

Please read this operating manual carefully before starting the device. Keep it in a safe place for future reference. If the device is passed on to another person, this operating manual must be handed over to the user along with it.

The manufacturer cannot be held liable for damage resulting from **improper usage** or **incorrect operation**.

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1 Explanation of symbols



DANGER!

Safety instruction: Failure to observe this instruction will cause fatal or serious injury.



WARNING!

Safety instruction: Failure to observe this instruction can cause fatal or serious injury.

**CAUTION!**

Safety instruction: Failure to observe this instruction can lead to injury.

**NOTICE!**

Failure to observe this instruction can cause material damage and impair the function of the product.

**NOTE**

Supplementary information for operating the product.

- ▶ **Action:** This symbol indicates that action is required on your part. The required action is described step-by-step.
- ✓ This symbol describes the result of an action.

Fig. 1 5, page 3: This refers to an element in an illustration. In this case, item 5 in figure 1 on page 3.

2 Safety instructions

2.1 General safety

**WARNING!**

- Do not operate the device if it is visibly damaged.
- If this device's power cable is damaged, it must be replaced by the manufacturer, customer service or a similarly qualified person in order to prevent safety hazards.
- This device may only be repaired by qualified personnel. Improper repairs can lead to considerable hazards.
- This device can be used by children aged 8 years or over, as well as by persons with diminished physical, sensory or mental capacities or a lack of experience and/or knowledge, providing they are supervised or have been taught how to use the device safely and are aware of the resulting risks.
- Cleaning and user maintenance must not be carried out by children without supervision.
- Children must not play with the device.

- Children must be supervised to ensure that they do not play with the device.
- Always keep and use the device out of the reach of children under the age of 8 years.
- Do not store any explosive substances such as spray cans with a flammable propellant in the device.

**CAUTION!**

- Disconnect the device from the mains
 - before each cleaning and maintenance
 - after every use
- Food may only be stored in its original packaging or in suitable containers.

**NOTICE!**

- Check that the voltage specification on the type plate corresponds to that of the energy supply.
- Only connect the device to a DC plug socket in the vehicle (e. g. cigarette lighter) with the DC cable.
- Never pull the plug out of the socket by the cable.
- Disconnect the cooler and other power consuming devices from the battery before connecting the quick charging device.
- Disconnect the cooler or switch it off when you turn off the engine. Otherwise you may discharge the battery.
- The cooling device is not suitable for transporting caustic materials or materials containing solvents.

2.2 Operating the device safely

**DANGER!**

- Do not touch exposed cables with your bare hands.

**CAUTION!**

- Before starting the device, ensure that the power supply line and the plug are dry.

**NOTICE!**

- Do not use electrical devices inside the cooler unless they are recommended by the manufacturer for the purpose.

- Do not place the device near naked flames or other heat sources (heaters, direct sunlight, gas ovens etc.).
- **Danger of overheating!**
Ensure at all times that there is sufficient ventilation so that the heat that arises during operation does not build up. Make sure that the device is sufficiently far away from walls and other objects so that the air can circulate.
- Ensure that the ventilation openings are not covered.
- Do not fill the inner container with ice or fluid.
- Never immerse the device in water.
- Protect the device and the cable against heat and moisture.
- For HGV operation:
Empty the coolbox and switch the device off (see chapter “Switching off the coolbox” on page 25), before the driver's cabin is tipped up.

3 Scope of delivery

Quantity	Description
1	Drawer coolbox
4	Mounting bracket
1	Operating instructions

4 Proper use

The drawer coolers CD20 and CD30 are suitable for use in HGVs, boats or caravans and has been designed for a maximum permanent inclination of 30°.

An optimum cooling capacity is guaranteed at ambient temperatures between +16 °C and +32 °C and at a maximum air humidity of 90 %.



NOTE

Before exposing the cooling device to extreme conditions, please contact the manufacturer.



CAUTION! Health hazard!

- Please check if the cooling capacity of the device is suitable for storing the food or medicine you wish to cool.
- Food may only be stored in its original packaging or in suitable containers.

5 Technical description

The cooling devices can cool goods or keep goods cool in a temperature range from 0 °C to +15 °C (CD20) or –2 °C to +12 °C (CD30).

The coolbox is equipped with a battery monitor which switches the compressor off and on again and thereby protects both the battery and compressor against damage. The switch-off and switch-on points measured at the connection terminals of the compressor are listed in the chapter “Technical data” on page 30.

5.1 Control elements

No. in
fig. 3,
page 4

Explanation

1	Thermostat
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6 Installation



NOTICE!

- Ensure that the positive cable is connected to the positive terminal and the negative cable to the negative terminal.
- When choosing the installation location, ensure that the air heated by the liquefier can be drawn off.

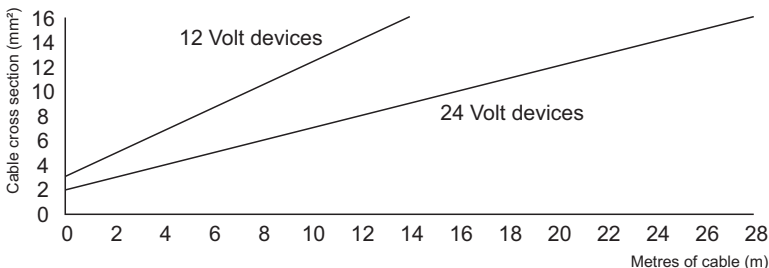


NOTE

To avoid voltage loss and therefore a drop in performance, the cable route should be kept as short as possible and should not be interrupted if this is possible. For this reason avoid additional switches, plug or power strips.

Please observe the following instructions:

- Determine the necessary cable cross section of the intake line using the diagram below:



- Connect your cooling device as directly as possible to the battery terminal or to an outlet with a fuse of at least 15 A (12 V) or 7.5 A (24 V).
- To screw the device in place use the screwing holes provided on the side of the device (see fig. **4**, page 4 and fig. **5**, page 4).
- You can detach the compressor from the cooling device and mount it in another place on the cooling device, or separately from it (fig. **2**, page 3). Make sure that the refrigerant line is 1.5 m (CD20)/1.5 m (CD30) long.

7 Operation

**NOTE**

Before starting your new cooling device for the first time, you should clean it inside and outside with a damp cloth for hygienic reasons (please also refer to the chapter “Cleaning and care” on page 26).

7.1 Energy saving tips

- Choose a well ventilated installation location which is protected against direct sunlight.
- Allow warm food to cool down first before placing it in the device to keep cool.
- Do not open the cooling device more often than necessary.
- Do not leave the cooler unit open for longer than necessary.
- Defrost your cooling device as soon as a layer of ice forms.
- Avoid unnecessarily low temperatures.
- Clean the condenser of dirt (dust etc.) at regular intervals.

7.2 Switching on the coolbox

- Open the coolbox drawer.
- To switch on the coolbox, turn the thermostat knob clockwise (see fig. **3** 1, page 4).
- ✓ The coolbox starts cooling the interior.

**NOTE**

Ensure that the objects placed in the coolbox are suitable for cooling/warming to the selected temperature.

7.3 Selecting the temperature

The switch on the thermostat (see fig. **3** 1, page 4) displays the selected temperature.

Switch position	Temperature range (dependent of ambient temperature)	
	CD20	CD30
MAX	approx. 0 °C in interior	approx. -2 °C in interior
MIN	approx. +15 °C in interior	approx. +12 °C in interior

- If you wish to set the temperature to cooling, turn the thermostat knob (see fig. **3** 1, page 4), to the desired temperature range.

7.4 Switching off the coolbox



NOTE

If you wish to leave the cooling device switched off for a longer period, clean it and leave the drawer slightly open. This will prevent unpleasant odours from forming.

- Open the coolbox drawer.
- To switch off the coolbox, turn the thermostat knob (see fig. **3** 1, page 4) to the "0" position.
- ✓ The coolbox is switched off.
- If you wish to stop using the coolbox, disconnect the connecting cable from the battery.

7.5 Defrosting

Humidity can form frost in the interior of the cooling device. This reduces the cooling capacity. Defrost the device in good time to avoid this.

**NOTICE!**

Do not remove the layer of ice with hard or sharp tools. These can damage the plastic of the vaporiser.

- Take the food or other objects out of the device and place it in another cooling device to keep it cool, if necessary.
- Switch the cooling device off (see chapter “Switching off the coolbox” on page 25) and leave the drawer open.
- Wipe off the water resulting from defrosting or – if present – empty the collecting tray.

8 Cleaning and care

**WARNING!**

Always disconnect the device from the mains before you clean and service it.

**NOTICE! Risk of damage**

- Never clean the cooler under running water or in dish water.
- Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the cooler.

- Occasionally clean the device interior and exterior with a damp cloth.
- Make sure that the air inlet and outlet vents on the device are free of any dust and dirt, so that heat can be released and the device is not damaged.

9 Warranty

The statutory warranty period applies. If the product is defective, please contact the manufacturer's branch in your country (see the back of the instruction manual for the addresses) or your retailer.

For repair and guarantee processing, please include the following documents when you send in the device:

- A copy of the receipt with purchasing date
- A reason for the claim or description of the fault

10 Disposal

- Place the packaging material in the appropriate recycling waste bins wherever possible.



If you wish to finally dispose of the product, ask your local recycling centre or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.

11 Troubleshooting



WARNING!

This device may only be repaired by specialist personnel. Inadequate repairs can lead to considerable hazards.

Compressor does not run

Feature	Possible cause	Remedy
$U_{\text{TERM}} = 0$ Volt	There is an interruption in the connection between the battery and the electronics	Establish a connection
	Main switch faulty (if installed)	Replace the main switch
	Additional supply line fuse has blown (if installed)	Replace the supply line fuse
$U_{\text{TERM}} \leq U_{\text{ON}}$	Battery voltage is too low	Charge the battery
During attempted start up $U_{\text{TERM}} \leq U_{\text{OFF}}$	Loose cable connection	Establish a connection
	Poor contact (corrosion)	
	Cable cross section too small	Replace the cable (fig. 2, page 3)
	Battery capacity too low	Replace the battery
During attempted start up $U_{\text{TERM}} \geq U_{\text{ON}}$	Ambient temperature too high	–
	Insufficient ventilation and/or air supply	Move the refrigerator to another location
	Condenser is dirty	Clean the condenser
Electric circuit between the pins in the compressor interrupted	Defective compressor	Replace the compressor

U_{TERM} Voltage between the positive and negative electronic terminals

U_{ON} Switch on voltage of the electronic connection terminals see chapter “Technical description” on page 22)

U_{OFF} Switch off voltage of the electronic connection terminals see chapter “Technical description” on page 22)

Interior temperature too low in the “MIN” thermostat setting

Feature	Possible cause	Remedy
Compressor runs continuously	Thermostat sensor has no contact to the vaporiser	Secure the sensor
	Short circuit in the thermostat line	Change the thermostat
	Thermostat defective	
Compressor runs for a long time	Large quantities have been frozen in the vaporiser compartment	

Cooling capacity drops, interior temperature rises

Feature	Possible cause	Remedy
Compressor runs for a long time/continuously	Vaporiser iced over	Defrost the vaporiser
	Cooling area insulation is insufficient (moist/wet)	Adjust/replace the drawer seal
	Ambient temperature too high	
	Insufficient ventilation	Ensure that the device is sufficiently ventilated
	Condenser is dirty	Clean the condenser
	Fan defective (if installed)	Replace the fan
Compressor does not run often	Battery capacity exhausted	Charge the battery

Unusual noises

Feature	Possible cause	Remedy
Loud humming	A component of the refrigerant circuit cannot move freely (touching the wall)	Bend the component carefully away from the obstruction
	Foreign body jammed between the cooling unit and the wall	Remove the foreign body
	Fan noise	–

Radio or television interference in the vehicle

Feature	Possible cause	Remedy
Reception interference when the compressor is running	The electronic connection of the cooling device is not directly clamped on to the battery	Connect the cooling device as directly as possible to the battery

12 Technical data

	CD20	CD30
Connection voltage:	12 V ⁻⁻⁻ /24 V ⁻⁻⁻	
Switch-off voltage:	10.4 V at 12 V ⁻⁻⁻ 22.8 V at 24 V ⁻⁻⁻	
Switch-on voltage:	11.7 V at 12 V ⁻⁻⁻ 24.2 V at 24 V ⁻⁻⁻	
Rated current:	12 V ⁻⁻⁻ : 3 A 24 V ⁻⁻⁻ : 1.5 A	
Cooling capacity:	0 °C bis +15 °C	-2 °C bis +12 °C
Capacity:	20 l	30 l
Climatic class:	N	
Ambient temperature:	+16 °C to +32 °C	
Relative humidity:	max. 90 %	
Permanent inclination:	max. 30°	
Dimensions:	fig. 1 , page 3	
Weight:	16.1 kg	18 kg
Test/certificates:	