



Function

Energy-saving issues as well as the rational use of resources are very current topics; therefore it is necessary to keep the heating circuit efficient by using a magnetic dirt separator filter placed on the return pipe to capture the impurities present in the heat carrier fluid and avoid any damage they could cause to the heating system.

This device must be installed on the heating circuit and, once positioned, it is necessary to fill the heating system up again, emptying the air in excess.

The main technical data are:

- It prevents the risk of obstruction of the heating circuit pipes and its components;
- Should the boiler be replaced, the dirt separator filter can be mounted on the new one too.

Technical data

Maximum working temperature:	65°C (installation on the return circuit of the heating system)
Room temperature:	+5°C ...+ 50°C (indoor installation)
Water working pressure:	1,0 ÷ 2,0 bar
Maximum water pressure:	3,0 bar
Water content in the heating circuit:	~ 0,2 litres
Magnet:	Ø12x60 mm, 4500 gauss
Width (hydraulic fittings excluded):	101,5 mm
Height:	116,5 mm
Net Weight:	175 g
Fittings supplied:	G3/4

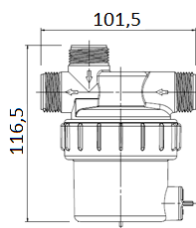
Materials

Brass parts:	CW 617 N – DW UNI-EN 12165:2016
Dirt separator body:	Black polypropylene and glass fibres
Filter:	Stainless steel

Dimensional drawings

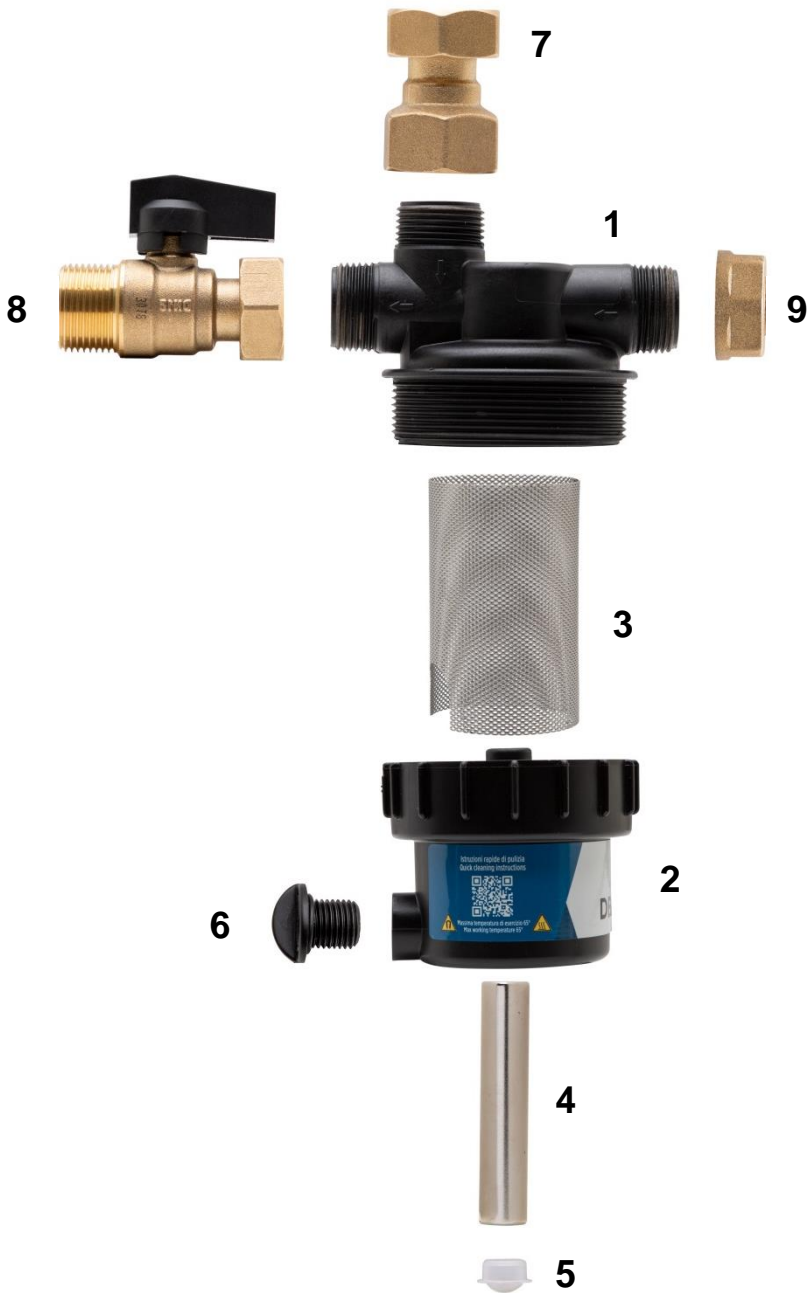
DM 2018

Magnetic dirt separator



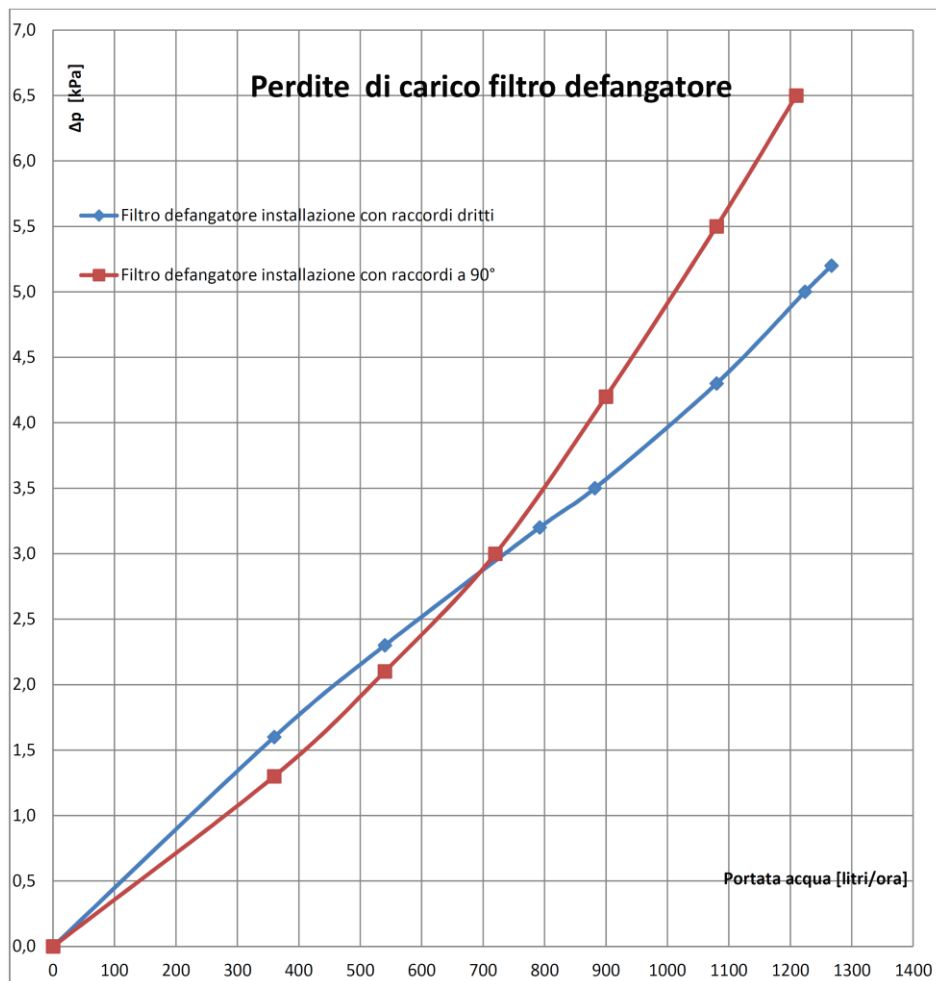
Code	Size	A	B	C	D	F
68550010	G 3/4	-	-	-	-	-

Components



1. Dirt separator body
2. Dirt separator cover
3. Metal mesh filter
4. Magnetic element
5. Plug of the magnet housing
6. Plastic M14 plug with O-Ring rubber gasket
7. G 3/4 fitting with gasket and female swivel nut
8. Ball valve to be positioned upstream of the dirt separator filter
9. G 3/4 female end cap

Flow rate chart



Operation

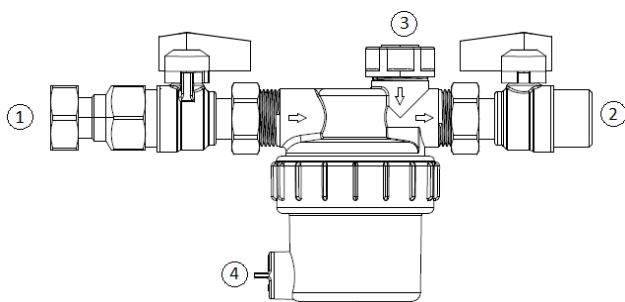
The water flow returning from the heating system passes through the inlet fitting of the dirt separator filter, then it flows through the internal area where there is the magnet and the stainless steel metal mesh and goes out through the outlet fitting of the dirt separator filter.

Operating Scheme

The dirt separator filter can be installed in two ways (horizontally or vertically) in order to be suitable to the majority of the domestic hydraulic circuits already existing as well as the new ones.

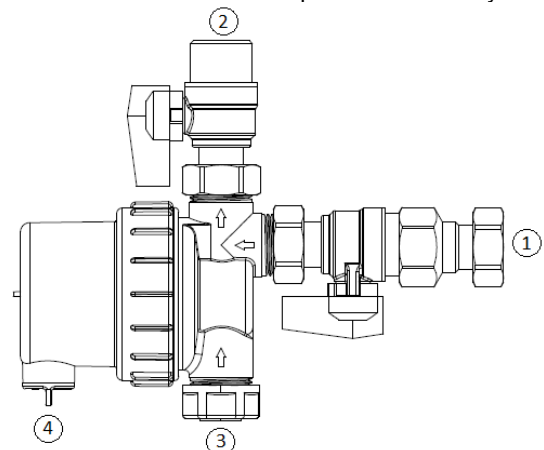
- Heating system return circuit / dirt separator filter inlet
- Dirt separator filter outlet / towards the boiler
- Position of G 3/4 female end cap
- Position of M12 grey plastic end cap for filter's emptying

Installation with the filter placed vertically:



- (1)
- (2)
- (3)
- (4)

Installation with the filter placed horizontally:



Operating Instructions

- The installation must be carried out by professionally qualified people and in compliance with the manufacturer's instructions.
- Before installing the dirt separator filter, make sure that the heating circuit or the boiler are provided with a relief valve set at 3,0 bar.
- It is very important to pay attention to the dimensions and the features of the dirt separator filter indicated above before proceeding with the following installation steps.
- Below you can find useful information for the correct installation of the magnetic dirt separator filter:
 - 1) Check if the hydraulic connections and the technical data of the system allow the installation of the magnetic dirt separator filter.
 - 2) Disconnect the boiler from the power supply (in order to avoid dangerous accidents and damages to the circuit board).
 - 3) Empty the system and wash the heating circuit pipes.
 - 4) The magnetic dirt separator filter has to be installed in an accessible place where all the future maintenance and periodic cleaning operations can be easily carried out.
 - 5) During installation make sure that the flow directions (inlet / outlet) are respected.
 - 6) It is recommended that shut-off valves are installed upstream and downstream of the dirt separator filter in order to facilitate maintenance operations.
 - 7) Before applying pressure to the dirt separator filter make sure that the plugs and the upper and lower bodies are tightened.
 - 8) Insert the magnet in its specific housing and place the transparent bottom plug.
 - 9) After 10 minutes working, stop the system and check if the cover is well blocked and tightened.



WARNING

All maintenance work must be carried out when the heating circuit is cold and by professionally qualified staff: the periodicity of the dirt separator filter's maintenance is twice a year. A use of the dirt separator in accordance with its intended use means also observation of the maintenance instructions. After the first installation, it advisable to remove the dirt accumulated in the filter twice a week during the first month of use.

Fast cleaning instructions

In order to clean the dirt separator filter rapidly, follow the below instructions:

- Turn off the boiler using the switches or knobs of the control panel and remove the boiler's plug from the power socket.
- Isolate the dirt separator filter from the heating system by closing both the valves upstream and downstream of the filter in order to avoid the emptying of the whole heating system.
- Remove the transparent bottom plug and take the magnet out of its housing.
- Unscrew the plastic threaded end cap (WARNING: circuit under pressure) and collect all the liquid and accumulated impurities in a container.
- Replace the plastic threaded end cap with its rubber gasket.
- Put the magnet into its housing again and insert the transparent plug.
- Slightly open the ball valves upstream and downstream of the dirt separator filter which have been previously closed.
- Adjust the pressure of the heating system water in compliance with the working pressure limit values indicated by the boiler's manufacturer.

Annual cleaning instructions

In order to carry out the annual cleaning operations, removing the magnet and the metal mesh, follow the instructions below:

- Turn off the boiler using the switches or knobs of the control panel and remove the boiler's plug from the power socket.
- Isolate the dirt separator filter from the heating system by closing both the valves upstream and downstream of the filter in order to avoid the emptying of the whole heating system.
- Remove the transparent bottom plug and take the magnet out of its housing.
- Unscrew the plastic threaded end cap (WARNING: circuit under pressure) and collect all the liquid and accumulated impurities in a container.
- Unscrew the lower body and wash it with running water.
- Remove the metal mesh and wash it with running water.
- Remove the ferrous impurities which may have accumulated in the filter.
- Replace the metal mesh and the lower body with rubber gasket screwing it to the upper body.
- Replace the plastic threaded end cap with its rubber gasket.
- Put the magnet into its housing again and insert the transparent plug.
- Slightly open the ball valves upstream and downstream of the dirt separator filter which have been previously closed.
- Adjust the pressure of the heating system water in compliance with the working pressure limit values indicated by the boiler's manufacturer.

Once the fast or annual cleaning have been completed, the heating circuit needs to be emptied of any air in excess.
An accurate maintenance always enables saving and security.



DANGER

Danger of burns due to hot water. Never open the dirt separator filter while the boiler is working and the circuit is under pressure.

Danger of flooding, before disassembling the dirt separator filter, make sure that both the ball valves upstream and downstream of the dirt separator filter have been closed.



FORBIDDEN

Before cleaning the dirt separator filter, turn off the boiler and disconnect it from the power supply.
Do not block or reduce the openings for the flow of the heating circuit water.



PRESENCE OF MAGNETIC FIELDS

Please note that there are strong magnetic fields which can damage or interfere with the correct functioning of electronic devices (pacemaker, magnetic badges, etc.).

Item specifications

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Dirt separator with magnet. Size DN 20. Connections 3/4. Dirt separator body and cover made of black polypropylene and glass fibres. Internal filter made of stainless steel. G 3/4 fitting with gasket and female swivel nut, ball valve to be positioned upstream of the dirt separator filter and G3/4 brass female end cap. Magnetic field 4500 gauss. Fluids to be used: water and water-glycol solutions; maximum glycol quantity 30%. Maximum working pressure 3 bar. Maximum working temperature 65 °C.



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