

MPIC 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

MPIC 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: MPIC 250-630-850
- Diffuser: Tinned Steel
- Valve: Steel

Pressure

- Test pressure: 1.5 MPa (15 bar)
- Min. Burst pressure: 3 MPa (30 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 1 MPa (10 bar)

Bypass valve

- Opening pressure 0.175 MPa (1.75 bar) $\pm 10\%$
- Opening pressure 0.25 MPa (2.5 bar) $\pm 10\%$, except for MPI 850

Filter element features

Filter MPIC		Filter element MRC	
Δp Element type			
Element media	Construction	Δp Series	Δp
A - Microfiber	Standard	D	10 bar
M - Wire mesh	Standard	D	10 bar
P - Paper	Standard	D	10 bar
Please see ordering code tables to check element Δp series availability based on filter features.			
Flow direction 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

MPIC filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]						Volumes [dm ³]					
	Length	10	20	30	40	50	Length	10	20	30	40	50
MPIC 100		0.90	1.00	1.20	1.50	1.80		0.90	0.90	1.20	1.60	1.80
MPIC 250		2.20	2.50	2.90	4.30	-		3.50	3.50	4.50	7.00	-
MPIC 630		3.40	3.90	4.30	5.40	6.60		5.80	7.40	9.50	11.40	13.50
MPIC 850		15.20	18.20	21.20	25.20	-		8.80	12.20	16.70	20.80	-

Flow rates [l/min]

Filters series	Length	Filter element design - D series					Filter element design - D series		
		A0003	A0006	A0010	A0016	A0025	M0025 M0060 M0090	P0010	P0025
MPIC 100	10	26	29	72	79	107	282	164	190
	20	43	46	112	114	161	318	164	190
	30	64	72	132	156	178	324	219	251
	40	90	99	184	198	216	324	266	302
	50	117	128	201	219	244	324	282	318
MPIC 250	10	93	102	210	251	315	1093	339	383
	20	124	151	327	412	421	1122	460	514
	30	189	221	418	445	500	1137	544	616
	40	261	304	592	670	766	1166	832	923
MPIC 630	10	160	200	369	423	518	1894	565	632
	20	240	257	571	611	1045	1929	1137	1285
	30	330	374	745	788	1308	1938	1416	1577
	40	374	403	887	1010	1348	1956	1448	1612
	50	625	698	1210	1257	1723	2121	1839	1929
MPIC 850	10	775	1041	1246	1568	2242	3311	2371	2625
	20	1176	1522	1682	1747	2449	3378	2684	2886
	30	1490	1914	1995	2014	3035	3405	3144	3220
	40	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.

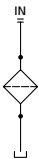
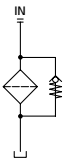
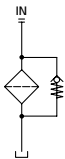
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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.

Filter series	00 - without bypass	17 - with bypass 1.75 bar	25 - with bypass 2.5 bar
MPIC 100	•	•	•
MPIC 250	•	•	•
MPIC 630	•	•	•
MPIC 850	•	•	-

		
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Hydraulic diagram

MPIC MPIC100 - MPIC250 - MPIC630 - MPIC850

Designation & Ordering code

COMPLETE FILTER

Series	Example 1:	MPIC	100	20	A0016	D	Z	25	NN000	0	ON	MA	P01	NN
MPIC	Example 2:	MPIC	630	50	P0010	D	V	00	NN000	0	ON	DE	P01	NN

Size	
100	630
250	850

Length	100	250	630	850
10	•	•	•	•
20	•	•	•	•
30	•	•	•	•
40	•	•	•	•
50	•	-	•	-

Filtration rating (filter media)		
A0003	Inorganic microfiber	3 µm
A0006	Inorganic microfiber	6 µm
A0010	Inorganic microfiber	10 µm
A0016	Inorganic microfiber	16 µm
A0025	Inorganic microfiber	25 µm
M0025	Wire mesh	25 µm
M0060	Wire mesh	60 µm
M0090	Wire mesh	90 µm
P0010	Resin impregnated paper	10 µm
P0025	Resin impregnated paper	25 µm

Element Δp	
D	10 bar

Seals and treatments	A0xxx	M0xxx	P0xxx
A NBR	•	•	•
V FPM	•	•	•
W NBR with filter and components surface treatment	•	•	-
Z FPM with filter and components surface treatment	•	•	-

By-pass valve	Size	100	250	630	850
00 Without bypass		•	•	•	•
17 With bypass 1.75 bar		•	•	•	•
25 With bypass 2.5 bar		•	•	•	-

Connections	
NN000	Without connection

Additional connections	
0	Without additional connections

Connections for clogging indicator	
ON	Without indicator connections

Additional features	
DA	With diffuser
DE	With diffuser and magnetic filter
MA	With magnetic filter
NN	Without additional features

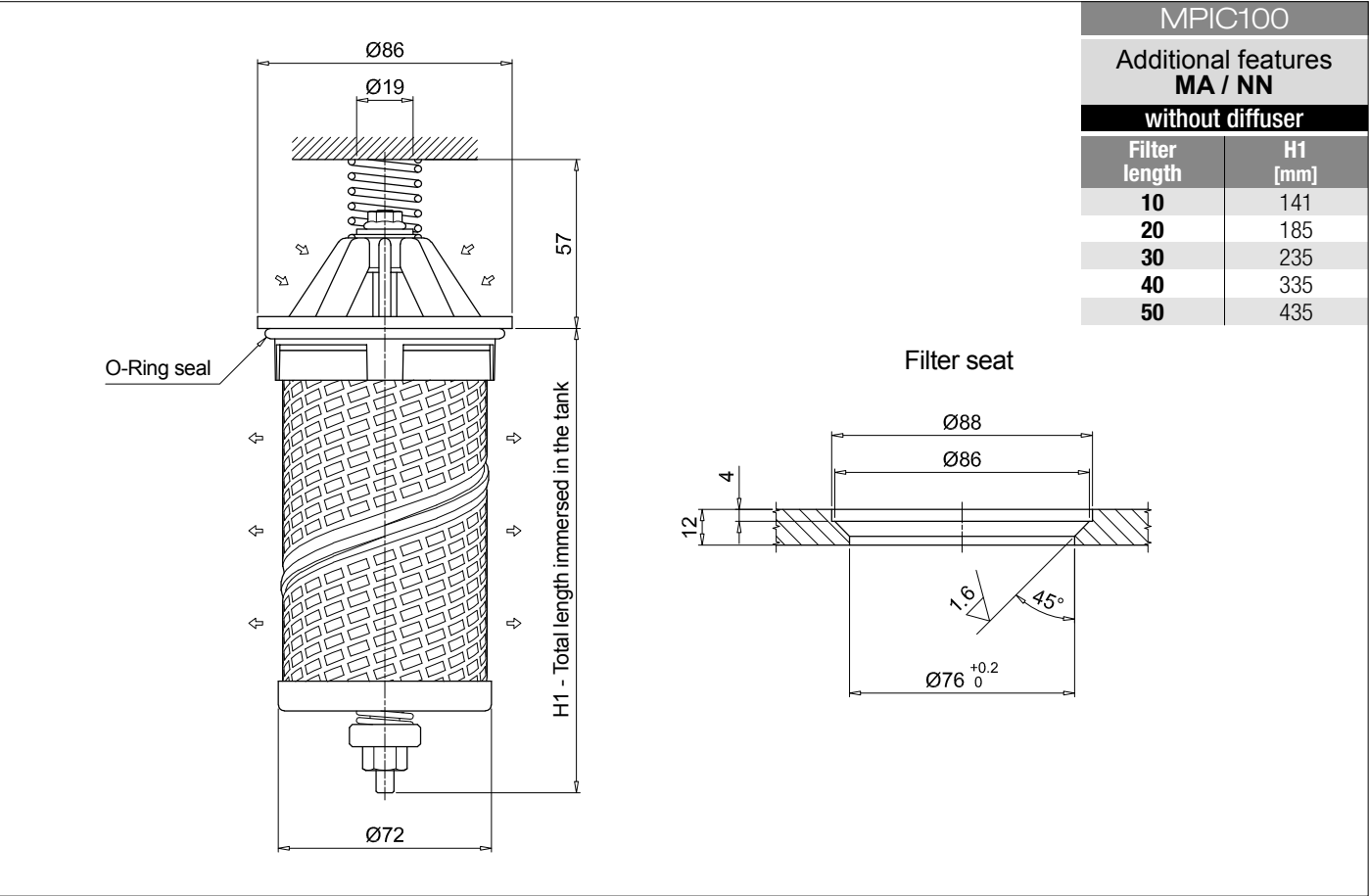
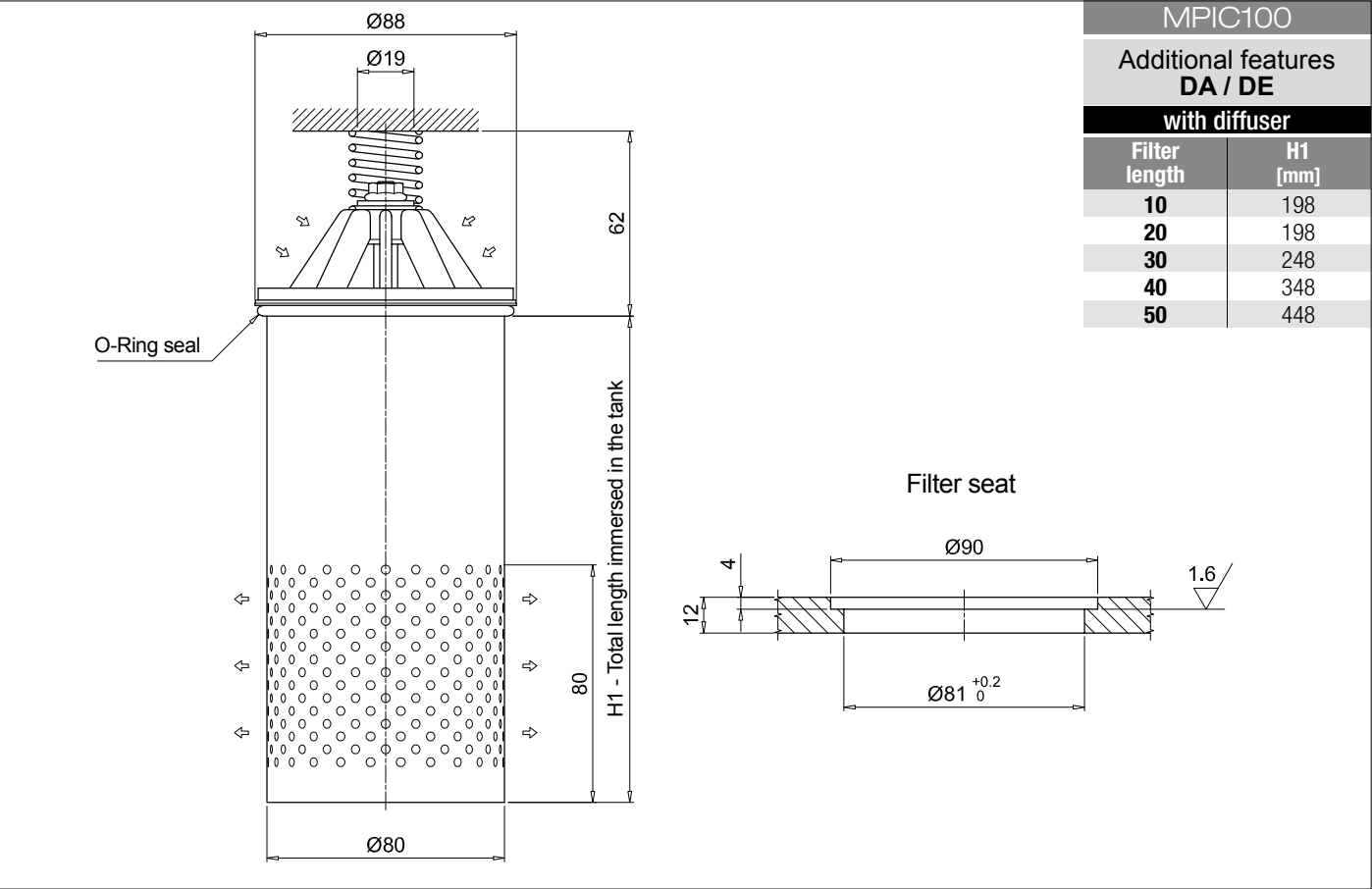
Execution	
P01	Standard catalogue item

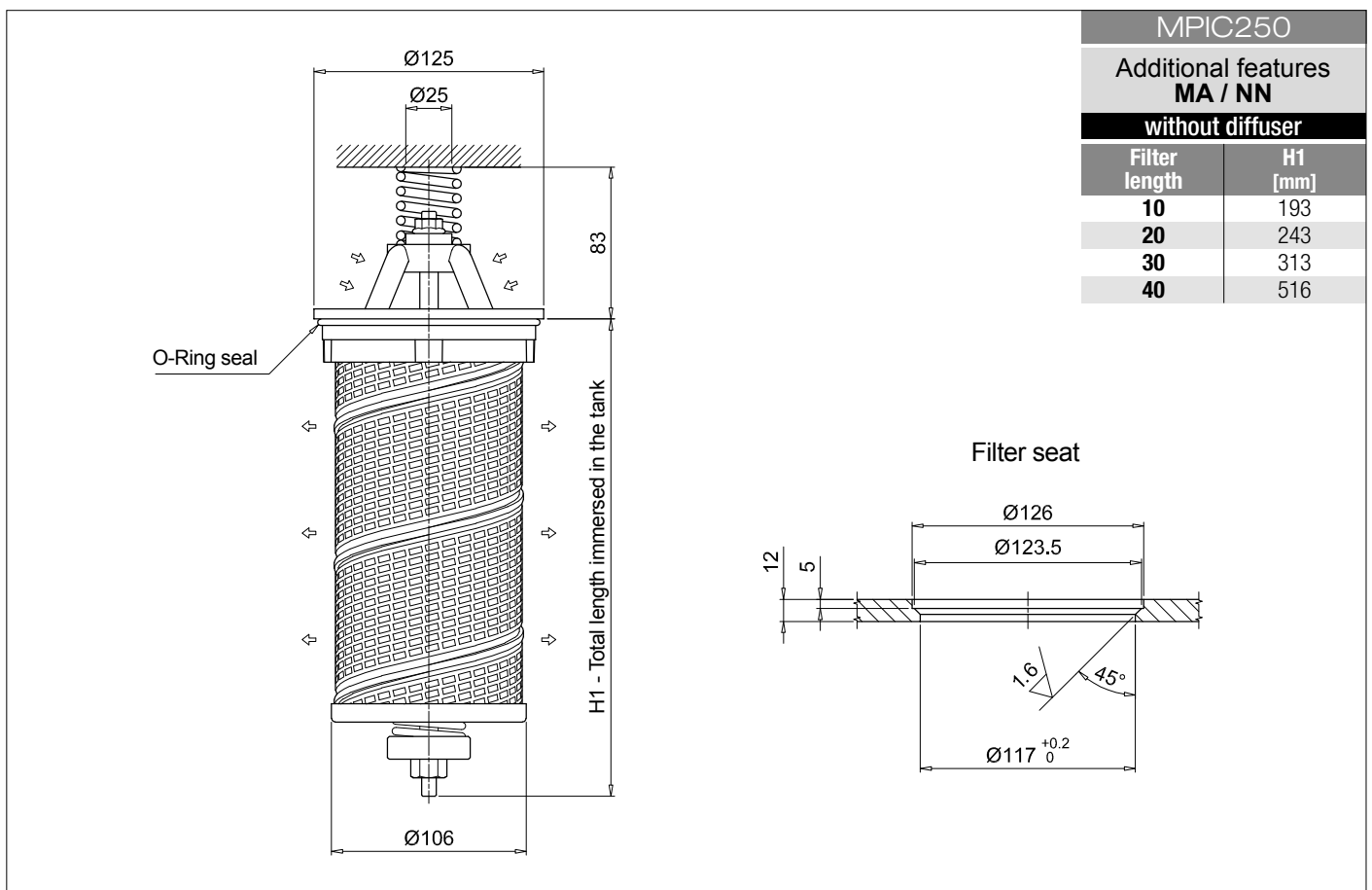
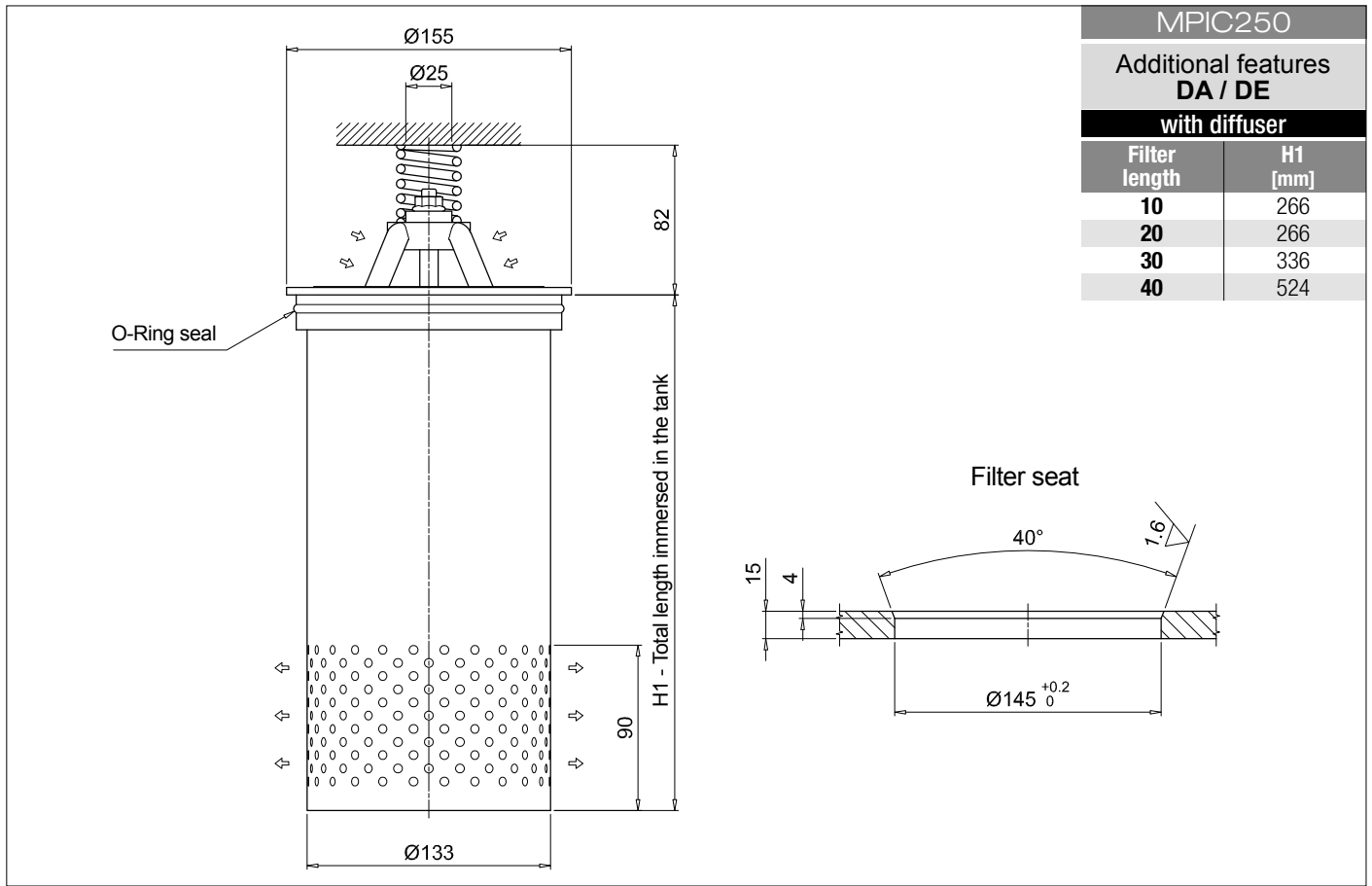
Certificates	
NN	None

FILTER ELEMENT

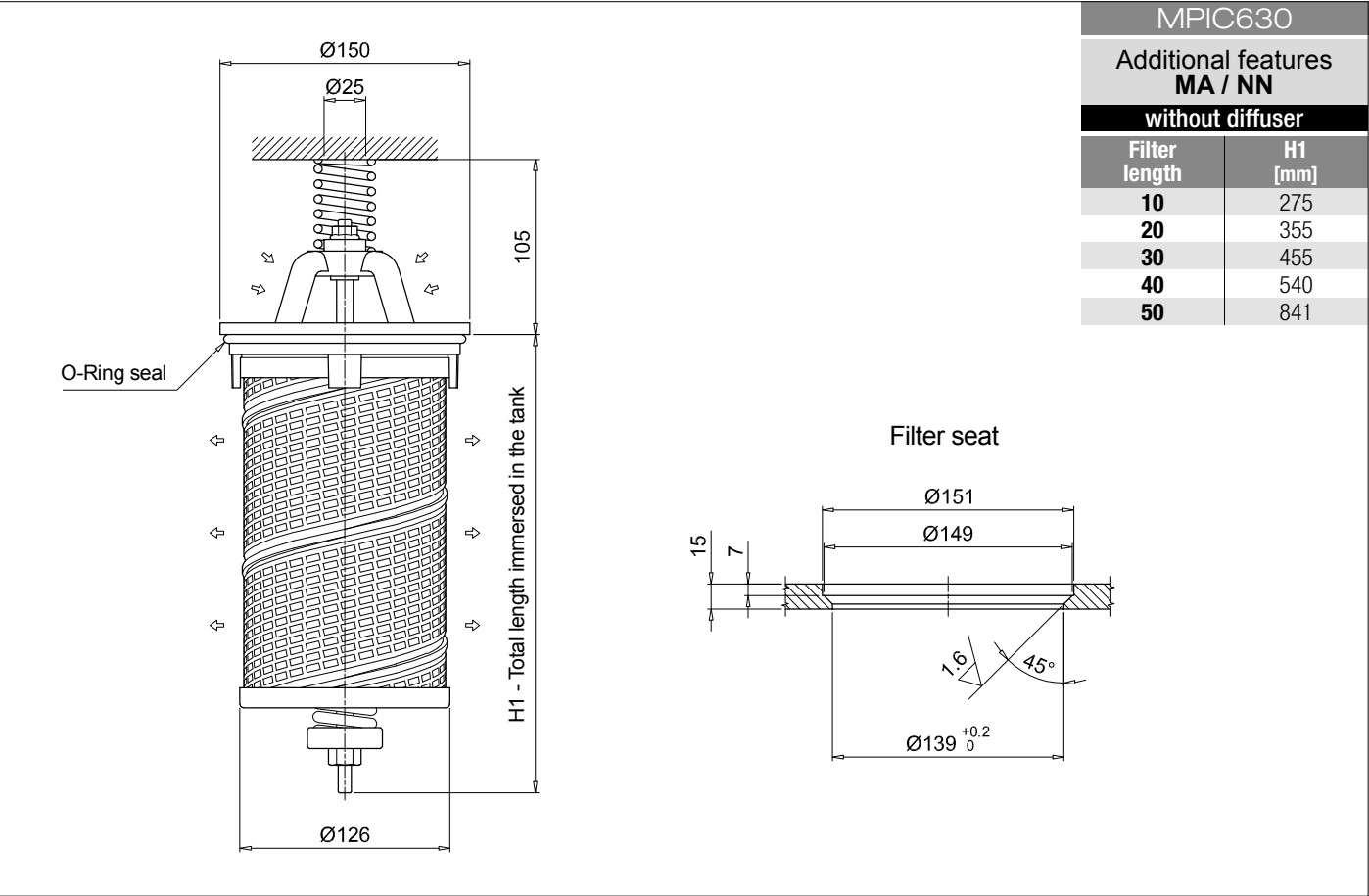
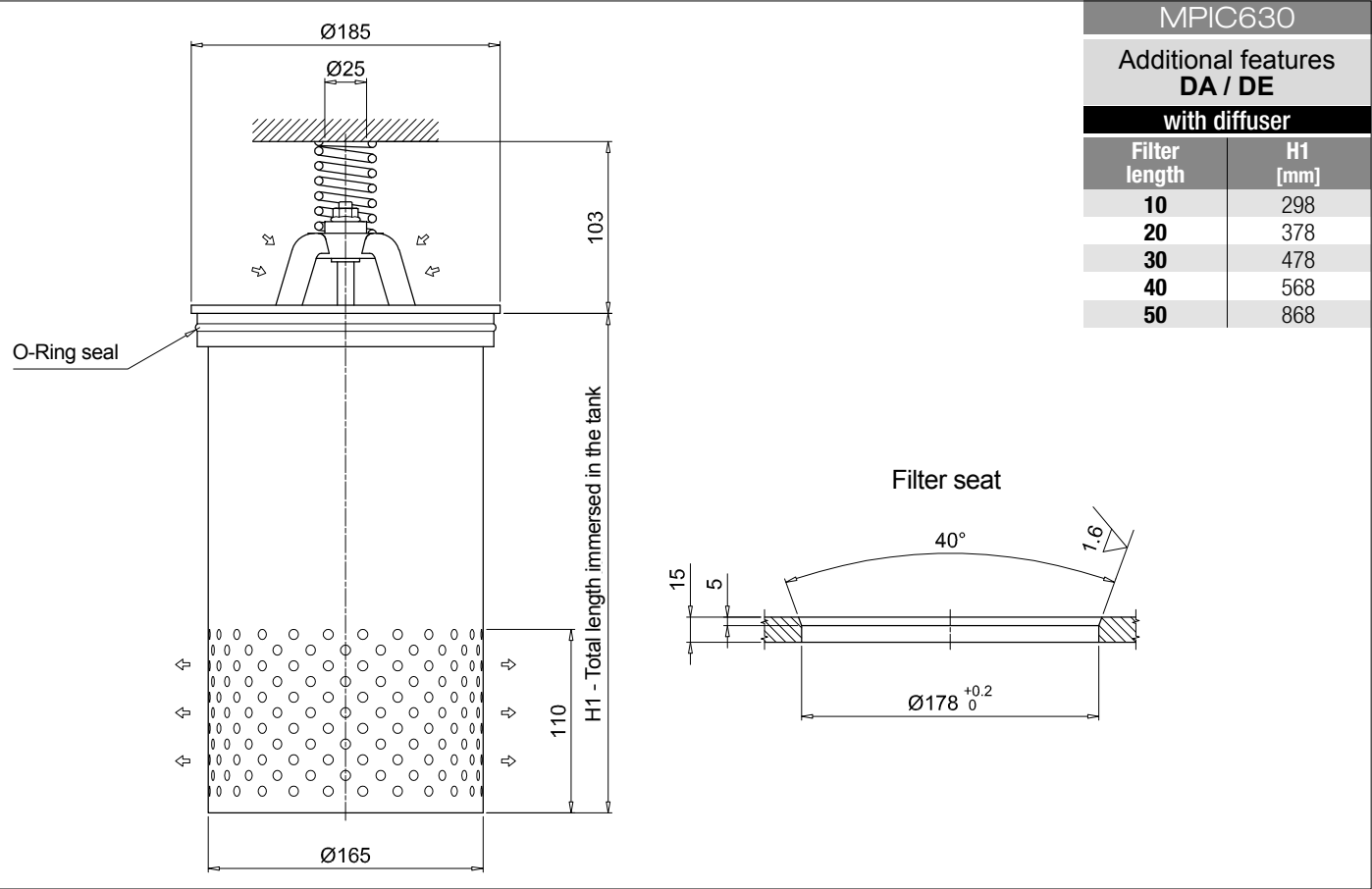
Series		Example 1: MRC 100 20 A0016 D V 00 NN P01 NN									
MRC		Example 2: MRC 630 50 P0010 D V 00 NN P01 NN									
Size											
100	630										
250	850										
Length	100	250	630	850							
10	•	•	•	•							
20	•	•	•	•							
30	•	•	•	•							
40	•	•	•	•							
50	•	-	•	-							
Filtration rating (filter media)											
A0003	Inorganic microfiber		3 µm								
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P0025	Resin impregnated paper		25 µm								
Element Δp											
D	10 bar										
Seals and treatments											
A	NBR										
V	FPM										
Bypass											
00	Without bypass										
Additional features											
NN	Without additional features										
Execution											
P01	Standard catalogue item										
Certificates											
NN	None										

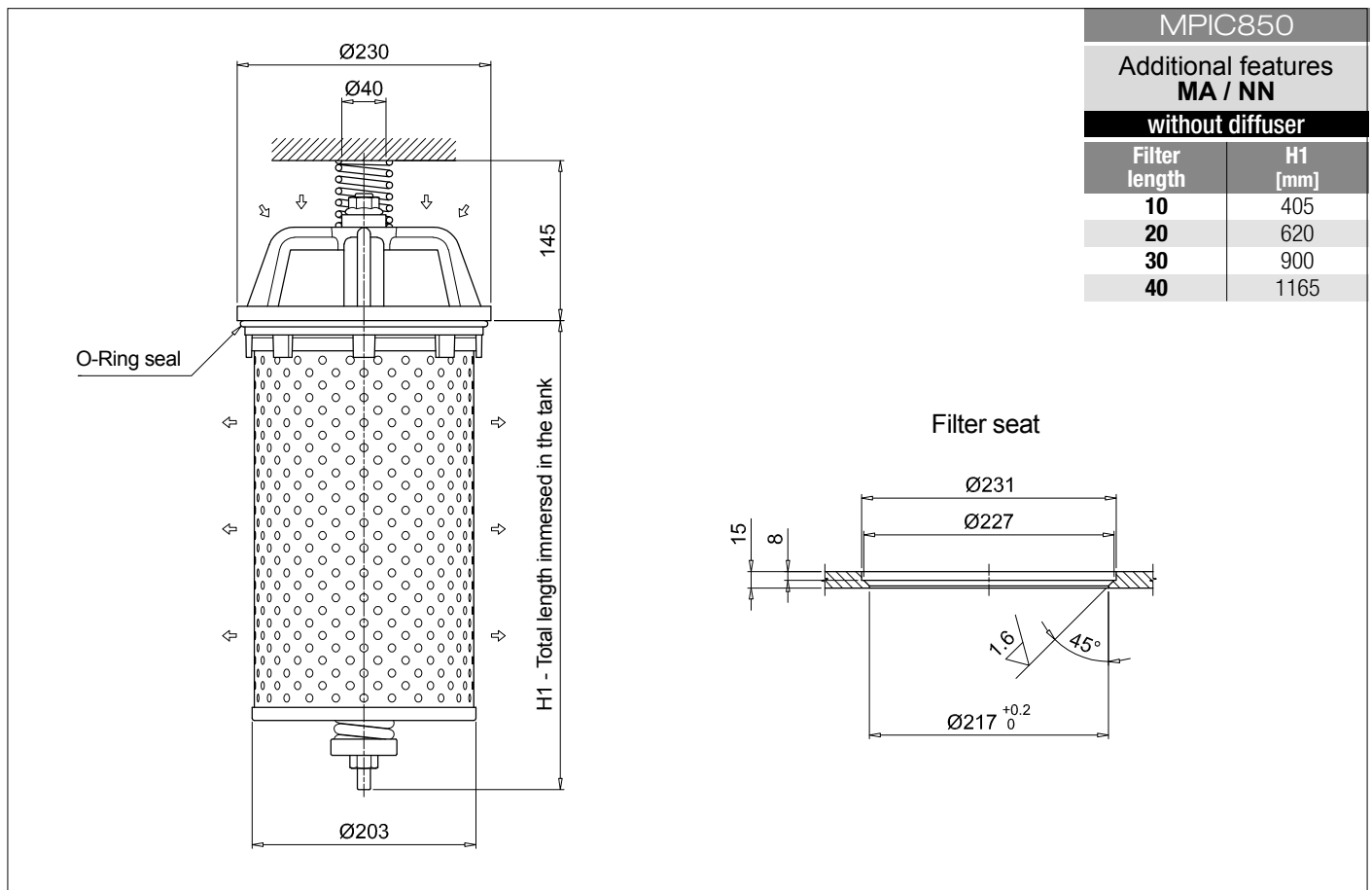
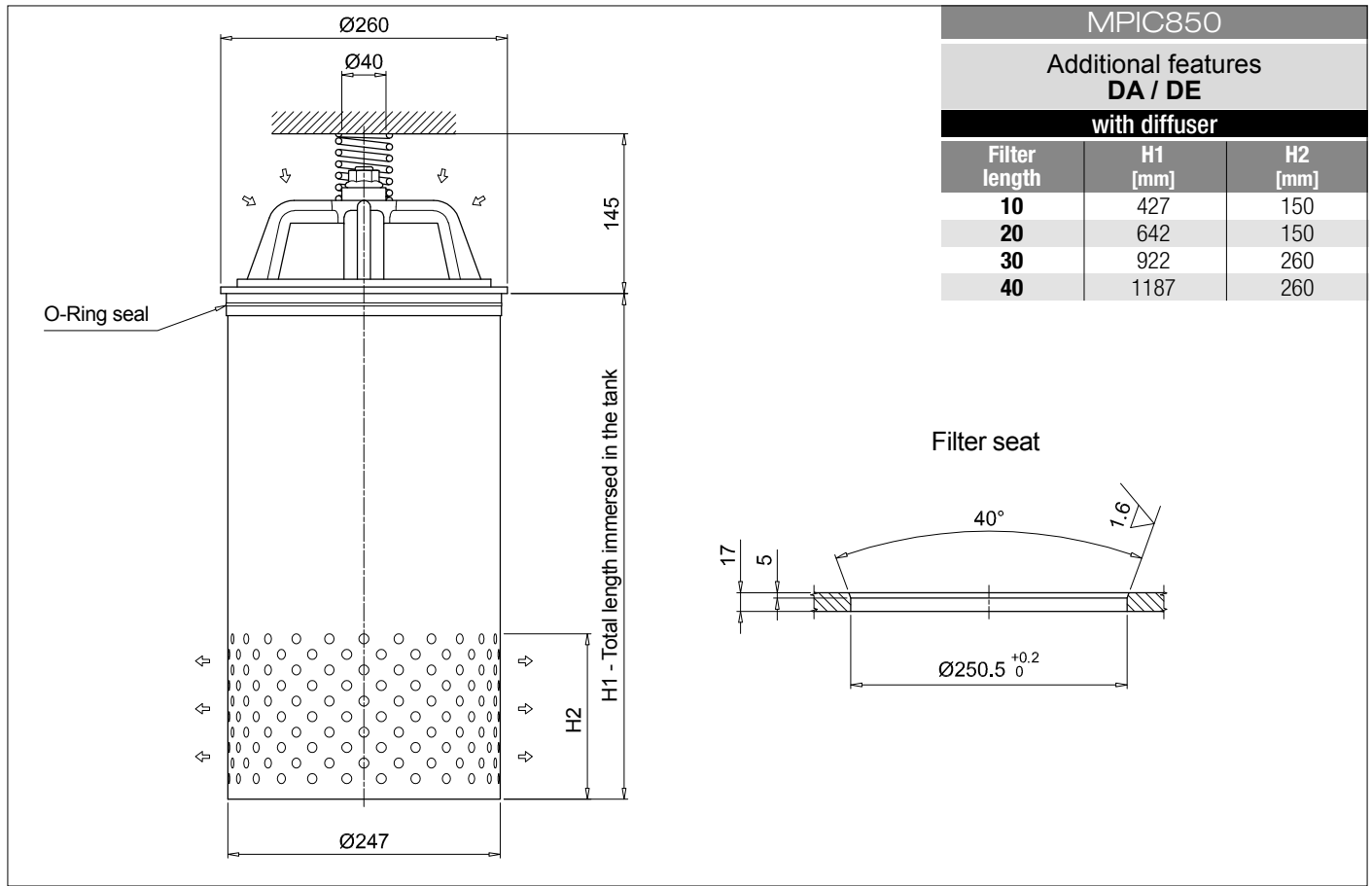
Dimensions





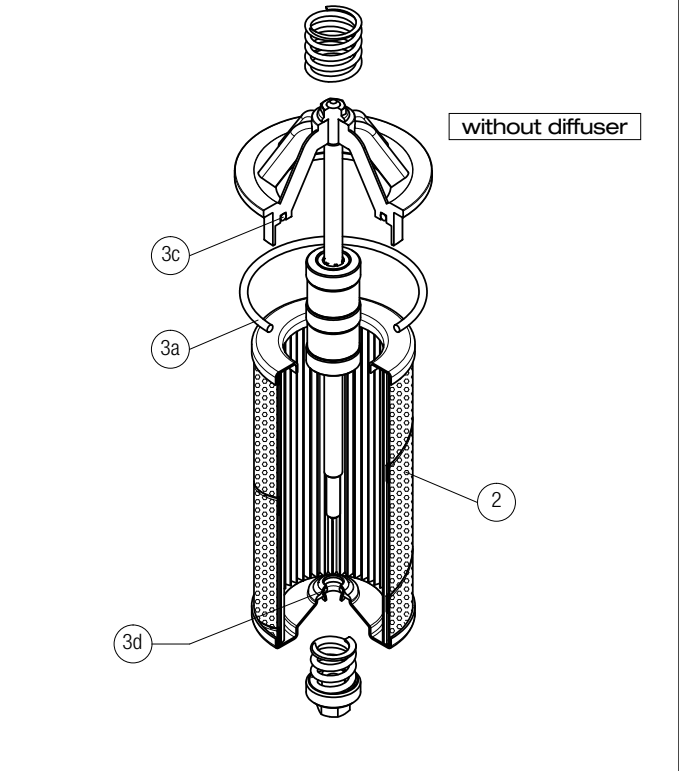
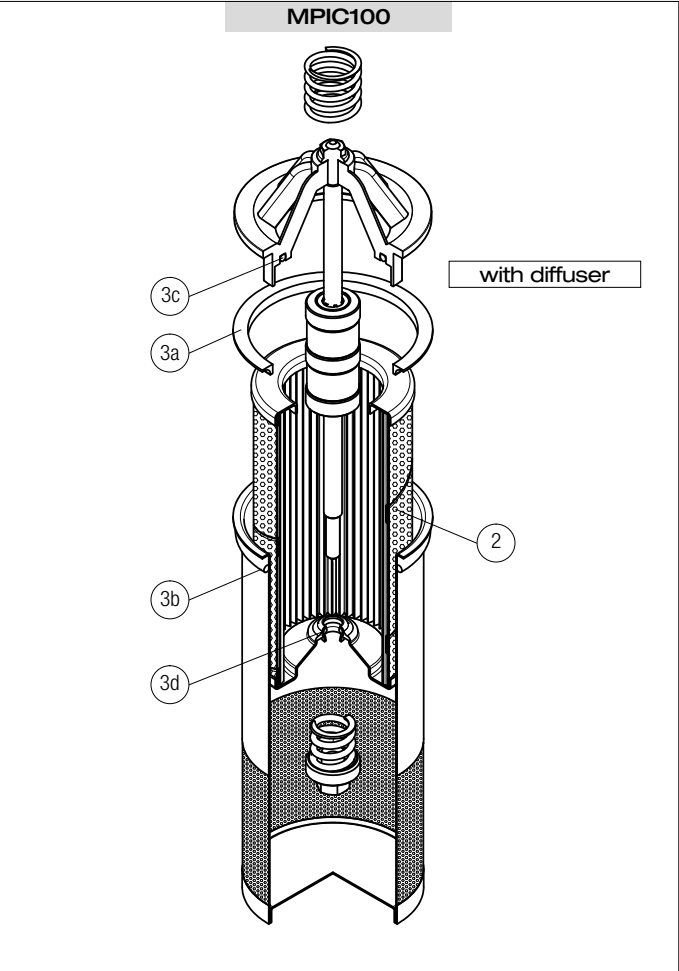
Dimensions



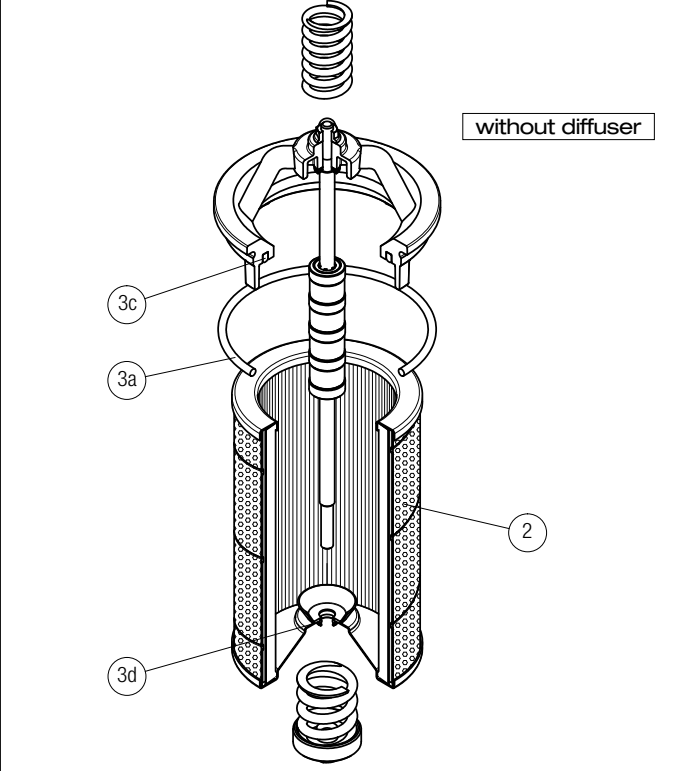
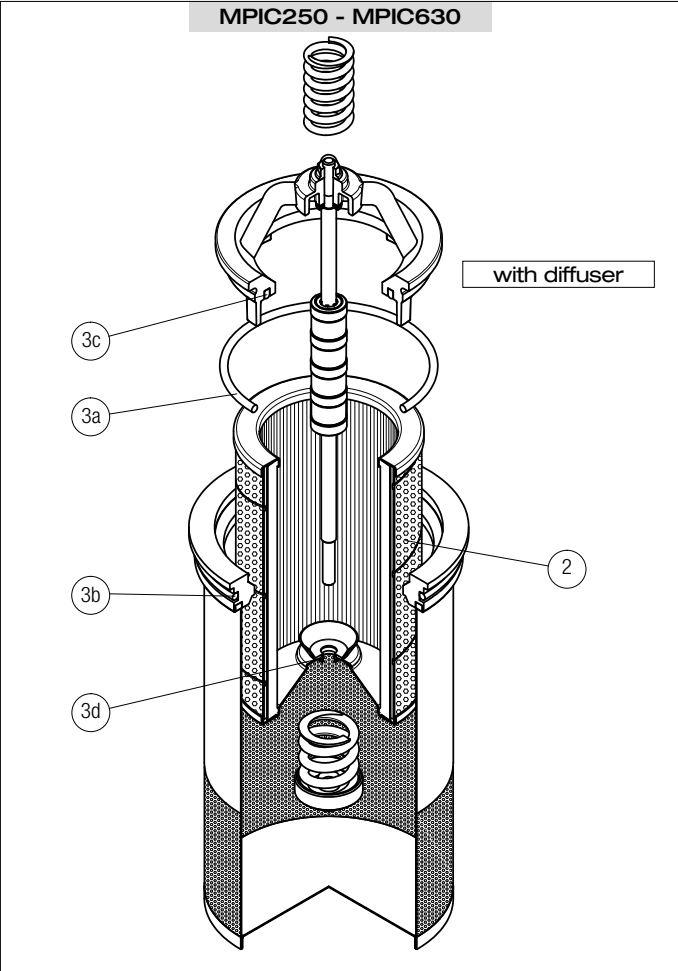


MPIC SPARE PARTS

Order number for spare parts

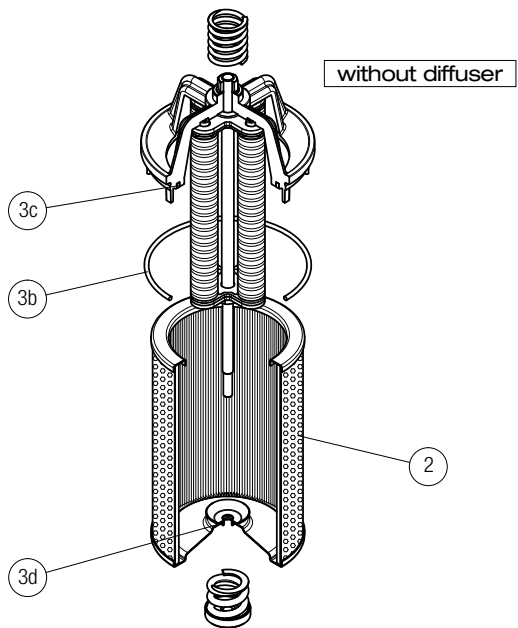
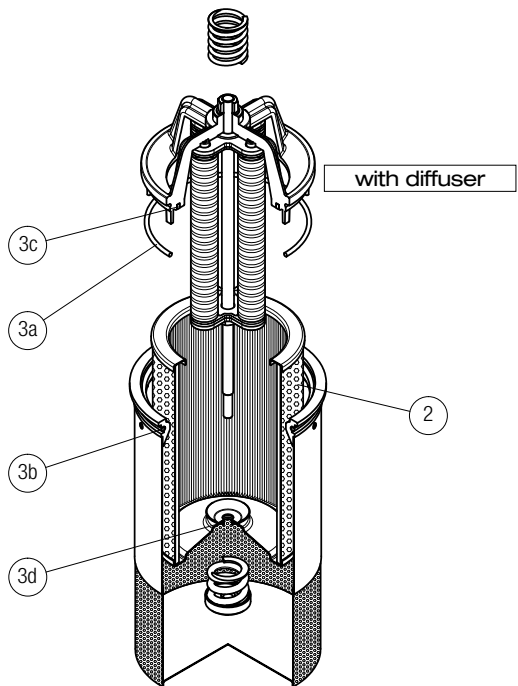


Q.ty: 1 pc.		Q.ty: 1 pc.	
Item:	2	3	(3a ÷ 3d)
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
MPIC 100	See order table	AK021000098	AK021000099



Q.ty: 1 pc.		Q.ty: 1 pc.	
Item:	2	3	(3a ÷ 3d)
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
MPIC 250	See order table	AK021000100	AK021000101
MPIC 630		AK021000079	AK021000080

MPIC850



Item:		Q.ty: 1 pc.	
Filter series		Q.ty: 1 pc.	
Filter element		Seal Kit code number	
MPIC 850		NBR	
See order table		FPM	
AK021000081		AK021000082	