Regulus

www.regulus.eu

PS 100 IZ, 200 IZ

Installation and Operation Manual
THERMAL STORES
PS 100 IZ, PS 200 IZ

EN

PS 100 IZ, 200 IZ

CONTENTS

1 - Description

These thermal stores are designed for storing and distribution of heat/cold. They are suitable as buffer tanks for inverter heat pumps to ensure sufficient water volume during evaporator defrosting. The tanks have four connections to connect sources of heat/cold and a heating/cooling system, two connections for universal inlets/outlets, two connections for temperature sensors and one for a safety valve. They come with vapour-proof non-detachable insulation.
When needed, an ETT-D, F, P, M electric heating element of max. 500 mm length can be installed into the tanks, 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 hard plastic in grey colour.

1.2 - Connection points on the tank

2x G 6/4“ F connection for connecting a heat/cold source
2x G 6/4“ F connection for a universal inlet/outlet
1x G 6/4“ F connection to connect return pipe from the heating system
1x G 5/4“ F connection to connect flow pipe to the heating system
3x G 1/2“ F connection for a temperature sensor and safety valve

1.3 - Packaging

These thermal stores are delivered standing, each screwed to its separate pallet, packed in bubble wrap.

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.

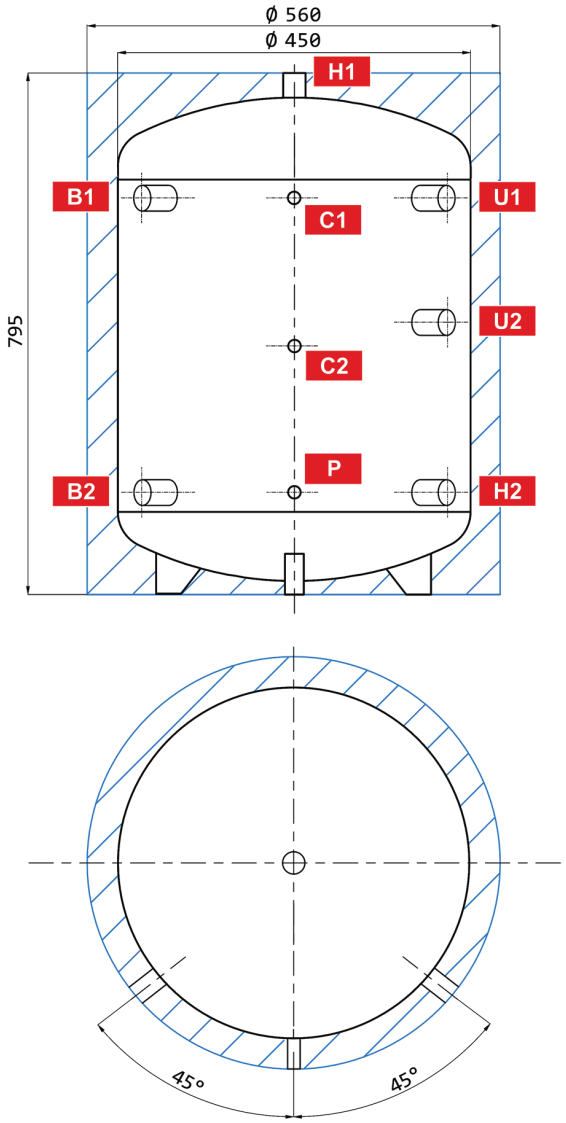
Using the tank for other purposes than stated in this Manual (e.g. as a hot water storage tank) is forbidden and the manufacturer accepts no responsibility for damage caused by improper or wrong use.

3 - Technical Data and Dimensions
3.1 - Regulus PS 100 IZ

Technical Data	
Total tank volume	99 l
Working temperature in tank	7–95 °C
Max. pressure in tank	3 bar
Tank diameter	450 mm
Tank diameter with insulation	560 mm
Tank overall height	795 mm
Tipping height	1030 mm
Tank perimeter insulation thickness	55 mm
Empty weight	28 kg

Materials	
Tank material	S235JR
Tank perimeter insulation material	PU foam
Tank insulation outer surface	hard plastics, grey colour

Dimensions



CONNECTIONS

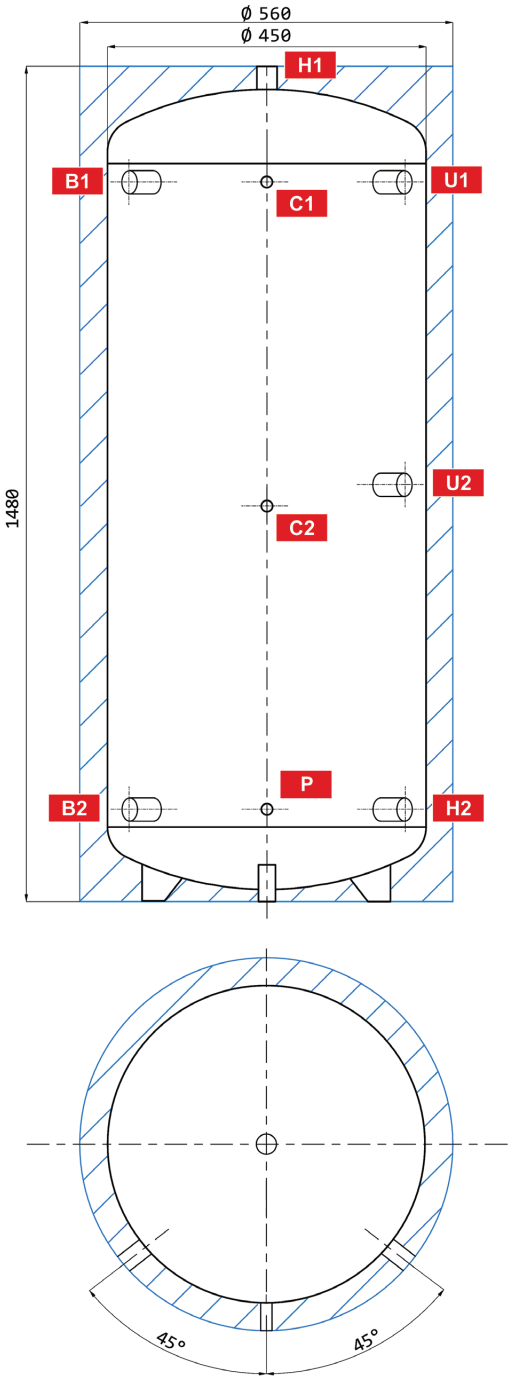
Pos.	Description	Connections	Height [mm]
Heat sources			
B1	Inlet from heat source	G 6/4" F	605
B2	Return to heat source	G 6/4" F	185
Heating system			
H1	Outlet to the heating circuit system	G 5/4" F	795
H2	Return from heating system	G 6/4" F	185
Control and safety			
C1	Temperature sensor	G 1/2" F	605
C2	Temperature sensor	G 1/2" F	395
P	Safety valve	G 1/2" F	185
Universal inlet/outlet			
U1	Universal inlet/outlet	G 6/4" F	605
U2	Universal inlet/outlet	G 6/4" F	445

3.2 - Regulus PS 200 IZ

Technical Data	
Total tank volume	204 l
Working temperature in tank	7–95 °C
Max. pressure in tank	3 bar
Tank diameter	450 mm
Tank diameter with insulation	560 mm
Tank overall height	1480 mm
Tipping height	1620 mm
Tank perimeter insulation thickness	55 mm
Empty weight	47 kg

Materials	
Tank material	S235JR
Tank perimeter insulation material	PU foam
Tank insulation outer surface	hard plastics, grey colour

Dimensions



CONNECTIONS

Pos.	Description	Connections	Height [mm]
Heat sources			
B1	Inlet from heat source	G 6/4" F	1285
B2	Return to heat source	G 6/4" F	185
Heating system			
H1	Outlet to the heating circuit system	G 5/4" F	1480
H2	Return from heating system	G 6/4" F	185
Control and safety			
C1	Temperature sensor	G 1/2" F	1285
C2	Temperature sensor	G 1/2" F	735
P	Safety valve	G 1/2" F	185
Universal inlet/outlet			
U1	Universal inlet/outlet	G 6/4" F	1285
U2	Universal inlet/outlet	G 6/4" F	785

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.

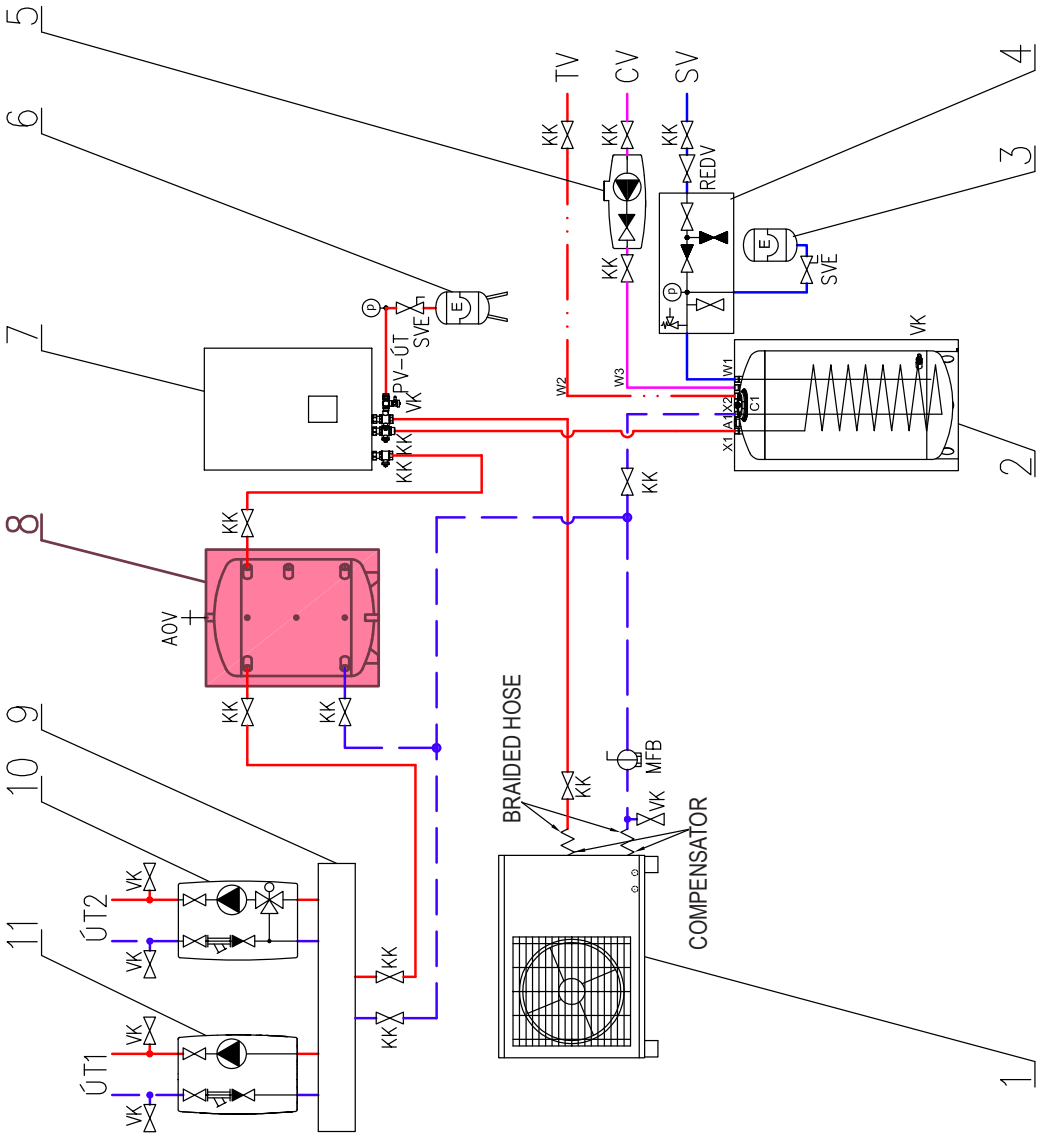
5 - Example of Thermal Store Connections
5.1 - With RegulusBOX

KEY

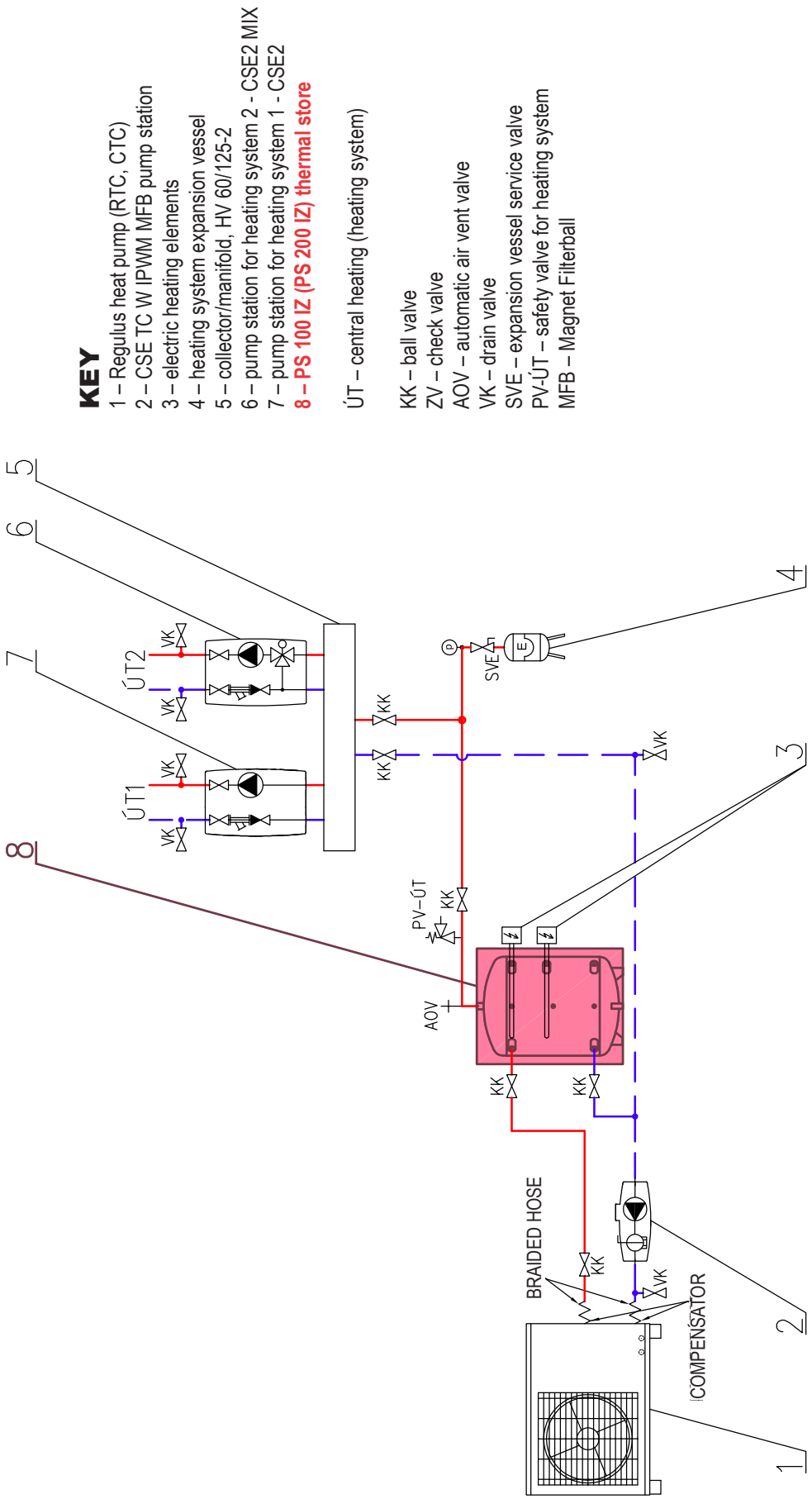
1 – Regulus heat pump (RTC, CTC)
2 – hot water storage tank (e.g. NBC 170 HP)
3 – DHW expansion vessel
4 – safety kit for HW storage tank
5 – pump station for DHW recirculation – CSE TV ZV
6 – heating system expansion vessel
7 – RegulusBOX indoor unit
8 – PS 100 IZ (PS 200 IZ) thermal store
9 – collector/manifold, HV 60/125-2
10 – pump station for heating system 2 - CSE2 MIX
11 – pump station for heating system 1 - CSE2

SV – cold water
TV – hot water
CV – hot water recirculation
ÚT – central heating (heating system)

KK – ball valve
ZV – check valve
AOV – automatic air vent valve
PTR – pressure temperature relief valve
REDV – pressure reducing valve (optional)
VK – drain valve
SVE – expansion vessel service valve
PV-ÚT – safety valve for heating system
MFB – Magnet Filterball



5.2 - With el. heating elements



6 - Installation and Commissioning

The installation of an electric heating element may be done by qualified staff only.

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

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

Place the tank on the floor as close as possible to the source of heat /cold and level it. 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. Install a drain valve at the lowest point of the tank. Insulate all the connection piping.

When using the tank for storing cold or when using it alternately for storing either heat or 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 electric heating elements with thermostatic head (e.g. ETT-D, F, P, M), max. length 500 mm. Installing electric heating elements with no thermostatic head is possible only under the condition of placing the thermostat sensors above the heating elements.

6.3 - Commissioning

Ground the tank before commissioning.
This tank is not designed for DHW heating.
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.

v1.0-03/2023

REGULUS spol. s r.o.
E-mail: sales@regulus.eu
Web: www.regulus.eu