



1 - 100 micron / 14 - 210 m<sup>3</sup>/h

HiFlux TM-P Magnetic Bag Filters are used where there is a need for reliable removal of magnetic particles and combine the advantages of magnetic and bag filtration.

The TM-P filters are used for partial flow filtration in district heating and cooling installations, as both magnetic and non-magnetic particles of less than 1 micron are retained in the filter.

Partial flow filtration is used in recirculating systems where there is a requirement for continuous flow, also during filter cleaning. Efficient removal of dirt and magnetic particles from the liquid reduces the number of breakdowns in the system and increases the life of measuring equipment, heat exchangers, pumps, valves and other components significantly.

In partial flow filtration 5-15% of the total flow is led out of the system and pumped through the magnetic bag filter, and is then led back to the system – cleaned of sludge and magnetite. As the partial flow filter is not located in the main circuit, the flow through the filter can be interrupted and the filter cleaned without interrupting the main flow.

Continuous reduction of the sludge content reduces sedimentation in heat exchangers, pipes and other components, helping to keep the heat transmission performance at a maximum and reducing corrosion in the system. Friction is also reduced in mechanical measuring equipment and errors in connection with inductive measuring are minimised, which is why it is possible to achieve more reliable energy consumption measurements.

The magnetic bars in the filter are located in conducting pipes, which leads the liquid through a magnetic field generated by magnets with changing polarity. This induces a field around even the smallest particles and so provides efficient retention of particles of less than 1 micron. The filter will actively retain ferromagnetic particles and some iron oxides of the Fe<sub>3</sub>O<sub>4</sub>, γ-Fe<sub>2</sub>O<sub>4</sub>, δ-Fe<sub>2</sub>O<sub>3</sub> type and other mixed oxides of Fe<sub>3</sub>O<sub>4</sub>, where the spinel structure FeO is substituted by other oxides, e.g. CoO, MnO, NiO, ZnO, Cr<sub>2</sub>O<sub>3</sub>.

Fitted with the highly efficient HiFlux magnetic system, which provides a magnetic field that is seven times stronger both efficiency and capacity can be increased significantly.

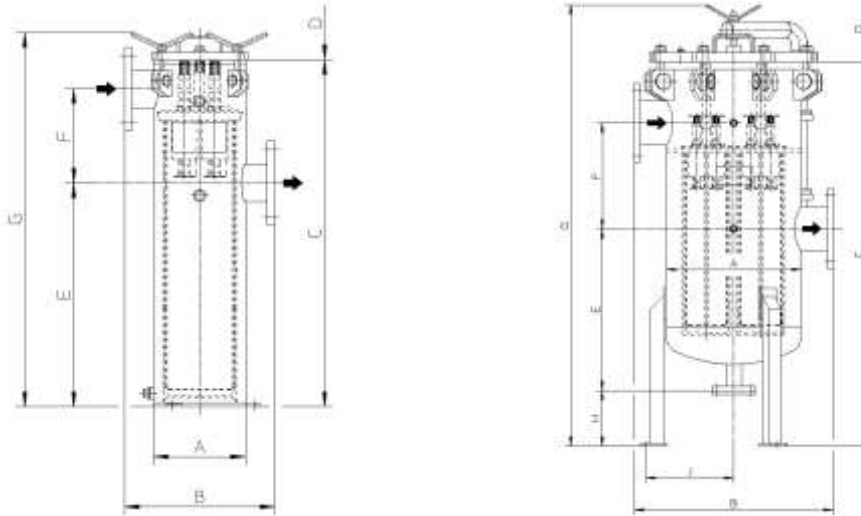
Non-magnetic particles are retained efficiently in the filter bag (see also data sheet for filter bags).

HiFlux Filtration A/S manufactures several solutions for these applications, both as individual filters or as complete systems with pumps and measuring equipment – see data sheets for **HiFlux TM-P Unit**, **HiFlux Micro-Line 1050**, **HiFlux Micro-Line 1050 SS** and **HiFlux TP filters** or receive special information about filtration in energy systems by post.





# TM-P Magnetic Bag Filters 4 - 20



Type	A	B	C	D	E	F	G	H	J	Drain	Air	Connection	Weight	No. of fittings
	mm	mm	mm	mm	mm	mm	mm	mm	mm		plug	DN	kg	no.
<b>TM4-P4250</b>	219	360	830	690	535	225	900		132	G½B	G½B	80	61	4
<b>TM4-P6300</b>	219	360	1270	1100	960	225	1335		132	G½B	G½B	100	77	4
<b>TM16-P4x4250</b>	508	750	1400	1000	920	300	1480	210	330	DN50	G½B	150	~255	10
<b>TM16-P4x6300</b>	508	750	1800	1400	1180	400	1880	210	330	DN50	G½B	150	~310	10
<b>TM20-P5x4250</b>	610	850	1450	1050	945	300	1530	210	380	DN50	G½B	200	~320	12
<b>TM20-P5x6300</b>	610	850	1860	1460	1210	400	1940	210	380	DN50	G½B	200	~390	12

HiFlux standard filters type TM-P are manufactured in carbon steel or stainless acid-proof steel EN 1.4404.

- Design pressure: 10 bar or 16 bar
- Test pressure: According to EN 13445
- Max. differential pressure: 1,0 bar
- Max. working pressure: 110° C (water) or according to customers requirements
- Flange connection: EN 1092-1, 2 pcs., pressure outlets G½B
- Filter bags: See data sheet for filter bags
- Polypropylene: 1-5-10-25-50-100-200 micron (max. 90° C)
- Polyester: 1-5-10-25-50-75-100-150-200-300 micron (max. 150° C)

Capacity:  
(at a viscosity of 1 cSt  
and 5 micron filtration)

Type	Filter area (cm <sup>2</sup> )	No. of bars	No. of bags	HiFlux diff. clean (bar)	HiFlux m <sup>3</sup> /h capacity
<b>TM4-P4250</b>	4250	4	1	0,15	40
<b>TM4-P6300</b>	6300	4	1	0,09	40
<b>TM16-P4x4250</b>	17000	16	4	0,10	160
<b>TM16-P4x6300</b>	25200	16	4	0,10	160
<b>TM20-P5x4250</b>	21250	20	5	0,08	200
<b>TM20-P5x6300</b>	31500	20	5	0,08	200

For efficiency reason the capacity should be reduced with 0,2% for each °C the temperature exceeds 100 °C.  
It is recommended to dimension the filter installation based on differential pressure of 0.1 bar.