MPI series

Maximum working pressure up to 1 MPa (10 bar) - Flow rate up to 3500 l/min

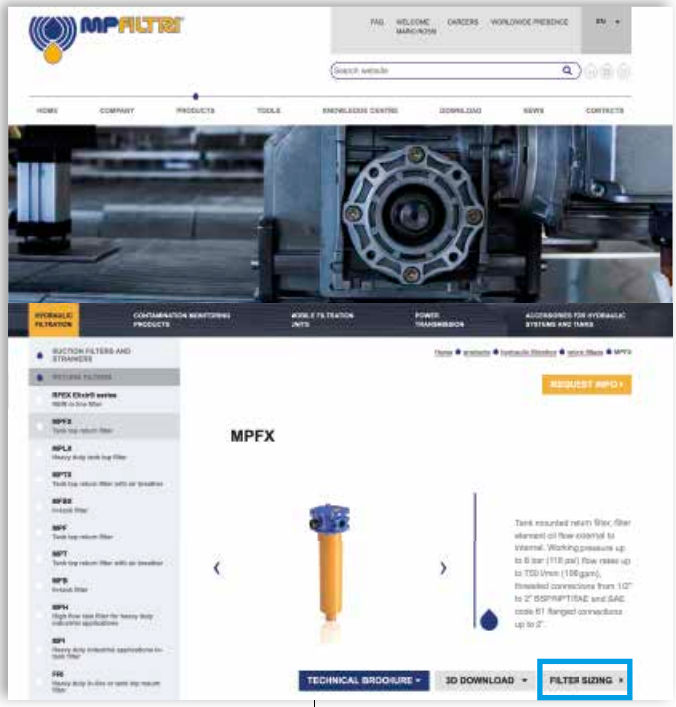
TYPICAL FILTER SIZING Selection Software

Step 1

Select “FILTER SIZING SOFTWARE” after login

OR

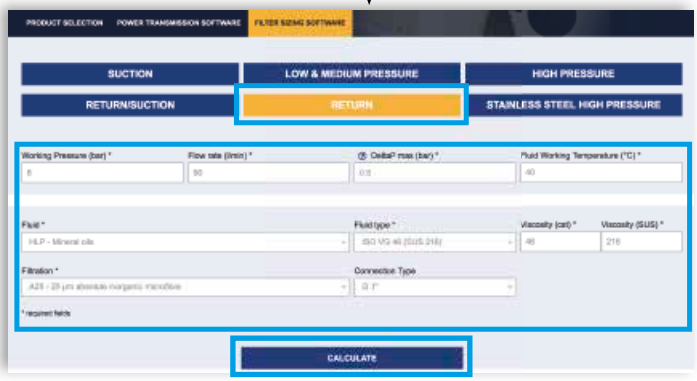
Select “FILTER SIZING” after login from a product page

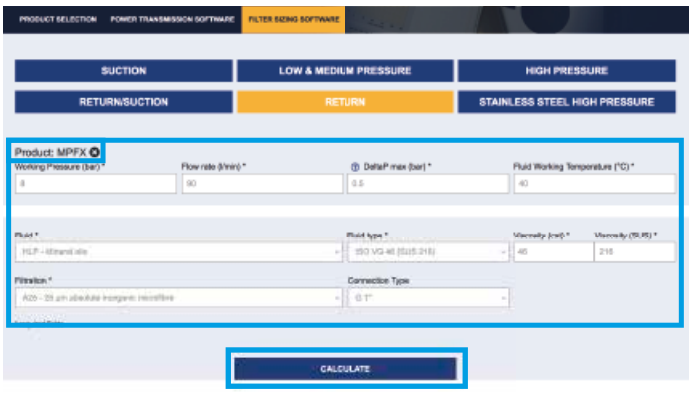


Choose the type of filter family.
Enter the main data for sizing the filter
then push CALCULATE.

Step 2

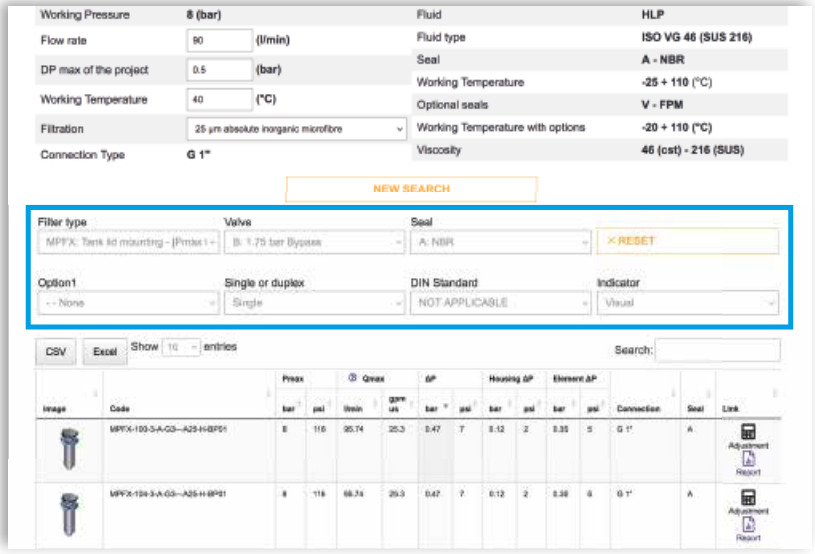
Enter the main data for sizing the filter
then push CALCULATE.





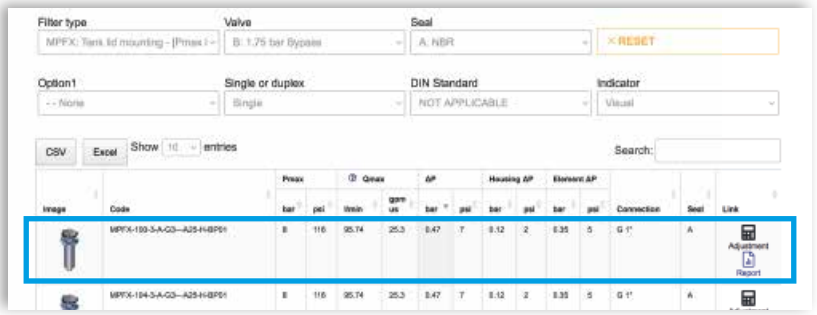
Step 3

Select the desidered options to choose the appropriate filter type for the application.



Step 4

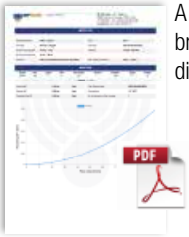
Choose the most suitable filter from the proposed list.



Step 5

A SAVE YOUR FILTER'S REPORT

SAVE IN YOUR ARCHIVE
typing your reference data and then SAVE AS PDF

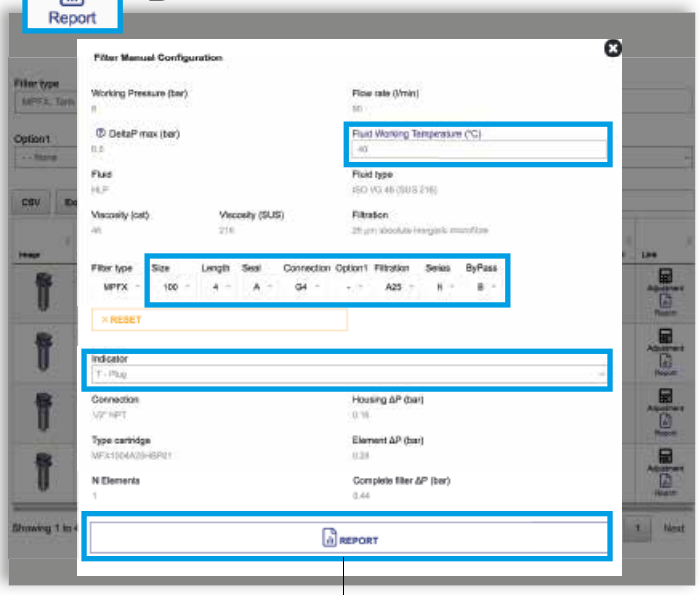


A new
browser window
displays the pdf

Close the report window

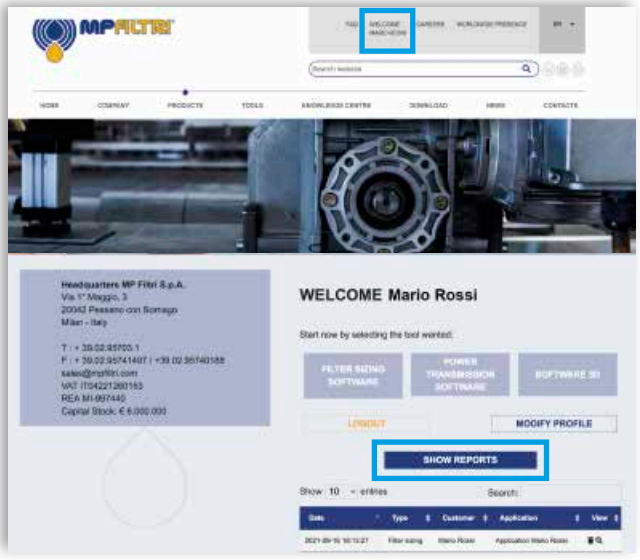
B MANUAL EDIT

It is possible to change the filter
modifying every parameter.



see **A**

By clicking your WELCOME button,
the SHOW REPORTS is displayed: select it to see your filters list.



Description

Return filter

Maximum working pressure up to 1 MPa (10 bar)
Flow rate up to 3500 l/min

MPI is a range of return filter kits for protection of the reservoir against the system contamination.
They are directly integrated in the reservoir in immersed or semi-immersed position to save space into the tank.
The use of the diffuser is recommended, to place the filter output always immersed into the fluid to avoid aeration or foam generation into the reservoir.
The filtration from inside to outside allows a cleaner filter element replacement, the dirty remains into the filter element.

Available features:
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve, to relieve excessive pressure drop across the filter media
- Magnetic filter, to hold the ferrous particles
- Oil dipstick, to easily check the level of the fluid into the reservoir (separate item)
- Diffuser, to reduce the risk of aeration, foaming and noise

Common applications:
Heavy duty industrial equipment

Technical data

Filter housing materials
- Insert assembly
  Polyamide, GF reinforced: MPI 100
  Aluminium: MPI 250-630-850

- Diffuser: Tinned Steel

- Valve: Steel

Bypass valve
- Opening pressure 175 kPa (1.75 bar) ±10%
- Opening pressure 250 kPa (2.5 bar) ±10%, except for MPI 850

Δp element type
- Microfibre filter elements - series MR: 10 bar
- Fluid flow through the filter element from IN to OUT

Seals
- Standard NBR series A
- Optional FPM series V

Temperature
From -25 °C to +110 °C

Note
MPI filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]						Volumes [dm³]					
	Length	1	2	3	4	5	Length	1	2	3	4	5
MPI 100		0.90	1.00	1.20	1.50	1.80		0.90	0.90	1.20	1.60	1.80
MPI 250		2.20	2.50	2.90	4.30	-		3.50	3.50	4.50	7.00	-
MPI 630		3.40	3.90	4.30	5.40	6.60		5.80	7.40	9.50	11.40	13.50
MPI 850		15.20	18.20	21.20	25.20	-		8.80	12.20	16.70	20.80	-

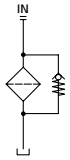
FILTER ASSEMBLY SIZING
Flow rates [l/min]

Filters series	Length	A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
MPI 100	1	26	29	72	79	107	282	164	190
	2	43	46	112	114	161	318	164	190
	3	64	72	132	156	178	324	219	251
	4	90	99	184	198	216	324	266	302
	5	117	128	201	219	244	324	282	318
MPI 250	1	93	102	210	251	315	1093	339	383
	2	124	151	327	412	421	1122	460	514
	3	189	221	418	445	500	1137	544	616
	4	261	304	592	670	766	1166	832	923
MPI 630	1	160	200	369	423	518	1894	565	632
	2	240	257	571	611	1045	1929	1137	1285
	3	330	374	745	788	1308	1938	1416	1577
	4	374	403	887	1010	1348	1956	1448	1612
	5	625	698	1210	1257	1723	2121	1839	1929
MPI 850	1	775	1041	1246	1568	2242	3311	2371	2625
	2	1176	1522	1682	1747	2449	3378	2684	2886
	3	1490	1914	1995	2014	3035	3405	3144	3220
	4	1668	2088	2305	2363	3169	3517	3272	3378

Maximum flow rate for a complete return filter with a pressure drop Δp = 0.5 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 symbol

Filter series	Style 1 connection
MPI 100	•
MPI 250	•
MPI 630	•
MPI 850	•



Designation & Ordering code

COMPLETE FILTER

Configuration example 1: MPI100 | 1 | C | D | A | A10 | P01
Configuration example 2: MPI630 | 5 | E | D | Z | M25 | P01

Series and size
- **MPI100**
- **MPI250**
- **MPI630**
- **MPI850**

Length	MPI100	MPI250	MPI630	MPI850
1	•	•	•	•
2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5	•		•	

Bypass valve	MPI100	MPI250	MPI630	MPI850
S Without	•	•	•	•
C 1.75 bar	•	•	•	•
E 2.5 bar	•	•	•	

Diffuser and magnetic filter
- **D** With diffuser, with magnetic filter
- **F** With diffuser, without magnetic filter
- **O** Without diffuser, with magnetic filter
- **E** Without diffuser, without magnetic filter

Seals and treatments		Filtration rating Axx	Mxx	Pxx
A	NBR	•	•	•
V	FPM	•	•	•
W	NBR head anodized	•	•	
Z	FPM head anodized	•	•	

filter element compatible with fluids HFA-HFB-HFC

Filtration rating (filter media)

A03	Inorganic microfiber 3 µm	**M25**	Wire mesh 25 µm
A06	Inorganic microfiber 6 µm	**M60**	Wire mesh 60 µm
A10	Inorganic microfiber 10 µm	**M90**	Wire mesh 90 µm
A16	Inorganic microfiber 16 µm	**P10**	Resin impregnated paper 10 µm
A25	Inorganic microfiber 25 µm	**P25**	Resin impregnated paper 25 µm

Execution
- **P01** MP Filtri standard
- **Pxx** Customized

FILTER ELEMENT

Configuration example 1: MR100 | 1 | A10 | A | P01
Configuration example 2: MR630 | 5 | M25 | V | P01

Element series and size
- **MR100**
- **MR250**
- **MR630**
- **MR850**

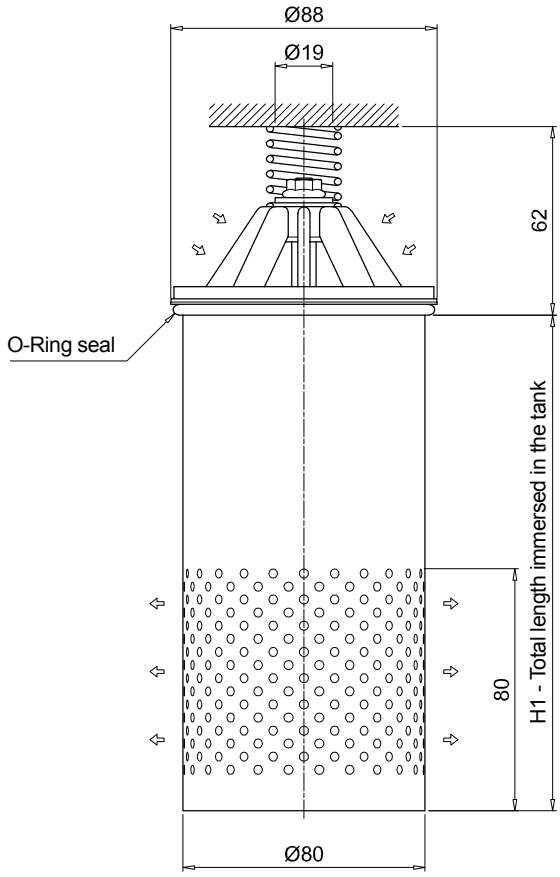
Element length	Size 100	Size 250	Size 630	Size 850
1	•	•	•	•
2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5	•		•	

Filtration rating (filter media)

A03	Inorganic microfiber 3 µm	**M25**	Wire mesh 25 µm
A06	Inorganic microfiber 6 µm	**M60**	Wire mesh 60 µm
A10	Inorganic microfiber 10 µm	**M90**	Wire mesh 90 µm
A16	Inorganic microfiber 16 µm	**P10**	Resin impregnated paper 10 µm
A25	Inorganic microfiber 25 µm	**P25**	Resin impregnated paper 25 µm

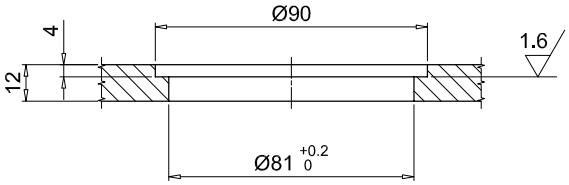
Seals
- **A** NBR
- **V** FPM

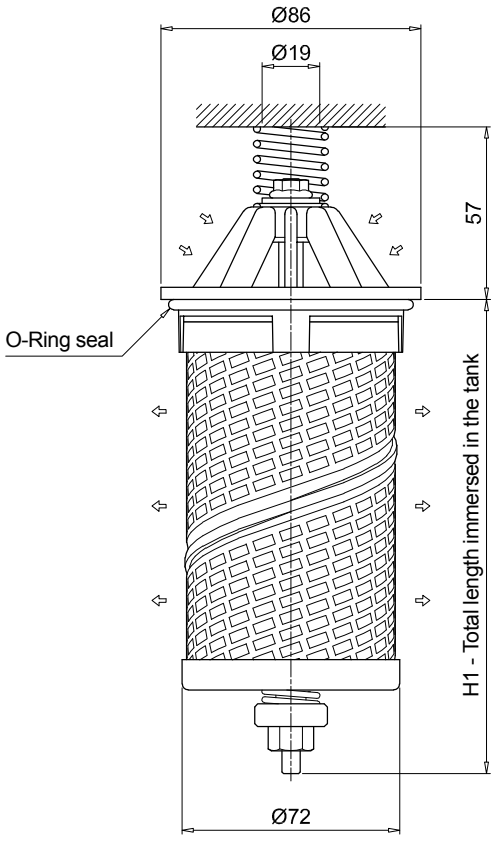
Execution
- **P01** MP Filtri standard
- **Pxx** Customized



MPI100 with diffuser	
Filter length	H1 [mm]
1	198
2	198
3	248
4	348
5	448

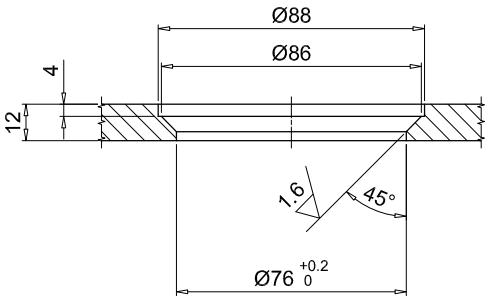
Filter seat



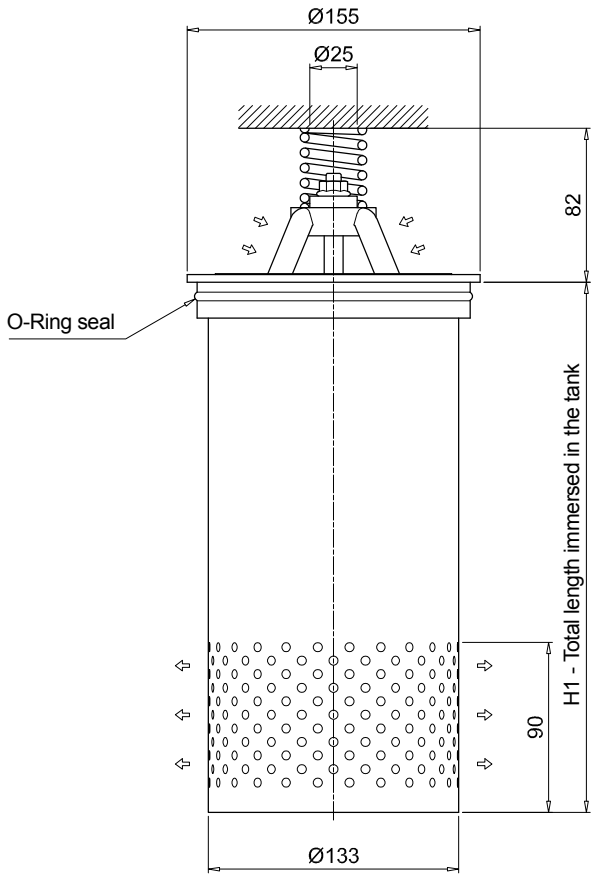


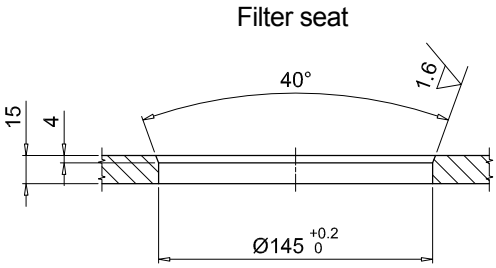
MPI100 without diffuser	
Filter length	H1 [mm]
1	141
2	185
3	235
4	335
5	435

Filter seat

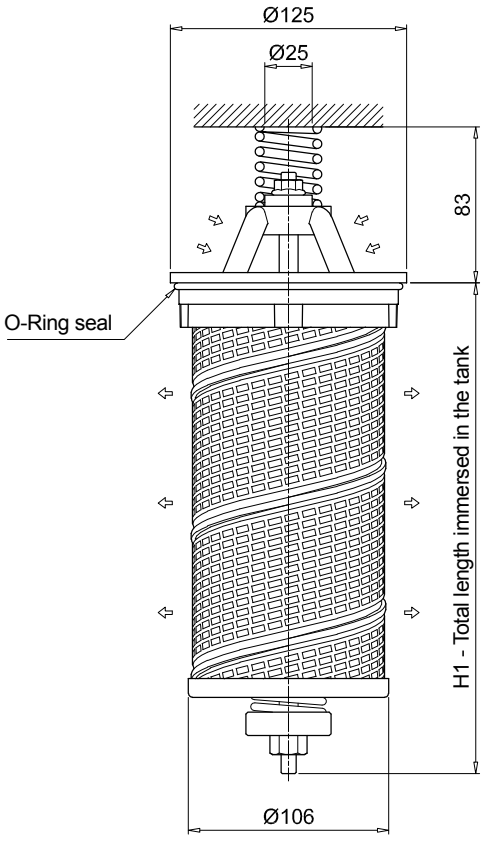


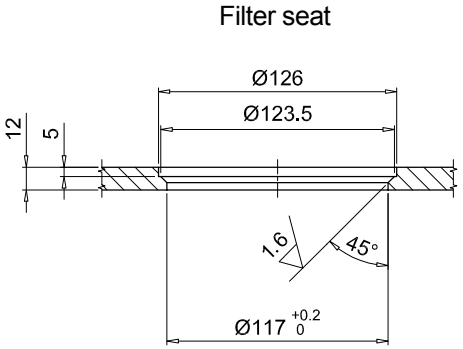
Dimensions



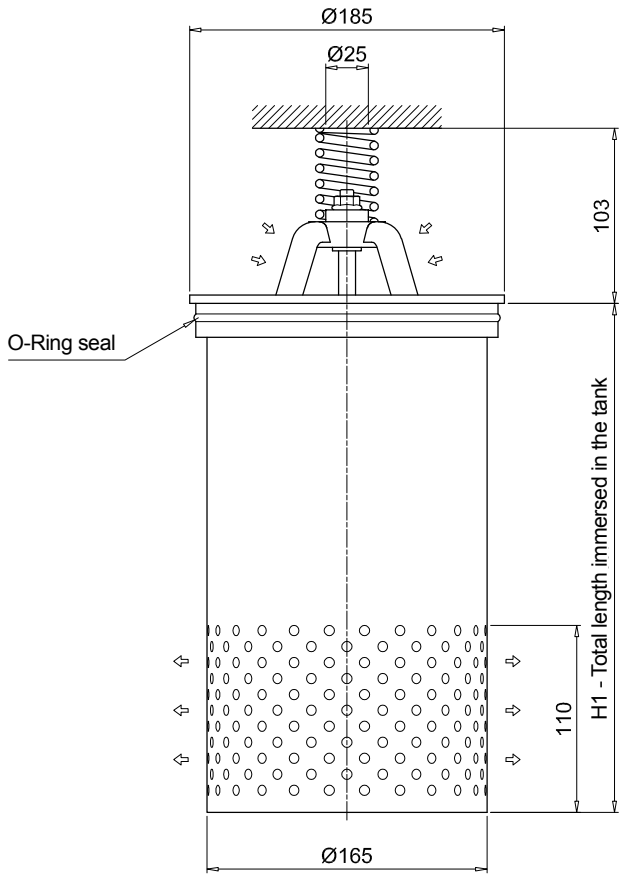


MPI250 with diffuser	
Filter length	**H1 [mm]**
1	266
2	266
3	336
4	524

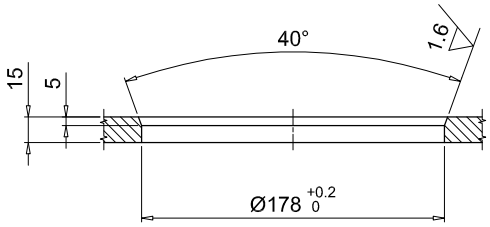




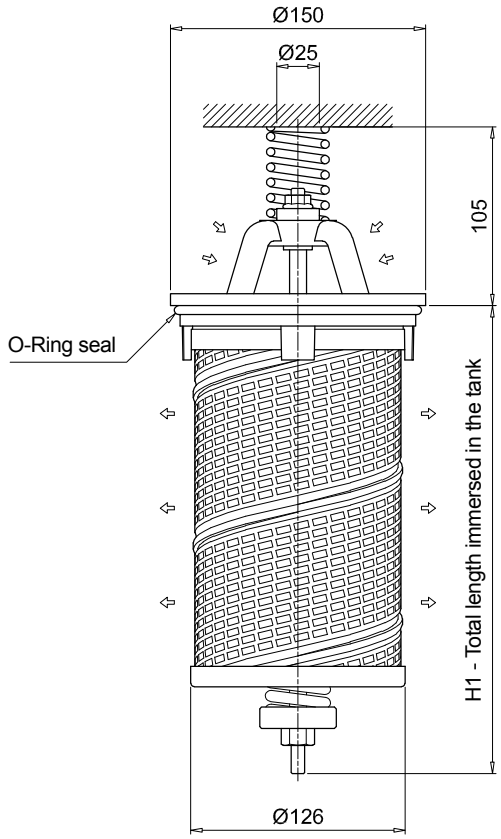
MPI250 without diffuser	
Filter length	**H1 [mm]**
1	193
2	243
3	313
4	516



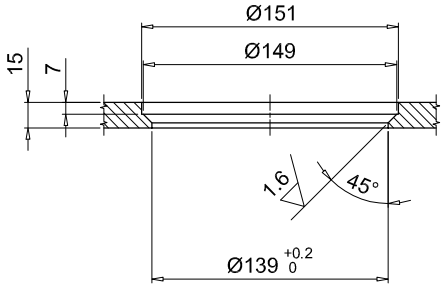
Filter seat



MPI630 with diffuser	
Filter length	**H1 [mm]**
1	298
2	378
3	478
4	568
5	868

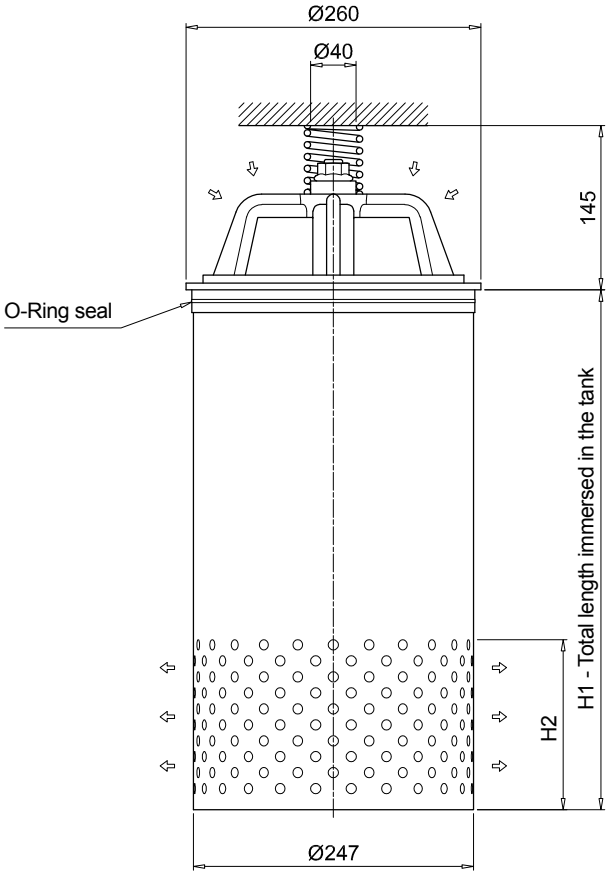


Filter seat



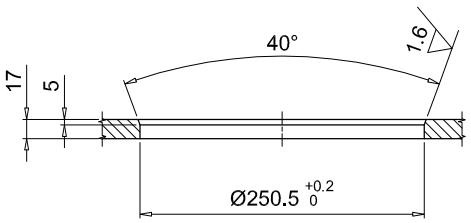
MPI630 without diffuser	
Filter length	**H1 [mm]**
1	275
2	355
3	455
4	540
5	841

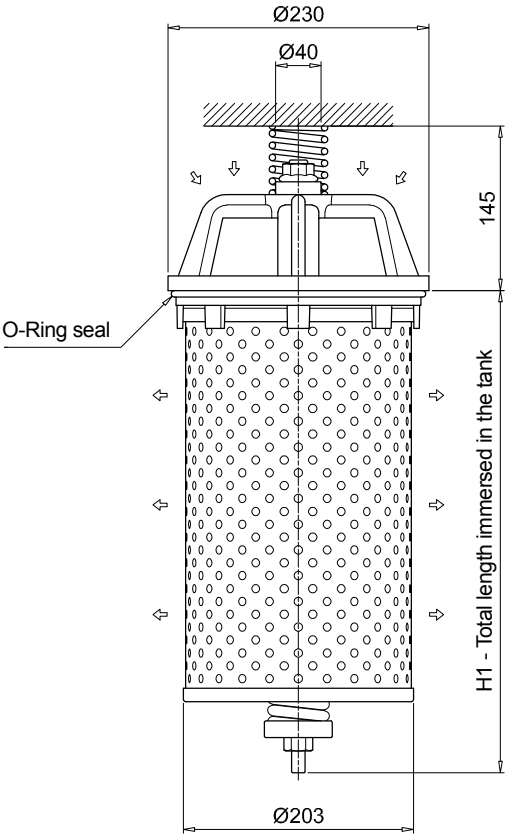
Dimensions



MPI850 with diffuser		
Filter length	H1 [mm]	H2 [mm]
1	427	150
2	642	150
3	922	250
4	1187	250

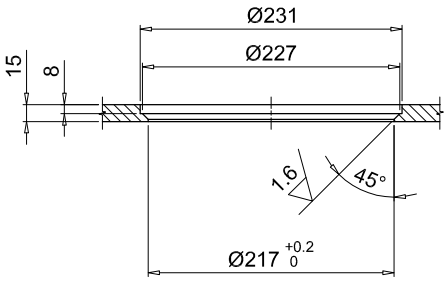
Filter seat





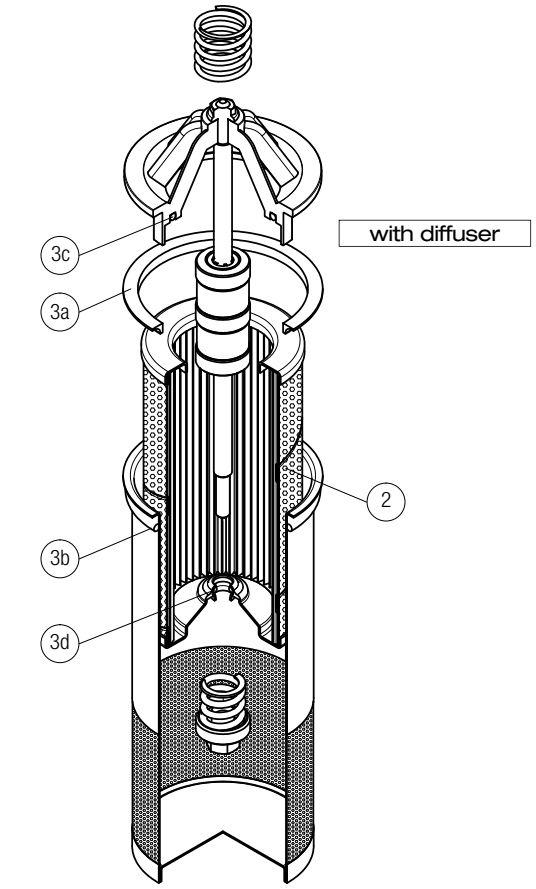
MPI850 without diffuser	
Filter length	H1 [mm]
1	405
2	620
3	900
4	1165

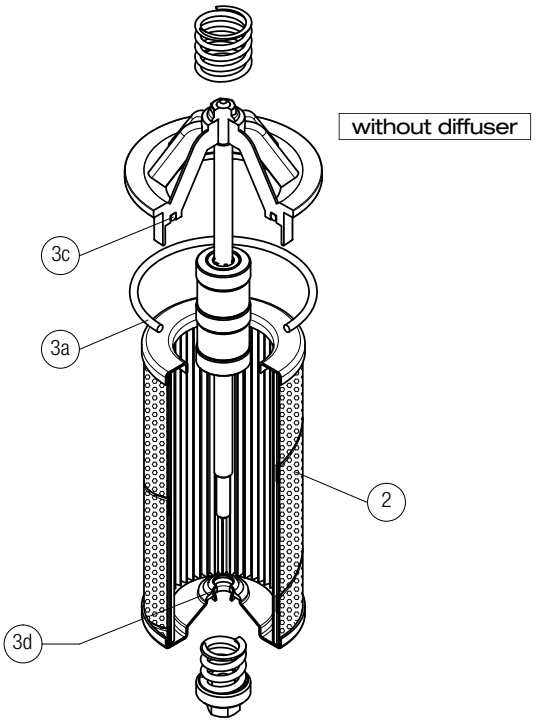
Filter seat



Order number for spare parts

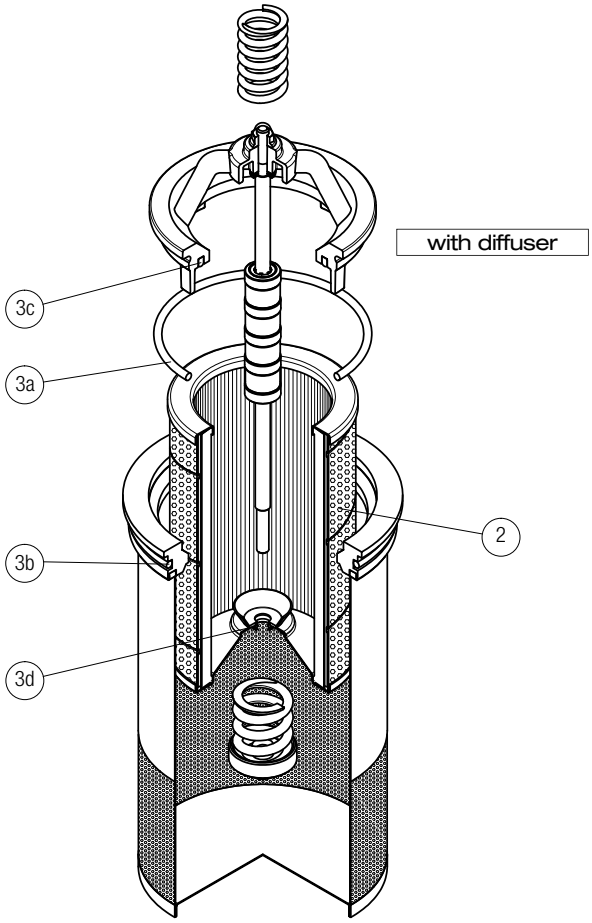
MPI 100

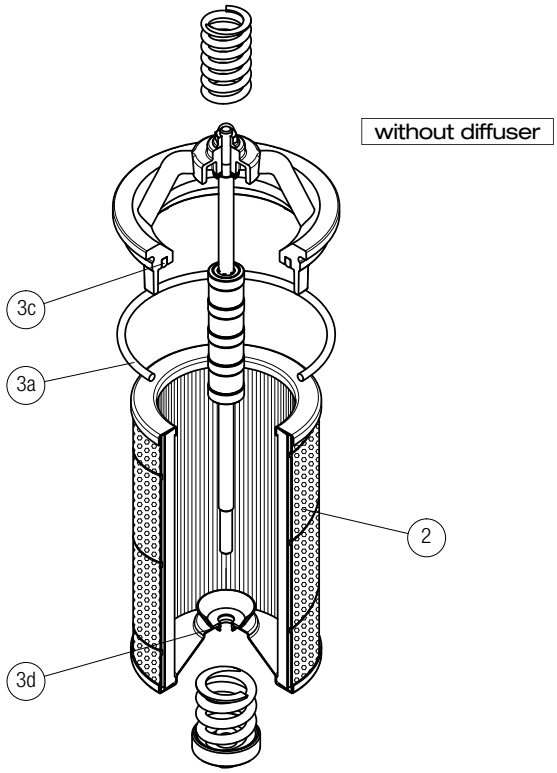




Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)	
Filter series	**Filter element**	**Seal Kit code number NBR**	**FPM**
MPI 100	See order table	02050145	02050146

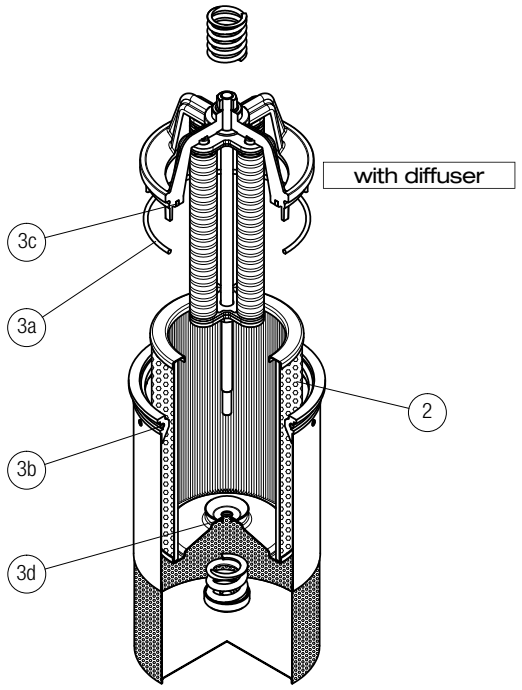
MPI 250 - 630

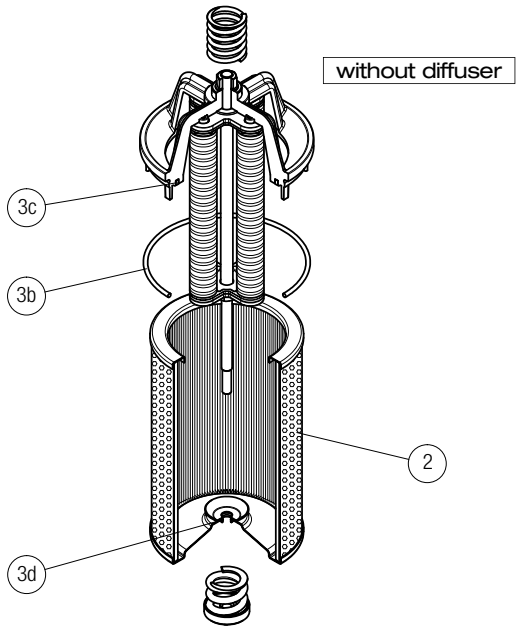




Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)	
Filter series	**Filter element**	**Seal Kit code number NBR**	**FPM**
MPI 250	See order table	02050147	02050148
MPI 630		02050112	02050113

MPI 850





Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3d)	
Filter series	Filter element	Seal Kit code number NBR	FPM
MPI 850	See order table	02050114	02050115