


HSK 650 PB Combination Thermal Store

	Main Features	
	Application	Combination thermal store with integrated stainless-steel heat exchanger and a tight separating metal sheet is intended for heat accumulation and DHW heating. Thanks to its modified design and the tight separating metal sheet, just one zone valve is sufficient for switching between heating the upper and lower tank sections. The tank is suitable for installations with heat pumps and RegulusBOX indoor unit. The tank insulation is not included in supply and shall be ordered separately, see the code 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	19633
	Insulation code	19635

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

	valid for a thermal store with insulation
Energy efficiency class	N/A
Static loss	112 W
Storage volume	625 l

Technical data

Total thermal store volume	625 l
Fluid volume in thermal store	604 l
Fluid volume above separating plate	312 l
Fluid volume below separating plate	292 l
Fluid volume of DHW heat exchanger above the separating plate	21.0 l
Surface area of DHW heat exchanger above the separating plate	6.0 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	4 bar
Max. working pressure in DHW heat exchanger	10 bar
Thermal store diameter	750 mm
Thermal store diameter with insulation	950 mm
Thermal store overall height	1725 mm
Tipping height without insulation	1880 mm
Thermal store perimeter insulation thickness	100 mm
Thermal store bottom insulation thickness	50 mm
Thermal store top insulation thickness	120 mm
Empty weight without insulation	115 kg

Accessories

Electric heating element	types ETT-A, D2, R, S, C, F2, M, P, U
Heating element max. length	755 mm

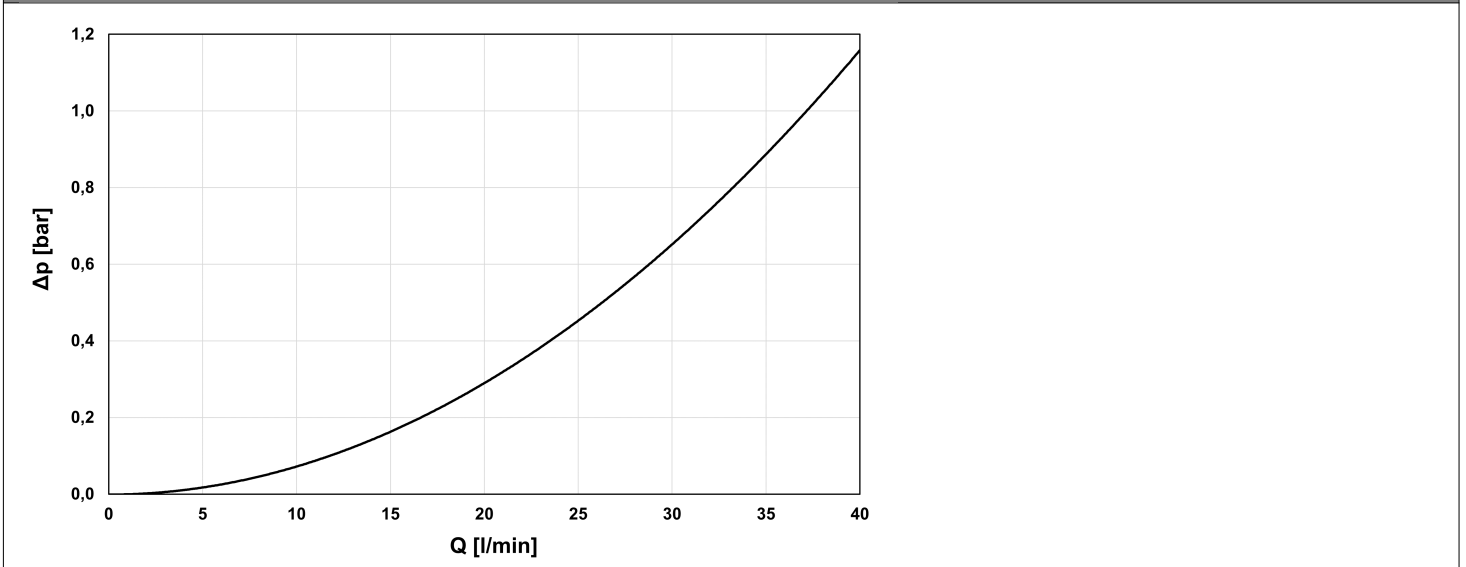
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Materials	
Thermal store material	S235JR
Thermal store perimeter insulation	fleece
Thermal store outer surface insulation	hard polystyrene
Top and bottom thermal store insulation	fleece
DHW heat exchanger	AISI 316 L

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

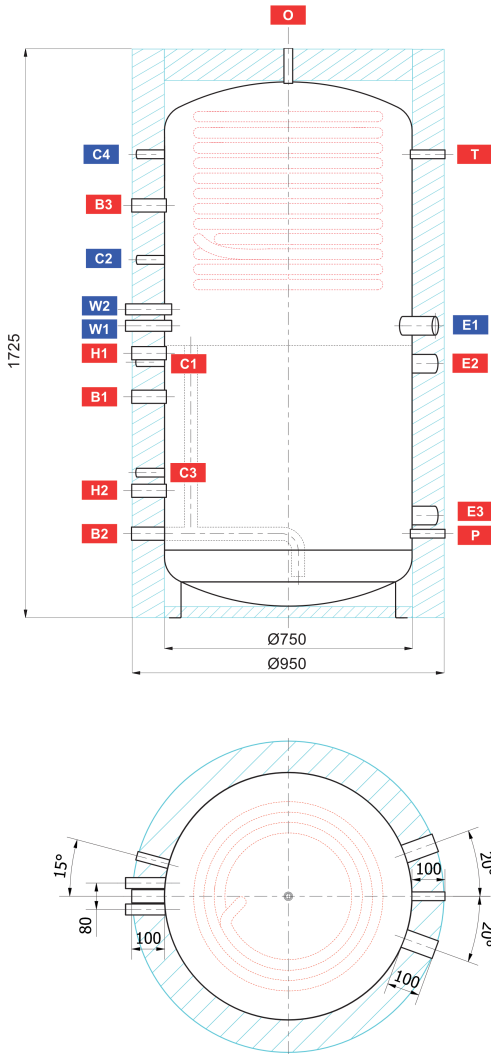
Volume of supplied DHW (heated from 10 °C to 40 °C)				
Heated volume	Temperature in thermal store	Backup heater	Flow rate [l/min]	Hot water volume [l]
Entire	50 °C	10 kW	8	210
			12	159
			20	129
Entire	50 °C	none	8	165
			12	132
			20	128
Above metal sheet	50 °C	10 kW	8	211
			12	125
			20	102
Entire	60 °C	10 kW	8	542
			12	354
			20	309
Entire	60 °C	none	8	337
			12	293
			20	248
Above metal sheet	60 °C	10 kW	8	532
			12	341
			20	296

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 1" F	670
B2	Return to heat source	G 1" F	255
B3	Supply from heat source	G 1" F	1250
Heating system			
H1	Flow to heating system	G 1" F	802
H2	Return from heating system	G 1" F	385
Electric heating element			
E1	El. heating element (DHW)	G 6/4" F	885
E2	El. heating element (space heating)	G 6/4" F	770
E3	El. heating element (space heating)	G 6/4" F	310
DHW heating			
W1	Cold water	G 1" M	885
W2	Domestic hot water	G 1" M	935
Control and safety			
C1	Temperature sensor	G 1/2" F	775
C2	Temperature sensor	G 1/2" F	1085
C3	Temperature sensor	G 1/2" F	440
C4	Temperature sensor	G 1/2" F	1405
T	Thermometer	G 1/2" F	1405
P	Safety valve	G 1/2" F	255
Air discharge			
O	Air vent valve	G 1/2" F	1725