

HSK 1700 PV Combination Thermal Store


Main Features	
Application	This combination Thermal Store utilizes a heat pump with PV panels as a heat source for both space and DHW heating; DHW is being prepared in 2 integrated stainless-steel heat exchangers; a tightly fitting separating metal plate increases the heat pump's seasonal coefficient of performance, a dedicated PV heating element is placed in the lower tank section; more electric heating elements can be installed if needed.
Working fluid	Water (heat exchanger), water; water-glycol mixture (max. 1:1) or water/glycerine mixture (max. 2:1 (thermal store)).
Thermal store code	16183
Insulation code	18848

Energy Efficiency Data (as per EC Regulation No. 812/2013)

	valid for a thermal store with insulation
Energy efficiency class	N/A
Static loss	175 W
Storage volume	1684 l

Technical data

Total thermal store volume	1684 l
Fluid volume in thermal store	1652 l
Fluid volume above separating plate	550 l
Fluid volume below separating plate	1102 l
Fluid volume of DHW heat exchanger above the separating plate	21.0 l
Fluid volume of DHW heat exchanger below the separating plate	11.0 l
Surface area of DHW heat exchanger above the separating plate	6.0 m ²
Surface area of DHW heat exchanger below the separating plate	3.0 m ²
Max. working temperature in thermal store	95 °C
Max. working temperature in DHW heat exchanger	95 °C
Max. working pressure in thermal store	3 bar
Max. working pressure in DHW heat exchanger	10 bar
Thermal store diameter	1100 mm
Thermal store diameter with insulation	1300 mm
Thermal store overall height	2075 mm
Tipping height without insulation	2350 mm
Thermal store perimeter insulation thickness	100 mm
Thermal store bottom insulation thickness	50 mm
Thermal store top insulation thickness	100 mm
Empty weight without insulation	240 kg

Accessories

Electric heating element	types ETT-C, P, F2, M, U
Heating element max. length	955 mm

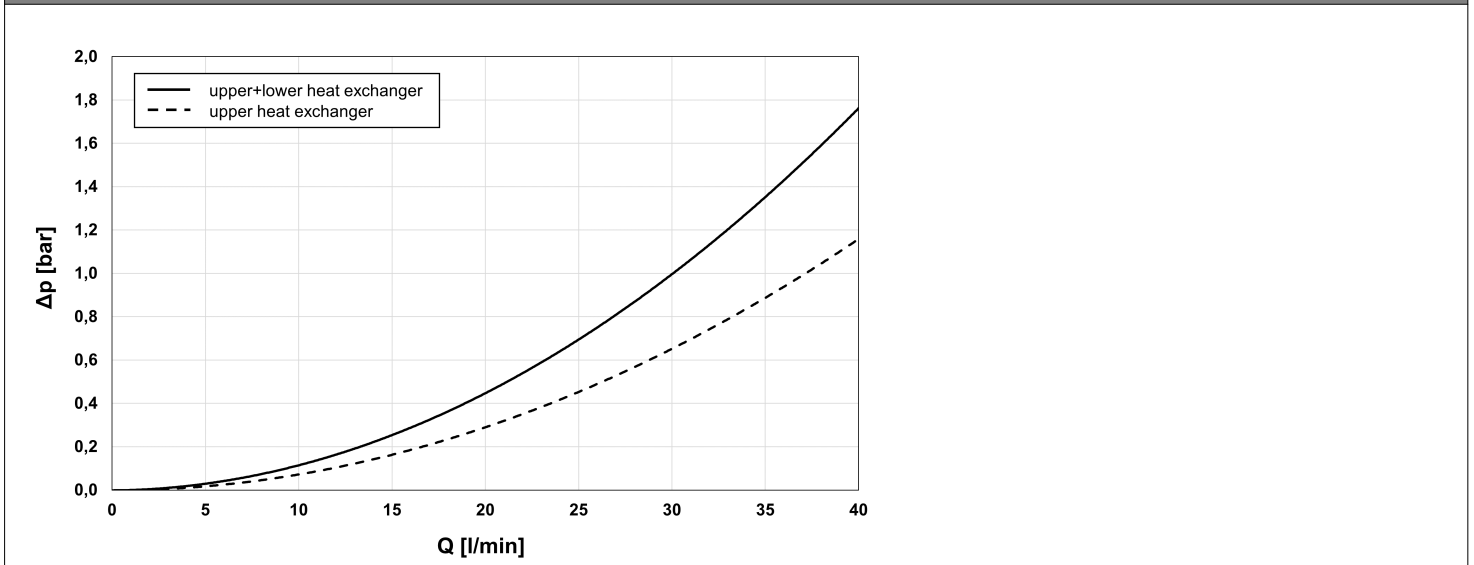
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Materials	
Thermal store material	S235JR
Thermal store perimeter insulation	fleece
Thermal store outer surface insulation	hard polystyrene
Top and bottom thermal store insulation	fleece
DHW heat exchanger	AISI 316 L

Insulation thermal conductivity $\lambda \leq 0.037 \text{ W/mK}$, thermal resistance (short/long term) 150/100 °C, fire class E.

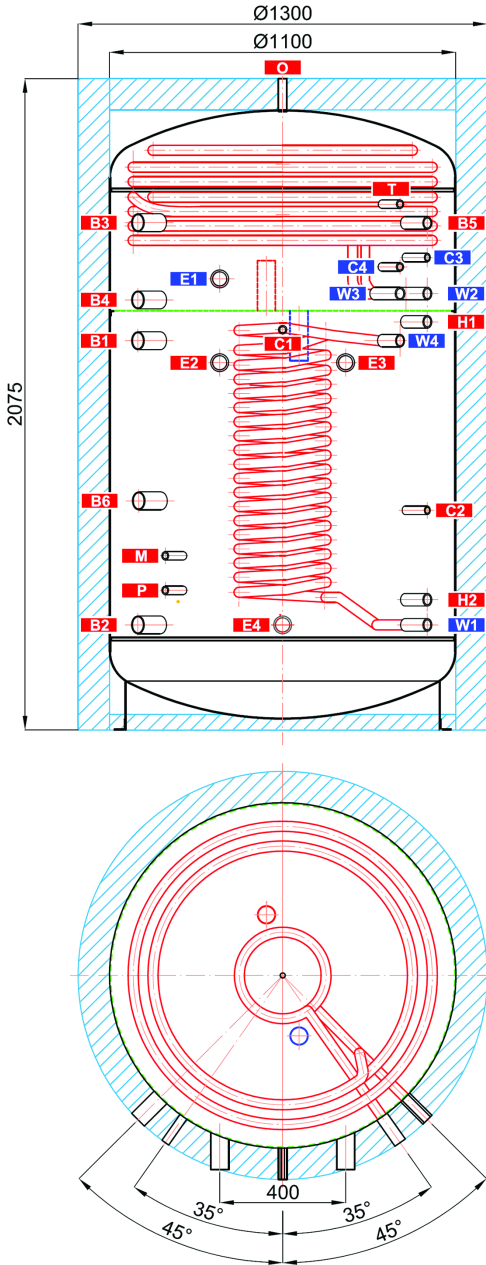
Volume of supplied DHW (heated from 10 °C to 40 °C)				
Heated volume	Temperature in thermal store	Backup heater	Flow rate [l/min]	Hot water volume [l]
Entire	50 °C	10 kW	8	939
			12	863
			20	621
Entire	50 °C	none	8	898
			12	832
			20	557
Above metal sheet	50 °C	10 kW	8	411
			12	293
			20	186
Entire	60 °C	10 kW	8	2642
			12	2007
			20	1498
Entire	60 °C	none	8	1533
			12	1407
			20	1264
Above metal sheet	60 °C	10 kW	8	836
			12	631
			20	423
Entire	80 °C	none	8	2369
			12	2350
			20	2179

DHW heat exchanger pressure drop graph



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Dimensions



CONNECTIONS

pos.	description	connection	height [mm]
Heat sources			
B1	Supply from heat source	G 6/4" F	1240
B2	Return to heat source	G 6/4" F	335
B3	Supply from heat source	G 6/4" F	1615
B4	Return to heat source	G 6/4" F	1370
B5	Supply from heat source	G 1" F	1615
B6	Supply from heat source	G 6/4" F	730
Heating system			
H1	Flow to heating system	G 1" F	1300
H2	Return from heating system	G 1" F	415
Electric heating element			
E1	El. heating element (DHW)	G 6/4" F	1437
E2	El. heating element (space heating)	G 6/4" F	1170
E3	El. heating element (space heating)	G 6/4" F	1170
E4	El. heating element (for PV system)	G 6/4" F	335
DHW heating			
W1	Cold water	G 1" M	335
W2	Domestic hot water	G 1" M	1390
W3	Recirculation	G 1" M	1390
W4	Domestic hot water	G 1" M	1240
Control and safety			
C1	Temperature sensor	G 1/2" F	1275
C2	Temperature sensor	G 1/2" F	700
C3	Temperature sensor	G 1/2" F	1505
C4	Temperature sensor	G 1/2" F	1475
T	Thermometer	G 1/2" F	1675
M	Pressure gauge	G 1/2" F	555
P	Safety valve	G 1/2" F	445
Air discharge			
O	Air vent valve	G 1/2" F	2075