

magnetic

# Heating Water Regulator HWR plus

for a long heating life



magnetic ...einfach besser

**magnetic GmbH & Co. KG**

Am Richtbach 5  
D-74547 Untermünkheim  
Tel. +49 79 44 9 41 99-0  
Fax +49 79 44 9 41 99-19  
info@magnetic-online.de  
www.magnetic-online.de

**managing director**

Michael Bader  
Tax ID number: DE 255 018 730  
Commercial register no: HRA 571362  
Reg. Court. Stuttgart

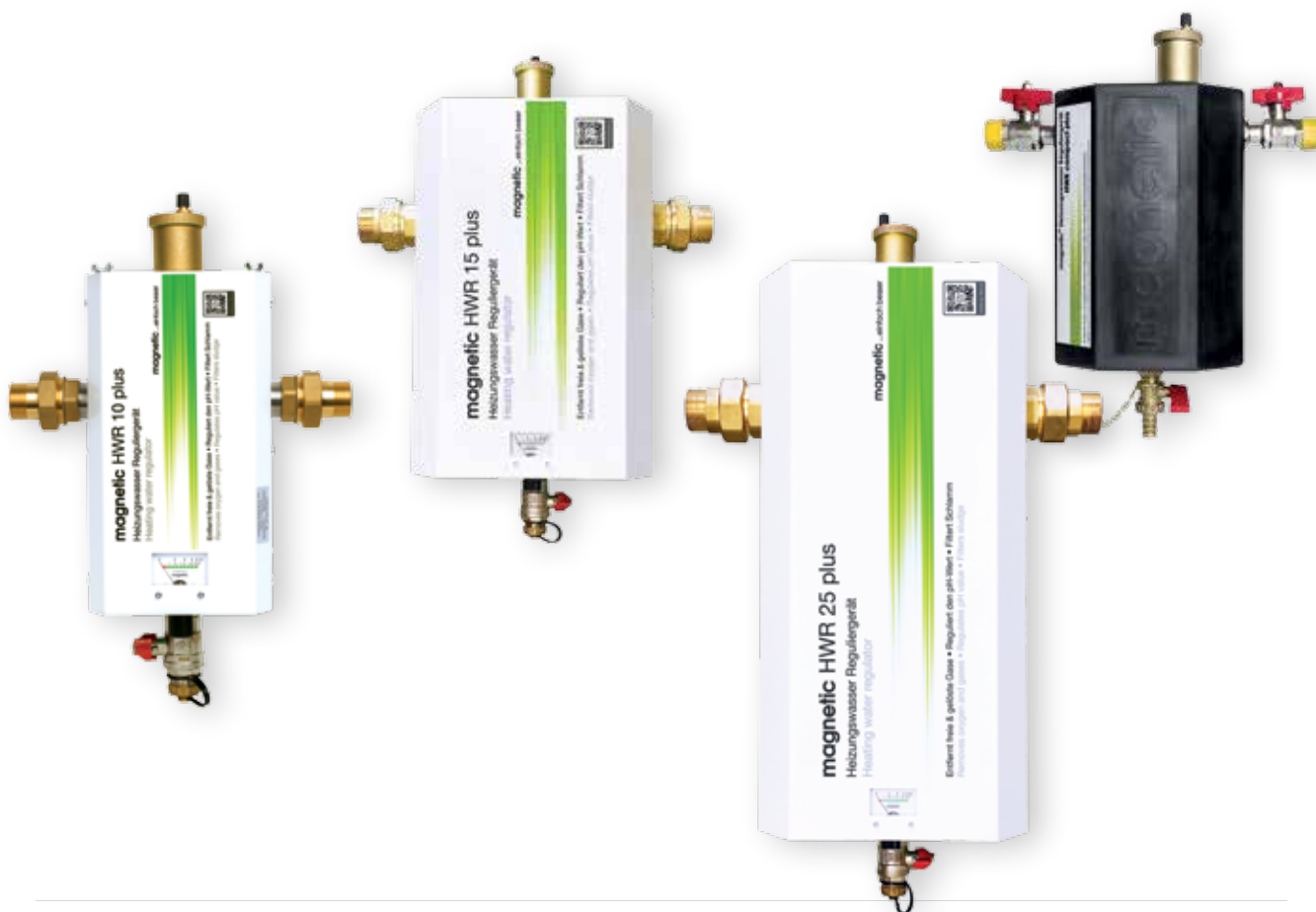
**Proud supporters of:**

We donate part of every euro we collect to  
the association „Kinderglück e.V.“  
Thank you for your support  
You can find more information at  
[www.magnetic-online.de/kinderglueck](http://www.magnetic-online.de/kinderglueck)



# Heating Water Regulator - HWR plus

one device many functions



- + Degasser
- + Dirt separator
- + pH regulation
- + Magnetic flux filter
- + Pump protection
- + Gravity filter
- + Gas bubble separator

All in one  
device!

# Corrosion and rust sludge

quickly lead to expensive repairs and reduce the efficiency of your heating system



**Residue**



**Corrosion damage**



# Getting to the root of the problem

Efficiency and durability are often the decisive criteria when installing a new heating system. This makes it all the more important to correctly fill the heating system with water in accordance with VDI guideline 2035. Nonetheless, external influences can cause silting, which has a negative effect on the points mentioned above. The causes of sludge build-up in heating systems are:



## Wrong pH value

Water that is too acidic or too alkaline increases the risk of corrosion. The water is aggressive and attacks the different materials of the heating system.



## Too many gases

Free and dissolved gases in the heating water can lead to increased corrosion. In addition, free gases can develop into air cushions within the heating system. These affect efficiency.



## Too much sludge

Unsuitable filling water can cause sludge formation in the heating system. This sludge can damage pumps and valves. In addition, deposits have a negative effect on efficiency

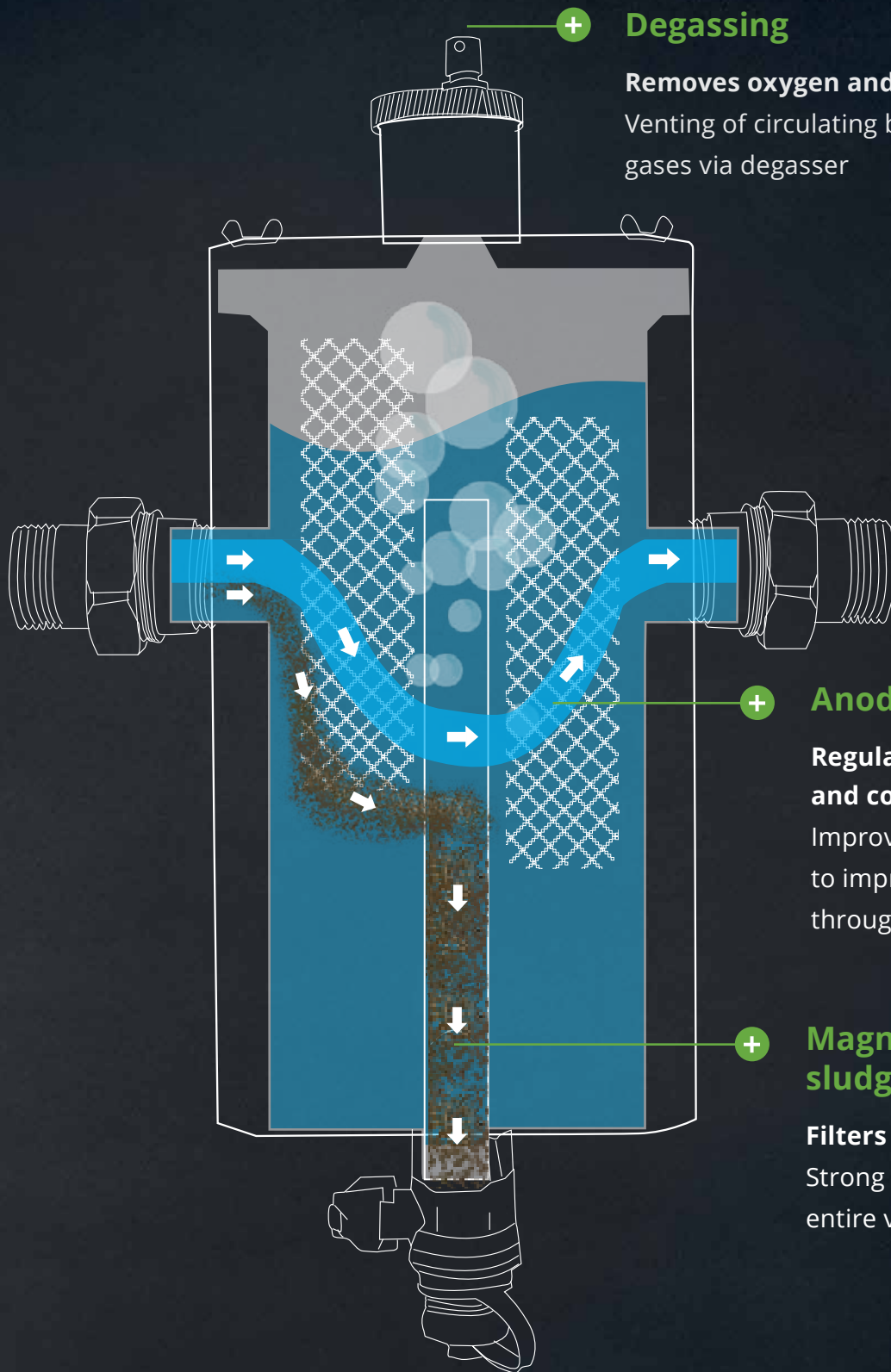
# The solution - HWR plus

## Degasser, dirt separator and pH value regulation in one device

For long-term regulation of the heating water and to reliably prevent new deposits, the installation of a magnetic heating water regulating device is the best solution. This not only saves energy, but also reduces the risk of damage from corrosion and corrosion by-products in control valves and pumps. The HWR plus (heating water regulator) eliminates all causes of corrosion and sludge buildup, especially in heating systems that are not diffusion proof and therefore have an increased risk of corrosion.

- + **Effective energy saving**
- + **Protects all components in the heating system**
- + **Clear and clean water for trouble-free operation**
- + **Stable pH value**





**+ Degassing**

**Removes oxygen and gases.**

Venting of circulating bubbles or separated gases via degasser

**+ Anode protection**

**Regulates the pH value and converts oxygen.**

Improved contact time due to improved water flow through the entire device

**+ Magnetic flux and sludge filters**

**Filters sludge and cleans**

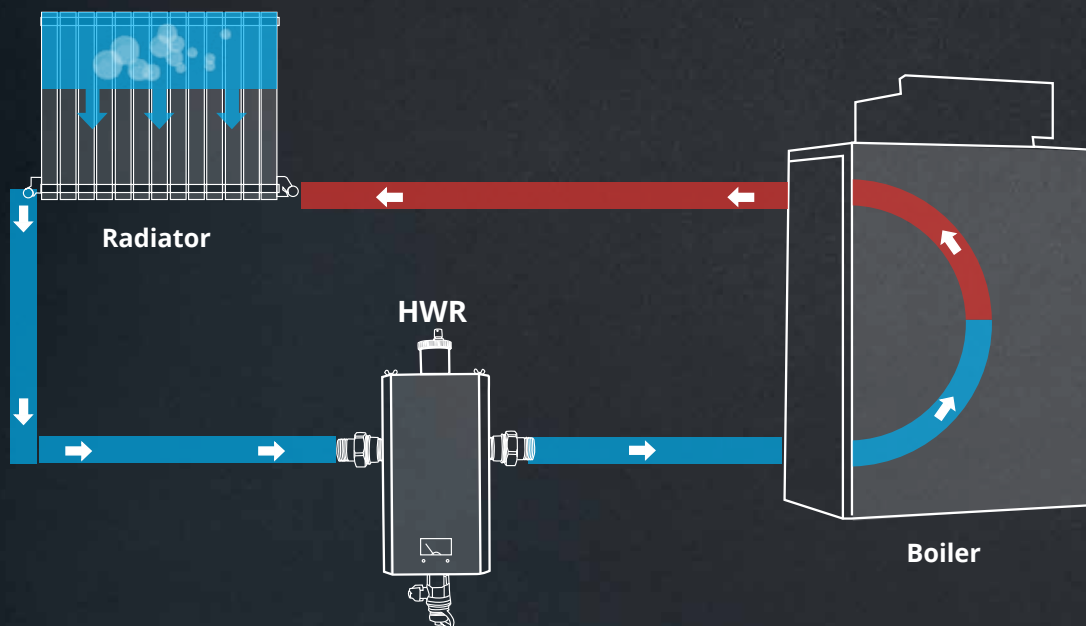
Strong magnet across the entire vessel

# Degassing

## Getting rid of air

Reliably removes oxygen and other gases from the heating circuit. Underfloor heating pipes, valves, pumps, screw connections, ventilators or defective expansion vessels can be causes of increased oxygen in the heating system. The HWR plus heating water regulating device continuously removes dissolved gases from the heating water.

The now degassed heating water is able to release new gases, to send them to the HWR. This means that even air deposits from the highest points in the heating system can be released and separated. **Continuously, efficiently and without external energy.**



# Desludging

## getting rid of the sludge

The sludge must be filtered out of the heating system so that deposits do not clog heating circuits/control elements and encourage pitting. In the heating water regulator, the principle of gravity filtration is perfectly combined with a magnetic flux filter. Removal of sludge can be done without interrupting the heating operation.



# Anode protection

## Minimizes and stabilizes

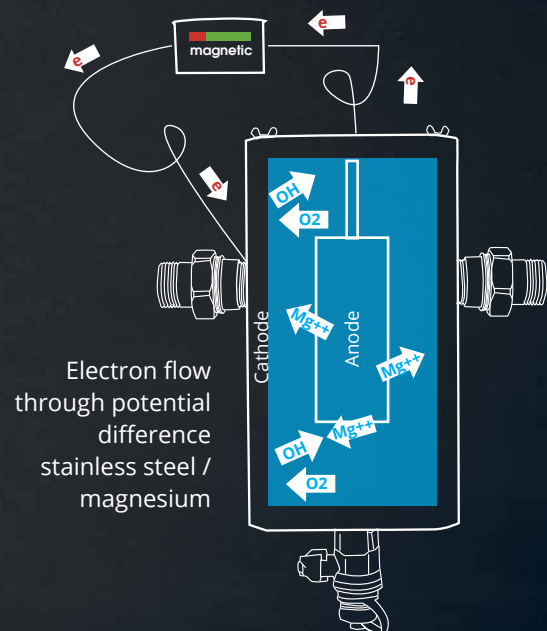
### Stabilizes the pH value, minimizes oxygen

The reaction vessel of the heating water regulator HWR is equipped with a specially developed anode. A galvanic intrinsic current forces the oxygen to connect with the anode. This brings the pH value into an optimal range.

The HWR plus thus produces alkaline water with a minimal oxygen concentration. If the anode is consumed after 2-6 years, it can be quickly replaced in a few simple steps.

### Permanent control of the heating water and the performance of the anode

The concentration of oxygen in the heating water is constantly monitored and displayed via a measuring device. The HWR heating water regulator can regulate the water optimally.



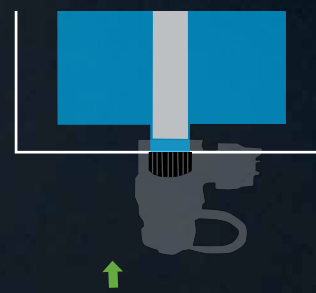
1. Pull magnet



2. Open the drain



3. Close the drain



# Technical specifications

## Data, calculations and installation

	HWR compact plus	HWR 10 plus	HWR 15 plus
System water content	< 500 l	< 500 l	< 1500 l
Flow	< 3 m <sup>3</sup> /h	< 3 m <sup>3</sup> /h	< 5 m <sup>3</sup> /h
Connection dimension	1"	1"	1 ½"
Total installation height	365 mm	450 mm	604 mm
Total installation length	105mm	310 mm	440 mm
	(only for diffusion-proof systems)		

	HWR 25 plus	HWR 50 plus	HWR 100 plus
System water content	< 5000 l	< 15 000 l	< 35 000 l
Flow	< 7 m <sup>3</sup> /h	< 0,6 m <sup>3</sup> /h	< 0,6 m <sup>3</sup> /h
Connection dimension	1 ½"	1"	1"
Total installation height	750 mm	1060 mm	1210 mm
Total installation length	440 mm	404 mm	404 mm

# Which HWR is right for me?

The determination of the heating water regulator depends on the system water content. You can calculate this using the following formula:

**Heating capacity of the system (kW) x factor 20 = system water content (l)**

(Water content of storage tanks/buffers are negligible)

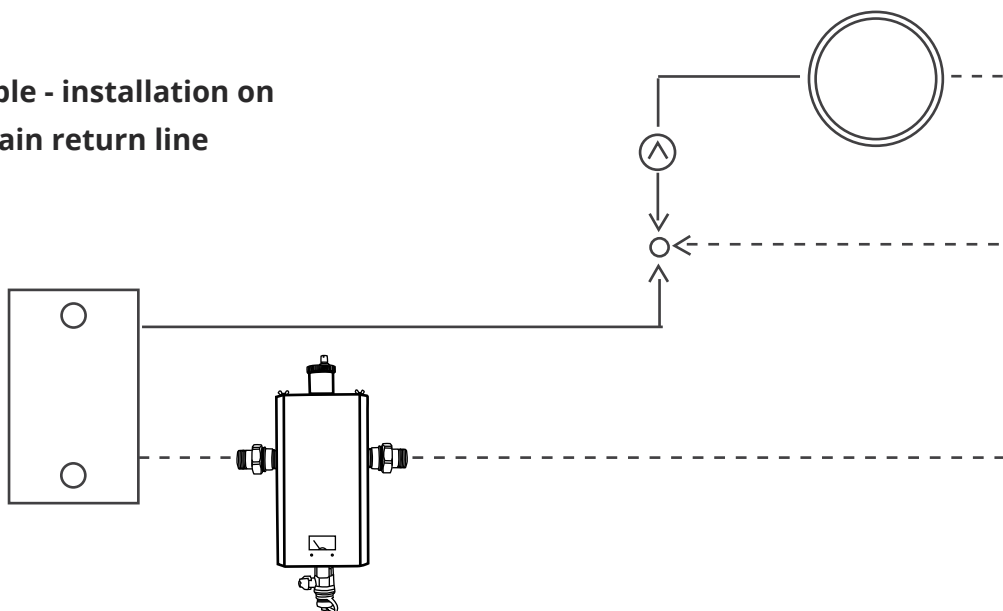
## Correct installation - ideal on the main supply line

The heating water regulating device HWR plus can be installed either in the main supply line or main return line. The concentration of dissolved oxygen is highest in the main supply line.

To optimize the pH value and the consumption of dissolved oxygen by means of electrochemical devices, installation in the main supply line is recommended.

The installation location is flexible at low temperatures.

**Example - installation on the main return line**



**For an economical  
heating process**

**magnetic GmbH & Co. KG**

Am Richtbach 5  
D-74547 Untermünkheim

Tel. +49 79 44 9 41 99-0  
Fax +49 79 44 9 41 99-19

info@magnetic-online.de  
www.magnetic-online.de

**managing director**

Michael Bader  
Tax ID number: DE 255 018 730  
Commercial register no: HRA 571362  
Reg. Court. Stuttgart

Your specialist retailer will gladly offer you guidance: