Air Cooled Scroll Chiller

Cooling capacity 15 ~ 110 kw

Feature:
- High cooling capacity, low power consumption
- Low starting torque
- Silent and low vibration
- High efficiency, durable and easy maintenance
- Intelligent electronics protector for motor compressor
Low power consumption and Easy maintenance

*thermo Q* presents the line of Air cooled packaged Scroll Water Chiller. Range from 4 to 34 TR Capacity. Economical, easy installation and operation in a complete packaged design. Ideal for modern cooling applications in industrial process plant. All units are compact, completely factory assembled, shape and modular system to be installed as outdoor and weather proof. Its can reach on site easy to handling on transportation. The unit is pressure tested, evacuated and fully charge with Refrigerant 22.

Main Components

- **Durable Scroll Compressor**
  
  With Copeland Scroll Compressor, End Users can improve the reliability of their refrigeration system and reduce their running costs:
  - Annual running cost reduction with increased compressor seasonal efficiency
  - Smaller compressors that are easier to service and replace
  - No risk of capacity shortfall at high ambient conditions Stable operation and less compressor Cycling
  
  Improved reliability; less installed compressors, better oil return. No need to use a mechanical subcooler between the medium and low temperature circuits and over sizing the medium temperature rack is no longer necessary.

- **Low Noise Condenser with Axial Fan**
  
  The highly efficient and compact Cross finned coil type are designed with corrugated surface aluminum fins and extended surface in inner tube. Outdoor fan with best quality fan made convenience with low noise level, saving energy and high ambient resistance temperature use until 60°C. Axial type with external rotor motor, IP 54 motor protector and Class F insulation (DIN EN 60 034-1).
  
  The fan motor totally encloses weather proof type.

- **High efficiency Evaporator**
  
  Dry expansion Shell and Tube type Evaporator, compact and height efficiency heat transfer.
  
  All evaporator equipped with Anti freeze to protect the cooling tube from being damage due to chilled water freeze up and chilled water temperature sensor to reduce precision chilled water temperature.
  
  A drain plug is provided in the evaporator inlet pipe to extract chilled water. Manufacture standard TEMA, ASTM.

**Protection and safety control equip.**

- Dual pressure switch, Freezing protection thermostat, Oil pressure safety switch, Thermostat control.

**Easy maintenance and safe**

- Unit full equipped with operation indicator, hi / low pressure indicator; temperature indicator.
  
  Liquid receiver and stop valve an attached on the liquid line for refrigerant pump down. Sight glass, filter drier and a moisture indicator.
**Optional features:**
- Ozone friendly refrigerant use
- Brine Chiller with chilled water temp min 40 °C
- Heat recovery from refrigerant to reduce hot water

**AIR COOLED SCROLL CHILLER**

**SPECIFICATION DATA**

<table>
<thead>
<tr>
<th>Model</th>
<th>CA Series</th>
<th>5 AScr</th>
<th>8 AScr</th>
<th>10 AScr</th>
<th>15 AScr</th>
<th>20 AScr</th>
<th>30 AScr</th>
</tr>
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<tbody>
<tr>
<td>Cooling Capacity</td>
<td>[ KW ]</td>
<td>11.75</td>
<td>19.60</td>
<td>25.70</td>
<td>37.40</td>
<td>51.40</td>
<td>74.80</td>
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<td></td>
<td>[ TR ]</td>
<td>3.34</td>
<td>5.57</td>
<td>7.30</td>
<td>10.63</td>
<td>14.61</td>
<td>21.26</td>
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<tr>
<td>Power Input</td>
<td>[ KW ]</td>
<td>4.63</td>
<td>6.79</td>
<td>9.27</td>
<td>13.35</td>
<td>17.74</td>
<td>25.90</td>
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<tr>
<td>Current Ampere</td>
<td>[ Amp ]</td>
<td>8.08</td>
<td>11.86</td>
<td>16.18</td>
<td>23.31</td>
<td>30.98</td>
<td>45.23</td>
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<tr>
<td>Power Source</td>
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<td>380 V / 3 Ph / 50 Hz</td>
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<tr>
<td>Refrigerant</td>
<td></td>
<td>R 407 C</td>
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</table>

**COMPRESSOR**

- Type: FULL HERMATIC SCROLL
- Model: ZR 61, ZR 94, ZR 125, ZR 190, ZR 125 x 2, ZR 190 x 2
- Qty: 1, 1, 1, 1, 1, 2
- Capacity Control [%]: ON/OFF, ON/OFF, ON/OFF, ON/OFF, ON/OFF, ON/OFF
- Fan Dia - No: 500 x 1, 500 x 2, 500 x 2, 500 x 3, 500 x 3, 500 x 4

**CONDENSER**

- Type: PLATE FIN COIL
- Model: GA 75, GA 100, GA 120, GA 200, GA 250, GA 350
- Material: Copper Tube, Aluminum Fin

**EVAPORATOR**

- Type: SHELL AND TUBE
- Model: DX 5, DX 8, DX 10, DX 15, DX 20, DX 30
- Material: Copper Tube, carbon steel casing
- Press. Drop. [ Bar ]: 0.25, 0.26, 0.29, 0.3, 0.31, 0.3
- Chilled Water Flow - min. [ Ltr/min ]: 40, 65, 80, 120, 160, 230
- Chilled Water Connection: DN 25, DN 40, DN 40, DN 50, DN 50, DN 65
- No of Circuit: 1, 1, 1, 1, 1, 2

**IMMERSER EVAPORATOR**

- Type: Immerse Coil
- Model: 5 C, 8 C, 10 C, 15 C, 20 C, 30 C
- Tank Volume [ Ltr ]: 100, 170, 220, 320, 450, 650
- Circ. Pump. [ Ltr/min ]: 45, 70, 90, 135, 175, 250
- Tot. Head [ m ]: 15, 15, 15, 15, 15, 15
- Tank Material: Stainless Steel – Hermaflex Insulation
- Chilled Water Temp. - IN/OUT [ °C ]: 12.0 / 7.0

**Model** | **Dimension** |
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<tr>
<td>L</td>
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