

TECHNICAL DESCRIPTION **CRANEFRIGOR™ TX2**

Date: 19/12/2019
QVO 0462
Rev. 02

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



Figure

CRANEFRIGOR™ TX2

The CRANEFRIGOR™ TX2 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 (made by Copeland) <ul style="list-style-type: none"> Hermetically sealed construction Suction-gas-cooled motor Self-regulating oil sump heater 	<ul style="list-style-type: none"> Low maintenance No risk of overheating Ensures lubrication during the start Very good availability of spare parts worldwide
Liquefier <ul style="list-style-type: none"> Cathodic dip coating 	<ul style="list-style-type: none"> High corrosion resistance 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
Heater <ul style="list-style-type: none"> 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
Output adjustment <ul style="list-style-type: none"> Regulation of cooling performance by hot-gas bypass 	<ul style="list-style-type: none"> Minimal temperature fluctuations in the cabin
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 7035 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 7035 Climate control box K6 <i>Note:</i> Climate control box can be installed anywhere in the cabin 	<ul style="list-style-type: none"> The CRANFRIGOR™ is ready for connection; at the site, you only have to connect the power supply Colour scheme with high corrosion protection Functions climate control box: <ul style="list-style-type: none"> Switch on air-conditioning mode Switch on heating mode Switch on dehumidification mode (simultaneously cooling and heating) Digital actual and setpoint display at the regulator Switch between manual and automatic blower modes

Casing <ul style="list-style-type: none"> • Robust, welded construction • Primed and powder-coated in RAL 7035 • 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!
807 473	Option package "Compressor (made by Bizer)" Semi-hermetically sealed construction Suction-gas-cooled motor Self-regulating oil sump heater	<ul style="list-style-type: none"> • Secure operation at higher ambient temperatures • Low maintenance • No risk of overheating • Ensures lubrication during the start • Very good availability of spare parts worldwide
807 569	Option package "Operational reliability" Low outside temperature	<ul style="list-style-type: none"> • Cooling during outside temperature <15 °C
807 585 807 608	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
807 788	Option package "Suction channel" Soundproofed intake duct incl. filter, filter class COARSE 80%	<ul style="list-style-type: none"> • Reduction of sound emission in 1m distance from air inlet by: <ul style="list-style-type: none"> ○ Max. speed 12db(A) ± 3dB(A) ○ Average speed 11db(A) ± 3dB(A) ○ Min. speed 11db(A) ± 3dB(A) • Design according to dimension sheet 207.324/3
807 669	Option package "Custom" Customer-specific version	Special requirements of a company can be realised, such as: <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
807 673 807 677	Options packages "Accessories" Assembly accessories according to specification Spare parts according to specification	<ul style="list-style-type: none"> • Air duct, holding devices, refrigerating accessories • Spare part package

Plant packages:

Material order no.	Scope of delivery	Your benefits!
807 680 807 562	Plant packages "Overpressure / Fresh air" Fresh air supply on the device Filter/Overpressure unit FT15	<ul style="list-style-type: none"> • Filtered fresh air supply, air volume not adjustable • Filtered fresh air supply, adjustable air

		<p>volume</p> <ul style="list-style-type: none"> • Creation of overpressure in the room to be cooled; less dust comes in
807 565	<p>Plant package “Condensation evaporator” Condensation evaporator KVW</p>	<ul style="list-style-type: none"> • No damage due to dripping condensation • No additional power supply necessary • Overload protection

Technical specifications TX2:

Performance data

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

Nominal cooling performance:

6.4 kW

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

Air flow volume:

1,000 m³/h

Cooling mode

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

Temperature range R134a

-5 °C to +70 °C

With option package "low outside temperature"

-25 °C to +70 °C

Temperature range R513A

-5 °C to +70 °C

With option package "low outside temperature"

-25 °C to +70 °C

Temperature range R450A

-5 °C to +80 °C

With option package "low outside temperature"

-25 °C to +80 °C

Heating mode

Temperature range

-25 °C to +30 °C

Sizes and weight

Weight

approx. 180 kg

Dimensions

type, see dimension sheet

Operating voltage

3 ph / 400 V / 50 Hz

Further operating voltages upon request

3 ph / 460 V / 60 Hz

Protection category

IP54

Network type

TN-S

Refrigerant

R134a / R513A / R450A

GWP (global warming potential)

1430 / 631 / 605

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	
	Standard	With option package „Low outside temperature“
R134a	9,2 m ³	21,6 m ³
R513A	7,2 m ²	16,6 m ³
R450A	6,1 m ³	14,5 m ³

ATEL: Exposure limit value for acute toxicity

ODL: Limit value for oxygen deficiency