

CRANEFRIGOR™ Crane air conditioning for the V and T model – for a higher production safety

In high-heat operating conditions work is done under extreme conditions:

- Very high air temperature
- High thermal radiation and movement of air
- Extreme exposure to dust, odours, and gases
- High noise level

Air-conditioning devices from FrigorTec achieve a good working environment for their employees even under these extreme conditions. A safe and efficient production process can be guaranteed.

Cooled air for man and machine

By air-conditioning the crane cabin, guidelines for workplace regulations are met. Your colleagues work under comfortable, performance-enhancing conditions. Likewise, the crane control unit has to be reliably cooled – operation reliability depends on it.

High performance and variable installation for their application

With a wide product range and concise differentiation of specific performance features air-conditioning devices can be selected to suit their specific on-site requirements. This guarantees:

- Reliable cooling at ambient temperatures of up to +90° C
- Compact construction with precise machine and air-conditioning unit measurements
- Split construction (V model) allows for a variety of installation options
- Versatile electrical arrangements related with voltage, frequency, and current type

Tried and tested

The calculated machine performance data is checked by our technicians. Where the temperature conditions of high-heat operations are simulated and the machine is operated at the required connected wattage.

Name us your requirements, we'll send you an individual offer.



Examples of application: The air conditioning units for high heat operators can be used in steel works, smelting works, foundries, and mills and many other places.

We pass on only what we have produced by our own hands.



In the parent plant in Amtzell, Germany all products made by FrigorTec GmbH are developed, constructed and produced. Every device passes a quality inspection with test runs before delivery. FrigorTec solutions are sold in over 80 countries through our worldwide distribution network.

FrigorTec (formerly the refrigerator product range of Axima and Sulzer Escher Wyss) - The specialist for refrigerators and heat pumps:



GRANIFRIGOR™ – Grain cooling devices for agricultural business. Secures the harvest quality of grains and oil seeds.



STANDARDFRIGOR – Standard cooling devices and heat pumps for cooling of production equipment in production processes.



SHELTERFRIGOR – Container cooling devices for various applications.

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CRANEFRIGOR™ – Cooling of crane cabs and crane electronics

www.frigortec.com



CRANEFRIGOR™ Compact devices

	TX / TY	TW	TK	TB	TC	TD	TF	TE
Dimensions [mm] L x W x H vertical	670 x 520 x 1.520	–	633 x 600 x 1.640	600 x 850 x 1.125	640 x 900 x 1.260	940 x 1.100 x 1.800	1.100 x 1.380 x 2.200	1.220 x 1.700 x 2.620
horizontal	–	1.075 x 695 x 514	–	600 x 1.710 x 585	640 x 1.810 x 680	940 x 2.210 x 860	1.100 x 2.790 x 1.200	1.220 x 3.400 x 1.250
Weight approx. [kg] vertical / horizontal	180 / –	– / 140	280 / –	270 / 287	380 / 395	628 / 660	1.140 / 1.260	1.360 / 1.475
Refrigerating capacity [kW] with R 134a * ^{1.)} at a room temperature of 26 °C – 40 °C	3,9 – 5,1	4,7 – 6,1	4,8 – 6,3	4,2 – 5,9	6,0 – 8,1	11,5 – 15,5	20,1 – 29,2	25,9 – 35,1
Refrigerating capacity [kW] with R 227ea * ^{1.)} at a room temperature of 26 °C – 40 °C	on request	3,0 – 4,7	4,2 – 5,9	3,7 – 5,2	5,5 – 7,9	11,2 – 15,1	19,9 – 28,8	25,2 – 34,1
Cooling performance [kW] with R 124 * ^{1.)} at a room temperature of 26 °C – 40 °C	–	–	4,0 – 4,7	3,4 – 4,7	4,5 – 6,4	8,6 – 12,7	15,5 – 23,5	18,7 – 27,5
Refrigerating capacity [kW] with R 236fa * ^{1.)} at a room temperature of 26 °C – 40 °C	–	–	3,7 – 4,2	3,1 – 4,1	4,2 – 6,1	8,5 – 12,3	15,1 – 22,6	17,6 – 26,1
Air flow rate, free blowing [m ³ /h]	2.000	1.100	1.200	1.000	1.530	1.900	4.500 / 6.000	5.500 / 8.000

CRANEFRIGOR™ Split devices^{2.)}

	VX	VB	VC	VD	VF	VE
Dimensions [mm] L x W x H Machine part	630 x 530 x 830	600 x 850 x 585	640 x 900 x 680	940 x 1.100 x 860	1.100 x 1.380 x 1.200	1.220 x 1.700 x 1.250
Weight (Machine part) approx. [kg]	70	150	250	400	700	950
Refrigerating capacity [kW] with R 134a * ^{1.)} at a room temperature of 26 °C – 40 °C	4,3 – 5,6	4,6 – 6,5	6,6 – 8,9	12,5 – 17,0	22,1 – 32,2	28,2 – 38,6
Refrigerating capacity [kW] with R 227ea * ^{1.)} at a room temperature of 26 °C – 40 °C	on request	4,1 – 5,6	6,4 – 8,6	12,2 – 16,6	21,5 – 30,1	27,7 – 37,2
Cooling performance [kW] with R 124 * ^{1.)} at a room temperature of 26 °C – 40 °C		3,7 – 5,1	4,9 – 7,0	9,5 – 14,0	17,1 – 25,9	20,5 – 30,2
Refrigerating capacity [kW] with R 236fa * ^{1.)} at a room temperature of 26 °C – 40 °C		3,5 – 4,6	4,6 – 6,7	9,3 – 13,5	16,6 – 25,1	19,4 – 28,9

* Other refrigerants on request. Ask us, we are pleased to advise you.
^{1.)} With ambient temperature of 50 °C.
 Refrigerant capacity is dependant on the ambient temperature, the refrigerant and the room conditions.
^{2.)} Evaporators are chosen individually.

Refrigerant application range	
R 134a	ambient temperature 65 °C
R 227ea	ambient temperature 75 °C
R 124	ambient temperature 90 °C
R 236fa	ambient temperature 90 °C



The FrigorTec GmbH is certified with DIN EN ISO 9001:2000.
TÜV acceptance testing in our plant.
An additional check at the installation site is not usually necessary for the compact device CRANEFRIGOR™.

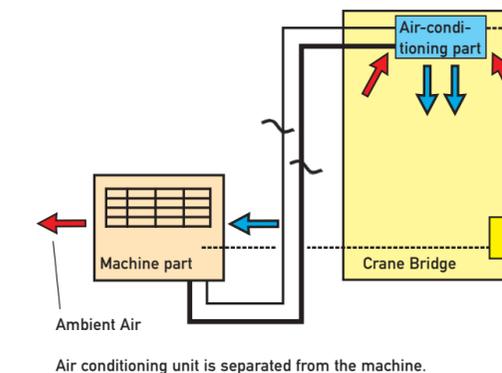
CRANEFRIGOR™ – Crane air conditioning units, custom-made and serial production

The V model – Custom-made split devices

V model air conditioning units are split devices: Machine parts (liquefier) and air conditioning part (evaporator) are set up separately. The air conditioning part is connected to the machine parts with refrigerant lines (see fig. 1).

The air conditioning part is situated directly next to the heat source and works most effectively here. A wide range of individual component combinations allow for an exact output adjustment. The heat absorbed into the air conditioning unit is dissipated with ambient air.

Fig.1 Process principle for the crane air conditioning unit V model



Air conditioning unit is separated from the machine.

Technical features of the V and T models

- Long-lasting liquefier made of copper, or on request made with different materials or coated
- Corrosion-resistant housing available for installation in aggressive atmospheres
- Robust sheet-steel construction, designed for extreme shock-loads
- Robust refrigerant compressor in various constructions
- Separate electrical control cabinet in the cooling space (V model) or integrated and air conditioned airconditioning part (T model)
- Painted with acid- and alkaline-resistant paint

The model T – Compact air conditioning units

Compact air-conditioners of the series T consist of two modules: the machine part and the air-conditioning part. As shown in the diagram (fig. 2), both modules can be configured in various ways.

This construction unit system allows for simple layout and accommodation to their needs. The cooled air is guided through channels to the crane bridge or cabin and then, supplemented with fresh air, drawn back by air circulation. The heat absorbed into the air conditioning unit is drawn off with the surrounding air in the machine part.

Fig. 2 Possible variation from the T model air conditioning unit and machine part

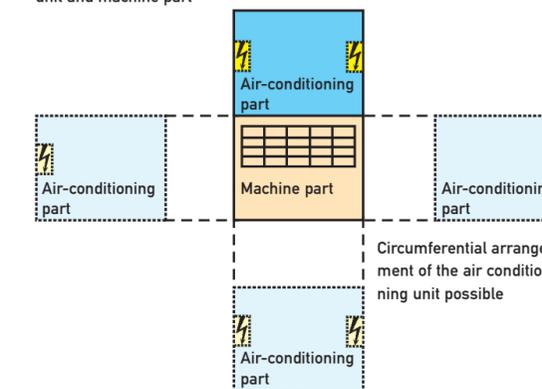


Fig. 3 Circumferential connection of the air duct possible (front view)

