

DUO 600/200 N PR Thermal Store with immersed DHW tank

		Main Features
		Application Combination thermal store with immersed stainless-steel DHW tank, 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, water/glycol mixture (max. 1:1) or water/glycerine mixture (max. 2:1) (thermal store), water (immersed DHW tank).	Thermal store code 19133	Insulation code 19321
Energy Efficiency Data (as per EC Regulation No. 812/2013)		
Energy efficiency class N/A	Static loss 100 W	Storage volume 546 l
Technical data		
Total thermal store volume 559 l	Fluid volume in thermal store 372 l	Immersed DHW tank volume 174 l
Fluid volume in solar heat exchanger 13.0 l	Solar heat exchanger surface area 2.4 m ²	Max. working temperature in thermal store 95 °C
Max. working temperature in immersed DHW tank 95 °C	Max. working temperature in solar heat exchanger 95 °C	Max. working pressure in thermal store 3 bar
Max. working pressure in immersed DHW tank 6 bar	Max. working pressure in solar heat exchanger 10 bar	Thermal store diameter 650 mm
Thermal store diameter with insulation 850 mm	Thermal store overall height 1910 mm	Tipping height without insulation 1935 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 143 kg		
Materials		
Thermal store material S235JR	Thermal store perimeter insulation fleece	Immersed DHW tank AISI 304
Thermal store outer surface insulation PU leather	Top and bottom thermal store insulation fleece	Solar heat exchanger S235JR+N

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

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Accessories																												
Electric heating element				types ETT-C, F2, M, P, U																								
Heating element max. length				500 mm																								
Electronic anode rod				code 13793																								
Expansion vessel				type HW 8 l and larger																								
Spare parts (magnesium anode rods)																												
Magnesium anode rod				code 19152																								
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	60 °C	10 kW	8	526																								
			12	397																								
			20	292																								
Entire	60 °C	none	8	457																								
			12	384																								
			20	319																								
Above metal sheet	60 °C	10 kW	8	267																								
			12	237																								
			20	212																								
Entire	80 °C	none	8	766																								
			12	689																								
			20	571																								
DHW heat exchanger pressure drop graph																												
<p>The graph plots the pressure drop Δp [bar] against the flow rate Q [l/min]. Both curves show a linear increase, with the circulation-DHW curve being steeper than the cold water-DHW curve.</p> <table border="1"> <caption>Data points estimated from DHW heat exchanger pressure drop graph</caption> <thead> <tr> <th>Flow rate Q [l/min]</th> <th>Cold water-DHW Δp [bar]</th> <th>Circulation-DHW Δp [bar]</th> </tr> </thead> <tbody> <tr><td>0</td><td>0,00</td><td>0,00</td></tr> <tr><td>5</td><td>0,005</td><td>0,010</td></tr> <tr><td>10</td><td>0,010</td><td>0,020</td></tr> <tr><td>15</td><td>0,015</td><td>0,030</td></tr> <tr><td>20</td><td>0,020</td><td>0,040</td></tr> <tr><td>25</td><td>0,025</td><td>0,050</td></tr> <tr><td>30</td><td>0,030</td><td>0,060</td></tr> </tbody> </table>					Flow rate Q [l/min]	Cold water-DHW Δp [bar]	Circulation-DHW Δp [bar]	0	0,00	0,00	5	0,005	0,010	10	0,010	0,020	15	0,015	0,030	20	0,020	0,040	25	0,025	0,050	30	0,030	0,060
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Dimensions			
CONNECTIONS			
pos.	description	connection	height [mm]
Heat sources			
B1	Supply from heat source	G 6/4" F	985
B2	Return to heat source	G 6/4" F	135
B3	Supply from heat source	G 6/4" F	1635
B4	Return to heat source	G 6/4" F	1090
B5	Supply from heat source	G 1" F	1570
B6	Supply from heat source	G 6/4" F	660
Heating system			
H1	Flow to heating system	G 1" F	1030
H2	Return from heating system	G 1" F	225
Solar thermal system			
X1	Supply from solar collectors	G 1" F	820
X2	Return to solar collectors	G 1" F	235
Electric heating element			
E1	El. heating element (DHW)	G 6/4" F	1180
E2	El. heating element (space heating)	G 6/4" F	890
E3	El. heating element (space heating)	G 6/4" F	890
DHW heating			
W1	Cold water	G 3/4" F	1910
W2	Domestic hot water	G 3/4" F	1910
W3	Recirculation	G 3/4" F	1910
A1	Anode	G 3/4" F	1880
Control and safety			
C1	Temperature sensor	G 1/2" F	1000
C2	Temperature sensor	G 1/2" F	625
C3	Temperature sensor	G 1/2" F	1310
C4	Temperature sensor	G 1/2" F	1220
T	Thermometer	G 1/2" F	1635
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	1910
Pump station support			
F1	Pump station support – upper	M6	1660
F2	Pump station support – lower	M6	1500