

Operation manual COOL-CARE[®]

This operation manual is to be handed out to the operating personnel as well as to the authorized maintenance and repair services. It is absolutely necessary that it be read through before start-up.

1.) Installation of the device:

The air necessary for cooling the compressor is drawn in at the rear of the device and blown out on the side.

For this reason the rear of the device must not be blocked up. Maintain a minimum space of 15 to 20 cm at the rear. The side vents too must not be blocked, as the existing air must not be hindered.

2.) Starting up with cooling water:

To enable the coolant supply, the internal circulating pump of the **COOL-CARE^â** must first be vented following these steps:

a) The **COOL-CARE[®]** is **turned off**.

b) The **COOL-CARE^â** is supplied with power by plugging it into the mains.

c) Remove the container stoppers from the top side and fill the container below them the coolant. The cooling coils should be well covered to enable full transfer of cooling power. **ATTENTION !** It is mandatory that an anti-freeze be used. Pure water would freeze. The anti-freeze effectiveness should be -10° C. By no means less, but too much of impairment on the conveyance power of the water pump.

d) Now connect a piece of hose to the **COOL-CARE^â** water supply and hold it in a bucket or like container.

e) The operating switch for the cooling can now be briefly switched on. The supply pump runs and vents because the water is being pumped into the bucket. When a stream of water has developed, the cooling can be switched off.

3.) The cooling water hoses can now be connected according to the plates.

Water supply means:

-Outflow of the cold water from the **COOL-CARE[®]**, i.e. inflow into the unit to be cooled.

Water return means:

-Outflow of the heated water from the unit to be cooled, i.e. inflow into the **COOL-CARE[®]**.

Since the temperature will swing into the minus range, (**ATTENTION !** This applies only to devieces without a thermostat. See pt. 6), the cooling water hose should be insulated to avoidcondesation.

4.) Now switch the **COOL-CARE^â** on again. The water pump is running and vents the system. In the initial phase the water level will sink drastically as a result of the venting process in the system. The amount lost must be refilled.

ATTENTION ! It is absolutely necessary that the sinkage of the water level be observed in order to avoid the supply pump running dry. Anti-freeze should be aded while venting is in process.

5.) The device is now ready for operation. Since the **COOL-CARE^â** is devised mainly to cool processes having no specific pre-set temperature, a temperature gauge, i.e. thermostat has purposely been done without. A specific temperature range is swung into depending on surrounding conditions and the device to be cooled. The device is suited to run permanently.

6.) Pt. 5 does not apply to devices with a thermostat. If a thermostat is present, a specific temperature within the limits values can be selected. The device will then shut off when the temperature is reached. A description of the thermostat is enclosed an should be heeded.

General tips:

- 1.) **ATTENTION !** Disconnect the plug from the mains before opening the device. Repair work should only be done by an expert.
- 2.) The air intake and outlet grilles are not to be blocked up. Good air circulation must always be guaranteed.
- 3.) The water pump must not be allowed to run dry. For this reason adhere to the start-up procedure as described.
- 4.) Check at regular intervals - by diminished cooling power, immediately - that the water level in the water container is sufficient (the cooling coils must be covered).

If not included in the delivery, enquire with us about an anti-algae agent.

- 5.) The device is not to be exposed to sub-zero temperatures. Even when empty, residual water remains in the pump and in the lines. At temperatures below 0° C this can cause damage
ATTENTION ! This applies also when the device is not in operation.
- 6.) For technical-physical reasons, the net output of the device decreases at lower required temperatures.
- 7.) Adhere to the given voltages and frequencies.

Maintenance:

Depending on the location and dust content in the air the liquefier plates at the back should be checked at long intervals - by diminished cooling power, immediately - for contamination and cleaned if necessary. For this the guard plate must be loosened and the liquefier vigorously blown-through from back to front with nitrogen or oil-free compressed air.

The device is otherwise maintenance-free.

*** For disturbances or enquiries contact:**

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Parts list for COOL-CARE[®], 50 Hz, R 134 a

No.	Pces.	Description	Make	Type	Order no.	No. in wiring diagram
01	1	Main switch	EVG	green	1660.0202	H1 + S1
02	1	Compressor	Danfoss	PL50F	103N0491	M1
03	1	Ventilator	Danfoss	zu PL50F	118U0214	M2
04	1	Water pump	Eheim	1048	1048	M3
05	1	Starting relay	Danfoss	zu PL50F	117U6021	zu M1
06	1	Starting capacitor	Danfoss	zu PL50F/60µ F	117U5014	zu M1
07	1	Thermostat	Störk-Tronic	ST70-31.10	201665	S2
08	1	Transformer	Störk-Tronic	~230 V/~12 V AC	198432	T1

Technical data for type COOL-CARE®

Voltage	: ~230 V/1 PH/N/PE
Frequency	: 50 Hz
Current input IN max.	: 0,8 A
Starting current max.	: 1,5 A
Power consumption	: 85 watts
Refrigerating capacity	: 180 watts at 20° C water preflow temperature
Pump capacity max. delivery height	: 0,15 bar
Pump capacity max. quantity	: 5 l/min
Permitted ambient temperature	: +28° C
Max. operating overpressure	: 12 bar
Cooling agent	: R 134 a
Quantity of cooling agent	: 75 g
Air volume flow	: 112 m³/h
Water tank capacity	: 0,8 l
Weight	: approx. 13 kg
Dimensions	: length x width x heigh = 260 x 390 x 245 mm
Noise level	: 39 dBA vertical measurement at 2 m distance
Colour	: RAL 7035 epoxy resin coated and RAL 5001
Wasser connections	: MS fast action coupling 3/8"
Control unit	: ~ 230 V/50 Hz twopoint-regulator