

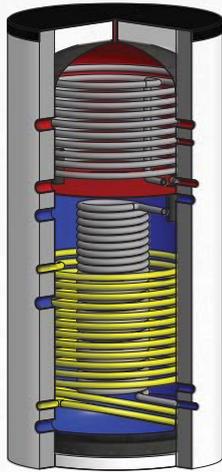
## HSK and DUO Thermal Stores



Thermal Stores  
with DHW heating  
and separating metal sheet



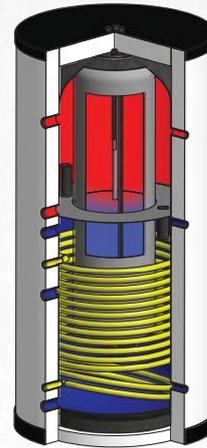
## HSK THERMAL STORES



Regulus HSK Thermal Stores with a separating metal sheet and stainless-steel heat exchangers are designed to store heat from solar thermal and photovoltaic systems, heat pumps, hydronic fireplace inserts and other heat sources.

The integrated stainless-steel heat exchanger ensures comfortable hot water supply, preventing the formation of Legionella bacteria. Hot water is heated by all the connected sources efficiently. The inner division into two sections not only brings higher efficiency of alternative sources but also ensures sufficient supply of hot water even when the lower section of the thermal store is exhausted by space heating.

## DUO THERMAL STORES



Regulus DUO Thermal Stores are fitted with an immersed DHW tank. They are designed to store heat from solar thermal systems, heat pumps, hydronic fireplace inserts and other heat sources. The immersed DHW tank is used by all the connected sources efficiently.

The inner division into two sections brings higher efficiency of alternative sources, more hot water prepared, and its longer storage even when the thermal store is exhausted for heating.

## ■ SUFFICIENT HOT WATER SUPPLY

Data sheets for separate tanks contain tables with the volume of hot water supplied under different conditions. As an illustration, one example for HSK 390 P and DUO 390/130 P thermal store:

### Volume of hot water supplied (heated from 10°C to 40°C)

Heated volume	entire tank			entire tank			entire tank			tank top section		
Tank temperature	60 °C			60 °C			80 °C			60 °C		
Backup heating	10 kW			none			none			10 kW		
Flow rate [l/min]	8	12	20	8	12	20	8	12	20	8	12	20
HSK 390 P [l]	534	359	268	321	290	266	567	528	516	253	235	208
DUO 390/130 P [l]	325	219	175	267	230	195	543	511	392	152	132	124

## INSULATION

We supply high quality insulation sets, incl. bottom insulation. This way the energy efficiency class C is reached.

## ADVANTAGES OF THERMAL STORES WITH SEPARATING METAL SHEET

Energy savings due to a higher efficiency of a heat pump as well as of a solar thermal system during heating the bottom section.

Hot water supply remains available even when the bottom section for heating is exhausted.

Possibility to launch additional energy sources separately for heating and separately for hot water, after a solid fuel boiler is extinguished and heat from the thermal store exhausted.

## ACCESSORY

### Electronic anode rod for DUO

DUO Thermal Stores come fitted with a magnesium anode rod as standard. However, it can be replaced by an electronic anode rod that does not require regular replacements. If an expansion vessel for DHW is installed, too, you will be granted an extended warranty.



Item	Length	Thread size	Code
El. anode rod for DUO	750 mm	3/4"	13 793

When an electronic anode rod is installed, the warranty period for DUO is extended to 5 years.

### Pump station

The tank is fitted with 2 pins designed to support a solar pump station. When hung directly on a tank, the pump station offers easier installation and needs shorter connection piping.

### Kits with plate heat exchanger for DUO

As accessories to DUO Thermal Stores we also offer a kit with a plate heat exchanger and a pump, or a kit with a plate heat exchanger, a pump and zone valves. These kits permit to connect a solar thermal system to tanks with no tube heat exchanger, or to connect a large solar thermal system. The kit with zone valves enables diverting the heat source to upper or lower section of the tank.

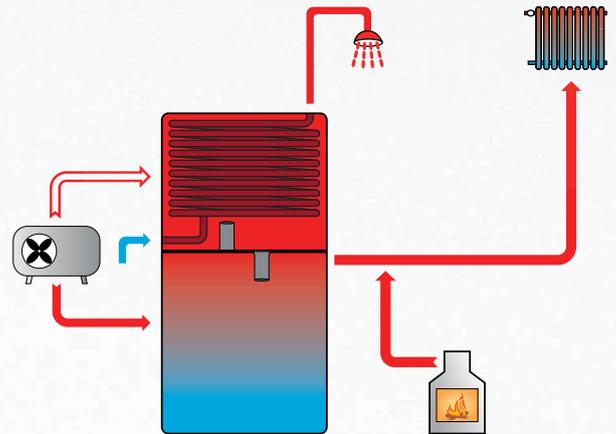


## ■ HSK P

### Thermal Store with a stainless-steel DHW heat exchanger and separating metal sheet

- For heat pumps and biomass boilers

This thermal store is mostly installed in systems where the main heat source for both space and DHW heating is a boiler, hydronic fireplace insert or a heat pump. Heat sources can be combined as an advantage. Besides that, electric heating elements can also be installed for both DHW and space heating.

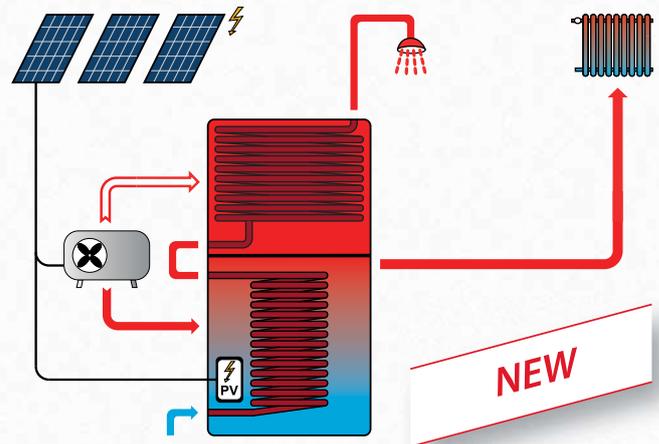


## ■ HSK PV

### Thermal Store with 2 stainless-steel DHW heat exchangers and separating metal sheet

- For PV panels and heat pumps

This thermal store is mostly installed in systems where the main source for both space and DHW heating is a heat pump combined with PV panels. Two stainless steel heat exchangers for DHW are located inside the tank. In the upper tank section sufficient temperature is kept for immediate DHW heating through the upper heat exchanger that is intended also for DHW recirculation heating. The entire tank volume can be utilized to gather more heat from PV excess energy. Hot water is heated in two steps, the lower heat exchanger serving to pre-heat it. Other heat sources can be connected to the tank as well, combined as an advantage. Besides a specially located PV powered heating element, also other electric heating elements can be installed for space or DHW heating.

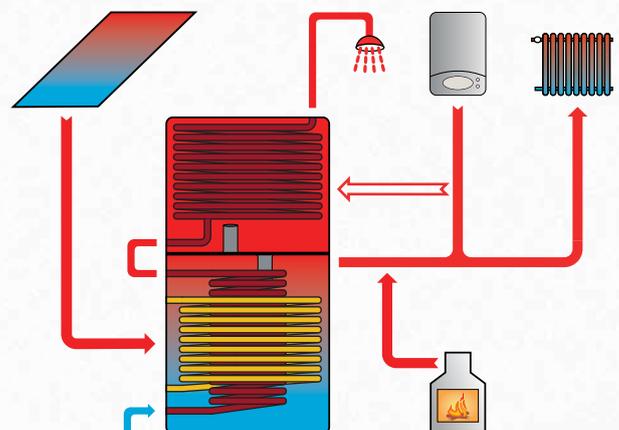


## ■ HSK PR

### Thermal Store with a solar heat exchanger, 2 stainless steel DHW heat exchangers\* and a separating metal sheet

- For solar thermal heat and any other source

The tank is used in systems with a solar thermal system for both DHW and support space heating, and with any other heat source. In its lower section, a solar heat exchanger and a stainless steel one for water pre-heating are located. Thanks to this, the solar thermal system works with higher efficiency under lower temperatures. In the upper tank section sufficient temperature is kept for immediate DHW heating through the upper heat exchanger that is intended also for DHW recirculation heating. The main heat source can be a heat pump, hydronic fireplace insert, gas-fired or another boiler. Heat sources can be combined as an advantage. Besides that, also electric heating elements can be installed for DHW or space heating.



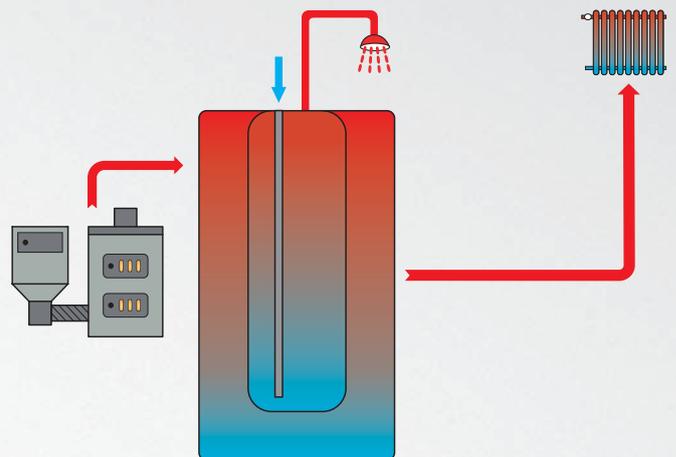
\*HSK 390 PR is fitted with only one stainless steel DHW heat exchanger.

## DUO

### DUO Thermal Store with immersed DHW tank, no separating metal sheet

This thermal store is intended for use with an automatic coal or pellet boiler as the main heat source for space and DHW heating. The system can be upgraded with electric heating elements for space backup heating or background heating during winter holidays or background heating in summer cottages.

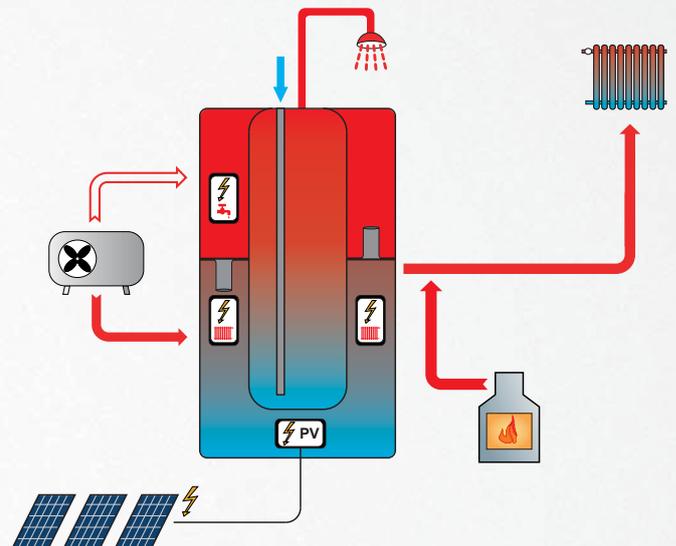
Another heating element can be also installed for DHW heating in the summer when boiler operation just for hot water heating alone would be uneconomic.



## DUO P

### DUO Thermal Store with immersed DHW tank and separating metal sheet

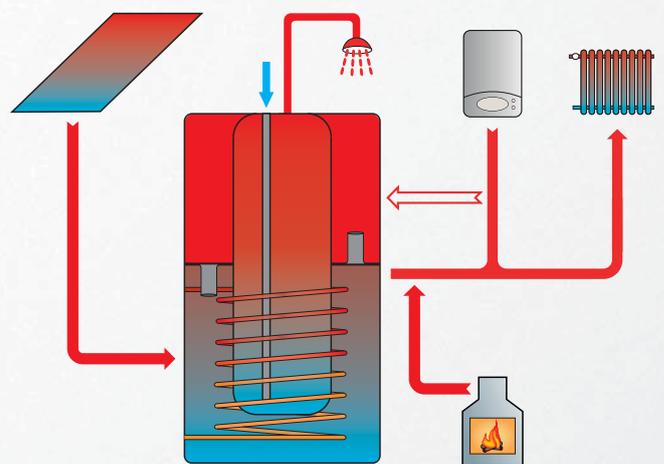
This thermal store is mostly installed in systems with a heat pump as the main heat source for both space and DHW heating, with a hydronic fireplace insert, with electric heating elements for space heating, background heating or out-of-season DHW heating. The existing electric boiler, gas-fired boiler or any other boiler can be connected to the tank, or any other combination of the sources mentioned. The tank permits installation of a heating element that uses electricity surplus from PV panels in the entire volume of the tank.



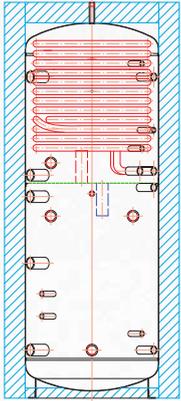
## DUO PR

### Thermal Store with immersed DHW tank, separating metal sheet and solar heat exchanger

This thermal store is equipped with a solar heat exchanger that permits utilizing the solar thermal system for both DHW and space heating. A heat pump, hydronic fireplace insert, gas-fired or any other boiler can be used as the main heat source, including any combination of the sources mentioned. Besides that, also electric heating elements can be installed for space heating, background heating or out-of-season DHW heating.



## ■ HSK P Thermal Store with stainless-steel DHW heat exchanger and separating metal sheet



Model	Height [mm]	Diam. [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Code	Insulation code
HSK 390 P*	1905	550	398	321	13 517	16 318
HSK 600 P	1935	650	560	468	14 175	16 320
HSK 750 P	1975	750	760	548	14 178	16 323
HSK 1000 P	2080	800	925	592	14 555	16 310
HSK 1700 P	2075	1100	1687	1072	14 558	16 314

### Thermal Store:

8\* G 1" or G 6/4" F side tapplings  
 3 G 6/4" F side tapplings  
 5 G 1/2" F side tapplings  
 1 G 1/2" F top tapping  
 2 M6 pins

- to connect heating system and heat sources  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors  
 - for air vent valve  
 - to mount pump station

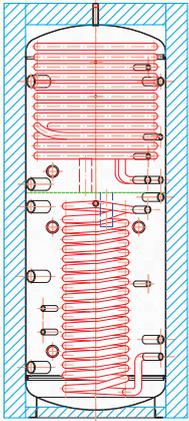
### DHW heating:

2 G 1" M side tapplings  
 1 G 6/4" F side tapping  
 2 G 1/2" F side tapplings

- in, out  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors

\* HSK 390 P is fitted with 7 G 1" F side tapplings to connect a heating system and heat sources

## ■ HSK PV Thermal Store with 2 stainless steel DHW heat exchangers and separating metal sheet



Model	Height [mm]	Diam. [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Code	Insulation code
HSK 600 PV	1935	650	557	669	16 158	16 160
HSK 750 PV	1975	750	757	784	16 177	16 179
HSK 1000 PV	2080	800	922	846	16 180	16 312
HSK 1700 PV	2075	1100	1684	1533	16 183	16 185

### Thermal Store:

8 G 1" F or G 6/4" F side tapplings  
 3 G 6/4" F side tapplings  
 5 G 1/2" F side tapplings  
 1 G 1/2" F top tapping  
 2 M6 pins

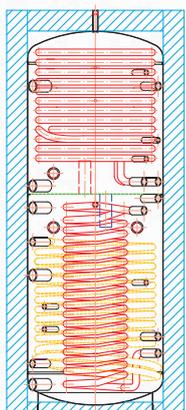
- to connect heating system and heat sources  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors  
 - for air vent valve  
 - to mount pump station

### DHW heating:

4 G 1" M side tapplings  
 1 G 6/4" F side tapping  
 2 G 1/2" F side tapplings

- in, out  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors

## ■ HSK PR Thermal Store with 2 stainless steel DHW heat exchangers\*, separating metal sheet and solar heat exchanger



Model	Height [mm]	Diam. [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Solar heat exchanger surface area [m <sup>2</sup> ]	Code	Insulation code
HSK 390 PR*	1905	550	394	321	1.5 m <sup>2</sup>	14 172	16 319
HSK 600 PR	1935	650	553	669	2.4 m <sup>2</sup>	14 187	16 321
HSK 750 PR	1975	750	753	784	2.5 m <sup>2</sup>	14 190	16 324
HSK 1000 PR	2080	800	916	846	3.2 m <sup>2</sup>	14 012	16 311
HSK 1700 PR	2075	1100	1676	1533	4 m <sup>2</sup>	14 013	16 315

### Thermal Store:

8\* G 1" or G 6/4" F side tapplings  
 2 G 1" F side tapplings  
 2 G 6/4" F side tapplings  
 5 G 1/2" F side tapplings  
 1 G 1/2" F top tapping  
 2 M6 pins

- to connect heating system and heat sources  
 - to connect solar thermal system  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors  
 - for air vent valve  
 - to mount pump station

### DHW heating:

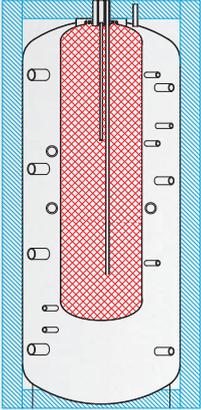
4\* G 1" M side tapplings  
 1 G 6/4" F side tapping  
 2 G 1/2" F side tapplings

- in, out  
 - to insert el. heating element  
 - to insert sheaths for temperature sensors

\* HSK 390 PR is fitted with only 1 stainless steel heat exchanger for DHW, only 7 G 1" F side tapplings to connect a heating system and heat sources, and only 2 G 1" tapplings for DHW heating.

\*\* for tank heated to 60°C with 40°C outlet temperature at flowrate of 8 l/min., no aux. heat.

## DUO Thermal Store with immersed DHW tank



Model	Height [mm]	Diam.* [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Code	Insulation code
DUO 390/130	1910	550	123	267	14 198	16 294
DUO 600/200	1935	650	190	440	14 201	16 300
DUO 750/200	1980	750	190	447	14 204	16 303
DUO 1000/200	2080	800	190	518	14 210	16 255
DUO 1700/200	2080	1100	190	762	14 213	16 291

### Thermal Store:

- 7 G 1" or G 6/4" F side tapplings
- 3 G 6/4" F side tapplings
- 7 G 1/2" F side tapplings
- 1 G 1/2" F top tapping

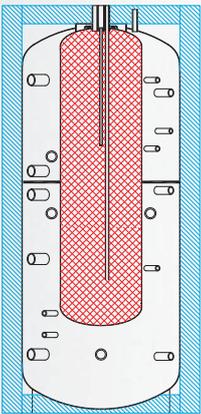
- to connect heating system and heat sources
- to insert el. heating element
- to insert sheaths for temperature sensors
- for air vent valve

### Immersed DHW tank:

- 3 G 3/4" M top tapplings
- 1 G 1/2" F top tapping
- 1 magnesium anode rod (G 3/4")

- in, out, recirculation
- to insert a sheath for temperature sensor

## DUO P Thermal Store with immersed DHW tank and separating metal sheet



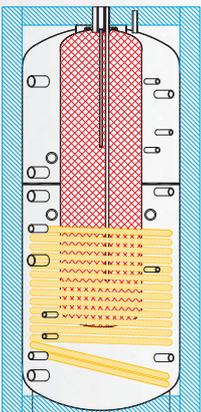
Model	Height [mm]	Diam.* [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Code	Insulation code
DUO 390/130 P	1910	550	123	267	14 071	16 295
DUO 600/200 P	1935	650	190	440	14 272	16 301
DUO 750/200 P	1980	750	190	447	14 274	16 304
DUO 1000/200 P	2080	800	190	518	14 266	16 256
DUO 1700/200 P	2080	1100	190	762	14 268	16 292

### Extra features of DUO P against DUO tanks:

- 1 G 1" or G 6/4" F side tapping
- 1 G 6/4" F side tapping

- to connect heating system and heat sources
- to insert el. heating element

## DUO P Thermal Store with immersed DHW tank, separating metal sheet and solar heat exchanger



Model	Height [mm]	Diam.* [mm]	Tank volume [l]	Volume of supplied hot water [l]**	Heat exchanger surface area [sqm]	Code	Insulation code
DUO 390/130 PR	1910	550	123	267	1.5	14 072	16 296
DUO 600/200 PR	1935	650	190	440	2.4	14 219	16 302
DUO 750/200 PR	1980	750	190	447	2.5	14 222	16 305
DUO 1000/200 PR	2080	800	190	518	3.2	14 125	16 258
DUO 1700/200 PR	2080	1100	190	762	4.0	14 228	16 293

### Extra features of DUO PR against DUO tanks:

- 1 G 1" or G 6/4" F side tapping
- 2 G 6/4" F side tapplings

- to connect heating system and heat sources
- to connect heating system heat exchanger

\* diameter without tapplings and insulation

\*\* for tank heated to 60°C with 40°C outlet temperature at flowrate of 8 l/min., no aux. heat.

