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RDC 200Z

Installation and Operation Manual
WALL HUNG HOT WATER STORAGE TANK
RDC 200Z

EN

RDC 200Z

1 - Description

RDC Storage water heater (further "tank") with one enamelled heating coil (e.g. for connecting a solar thermal system or a gas boiler), enabling installation of an electric heating element.

In order to reach proper working of the tank, it is necessary to design optimum hydraulics of the whole system, i.e. position of circulation pumps for sources and heating circuits, valves, non-return valves etc.

1.1 - Models

One model of 195 l capacity enabling installation of an electric heating rod.

1.2 - Tank protection

Enamel on the inner surface and on coils guarantees a long service life. Enamel is applied in compliance with DIN 4753. Further qualitative improvement is ensured by a magnesium anode rod installed inside the tank.

1.3 - Thermal insulation

Tanks are supplied with a CFC-free hard polyurethane insulation 42 mm thick. The RDC 200Z model has a mantle of sheet metal, white painted.

1.4 - Connection points on the tank

2 side tappings with G 1" M to heat exchanger circuit

2 bottom tappings with G 3/4" F for cold water inlet and hot water outlet

1 side tapping with G 3/4" F for recirculation

1 side tapping with G 6/4" F, for an el. heating element

1.5 - Packaging

Tanks are delivered standing, each on its pallet, packed in a cardboard wrap with polystyrene filling. The tanks shall not be transported/stored in a horizontal position.

2 - General Information

The appliance shall be installed by a qualified person according to valid rules and Manufacturer's Instructions.

This Manual is an integral part of the product and must be handed over to the User. Read carefully the instructions in this Manual as they contain important information concerning safety, installation, operation and maintenance. Keep this Manual for later reference.

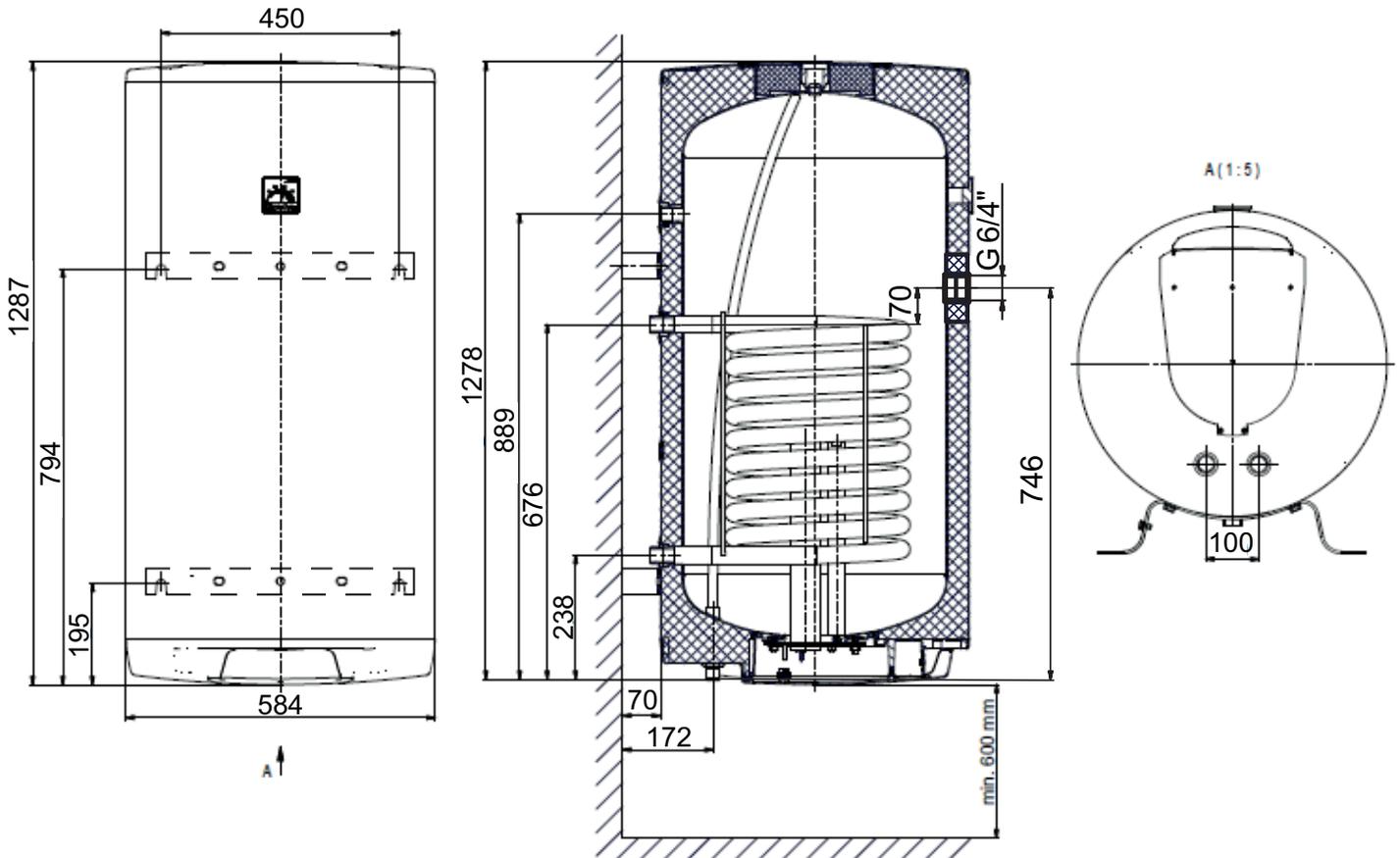
Using the tank for other purposes than stated above is forbidden and the manufacturer accepts no responsibility for damage caused by improper or wrong use.

3 - Operation

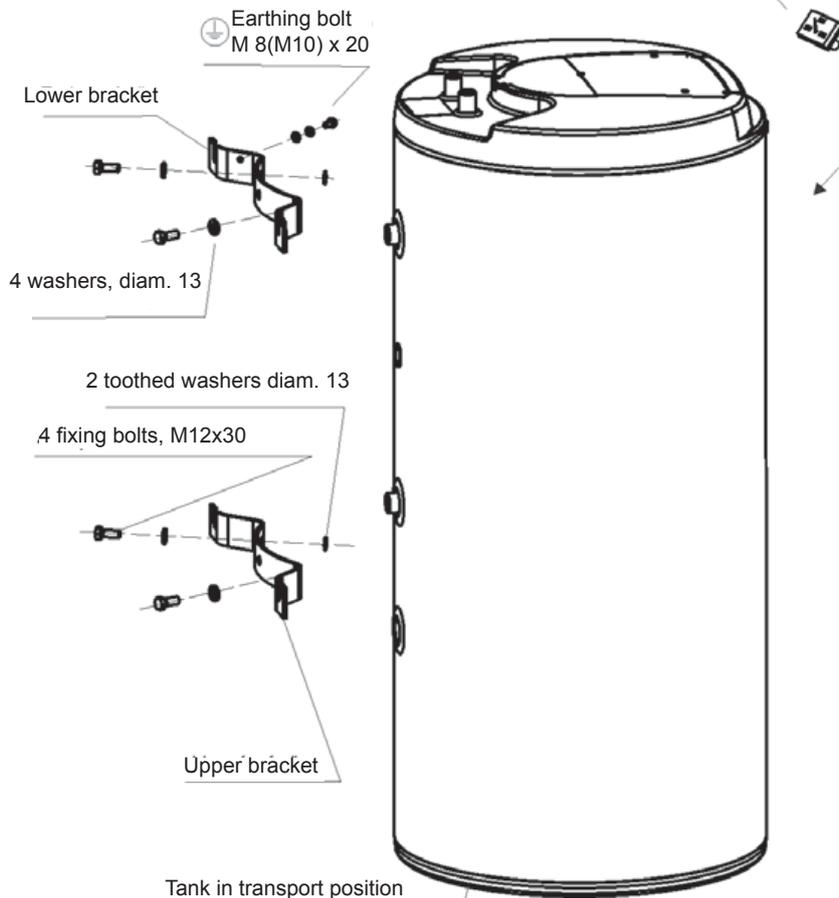
This tank is designed for operation in sealed pressure circuits. Hot water is heated in the integrated hot-water heat exchanger (heating coil) inside the tank from several possible heat sources like various kinds of hydronic boilers, renewable energy sources (solar collectors). An electric heating element can be installed into the tank for DHW auxiliary heating.

Hot water temperature should be set to 60-65 °C. This temperature guarantees the best operation and at the same time, it prevents formation of Legionella bacteria.

4 - Technical Data and Dimensions



Slide the indicator into the jacket opening following the arrow.
 (The indicator is a part of the tank, located in the upper part of the jacket.)



Tank in transport position

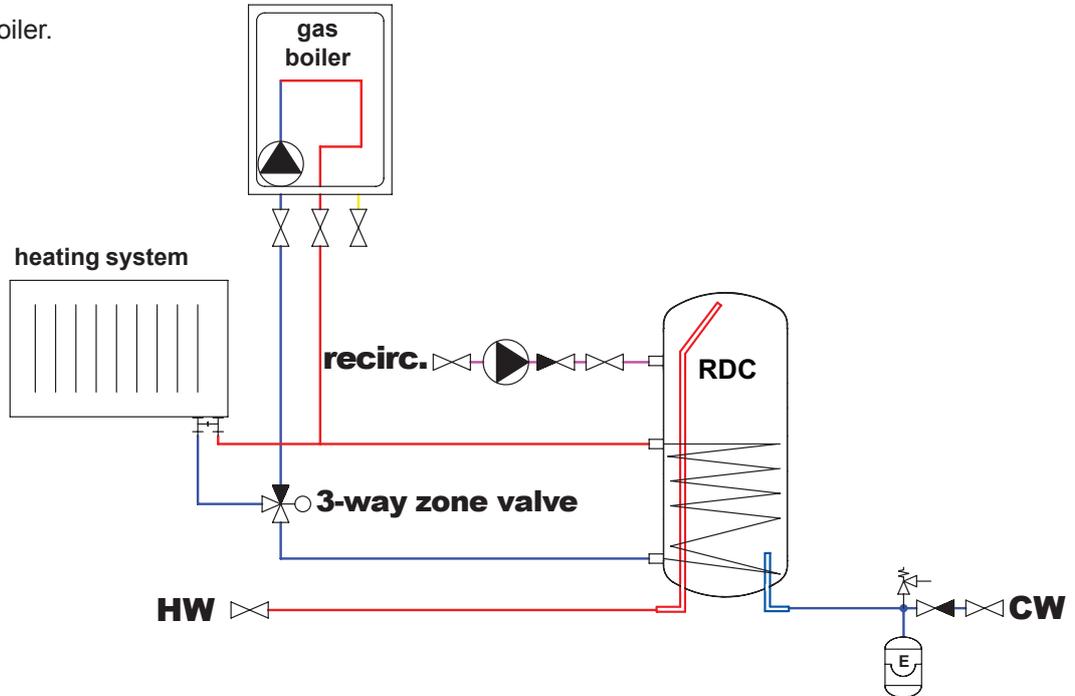
Table of limit values for total dissolved solids in hot water

Description	pH	Total dissolved solids (TDS)	Ca	Chlorides	Mg	Na	Fe
Max. value	6.5 - 9.5	600 mg/l	40 mg/l	100 mg/l	20 mg/l	200 mg/l	0.2 mg/l

5 - Typical Installation Examples

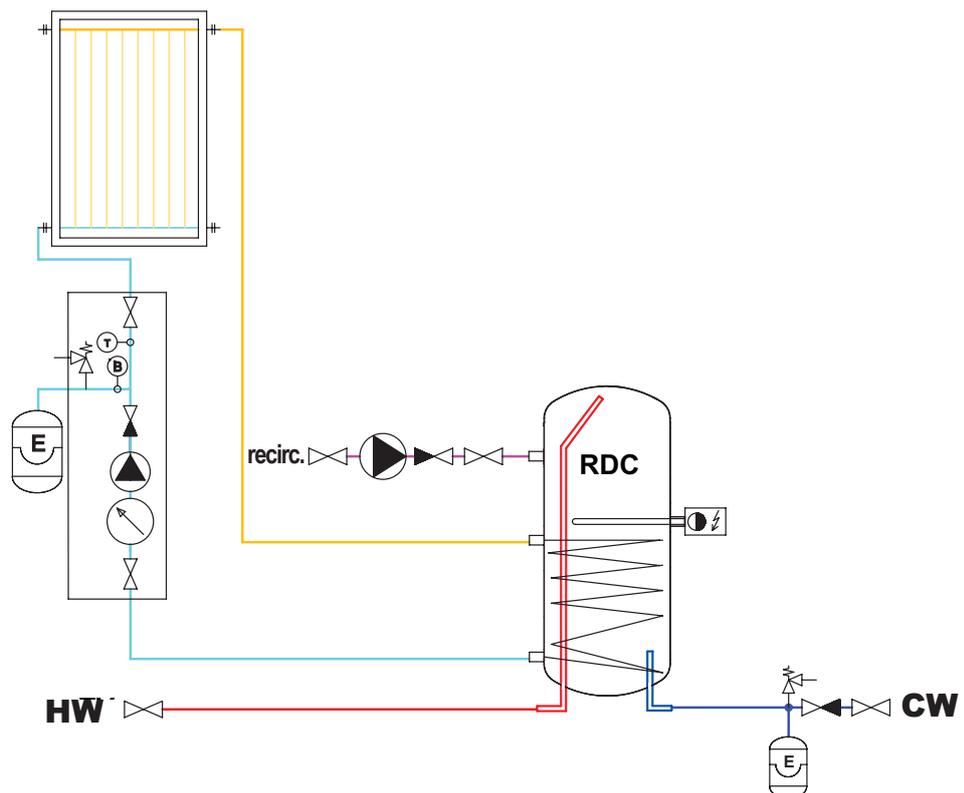
Example I.

With a gas boiler.



Example II.

With a solar thermal system and el. auxiliary heating



6 - Installation and Commissioning

Installation must meet valid rules and may be done by qualified staff only.

Warning: Defects caused by improper installation, use or handling are not covered by warranty.

6.1 - Connection to heat sources

Install the tank on a wall, as close to a heat source (solar thermal system, gas boiler) as possible. Connect it using G 1" couplers.

6.2 - Connection to a solar thermal system

The tank can be used with a solar thermal system. In such a case, the inlet for hot heat-carrying liquid coming from the solar thermal system shall be connected to the G 3/4" upper sleeve of the heating coil and the lower outlet to the return piping to the solar thermal system. Insulate all the piping between the tank and the solar thermal system.

6.3 - Heating element installation

The G 6/4" side tapping is designed to accommodate an electric heating rod. Heating rods of output up to 6 kW can be used, connected either directly to the mains (thermostat-equipped rods), or to a heating system controller. The installation may be done by qualified staff only.

Warning: All electric heating elements shall be protected by a safety thermostat.

6.4 - Connection to water mains

DHW piping shall be done according to valid rules. G 3/4" threaded couplers are used to connect the tank to a cold water inlet and hot water outlet. A 6bar safety valve shall be installed at the cold water inlet, installation of a reducing valve is recommended. If the pressure from water mains exceeds 6 bar, a reducing valve is necessary. In order to prevent water loss, an 8 l expansion tank should be installed at the cold water inlet.

Should the water be too hard, install a water softener before the tank. In case the water contains mechanical impurities, install a strainer.

A suitable thermostatic mixing valve should be installed at the hot-water outlet from the tank, preventing too hot water from entering the taps.

Install a drain valve to the lowest point of the tank.

Complete DHW piping shall be properly insulated.

6.5 - Commissioning

Fill the heating circuit with the appropriate fluid and air-bleed the entire system.

Fill the tank with cold water following this sequence:

- open the shut-off valve at the tank inlet
- open the hot water tap/outlet point, as soon as hot water starts flowing, filling is complete; close the tap
- check all connections for leaks and the system pressure

Hot water quality must meet the conditions shown in the Table of limit values for total dissolved solids in hot water, page 4 of this Manual.

Set the heating controller in compliance with the documentation and manufacturer's recommendations. Check regularly a proper function of all control and adjusting elements.

7 - Maintenance, Replacement of Magnesium Anode Rod

If the tank is fitted with a heating element, disconnect it from the mains first.

Clean the exterior of the tank with a soft cloth and a mild detergent. Never use abrasive cleaners or solvents. Check all connections for leaks.

The tanks are equipped with an anti-corrosion sacrifice magnesium anode rod. The anode rod shall be checked within 12 months after commissioning and subsequently always not later than 12 months after the last check. In locations where water contains more ferrites or calcites, it is recommended to check the anode every 6 months. If more than 1/3 of its total volume is consumed, the anode shall be replaced with a new one. Disregarded of its state, the anode rod shall be replaced with a new one within 24 months from commissioning.

If damage to a tank occurs due to neglected replacement of a magnesium anode rod, the warranty cannot be claimed.

8 - Disposal

Packaging shall be disposed of in compliance with the valid rules. When the product reaches the end of its life, it shall not be disposed of as household waste. It shall be dropped off at a Local Waste Recycling Centre. Insulation shall be recycled as plastic and the steel vessel as scrap iron.

9 - Warranty

This product is covered by warranty according to the conditions described in this Manual and according to the Warranty Certificate. A Warranty Certificate is an integral part of the supply. Tank transport or storing in a horizontal position is considered warranty violation!