

MFB series

BOWL ASSEMBLY

Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 700 l/min



Description

Technical data

Return filter Bowl assembly

Maximum working pressure up to 800 kPa (8 bar)

Flow rate up to 700 l/min

MFB is a range of return filter kits for protection of the reservoir against the system contamination.

They are directly integrated in the moulded reservoir in immersed or semi-immersed position to save space into the tank.

Treaded or flanged covers can be provided.

The filter output must be always immersed into the fluid to avoid aeration or foam generation into the reservoir.

Available features:

- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve integrated into the filter element, to relieve excessive pressure drop across the filter media
- Extension tube, to be used in deep reservoirs (sold as separate item)
- Diffuser, to reduce the risk of aeration, foaming and noise (sold as separate item)

Common applications:

Mobile machines

Bowl assembly materials

- Cover
Polyamide: MFB 020-030-100
Aluminium: MFB 180-190

- Bowl: Polyamide

Filter element materials

- Caps: Polyamide
- Spring: Spring steel

Bypass valve

- Opening pressure 175 kPa (1.75 bar) $\pm 10\%$
- Opening pressure 300 kPa (3 bar) $\pm 10\%$

Δp element type

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

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

From -25 °C to +110 °C

Note

MFB filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm ³]				
	Length	1	2	3	4	Length	1	2	3	4
MFB 020		0.25	0.35	0.40	-		0.10	0.15	0.20	-
MFB 030		0.25	-	-	-		0.15	-	-	-
MFB 100		0.50	0.60	0.75	0.95		0.35	0.50	0.80	1.10
MFB 180		1.60	2.40	-	-		1.50	2.90	-	-
MFB 190		-	2.40	-	-		-	3.00	-	-

Flow rates [l/min]

Filter series	Length	Filter element design - H series					Filter element design - N series		
		A03	A06	A10	A16	A25	M25 M60 M90	P10	P25
MFB 020	1	7	10	23	28	42	59	51	54
	2	17	20	45	48	56	72	64	67
	3	21	24	50	55	59	76	74	75
MFB 030	1	7	10	24	29	47	84	60	66
MFB 100	1	18	20	53	56	65	153	87	96
	2	28	38	65	75	95	158	111	123
	3	48	55	125	135	169	289	224	251
	4	79	89	180	185	198	306	264	289
MFB 180	1	127	148	235	243	278	441	285	299
	2	231	262	358	382	388	472	404	412
MFB 190	2	261	305	489	528	546	696	583	598

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.

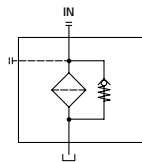
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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 symbols

Filter series	Style 1 connection
MFB 020	•
MFB 030	•
MFB 100	•
MFB 180	•
MFB 190	•



MFB MFB020 - MFB030 - MFB100 - MFB180 - MFB190

Designation & Ordering code

COMPLETE FILTER

Series and size						Configuration example 1: MFB100 1 A 2 A10 H E P01							
MFB020	MFB030	MFB100	MFB180	MFB190		Configuration example 2: MFB180 2 V 1 M25 N B P01							
Filter element with private spigot													
Length	MFB020	MFB030	MFB100	MFB180	MFB190								
1	•	•	•	•	-								
2	•	-	•	•	•								
3	•	-	•	-	-								
4	-	-	•	-	-								
Seals													
A NBR													
V FPM													
Version													
Version	MFB020	MFB030	MFB100	MFB180	MFB190								
1 Without cover	•	•	•	•	•								
2 With flanged cover type MPF	-	•	•	•	•								
3 With threaded cover type MPT	•	-	•	-	-								
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							
Element Δp													
Element Δp						Filter media							
N 10 bar						Axx	Mxx	Pxx					
H 10 bar						-	•	•					
											Bypass valve		
											E 3 bar		
											B 1.75 bar		
											Execution		
											P01 MP Filtri standard		
											Pxx Customized		

FILTER ELEMENT

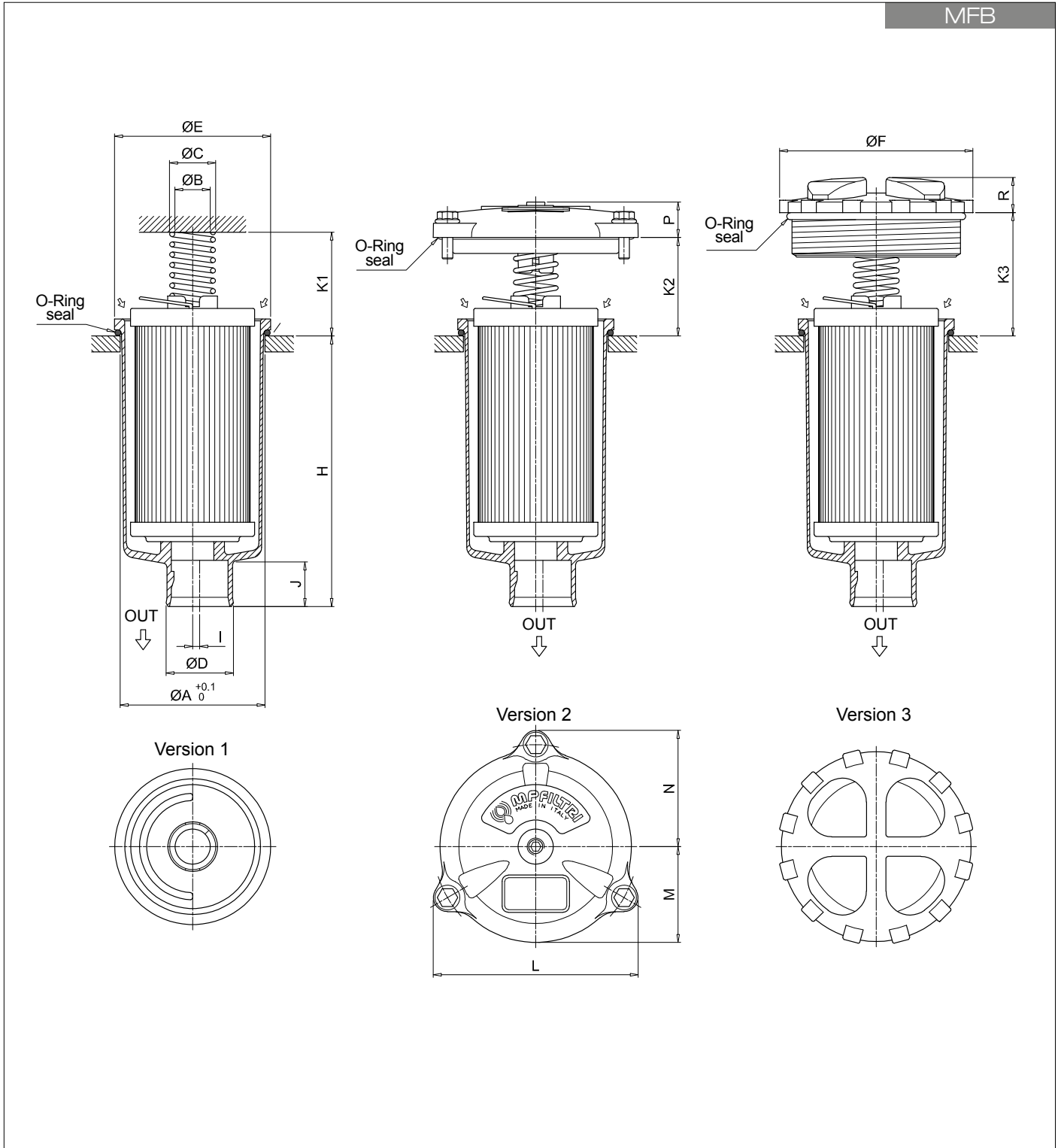
Element series and size						Configuration example 1: MF100 1 A10 H B E P01							
MF020	MF030	MF100	MF180	MF190		Configuration example 2: MF180 2 M25 N V P01							
Filter element with private spigot													
Element length	MF020	MF030	MF100	MF180	MF190								
1	•	•	•	•	-								
2	•	-	•	•	•								
3	•	-	•	-	-								
4	-	-	•	-	-								
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							
Element Δp													
Element Δp						Filter media							
N 10 bar						Axx	Mxx	Pxx					
H 10 bar						-	•	•					
											Seals		
											B NBR		
											V FPM		
											Bypass valve		
											E 3 bar		
											- 1.75 bar		
											Execution		
											P01 MP Filtri standard		
											Pxx Customized		

ADDITIONAL FEATURES

See page 266

	MFB020	MFB030	MFB100	MFB180	MFB190
TE Extension tube	•	•	•	•	•
DFS Diffuser with fast lock connection	-	-	•	-	-

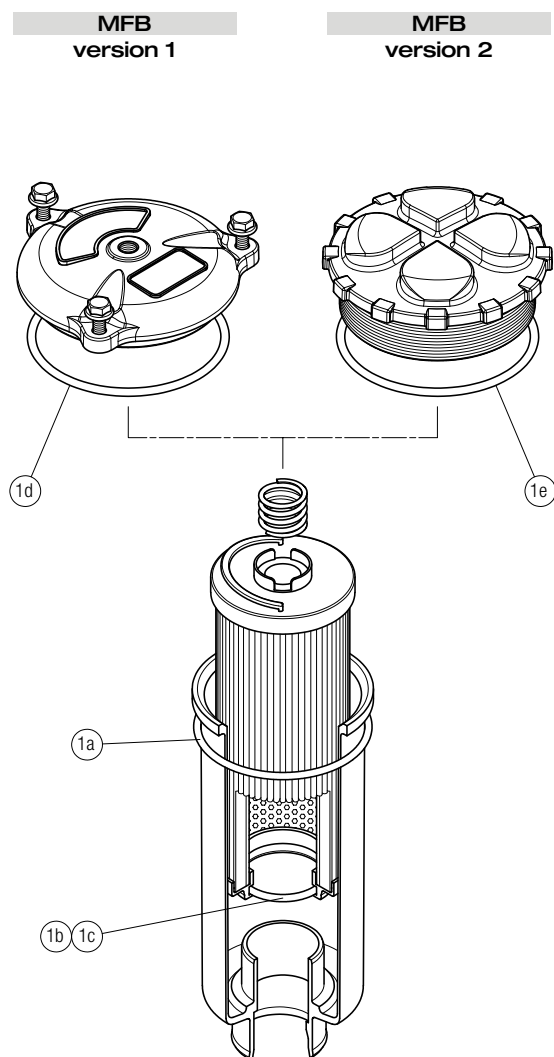
MFB



Filter size	Filter Length	ø A [mm]	ø B [mm]	ø C [mm]	ø D [mm]	ø E [mm]	ø F [mm]	H [mm]	I [mm]	J [mm]	K1 [mm]	K2 [mm]	K3 [mm]	L [mm]	M [mm]	N [mm]	P [mm]	R [mm]
020	1	52	20.5	26	32	56	75	111	0	24	42	-	36	-	-	-	-	18
	2	52	20.5	26	32	56	75	175	0	24	42	-	36	-	-	-	-	18
	3	52	20.5	26	32	56	75	214	0	24	42	-	36	-	-	-	-	18
030	1	60.5	20	25.5	32	68	-	92	3	21	33	35	-	92	42	52	18	-
	1	80.5	20	26	38	88	111	107	4	24	58	55	69	116	54	66	20	20
	2	80.5	20	26	38	88	111	154	4	24	58	55	69	116	54	66	20	20
	3	80.5	20	26	47	88	111	232	0	24	58	55	69	116	54	66	20	20
100	4	80.5	20	26	47	88	111	334	2.5	24	58	55	69	116	54	66	20	20
	1	112.5	26	33.5	47	121	-	234	0	31	58	58	69	159	76	95	21	-
	2	112.5	26	33.5	47	121	-	447	0	31	58	58	69	159	76	95	21	-
	2	112.5	26	33.5	50	121	-	454	0	38	58	58	69	159	76	95	21	-

MFB SPARE PARTS

Order number for spare parts



Q.ty: 1 pc.		
Item: 1 (1a ÷ 1e)		
Filter series	Seal Kit code number	
	NBR	FPM
MFB 020	02050572	02050573
MFB 030	02050574	02050575
MFB 100	02050555	02050556
MFB 180	02050576	02050577
MFB 190	02050578	02050579

Accessories

POLYAMIDE EXTENSION TUBE

H1 - Total length immersed in the tank

Configuration example: **TE** **40** **A** **250**

Series	Size	Material	Length	H [mm]
TE			200	200
			250	250
			300	300
			350	350
			400	400
			450	450
			500	500

Size	Ø D [mm]
25	25
32	32
40	40

Material
A Polyamide

COMPATIBILITY TABLE															
Filter series	Filter size			Filter length	Tube length										
					TE25	TE32	TE40	200	250	300	350	400	450	500	
MPF - MPFX	30			1	•	-	-	266	316	366	416	466	516	566	
MPF	100	104	110	1	-	•	-	275	325	375	425	475	525	575	
				2	-	-	-	322	372	422	472	522	572	622	
				3	-	-	•	400	450	500	550	600	650	700	
				4	-	-	-	502	552	602	652	702	752	802	
MPFX	100	104	110	1	-	-	•	277	327	377	427	477	527	577	
				2	-	-	-	322	372	422	472	522	572	622	
				3	-	-	•	400	450	500	550	600	650	700	
				4	-	-	-	502	552	602	652	702	752	802	
MPF MPFX	181	182	184	1	-	-	•	410	460	510	560	610	660	710	
				2	-	-	-	623	673	723	773	823	873	923	
MPT MPTX	025		027		1	•	-	-	278	328	378	428	478	528	578
					2	-	-	-	342	392	442	492	542	592	642
					3	-	-	-	380	430	480	530	580	630	680
MPT	110	114	116	120	1	-	•	-	273	323	373	423	473	523	573
					2	-	-	-	320	370	420	470	520	570	620
					3	-	-	•	396	446	496	546	596	646	696
					4	-	-	-	498	548	598	648	698	748	798
MPTX	110	114	116	120	1	-	-	•	273	323	373	423	473	523	573
					2	-	-	-	318	368	418	468	518	568	618
					3	-	-	-	396	446	496	546	596	646	696
					4	-	-	-	498	548	598	648	698	748	798

STEEL EXTENSION TUBE

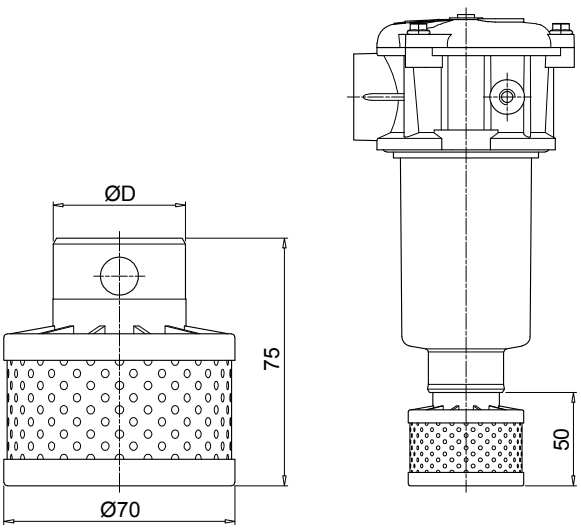
H1

Configuration example: **MPF191** **2** **A** **F1** **A10** **H** **B** **S60**

Length	H1 [mm]
S30	300
S35	350
S40	400
S45	450
S50	500
S60	600
S70	700
S80	800
S90	900

COMPATIBILITY TABLE							
Filter series	Filter size			Filter length	Ø D [mm]		
					52	65	
MPF	191	192	194	2	•	-	
				1	•	-	
	400	410	450	451	2	-	•
					3	-	•
	750				1	-	•

DIFFUSER WITH FAST LOCK CONNECTION

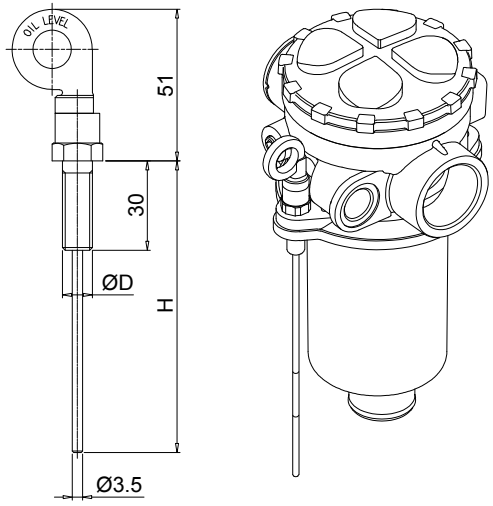


Configuration example: **DFS 32 A 075**

Series		DFS	
Size		ø D [mm]	
32	32		
40	40		
		Version	
		A Standard	
		Length	
		075 Standard	

COMPATIBILITY TABLE							
Filter series	Filter size			Filter Length	DFS32	DFS40	
MPF	100	104	110	1	•	-	
				2	-	-	
				3	-	•	
				4	-	-	
MPFX	100	104	110	1	-	•	
				2	-	•	
				3	-	-	
				4	-	-	
MPT	110	114	116	120	1	•	-
					2	-	-
					3	-	•
					4	-	-
MPTX	110	114	116	120	1	-	•
					2	-	•
					3	-	-
					4	-	-

DIPSTICK



Configuration example: **DPT 20 M10 A P01**

Series		DPT	
Length		H [mm]	
15	134		
20	184		
25	234		
30	284		
35	334		

Materials

- Screw: phosphatized steel
- Stick: phosphatized steel
- Handle: Polyamide

Technical data

Working temperature: from -25 °C to +110 °C

Fastening

M8 Fastening with screws ø D = M8
M10 Fastening with screws ø D = M10

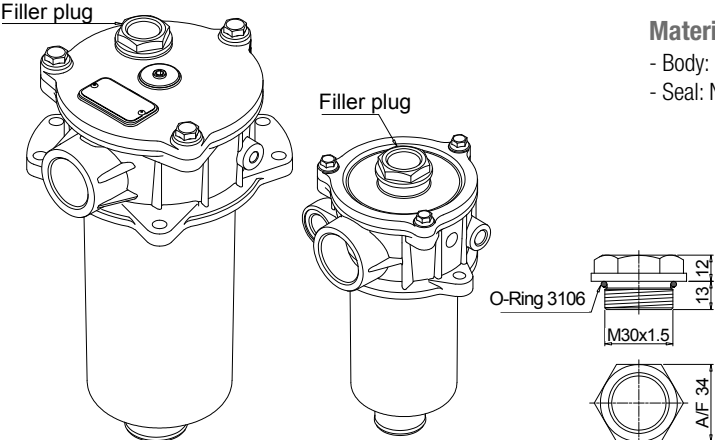
Seals

A NBR
V FPM

Execution

P01 MP Filtri standard
Pxx Customized

FILLER PLUG



Materials

- Body: Polyamide
- Seal: NBR

Technical data

Tightening torque: 15 N·m

O-Ring 3106

M30x1.5

13 12

A/F 34

For any further information, please, contact our commercial dept.

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	•	-