

# CRANEFRIGOR™

Industrial Cooling since 1961

Made in Germany

TECHNICAL DESCRIPTION CRANEFRIGOR™ CC05/08

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Figure

# CRANEFRIGOR<sup>™</sup> CC05 / CC08

The CRANEFRIGOR<sup>™</sup> CC05 / CC08 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<sup>™</sup> series of crane air conditioning units ensure a reliable and efficient production process.



### **General description**

| Scope of delivery   | Your benefits!  |
|---|---|
| Refrigerant   |   |
| Ecological refrigerant  | Long-term safe usage in accordance with legal regulations (EU) no. 517/2014   |
| Low greenhouse warming potential  | Sustainable operation   |
| Compressor (made by Copeland)   |   |
| Hermetically sealed construction  | Low maintenance   |
| Suction-gas-cooled motor  | No risk of overheating  |
| Self-regulating oil sump heater   | Ensures lubrication during the start  |
| Liquefier   |   |
| Cathodic dip coating  | High corrosion resistance   |
|   | <ul> <li>Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load</li> <li>Shorter maintenance intervals due to smooth surfaces</li> </ul> |
| Liquefier fan   |   |
| • Speed-controlled EC axial fan in industrial   | Powerful  |
| construction for high ambient temperatures  | Long runtimes   |
|   | Energy-efficient  |
| Evaporator  | - Evenilent heat transfer   |
| Zinc-plated steel housing with epoxy-   | Excellent heat transfer   |
| <ul><li>coated aluminium blades</li><li>Cleaning opening / Inspection opening</li></ul> | Shorter maintenance intervals due to special adapted     appearing between blodge even with outcome dust lead   |
| Cleaning opening / Inspection opening   | spacing between blades even with extreme dust load  |
|   | <ul> <li>Shorter maintenance interval due to smooth surface.<br/>Soiling is easily recognised and simple to clean through</li> </ul>  |
|   | the opening   |
| Circulating air fan   |   |
| • EC radial fan, industrial construction  | Powerful  |
| (CC05)  | Long runtimes   |
| • AC radial fan, industrial construction  | Energy-efficient (EC version)   |
| (CC08)  |   |
| Air filter  |   |
| Large-area frame filter   | Effective filter with long service life   |
| Filter class COARSE 80%   | Easy to replace and clean   |
| Condensation water separation   |   |
| Drip tray primed and powder-coated in RAL   | No corrosion of the tray  |
| 7035  | Defined condensation drainage   |
| Hose connection for condensation     Sinker in condensate line                          | Avoids the drawing in of contaminated ambient air   |
| Siphon in condensate line Control and power cabinet                                     |   |
| Completely wired, according to VDE  | • The CRANEFRIGOR <sup>™</sup> is ready for connection; at the  |
| <ul> <li>Temperature control by thermostat</li> </ul>                                   | site, you only have to connect the power supply   |
| <ul> <li>Operational and fault signal outputs</li> </ul>                                | <ul> <li>Colour scheme with high corrosion protection</li> </ul>  |
| <ul> <li>Powder-coated RAL 7035</li> </ul>  |   |
| Optional stainless steel version  |   |
| Casing  |   |
| <ul> <li>Robust, welded construction</li> </ul>   | Long service life   |
| <ul> <li>Primed and powder-coated in RAL 7035</li> </ul>                                | Attractive colour scheme with high corrosion protection   |
| Other colours or stainless steel version optional                                       |   |
| Quality assurance   |   |
| Leakage test  | Operational reliability   |
| <ul> <li>Function test in our plant's test facility</li> </ul>                          | Easy commissioning on site  |
|   |   |



#### **Options packages:**

| Material                       | Scope of delivery  | Your benefits!  |
|--------------------------------|--|---|
| order no.                      |  |   |
| CC05: 807 637<br>CC08: 807 640 | Option package "Compressor (made<br>by Bizer)"<br>Semi-hermetically sealed construction<br>Suction-gas-cooled motor<br>Self-regulating oil sump heater | <ul> <li>Secure operation at higher ambient temperatures</li> <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>   |
| CC05: 807 640<br>CC08: 807 641 | <b>Option package "Heater"</b><br>Air heater with temperature monitor  | <ul> <li>Comfortable room temperature</li> <li>Frost protection even at standstill or during maintenance work</li> </ul>  |
| CC05: 807 646<br>CC08: 807 647 | Options packages "Corrosion<br>protection"<br>Corrosion protection package 1   | Multiple-coated pipes   |
| CC05: 807 650<br>CC08: 807 651 | Corrosion protection package 2   | <ul> <li>Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti</li> <li>Multiple-coated pipes</li> </ul>   |
| CC05: 807 654<br>CC08: 807 655 | Option package "Custom"<br>Customer-specific version   | <ul> <li>Special requirements of a company can be realised, such as:</li> <li>Custom voltages / Network configurations</li> <li>Heat exchanger version (fully copper, blade spacing and thickness)</li> <li>Conductor identification</li> <li>Special coatings</li> <li>Protection class</li> </ul> |
| CC05: 807 658<br>CC08: 807 659 | <b>Options packages "Accessories"</b><br>Assembly accessories according to<br>specification  | <ul> <li>Air duct, holding devices, refrigerating accessories</li> </ul>  |
| CC05: 807 662<br>CC08: 807 663 | Spare parts according to specification   | Spare part package  |

#### Plant packages:

| Material order no. | Scope of delivery  | Your benefits!  |
|--------------------|--|---|
| 807 562            | Plant package "Overpressure / Fresh<br>air"<br>Filter/Overpressure unit FT15 | <ul> <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> |
| 807 565            | Plant package "Condensation<br>evaporator"<br>Condensation evaporator KVW    | <ul> <li>No damage due to dripping condensation</li> <li>No additional power supply necessary</li> <li>Overload protection</li> </ul>               |

# **Options packages:**

| Scope of delivery   | Your benefits!  |  |
|---|---|--|
| <ul> <li>1 Option package "Compressor (made by Bizer)"</li> <li>1.1 Semi-hermetically sealed construction <ul> <li>Suction-gas-cooled motor</li> <li>Self-regulating oil sump heater</li> </ul> </li> </ul> | <ul> <li>Secure operation at higher ambient temperatures</li> <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>   |  |
| <ul> <li>2 Option package "Heater"</li> <li>2.1 Air heater with temperature monitor and safety temperature limiter</li> </ul>   | <ul> <li>Frost protection even at standstill or during<br/>maintenance work</li> </ul>  |  |
| <ul> <li>3 Options packages "Corrosion protection"</li> <li>3.1 Corrosion protection package 1</li> <li>3.2 Corrosion protection package 2</li> </ul>   | <ul> <li>Multiple-coated pipes</li> <li>Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti</li> <li>Multiple-coated pipes</li> </ul>  |  |
| <ul><li>4 Option package "Custom"</li><li>4.1 Customer-specific version</li></ul>   | <ul> <li>Special requirements of a company can be realised, such as:</li> <li>Custom voltages / Network configurations</li> <li>Heat exchanger version (fully copper, cathodic dip coating, blade spacing and thickness)</li> <li>Conductor identification</li> <li>Special coatings</li> <li>Protection class</li> </ul> |  |
| <ul> <li>5 Options packages "Accessories"</li> <li>5.1 Assembly accessories according to specification</li> <li>5.2 Spare parts according to specification</li> </ul>                                       | <ul><li>Air duct, holding devices, refrigerating accessories</li><li>Spare part package</li></ul>   |  |

# Plant packages:

| Scope of delivery  | Your benefits!  |
|--|---|
| <b>1 Plant package "Overpressure / Fresh air"</b><br>1.1 Filter/Overpressure unit FT15                 | <ul> <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> |
| <ul><li><b>2 Plant package "Condensation evaporator"</b></li><li>2.1 Condensation evaporator</li></ul> | <ul> <li>No damage due to dripping condensation</li> <li>No additional power supply necessary</li> <li>Overload protection</li> </ul>               |

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#### Technical specifications CC05 / CC08:

#### Performance data

Cooling performance is included customised in the offer Heat output is included customised in the offer

| <ul> <li>Nominal cooling performance:<br/>CC05<br/>CC08</li> <li>At 27 °C room temperature, 52 % rel. room air humidity<br/>35 °C ambient temperature</li> <li>Refrigerant R134a / R513A</li> </ul> | 5.8 kW<br>11.4 kW   |
|---|---|
| Air flow volume:<br>CC05<br>CC08  | 1,200 m <sup>3</sup> /h<br>2,000 m <sup>3</sup> /h            |
| <ul> <li>Cooling mode</li> <li>Depends on the compressor model size and version</li> <li>Depends on the option packages and version of heat exchanger</li> </ul>                                    |   |
| Temperature range R134a   | -5 °C to +70 °C   |
| Temperature range R513A   | -5 °C to +70 °C   |
| Sizes and weight<br>Weight CC05<br>Weight CC08<br>Dimensions  | approx. 280 kg<br>approx. 450 kg<br>type, see dimension sheet |
| <b>Operating voltage</b><br>Further operating voltages upon request   | 3 ph / 400 V / 50 Hz<br>3 ph / 460 V / 60 Hz                  |

|   | 3 ph / 460 V / 60 H |
|---|---------------------|
| Further operating voltages upon request |                     |

Protection category

Network type

**Refrigerant** GWP (global warming potential)

Filling quantity / CO2 equivalent

depends on the unit version

IP54

TN-S

R134a / R513A

1430 / 631

The performance description is a quality in the sense of sections 434 and/or 633 BGB (German Civil Code). Subject to technical change.

Cooling to the point

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According to (EN) 378-3 "Refrigeration units and Heat pumps – safety and environment regulations – Location and protection for persons" detectors needs to installed if concentration exceeds the practical limits (ATEL/ODL- EN 378-1, Appendix C) in a working and staying area.

The table is showing the minimum space dependent from the used Freon, air-conditioner and options.

Detectors are required if the conditioned space is smaller as mentioned in the table below.

Local restrictions and regulations need to be considered first.

| Refrigerant | Minimum conditioned space before detector is required |                     |
|-------------|---|---------------------|
|             | CC05  | CC08                |
| R134a       | 11,2 m³   | 22,8 m <sup>3</sup> |
| R513A       | 8,8 m³  | 17,9 m <sup>3</sup> |

ATEL: Exposure limit value for acute toxicity

ODL: Limit value for oxygen deficiency