DATA SHEET

HSK 1000 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	21184
Insulation code	18845

Energy Efficiency Data (as per EC Regulation No. 812/2013)	
	valid for a thermal store with insulation
Energy efficiency class	N/A
Static loss	129 W
Storage volume	922 l

Technical data	
Total thermal store volume	922 l
Fluid volume in thermal store	890 l
Fluid volume above separating plate	314 l
Fluid volume below separating plate	576 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 m²
Surface area of DHW heat exchanger below the separating plate	3.0 m²
Max. working temperature in thermal store	95 °C
Max. working temperature in DHW heat exchanger	95 °C
Max. working pressure in thermal store	4 bar
Max. working pressure in DHW heat exchanger	10 bar
Thermal store diameter	800 mm
Thermal store diameter with insulation	1000 mm
Thermal store overall height	2080 mm
Tipping height without insulation	2230 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	144 kg

Accessories	
Electric heating element	types ETT-C, P, F2, M, U
Heating element max. length	755 mm

R E G U L U S spol. s r.o. Czech Republic
Do Koutů 1897/3, 143 00 Praha 4
Tel.: +420 241 764 506
Fax: +420 241 763 976
E-mail: sales@regulus.eu
Web: www.regulus.eu

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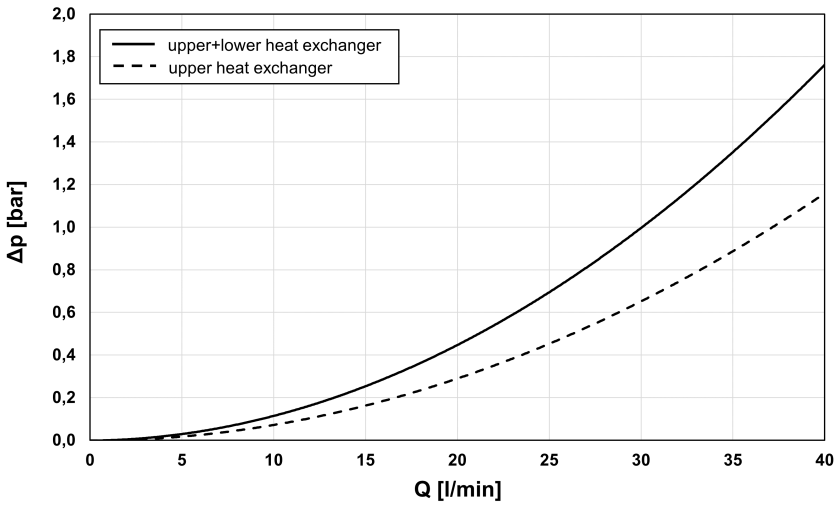
Materials	
Thermal store material	S235JR
Thermal store perimeter insulation	fleece
Thermal store outer surface insulation	hard polystyrene
Top and bottom thermal store insulation	fleece
DHW heat exchanger	AISI 316 L

Insulation thermal conductivity λ ≤ 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	451
			12	391
			20	287
Entire	50 °C	none	8	414
			12	370
			20	253
Above metal sheet	50 °C	10 kW	8	218
			12	199
			20	118
Entire	60 °C	10 kW	8	1381
			12	1008
			20	796
Entire	60 °C	none	8	846
			12	749
			20	697
Above metal sheet	60 °C	10 kW	8	423
			12	301
			20	270
Entire	80 °C	none	8	1406
			12	1365
			20	1173

DHW heat exchanger pressure drop graph



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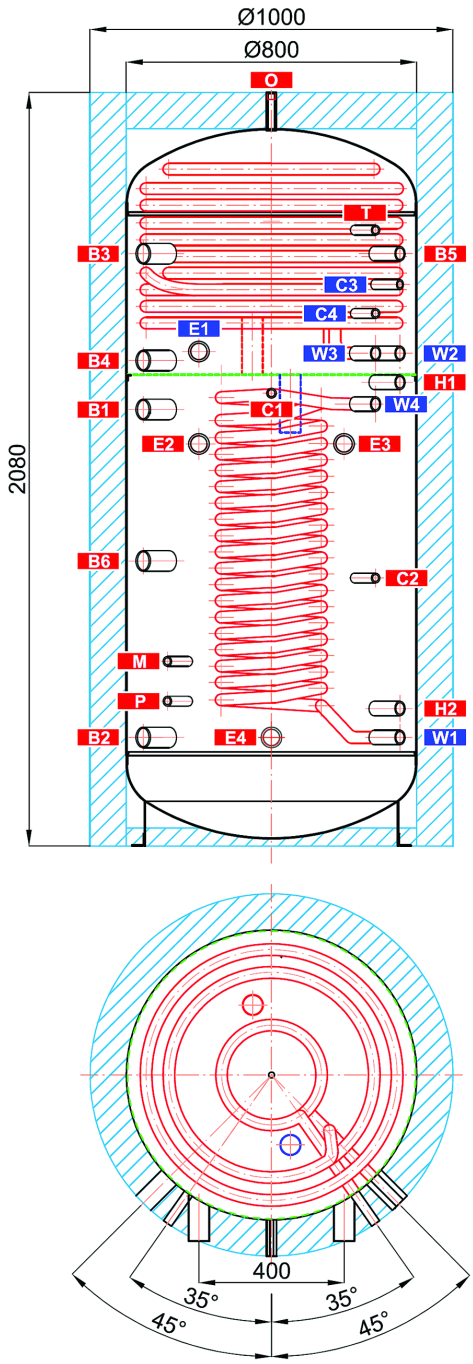
Dimensions



CONNECTIONS

pos.	description	connection	height [mm]
Heat sources			
B1	Supply from heat source	G 6/4" F	1205
B2	Return to heat source	G 6/4" F	300
B3	Supply from heat source	G 6/4" F	1635
B4	Return to heat source	G 6/4" F	1340
B5	Supply from heat source	G 1" F	1635
B6	Supply from heat source	G 6/4" F	787
Heating system			
H1	Flow to heating system	G 1" F	1280
H2	Return from heating system	G 1" F	380
Electric heating element			
E1	El. heating element (DHW)	G 6/4" F	1365
E2	El. heating element (space heating)	G 6/4" F	1110
E3	El. heating element (space heating)	G 6/4" F	1110
E4	El. heating element (for PV system)	G 6/4" F	300
DHW heating			
W1	Cold water	G 1" M	300
W2	Domestic hot water	G 1" M	1360
W3	Recirculation	G 1" M	1360
W4	Domestic hot water	G 1" M	1220
Control and safety			
C1	Temperature sensor	G 1/2" F	1250
C2	Temperature sensor	G 1/2" F	740
C3	Temperature sensor	G 1/2" F	1550
C4	Temperature sensor	G 1/2" F	1470
T	Thermometer	G 1/2" F	1700
M	Pressure gauge	G 1/2" F	510
P	Safety valve	G 1/2" F	400
Air discharge			
O	Air vent valve	G 1/2" F	2080

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