

Regulus

www.regulus.eu



PS 80 ZC

Installation and Operation Manual
WALL-HUNG THERMAL STORE
PS 80 ZC

EN

PS 80 ZC

CONTENTS

1 Description	3
1.1 Tank protection	3
1.2 Connection points on the tank	3
1.3 Packaging	3
2 General Information	3
3 Technical Data and Dimensions	4
4 Operation	5
5 Example of Thermal Store Connections	5
6 Installation and Commissioning	6
6.1 Connection to sources of heat/cold.....	6
6.2 Installation of an electric heating element	6
6.3 Commissioning	6
7 Maintenance	7
8 Disposal	7
9 Warranty	7

1 - Description

PS 80 ZC Wall-hung thermal store is designed for storing and subsequent distribution of heat/cold. It is suitable as a buffer tank for inverter heat pumps to ensure sufficient water volume during evaporator defrosting. The tank has four G 1" M connections to connect sources of heat/cold and a heating/cooling system. It comes with vapour-proof non-detachable insulation and parts for hanging the tank on a wall.

When needed, an electric heating element without thermostatic head of max. 7.5 kW output can be installed into the tank, for codes see the Catalogue.

1.1 - Tank protection

The inner surface has no surface finish, no anticorrosion protection. On its lacquered outer surface there is a hard PU foam insulation covered with alacquered metal sheet.

1.2 - Connection points on the tank

4x G 1" M connection for connecting a heat/cold source and a heating/cooling system

1x G 1/2" F connection for an air vent valve

1x G 6/4" F connection for an electric heating element

2x sensor sheaths, diam. 12.6 mm

1.3 - Packaging

The tanks are wrapped in foil and delivered in a box filled with polystyrene.

2 - General Information

This Manual is an integral and important 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. Installation may be done only by qualified staff in compliance with valid rules, standards and Manufacturer's instructions.

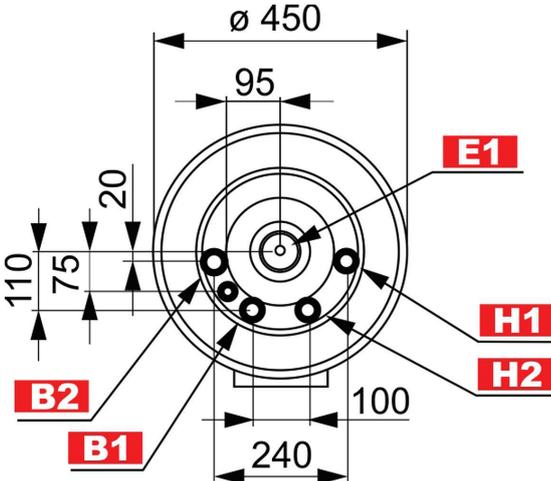
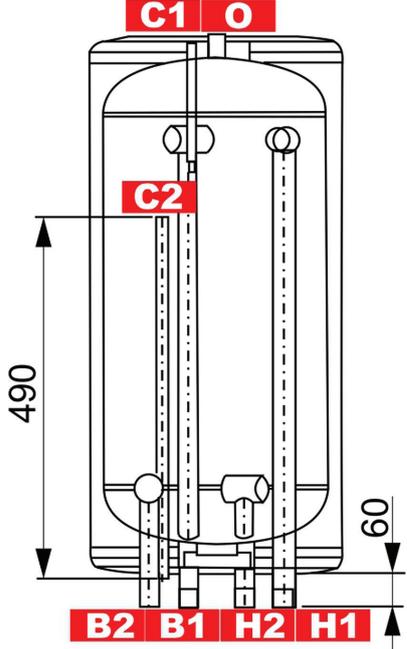
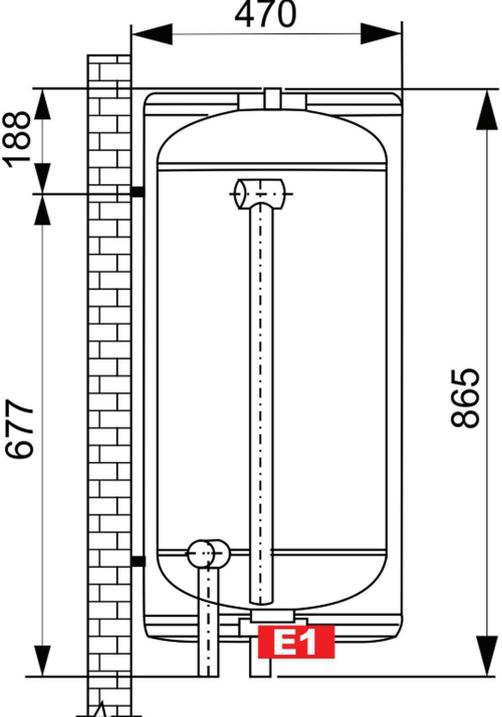
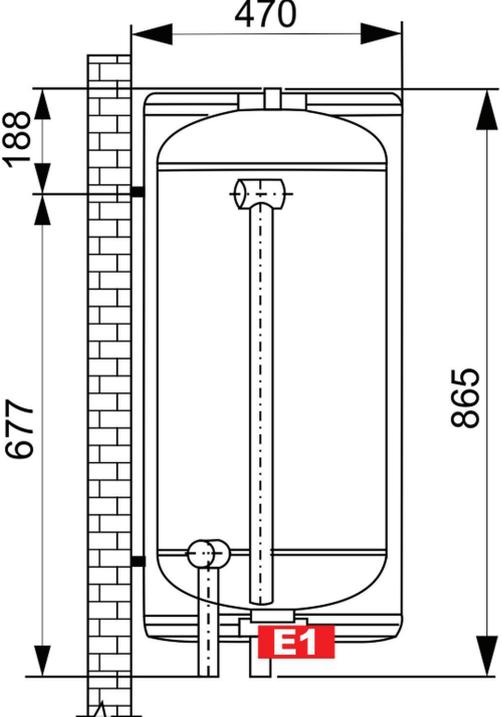
This appliance is designed to accumulate and distribute heat/cold. It shall be connected to a heating/cooling system and sources of heat/cold.

Using the tank for other purposes than stated in this Manual (e.g. as a hot water storage tank) is forbidden and the manufacturer accepts no responsibility for damage caused by improper or wrong use.

3 - Technical Data and Dimensions

Technical Data	
Total tank volume	77 l
Working temperature in tank	5–80 °C
Max. pressure in tank	3 bar
Tank diameter	400 mm
Tank diameter with insulation	450 mm
Tank overall height	865 mm
Tank perimeter insulation thickness	25 mm
Bottom insulation thickness	25 mm
Top insulation thickness	25 mm
Tipping height	980 mm
Empty weight with insulation	36 kg

Materials	
Tank material	steel
Tank insulation material	PUR foam
Outer surface of the insulation	sheet metal

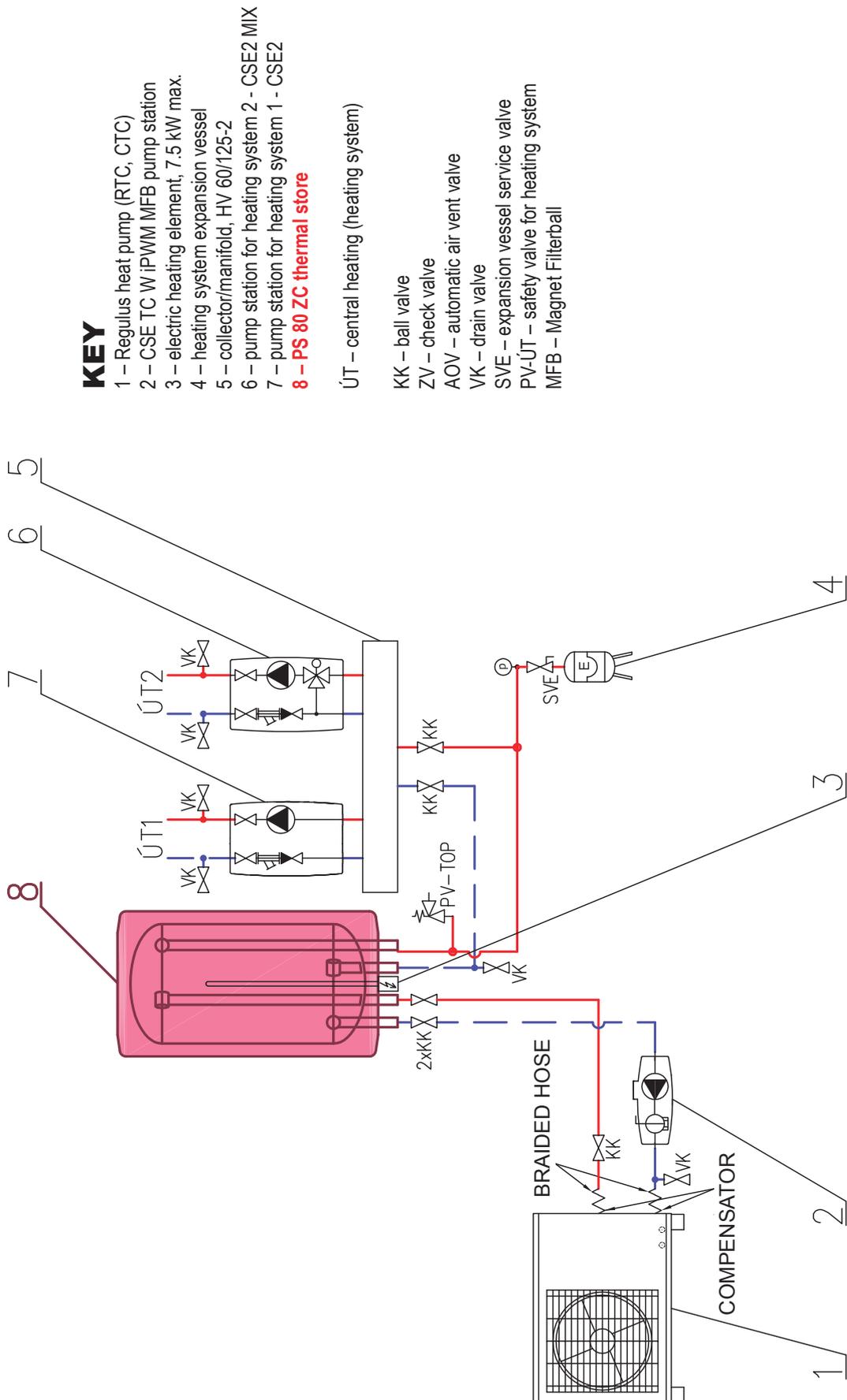
Dimensions		Pos.	Description	Connections
Heat sources				
	B1	Inlet from heat source	G 1" M	
	B2	Return to heat source	G 1" M	
Heating system				
	H1	Flow to heating system	G 1" M	
	H2	Return from heating system	G 1" M	
Auxiliary heat source				
	E1	Electric heating element	G 6/4" F	
	Control and safety			
	O	Air discharge	G 1/2" F	
	C1	Sheath	ø 12,6 mm	
	C2	Sheath	ø 12,6 mm	

Minimum tank hanging height from the floor when installing a 7.5 kW heating element – 650 mm

4 - Operation

The thermal store is suitable for storing and distribution of heat/cold and as a buffer tank for inverter heat pumps to ensure sufficient water volume during evaporator defrosting.

5 - Example of Thermal Store Connections



6 - Installation and Commissioning

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

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

Before installing the tank, check the load-bearing capacity and material of the supporting structure with regard to the weight of the tank full of water, i.e. 113 kg. Fix the mounting plate to the support structure with two 8x80 mm hex head screws into 12 mm diameter dowels. All these parts are included in the delivery - see Fig. Then hang the tank on the mounting plate.



Should the tank be equipped with an electric heating element, it is recommended to install it before connecting the pipes of the heating system.

After the tank is installed and connected to an existing heating/cooling system, it is recommended to clean the entire heating/cooling system using a suitable cleaning agent for heating systems.

It is recommended to add protective anti-corrosion fluid into the heating system. The respective item codes can be found in the Catalogue or at www.regulus.eu.

6.1 - Connection to sources of heat/cold

Hang the tank on the wall as close to the heat source as possible (the minimum hanging height of the tank from the floor when installing a 7.5 kW heater must be at least 650 mm). Connect the source of heat/cold and the heating/cooling system to inlets and outlets. Install an air vent valve at the highest point of the system. Insulate all the connection piping.

When using the tank for storing cold or when using it alternately for storing both heat and cold, thoroughly insulate all parts of the piping, including fittings and equipment connected to the tank (heating element, thermostats etc.) with vapor barrier insulation to prevent condensation on the surface of these parts.

6.2 - Installation of an electric heating element

The thermal store can be equipped with an electric heating element without thermostatic head (e.g. ETT-A) of output up to 7.5 kW, max. length 635 mm.

It is recommended to use an encased adjustable thermostat with 1.5m long capillary, code 10772, for switching the heating element. Place the thermostat sensor into the bottom sheath C2.

Electric heating elements with no thermostatic head shall be protected by a safety thermostat.

It is recommended to use an encased safety thermostat with 1.3 m capillary, code 19548.

Place the thermostat sensor into the sheath C1.

Electric heating elements must be wired by a qualified person only.

6.3 - Commissioning

Ground the tank before commissioning.

The tank shall be filled up together with the heating/cooling system, respecting valid standards and rules. In order to minimize corrosion, special protective additives for heating systems should be used (see the Catalogue). The quality of heating water, of top-up water and the frequency of topping has a strong influence on the lifetime of heating systems. Poor quality of heating water may cause problems like corrosion and incrustation.

Fill the system with the appropriate fluid and air-bleed. Check all connections for leaks and verify the system pressure. Set the heating/cooling controller in compliance with the documentation and manufacturer's recommendations. Check regularly the proper function of all control and adjustment elements.

7 - Maintenance

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

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 Center. 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.

