

DATA SHEET

DUO 390/130 N PR Thermal Store with immersed DHW tank

| | | |
|---|---|--|
| | Main Features | |
| | Application | Storage of thermal energy for DHW and space heating. |
| | Description | Combination Thermal Store with immersed stainless steel DHW tank; a tight separating plate increases seasonal performance factor of a heat pump. |
| | 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 | 19139 |
| | Insulation Code | 19293 |
| | Energy Efficiency Data (as per EC Regulation No. 812/2013) | |
| | with insulation | |
| | Energy efficiency class | C |
| | Standing loss | 86 W |
| | Storage volume | 387 l |
| Technical Data | | |
| Total volume | 396 l | |
| Fluid volume in thermal store | 264 l | |
| Immersed DHW tank volume | 123 l | |
| Heat exchanger (HX) volume | 9 l | |
| Heat exchanger surface area | 1.5 m ² | |
| Max. working temp. in thermal store | 95 °C | |
| Max. working temp. in DHW tank | 95 °C | |
| Max. working temperature in heat exchanger | 95 °C | |
| Max. working pressure in thermal store | 3 bar | |
| Max. working pressure in DHW tank | 6 bar | |
| Max. working pressure in HX | 10 bar | |
| Materials | | |
| Thermal store material | S235JR | |
| DHW tank material | AISI 304 | |
| Exchanger material | S235JR+N | |
| Tank perimeter insulation | fleece | |
| Perimeter insulation's outer surface | hard polystyrene | |
| Top and bottom tank insulation | fleece | |
| Dimensions, tipping height, insulation thickness, weight | | |
| Tank diameter | 550 mm | |
| Tank diameter with insulation | 750 mm | |
| Tank overall height | 1910 mm | |
| Tipping height without insulation | 1950 mm | |
| Tank perimeter insulation thickness | 100 mm | |
| Bottom insulation thickness | 50 mm | |
| Top insulations thickness | 120 mm | |
| Empty weight without insulation | 117 kg | |
| Accessories | | |
| El. heating elements | types ETT-C, F, M, P | |
| Heating elements max. lenght | 3 x 500 mm | |
| Electronic anode rod | code 13793 | |
| Expansion vessel (drinking water) | type HW 8 l and larger | |
| Spare Parts | | |
| Magnesium anode rod | code 19152 | |

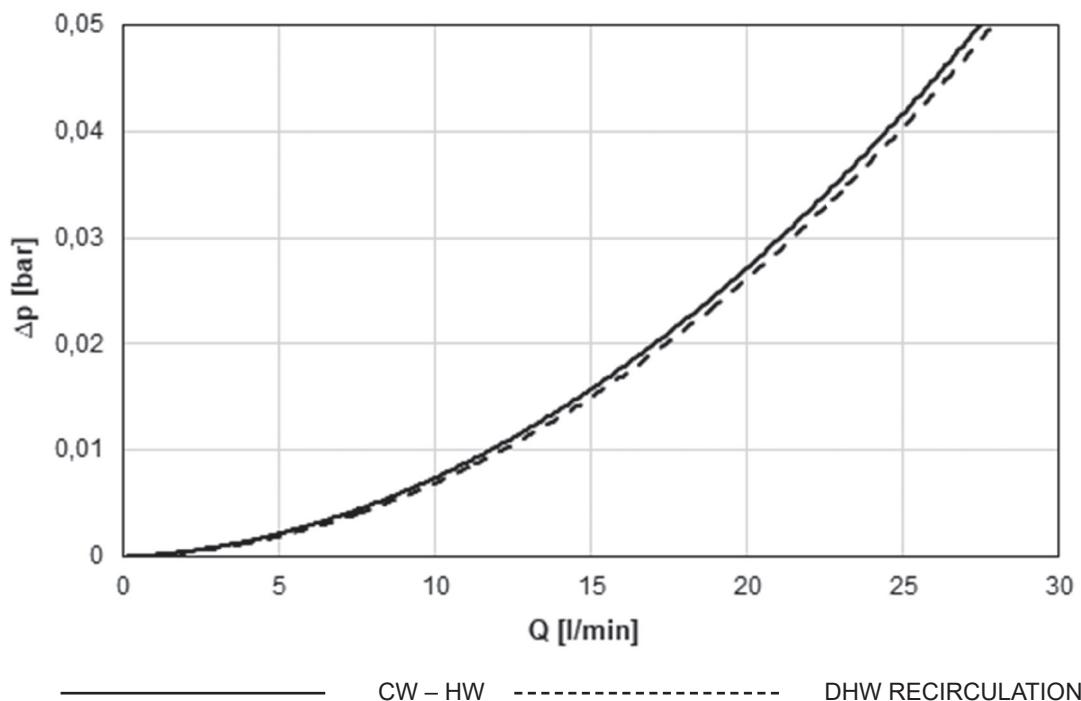
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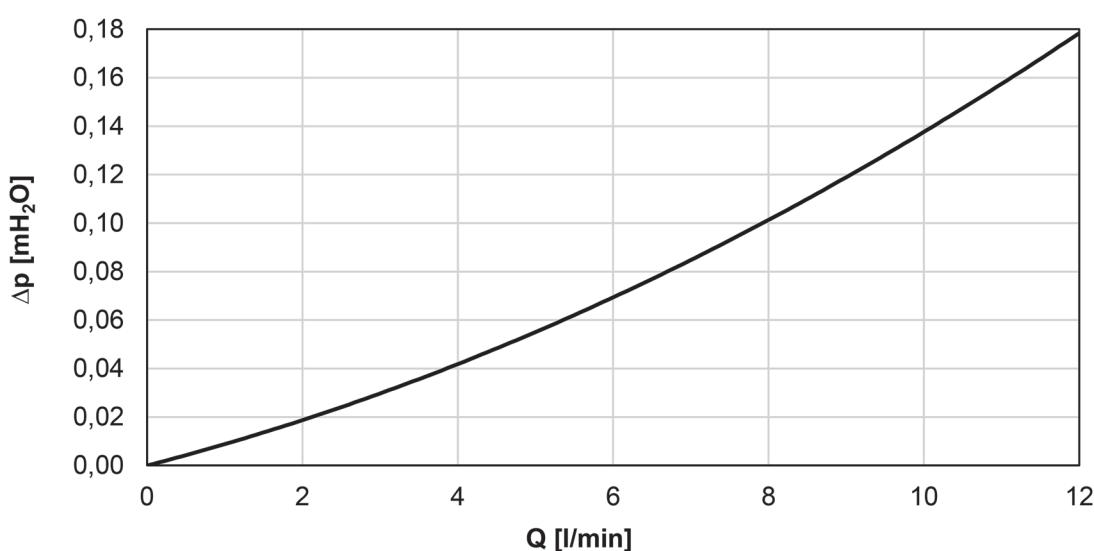
Volume of supplied DHW (heated from 10 °C to 40 °C)

| Heated volume | entire | | | entire | | | above separating plate | | | entire | | |
|-----------------------------|------------|------------|------------|------------|------------|------------|------------------------|------------|------------|------------|------------|------------|
| Temperature in tank | 60 °C | | | 60 °C | | | 60 °C | | | 80 °C | | |
| Backup heater | 10 kW | | | none | | | 10 kW | | | none | | |
| Flow rate [l/min] | 8 | 12 | 20 | 8 | 12 | 20 | 8 | 12 | 20 | 8 | 12 | 20 |
| Hot water volume [l] | 331 | 223 | 174 | 277 | 254 | 197 | 199 | 176 | 157 | 487 | 458 | 351 |

Graph of pressure drop versus flow in the DHW tank



Graph of solar exchanger pressure losses

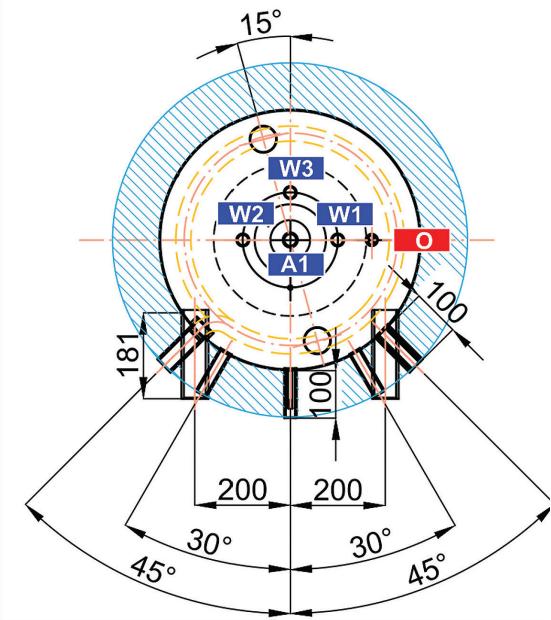
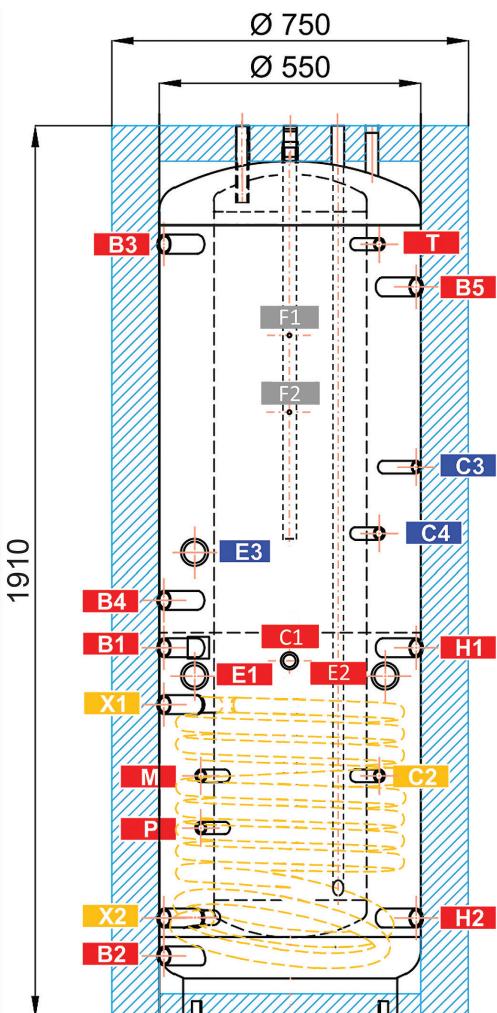


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Dimensions

Tipping height without insulation 1950 mm



CONNECTIONS

| pos. | descriptions | connection | height [mm] |
|----------------------------------|--|------------|-------------|
| Heat sources | | | |
| B1 | Incoming from heat source | G 1" F | 780 |
| B2 | Return to heat source | G 1" F | 130 |
| B3 | Incoming from heat source | G 1" F | 1630 |
| B4 | Return to heat source | G 1" F | 880 |
| B5 | Incoming from heat source | G 1" F | 1540 |
| Heating system | | | |
| H1 | Outlet to the heating circuit | G 1" F | 780 |
| H2 | Return from the heating circuit | G 1" F | 210 |
| Solar system | | | |
| X1 | Incoming from solar collectors | G 1" F | 660 |
| X2 | Return to solar collectors | G 1" F | 210 |
| Electric heating elements | | | |
| E1 | Electric heating element for space heating | G 6/4" F | 720 |
| E2 | Electric heating element for space heating | G 6/4" F | 720 |
| E3 | Electric heating element for DHW heating | G 6/4" F | 980 |
| DHW heating | | | |
| W1 | Cold water | G 3/4" M | 1910 |
| W2 | Hot water | G 3/4" M | 1910 |
| W3 | Recirculation | G 3/4" M | 1910 |
| A1 | Anode | G 3/4" F | 1855 |
| Control and safety | | | |
| C1 | Temperature sensor – space heating | G 1/2" F | 750 |
| C2 | Temperature sensor – solar | G 1/2" F | 510 |
| C3 | Temperature sensor – DHW heating | G 1/2" F | 1160 |
| C4 | Temperature sensor – DHW heating | G 1/2" F | 1020 |
| T | Thermometer | G 1/2" F | 1630 |
| M | Pressure gauge | G 1/2" F | 510 |
| P | Safety valve | G 1/2" F | 400 |
| Air release | | | |
| O | Air vent valve | G 1/2" F | 1885 |
| Other | | | |
| F1 | Attaching the pump station | M 6 | 1430 |
| F2 | Attaching the pump station | M 6 | 1270 |