Device information SI 130TUR+

**Design**
- Heat source: Brine
- Model: Universal design reversible
- Thermal energy metering: Integrated
- Installation location: Indoors
- Performance levels: 4

**Operating limits**
- Max. flow temperature: 78 °C +/- 2
- Flow temperature cooling min. / Flow temperature cooling max.: 7 / 20 °C
- Lower operating limit heat source (heating operation) / Upper operating limit heat source (heating operation): -5 / 25 °C
- Lower operating limit heat source (cooling operation) / Upper operating limit heat source (cooling operation): 10 / 30 °C
- Anti-freeze: Monoethylenglycol
- Minimum brine concentrate: 25 %

**Flow / sound**
- Max. heating water flow rate / Pressure drop: 19.0 m³/h / 13000 Pa
- Minimum heating water flow rate / Pressure drop: 9 m³/h / 2900 Pa
- Minimum cooling water flow rate / Pressure drop: 19.0 m³/h / 13000 Pa
- Additional heat exchanger flow / Pressure drop additional heat exchanger: 6 m³/h / 24500 Pa
- Heat source flow (min.) / Pressure drop evaporator EN 14511: 24.5 m³/h / 21500 Pa
- Sound power level: 76 dB (A)
- Sound pressure level in 1 m: 60 dB (A)

**Dimensions / weight and filling quantities**
- Dimensions (W x H x D): 1350 x 1890 x 775 mm
- Weight: 830 kg
- Thread type, heating connection / Connection heating: R1 / 3 inch
- Thread type, heat source connection / Heat source connection: R1 / 3 inch
- Thread type connection additional heat exchanger / Additional heat exchanger connection: G1 / ½ inch
- Refrigerant / Amount of refrigerant: R410A / 16.9 kg
- Oil type / Oil quantity: Polyolester (POE) / 10 l

**Electrical connection**
- Rated voltage / Fuse protection: 3/N/PE ~400 V, 50 Hz / C 80 A
- Control voltage / Control voltage fuse protection: 1/N/PE ~230 V, 50 Hz / C 16 A
- Degree of protection: IP 21
- Initial current limiter: Yes
- Starting current: 108 A
- Nominal power consumption according to EN 14511 at B0/W35 1): 25.83 kW
- Nominal current at B0/W35 / Nominal current cos phi: 46.6 A / 0.8
- Power consumption of the compressor protection: 120 W

**Complies with the European safety regulations**

**Additional model features**
- Water in device protected against freezing 4)
- 4-way valve for heating and cooling 9)
- Yes

**Heat output / coefficient of performance (COP) according to EN 14511: 1)8)9)10)**

<table>
<thead>
<tr>
<th>Heating compressor 1</th>
<th>W35</th>
<th>W45</th>
<th>W55</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-5</td>
<td>49.4 kW / 3.96</td>
<td>47.5 kW / 3.15</td>
<td></td>
</tr>
<tr>
<td>B0</td>
<td>57.6 kW / 4.4</td>
<td>55.2 kW / 3.5</td>
<td></td>
</tr>
<tr>
<td>B25</td>
<td>105.0 kW / 7.88</td>
<td>98.9 kW / 6.29</td>
<td>90.5 kW / 4.88</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heating compressor 2</th>
<th>W35</th>
<th>W45</th>
<th>W55</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-5</td>
<td>94.2 kW / 7.75</td>
<td>92.8 kW / 3.12</td>
<td>89.8 kW / 2.45</td>
</tr>
<tr>
<td>B0</td>
<td>108.5 kW / 4.21</td>
<td>105.7 kW / 3.49</td>
<td>103.1 kW / 2.82</td>
</tr>
<tr>
<td>B25</td>
<td>191.2 kW / 7.07</td>
<td>184.2 kW / 5.85</td>
<td>177.7 kW / 4.81</td>
</tr>
</tbody>
</table>

**Cooling capacity / energy efficiency ratio (EER) according to EN 14511: 8)11)**

<table>
<thead>
<tr>
<th>Cooling compressor 1</th>
<th>W7</th>
<th>W18</th>
</tr>
</thead>
<tbody>
<tr>
<td>B10</td>
<td>64.8 kW / 6.8</td>
<td>81.4 kW / 7.2</td>
</tr>
<tr>
<td>B20</td>
<td>63.4 kW / 5.8</td>
<td>89.4 kW / 7.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling compressor 2</th>
<th>W9</th>
<th>W18</th>
</tr>
</thead>
<tbody>
<tr>
<td>B10</td>
<td>139.7 kW / 6.9</td>
<td>174.1 kW / 7.0</td>
</tr>
<tr>
<td>B20</td>
<td>129.0 kW / 5.6</td>
<td>168.2 kW / 6.7</td>
</tr>
</tbody>
</table>

**Note:**
1) This data indicates the size and capacity of the system according to EN 14511. For an analysis of the economic and energy efficiency of the system, the bivalence point and regulation should be taken into consideration. These specifications can only be achieved with clean heat exchangers. Information on maintenance, commissioning and operation can be found in the respective sections of the installation and operating instructions. The specified values have the following meaning, e.g. A7 / W35: Heat source temperature 7 °C and heating water flow temperature 35 °C.
2) The specified sound pressure level corresponds to the operating noise of the heat pump in heating operation with a flow temperature of 35 °C. The specified sound pressure level represents the free sound area level. The measured value can deviate by up to 16 dB(A), depending on the installation location.
3) Please note that additional space is required for pipe connections, operation and maintenance.
4) The heat circulating pump and the heat pump manager must always be ready for operation.
5) Depending on the heat pump type and refrigerant used, the maximum flow temperatures in heating operation may be reduced when the outside temperature falls. Further information can be found in the operating limit diagram for the heat pump. If the supporting feet are used, the level can increase by up to 3 dB (A).
8) Domestic hot water preparation via additional heat exchanger operating in parallel. The waste heat output and/or the attainable cylinder temperature is dependent on the respective operating point (temperature level/performance level). The waste heat output falls as the cylinder temperature rises.

9) The specified coefficients of performance are also achieved in parallel domestic hot water preparation via additional heat exchangers.

10) The values specified apply when using the hydraulic 4-way reversing valve, available as an option (observe instructions for accessories). The heat outputs are reduced by approximately 10%, and the COPs by approximately 12%, when the 4-way reversing valve is not used.

11) Considerably higher COPs are achieved with cooling operation and waste heat recovery using additional heat exchangers.

12) This results in a cooling water temperature difference of 5K +/-1K for the A35/W18, B20/W18 or W20/W18 in 2 compressor operating mode. This is necessary for ensuring waste heat recovery in cooling operation.
The values specified apply when using the hydraulic four-way reversing valve, available as an option (observe instructions for accessories). The heat outputs are reduced by approximately 10%, and the coefficients of performance (COPs) by approximately 12%, when the four-way reversing valve is not used.

Conditions:
Minimum heating water flow rate 9, m³/h
Heat source flow (min.) 24.5 m³/h
Operating limits diagram SI 130TUR+

Reversible brine-to-water heat pump

Note:
The maximum possible flow temperature and the operating limits vary by ± 2K due to component tolerances.
The minimum volume flow specified in the device information must be ensured at the lower operating limit.
In mono energy operating mode with the heating element activated, the maximum flow temperature increases by approximately 3K.