

**HSK 600 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, with a solar heat exchanger in the lower tank section below the plate. |
| Working fluid      | Water (heat exchanger), water; water-glycol mixture (max. 1:1) or water/glycerine mixture (max. 2:1 (thermal store)).                                                                                                                                                                                                                |
| Thermal store code | 14187                                                                                                                                                                                                                                                                                                                                |
| Insulation code    | 18838                                                                                                                                                                                                                                                                                                                                |

| Energy Efficiency Data (as per EC Regulation No. 812/2013) |                                           |
|------------------------------------------------------------|-------------------------------------------|
|                                                            | valid for a thermal store with insulation |
| Energy efficiency class                                    | N/A                                       |
| Static loss                                                | 98 W                                      |
| Storage volume                                             | 540 l                                     |

| Technical data                                                |                    |
|---------------------------------------------------------------|--------------------|
| Total thermal store volume                                    | 553 l              |
| Fluid volume in thermal store                                 | 508 l              |
| Fluid volume above separating plate                           | 235 l              |
| Fluid volume below separating plate                           | 273 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             |
| Fluid volume in solar heat exchanger                          | 13.0 l             |
| Surface area of DHW heat exchanger above the separating plate | 6.0 m <sup>2</sup> |
| Surface area of DHW heat exchanger below the separating plate | 3.0 m <sup>2</sup> |
| Solar heat exchanger surface area                             | 2.4 m <sup>2</sup> |
| 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                                        | 650 mm             |
| Thermal store diameter with insulation                        | 850 mm             |
| Thermal store overall height                                  | 1935 mm            |
| Tipping height without insulation                             | 1970 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                               | 136 kg             |

| Accessories                 |                |
|-----------------------------|----------------|
| Electric heating element    | ETT-C, P, M, U |
| Heating element max. length | 555 mm         |

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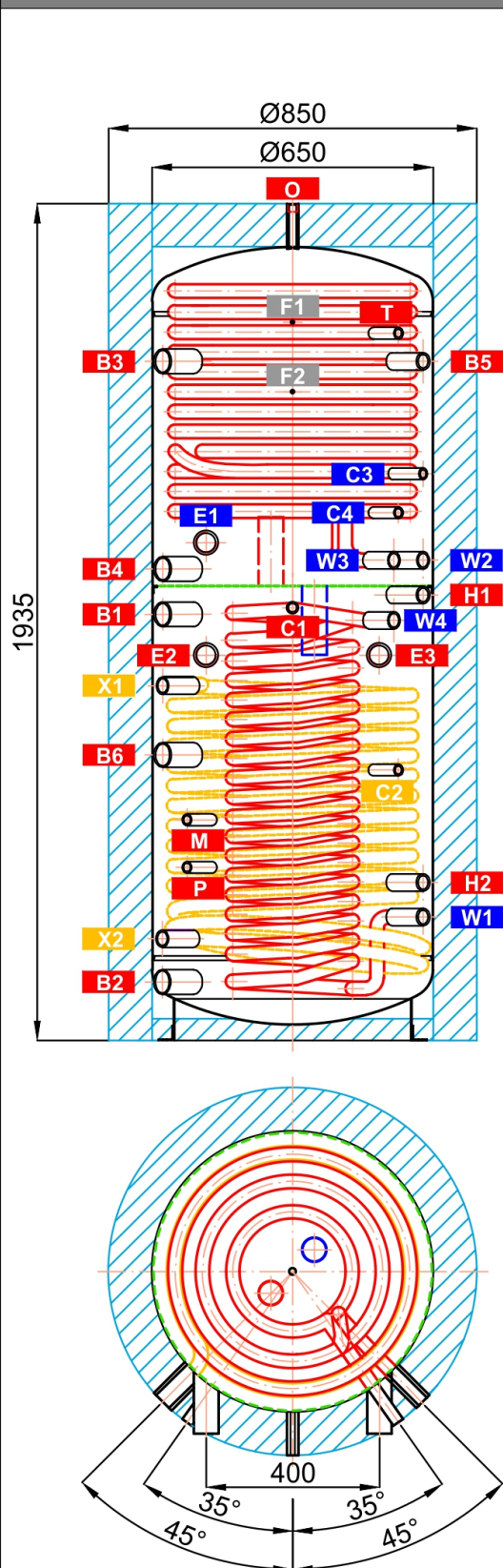
| Materials                               |                  |
|-----------------------------------------|------------------|
| Thermal store material                  | S235JR           |
| Thermal store perimeter insulation      | fleece           |
| Thermal store outer surface insulation  | hard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

Insulation thermal conductivity  $\lambda \leq 0.037 \text{ W/mK}$ , 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                 | 315                  |
|                                                     |                              |               | 12                | 287                  |
|                                                     |                              |               | 20                | 213                  |
| Entire                                              | 50 °C                        | none          | 8                 | 283                  |
|                                                     |                              |               | 12                | 247                  |
|                                                     |                              |               | 20                | 175                  |
| Above metal sheet                                   | 50 °C                        | 10 kW         | 8                 | 167                  |
|                                                     |                              |               | 12                | 152                  |
|                                                     |                              |               | 20                | 105                  |
| Entire                                              | 60 °C                        | 10 kW         | 8                 | 1094                 |
|                                                     |                              |               | 12                | 835                  |
|                                                     |                              |               | 20                | 406                  |
| Entire                                              | 60 °C                        | none          | 8                 | 669                  |
|                                                     |                              |               | 12                | 651                  |
|                                                     |                              |               | 20                | 567                  |
| Above metal sheet                                   | 60 °C                        | 10 kW         | 8                 | 320                  |
|                                                     |                              |               | 12                | 287                  |
|                                                     |                              |               | 20                | 257                  |
| Entire                                              | 80 °C                        | none          | 8                 | 1037                 |
|                                                     |                              |               | 12                | 1007                 |
|                                                     |                              |               | 20                | 924                  |

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### Dimensions

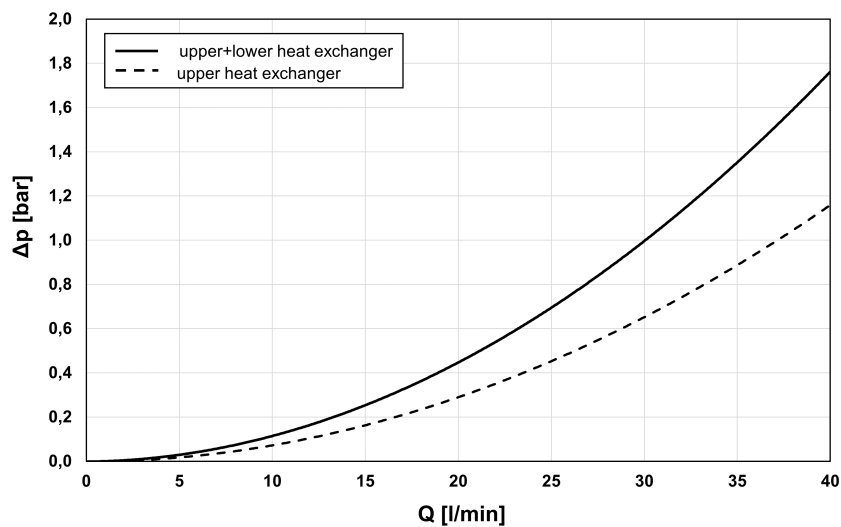


### CONNECTIONS

| pos.                            | description                         | connection | height [mm] |
|---------------------------------|-------------------------------------|------------|-------------|
| <b>Heat sources</b>             |                                     |            |             |
| 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   | 1570        |
| 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         |
| <b>Heating system</b>           |                                     |            |             |
| H1                              | Flow to heating system              | G 1" F     | 1030        |
| H2                              | Return from heating system          | G 1" F     | 365         |
| <b>Solar thermal system</b>     |                                     |            |             |
| X1                              | Supply from solar collectors        | G 1" F     | 820         |
| X2                              | Return to solar collectors          | G 1" F     | 235         |
| <b>Electric heating element</b> |                                     |            |             |
| E1                              | El. heating element (DHW)           | G 6/4" F   | 1150        |
| E2                              | El. heating element (space heating) | G 6/4" F   | 890         |
| E3                              | El. heating element (space heating) | G 6/4" F   | 890         |
| <b>DHW heating</b>              |                                     |            |             |
| W1                              | Cold water                          | G 1" M     | 285         |
| W2                              | Domestic hot water                  | G 1" M     | 1110        |
| W3                              | Recirculation                       | G 1" M     | 1110        |
| W4                              | Domestic hot water                  | G 1" M     | 970         |
| <b>Control and safety</b>       |                                     |            |             |
| 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         |
| <b>Air discharge</b>            |                                     |            |             |
| O                               | Air vent valve                      | G 1/2" F   | 1935        |
| <b>Pump station support</b>     |                                     |            |             |
| F1                              | Pump station support – upper        | M6         | 1660        |
| F2                              | Pump station support – lower        | M6         | 1500        |

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### DHW heat exchanger pressure drop graph



### Solar heat exchanger pressure drop

