since 1961
OVER 50 YEARS
Air Conditioning Units
CRANEFRIGOR™
FRIGOR TEC
Cooling to the point

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CRANEFRIGOR™ – Cooling for containers, crane cabins, and control cabinets

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FRIGOR TEC

Cooling to the point

CRANEFRIGOR™ Container cooling units / control cabinet cooling units		CC02	CC05 / CC08		TY
Dimensions [in]	Length	16.3	24.0	39.2	26.4
	Width	20.0	39.0	30.0	20.9
	Height	44.4	64.6	86.6	63.0
Weight approx. [lb]		198	617	992	397
Nominal cooling capacity [btu/h][1) 2)] with R134a / R513A		12,000	20,000	40,000	22,000
Heating capacity [kW][2)]		–	2,3	5,0	4
CO_2-equivalent [kg]	R134a	2.002	3.146	5.720	3.289
	R513A	883	1.388	2.524	1.451
	R450A	–	1.331	2.420	1.391
Air flow rate, free blowing [cfm]		882	706	1,177	589

CRANEFRIGOR™ Crane cabin cooling units		OC02	TW	OC07	TX
Dimensions [in]	Length	23.6	41.3	34.6	26.5
	Width	23.6	28.7	18.1	20.9
	Height	23.6	24.8	84.3	63.0
Weight approx. [lb]		198	309	507	397
Nominal cooling capacity [btu/h][1) 2)] with R134a / R513A		12,000	20,000	22,000	22,000
Heating capacity [kW][2)]		2,3	3,5	6,9	4
CO_2-equivalent [kg]	R134a	2.002	3.003	2.860	3.289
	R513A	883	1.577	1.262	1.451
	R450A	–	1.512	1.210	1.391
Air flow rate, free blowing [cfm]		500 [3)]	471 [3)]	589 [3)]	589 [3)]

[1)] At 80 °F indoor temperature, 52 % rel. indoor air humidity and 95° F ambient temperature

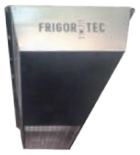
[2)] 480 V / 60 Hz (additional operating voltages available)

[3)] controllable

Subject to technical change.

Refrigerant

Type:	GWP value:	Area of application:
R 134 a	1.430	Up to 160 °F
R513A	631	Up to 160 °F
R450A	605	Up to 185 °F



CK12 / 18 / 24			CK10 / 16 / 22 / 30				CVD1 Split	DV Split
41.3 25.1 72.6	45.2 33.0 76.6	45.2 33.0 76.6	83.9 47.2 37.8				33.6 47.2 35.9	36.1 - 83.3 35.8 10.6
904	1,058	1,124	1,300	1,350	1,367	1,367	639	77 – 201
42,000	66,000	84,000	60,000	90,000	108,000	120,000	36,000 – 120,000	36,000 – 120,000
	6,9		6,2/12,3				–	–
11.440 5.048 4.840	13.585 5.994 5.747	18.590 8.203 7.865	12.870 5.679 5.445	20.020 8.834 8.470	24.310 10.727 10.285	25.740 11.358 10.890	–	–
1,471	2,060	2,354	2,060	2,530	4,100	4,100	–	1,089 – 3,779

Filter device	Condensate evaporator	Condensate evaporator
FT15	**KVW wall mounting**	**KV1 floor and wall mounting**
14.6 14.6 18.9 - 46.1	21.6 5.5 9.5	38.5 6.5 14.0
Voltages: 24 V DC, 115 V, 230 V	Control by cooling unit	Control via integrated control cabinet
Possible filter class: G2/G3, M5/F7, chemical filters, activated charcoal filter	2,3 - 3,6 kW heat output at 400 V - 500 V	2,3 - 3,6 kW heat output at 400 V - 500 V
–	–	–
–	–	–
Volume flow [cfm] [3]: 60-230	Possible control voltage: 110 V 50 / 60 Hz, 230 V 50 / 60 Hz	Possible control voltage: 110 V 50 / 60 Hz, 230 V 50 / 60 Hz

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™ – Air conditioning units, custom-made and in serial production

For over 50 years, FrigorTec has produced crane air conditioning units for container terminals and harbours, as well as for hot areas, such as foundries, steel works, and mills. On the one hand, the devices create optimal working conditions in the cabin for crane drivers; on the other hand, they ensure reliable room temperatures for sensitive performance and control electronics. The devices, which have been put to the test worldwide, are available in many installation variations and with various output stages.

CRANEFRIGOR™ air conditioning units for cooling containers, crane cabins, and control cabinets, have been specially developed for use in harbours and container terminals. The compact and robust design, and the materials used, make them perfectly suited for small installation spaces, salty air, and constant vibrations. Compact or split devices are also used depending on the profile of requirements.

In the case of a split device (Fig. 1), the condenser unit is installed outside the space to be cooled, with the air conditioning unit inside. The two devices are connected by refrigerant lines. The air conditioning unit is positioned directly above the heat source, making it especially effective.
A wide range of individual component combinations allow for an exact output adjustment.

Container/control cabinet cooling

The air conditioning unit is mounted externally on the container wall (Fig. 2). The spatial conditions determine whether a vertical or horizontal design is chosen. In both cases, the device blows cool air from below into the space. At the top, the heated air is sucked in through a fan and extracted. The air conditioning unit for the control cabinet cooling is mounted directly on the control cabinet. A simple air distribution is also supplied in the case of large or long control cabinets.

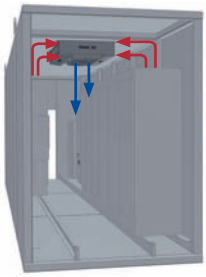


Fig. 1 Functional principle for container cooling of split device CVD1

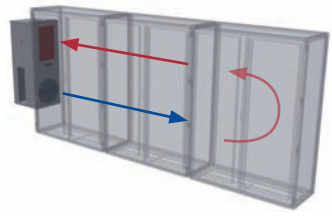


Fig. 2 Functional principle of CC02 for control cabinet cooling

Crane cabin cooling

The air conditioning unit for crane cabin cooling is mounted directly on the cabin wall (Fig. 3). It operates very quietly and is easy to operate. In the case of cooling, cold supply air flows underneath the ceiling into the crane cabin. In the case of heating, warm supply air flows above the floor. This provides optimal comfort for the crane driver.

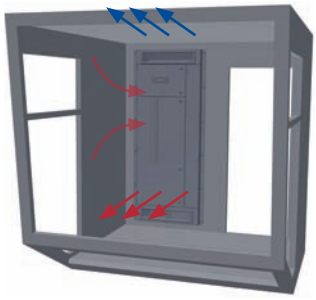


Fig. 3 Operating principle of OC07 for crane cabin cooling

Technical features of the CRANEFRIGOR™ cooling units

- Long-lasting condenser made of copper, or on request, 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
- Coated with acid- and alkaline-resistant paint
- Potential for individual applications due to compact or split devices
- Condensate evaporator and fresh air filter devices as optional package

CRANEFRIGOR™ air conditioning units for container/ control cabinet and crane cabin cooling

In harbours and container terminals work is often done under extreme conditions:
- high ambient temperatures
- very high air humidities
- a high level of direct sunlight
- salty air
- high level of exhaust pollution
- high noise levels
- vibrations

Air conditioning units from FrigorTec achieve a good working environment for your employees even under these extreme conditions. In this way, normal operations and all logistics processes can be carried out safely and efficiently.

Cooled air for man and machine
The guidelines for workplace conditions are met by air conditioning the crane cabin. Your employees work under comfortable, performance-enhancing conditions.

Likewise, the sensitive crane control units have to be reliably cooled – operation reliability depends on this during normal operations and logistic processes.
It makes no difference if individual control cabinet lines are involved or entire electric containers.

High performance and variable installation – individually designed for your application profile
Air conditioning units from FrigorTec come in a wide product range, with a concise differentiation of specific performance features. We choose the exact device to fulfil your individual needs on location.
Your benefits:
- reliable cooling at ambient temperatures of up to +190° F
- robust construction
- split designs allow for a variety of installation options
- versatile electrical arrangements regarding voltage, frequency, and current type

Tried and tested
The calculated performance data for the devices is tested in our technology department. When doing so, we simulate the temperature conditions of high-heat operations, and operate the device at the required electrical connection values.
In this way, FrigorTec has produced air conditioning units for container/control cabinet and crane cabin cooling for over 50 years. Our devices are used successfully in more than 80 countries.

Tell us your requirements, we will be pleased to send you an individual offer.

Examples of application: Our air conditioning units for container, control cabinet, and crane cabin cooling are used for the most diverse and challenging requirements in harbours and container terminals all across the world.

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

In the main plant in Amtzell, Germany and our facility in the United States 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.

SERVICE (24/7)

Our service keeps the units maintained and ensures the spare parts supply - worldwide.
service@frigortecamericas.com

- Grain cooling units GRANIFRIGOR™
- Crane air conditioning units CRANEFRIGOR™
- Standard cooling units STANDARDFRIGOR
- Special solutions SHELTERFRIGOR
- Insect heat treatment DEBUGGER
- Hay dryer AGRIFRIGOR™

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