

MPI series

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



Description

Technical data

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

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) $\pm 10\%$
- Opening pressure 250 kPa (2.5 bar) $\pm 10\%$, 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 [dm ³]						
	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	-		

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.

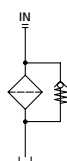
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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

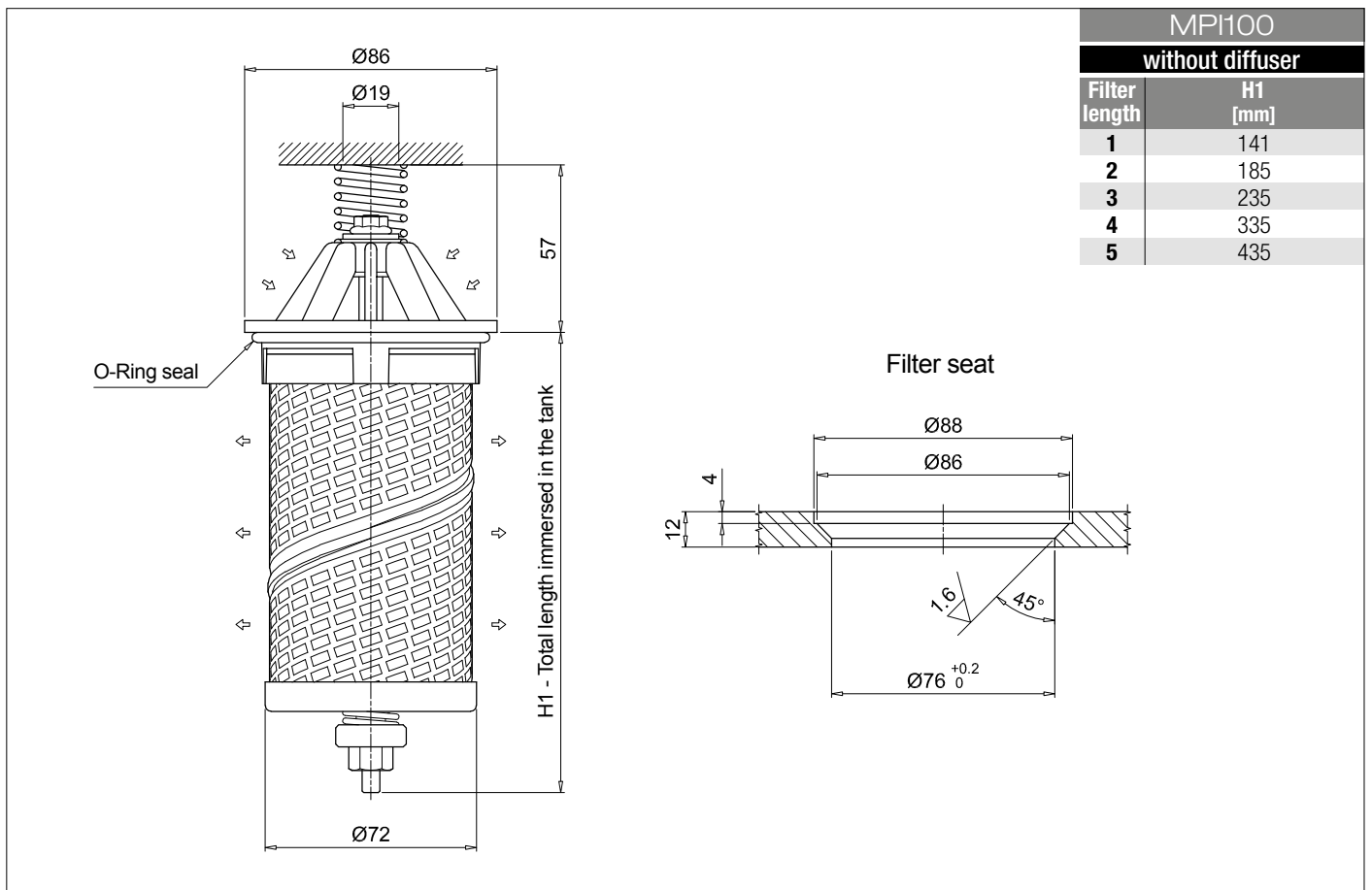
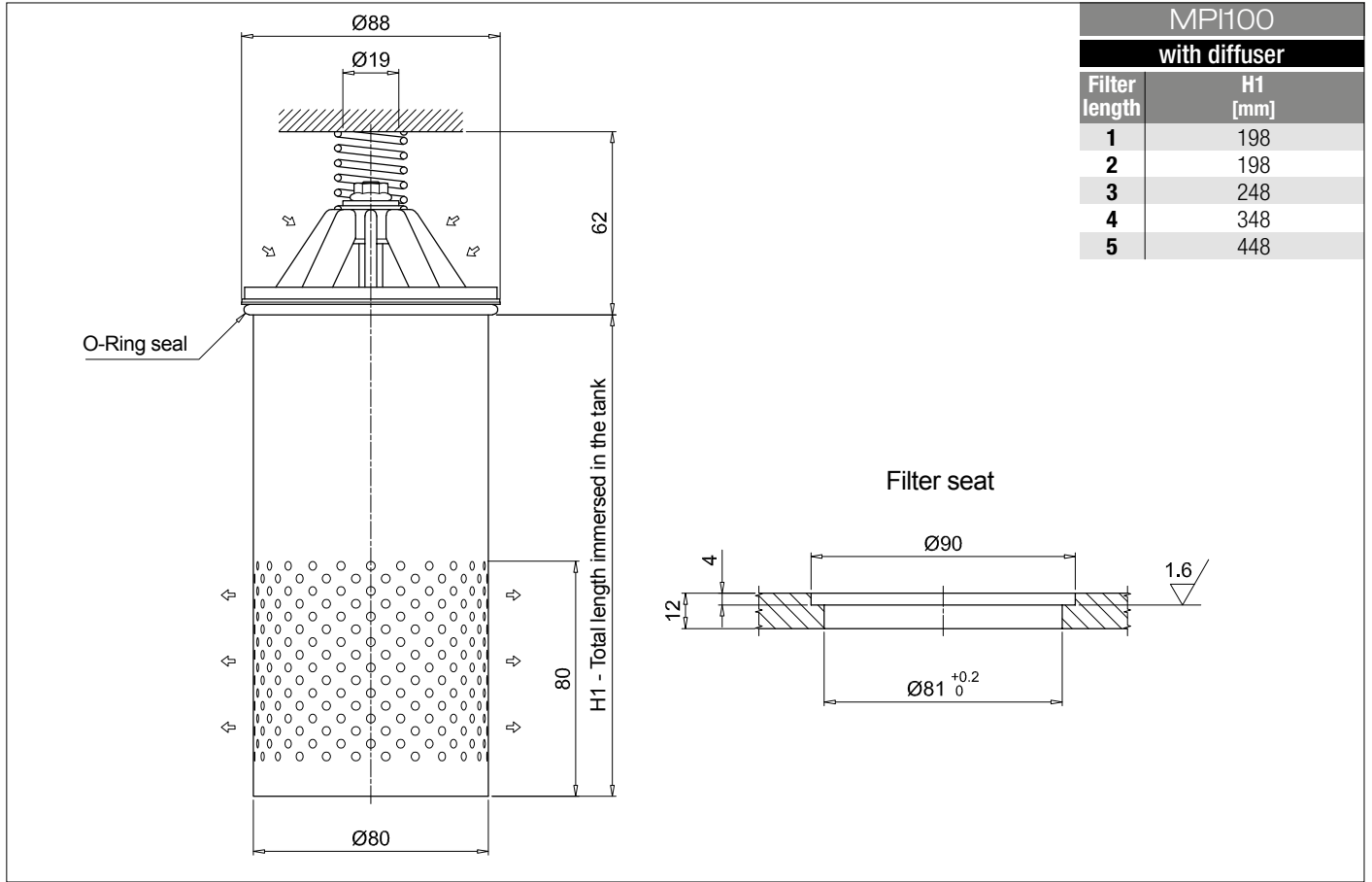
Designation & Ordering code

COMPLETE FILTER

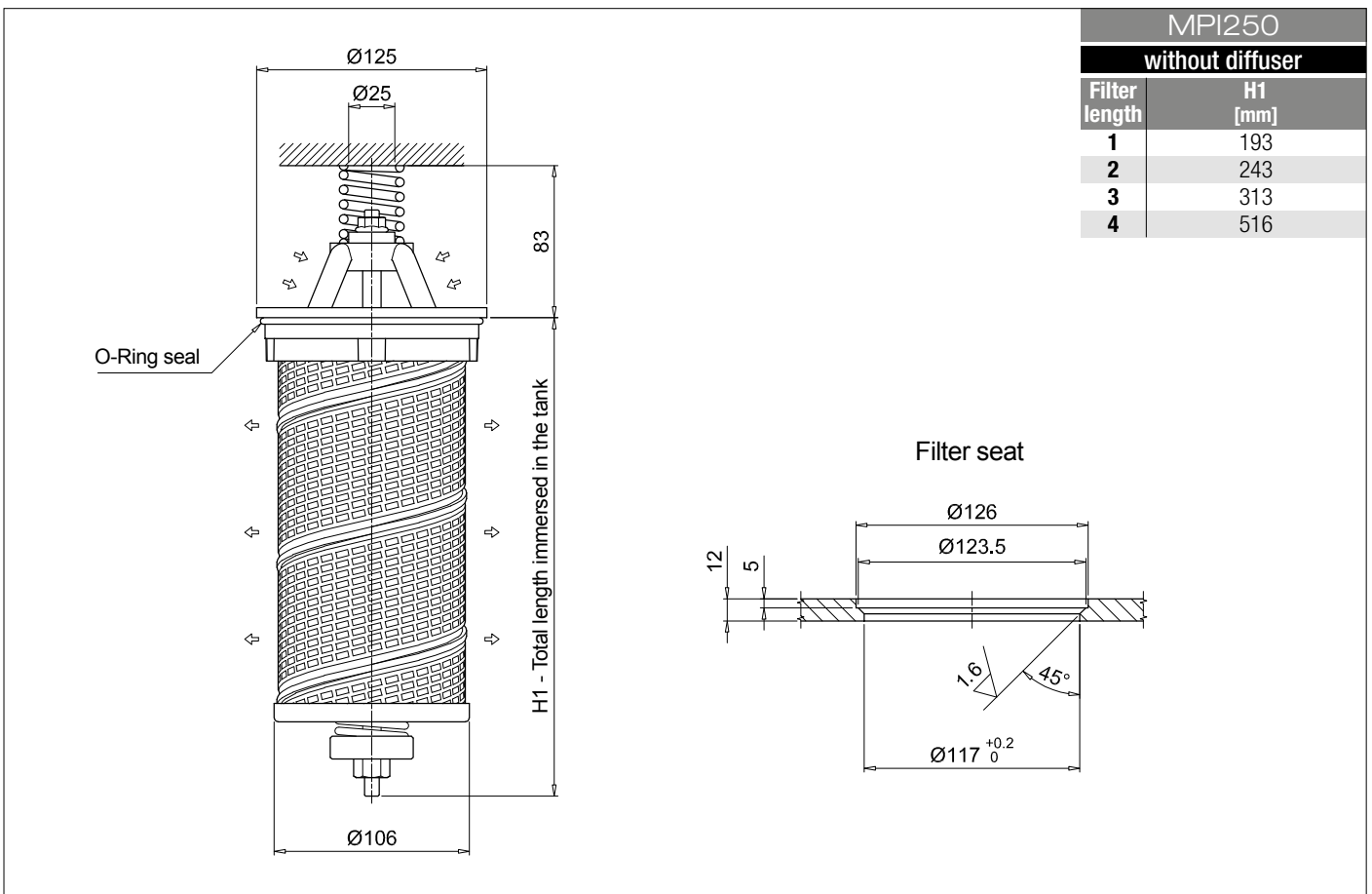
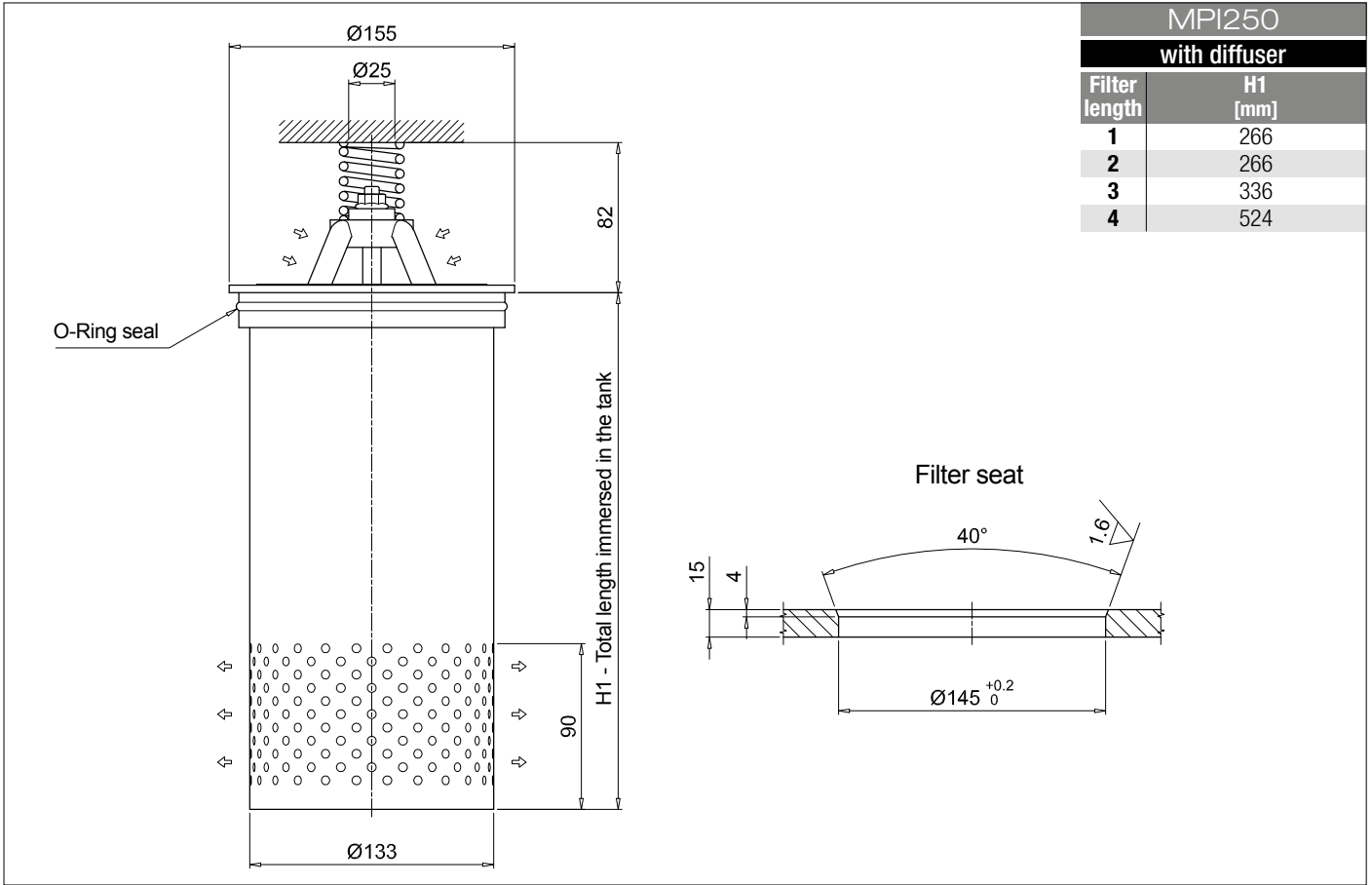
Series and size					Configuration example 1: MPI100 1 C D A A10 P01						
MPI100					Configuration example 2: MPI630 5 E D Z M25 P01						
MPI250											
MPI630											
MPI850											
Length					MPI100	MPI250	MPI630	MPI850			
1		•	•	•	•						
2		•	•	•	•						
3		•	•	•	•						
4		•	•	•	•						
5		•	-	•	-						
Bypass valve					MPI100	MPI250	MPI630	MPI850			
S	Without bypass	•	•	•	•						
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			•	•	-					
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						

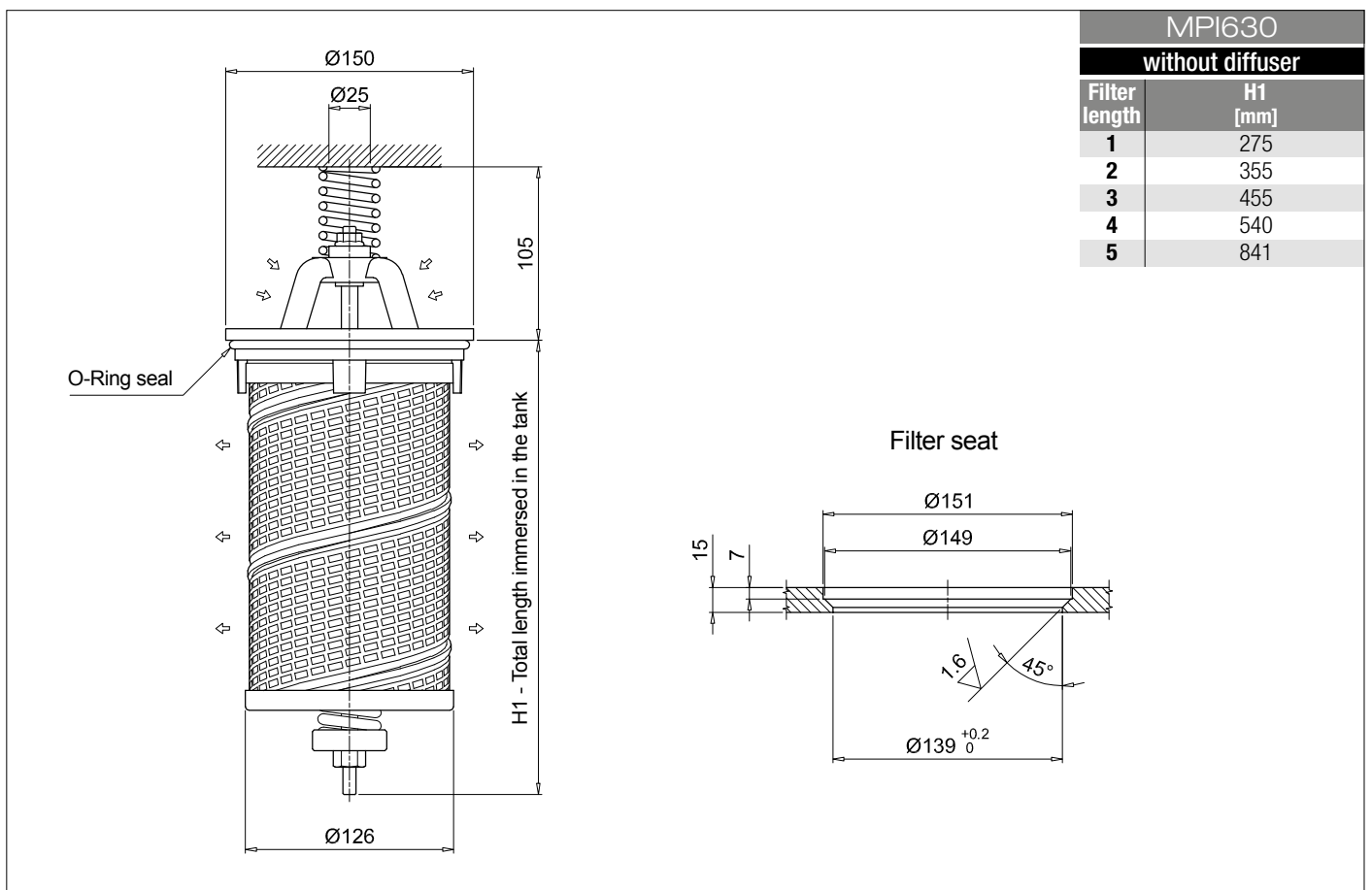
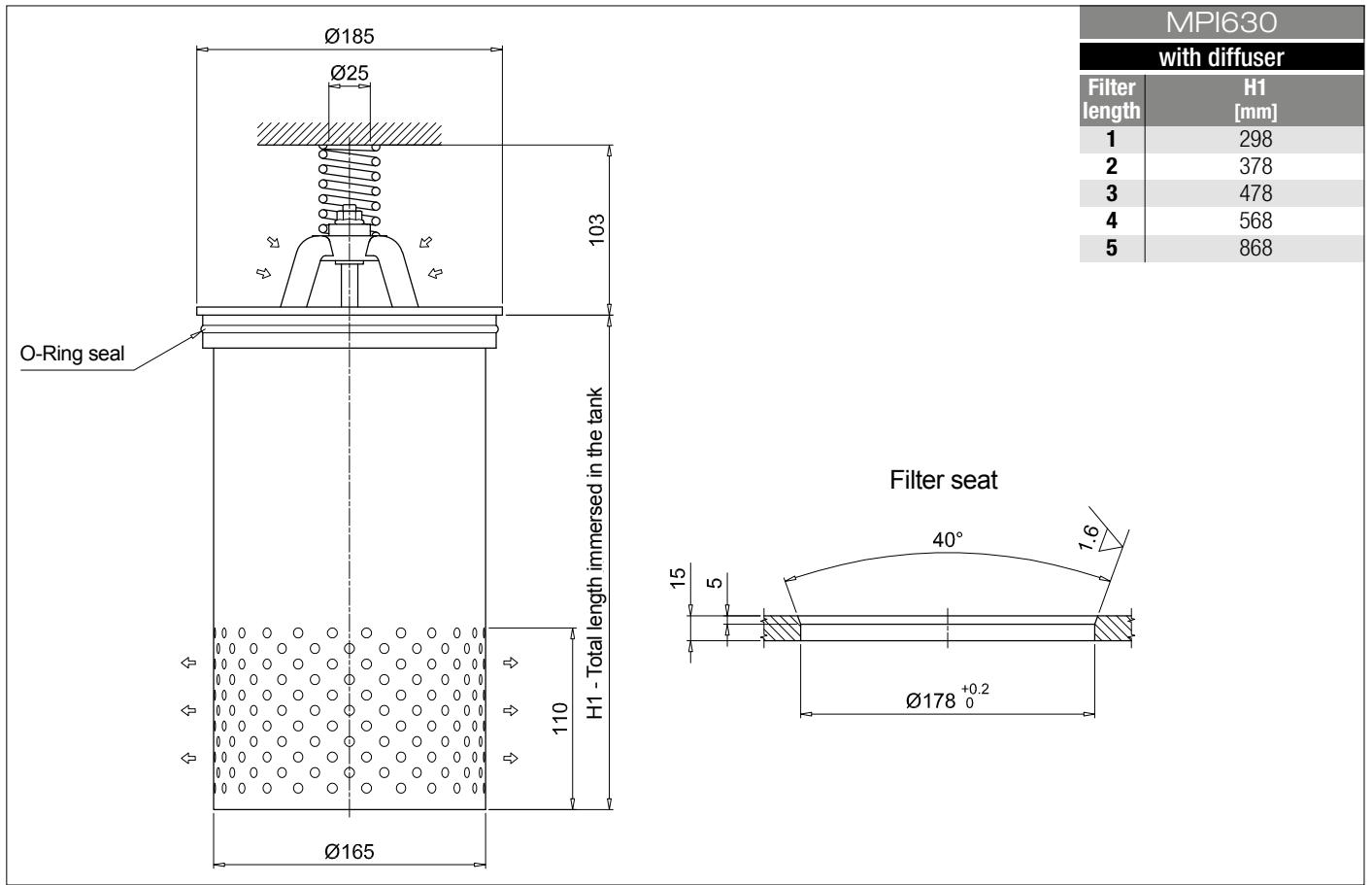
FILTER ELEMENT

Element series and size					Configuration example 1: MR100 1 A10 A P01						
MR100					Configuration example 2: MR630 5 M25 V P01						
MR250											
MR630											
MR850											
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						



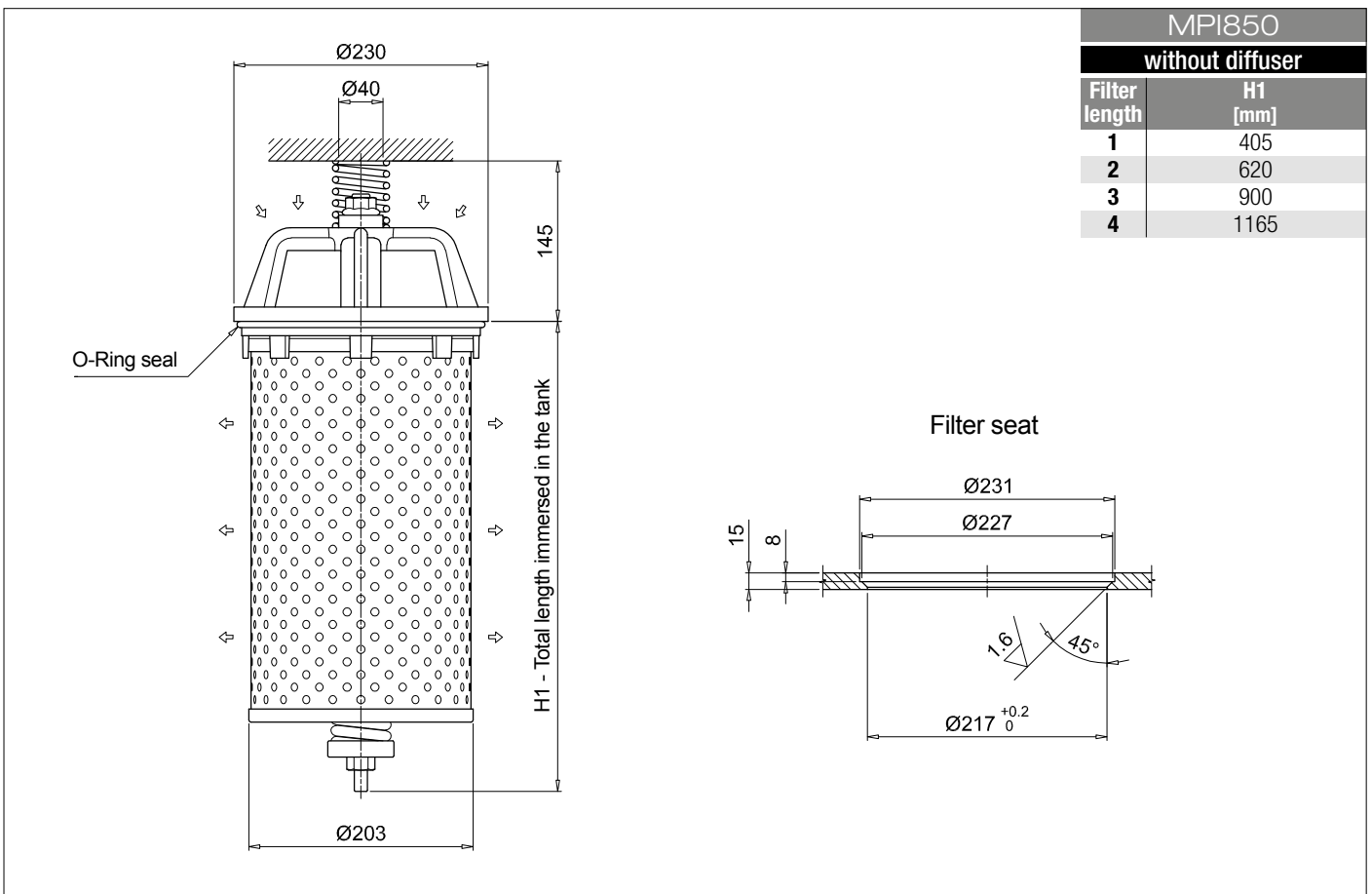
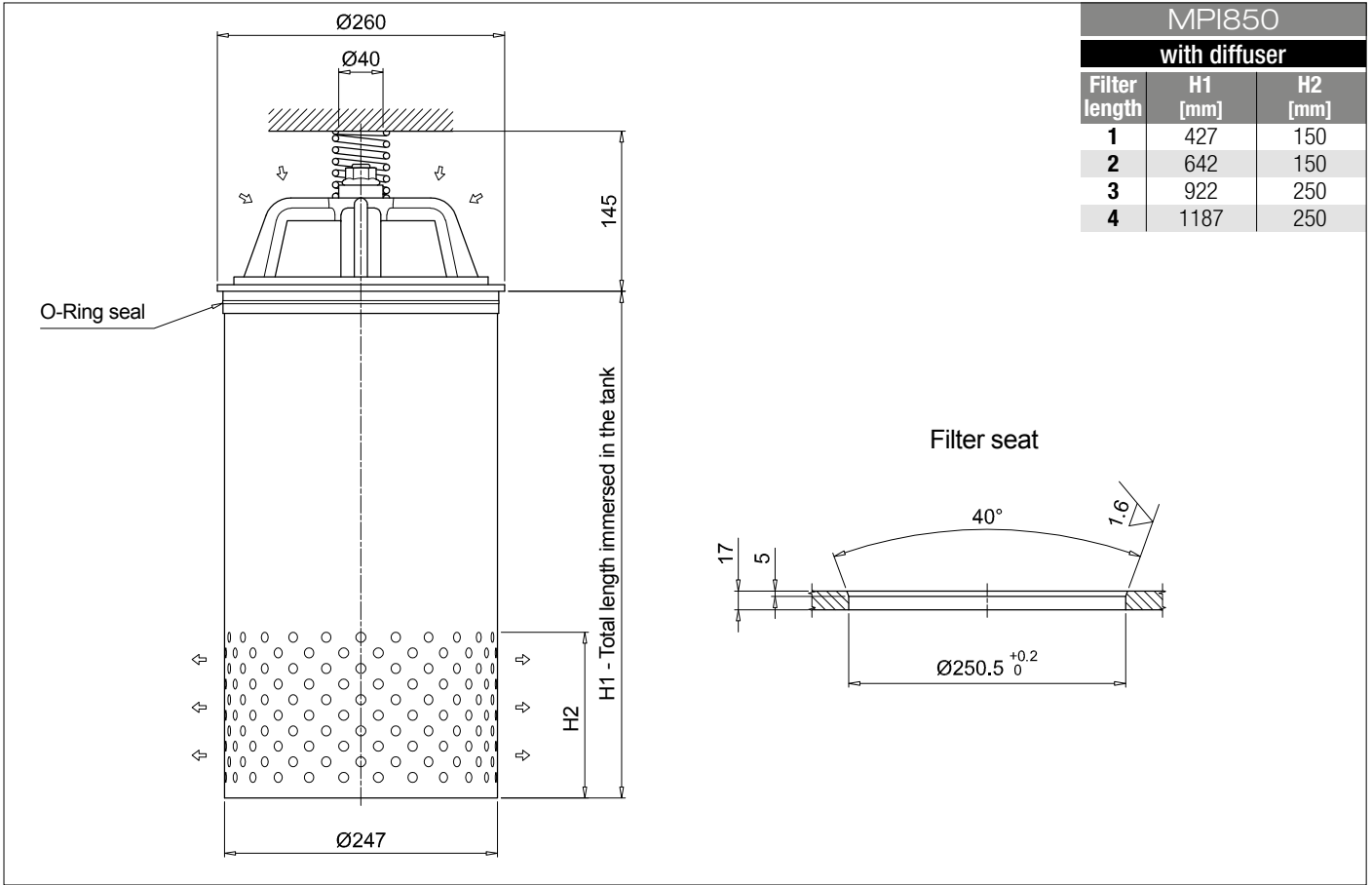
Dimensions





MPI MPI100 - MPI250 - MPI630 - MPI850

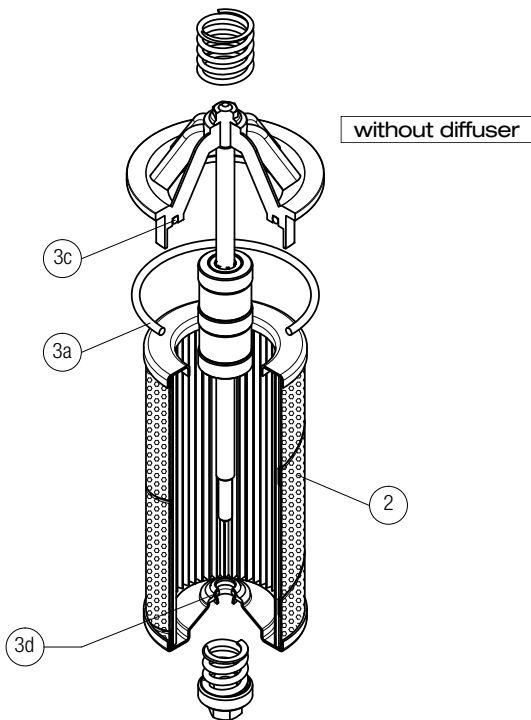
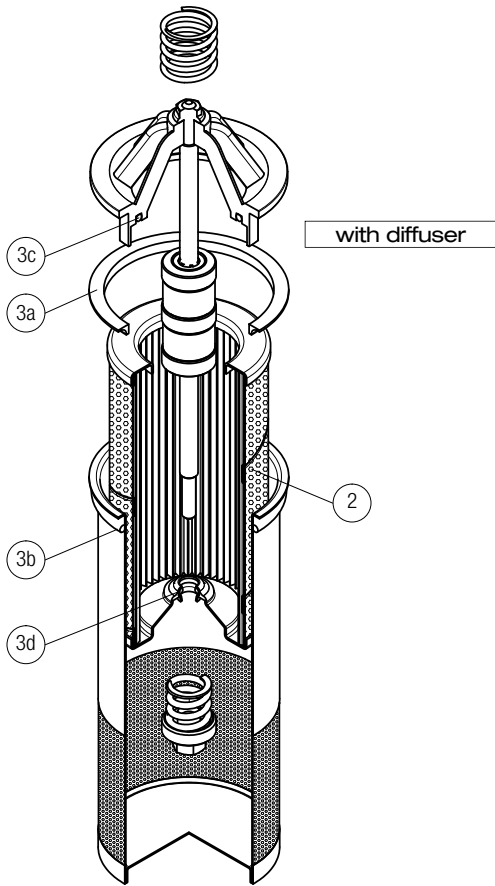
Dimensions



MPI SPARE PARTS

Order number for spare parts

MPI 100



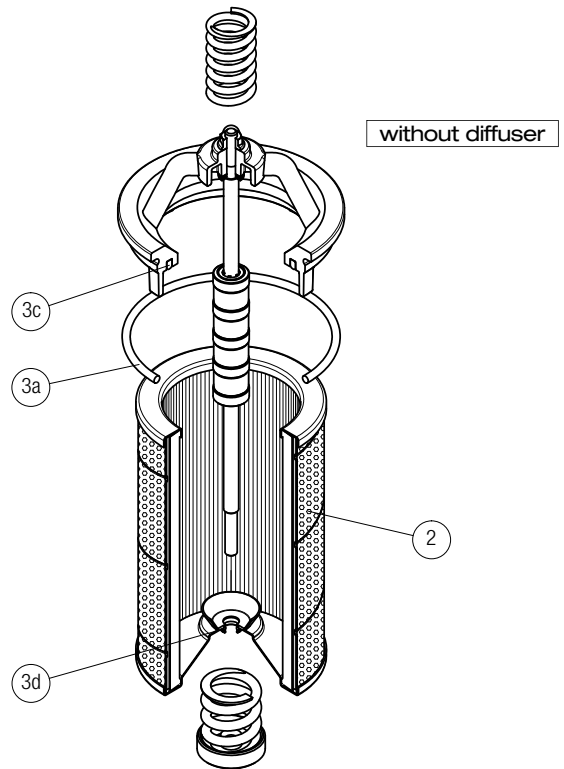
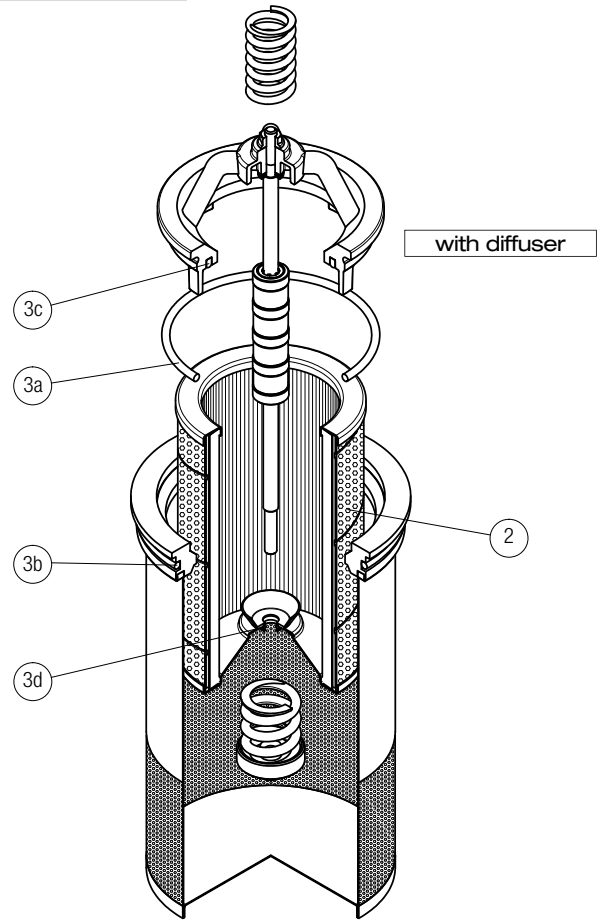
Q.ty: 1 pc.

Q.ty: 1 pc.

Item: **2** **3** (3a ÷ 3d)

Filter series	Filter element	Seal Kit code number	
		NBR	FPM
MPI 100	See order table	02050145	02050146

MPI 250 - 630



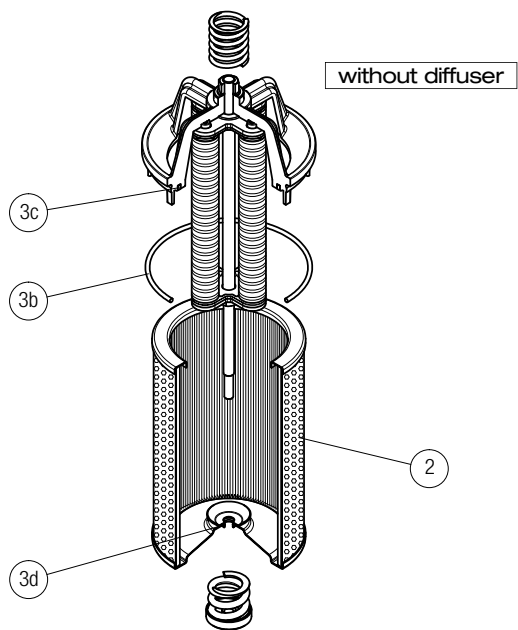
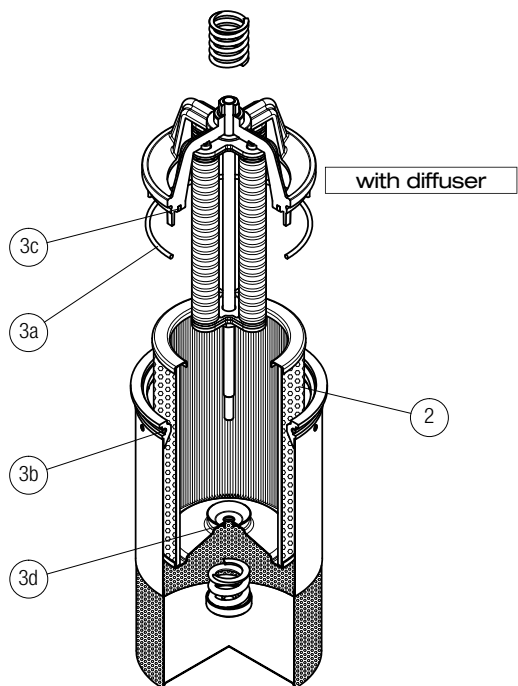
Q.ty: 1 pc.

Q.ty: 1 pc.

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

Designation & Ordering code

BAROMETRIC (PRESSURE) INDICATORS

Series	Configuration example 1: BE A 15 H A 41 P01 EX									
BE Electrical pressure indicator	Configuration example 2: BL A 20 H A 71 P01									
BL Electrical/Visual pressure indicator	Configuration example 3: BV R 14 P01									
BV Visual pressure indicator	Configuration example 4: BV P 20 H P01									
Type	BE	BL	BV							
A Standard type	•	•	A Axial connection pressure gauge							
M With wired electrical connection	•	-	R Radial connection pressure gauge							
T With thermal switch	•	-	P Visual indicator with automatic reset							
			Q Visual indicator with manual reset							
Pressure setting	BEA-BEM	BET	BLA	BVA-BVR	BVP-BVQ					
14 1.4 bar	-	-	-	•	-					
15 1.5 bar	•	-	•	-	•					
20 2.0 bar	•	•	•	-	•					
25 2.5 bar	-	•	-	•	-					
Seals	BE	BLA	BVA-BVR	BVP-BVQ						
H HNBR	•	•	-	•						
Thermostat	BEA-BEM	BET	BLA							
A Without thermostat	•	-	•							
F With thermostat	-	•	-							
Electrical connections	BEA	BEM	BET	BL						
10 Connection AMP Superseal series 1,5	-	-	•	-						
30 Connection Deutsch DT-04-2-P	-	-	•	-						
41 Connection via four-core cable	-	•	-	-						
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	BEA	BEM-BET	BL	BV						
Without	•	•	•	•						
EX ATEX certification	•	-	-	-						
UL UL certification	•	-	-	-						

DIFFERENTIAL PRESSURE INDICATORS

Series
DE Electrical differential pressure indicator
DL Electrical/Visual differential pressure indicator
DT Electrical differential pressure indicator
DV Visual differential pressure indicator

Configuration example 1:	DE	M	20	H	F	50	P01	
Configuration example 2:	DE	U	50	H	A	50	P01	UL
Configuration example 3:	DL	E	20	V	A	71	P01	
Configuration example 4:	DT	A	20	H	F	70	P01	
Configuration example 5:	DV	M	20	V			P01	

Type	DE	DL	DT
A Standard type	•	•	•
M With wired electrical connection	•	-	-
U Standard type 210 bar, UL certified	•	-	-
E For high power supply	-	•	-
S Compact version	•	-	-

DV
A With automatic reset
M With manual reset
S With automatic reset

Pressure setting	DEA	DEM	DEU	DES	DL	DT	DVA	DVM	DVS
12 1.2 bar	-	-	-	•	-	-	-	-	•
20 2.0 bar	•	•	•	-	•	•	•	•	-
25 2.5 bar	-	-	-	•	-	-	-	-	•

Seals	DEA	DEM	DEU	DES	DL	DT	DVA	DVM	DVS
H HNBR	•	•	-	•	•	•	•	•	•
V FPM	•	•	•	-	•	•	•	•	-

Thermostat	DEA	DEM	DEU	DES	DLA	DLE	DT
A Without thermostat	•	•	•	•	•	•	-
F With thermostat	-	•	-	-	-	•	•

Electrical connections	DEA	DEM	DEU	DES	DLA	DLE	DT
10 Connection AMP Superseal series 1.5	-	•	-	•	-	-	-
20 Connection AMP Timer Junior	-	•	-	-	-	-	-
30 Connection Deutsch DT-04-2-P	-	•	-	•	-	-	-
35 Connection Deutsch DT-04-3-P	-	•	-	-	-	-	-
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	-	-	-	-	•	-	-
70 Connection IEC 61076-2-101 D (M12)	-	-	-	-	-	-	•
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	-	-	•	-	-
80 Connection Stud #10-32 UNF	-	-	-	•	-	-	-

Option
P01 MP Filtri standard
Pxx Customized

Certifications	DEU	OTHERS
Without	-	•
UL UL certification	•	-

PLUGS

Series
T2 Plug
T4 Plug

Configuration example	T2	H
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Seals	T2	T4
A NBR	-	•
H HNBR	•	-
V FPM	•	-