TECHNICAL DESCRIPTION **CRANEFRIGOR™ CK16**

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Figure

CRANEFRIGOR™ CK16

The CRANEFRIGOR™ CK16 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 • Ecological refrigerant • Low greenhouse warming potential	• Long-term safe usage in accordance with legal regulations (EU) no. 517/2014 • Sustainable operation
Compressor (made by Bizer) • Semi-hermetically sealed construction • Suction-gas-cooled motor • Self-regulating oil sump heater	• Low maintenance • No risk of overheating • Ensures lubrication during the start • Very good availability of spare parts worldwide
Liquefier • Cathodic dip coating	• 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 • Norm motors in industrial construction with coupled fan wheel	• Powerful • Long runtimes • Very good availability of spare parts worldwide
Evaporator • Zinc-plated steel housing with epoxy-coated aluminium blades • Cleaning opening / Inspection opening	• 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 • AC radial fan, industrial construction	• Powerful • Long runtimes
Air filter • Large-area frame filter • Filter class COARSE 80%	• Effective filter with long service life • Easy to replace and clean
Condensation water separation • Drip tray primed and powder-coated in RAL 7035 • Hose connection for condensation • Siphon in condensate line	• No corrosion of the tray • Defined condensation drainage • Avoids the drawing in of contaminated ambient air
Control and power cabinet • Completely wired, according to VDE • Temperature control by thermostat • Operational and fault signal outputs • Powder-coated RAL 7035 • Optional stainless steel version	• The CRANEFRIGOR™ is ready for connection; at the site, you only have to connect the power supply • Colour scheme with high corrosion protection
Casing • Robust, welded construction • Primed and powder-coated in RAL 7035 • Other colours or stainless steel version optional	• Long service life • Attractive colour scheme with high corrosion protection
Quality assurance • Leakage test • Function test in our plant's test facility	• Operational reliability • Easy commissioning on site

Options packages:

Material order no.	*Scope of delivery*	*Your benefits!*
807 611	**Option package "Heater"** Air heater with temperature monitor and safety temperature limiter	• Comfortable room temperature • Frost protection even at standstill or during maintenance work
807 615 807 619	**Options packages "Corrosion protection"** Corrosion protection package 1 Corrosion protection package 2	• Multiple-coated pipes • Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti • Multiple-coated pipes
807 782	**Option package "Air duct"** Air duct primed and powder coated RAL7035 incl. filter, filter class COARSE 80%	• Simple and fast connection to the cooling room
807 623	**Option package "Custom"** Customer-specific version	Special requirements of a company can be realised, such as: • Custom voltages / Network configurations • Heat exchanger version (fully copper, blade spacing and thickness) • Conductor identification • Special coatings • Protection class
807 628 807 633	**Options packages "Accessories"** Assembly accessories according to specification Spare parts according to specification	• Air duct, holding devices, refrigerating accessories • Spare part package

Plant packages:

Material order no.	*Scope of delivery*	*Your benefits!*
807 636	**Plant package "Overpressure / Fresh air"** Filter/Overpressure unit FT30	• Filtered fresh air supply, adjustable air volume • Creation of overpressure in the room to be cooled; less dust comes in
807 565	**Plant package "Condensation evaporator"** Condensation evaporator KVW	• No damage due to dripping condensation • No additional power supply necessary • Overload protection
807 566	**Plant package "SMART Control"** Superordinate controller FrigorTec Smart Control FSC	• Cyclic switching over for redundant systems • Digital display of pressures and temperatures • Optional regulation of the room pressure by filter/overpressure unit • Optional display of the relative room humidity

Technical specifications CK16:

Performance data

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

Nominal cooling performance:	26.6 kW

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

Air flow volume:	4,300 m³/h

Cooling mode

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

Temperature range R134a	-25 °C to +70 °C
Temperature range R513A	-25 °C to +70 °C
Temperature range R450A	-25 °C to +85 °C

- More extreme temperatures upon request

Heating mode

Temperature range	-25 °C to +30 °C

Sizes and weight

Weight	approx. 610 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***
R134a	69,2 m³
R513A	53,9 m³
R450A	46,7 m³

ATEL: Exposure limit value for acute toxicity
ODL: Limit value for oxygen deficiency