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

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.

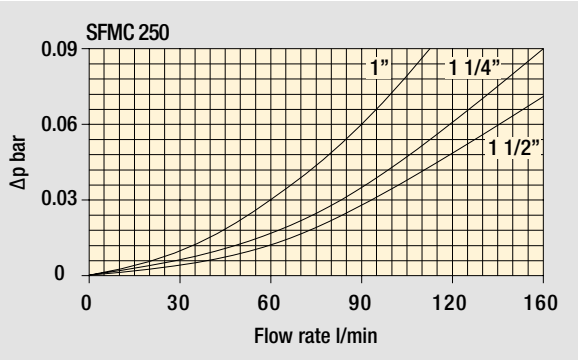
Please, contact our Sales Department for further additional information.

Hydraulic symbols

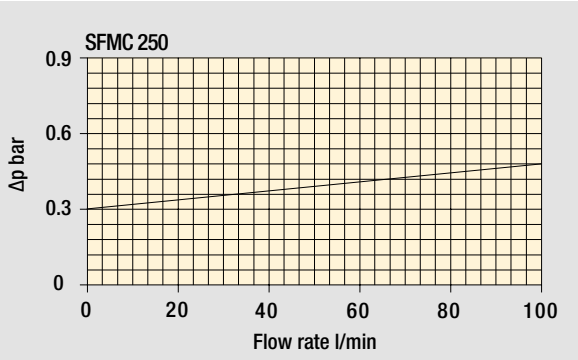
Filter series	0 - without additional connections	1 - with smaller additional connections	0 - without additional connections	1 - with smaller additional connections
SFMC 250 without bypass	•	•	-	-
SFMC 250 with bypass	-	-	•	•

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 715

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

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

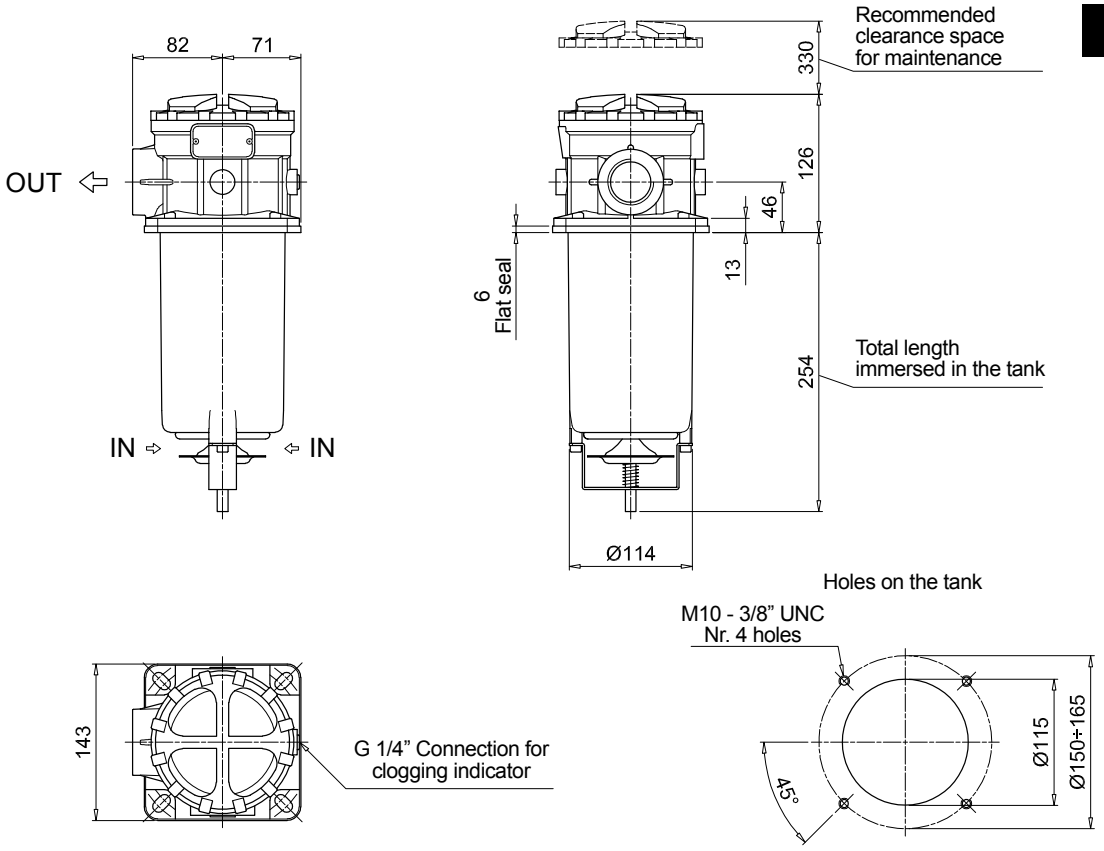
SFMC 250

Dimensions

SFMC 250

Threaded connections FG - FN - FS

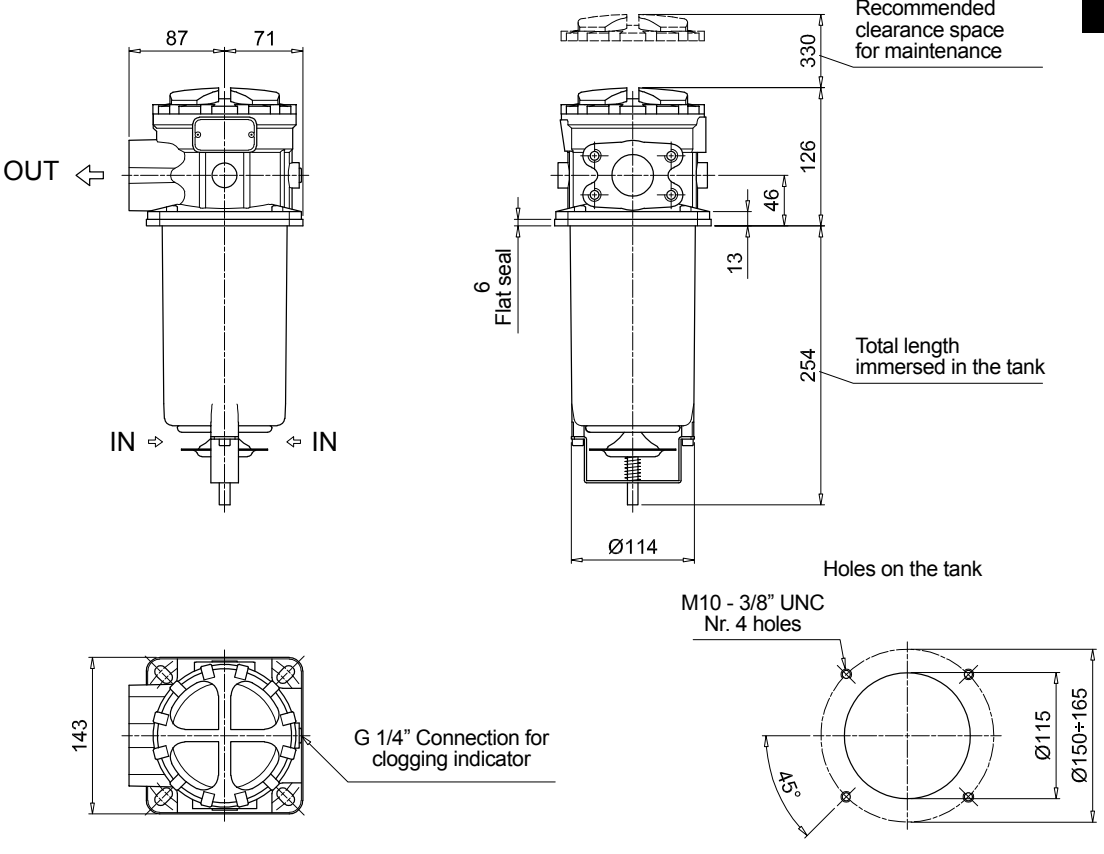
Without additional connection 0



SFMC 250

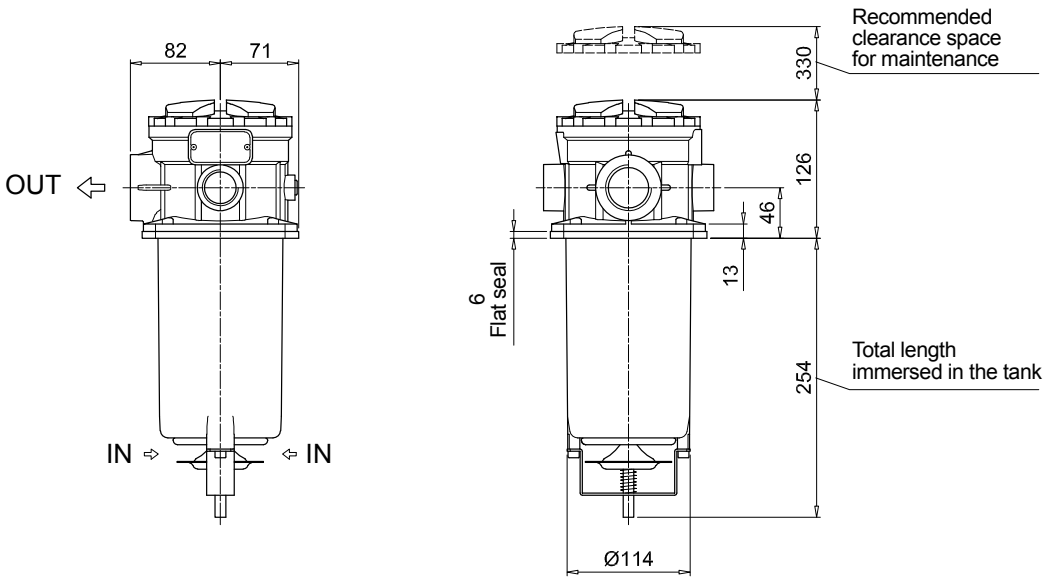
Flange connections FE - FF

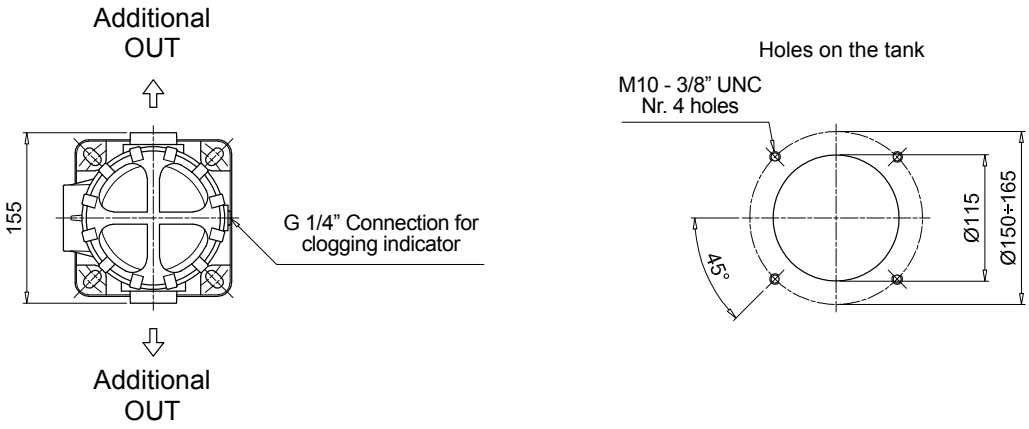
Without additional connection 0



SFMC 250

With smaller additional connection 1

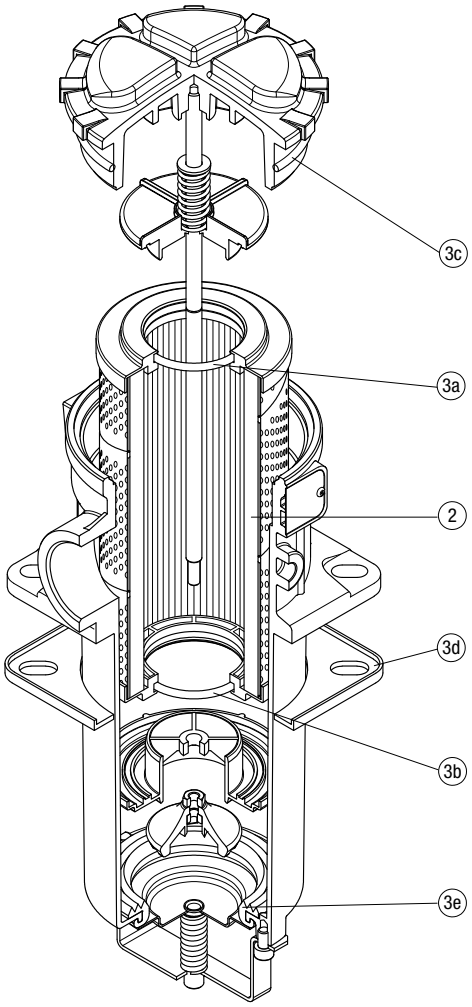




SFMC 250 SPARE PARTS

Order number for spare parts

SFMC 250

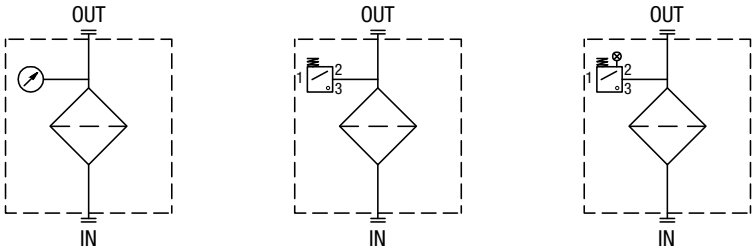


Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3e)	
Filter series	**Filter element**	**Seal Kit code number NBR**	**FPM**
SFMC 250	See order table	02050586	02050587

Suitable indicator types

V ACUUM INDICATORS

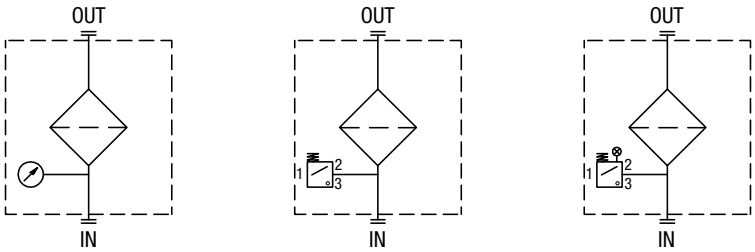
Vacuum indicators are used on the Suction line to check the efficiency of the filter element.
They measure the pressure downstream of the filter element.
Standard items are produced with R 1/4" EN 10226 connection.
Available products with R 1/8" EN 10226 to be fitted on MPS series.
Vacuum indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "V".



Example:
V VVB20P01

B AROMETRIC (PRESSURE) INDICATORS

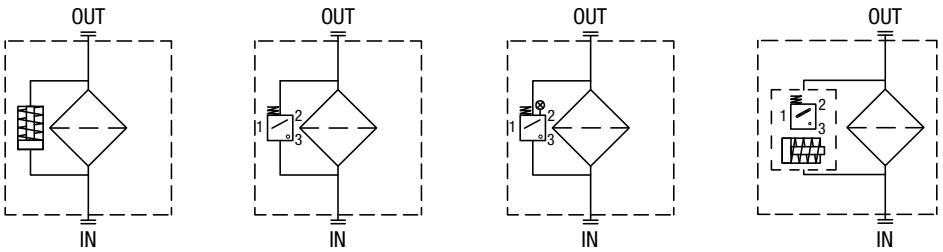
Pressure indicators are used on the Return line to check the efficiency of the filter element.
They measure the pressure upstream of the filter element.
Standard items are produced with R 1/8" EN 10226 connection.
Barometric (pressure) indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "B"



Example:
B BVA14P01

D IFFERENTIAL PRESSURE INDICATORS

Differential pressure indicators are used on the Pressure line to check the efficiency of the filter element.
They measure the pressure upstream and downstream of the filter element (differential pressure).
Standard items are produced with special connection G 1/2" size.
Also available in Stainless Steel models.
Differential pressure indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "D"



Example:
D DVA20xP01

Designation & Ordering code

VACUUM INDICATORS

Configuration example 1:	VE	A	21	V	A	50	P01	EX
Configuration example 2:	VL	B	21	A	A	71	P01	
Configuration example 3:	VV	R	20				P01	

Series

VE	Electrical vacuum indicator
VL	Electrical/Visual vacuum indicator
VV	Vacuum gauge

Type VE - VL

A	Connection EN 10226 - R1/4”
B	Connection EN 10226 - R1/8”

Type VV

		SF2	SFEX
A	Axial connection EN 10226 - R1/4”	•	-
B	Axial connection EN 10226 - R1/8”	-	•
R	Radial connection EN 10226 - R1/4”	•	-
S	Radial connection EN 10226 - R1/8”	-	•

Vacuum setting

		VE	VL	VV
20	-0.16 bar	-	-	•
21	-0.21 bar	•	•	-

Seals

		VEA - VLA	VEB - VLB
A	NBR	•	•
V	FPM	•	-

Thermostat

		VE	VL
A	Without	•	•

Electrical connections

		VE	VL
50	Connection EN 175301-803	•	-
51	Connection EN 175301-803, transparent base with lamps 24 Vdc	-	•
52	Connection EN 175301-803, transparent base with lamps 110 Vdc	-	•
53	Connection EN 175301-803, transparent base with lamps 230 Vac	-	•
71	Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	•

Option

P01	MP Filtri standard
Pxx	Customized

Certifications

		VEA21A	VEA21V	VEB	VL	VV
	Without	•	•	•	•	•
EX	ATEX certification	•	•	•	-	-
UL	UL certification	•	-	-	-	-