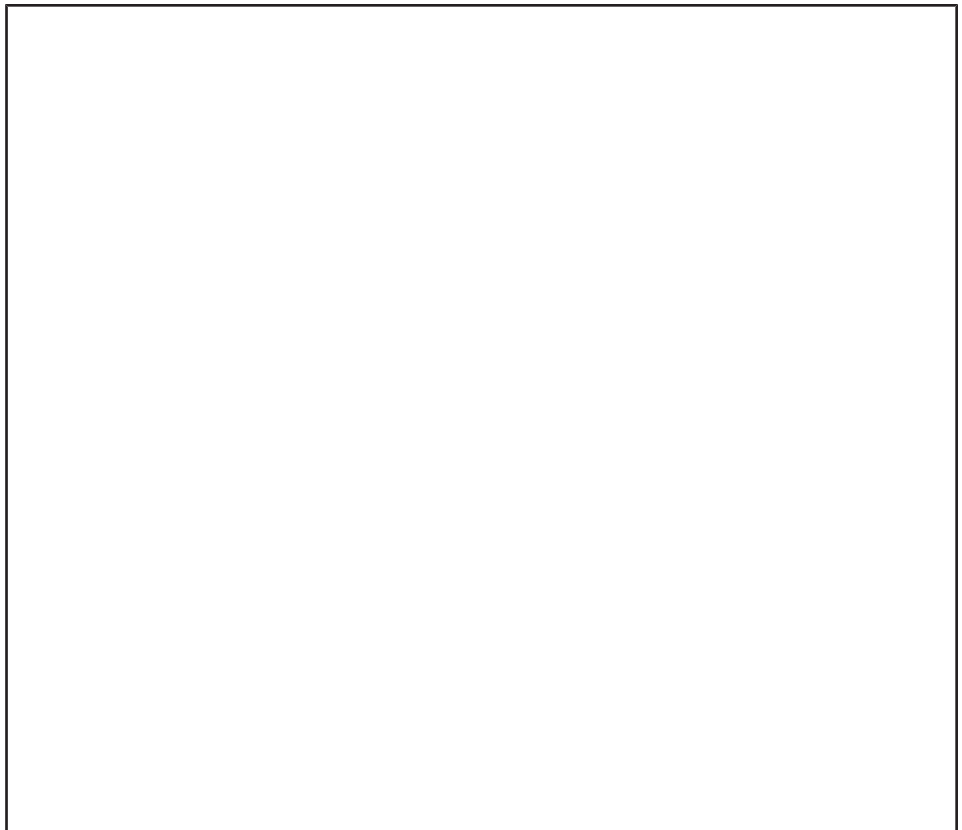


Magnetic Filter

Type F 112S-200 DN 15
Type CMF-181R

Supplementary Operating Manual



Legal information/Copyright

Supplementary Operating Manual Magnetic Filter

Original operating manual

All rights reserved. The contents provided herein must neither be distributed, copied, reproduced, edited or processed for any other purpose, nor otherwise transmitted, published or made available to a third party without the manufacturer's express written consent.

Subject to technical modification without prior notice.

© KSB SE & Co. KGaA, Frankenthal 26/02/2022

Contents

1	Supplementary Operating Manual	4
1.1	General.....	4
1.2	Function	4
1.3	Applications	5
1.4	Installing the magnetic filter	5
1.5	Cleaning the magnetic filter.....	6
1.6	Monitoring the magnetic filter	7
1.6.1	Function.....	7
1.6.2	Trigger values.....	7

1 Supplementary Operating Manual

1.1 General

This supplementary operating manual accompanies the installation/operating manual. All information contained in the installation/operating manual must be observed.

Table 1: Relevant operating manuals

Type series	Reference number of the installation/operating manual
HPH	1122.8110
RPH-HW	1327.8

Manufacturer's product literature

For accessories and/or integrated machinery components observe the relevant manufacturer's product literature.

1.2 Function

The magnetic filter is designed for filtering liquids, e.g. in circulation circuits, containing ferrous particles (magnetite, etc.) which have to be removed in order to protect the mechanical seal faces.

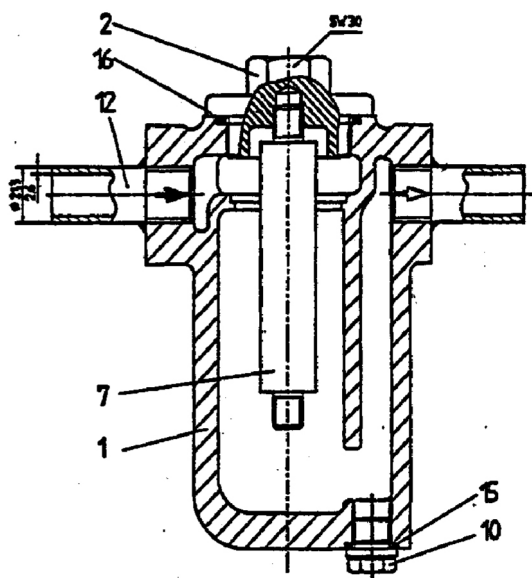


Fig. 1: Design of magnetic filter

1	Filter housing	2	Screw plug with bar magnet
7	Bar magnet	10	Drain plug in filter housing
12	Butt weld end	15/16	Joint ring

The magnetic filter consists of a cast stainless steel housing (1), screw plug (2) and the filtration unit. The filtration unit consists of an internal bar magnet (7). The fluid to be filtered enters the filtration unit from above and flows around the bar magnet, which attracts and holds ferromagnetic contaminants. The bar magnet consists of high-quality ceramic ring magnets, which are mounted on a bar attached to the bottom of the screw plug (2).

1.3 Applications

Table 2: Application range of magnetic filter

Type of magnetic filter	System pressure [bar]	Temperature [°C]
Type F 112S-200 DN 15	130	160
CMF-181R	200	200

1.4 Installing the magnetic filter

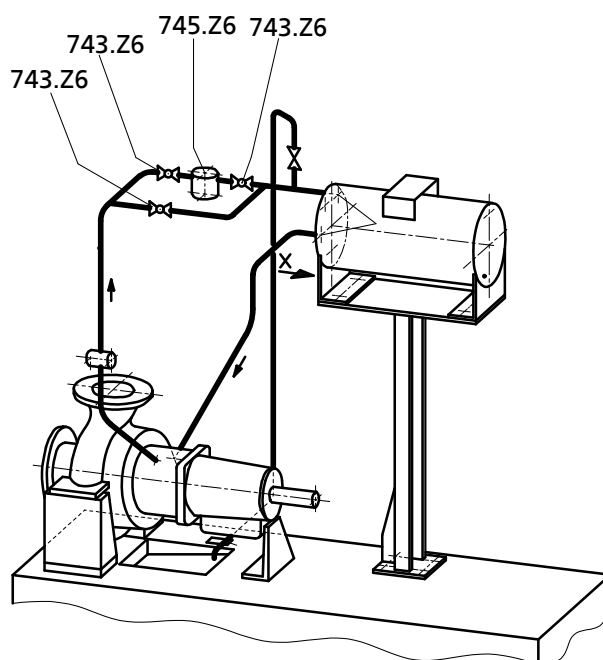


Fig. 2: Installing the magnetic filter

743.Z6	Shut-off elements upstream and downstream of magnetic filter	745.Z6	Magnetic filter
--------	--	--------	-----------------

Observe the following when installing the magnetic filter on a pump (set):

- In order to avoid leaks at screwed connections, weld the magnetic filter directly into the circulation pipework of the mechanical seal circuit using butt weld ends (pipe 21.3×2.6).
- Install the magnetic filter such that the fluid flows through the magnetic filter in the direction shown on the housing. Flow in the wrong direction could cause the filter to malfunction.

1.5 Cleaning the magnetic filter



WARNING

Improper maintenance

Hot and/or toxic fluid may spurt out!

- ▷ Do not open the screw plug until the magnetic filter has cooled down to ambient temperature and pressure has been released.
- ▷ Maintain the circulation flow through the bypass line.

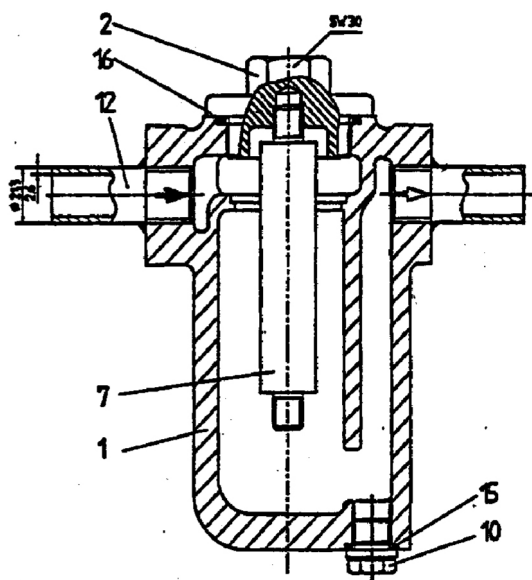


Fig. 3: Design of magnetic filter

1	Filter housing	2	Screw plug with bar magnet
7	Bar magnet	10	Drain plug in filter housing
12	Butt weld end	15/16	Joint ring




1. Close shut-off elements 743.Z6 upstream and downstream of the magnetic filter.
2. Open shut-off element 743.Z6 in the bypass line to maintain circulation.
3. Allow the magnetic filter to cool down to ambient temperature.
4. Carefully open the drain plug in the filter housing (10) to release the pressure.
5. Open the screw plug with the bar magnet (2), pull out the bar magnet (7) and clean it.
6. Clean the filter housing (1).
7. Check the joint rings (15 and 16) for damage and replace with new ones if necessary.
8. Fit the filter housing (1) and the bar magnet (7) again. Take care to avoid any damage to the joint rings (15 and 16).
9. Close the screw plug (2) and the drain plug (10).
10. Open shut-off elements 743.Z6 upstream and downstream of the magnetic filter and close shut-off element 743.Z6 in the bypass line.

Cleaning intervals

The necessary cleaning intervals depend on the level of contamination of the circulating liquid. It is advisable to clean the filter every day for a while following initial commissioning of the pump/system and then to schedule future intervals on the basis of the observed contamination.

1.6 Monitoring the magnetic filter

As the magnetic filter will become clogged by particles after a period of time, it has to be monitored.

 	 DANGER
	Clogged magnetic filter Explosion hazard by excessive surface temperature! Damage to the pump set! ▷ Monitor the magnetic filter. Clean it when necessary.

1.6.1 Function

The mechanical seal temperature is measured with a Pt100 resistance thermometer. If the magnetic filter becomes clogged by solid particles, the flow rate through the mechanical seal will be reduced. This will lead to a temperature increase at the mechanical seal.

1.6.2 Trigger values

Table 3: Recommended settings for temperature monitoring

At a temperature of [°C]	Recommended setting
80	Alert
100	Tripping



KSB SE & Co. KGaA

Johann-Klein-Straße 9 • 67227 Frankenthal (Germany)

Tel. +49 6233 86-0

www.ksb.com

1122.8107/04-EN