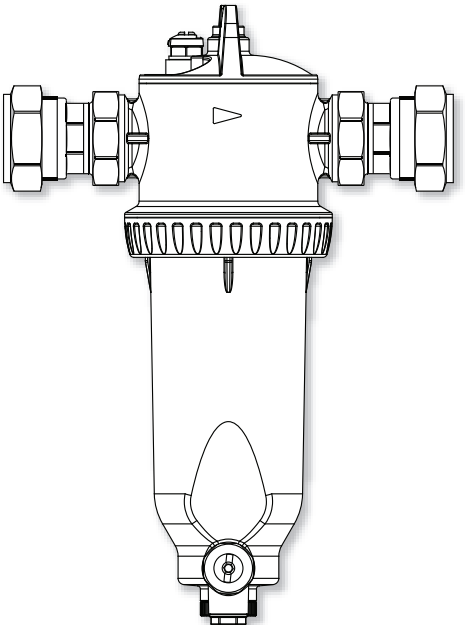
Heat Pump Filter

IK35MP1

Installation and Maintenance Instructions



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Introduction

The Inta IK35MP1 heat pump filter is designed to protect the heat pump from damage caused by debris in the system.

Through its effective and constant action, the magnetic filter collects all the debris present in the system, preventing them from circulating, thus avoiding wear and damage to components in the system.

Impurities collected by the filter accumulate at the bottom of the filter chamber until they are expelled through the discharge valve.

These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product, please note;

We recommend that the installation of any Inta product is carried out by an approved installer.

Materials of Construction

Body:	Polyamide PA66 + 30% FV
Filter cartridge:	Stainless steel AISI 304
Seals:	Elastomer
Magnet:	Neodymium REN35 B = 11,000 Gauss

Technical Specification

Compatible fluids:	Water and glycol solution
Maximum operating pressure:	6 bar
Maximum pressure during maintenance:	3 bar
Operating temperature:	0 to 70˚C
Maximum temperature - one hour max:	90˚C
Degree of filtration:	300µm
Compression connections:	BS EN 1254-2

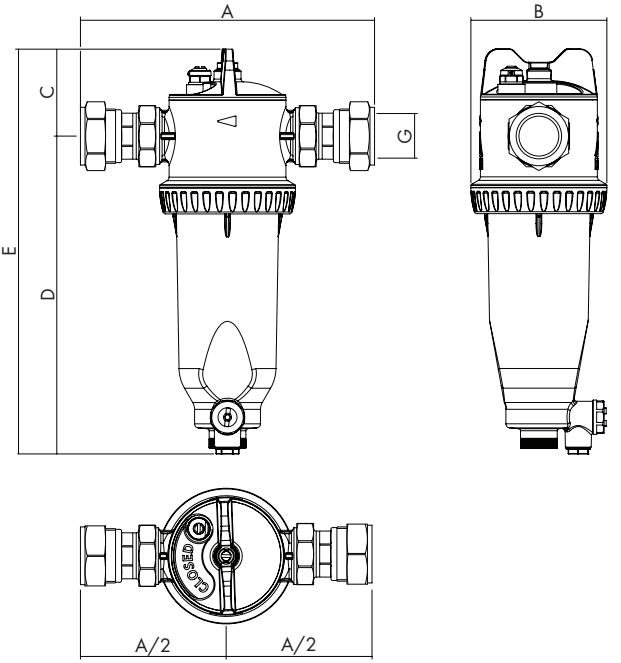
WARNING

This filter contains a powerful magnet and strong magnetic fields are present.

It is recommended that the holders of pacemaker devices keep a safe distance during filter operation and/or maintenance.

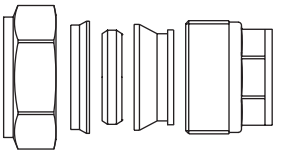
Care needs to be taken when using electronic devices near the magnets to avoid affecting their operation.

Dimensions



Code	G	A	B	C	D	E
IK35MP1	35	194	100	51	234	285

Reducing Set - 35 x 28mm



The filter is supplied with 35mm and 28mm olives and 35mm to 28mm reducing sets.

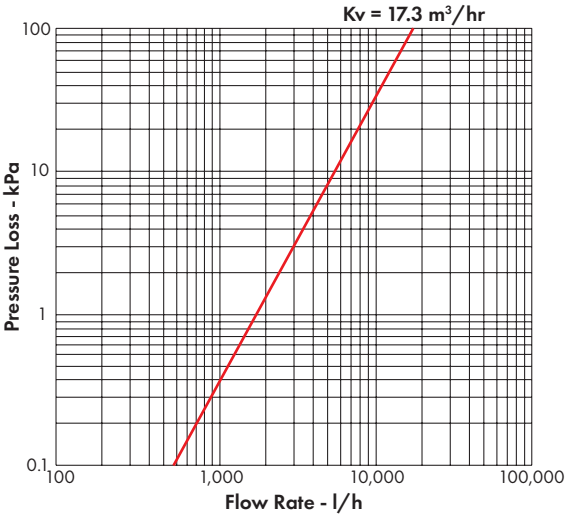
If the filter is to be used with 28mm pipe, first remove the 35mm olives and compression nuts.

The larger piece of the reducing set should be inserted into the compression joint as shown.

The 35mm compression nut, the smaller piece of the reducing set and the 28mm olive should be located onto the 28mm diameter copper pipe and inserted fully into the compression joint.

Hand tighten the compression nut before using a suitably sized spanner or wrench to fully tighten (approximately 1 turn) the compression nut.

Flow Chart and Kv Value



Operating Principle

By going through a set course, the fluid is forced through the mesh of the cartridge before it enters the filtering chamber.

In the filtering chamber, due to the simultaneous action of the:

- filtering cartridge
- magnet
- direct flow design

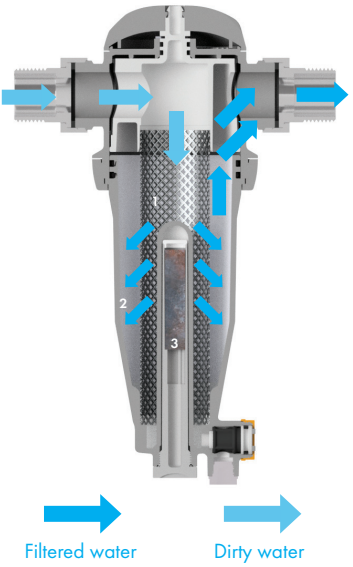
Initially the larger diameter of the filter chamber compared to the pipe work slows down the flow of fluid and consequently, reducing the entrainment rate of the particles suspended in it.

The particles collide with the mesh of the filtering cartridge and then slow down.

The heavier particles fall downwards due to gravity, which prevails over the drag force.

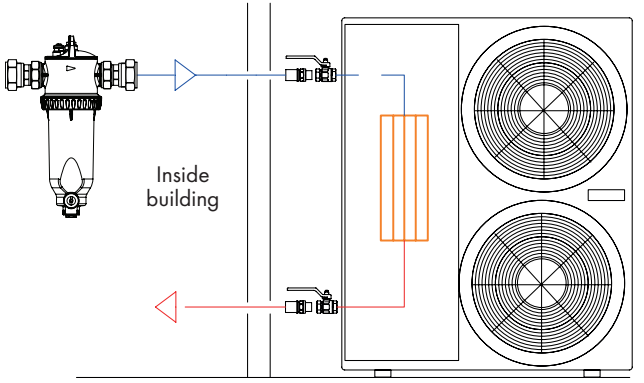
The magnet, placed inside a cylinder at the centre of the filtering chamber, attracts all the impurities having magnetic characteristics.

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



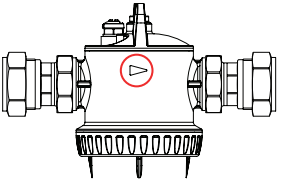
1 Filter cartridge
2 Filtering chamber
3 Magnet

Installation



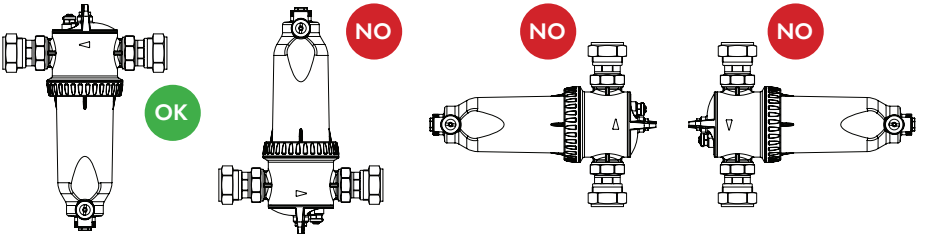
It is recommended to install the filter on the return circuit, before the inlet to the heat pump, in order to protect the heat pump from any impurities in the system, especially during the start-up

It is important to follow the direction indicated by the arrow on the body to ensure the maximum efficiency of the filtering action.



Orientation

The filter must be installed with the impurity discharge cock facing downwards.



There is a ¼" manual air vent valve in the upper part of the filter.

This can be used to eliminate air that was not expelled during filling the system, or micro-bubbles that may have formed during normal operation of the system.

Maintenance - without dismantling the filter

It is possible to clean the cartridge by extracting the magnet or, alternatively, by completely unscrewing the filter pot/magnet.

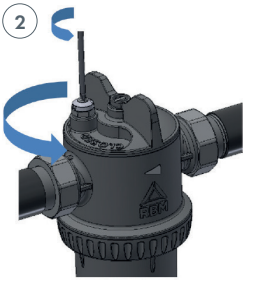
Before cleaning ensure the working environment is safe. It is recommends that the **heat pump is switched off and the system is allowed to cool to room temperature** before carrying out any maintenance, in order to prevent burns.

1

Turn off the pump.

Unscrew the drain plug.

2



Close the filter by rotating the knob.

Open the air vent using a flat head screwdriver to prevent the vacuum effect during discharge.

3

Unscrew the magnet and remove it.

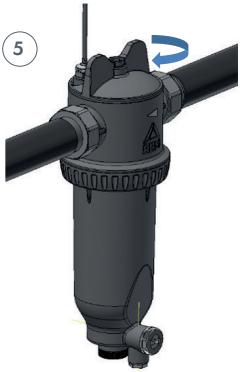
Place the magnet on a clean surface.

4

Open the drain using a 4mm allen key..

The debris inside the filter no longer captured by the magnet will be channelled outside by the flow of water through the drain. Use a container of at least 1 litre.

5



1. Close the drain.
2. Re-fit the grey safety plug.
3. Screw the magnet back in.
4. Turn the knob to open position.
5. Start the pump.
6. Lastly, close the air vent after venting some air.

7. Re-pressurise system

Maintenance - dismantling the filter

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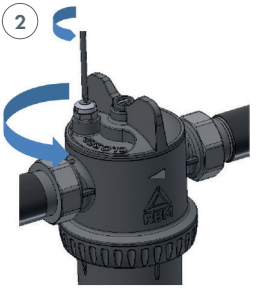


Close the filter by rotating the knob.

Open the air vent using a flat head screwdriver to prevent the vacuum effect during discharge.

3

Open the drain using a 4mm allen key and empty the water inside the filter chamber.

Use a container of at least 1 litre.

4

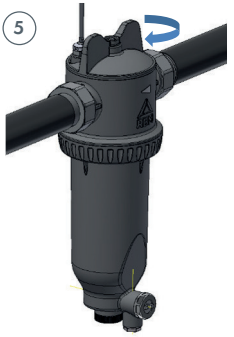
Unscrew the union nut to release the filter chamber.

Remove the magnet (put it in a clean place).

Remove the stainless steel cartridge.

Wash the filter chamber and cartridge under running water.

5



1. Refit the filter chamber and cartridge, tighten the union nut.
2. Close the drain
3. Refit the grey safety plug
4. Refit the magnet
5. Turn the knob to open position.
6. Re-pressurise the system and start the pump.
7. Lastly, close the air vent after venting any remaining air in the system.

Installation Jacket - Code IK35INSU

An insulation jacket is available (not supplied with the filter).

It is recommended that an insulation jacket is fitted to the filter to minimse heat loss and improve thermal efficiency.

To activate your product warranty please visit

www.intatec.co.uk

and click on Product Registration

Please leave this Manual for the User

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