DIRTOUT™ HP MAXI

Magnetic dirt separator specifically for heat pumps complete with insulation shell

CARING FOR WATER

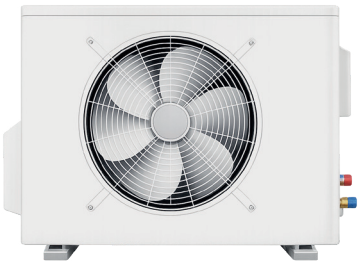
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Air vent valve installation socket

PATENT PENDING



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Function

Heat pump systems are increasingly sophisticated and delicate. DirtOUT™ HP MAXI allows the system's components to be protected from the presence of particles, sand and rust that are formed as a result of corrosion and scaling during normal operation of the system.
Shapes and materials have been carefully selected to ensure performance, resistance and durability. The device has a drain cock, with a large collection chamber that allows the bleed frequency to be reduced. The water laden with debris undergoes an important filtration treatment.

Plus

- Very low pressure drops
- Maximum Filtering Surface
- Self-cleaning
- Prolongs the life of the heat pump

Internal passages designed to increase flow rate

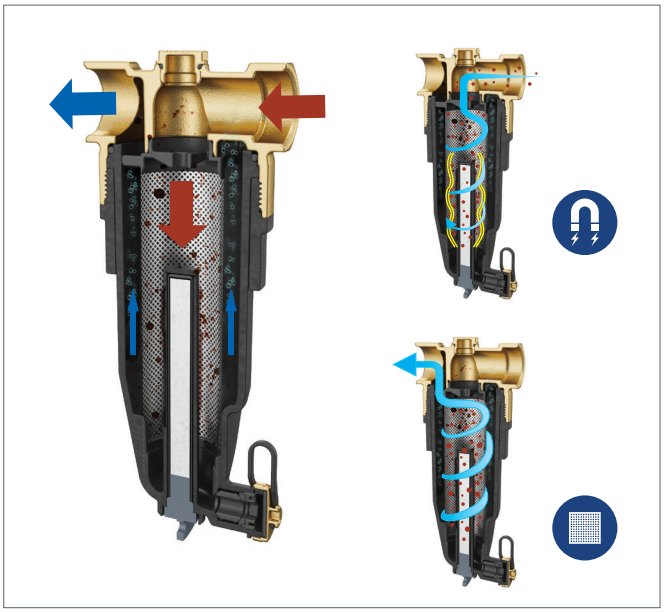
High-performance magnet

Oversized filter mesh

Product range

CODE	DESCRIPTION	SIZE	COLOUR
DF00800112	Magnetic dirt separator DirtOUT™ HP MAXI	1" 1/2 F x 1" 1/2 F	Black
DF00800200	Magnetic dirt separator DirtOUT™ HP MAXI	2" F x 2" F	Black

MADE IN ITALY



Materials

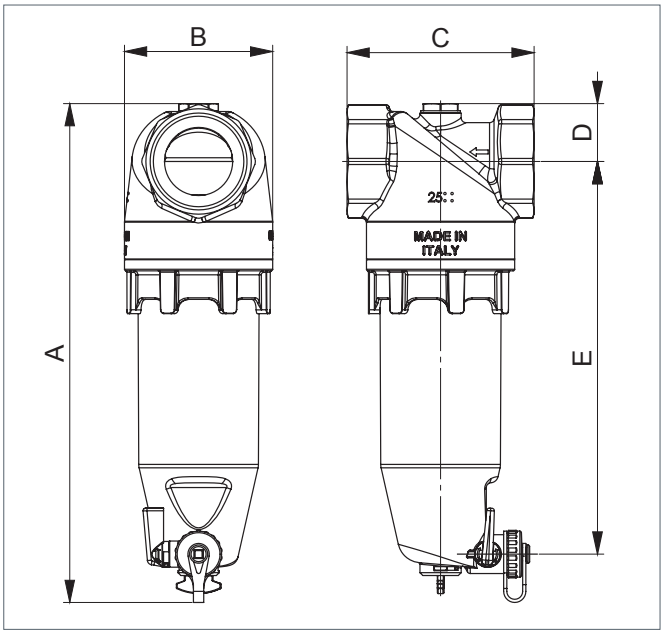
Settling chamber, filter stop: PA66 + GF 30%

Magnet: Neodymium

Filtering cartridge: Stainless steel AISI 304

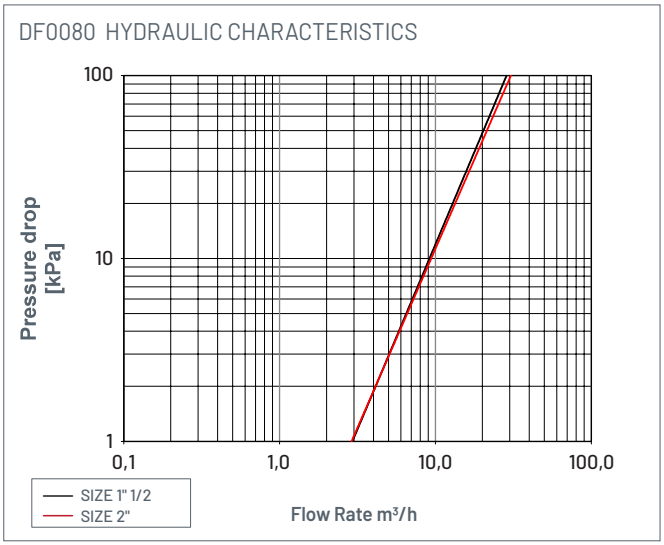
Sealing parts: Peroxide-cured EPDM

Body: EN 12165 CW 617 Brass



Dimensions DF0080 MAXI

SIZE	1" 1/2	2"
A	314,7	314,7
B	93,5	93,5
C	112	118
D	36,5	36,5
E	247,7	247,7



Technical data

Magnet: 14.000 G

Porosity of filters: 800 µm
(available with other filtration grades up to 100 µm)

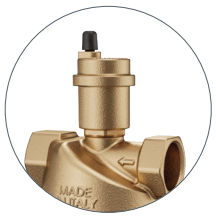
Compatible fluids: water; water + glycol 50% max

Max. pressure: 6 bar

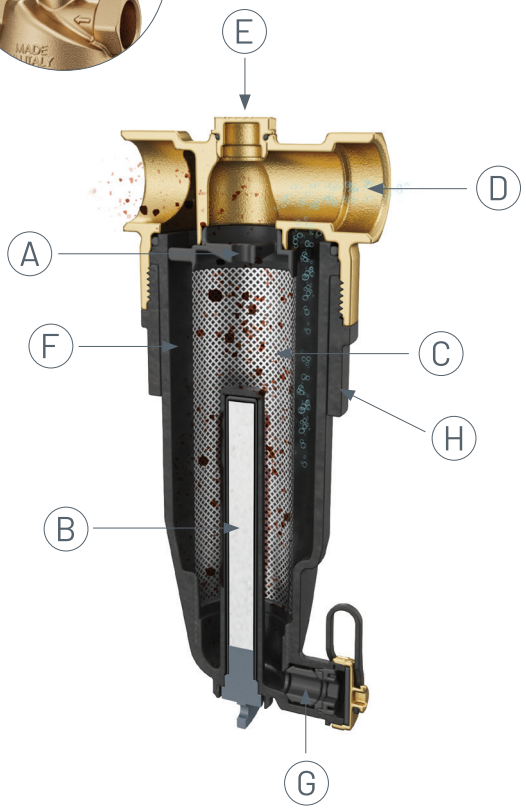
Temperature range: 0-90°C

Max. pressure during maintenance: 3 bar

SIZE	kv - m³/h
1" 1/2	28,6
2"	30,5



1/2" accessory connection for air or pressure or temperature vent valve



Description

A. Filtering cartridge carrier
B. Magnet
C. Filtering cartridge
D. Body
E. Upper cover 1/2"
F. Settling chamber
G. Integrated adjustable drain valve
H. Ring nut

Through a forced path, DirtOUT™ HP MAXI forces the fluid to pass through the cartridge mesh and enter the filtration chamber.

In this filtration chamber, through the combined action of:

- **Filter cartridge (large filtering surface)**
- **XL central magnet**
- **Design choices regarding the section of the settling chamber**

First of all, the sudden change in section (the inlet duct has a smaller diameter than the settling chamber) slows down the motion of the fluid and consequently the drag speed of the particles suspended in it. The particles collide with the mesh of the filter cartridge and further slow down their motion. The heavier particles precipitate downwards due to the force of gravity which prevails over the drag force. The magnet inside a cylinder positioned in the centre of the settling chamber attracts all impurities with magnetic characteristics. In this way, all magnetic (ferrous residues) and non-magnetic (slime, sand, sludge) contaminants present in the system are removed.

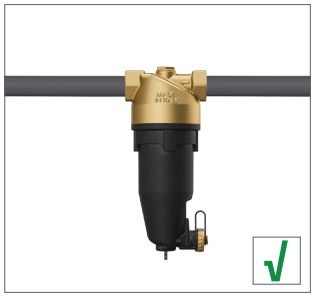


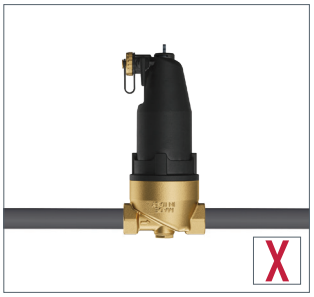
Filter cartridge

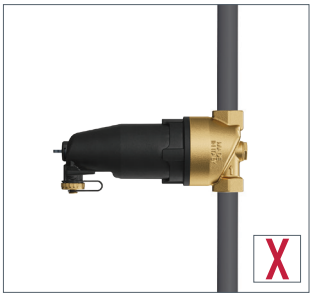
The greater the filtering action of the magnetic dirt separator filter, the greater the working guarantee of new heating and cooling systems, especially those that use sophisticated technology such as heat pump systems.
Thanks to the large filtering surface of 2310 mm², the possibility of clogging by sludge is reduced to a minimum compared to non-specific filters.

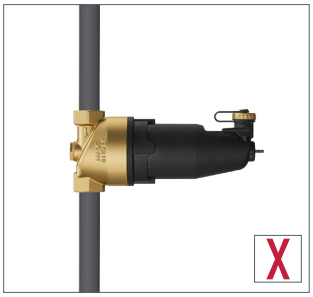
Operating instructions

DirtOUT™ HP MAXI MUST BE INSTALLED WITH THE IMPURITY DRAIN COCK FACING DOWNWARDS.











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

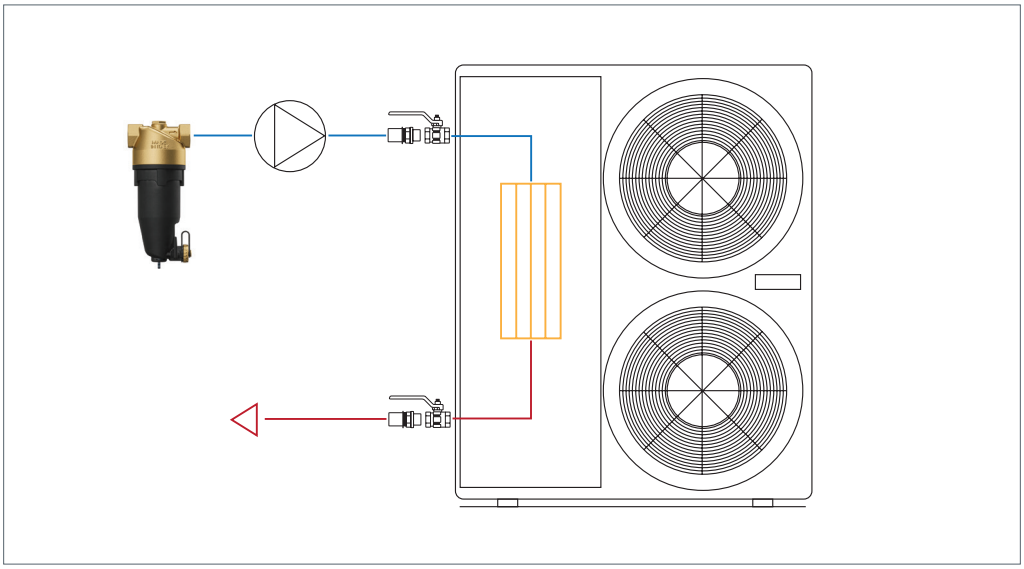
Installation positions

- The dirt separator filter should preferably be installed on the return pipe from the generator.
- The air collected in the device can be expelled by fitting a bleed valve onto the top cap.

NOTE: for detailed information on the fitting, use and maintenance of the DirtOUT™ HP MAXI dirt separator, refer to the relative instruction sheet. In case it is lost, ask for a copy to be sent.

THE DEVICE MUST BE INSTALLED IN COMPLIANCE WITH CURRENT REGULATIONS AND MUST BE DONE BY A QUALIFIED FITTER.

It is recommended to install DirtOUT™ HP MAXI on the return circuit, at the heat pump inlet, to protect it from all impurities present in the system, especially in the start-up phase.

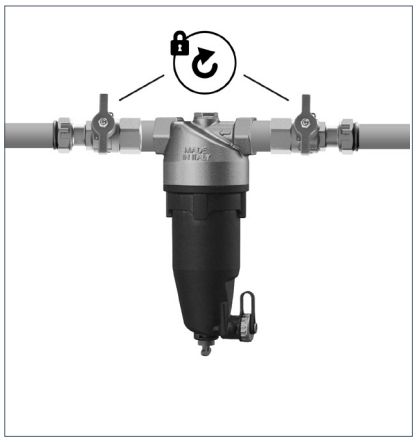


Inspection, cleaning and maintenance

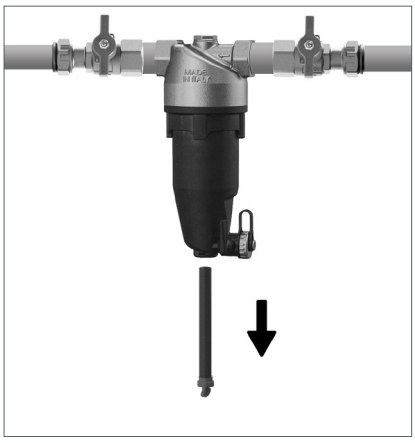
WARNING
Caution. Before any inspection, cleaning or maintenance operation, make sure the boiler is switched off and that the shut-off valves upstream and downstream of the device are closed, and allow some time for the components to cool down.

To clean the device, proceed as follows:

1. Close the shut-off valves upstream and downstream of the filter.
2. Extract the magnet: the debris is released and is collected on the bottom of the chamber.
3. Unscrew the drain valve plug on the bottom.
4. Connect a hose to the valve or place a collector below the device.
5. Open the drain valve by operating the lever.
6. Slightly open the shut-off valve upstream of the device, to allow water to flow and flush the debris out of the filter.
7. After the discharge has been completed, close the upstream shut-off valve and the drain valve, remove the hose or the collector and plug the drain valve.
8. Put the magnetic insert back into the proper housing. Open the shut-off valves again.

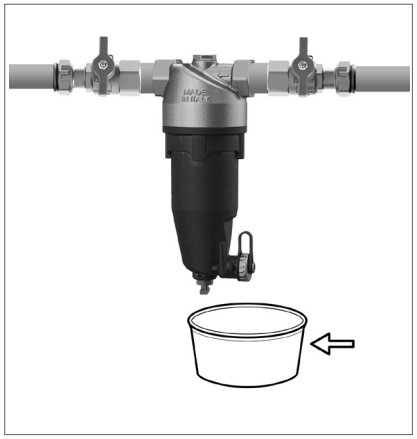


1. Close the shut-off valves.

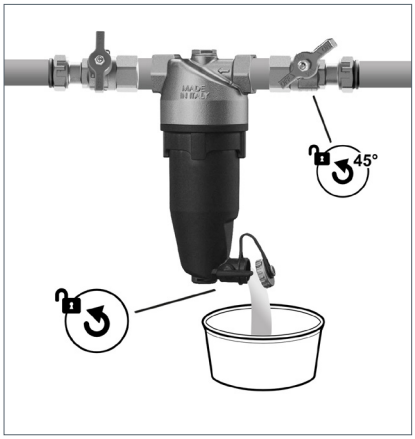


2. Remove the Magnet.

WITHOUT DISMANTLING THE FILTER



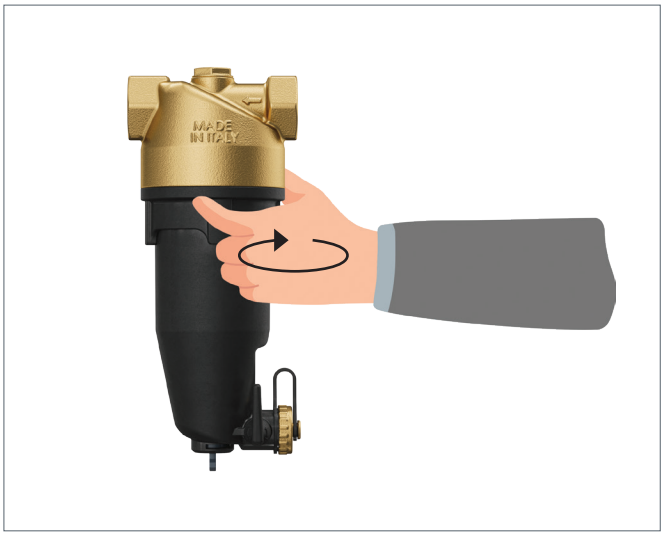
3. Drain hose connection, or prepare a collection container.



4. Slightly open the shut-off valve upstream and allow water to flush the inner parts.

Inspection, cleaning and maintenance

DISMANTLING THE FILTER



WARNING
To completely inspect the dirt separator or to clean or replace the filter cartridge, it is possible to completely unscrew the settling chamber with the help of a normal wrench.

1. Close the shut-off valve upstream and downstream of the dirt separator.
2. Open the drain valve to depressurize the system and empty the water contained in the filter. Collect the waste water in a collection container of at least 1 litre.
3. Loosen the ring nut. Release the body. Remove the magnet and put it in a clean place. Remove the STAINLESS cartridge. Wash the body and cartridge under running water.
4. Refit the body and tighten the ring nut. Refit the magnet. Open the shut-off valves. Start the pump. Bleed the air using an air bleed valve.

The device should be cleaned at least with the following frequency:

- 1 month after the first installation;
- once a year.

However, the minimum cleaning frequency depends on the characteristics of the system.

Package contents

- Magnetic filter DirtOUT™ HP MAXI
- Standard 800 µm filtering cartridge

Tender specifications

Self-cleaning magnetic dirt separator filter for heat pumps, model DirtOUT™ HP MAXI. Brass body and plastic polymer settling chamber. Reinforced filter cartridge in AISI 304 stainless steel. Elastomer hydraulic seals. FF UNI-EN-ISO-228 threaded connections. Max. operating pressure 6 bar. Working temperature 0-90 °C. Neodymium magnet B = 14,000 gauss. Degree of filtration 800 µm. Eliminates all impurities; excellent hydraulic characteristics; prolongs the life of heat pumps; fights corrosion; guarantees the efficiency of the system; complete with integrated shut-off device and drain ball valve. Sizes available 1" 1/2 and 2".

HCE Srl reserves the right to make improvements and changes to the products described and to the related technical data at any time and without notice: always refer to the instructions attached to the components supplied, this sheet is an aid if they are too schematic. Our technical office is always available for any doubt, problem or clarification.