DATA SHEET

HSK 1000 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, wiht a solar heat exchanger in the lower tank section below the plate. Thermal stores are supplied uninsulated. Thermal insulation is available as a separate item, see the codes below.
Working fluid	Water (heat exchanger), water; water–glycol mixture (max. 1:1) or water/glycerine mixture (max. 2:1 (thermal store).
Thermal store code	20998
Insulation code	22159

Energy Efficiency Data (as per EC Regulation No. 812/2013)	
	valid for a thermal store with insulation
Energy efficiency class	N/A
Static loss	127 W
Storage volume	897 l

Technical data	
Total thermal store volume	916 l
Fluid volume in thermal store	869 l
Fluid volume above separating plate	314 l
Fluid volume below separating plate	555 l
Fluid volume of DHW heat exchanger above the separating plate	21.0 l
Fluid volume of DHW heat exchanger below the separating plate	8.0 l
Fluid volume in solar heat exchanger	18.0 l
Surface area of DHW heat exchanger above the separating plate	6.0 m²
Surface area of DHW heat exchanger below the separating plate	2.0 m²
Solar heat exchanger surface area	3.2 m²
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	4 bar
Max. working pressure in DHW heat exchanger	10 bar
Max. working pressure in solar heat exchanger	10 bar
Thermal store diameter	790 mm
Thermal store diameter with insulation	990 mm
Thermal store overall height with insulation	2130 mm
Tipping height without insulation	2111 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	180 kg

Accessories	
Electric heating element	types ETT-A, D2, R, S, C, F2, M, P, U
Heating element max. length	815 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 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	508
			12	401
			20	270
Entire	50 °C	none	8	509
			12	389
			20	268
Above metal sheet	50 °C	10 kW	8	225
			12	219
			20	121
Entire	60 °C	10 kW	8	1478
			12	989
			20	751
Entire	60 °C	none	8	824
			12	734
			20	637
Above metal sheet	60 °C	10 kW	8	497
			12	353
			20	271
Entire	80 °C	none	8	1332
			12	1269
			20	1181

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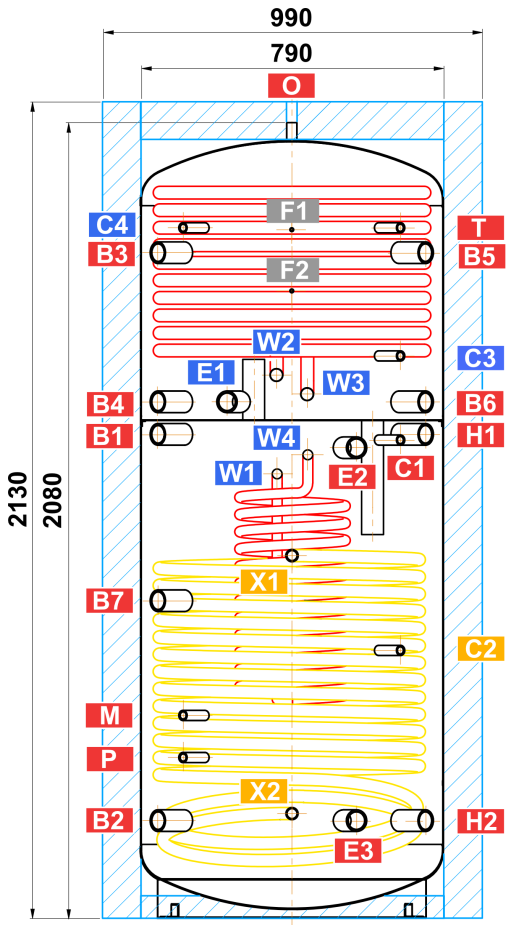
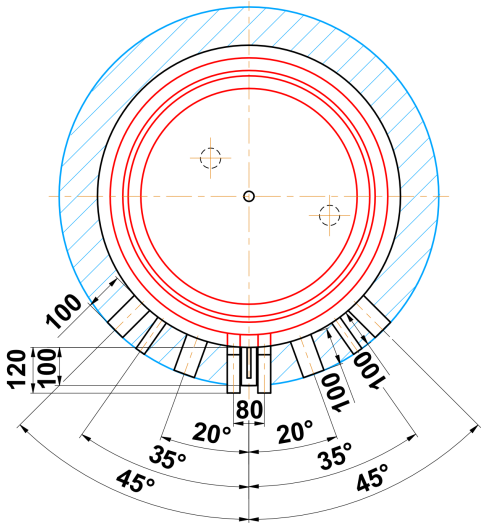
Dimensions





CONNECTIONS

pos.	description	connection	height [mm]
Heat sources			
B1	Supply from heat source	G 6/4" F	1265
B2	Return to heat source	G 6/4" F	255
B3	Supply from heat source	G 6/4" F	1740
B4	Return to heat source	G 6/4" F	1350
B5	Supply from heat source	G 6/4" F	1740
B6	Return to heat source	G 6/4" F	1350
B7	Supply from heat source	G 6/4" F	830
Heating system			
H1	Flow to heating system	G 6/4" F	1265
H2	Return from heating system	G 6/4" F	255
Solar thermal system			
X1	Supply from solar collectors	G 1" F	945
X2	Return to solar collectors	G 1" F	270
Electric heating element			
E1	El. heating element (DHW)	G 6/4" F	1350
E2	El. heating element (space heating)	G 6/4" F	1230
E3	El. heating element (space heating)	G 6/4" F	255
DHW heating			
W1	Cold water	G 1" M	1160
W2	Domestic hot water	G 1" M	1420
W3	Recirculation	G 1" M	1370
W4	Domestic hot water	G 1" M	1210
Control and safety			
C1	Temperature sensor	G 1/2" F	1250
C2	Temperature sensor	G 1/2" F	700
C3	Temperature sensor	G 1/2" F	1470
C4	Temperature sensor	G 1/2" F	1805
T	Thermometer	G 1/2" F	1805
M	Pressure gauge	G 1/2" F	530
P	Safety valve	G 1/2" F	420
Air discharge			
O	Air vent valve	G 1/2" F	2080
Pump station support			
F1	Pump station support – upper	M6	1800
F2	Pump station support – lower	M6	1640

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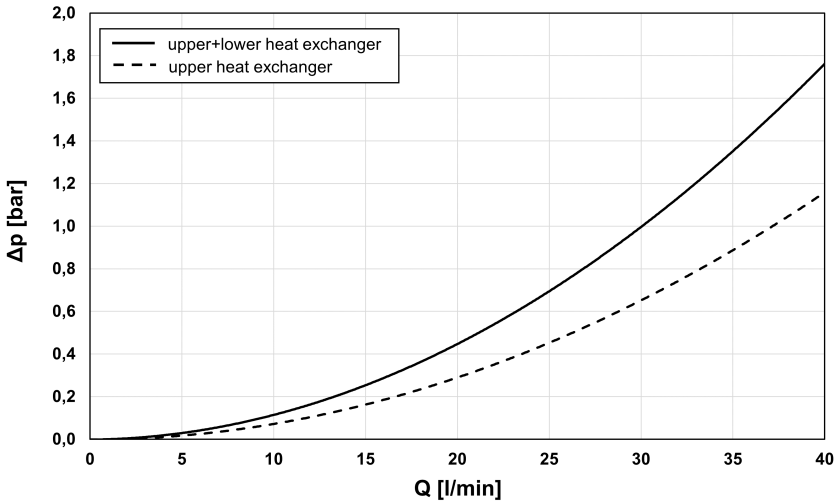
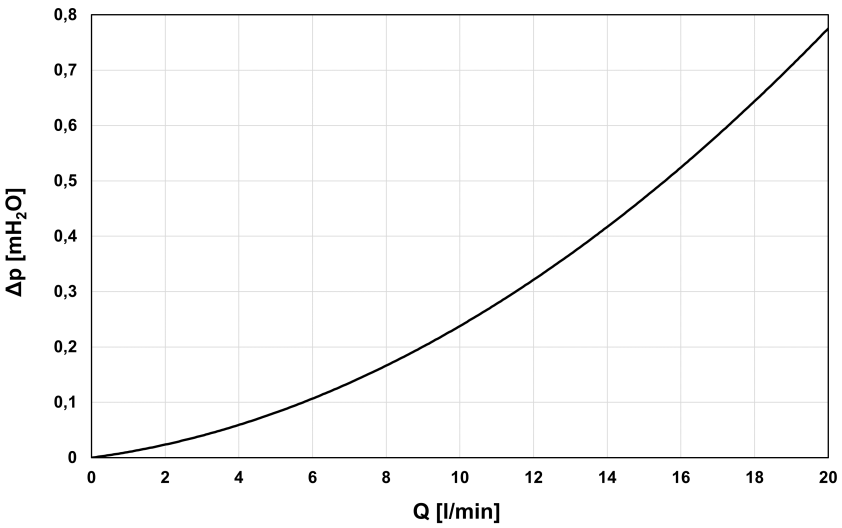
DHW heat exchanger pressure drop graph



Solar heat exchanger pressure drop