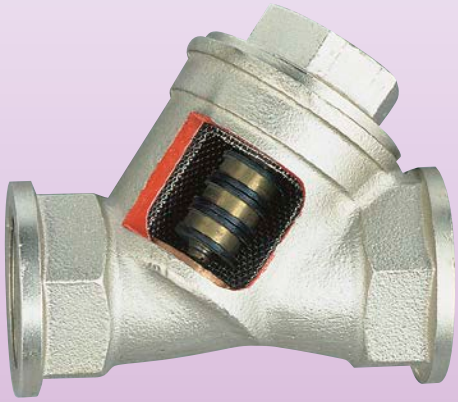
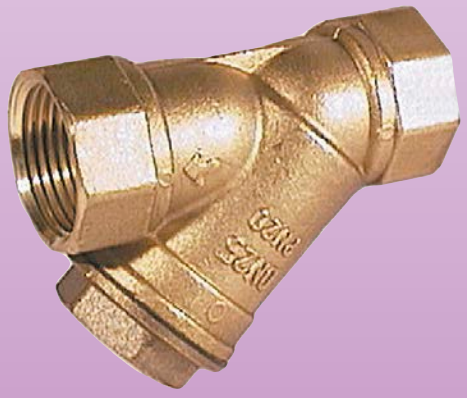
Zertifiziertes QM-System
DIN EN ISO 9001
Zertifikat-Nr. 01017

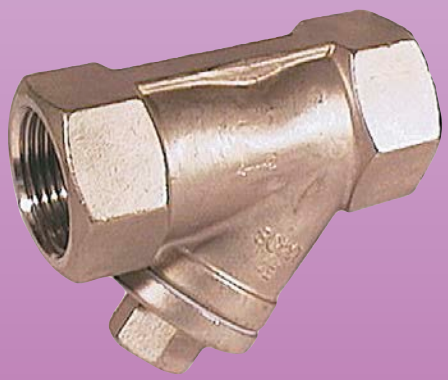
Magnetic Filters and Dirt Traps

measuring • monitoring • analysing

MFR/MFT







- p_{max}: PN 40
- t_{max}: +200 °C
- Screw thread: G ¼ ... G 4
- Screw thread: Rp 1 ... Rp 2
- Solder connections: 22 mm ... 35 mm
- Material: brass, stainless steel, bronze
- Mesh sizes: 50 µm ... 800 µm

Z1

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1/07 - 2025

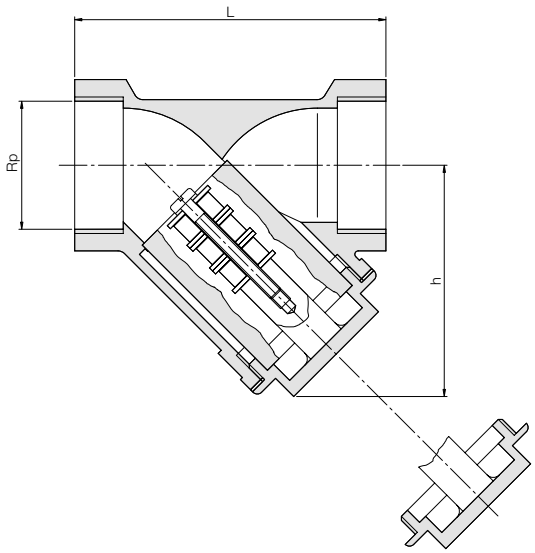
Description

KOBOLD magnetic filters are used in many applications, including central system filters, where it is necessary to protect devices from dirt and contamination. They are used to catch and remove contaminants from industrial cooling and lubrication circuits, especially where residue and sediment from assembly (such as chips from thread-cutting) and normal operation (such as scale and residue from frictional wear) can be carried along in the medium being filtered. Contaminants of these types can form deposits that can cause pitting and corrosion in highly sensitive measuring and control devices. Regular maintenance and cleaning of the magnetic filter inserts will effectively prevent system and device failure and the resulting downtime.

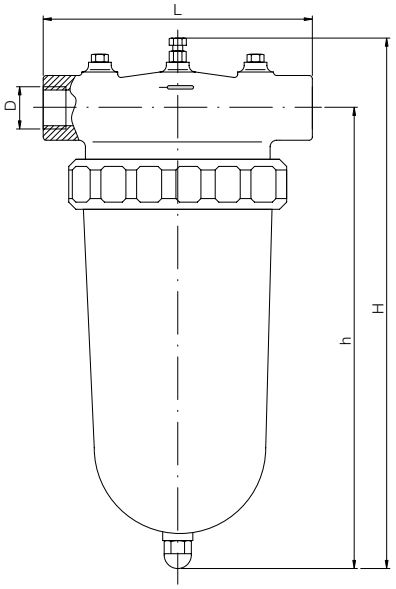
Function

The medium being filtered with these devices first flows around the centrally positioned bar magnet and then passes through – from the inside out – the stainless steel filter cartridge. The bar magnetic attracts and retains larger ferrous particles, thus making the magnetic filter easier to service. Larger, coarse pieces of material are trapped by the filter cartridge. The selected mesh sizes, from 150 to 1200 µm, ensure that the filter does not get clogged with fine sludge and causes only a minor pressure loss.

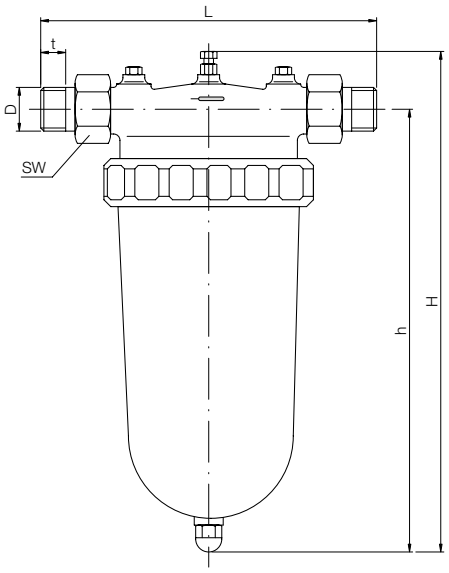
Magnetic filter, female thread, MFR-00



Adapter magnetic filter, female thread, MFT-I



Adapter magnetic filter, threaded connection, MFT-A, MFT-L



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Materials

Screw-on magnetic filter: body bronze
Adapter magnetic filter: body brass
Filter cartridge: stainless steel
Magnets: oxide ceramic
Gasket: Klinger Sil® C-4300

Mounting

Screw-on magnetic filter: horizontal or vertical
Adapter magnetic filter: horizontal

Maintenance

First check after being put into operation. Thereafter, frequency of checks are dependent on actual rate of contamination, with at least one check per year.

Cleaning

Clean with water stream/compressed air and brush.

Technical Details

Thread connection: female thread G ½ ... G 3
male thread R ¾ ... R 1¼
(according to DIN 2999)
Solder connections: 22 mm ... 35 mm
Flanges: according to DIN 2533
DN 50 ... DN 200

Nominal pressures

Screw-on magnetic filter: PN 16
Adapter magnetic filter: PN 10

Max. temperature

Screw-on magnetic filter: 200 °C
Adapter magnetic filter: 90 °C
Mesh size: see table

Dimensions and Order Details (example: **MFR-0015**)

Version	Connection	k_v-value [m³/h]	Mesh size [µm]	Size of filter cartridge [mm]	L [mm]	h [mm]	H [mm]	t [mm]	AF [mm]	Weight [kg]	ID no.
Female thread	G ½	6.2	280	19/32	64	45	-	-	-	0.3	**MFR-0015**
	G ¾	7.7	280	25/38	74	55	-	-	-	0.3	**MFR-0020**
	G 1	12.4	280	29/46	82	62	-	-	-	0.4	**MFR-0025**
	G 1¼	13.9	280	37/55	96	73	-	-	-	0.5	**MFR-0032**
	G 1½	18.5	280	43/61	112	84	-	-	-	0.9	**MFR-0040**
	G 2	31	280	58/75	134	103	-	-	-	2.2	**MFR-0050**
	G 2½	56	280	66/9	151	105	-	-	-	2.8	**MFR-0065**
	G 3	80	530	80/130	172	129	-	-	-	4.8	**MFR-0080**
Female thread adapter	Rp 1	17.5	600	70/197	130	283	324	-	-	5.1	**MFT-I025**
	Rp 1¼	20	600	70/197	135	283	324	-	-	5.1	**MFT-I032**
	Rp 1½	25	600	70/197	150	293	338	-	-	5.5	**MFT-I040**
	Rp 2	33	600	70/197	160	299	351	-	-	6.0	**MFT-I050**
Male thread adapter	R ¾	12	600	70/197	192	283	324	11	37	5.3	**MFT-A020**
	R 1	17.5	600	70/197	223	283	324	19	46	5.5	**MFT-A025**
	R 1¼	21	600	70/197	253	283	324	21.5	52	5.9	**MFT-A032**
Solder connection adapter	22 mm	12	600	70/197	176	283	324	17	37	5.3	**MFT-L020**
	28 mm	17.5	600	70/197	184	283	324	18.5	46	5.5	**MFT-L025**
	35 mm	21	600	70/197	200	283	324	23.5	52	5.9	**MFT-L032**

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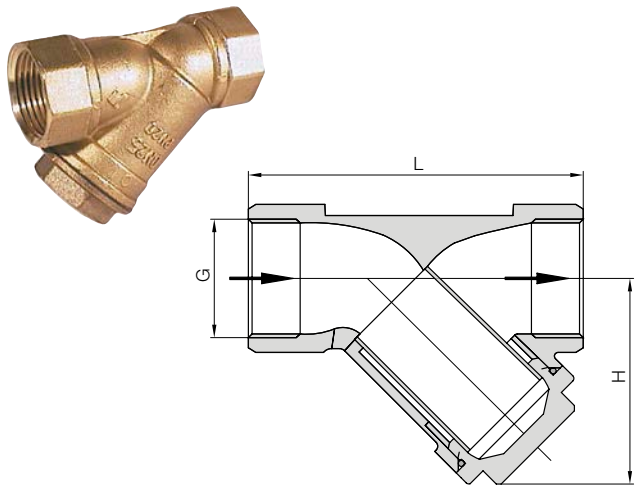
Technical Details MFR-female thread (brass version)

Design:	two-part screwed body
Connections:	female thread G ¼ ... G 4 DIN ISO 228
Nominal pressure:	see table
Temperature range:	max. 90 °C (water) -15 °C ... 110 °C (air)
Mesh size:	see table
Mounting position:	cover toward bottom, note specified direction of flow

Materials

Body:	brass Ms 58
Cover:	brass Ms 58
Mesh:	stainless steel AISI 304
Cap seal:	NBR G 2½ ... G 4 = Betaflex 71 cellulose with NBR

MFR-IG



Dimensions and Order Details

MFR-IG brass version
(example: **MFR-IGR15**)

Screw thread [G]	k_v-value [m³/h]	Order no.	Mesh size [µm]	L [mm]	H [mm]	Nominal pressure	Weight [kg]
¼	2.20	**MFR-IGR 08**	500	55	40	PN20	0.13
¼		**MFR-IGR 08 (F)**	50	55	40		
⅜	3.43	**MFR-IGR 10**	500	55	40		0.13
⅜		**MFR-IGR 10 (F)**	50	55	40		
½	4.48	**MFR-IGR 15**	500	58	40		0.15
½		**MFR-IGR 15 (F)**	50	58	40		
¾	7.86	**MFR-IGR 20**	500	70	48		0.24
¾		**MFR-IGR 20 (F)**	50	70	48		
1	11	**MFR-IGR 25**	500	87	56		0.38
1		**MFR-IGR 25 (F)**	50	87	56		
1¼	16	**MFR-IGR 32**	500	96	64		0.56
1¼		**MFR-IGR 32 (F)**	50	96	64		
1½	22	**MFR-IGR 40**	500	106	73		0.7
1½		**MFR-IGR 40 (F)**	50	106	73		
2	35	**MFR-IGR 50**	500	126	89		1.2
2		**MFR-IGR 50 (F)**	50	126	89		
2½	60	**MFR-IGR 65**	800	150	107	PN16	2.2
3	83	**MFR-IGR 80**	800	169	120		3.1
4	100	**MFR-IGR 1H**	800	219	161		6.6

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1/07 - 2025

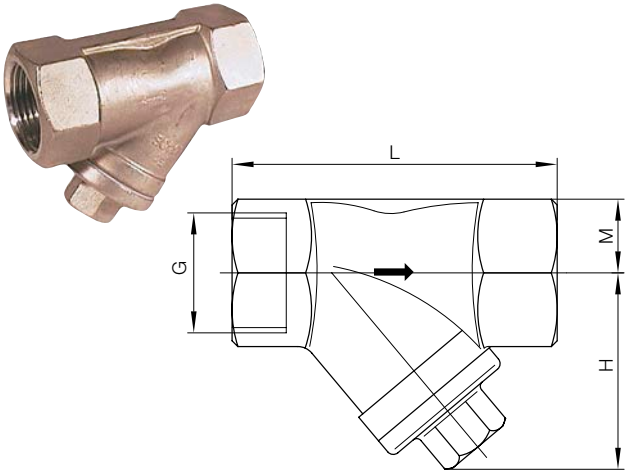
Technical Details MFR-EA (version stainless steel)

Design:	two-part screwed body
Connections:	female thread G ½ ... G 2 DIN ISO 228 T1
Nominal pressure:	PN 40
Temperature range:	-30 °C ... +180 °C (air)
Mesh size:	filter (standard) 500 µm filter (fine) 250 µm
Mounting position:	cover toward bottom, note specified direction of flow

Materials

Body:	stainless steel 1.4408
Cover:	stainless steel 1.4408
Mesh:	stainless steel 1.4301
Gasket:	PTFE

MFR-EA



Dimensions and Order Details

MFR-EA stainless steel version
(example: **MFR-EAR15E**)

Screw thread [G]	Order no. filter (standard)	Order no. filter (fine)	M [mm]	H [mm]	L [mm]
½	**MFR-EAR15E**	**MFR-EAR15D**	12.5	42.5	65.0
¾	**MFR-EAR20E**	**MFR-EAR20D**	15.5	49.0	75.0
1	**MFR-EAR25E**	**MFR-EAR25D**	18.5	57.5	90.0
1¼	**MFR-EAR32E**	**MFR-EAR32D**	23.0	65.0	110.0
1½	**MFR-EAR40E**	**MFR-EAR40D**	26.5	74.0	120.0
2	**MFR-EAR50E**	**MFR-EAR50D**	33.5	85.0	150.0

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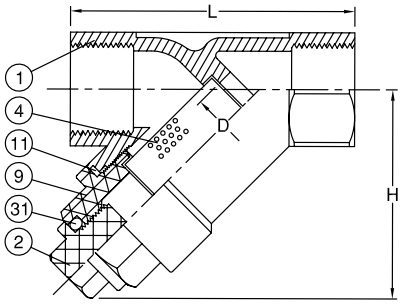
Technical Details MFR-DO (version stainless steel)

Design:	two-part screwed body
Connections:	female thread G ¼ ... G 3 DIN ISO 228-1
Nominal pressure:	PN 40
Temperature range:	-20 °C ... +180 °C
Mesh size:	200 mesh/75 µm for G ¼, G ⅜ 100 mesh/150 µm for G ½, G 1, G 1½ 40 mesh/400 µm for G 2, G 3
Mounting position:	cover toward bottom, note specified direction of flow

Materials

Body (1):	stainless steel 1.4408, EN1503-1
Plug (2):	stainless steel 1.4408, EN1503-1
Screen (4):	stainless steel 316
Bonnet (9):	stainless steel 1.4408, EN1503-1
Body seal (11):	PTFE
O-ring (31):	FPM

MFR-DO



Dimensions, weight and Order Details

MFR-DO stainless steel version
(example: **MFR-DOR15**)

Order no.	Size		L [mm]	H [mm]	D [mm]	Weight [kg]
MFR-DOR08	DN08	¼"	65.0	51.0	10.0	0.25
MFR-DOR10	DN10	⅜"	65.0	51.0	12.0	0.25
MFR-DOR15	DN15	½"	65.0	51.0	15.0	0.25
MFR-DOR25	DN25	1"	90.0	72.0	25.0	0.70
MFR-DOR40	DN40	1½"	120.0	87.0	40.0	1.20
MFR-DOR50	DN50	2"	140.0	103.0	50.0	1.90
MFR-DOR80	DN80	3"	200.0	143.0	80.0	6.16

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