

TECHNICAL DESCRIPTION CRANEFRIGOR™ OC02

Date: 16/01/2020
QVO 0457
Rev. 01

Contact: e-mail: info@frigortec.de / phone: +49 7520 91482 - 0



Figure

CRANEFRIGOR™ OC02

The CRANEFRIGOR™ OC02 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

Scope of delivery	Your benefits!
Refrigerant <ul style="list-style-type: none"> Ecological refrigerant Low greenhouse warming potential 	<ul style="list-style-type: none"> Long-term safe usage in accordance with legal regulations (EU) no. 517/2014 Sustainable operation
Compressor <ul style="list-style-type: none"> Hermetically sealed construction Self-regulating oil sump heater 	<ul style="list-style-type: none"> Low maintenance Ensures lubrication during the start
Liquefier <ul style="list-style-type: none"> Zinc-plated steel housing with epoxy-coated aluminium blades 	<ul style="list-style-type: none"> Excellent heat transfer Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load Shorter maintenance intervals due to smooth surface
Liquefier fan <ul style="list-style-type: none"> Speed-controlled EC axial fan in industrial construction for high ambient temperatures 	<ul style="list-style-type: none"> Powerful Long runtimes Energy-efficient
Evaporator <ul style="list-style-type: none"> Zinc-plated steel housing with epoxy-coated aluminium blades Cleaning opening / Inspection opening 	<ul style="list-style-type: none"> Excellent heat transfer Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load Shorter maintenance interval due to smooth surface. Soiling is easily recognised and simple to clean through the opening
Circulating air fan <ul style="list-style-type: none"> Speed-controlled EC radial fan, industrial construction 	<ul style="list-style-type: none"> Powerful Long runtimes Energy-efficient and quiet
Air filter <ul style="list-style-type: none"> Large-area frame filter Filter class COARSE 80% 	<ul style="list-style-type: none"> Effective filter with long service life Easy to replace and clean
Condensation water separation <ul style="list-style-type: none"> Drip tray primed and powder-coated in RAL 7015 Hose connection for condensation Siphon in condensate line 	<ul style="list-style-type: none"> No corrosion of the tray Defined condensation drainage Avoids the drawing in of contaminated ambient air
Control and power cabinet <ul style="list-style-type: none"> Completely wired, according to VDE Operational and fault signal outputs Powder-coated RAL 7015 Control integrated in control cabinet on operating side 	<ul style="list-style-type: none"> The CRANEFRIGOR™ is ready for connection; at the site, you only have to connect the power supply Colour scheme with high corrosion protection <p>Functions:</p> <ul style="list-style-type: none"> Digital actual and setpoint display at the regulator Mode selector switch On / Off / Ventilation Air volume can be set in 3 stages
Casing <ul style="list-style-type: none"> Robust, welded construction Primed and powder-coated in RAL 7015 Other colours or stainless steel version optional 	<ul style="list-style-type: none"> Long service life Attractive colour scheme with high corrosion protection
Quality assurance <ul style="list-style-type: none"> Leakage test Function test in our plant's test facility 	<ul style="list-style-type: none"> Operational reliability Easy commissioning on site

Options packages:

Material order no.	Scope of delivery	Your benefits!
807 477	Option package "Heater" Air heater with temperature monitor and safety temperature limiter	<ul style="list-style-type: none"> • Comfortable room temperature • Frost protection even at standstill or during maintenance work
807 478	Option package "Roof-top mounting" Climate control box FTC-K (cabin installation) (otherwise included as a standard feature)	<ul style="list-style-type: none"> • Digital actual and setpoint display at the regulator • Mode selector switch On / Off / Ventilation • Air volume can be set in 3 stages • Minimal temperature fluctuations in the cabin
807 567	Options packages "Weather roof_roof-top mounting outdoors" Primed and powder coat in RAL 7015 over the entire device	<ul style="list-style-type: none"> • Secure operation in all ambient conditions • Attractive colour scheme with high corrosion protection • High-quality stainless steel 1.4571 / AISI 316Ti
807 568	In stainless-steel version	
807 570 807 606	Options packages "Corrosion protection" Corrosion protection package 1 Corrosion protection package 2	<ul style="list-style-type: none"> • Multiple-coated pipes • Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti • Multiple-coated pipes
807 785	Options packages "air duct installation roof-top / external" Air duct primed and powder coated RAL7015	<ul style="list-style-type: none"> • Simple and fast connection to the cooling room • Connections for two D200 air hoses
807 787	Air duct incl. two D200 connections, primed and powder coated RAL7015	
807 666	Option package "Custom" Customer-specific version	<p>Special requirements of a company can be realised, such as:</p> <ul style="list-style-type: none"> • Custom voltages / Network configurations • Heat exchanger version (fully copper, blade spacing and thickness) • Conductor identification • Special coatings • Protection class
807 671	Options packages "Accessories" Assembly accessories according to specification	<ul style="list-style-type: none"> • Air duct, holding devices, refrigerating accessories • Spare part package
807 675	Spare parts according to specification	

Plant packages:

Material order no.	Scope of delivery	Your benefits!
807 562	<p>Plant package “Overpressure / Fresh air” Filter/Overpressure unit FT15</p>	<ul style="list-style-type: none"> • Filtered fresh air supply, air volume not adjustable • Filtered fresh air supply, adjustable air volume • Creation of overpressure in the room to be cooled; less dust comes in
807 579	<p>Plant package “Condensation evaporator” Condensation evaporator KV1</p>	<ul style="list-style-type: none"> • No damage due to dripping condensation • No additional power supply necessary • Overload protection

Technical specifications OC02:

Performance data

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

Nominal cooling performance:

3.5 kW

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

Air flow volume:

850 m³/h

Cooling mode

Temperature range R134a

-5 °C to +60 °C

Temperature range R513A

-5 °C to +60 °C

Heating mode

Temperature range

-25 °C to +30 °C

Sizes and weight

Weight

approx. 90 kg

Dimensions

type, see dimension sheet

Operating voltage

Further operating voltages upon request

3 ph / 400 V / 50 Hz

3 ph / 460 V / 60 Hz

Protection category

IP54

Network type

TN-S

Refrigerant

GWP (global warming potential)

R134a / R513A

1430 / 631

Filling quantity / CO2 equivalent

depends on the unit version

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

Subject to technical change.

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
R134a	6,8 m ³
R513A	5,3 m ³

ATEL: Exposure limit value for acute toxicity

ODL: Limit value for oxygen deficiency