

MPI series

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



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 $\Delta p = 0.5$ bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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

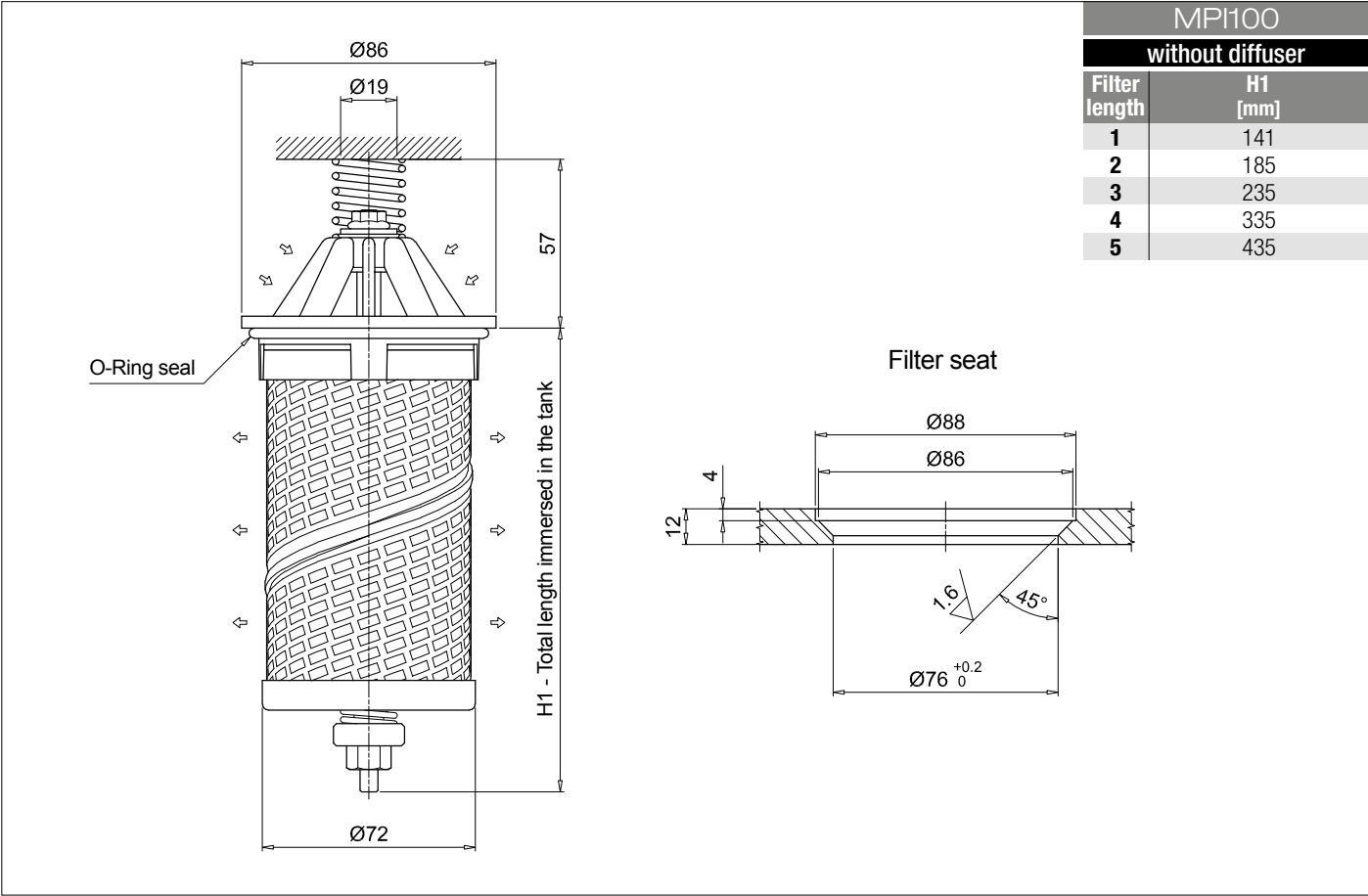
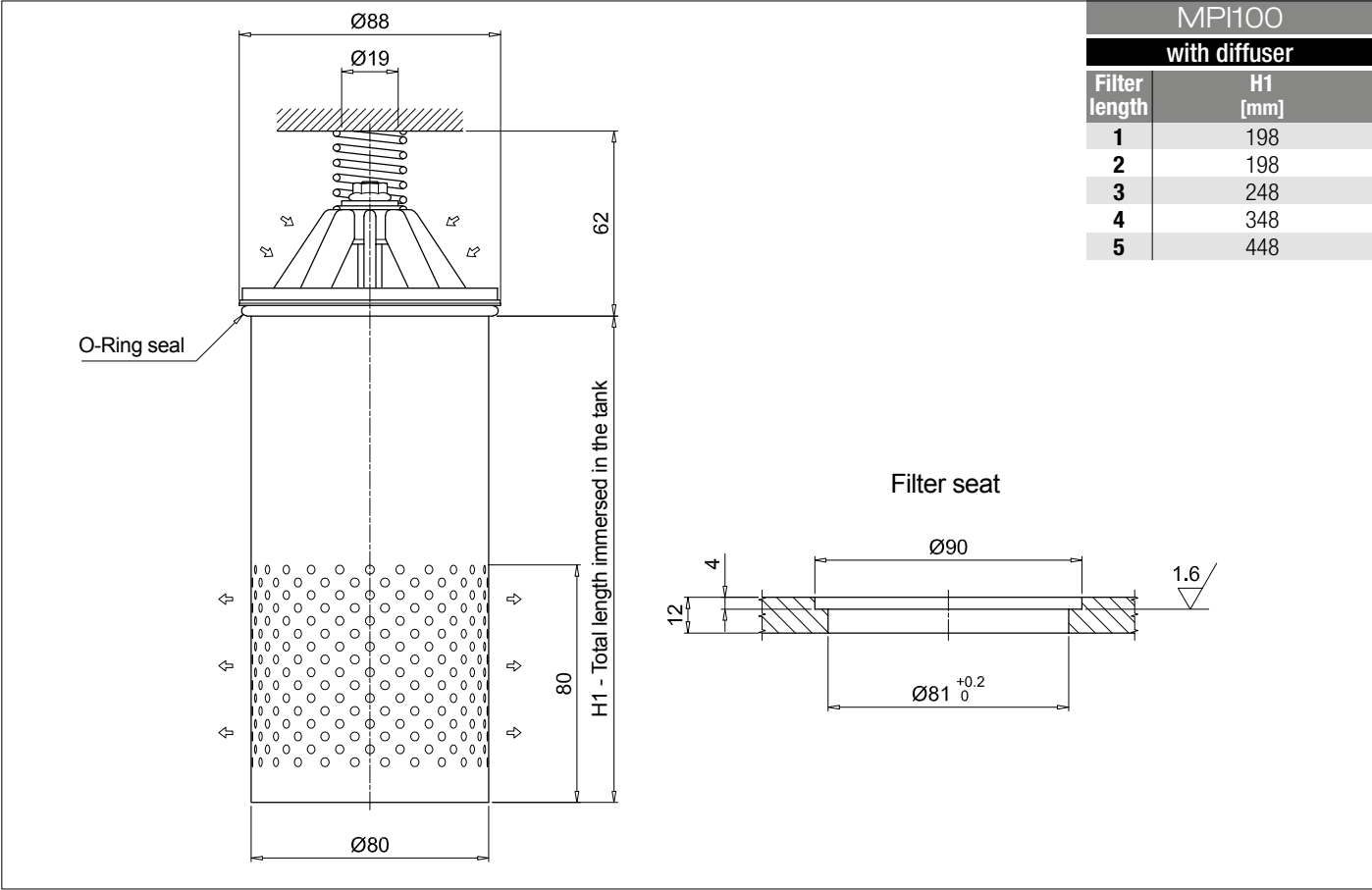
Filter series	Style 1 connection
MPI 100	•
MPI 250	•
MPI 630	•
MPI 850	•

MPI MPI100 - MPI250 - MPI630 - MPI850

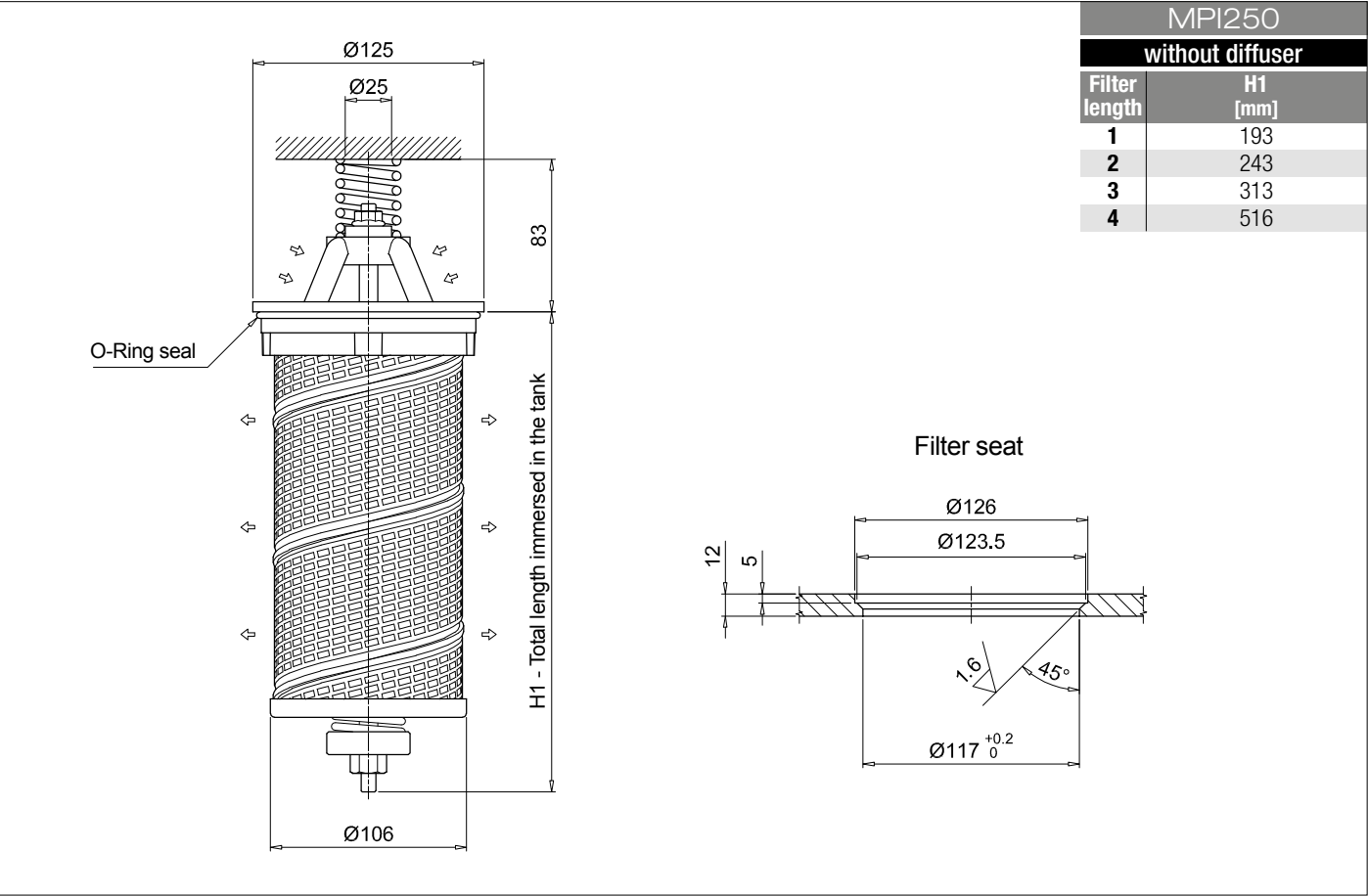
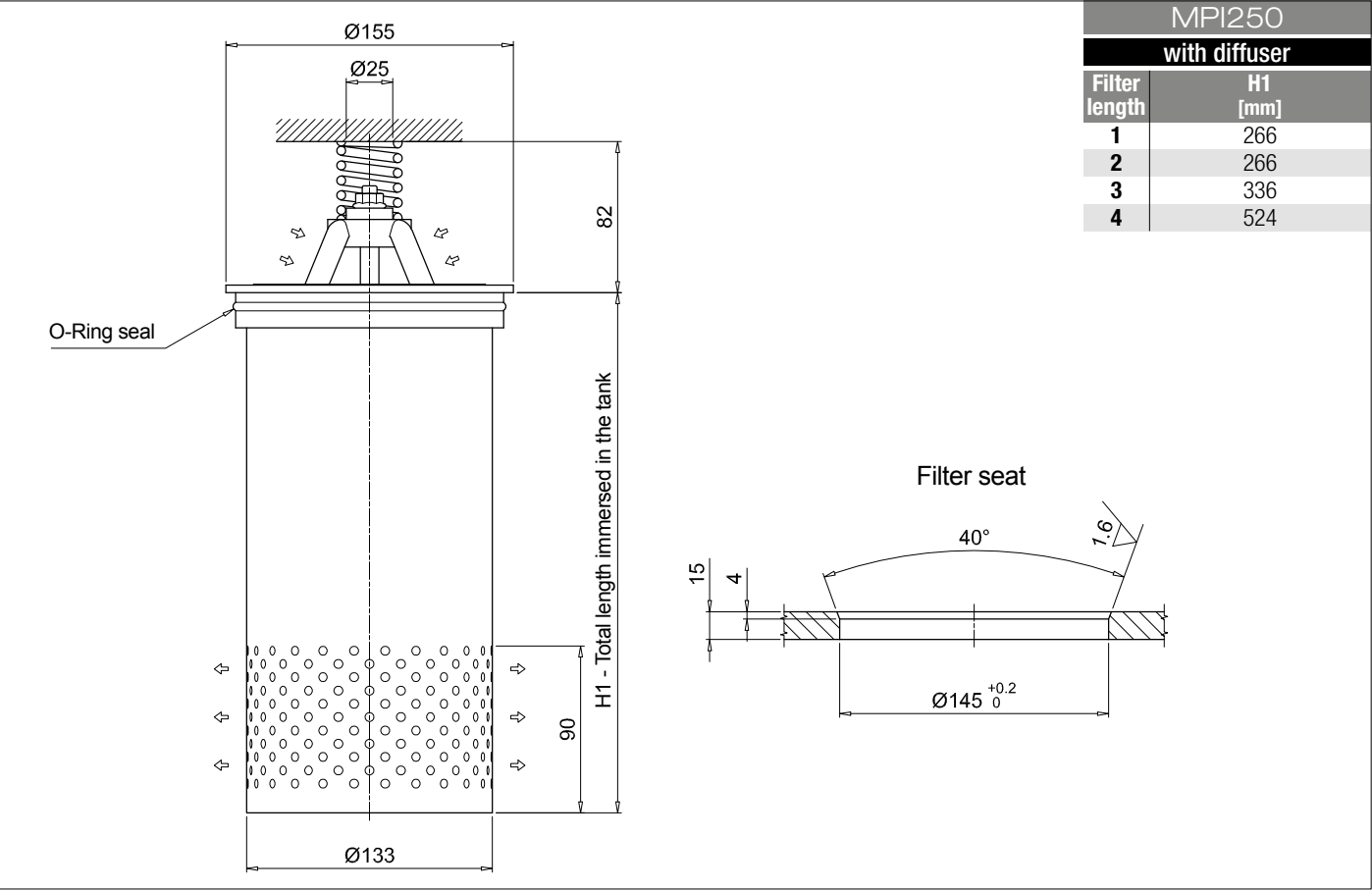
Designation & Ordering code

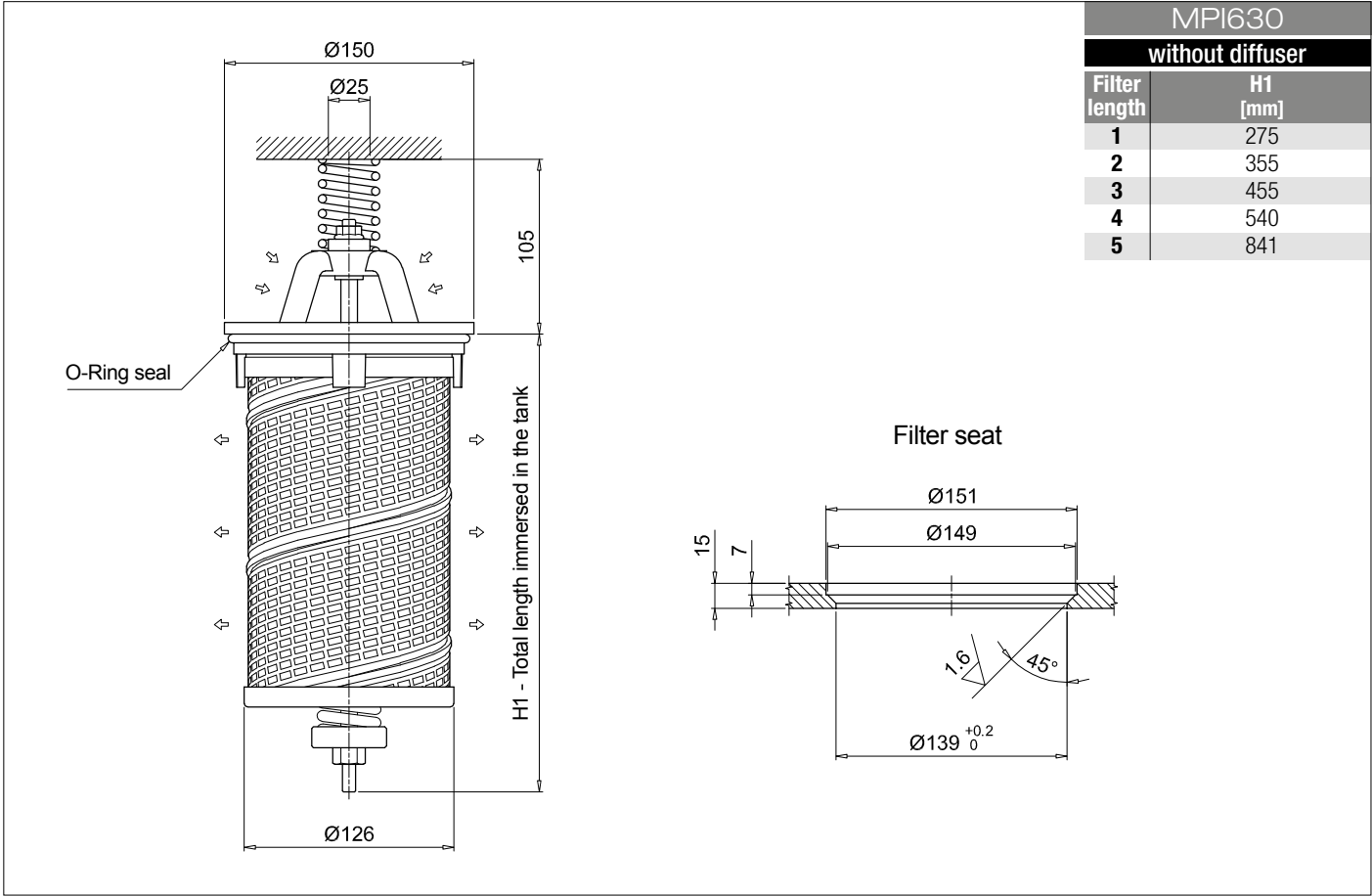
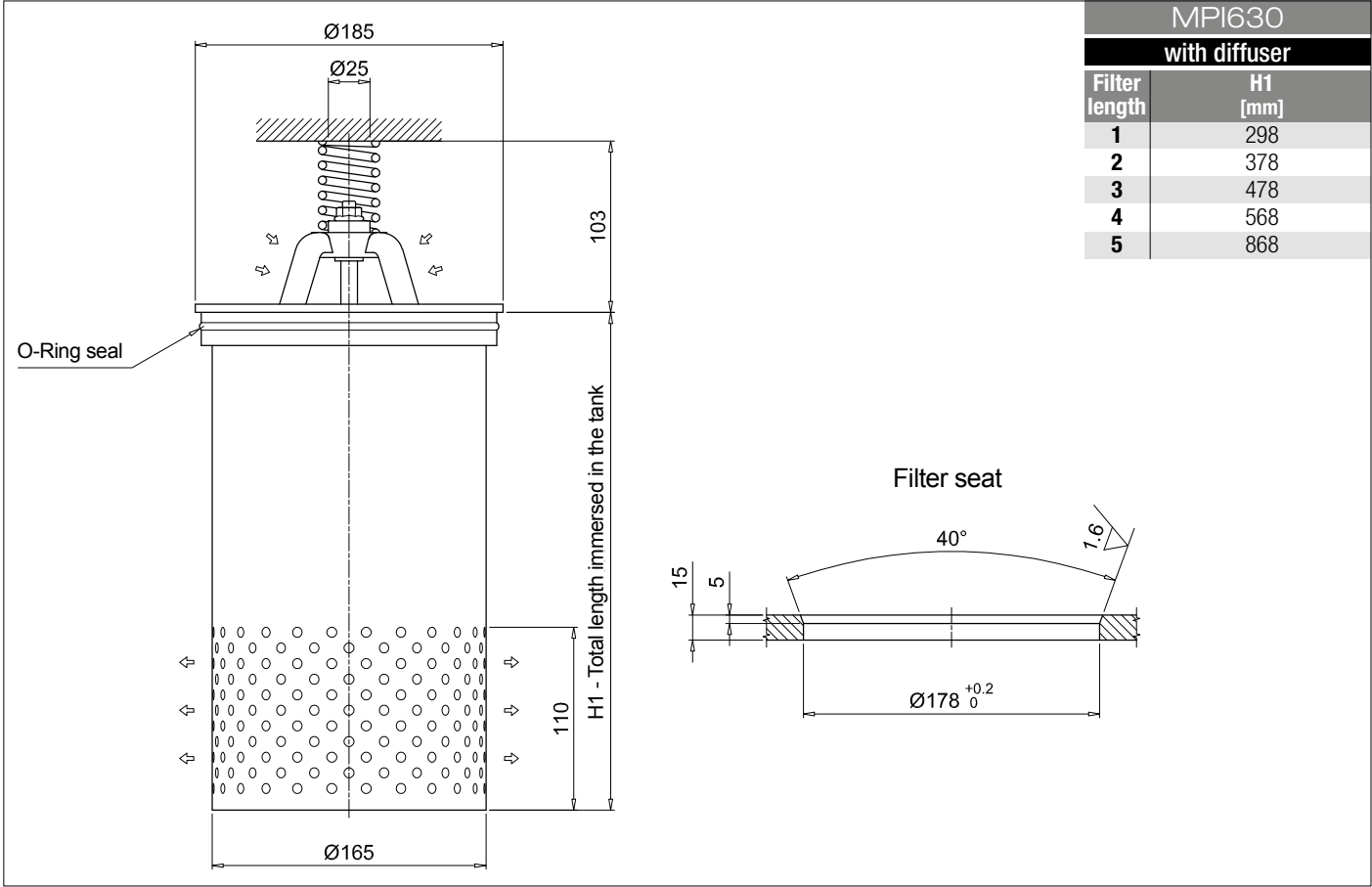
COMPLETE FILTER												
Series and size				Configuration example 1: MPI1001CDA A10P01								
MPI100				Configuration example 2: MPI6305EDZ M25P01								
MPI250												
MPI630												
MPI850												
Length		MPI100	MPI250	MPI630	MPI850							
1		•	•	•	•							
2		•	•	•	•							
3		•	•	•	•							
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														
Element series and size					Configuration example 1:					MR100	1	A10	A	P01
MR100					Configuration example 2:					MR630	5	M25	V	P01
MR250														
MR630														
MR850														

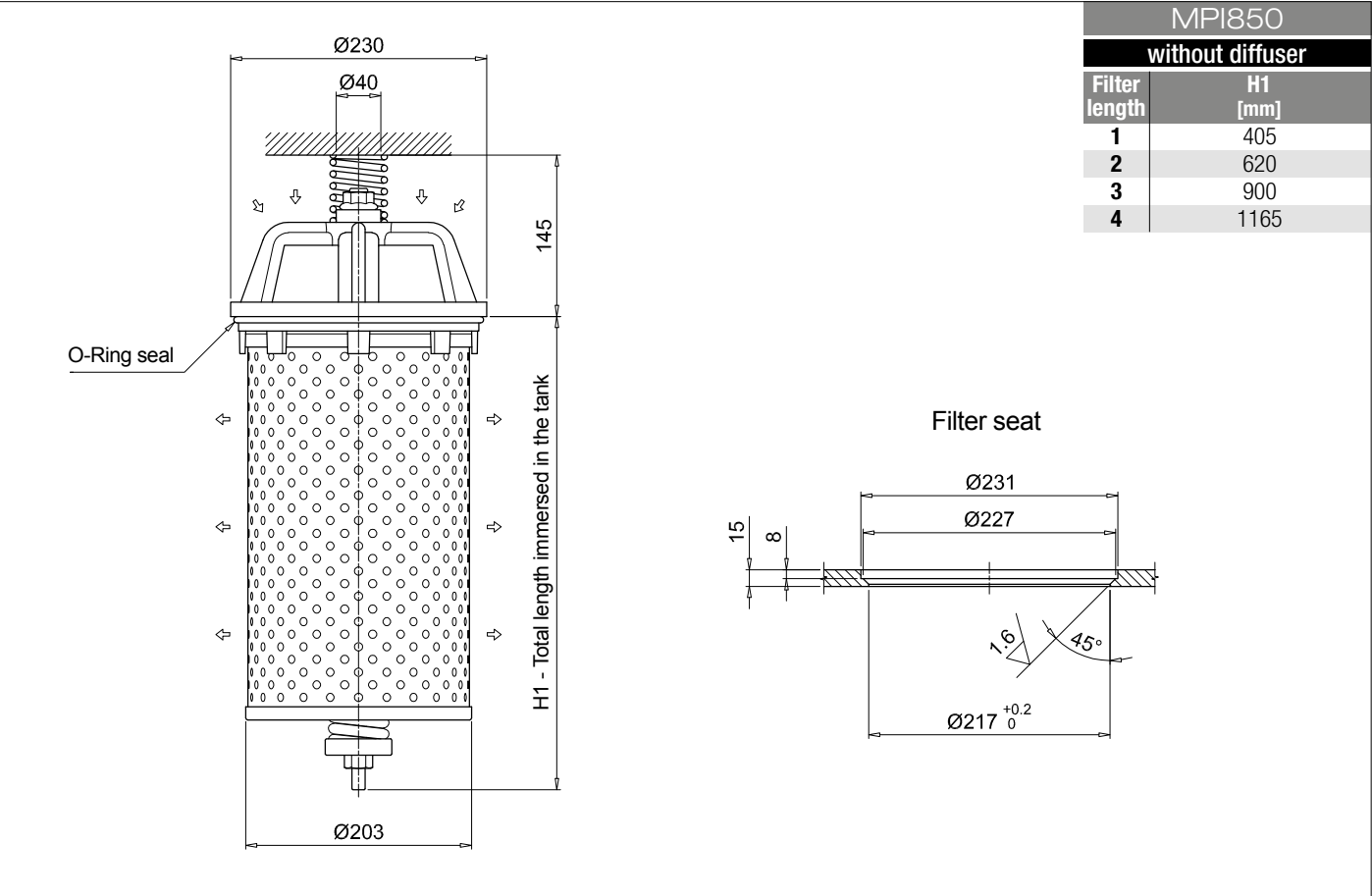
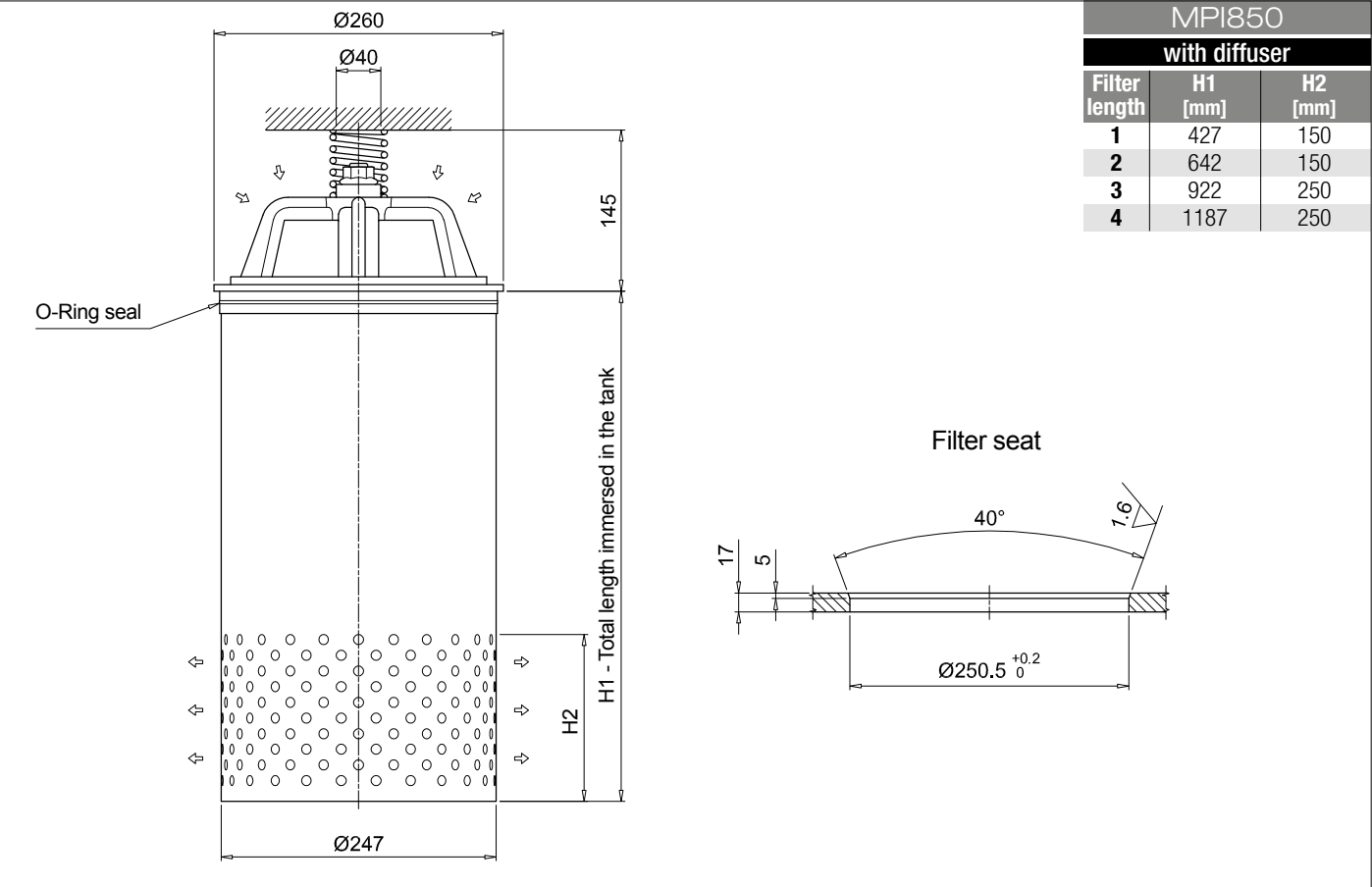


Dimensions





Dimensions



Order number for spare parts

MPI 100

with diffuser

without diffuser

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

MPI 250 - 630

with diffuser

without diffuser

Item:	2	3	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

with diffuser

without diffuser

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