

Friess Magnetic Filter

Model FMF 420

The Friess magnetic filter FMF 420 removes easily, quickly and reliably, particles from emulsions, cutting oils, grinding oils, etc.



Advantages

- Significantly reduced operating costs due to longer service life of the fluid used
- Improved surface quality due to clean cooling lubricant
- Reduced wear of machines, as particles of all sizes down to 1µm are removed
- Longer service life of tools used
- No consumables required

Technical data

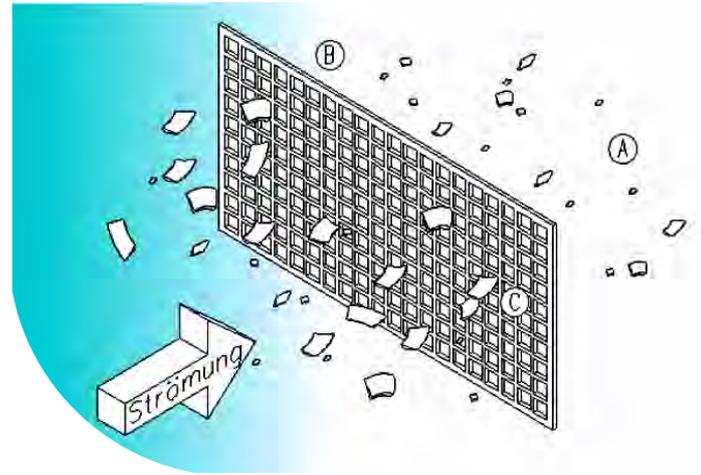
420/3

420/6

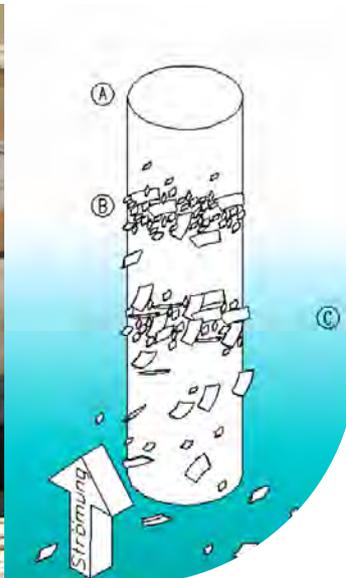
	420/3	420/6
Max. flow rate (water)	250 l / min	500 l / min
Max. flow rate (oil)	125 l / min	250 l / min
Max. operating pressure	15 bar	10 bar
Connector	1 1/2" BSP	2 1/2" BSP
Dirt holding capacity	3 Kg	6 Kg
Number of magnetic rods	3	6
Dimensions in mm height / base plate	511 / 170 x 170	511 / 200 x 200
Weight	13,2 Kg	19,6 Kg

1. Operation of the Magnetic Filter

With conventional filters, particles smaller than the specified pore size of the filter remain in the liquid and accumulate unhindered. The FMF magnetic filter removes ferritic particles of all sizes down to less than 1µm. The magnetic filter removes iron and steel particles. In addition, paramagnetic particles made of stainless steel or hard metal are attracted by the magnetic filter rods and removed from the liquid.



Operating principle conventional filter



1) Contaminated magnetic bars 2) Operating principle magnetic filter rod

2. Conventional Filter

- A.** Particles that are smaller than the specified pore size of the filter remain in the fluid and thus reduce its efficiency. In addition, machines and cutting tools are subject to increased wear.
- B.** Individual filter pores become clogged and system pressure increases.
- C.** Further filter pores become clogged and the filter material must be changed.

3. Magnetic Filter

- A.** All magnetizable particles are removed.
- B.** Even particles up to 1 µm are attracted by the magnetic rod and removed from the liquid.
- C.** With the Friess magnetic filter, the flow paths remain clear even when the filter is full. Blocking of the filter is not possible.

4. Operation of the Friess Magnetic Filter FMF

The liquid enters the magnetic filter through the inlet opening. Then it flows along the outer surfaces of the magnetic filter rods. The dirt particles are attracted by the magnetic filter rods and adhere to the surface of them. The cleaned liquid then flows to the outlet opening and leaves the magnetic filter. Due to the special flow guidance and the high field strength of the magnets used, a high separation efficiency is achieved, especially for small particles down to less than 1 µm.

5. Cleaning the Magnetic Filter FMF

The individual magnetic rods can be cleaned easily and quickly with the aid of the cleaning tool supplied. The adhering particles can be recycled or disposed of without any problems.

6. Applications for Magnetic Filtration

- Emulsion
- Grinding oil
- Washing water
- Fuel
- Drawing and honing oil

7. Variants

High temperature resistant version up to 130°C



Dirt on magnetic filter rods

For more information, consultation and ordering:

- Phone +49 21 73 / 520 11
- Internet at www.friess.eu
- E-Mail at post@friess.eu

The information in this brochure reflects the current state of the technology and is not intended to guarantee specific properties of the products or their suitability for a specific application. No legal obligation can be derived from it. Status 01/2022