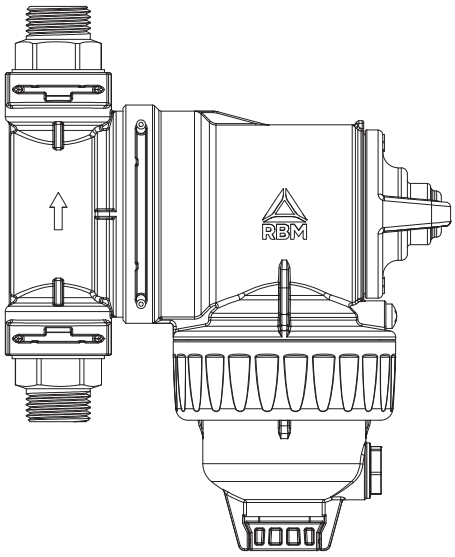

Rev. 06/2024

SERIE 4162

In-line magnetic filter with front interception

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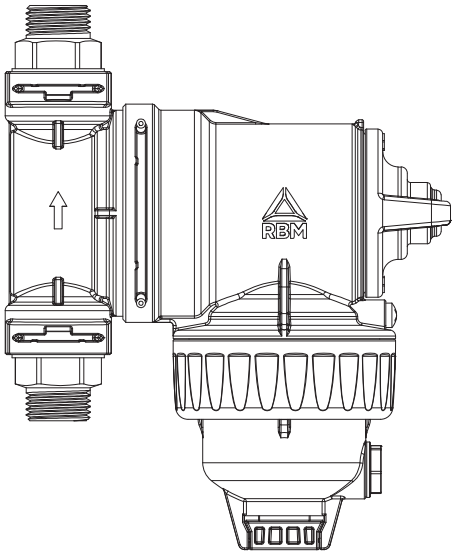
In-line magnetic filter with front interception



- Compact
- Quick and easy installation
- Can be installed VERTICAL and HORIZONTAL
- High efficiency with internal magnet
- Mechanical and magnetic filtration
- Double interception
- Increases the lifespan of the boiler
- Maintains optimum system efficiency

PRODUCTION RANGE

	Code	Size	Connection	Diverter valve body
	**4162.04.00**	G 1/2"	MM	Body: Polymer Connections: Brass
	4162.05.00	G 3/4"	MM	Body: Polymer Connections: Brass
	4162.06.00	G 1"	MM	Body: Polymer Connections: Brass
	4162.22.00	Ø22	MM	Body: Polymer Connections: Brass
	4162.28.00	Ø28	MM	Body: Polymer Connections: Brass

DESCRIPTION

The in-line magnetic filter with front interception by RBM represents the best solution to solve plant problems due to particle presence, especially rust and sand that are formed due to corrosion and scale during the normal operation of a system. In addition to being installed on household boilers, it is particularly suitable for protecting the heat pumps used in domestic systems.
The integrated double shut-off device greatly reduces installation space (**without two ball valves**).

OPERATING PRINCIPLE

Through its effective and constant action, the magnetic filter collects all the impurities present in the system, preventing them from circulating within it, thus avoiding wear and damage of the rest of the system components, but above all constantly protecting the boiler.

USE

It is advised to install it on the inlet circuit in order to protect it from any impurities in the system, especially during the start-up phase. **It is important to follow the direction indicated by the arrow** on the body to ensure better performance of the filtering action.
The jointed part allows installation on **VERTICAL, HORIZONTAL** and **DIAGONAL** pipes.

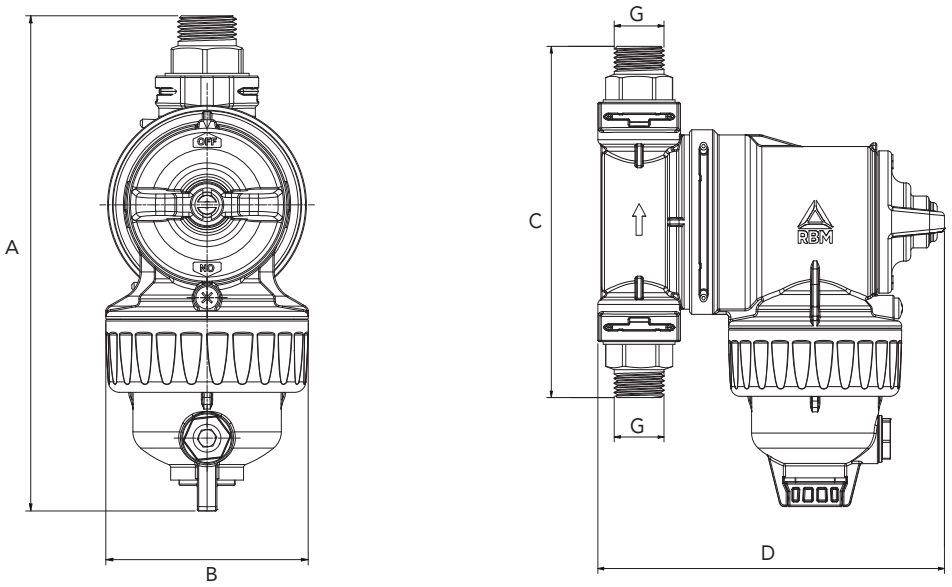
CONSTRUCTION FEATURES

Diverter valve body:	Polyamide PA66 +30% FV
Cartridge body	Polyamide PA66 +30% FV
Locking ring nut:	Polyamide PA66 +30% FV
Magnet holder bottom:	Polyamide PA66 +30% FV
Filtering cartridge:	AISI 302
Hydraulic seals:	EPDM+PRX
Magnet: B (MaxT) / B (RoomT)* < 1% (where MaxT = 130°C, RoomT = 21°C) Tested according to IEC 60404-5 & ASTM A977 regulations	Neodymium REN35 B = 11.000/12.000 Gauss

TECHNICAL FEATURES

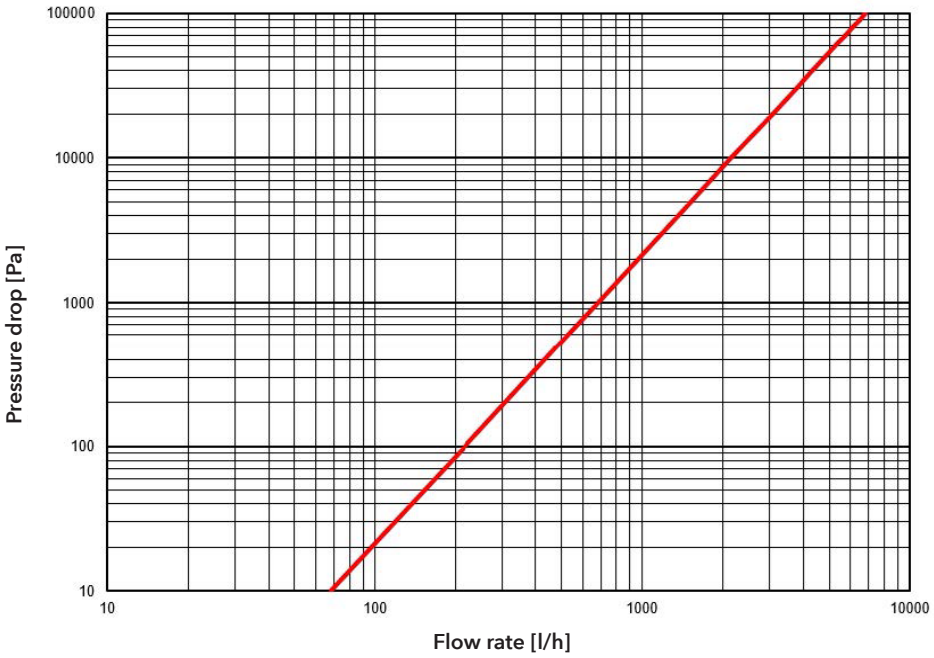
Compatible fluid:	Water, water + glycol
Max. operating pressure:	4 bar
Operating temperature:	0 - +70 °C
Max T (one hour max):	90 °C

DIMENSIONAL FEATURES



Code	Size G	A [mm]	B [Ø]	C [mm]	D [mm]
4162.04.00	1/2"	176.9	72.3	135	144.8
4162.05.00	3/4"	176.9	72.3	135	144.8
4162.06.00	1"	176.9	72.3	135	144.8
4162.22.00	Ø22	176.9	72.3	135	144.8
4162.28.00	Ø28	176.9	72.3	135	144.8

FLUID DYNAMICS FEATURES



Kv [m³/h]
6.83

OPERATING PRINCIPLE

By going through a set course, the fluid is forced to cross the mesh of the cartridge and enter the filtering chamber.
In this filtering chamber, the water in the various passages is filtered through the simultaneous action of:

- filtering cartridge
- magnet
- direction of the fluid given by the specific internal geometry

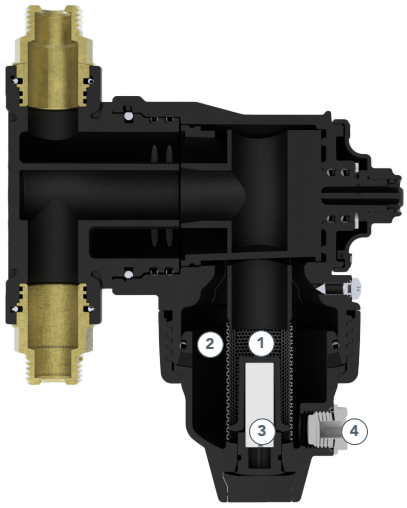
First of all, the sudden cross-section variation (the filtering chamber has a much greater diameter than the conduit) slows down the fluid motion and, consequently, the entrainment rate of the particles suspended in it.
The particles pass inside the filtering cartridge and are directly filtered.

The heavier particles fall downwards due to gravity, which prevails over the drag force. The magnet attracts all impurities having magnetic characteristics.

In this way, all magnetic (ferrous residues) and non-magnetic (algae, sludge, sand, etc.) contaminants in the system are retained in the filtering chamber.

The stainless steel cartridge in the basic model has 800 micron filtration.

The shut-off device must be used when cleaning the filter **after having switched off the system**. It is built into the device and is operationally equivalent to 2 ball valves (**filter inlet** and **filter outlet**). When the shut-off device is closed, the impurity collection chamber is excluded. A small amount of fluid continues to circulate in bypass in the diverter valve which is why **it is important to switch off the system** before performing maintenance.



1. **Filtering cartridge**
2. **Filtering chamber**
3. **Removable magnet**
4. **Exhaust valve**

INSTALLATION

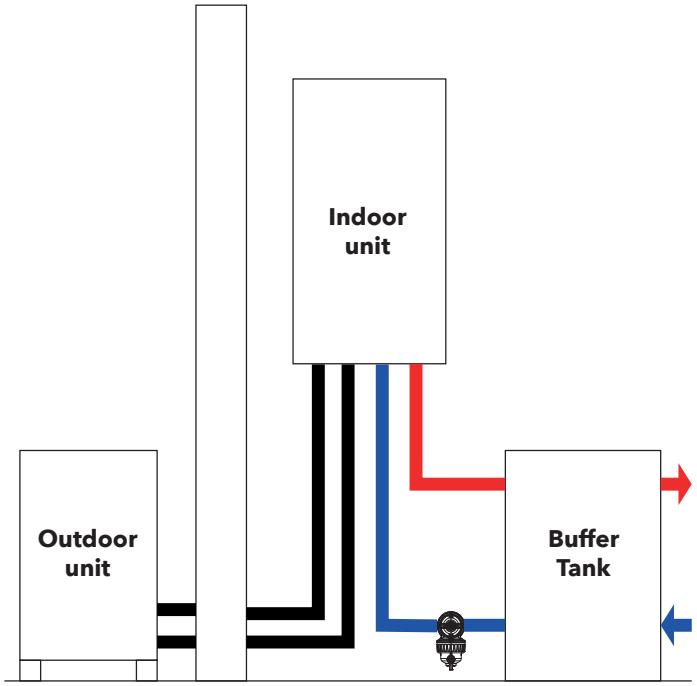
It is recommended to install the magnetic filter on the inlet circuit of the boiler or heat pump to protect it from all impurities in the system, especially during the start-up phase.

It is important to follow the direction indicated by the arrow on the body to ensure better performance of the filtering action. The multifunction magnetic sludge separator must be installed with the main cartridge/magnet body facing downwards.

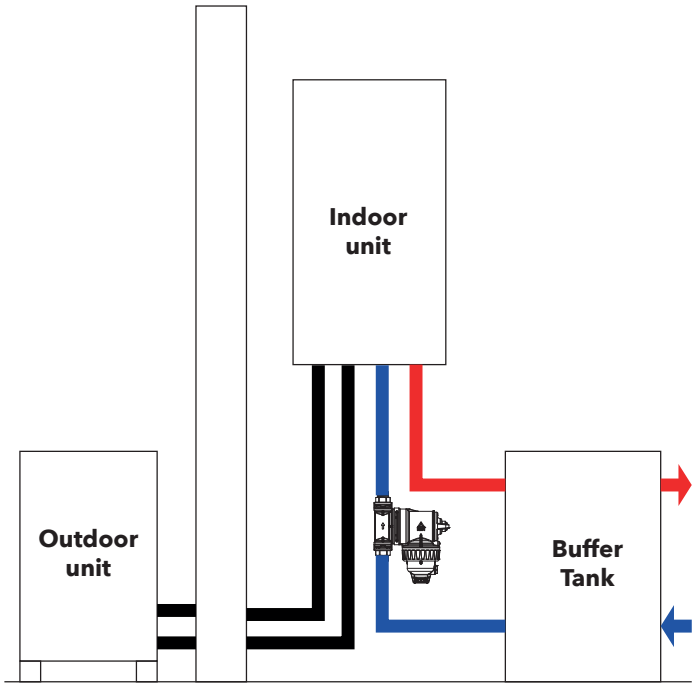
The jointed part allows installation on VERTICAL, HORIZONTAL and DIAGONAL pipes.

The sealing between the jointed part and the rest of the body does not depend on the strength with which the adjustment ring nut is tightened. This because it is a telescopic sealing, and not a head sealing.

HORIZONTAL ASSEMBLY



VERTICAL ASSEMBLY



MAINTENANCE INTERVENTIONS WITHOUT DISASSEMBLING THE FILTER

It is possible to clean the cartridge by extracting the magnet or, alternatively, by completely unscrewing the cartridge support/magnet. Before cleaning the filter, check that the working environment is safe.
RBM recommends that **the pump be off and the system be allowed to cool at room temperature** before carrying out any maintenance intervention, in order to avoid burns.

1

Switch off the system.

2

Unscrew the screw to depressurise the system (5 seconds).

3

Close the filter by rotating the knob.

4

Unscrew the magnet and remove it.
Place the magnet on a clean surface.

5

Open the drain. The dirt inside the filter no longer captured by the magnet will be channelled outside by the flow of water in the drain.
Use a container of at least 0,5 l.

6

Close the drain.
Mount the grey safety plug back on.
Mount the magnet back on.
Turn the knob to open.
Switch on the system.

MAINTENANCE INTERVENTIONS DISASSEMBLING THE FILTER

It is possible to clean the cartridge by extracting the magnet or, alternatively, by completely unscrewing the cartridge support/magnet. Before cleaning the filter, check that the working environment is safe.
RBM recommends that the **plant be off and the system be allowed to cool at room temperature** before carrying out any maintenance intervention, in order to avoid burns.

1

Switch off the system.

2

Open drain valve to depressurise system (5 seconds) and close again. Use a container to collect drain water.

3

Close the filter by rotating the knob.

4

Open the drain and empty the water inside it. Use a container of at least 1 l.

5

Unscrew the ring nut. Release the body.
Remove the magnet (put it in a clean place).
Pull out the stainless steel cartridge.
Wash the body and cartridge under running water.

6

Close the drain.
Mount the grey safety plug back on.
Mount the magnet back on.
Turn the knob to open.
Switch on the system.

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