

**HSK 1700 PR Combination Thermal Store**


Main Features	
Application	Combination thermal store with DHW heating in an integrated stainless-steel heat exchanger, fitted with a tight separating metal plate that increases seasonal coefficient of performance (SCOP) of a heat pump and the efficiency of a solar thermal system, with a solar heat exchanger in the lower tank section below the plate.
Working fluid	Water (heat exchanger), water; water-glycol mixture (max. 1:1) or water/glycerine mixture (max. 2:1 (thermal store)).
Thermal store code	14013
Insulation code	18847

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

	valid for a thermal store with insulation
Energy efficiency class	N/A
Static loss	174 W
Storage volume	1654 l

**Technical data**

Total thermal store volume	1676 l
Fluid volume in thermal store	1622 l
Fluid volume above separating plate	550 l
Fluid volume below separating plate	1072 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
Fluid volume in solar heat exchanger	22.0 l
Surface area of DHW heat exchanger above the separating plate	6.0 m <sup>2</sup>
Surface area of DHW heat exchanger below the separating plate	3.0 m <sup>2</sup>
Solar heat exchanger surface area	4.0 m <sup>2</sup>
Max. working temperature in thermal store	95 °C
Max. working temperature in DHW heat exchanger	95 °C
Max. working temperature in solar heat exchanger	95 °C
Max. working pressure in thermal store	3 bar
Max. working pressure in DHW heat exchanger	10 bar
Max. working pressure in solar 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	2190 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	295 kg

**Accessories**

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

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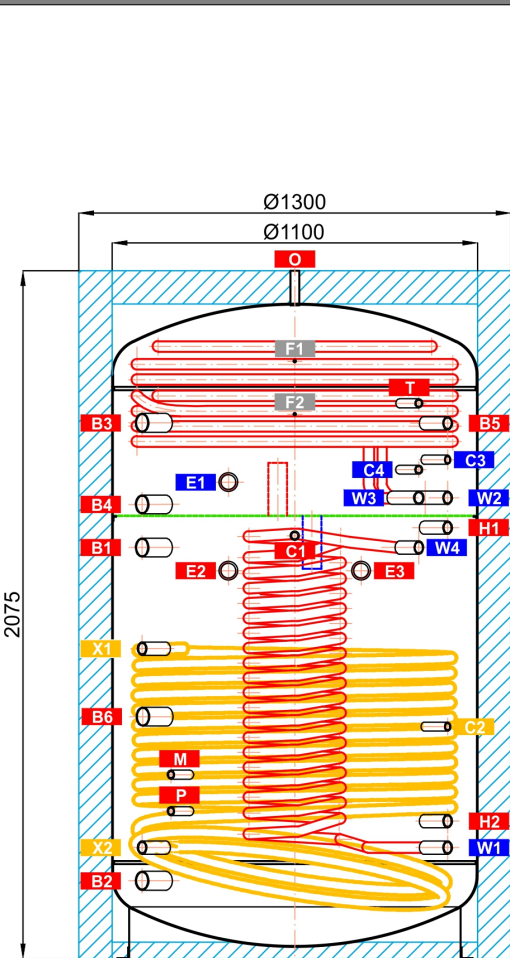
Materials	
Thermal store material	S235JR
Thermal store perimeter insulation	fleece
Thermal store outer surface insulation	hard polystyrene
Top and bottom thermal store insulation	fleece
DHW heat exchanger	AISI 316 L
Solar heat exchanger	S235JR+N

*Insulation thermal conductivity  $\lambda \leq 0.037$  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

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Dimensions

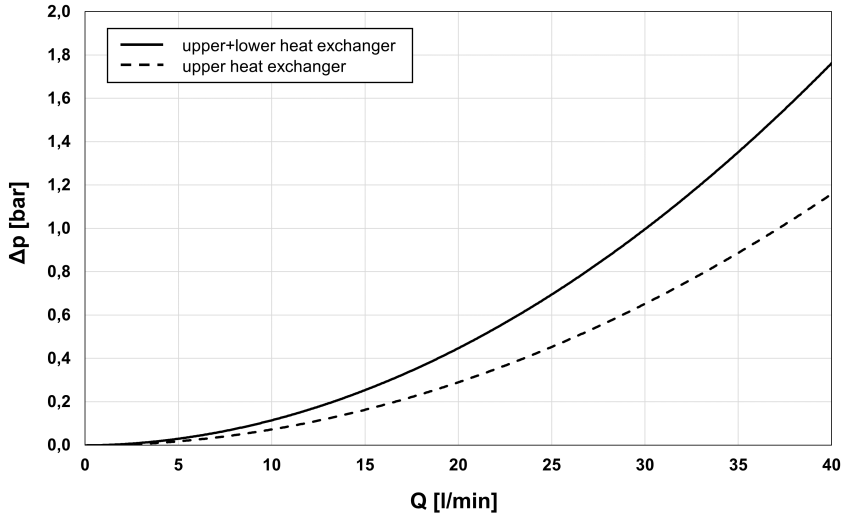


CONNECTIONS

pos.	description	connection	height [mm]
<b>Heat sources</b>			
B1	Supply from heat source	G 6/4" F	1240
B2	Return to heat source	G 6/4" F	235
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
<b>Heating system</b>			
H1	Flow to heating system	G 1" F	1300
H2	Return from heating system	G 1" F	415
<b>Solar thermal system</b>			
X1	Supply from solar collectors	G 1" F	935
X2	Return to solar collectors	G 1" F	335
<b>Electric heating element</b>			
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
<b>DHW heating</b>			
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
<b>Control and safety</b>			
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
<b>Air discharge</b>			
O	Air vent valve	G 1/2" F	2075
<b>Pump station support</b>			
F1	Pump station support – upper	M6	1802
F2	Pump station support – lower	M6	1642

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DHW heat exchanger pressure drop graph



Solar heat exchanger pressure drop

