

magnetic[®] Heating Water Regulator HWR compact plus Instructions for Use



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Version:2017 / 10 BA HWR compact EN



magnetic[®] HWR compact plus

Heating Water Regulator

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Which Heating Water Regulator model should be used for the specific system?

The magnetic HWR compact plus is the compact solution for all diffusion-tight systems with a system water content of up to 500 litres.

Data and Dimensions

Boiler material: chrome steel V4A

Dimensions in mm

A Total height

HWR compact plus

290 mm

D Installation length

180 mm

Performance Data

System water content:

< 500 l

Flow rate (direction not fixed):

< 3 m³/h

Coupling size:

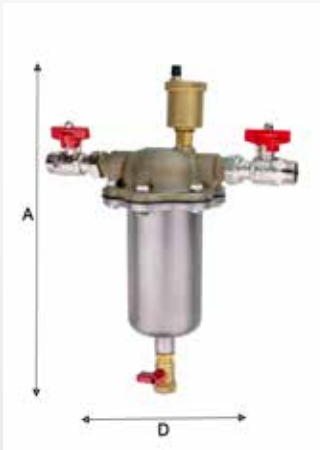
3/4 "

Max. operating pressure:

< 6 bar

Max. Temperature:

< 90° C

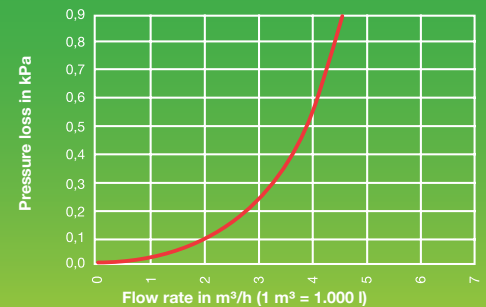


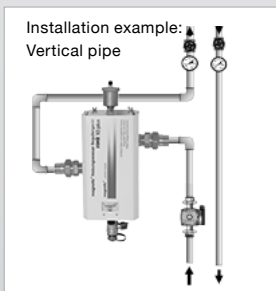
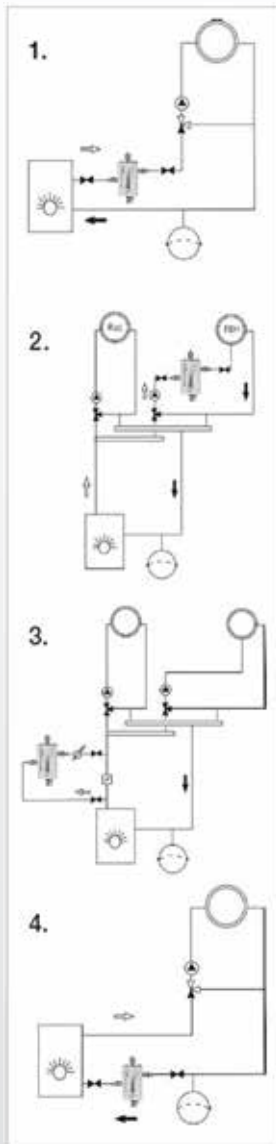
Scope of Supply:

1. Brass head
2. Reaction vessel, stainless steel
3. Insulation with high-power magnet
4. 2x ball valves with screw coupling 3/4"
5. Flushing tap 1/2
6. Quick-action vent



Flow resistance HWR compact plus





The correct installation

- optimum function
- reduced function
- no function

1. Installation in main supply line

The magnetic® HWR plus should be installed in the main supply line (full flow) of the heating system for a maximum removal of micro gas bubbles. Circulating impurities will then also be filtered out well via the supply line.

Degassing	Anode protection	Sludge removal
●	●	●

2. Installation in a system segment (Group)

The magnetic® HWR plus can be installed in the group circulation if the source of the oxygen diffusion is known (e.g. the floor heating group).

Degassing	Anode protection	Sludge removal
○	●	○

3. Installation in the bypass

The magnetic® HWR plus can be installed in the bypass. A flow rate meter must then also be used. The degassing and filtration performance reduces as the part-flow reduces.

However, the water conditioning by the sacrificial anode is still effective down to a minimum flow rate of 2 l/min.

Degassing	Anode protection	Sludge removal
○	●	○

4. Installation in the main return line

The magnetic® HWR plus can be installed in the main return line if the function of the sludge collector is more important. The water conditioning by the sacrificial anode is also effective in the return line but micro gas bubbles can hardly be removed (suitable for thermal pump heating systems).

Degassing	Anode protection	Sludge removal
●	●	●

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System water requirements

+ No chemical water additives

The magnetic® Heating Water Regulator may not be used in combination with chemical water additives. Corrosion inhibitors can impair the disintegration of the sacrificial anode and produce undesired chemical compounds. Inhibitor residues must be removed by a thorough cleaning of the heating system water before an HWR device is used. Suitable for that is a dispersing cleaner, like the magnetic® Cleaner for Heating Systems.

+ Rinsing of sludgy systems

Systems that have so much sludge that hydraulic problems occur should be flushed before the installation of the HWR plus.

The boiler and any hot water tank must also be flushed. Damage can occur under large deposits of limescale and corrosion residues in the boiler despite protective measures because the heat exchange and the water circulation are impaired there.

Sludge removal on HWR compact plus

1. Remove the insulation with the high-power magnet
2. Close the ball valve on the inlet
3. Close the ball valve on the outlet
4. Screw off the vent
5. Remove the lid on the flushing tap
6. Hold a bucket close under the HWR compact plus and then open the flushing tap
7. In the case of a blockage, clear the blockage with a screwdriver
8. Release the vacuum with pressure on the air valve
9. Connect the filling hose to the flushing tap
10. Hold the air valve pressed or screw on the vent
11. Fill the HWR compact plus with fresh water and repeat steps 6-8 until the HWR is clean. Then proceed with a filled HWR.
12. Close the flushing tap and the lid
13. Screw on the vent
14. Open the ball valve on the inlet
15. Open the ball valve on the outlet
16. Install the insulation with the high-power magnet

How often should the sludge removal be done?

Corrosion residues that are carried along with the water flow settle in the HWR plus and must be removed in the maintenance phase.

A too frequent sludge removal is undesired because it promotes the oxygen corrosion.

Fresh water contains about 100 times more oxygen than that permissible in the heating system for proper operation.

You should therefore note the amount of collected sludge and adjust the sludge removal intervals accordingly.

A sludge removal from the HWR plus should not be done more than twice per heating period and should not be done less often than once every 2 years

Anode replacement on the HWR compact plus

1. Close both ball valves
2. Remove the insulation
3. Screw off the reaction vessel
4. Screw the protective anode out of the fastener
5. Screw in the new protective anode
6. Install a new seal
7. Screw on the reaction vessel
8. Open the ball valve on the inlet
9. Open the ball valve on the outlet
10. Install the insulation



Troubleshooting

Before installation

Chemical contamination

Prior damage due to corrosion

After installation

High oxygen ingress is occurring

System water is not clear after one year

Corrosion and sludge formation are occurring

Remedy

We recommend a complete system rinsing before the installation of the HWR plus if the system water is contaminated with chemicals.

Before the installation, old heating systems must be checked for hidden corrosion damage, which can be hidden by deposits (boiler return flow in the horizontal area, rust bubbles on pipes and distributors). The loosening of deposits by the HWR plus can result in water escaping from the system in the case of hidden corrosion damage.

Check that the expansion vessel is OK.

Check if a circulation through all system parts is taking place. All system parts must be flushed if that is not possible.

Check if the HWR plus model was selected in accordance with our recommendations and is correctly installed. Has the maintenance taken place? Contact us to arrange a water analysis for fault correction.

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