

**TECHNICAL DESCRIPTION**  
**CRANEFRIGOR™ CVD**

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QVO 0445-US  
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**Figure**

**CRANEFRIGOR™ CVD**

The CRANEFRIGOR™ CVD liquefier was developed for reliable and long-term operation under extreme ambient conditions as in harbors. 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.

The condensing unit CRANEFRIGOR™ CVD is only approved for evaporating temperatures  $>15^{\circ}\text{F}$  ( $> -10^{\circ}\text{C}$ ) and is therefore not covered by Ecodesign Directive 2009/125/EC.

## General description

| <b>Scope of delivery</b>                                                                                                                                                                             | <b>Your benefits!</b>                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compressor</b> (made by Copeland) <ul style="list-style-type: none"> <li>Hermetically sealed construction</li> <li>Suction-gas-cooled motor</li> <li>Self-regulating oil sump heater</li> </ul>   | <ul style="list-style-type: none"> <li>Low maintenance</li> <li>No risk of overheating</li> <li>Ensures lubrication during the start</li> <li>Very good availability of spare parts worldwide</li> </ul>                                                |
| <b>Liquefier</b> <ul style="list-style-type: none"> <li>Zinc-plated steel housing with epoxy-coated aluminum blades</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>Excellent heat transfer</li> <li>Shorter maintenance intervals due to special adapted spacing between blades even with extreme dust load</li> <li>Shorter maintenance intervals due to smooth surface</li> </ul> |
| <b>Liquefier fan</b> <ul style="list-style-type: none"> <li>Speed-controlled EC axial fan in industrial construction for high ambient temperatures</li> </ul>                                        | <ul style="list-style-type: none"> <li>Powerful</li> <li>Long runtimes</li> <li>Energy-efficient</li> </ul>                                                                                                                                             |
| <b>Casing</b> <ul style="list-style-type: none"> <li>Robust, welded construction</li> <li>Primed and powder-coated in RAL 9003</li> <li>Other colours or stainless-steel version optional</li> </ul> | <ul style="list-style-type: none"> <li>Robust, welded construction</li> <li>Primed and powder-coated in RAL 9003</li> <li>Other colors or stainless-steel version optional</li> </ul>                                                                   |
| <b>Power cabinet</b> <ul style="list-style-type: none"> <li>Completely wired according to VDE</li> <li>Powder-coated RAL 7035</li> <li>Optional stainless-steel version</li> </ul>                   | <ul style="list-style-type: none"> <li>The CRANEFRIGOR™ is wired connection-ready on a terminal strip.</li> <li>Color scheme with high corrosion protection</li> </ul>                                                                                  |
| <b>Quality assurance</b> <ul style="list-style-type: none"> <li>Leakage test</li> <li>Presetting of the safety devices</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>Operational reliability</li> <li>Easy commissioning on site</li> </ul>                                                                                                                                           |

## Options packages:

| <b>Material order no.</b> | <b>Scope of delivery</b>                                                         | <b>Your benefits!</b>                                                                                                                                                                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 807 576                   | <b>Options packages "Corrosion protection"</b><br>Corrosion protection package 1 | <ul style="list-style-type: none"> <li>Multiple-coated pipes</li> <li>Housing / Plate parts made of high-quality stainless steel 1.4571 / AISI 316Ti</li> <li>Multiple-coated pipes</li> </ul>                                                                                                                             |
| 807 577                   | Corrosion protection package 2                                                   |                                                                                                                                                                                                                                                                                                                            |
| 807 578                   | <b>Option package "Custom"</b><br>Customer-specific version                      | <p>Special requirements of a company can be realised, such as:</p> <ul style="list-style-type: none"> <li>Custom voltages / Network configurations</li> <li>Liquefier version (fully copper, blade spacing and thickness)</li> <li>Conductor identification</li> <li>Special coatings</li> <li>Protection class</li> </ul> |

### Plant packages:

| <i><b>Material order no.</b></i> | <i><b>Scope of delivery</b></i>                                                                                                                                                                                                                                                                                    | <i><b>Your benefits!</b></i>                                                                                                                                                                                                                                                                       |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 807 566                          | <b>Plant package “SMART Control”</b><br>Superordinate controller FrigorTec Smart Control FSC                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Cyclic switching over for redundant systems</li> <li>• Digital display of pressures and temperatures</li> <li>• Optional regulation of the room pressure by filter/overpressure unit</li> <li>• Optional display of the relative room humidity</li> </ul> |
| 807 583                          | <b>Plant packages “Internal unit (Evaporator)”</b><br>Wall or ceiling version <ul style="list-style-type: none"> <li>• Operation of several internal units on one liquefier possible</li> <li>• Epoxy-coated blades</li> <li>• Housing primed and powder-coated</li> </ul>                                         | <ul style="list-style-type: none"> <li>• Adjustment options as required for the project</li> <li>• Color scheme with high corrosion protection</li> </ul>                                                                                                                                          |
| 805 584                          | Optional housing in stainless steel version                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>• Increased corrosion protection</li> </ul>                                                                                                                                                                                                                 |
| 807 562                          | <b>Plant package: “Overpressure / Fresh air”</b><br>Filter/Overpressure unit FT15                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Filtered fresh air supply, adjustable air volume</li> <li>• Creation of overpressure in the room to be cooled; less dust comes in</li> </ul>                                                                                                              |
| 807 579                          | <b>Plant package “Condensation evaporator”</b><br>Condensation evaporator KV1                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• No damage due to dripping condensation</li> <li>• No additional power supply necessary</li> <li>• Overload protection</li> </ul>                                                                                                                          |
| 807 578                          | <b>Plant package “Assembly material”</b> <ul style="list-style-type: none"> <li>• Refrigerant lines made of copper</li> <li>• Solenoid valves, expansion valves, filter drier, sight glasses</li> <li>• Thermostats</li> <li>• Insulation for suction line</li> <li>• Refrigerant</li> <li>• Plumb-line</li> </ul> | <ul style="list-style-type: none"> <li>• Adjustments and planning as required for the project must be made in advance.</li> </ul>                                                                                                                                                                  |

## Technical specifications CVD:

### Performance data

Cooling performance is included customized in the offer

### Nominal cooling performance:

|                                                                                                                                                                                                        |       |  |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--|---------------|
| CVD20                                                                                                                                                                                                  | 20 kW |  | 68,245 btu/h  |
| CVD30                                                                                                                                                                                                  | 30 kW |  | 102,365 btu/h |
| <ul style="list-style-type: none"><li>- At 80 °F (27 °C) room temperature, 52 % rel. room air humidity</li><li>- 95 °F (35 °C) ambient temperature</li><li>- Refrigerant R134a / R513A/R410A</li></ul> |       |  |               |

### Cooling mode

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

|                                                                                          |                  |  |                  |
|------------------------------------------------------------------------------------------|------------------|--|------------------|
| Temperature range                                                                        | -17 °C to +54 °C |  | +1 °F to +130 °F |
| <ul style="list-style-type: none"><li>- More extreme temperatures upon request</li></ul> |                  |  |                  |

### Sizes and weight

|              |                           |  |         |
|--------------|---------------------------|--|---------|
| Weight CVD20 | approx. 290 kg            |  | 640 lbs |
| Weight CVD30 | approx. 330 kg            |  | 730 lbs |
| Dimensions   | type, see dimension sheet |  |         |

### Operating voltage

|                                         |                      |
|-----------------------------------------|----------------------|
| Further operating voltages upon request | 3 ph / 400 V / 50 Hz |
|                                         | 3 ph / 460 V / 60 Hz |

### Refrigerant

|                                |                       |
|--------------------------------|-----------------------|
| GWP (global warming potential) | R134a / R513A / R410A |
|                                | 1430 / 631 / 2088     |

|                                   |                             |
|-----------------------------------|-----------------------------|
| Filling quantity / CO2 equivalent | depends on the unit version |
|-----------------------------------|-----------------------------|

Subject to technical change.