Additional connections	FG112	FS024
0 Without additional connections	-	-
1 With smaller additional connections	G1”	SAE 16 - 1 5/16” - 12 UN

Connections for clogging indicators
5T With rear indicator connection, with metal plugs

Additional features
NN Without additional features
MA With magnetic filter

Version
P01 Standard catalogue item

Certificates
NN None

CLOGGING INDICATORS See page 719

VEA	Electrical vacuum indicator	**VVA**	Axial vacuum gauge
VLA	Electrical / visual vacuum indicator	**VVR**	Radial vacuum gauge

SFMC 250

Designation & Ordering code

FILTER ELEMENT

Example 1:	SMC	250	10	M0025	A	A	00	NN	P01	NN
Example 2:	SMC	250	10	P0010	A	V	00	NN	P01	NN

Series
SMC

Size
250

Length
10

Filtration rating (filter media)

M0025	Wire mesh 25 µm	**P0010**	Resin-impregnated paper 10 µm
M0060	Wire mesh 60 µm	**P0025**	Resin-impregnated paper 25 µm
M0090	Wire mesh 90 µm		
M0250	Wire mesh 250 µm		

Element Δp
A 1 bar

Seals and treatments
A NBR
V FPM

Bypass
00 Without bypass

Additional features
NN Without

Version
P01 Standard catalogue item

Certificates
NN None

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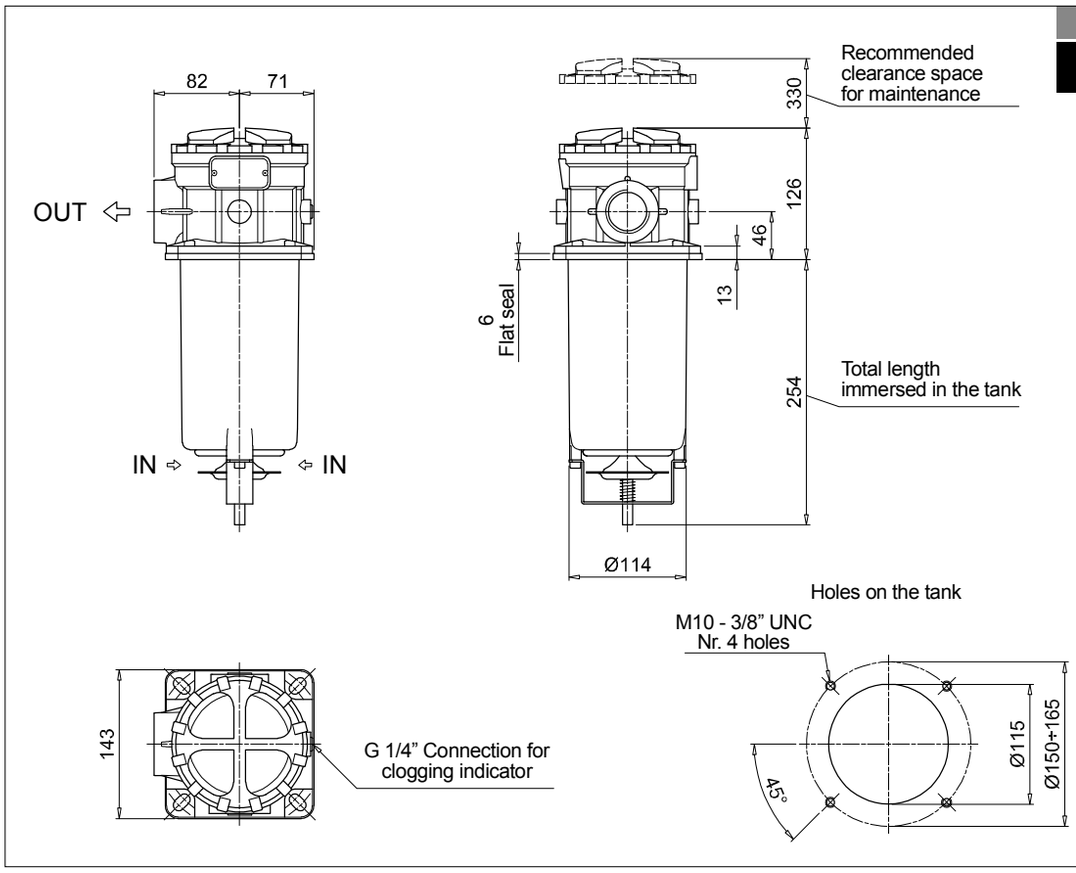
SFMC 250

Dimensions

SFMC 250

Threaded connections FG - FN - FS

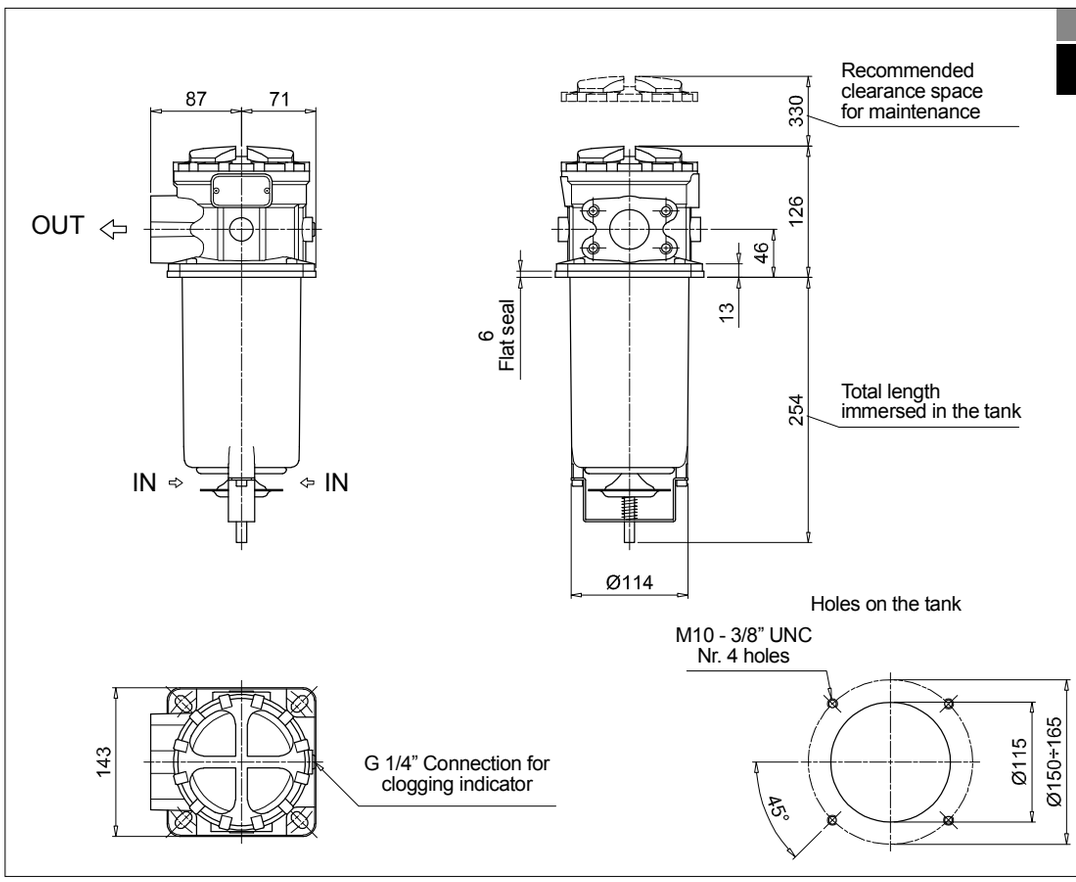
Without additional connection 0



SFMC 250

Flange connections FE - FF

Without additional connection 0



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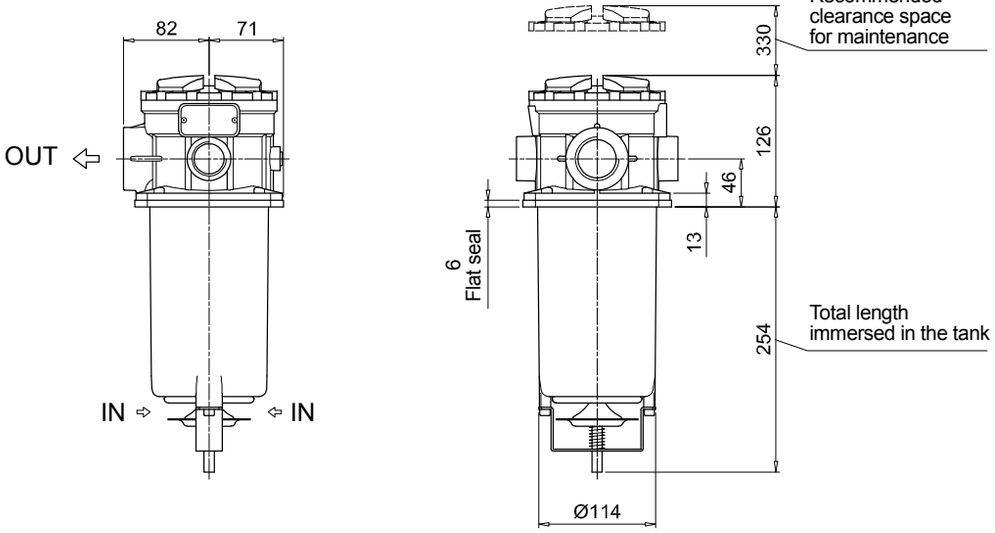
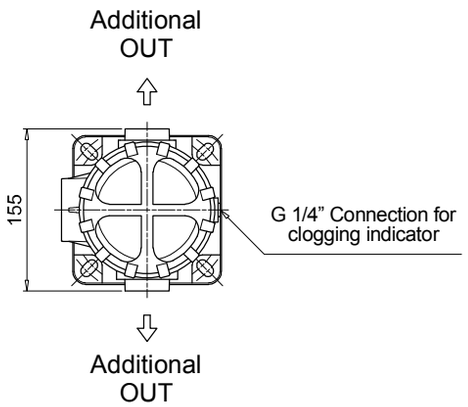
SFMC 250

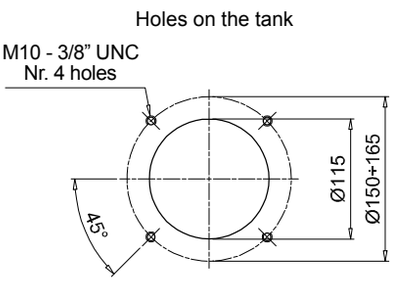
Dimensions

SFMC 250

With smaller additional connection 1







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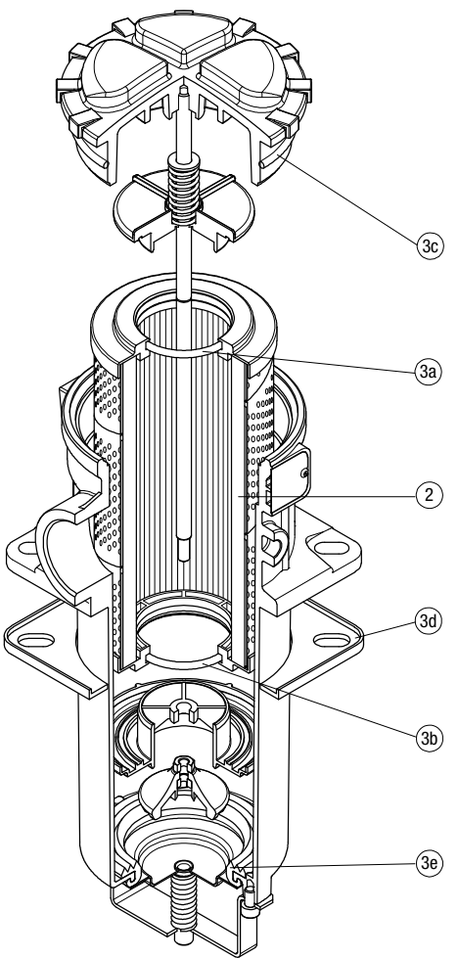
SFMC 250 SPARE PARTS

Order number for spare parts

SFMC 250



Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3e)	
Filter series	Filter element	Seal Kit code number NBR	FPM
SFMC 250	See order table	02050586	02050587

SFSC series

Flow rate up to 700 l/min

SFSC GENERAL INFORMATION

Description

Suction filters

Flow rate up to 700 l/min

SFSC is a range of suction filters with integrated shut-off valve for protection of the downstream pump against the coarse contamination.
They are placed below the minimum oil level, directly connected to the suction line of the pump.
They can be fitted on the side or below the tank, allowing a more flexible design of the tank.
The shut-off valve closes automatically when the cover is removed, allowing the filter element replacement without the fluid drop.

Available features:
- Flanged connections up to 4", for a maximum flow rate of 700 l/min
- Optional hose fitting installed, to connect the suction line without the use of flanges
- Magnetic filter, to hold the ferrous particles
- Plastic and metal handle, to close the shut-off valve before the cover removal
- Electrical switch, to signal the closed shut-off valve
- Visual, electrical and electronic clogging indicators

Common application:
Industrial equipment

Technical data

Filter housing materials
- Housing:
  Anodized Aluminium
  Steel (chemical heat treatment): only for SFSC 535 - 540

- Cover:
  Anodized Aluminium
  Steel (chemical heat treatment): only for SFSC 535 - 540

- Optional flange:
  Anodized Aluminium

Elements
Fluid flow through the filter element from IN to OUT

Seals
- Standard NBR series A or W
- Optional FPM series V or Z

Temperature
From -25 °C to +110 °C

Note
SFSC filters mounting, see the drawings on page 66 and following

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]	Volumes [dm³]
SFSC 500	4.2	1.8
SFSC 503	6.2	2.9
SFSC 504	7.2	4.0
SFSC 505	4.3	1.6
SFSC 510	5.4	2.1
SFSC 535	16	4.4
SFSC 540	18.6	6.5

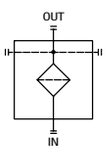
GENERAL INFORMATION SFSC

Flow rates [l/min]

	Filter element design - N Series	
Filter series	M0025	M0060 M0090 M0250
SFSC 500	219	234
SFSC 503	325	390
SFSC 504	484	543
SFSC 505	199	221
SFSC 510	259	282
SFSC 535	439	479
SFSC 540	644	688

Maximum flow rate for a complete suction filter with a pressure drop Δp = 0.08 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.
Please, contact our Sales Department for further additional information.

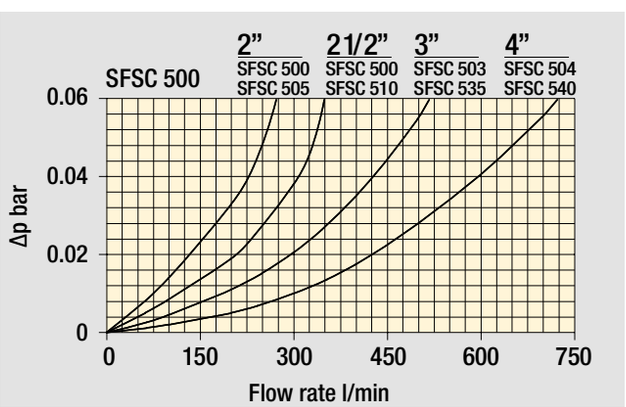
Hydraulic symbols



Filter series	
SFSC	•

PRESSURE DROP

Filter housings Δp pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968. Δp varies proportionally with density.

Corrective factors "Y" for filter element Δp calculation

Filter element		Nominal filtration Collapse ΔP : A = 1 bar					
Type	Length	P0010	P0025	M0025	M0060	M0090	M0250
SSC 503	10	-	-	0.17	0.11	0.11	0.11
SSC 504	10	-	-	0.11	0.08	0.08	0.08
SSC 505	10	-	-	0.23	0.18	0.18	0.18
SSC 510	10	-	-	0.18	0.14	0.14	0.14
SSC 535	10	-	-	0.08	0.05	0.05	0.05
SSC 540	10	-	-	0.05	0.04	0.04	0.04

See page 22 for the complete information regarding filter element Δp calculation.

Maximum total pressure drop (Δp max) allowed by a new and clean filter

Filter family	Δp max	
Suction	0.08 bar	1.15 psi

SFSC

SFSC500 - SFSC503 - SFSC504 - SFSC505 - SFSC510 - SFSC535 - SFSC540

Designation & Ordering code

COMPLETE FILTER

Example 1:	SFSC	500	10	M0025	A	W	00	FE200	0	6T	MA	P01	NN
Example 2:	SFSC	535	10	M0060	A	V	00	HB089	0	9T	MC	P01	NN

Series
SFSC

Size
500 | 503 | 504 | 505 | 510 | 535 | 540

Length
10

Filtration rating (filter media)

M0025	Wire mesh 25 µm	**M0090**	Wire mesh 90 µm
M0060	Wire mesh 60 µm	**M0250**	Wire mesh 250 µm

Element Δp
A 1 bar

Seals and treatments

A	NBR
V	FPM
W	NBR with components surface treatment
Z	FPM with components surface treatment

Bypass
00 Without bypass

Connections

		500	505	510	503-535	504-540
FE200	2" SAE 3000 psi/M	•	•	-	-	-
FE212	2 1/2" SAE 3000 psi/M	•	-	•	-	-
FE300	3" SAE 3000 psi/M	-	-	-	•	-
FE400	4" SAE 3000 psi/M	-	-	-	-	•
FF200	2" SAE 3000 psi/UNC	•	•	-	-	-
FF212	2 1/2" SAE 3000 psi/UNC	•	-	•	-	-
FF300	3" SAE 3000 psi/UNC	-	-	-	•	-
FF400	4" SAE 3000 psi/UNC	-	-	-	-	•

		500	505	510	503-535	504-540
HB063	Hose barb Ø 63 mm	•	•	-	-	-
HB075	Hose barb Ø 75 mm	•	-	•	-	-
HB089	Hose barb Ø 89 mm	-	-	-	•	-
HB114	Hose barb Ø 114 mm	-	-	-	-	•

Additional connections
0 Without additional connections

Connections for clogging indicators

		500-503-504-540	505-510-535
6T	With both side indicator connections, with metal plugs	•	-
9T	With multiple indicator connections, with metal plugs	-	•

Additional features

		500-503-504	505-510-535-540
MA	With magnetic filter	•	•
MB	With magnetic filter + polyamide handwheel	•	-
MC	With magnetic filter + microswitch	-	•
MD	With magnetic filter + microswitch + polyamide handwheel	•	-
ME	With magnetic filter + microswitch + steel handwhee	•	-

Version
P01 Standard catalogue item

Certificates
NN None

CLOGGING INDICATORS See page 719

VEA	Electrical vacuum indicator	**VVA**	Axial vacuum gauge
VLA	Electrical / visual vacuum indicator	**VVR**	Radial vacuum gauge

Designation & Ordering code

FILTER ELEMENT

Example 1:	SSC	510	10	M0025	A	N	00	NN	P01	NN
Example 2:	SSC	535	10	M0060	A	N	00	NN	P01	NN

Series
SSC

Size

503	SFSC 503	**510**	SFSC 500	**540**	SFSC 540
504	SFSC 504		SFSC 510		
505	SFSC 505	**535**	SFSC 535		

Length
10

Filtration rating (filter media)

M0025	Wire mesh 25 µm	**M0090**	Wire mesh 90 µm
M0060	Wire mesh 60 µm	**M0250**	Wire mesh 250 µm

Element Δp
A 1 bar

Seals and treatments
N No seal

Bypass
00 Without bypass

Additional features
NN Without

Version
P01 Standard catalogue item

Certificates
NN None

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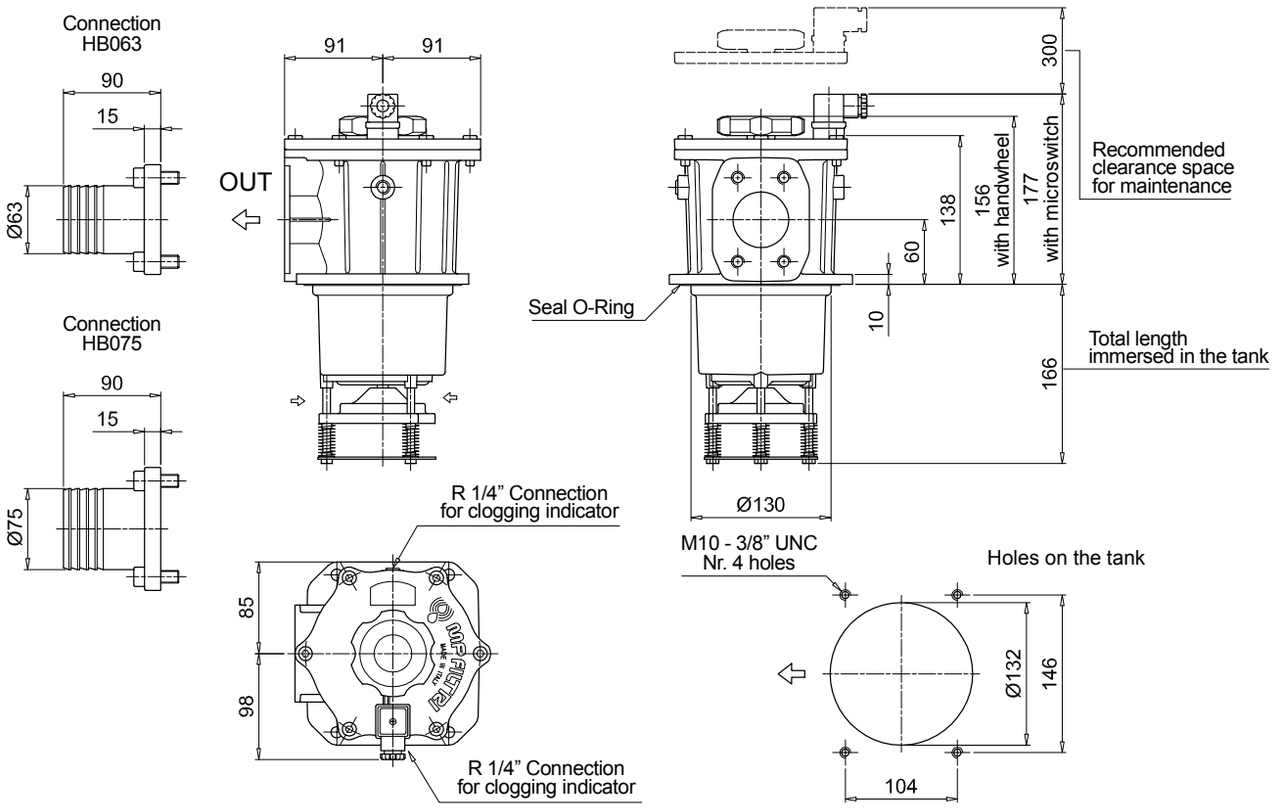
SFSC SFSC500

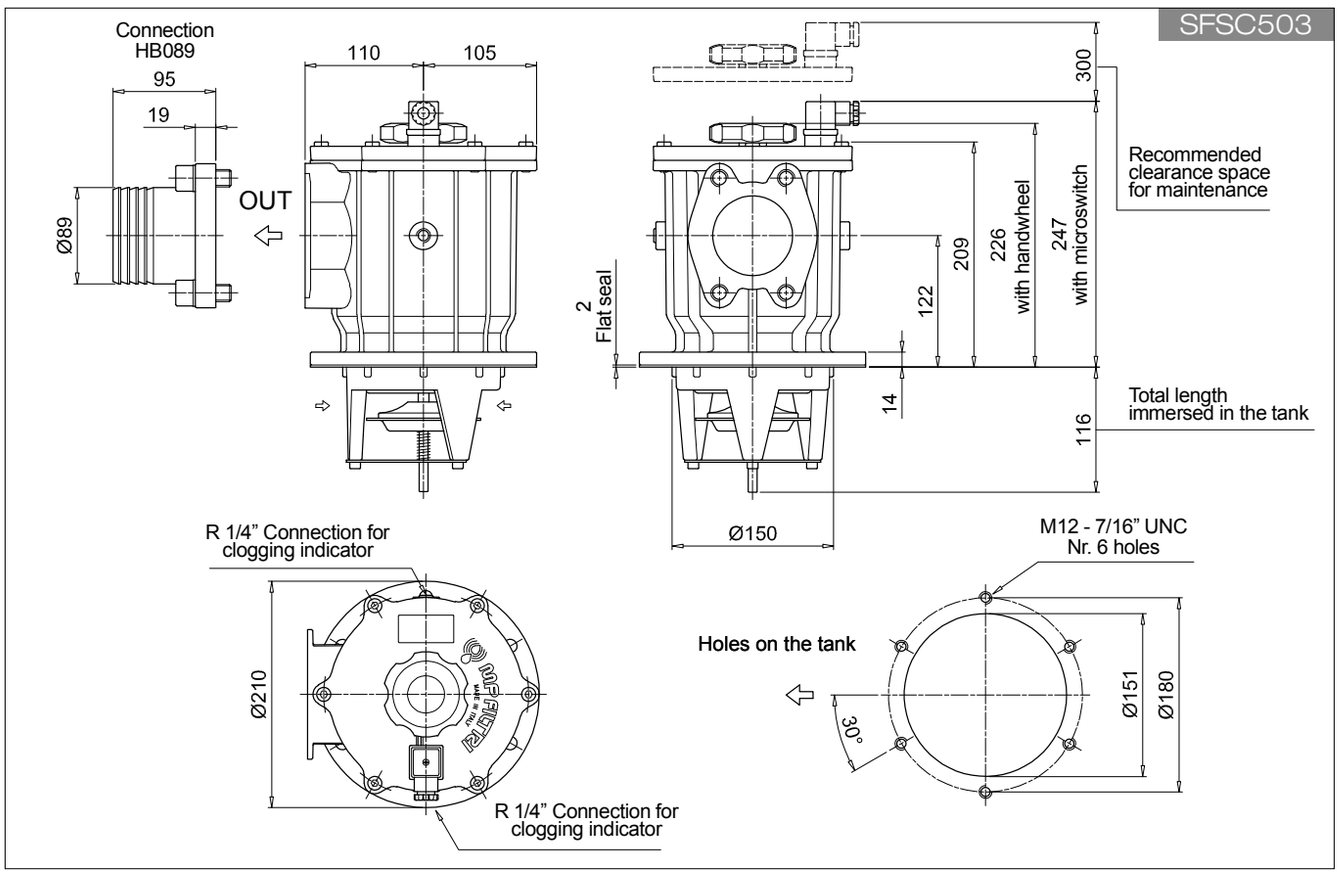
Dimensions

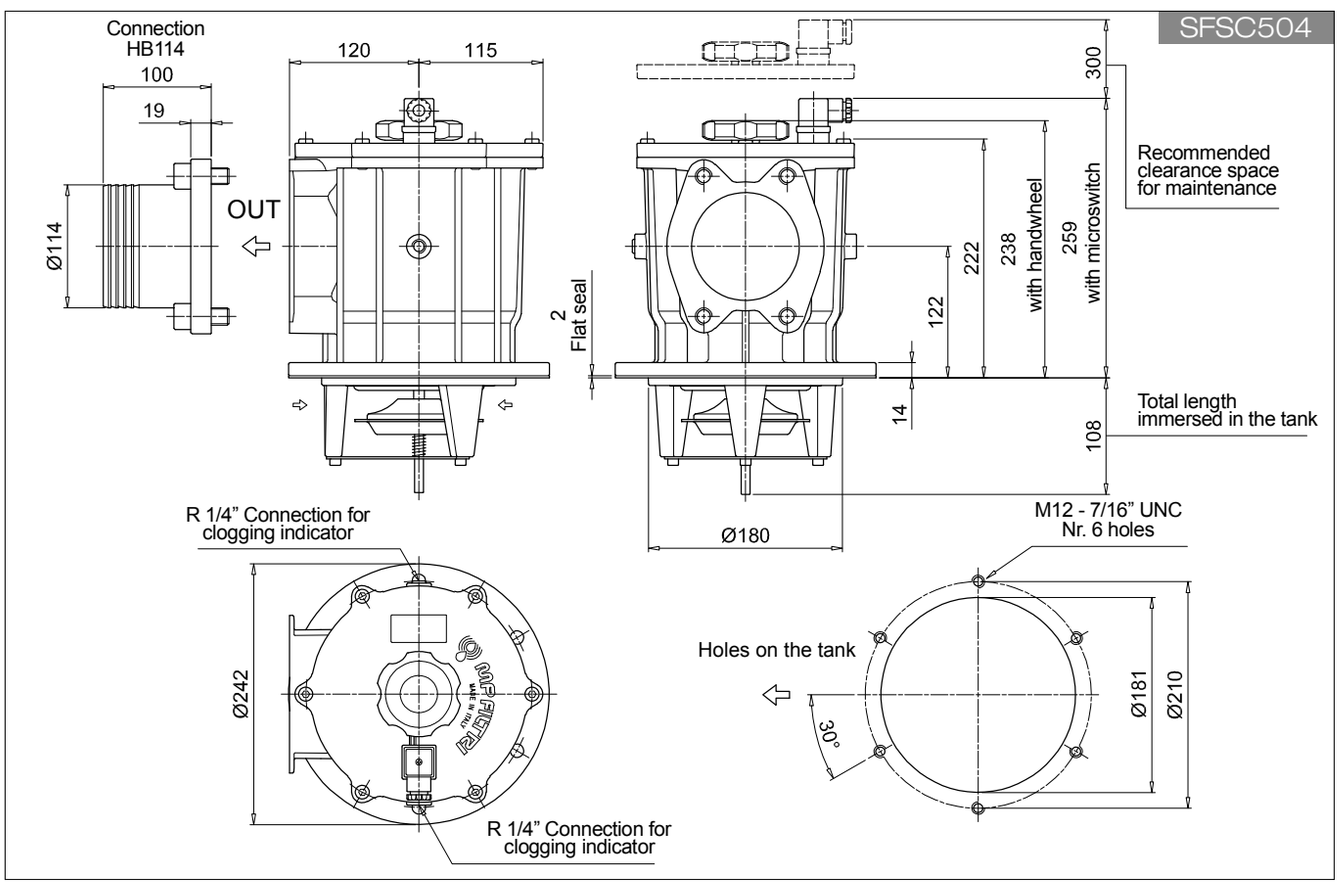
SFSC500



SFSC503 - SFSC504 SFSC

Dimensions





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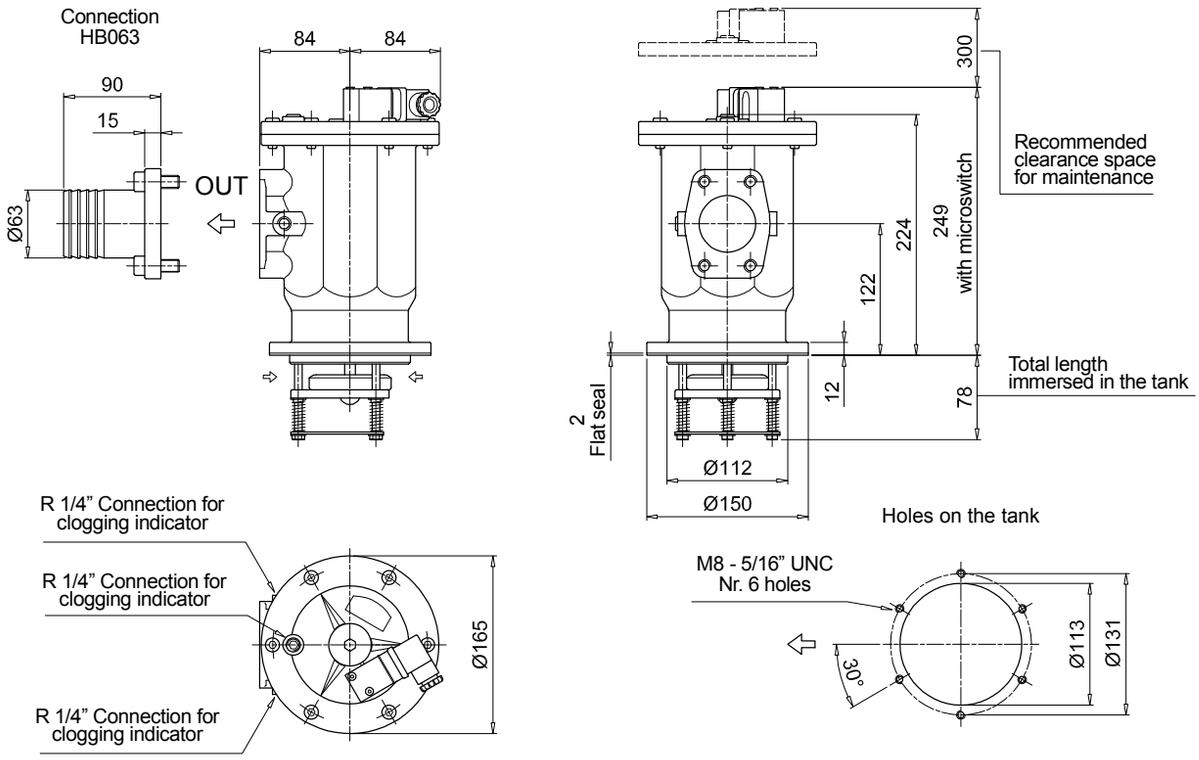
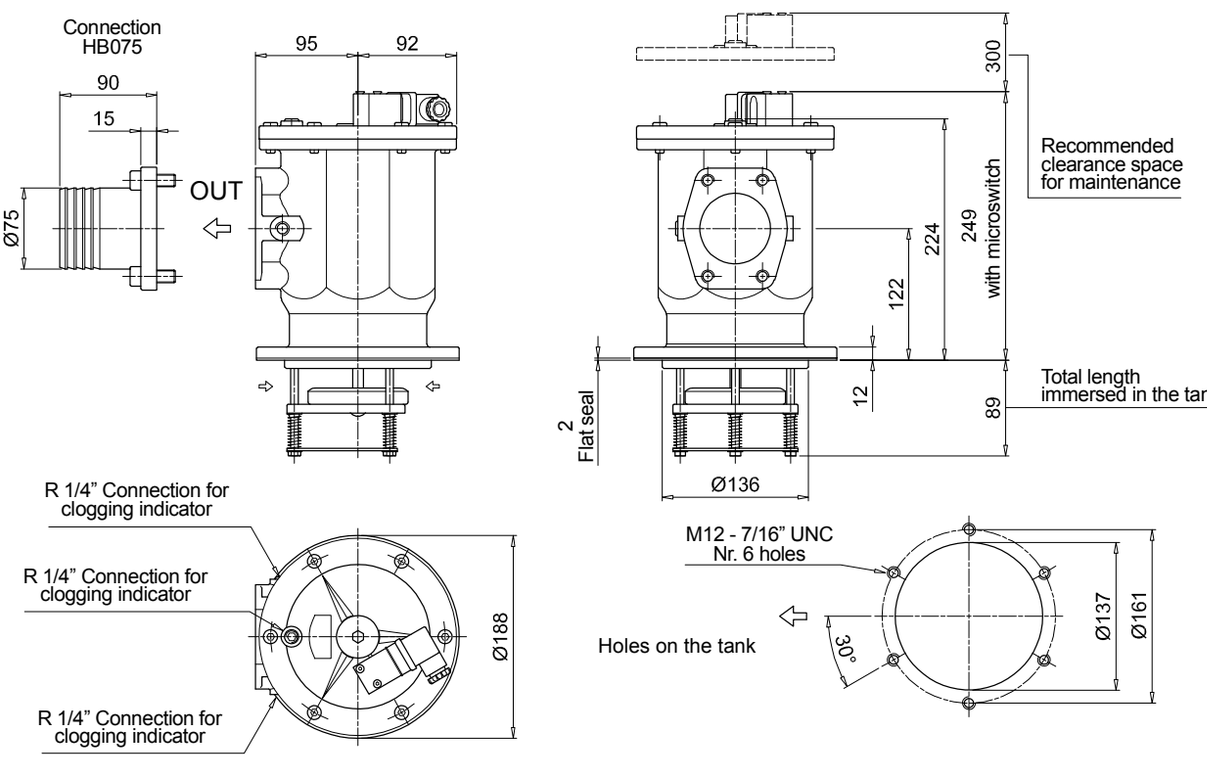
SFSC SFSC505 - SFSC510

Dimensions

SFSC505



SFSC510



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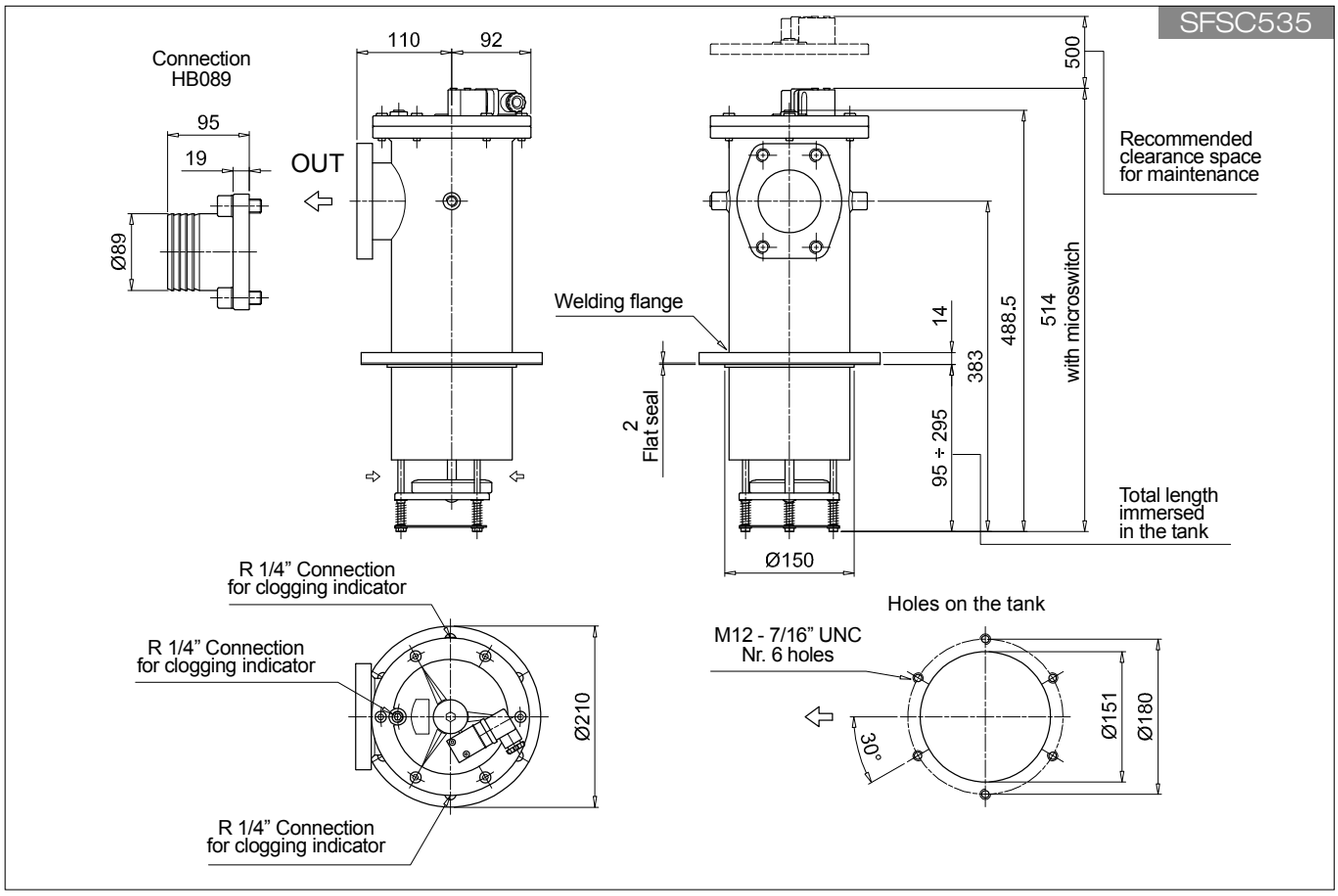
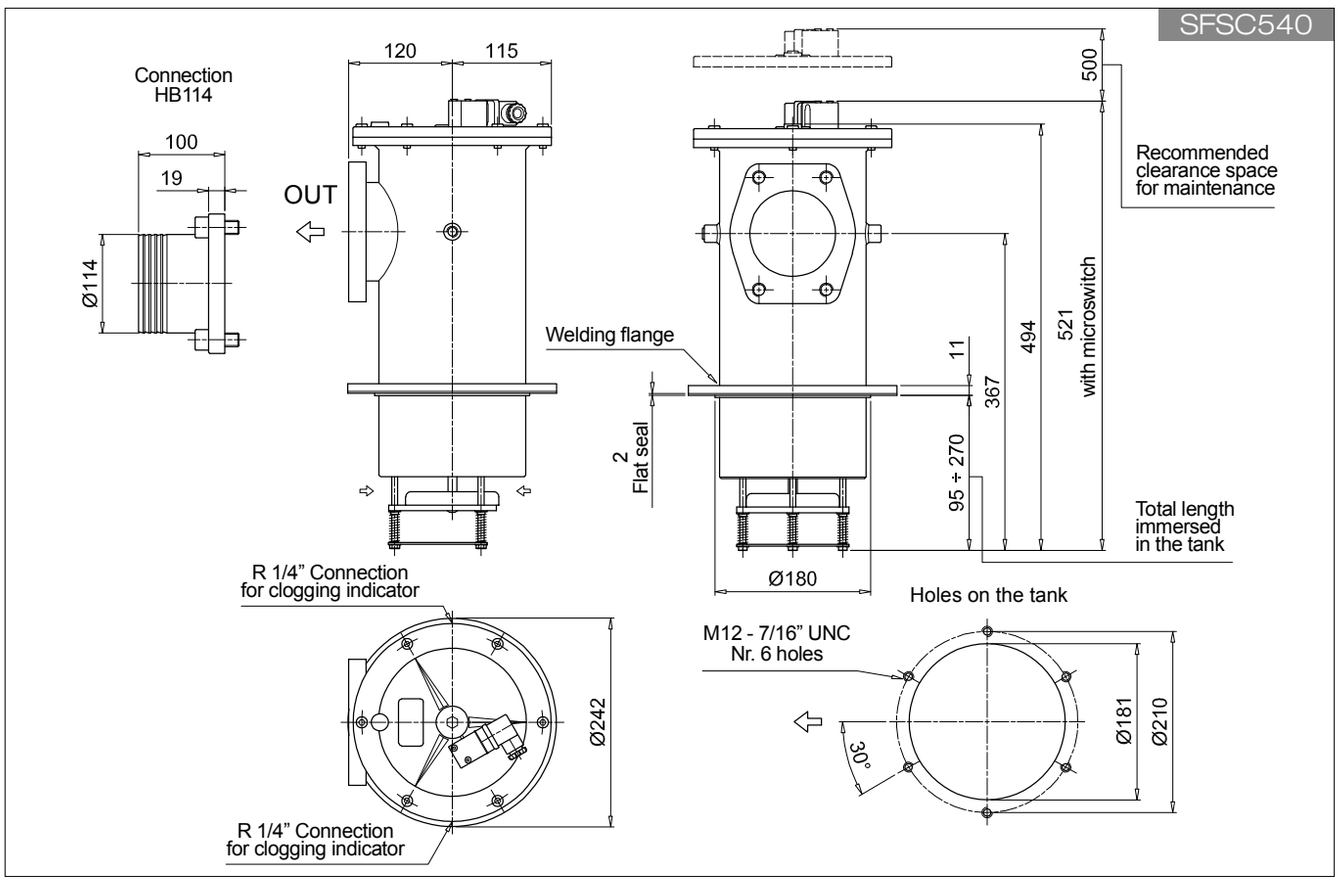
SFSC535 - SFSC540 SFSC

Dimensions

SFSC535



SFSC540



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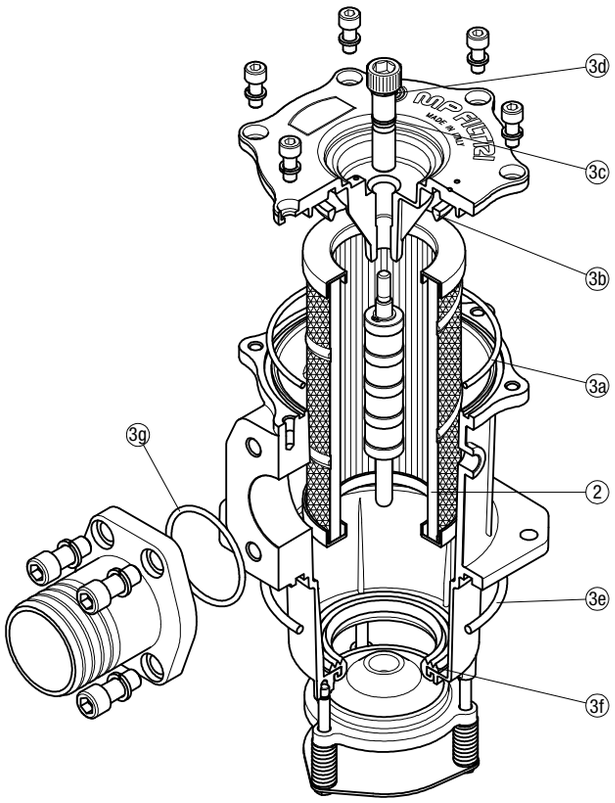
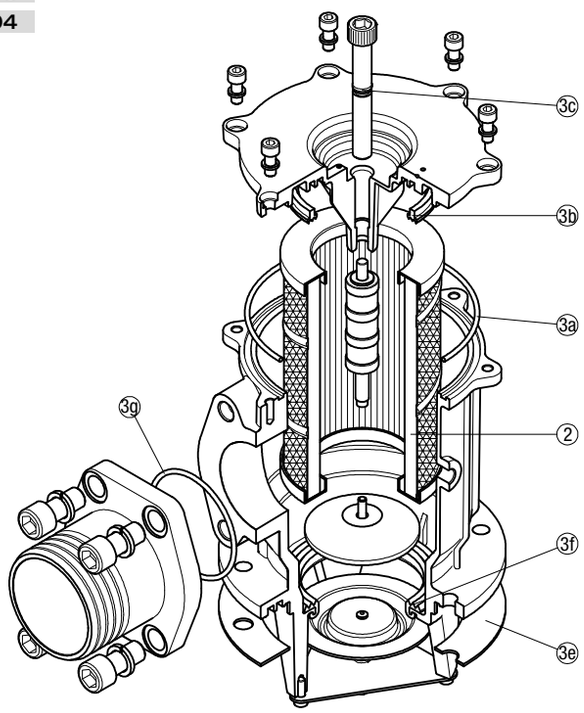
SFSC SPARE PARTS

Order number for spare parts

SFSC 500



SFSC 503
SFSC 504

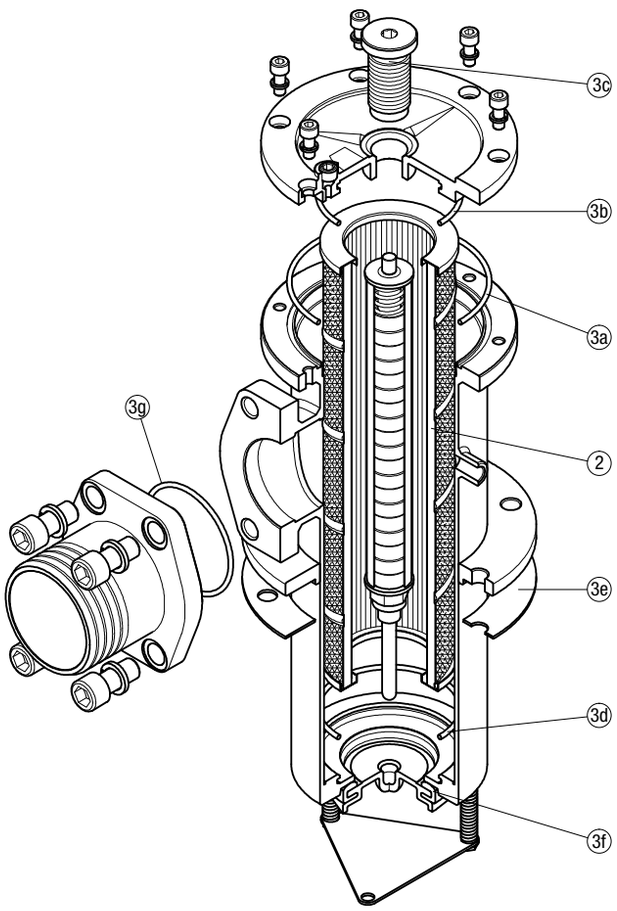


Item:	Q.ty: 1 pc. (2)	Q.ty: 1 pc. (3) (3a ÷ 3g)	
Filter series	Filter element	Seal Kit code number NBR	FPM
SF2 500	See	02050141	02050142
SF2 503	order	02050070	02050071
SF2 504	table	02050072	02050073

SPARE PARTS SFSC

Order number for spare parts

SFSC 505
SFSC 510
SFSC 535
SFSC 540



Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3g)	
Filter series	Filter element	Seal Kit code number NBR	FPM
SFSC 505	See order table	02050043	02050044
SFSC 510		02050045	02050046
SFSC 535		02050051	02050052
SFSC 540		02050053	02050054

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