

**TECHNICAL DESCRIPTION**  
**CRANEFRIGOR™ TC**

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**Figure**

**CRANEFRIGOR™ TC**

The CRANEFRIGOR™ TC cooling unit was developed for reliable and long-term operation under extreme ambient conditions as in steel works, paper factories and foundries. Thanks to its robust structure, a reliable operation is ensured even with heavy shocks.

The CRANEFRIGOR™ series of crane air conditioning units ensure a reliable and efficient production process.

General description

| <b>Scope of delivery</b>   | <b>Your benefits!</b>  |
|--|--|
| <b>Refrigerant</b> <ul style="list-style-type: none"> <li>Ecological refrigerant</li> <li>Low greenhouse warming potential</li> </ul>  | <ul style="list-style-type: none"> <li>Sustainable operation</li> </ul>  |
| <b>Compressor</b> (made by Bizer) <ul style="list-style-type: none"> <li>Semi-hermetically sealed construction</li> <li>Suction-gas-cooled motor</li> <li>Self-regulating oil sump heater</li> </ul>   | <ul style="list-style-type: none"> <li>Low maintenance</li> <li>No risk of overheating</li> <li>Ensures lubrication during the start</li> <li>Very good availability of spare parts worldwide</li> </ul>   |
| <b>Liquefier</b> <ul style="list-style-type: none"> <li>Cathodic dip coating</li> </ul>  | <ul style="list-style-type: none"> <li>High corrosion resistance</li> <li>Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load</li> <li>Shorter maintenance intervals due to smooth surface</li> </ul>  |
| <b>Liquefier fan</b> <ul style="list-style-type: none"> <li>Norm motors in industrial construction with coupled fan wheel</li> </ul>   | <ul style="list-style-type: none"> <li>Powerful</li> <li>Long runtimes</li> <li>Very good availability of spare parts worldwide</li> </ul>   |
| <b>Evaporator</b> <ul style="list-style-type: none"> <li>Cathodic dip coating</li> <li>Cleaning opening / Inspection opening</li> </ul>  | <ul style="list-style-type: none"> <li>High corrosion resistance</li> <li>Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load</li> <li>Shorter maintenance interval due to smooth surface. Soiling is easily recognized and simple to clean through the opening</li> </ul> |
| <b>Circulating air fan</b> <ul style="list-style-type: none"> <li>Speed-controlled EC radial fan, industrial construction</li> </ul>   | <ul style="list-style-type: none"> <li>Powerful</li> <li>Long runtimes</li> <li>Energy-efficient and quiet</li> </ul>  |
| <b>Air filter</b> <ul style="list-style-type: none"> <li>Large-area frame filter</li> <li>Filter class COARSE 90%</li> </ul>   | <ul style="list-style-type: none"> <li>Effective filter with long service life</li> <li>Easy to replace and clean</li> </ul>   |
| <b>Condensation water separation</b> <ul style="list-style-type: none"> <li>Drip tray made of stainless steel</li> <li>Hose connection for condensation</li> <li>Siphon in condensate line</li> </ul>  | <ul style="list-style-type: none"> <li>No corrosion of the tray</li> <li>Defined condensation drainage</li> <li>Avoids the drawing in of contaminated ambient air</li> </ul>   |
| <b>Control and power cabinet</b> <ul style="list-style-type: none"> <li>Completely wired, according to VDE</li> <li>Temperature control by thermostat</li> <li>Operational and fault signal outputs</li> <li>Powder-coated RAL 7035</li> <li>Optional stainless-steel version</li> </ul> | <ul style="list-style-type: none"> <li>The CRANEFRIGOR™ is ready for connection; at the site, you only have to connect the power supply</li> <li>Colour scheme with high corrosion protection</li> </ul>   |
| <b>Casing</b> <ul style="list-style-type: none"> <li>Robust, welded construction</li> <li>Primed and powder-coated in RAL 3004</li> <li>Other colors or stainless-steel version optional</li> </ul>  | <ul style="list-style-type: none"> <li>Long service life</li> <li>Attractive colour scheme with high corrosion protection</li> </ul>   |
| <b>Quality assurance</b> <ul style="list-style-type: none"> <li>Leakage test</li> <li>Function test in our plant's test facility</li> </ul>  | <ul style="list-style-type: none"> <li>Operational reliability</li> <li>Easy commissioning on site</li> </ul>  |

**Options packages:**

| <b>Material order no.</b> | <b>Scope of delivery</b>   | <b>Your benefits!</b>  |
|---------------------------|--|--|
| 807 468                   | <b>Options packages “Comfort”</b><br>Comfort controller FTC-K (installed in cabin) incl. regulation of cooling performance by hot-gas bypass | <ul style="list-style-type: none"> <li>• Digital actual and setpoint display at the regulator</li> <li>• Mode selector switch On / Off / Ventilation</li> <li>• Air volume can be set in 3 stages</li> <li>• Minimal temperature fluctuations in the cabin</li> </ul>  |
| 807 474                   | Comfort controller FTC-E (installed in electronics room)   | <ul style="list-style-type: none"> <li>• Digital actual and setpoint display at the regulator</li> <li>• Mode selector switch On / Off / Ventilation</li> </ul>  |
| 807 480                   | Vibration dampers  | <ul style="list-style-type: none"> <li>• Reduction structure-borne noise</li> </ul>  |
| 807 485                   | <b>Option package “Heater”</b><br>Air heater with temperature monitor  | <ul style="list-style-type: none"> <li>• Comfortable room temperature</li> <li>• Frost protection even at standstill or during maintenance work</li> </ul>   |
| 807 489                   | <b>Options packages “Operational reliability”</b><br>High ambient temperature  | <ul style="list-style-type: none"> <li>• Operational reliability during brief increased ambient temperature</li> </ul>   |
| 807 493                   | Low outside temperature  | <ul style="list-style-type: none"> <li>• Cooling during outside temperature &lt;+60 °F (&lt;15 °C)</li> </ul>  |
| 807 500                   | <b>Options packages “Corrosion protection”</b><br>Corrosion protection package 1   | <ul style="list-style-type: none"> <li>• Multiple-coated pipes</li> </ul>  |
| 807 505                   | Corrosion protection package 2   | <ul style="list-style-type: none"> <li>• Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti</li> <li>• Multiple-coated pipes</li> </ul>  |
| 807 510                   | <b>Option package “Custom”</b><br>Customer-specific version  | <p>Special requirements of a company can be realized, such as:</p> <ul style="list-style-type: none"> <li>• Custom voltages / Network configurations</li> <li>• Heat exchanger version (fully copper, blade spacing and thickness)</li> <li>• Control cabinet heater, conductor identification</li> <li>• Special coatings</li> <li>• UL-/CSA-conforming unit version</li> <li>• Protection class</li> </ul> |
| 807 515                   | <b>Options packages “Accessories”</b><br>Assembly accessories according to specification   | <ul style="list-style-type: none"> <li>• Air duct, holding devices, refrigerating accessories</li> </ul>   |
| 807 520                   | Spare parts according to specification   | <ul style="list-style-type: none"> <li>• Spare part package</li> </ul>   |

**Plant packages:**

| <i><b>Material order no.</b></i> | <i><b>Scope of delivery</b></i>  | <i><b>Your benefits!</b></i>   |
|----------------------------------|--|--|
| 8807 558                         | <b>Plant packages “Overpressure / Fresh air”</b><br>Fresh air supply on the device           | <ul style="list-style-type: none"> <li>• Filtered fresh air supply, air volume not adjustable</li> <li>• Filtered fresh air supply, adjustable air volume</li> <li>• Creation of overpressure in the room to be cooled; less dust comes in</li> <li>• Long filter service life due to fully automatic shaking function</li> <li>• Filtered fresh air supply, adjustable air volume</li> <li>• Creation of overpressure in the room to be cooled; less dust comes in</li> </ul> |
| 807 562                          | Filter/Overpressure unit FT15  |  |
| 807 563                          | Self-cleaning filter/overpressure unit FS10  |  |
| 807 565                          | <b>Plant package “Condensation evaporator”</b><br>Condensation evaporator KVV                | <ul style="list-style-type: none"> <li>• No damage due to dripping condensation</li> <li>• No additional power supply necessary</li> <li>• Overload protection</li> </ul>  |
| 807 566                          | <b>Plant package “SMART Control”</b><br>Superordinate controller FrigorTec Smart Control FSC | <ul style="list-style-type: none"> <li>• Cyclic switching over for redundant systems</li> <li>• Digital display of pressures and temperatures</li> <li>• Optional regulation of the room pressure by filter/overpressure unit</li> <li>• Optional display of the relative room humidity</li> </ul>   |

## Technical specifications TC:

### Performance data

Cooling performance is included customized in the offer

#### Nominal cooling performance:

12.5 kW | 42,650 btu/h

- At 80 °F (27 °C) room temperature, 52 % rel. room air humidity  
95 °F (35 °C) ambient temperature
- Refrigerant R134a / R513A

#### Nominal cooling performance:

11.3 kW | 38,555 btu/h

- At 80 °F (27 °C) room temperature, 52 % rel. room air humidity  
95 °F (35 °C) ambient temperature
- Refrigerant R450A

#### Heating power:

2.3 to 7.1 kW | 7,850 btu/h to 24,225 btu/h

Wide heating capacity on request

#### Air flow volume:

2,000 m<sup>3</sup>/h | 1,175 cfm

#### Cooling mode

- Depending on compressor size
- Depends on the option packages and version of heat exchanger

Temperature range R134a

+15 °C to +70 °C | +60 °F to + 160°F

With option package "low outside temperature"

-25 °C to +70 °C | -15 °F to + 160°F

Temperature range R513A

+15 °C to +70 °C | +60 °F to + 160°F

With option package "low outside temperature"

-25 °C to +70 °C | -15 °F to + 160°F

Temperature range R450A

+15 °C to +85 °C | +60 °F to + 185°F

With option package "low outside temperature"

-25 °C to +85 °C | -15 °F to + 185°F

- More extreme temperatures upon request

#### Heating mode

Temperature range

-25 °C to +30 °C | -15 °F to +85 °F

#### Sizes and weight

Weight

approx. 395 kg | 870 lbs

Dimensions

type, see dimension sheet

#### Operating voltage

3 ph / 400 V / 50 Hz

Further operating voltages upon request

3 ph / 460 V / 60 Hz

#### Refrigerant

R134a / R513A / R450A

GWP (global warming potential)

1430 / 631 / 605

Filling quantity / CO2 equivalent

depends on the unit version

Subject to technical change.