



*ColdCube™ - Operator's Manual*  
*ColdCube™ - Manuel de l'utilisateur*  
*ColdCube™ - Manuale dell'operatore*  
*ColdCube™ - Betriebshandbuch*  
*ColdCube™ - Manual del operador*



# **ColdCube™**

**TK 60942-11-OP (Rev. 0, 08-2012)**

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# Introduction

## General Information

This manual is published for informational purposes only and the information being furnished herein should not be considered as all-inclusive or meant to cover all contingencies. If further information is required, consult your Thermo King Service Directory for the location and telephone number of the local dealer.

All service requirements, major and minor, should be handled by a Thermo King dealer.

Performing pre-trip checks and enroute inspections on a regular basis will minimize on-the-road operating problems. A closely followed maintenance program will also help keep your unit in top operating condition (see the “Maintenance Inspection Schedule” in this manual).

## Thermo Assistance

Thermo Assistance is a multi-lingual communication tool designed to put you in direct contact with an authorized Thermo King dealer should you require one.



BEA261

back up numbers:

Holland	+31 202 02 51 09
Belgium	+32 270 01 735
France	+33 171 23 05 03
Spain	+34 914 53 34 65
Italy	+39 02 69 63 32 13
U.K.	+44 845 85 01 101
Denmark	+45 38 48 76 94
Germany	+49 695 00 70 740
All others	+32 270 01 735

## Introduction

To use this system, you need the following information before you call:

- Contact Phone Number
- Type of TK Unit
- Thermostat Setting
- Present Load Temperature
- Probable Cause of Fault
- Warranty Details of the Unit
- Payment Details for the Repair
- Refer to the Thermo King Service Directory.

Leave your name and contact number and a Thermo Assistance Operator will call you back. At this point you can give details of the service required and the repair will be organized.

Please note that Thermo Assistance cannot guarantee payments and the service is designed for the exclusive use of refrigerated transporters with products manufactured by Thermo King Corporation.

## Disclaimer

This manual is published for informational purposes only. Thermo King Corporation makes no representations or warranties, express or implied, with respect to the information, recommendations and descriptions contained in this manual and such information, recommendations and descriptions should not be regarded as all-inclusive or covering all contingencies. In the event you have any questions or require further information, please contact your local Thermo King dealer.

The procedures described herein should only be undertaken by suitably qualified personnel. Failure to implement these procedures correctly may cause damage to the Thermo King unit or other property or personal injury.

Thermo King Corporation and its affiliates shall have no liability in contract or tort (including negligence and/or strict liability) or otherwise, to any person or entity for any personal injury, property damage or any other direct, indirect, special or consequential damage or liability whatsoever, arising out of or resulting from any actions by any person that are contrary to this manual or any of the information, recommendations or descriptions contained herein or the failure of any person to implement the procedures described herein correctly or to follow caution and safety decals located on the Thermo King unit.

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# Safety Precautions

Thermo King recommends that all services be performed by a Thermo King dealer. However, there are several general safety practices which you should be aware of:



**WARNING:** Always wear goggles or safety glasses when working with or around the refrigeration system or battery. Refrigerant or battery acid can cause permanent damage if it comes in contact with your eyes.



**IMPORTANT:** Thermo King will not be held liable for claims for damage resulting from the following:

- Misuse, improper installation, abnormal service, storage of hazardous chemicals, use of corrosive substances, transit damage, recharging of cooling system, accident, fire, improper repair, tampering or abuse.
- Incorrect voltages or faults with regard to power supply which falls outside of the ColdCube operating parameters.



**CAUTION:** Danger of fatal injury from electric shocks! When using the ColdCube on boats, if the ColdCube is powered by 110-240 V AC, ensure that the power supply has a residual current circuit breaker! Check that the voltage specification on the type plate is the same as that of the power supply. Only connect the ColdCube as follows:

- with the 12/24 V connection cable included with the ColdCube to a 12/24 V battery.
- or, with the 110-240 V connection cable included with the ColdCube to the 110-240 V AC supply.

If the cable is damaged, it must be replaced to prevent possible electrical hazards.

Disconnect the connection cable before cleaning and maintenance, after use and before changing a fuse.

## Safety Precautions



***CAUTION: Danger of injuries! Batteries contain aggressive and caustic acids. Avoid battery fluid coming into contact with your body. If your skin does come into contact with battery fluid, wash the part of your body in question thoroughly with water. Disconnect the ColdCube and other electric devices from the battery before you connect the battery to a quick charging device. Over-voltage can damage the electronics of the ColdCube.***



***CAUTION: Electronic devices are not toys! The ColdCube is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised to ensure that they do not play with the appliance.***

***Do not operate the ColdCube if it is visibly damaged.***

***The ColdCube may only be repaired by qualified personnel. Inadequate repairs can cause considerable hazards. If your ColdCube should need repairing, please contact Thermo King customer service.***

***Do not open the refrigerant circuit under any circumstances!***

***The ColdCube is not suitable for transporting caustic materials or materials containing solvents. Food may be stored in its original packaging or in suitable containers.***

## Safety Precautions



**WARNING:** Control circuits used in the ColdCube are low voltage. This voltage potential is not considered dangerous, but the large amount of current available can cause severe burns if shorted to ground.



**WARNING:** Do not wear jewelry, watches, or rings. These items can short out electrical circuits and cause severe burns to the wearer.



**CAUTION:** Use tools with insulated handles that are in good condition.



**CAUTION:** Danger of fatal injury from electric shocks!

Do not touch exposed cables with your bare hands. This especially applies when operating the ColdCube from an AC power supply.

Before starting the ColdCube, ensure that the power supply line and the plug are dry. Do not place any electrical devices inside the cooling container.

Set up the ColdCube in a dry location where it is protected against splashing water. Protect the ColdCube and the cable against rain and moisture.

Do not place it near open flames or other heat sources (heaters, direct sunlight, gas ovens etc.).

**CAUTION:** Danger of overheating! Always make sure there is sufficient ventilation so that heat generated during normal operation can dissipate. Ensure that the ventilation slots are not covered. Leave at least 2 inches (50 mm) from top and around the ColdCube to ensure adequate ventilation.



Never immerse the ColdCube in water. Do not fill the inner container with ice or fluid.

## **First Aid**

### **First Aid—Refrigerant**

**Eyes:** For contact with liquid, immediately flush eyes with large amounts of water. Get prompt medical attention.

**Skin:** Flush areas with large amounts of warm water. Do not apply heat. Wrap burns with dry, sterile, bulky dressing to protect from infection or injury. Get prompt medical attention.

**Inhalation:** Move victim to fresh air and restore breathing if necessary. Stay with victim until arrival of emergency medical personnel.

**Inhalation:** Move victim to fresh air and restore breathing if necessary. Stay with victim until arrival of emergency personnel.

**Ingestion:** Do not induce vomiting. Immediately contact local poison control center or physician.

### **First Aid—Refrigerant Oil**

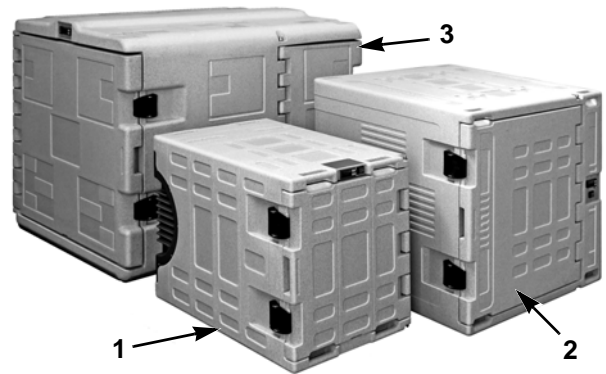
**Eyes:** Immediately flush eyes with large amounts of water for at least 15 minutes while holding the eyelids open. Get prompt medical attention.

**Skin:** Remove contaminated clothing. Wash thoroughly with soap and water. Get medical attention if irritation persists.

# Unit Description

Thermo King ColdCube cooling containers are the flexible and convenient solution for transportation of perishable goods in cars, trucks or vans. The heavy duty ColdCube is made of rotationally moulded polyethylene and can be cleaned easily according to 93/43/EEC (HACCP).

- Operating voltage is 12/24 V DC and 110-240 V AC, 50-60 Hz (except 915 Litre freezing unit which is 12V DC, 110-240V AC).
- The refrigerant gas is CFC free R134a (or 404a on 915L Freezing only).
- The digital temperature controller allows easy setting of the internal temperature.



**Figure 1: ColdCube**

There are six ColdCube models:

- 140 Litre cooling (1)
- 140 Litre freezing (1)
- 330 Litre cooling (2)
- 330 Litre freezing (2)
- 915 Litre cooling (3)
- 915 Litre freezing (3)



# ColdCube Installation



**NOTE:** Refer to ColdCube specifications page in the rear of this manual for unit max and average current requirements. Please ensure this has been taken into account for alternator and battery sizing.



**CAUTION:** Anchor the ColdCube to prevent it from shifting and causing harm to people or cargo.

Choose a well-ventilated installation location that is protected from direct sunlight.



**CAUTION:** The ColdCube unit and electrical connections are not water resistant or water proof. The ColdCube may not be used outside without proper protection from the weather.

## Electrical Connections



1.	DC Power Cable
2.	AC Power Cable with Plug

**Figure 2: Electrical Connections**

## Connecting to a DC battery



**NOTE:** *If the vehicle is equipped with a battery disconnect switch, always wire the ColdCube after the switch. This allows power to the ColdCube to be turned off by the battery disconnect switch.*



**CAUTION:** *Danger of damaging the ColdCube! Over-voltages can damage device electronics. Disconnect the cooling container and other consumers from the battery before charging the battery with a quick charging device.*

For safety reasons, the cooling container is equipped with an electronic system to protect it against reversed polarity when connecting to a battery.



**CAUTION:** *Danger of damaging the ColdCube! To prevent voltage and power losses, the cable should be as short as possible and not be interrupted. For this reason avoid additional switches, plugs or socket strips*

The ColdCube is supplied with a standard length DC battery cable with a fuse on the positive side. If this cable cannot be used, the fuse must be transferred to the cable installed.


Determine the required cross section of the cable in relation to the cable length according to the following table:

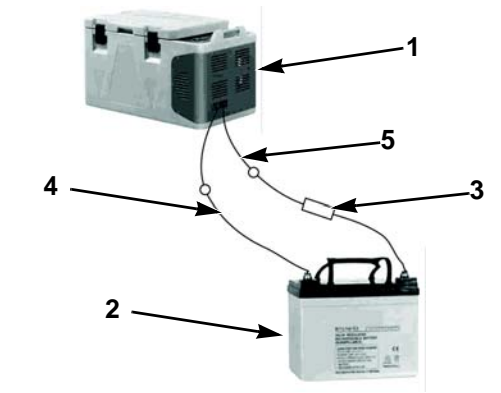
### Cable Length, 12 V & 24V DC

140 and 330 Litre Cooling			
Cross section		Max Length 12V	Max Length 24V
(mm <sup>2</sup> )	(AWG)	(m)	(m)
2.5	13	2.5	5
4	11	4	8
8	6	6	12
10	7	10	20

ColdCube Installation

140, 330 and 915 Litre Freezing			
Cross section		Max Length 12V	Max Length 24V
(mm <sup>2</sup> )	(AWG)	(m)	(m)
5	10	2.5	5
8	8	4	8
12	6	6	12
20	4	10	20

 **CAUTION: Danger of damaging the ColdCube!**  
Make sure that the polarity is correct.



1.	ColdCube	4.	Negative
2.	Battery	5.	Positive
3.	Fuse		

Figure 3: Battery Connections

➤ Before starting up the ColdCube for the first time, check whether the operating voltage and the battery voltage match (see type plate).

➤ Make sure that the cable at the positive battery terminal is protected with a fuse. See Figure 3.

### Fuse Sizes:

- 140 Litre cooling: 15A
- 140 Litre freezing: 25A
- 330 Litre cooling: 15A
- 330 Litre freezing: 25A
- 915 Litre cooling: 25A
- 915 Litre freezing: 25A

## Low Voltage DC Protection

The ColdCube is equipped with a battery monitor that protects the compressor from low voltage when connected to DC power. Thermo King has set the compressor low voltage disconnect higher than required to provide partial battery protection. If the ColdCube is operated when the vehicle ignition is switched off, the compressor switches off automatically as soon as the supply voltage falls below a set level. The compressor will switch back on once the battery has been recharged to the restart voltage level (normally 1.3V higher than the cut-out value).



***NOTE: The battery monitor only switches the compressor off and not the fans or controller, therefore a residual draw of 1 to 1.5 amps on the battery will remain unless the ColdCube power switch is turned off.***

***We highly recommend installing an ignition switch relay to turn off the ColdCube when the vehicle is not running.***

## Connecting to a 110-240 VAC Power Source



**CAUTION:** *Danger of electrocution! Never handle plugs and switches with wet hands or if you are standing on a wet surface.*

The ColdCube has a built-in multi-voltage electrical connection adapter with a priority circuit for connecting to a 110-240 VAC supply. The priority circuit automatically switches to VAC operation if the ColdCube is connected to a 110-240 VAC supply, even if the 12/24 V cable is still connected.

If both power sources are connected, AC power is selected. If the AC power supply is disconnected or drops below 85 V AC there will be a one minute time delay before the compressor switches to operate on DC power. If AC power is established at any time, there will be no delay to compressor operation.



Plug the AC connection cable into the AC voltage.



# ColdCube Remote Display Option

The optional ColdCube Remote Display kit includes a repeater display and display interface.

To install the Remote Display:

1. Figure 4 shows kit contents.



**Figure 4: Remote Display Kit Contents**

2. Gain access to unit display/controller top rear to find one or two connection ports. See Figure 5. Connect the provided dongle to the rear most port.



**Figure 5: Controller Connection Parts**

3. If your unit does not have round access hole, drill a hole large enough accept the bulkhead connector. Tighten the bulkhead. See Figure 6.



**Figure 6: Tighten Bulkhead**

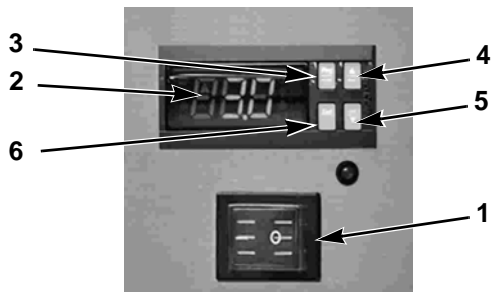
4. Connect wires together up to front of vehicle and to the Remote Display.
5. Use the following procedure to modify one parameter of the controller to allow transmission of data to the Remote Display:
  - a. With the ColdCube **ON**, press **PRG** and **SET** buttons together for more than 5 seconds. The display will show the number “0”, representing the password prompt.
    - b. Press " ▲ " or " ▼ " until the number “22” (the code of the password that allows access to the parameters) is displayed.
    - c. Confirm by pressing **SET**. The display will show the code of the first modifiable type “C” parameter (“/2”)
    - d. Press " ▲ " or " ▼ " until reaching the parameter “/te”.
    - e. Press **SET** to display the value associated with the parameter: should be “0”. Change to “1” using the " ▲ " or " ▼ " buttons.
    - f. Press **SET** to temporarily save the new value and return to the display of the parameter code.
    - g. To store the new values of the modified parameters, press **PRG** for more than 5 seconds to exit the parameter setting procedure.

# ColdCube Operation

## Before first use of ColdCube



**CAUTION:** *Danger of overheating! Ensure at all times that there is sufficient ventilation so that the heat that generated during operation can dissipate. Ensure that the ventilation slots are not covered. Make sure that the ColdCube is sufficiently far away from walls and other objects so that the air can circulate.*

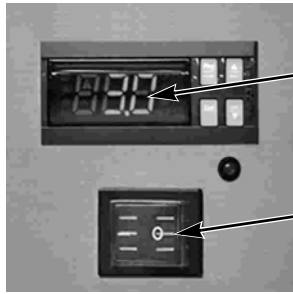


Pos.	Description	Function
1.	Switch	Switches the ColdCube on/off
2.	Display	Indicates the temperature
3.	PRG	Accesses controller programing
4.	▲	Increases the desired cooling temperature and scrolls backwards in display
5.	▼	Reduces the desired cooling temperature and scrolls forwards in display lists
6.	SET	Sets Temperature

**Figure 7: Display Elements**

**NOTE:** *Before starting your ColdCube for the first time, you should clean it inside and outside with a damp cloth.*

### To Begin Operation



1. Press the "I/O" button.
2. The display (Fig. 1-2) shows the current inside temperature in degrees F.
3. The cooling container starts working.

**Figure 8: To Begin Operation**

### Setting the temperature (Refer to Figure 7)

1. Press the **SET** button and hold it down for two seconds.
2. The display shows the set cooling temperature in °F.
3. Use the buttons " ▲ " or " ▼ " to set the requested internal temperature.

4. The display shows the desired cooling temperature in F°.
5. Press the **SET** button to store the desired cooling temperature.

### Changing temperature units

1. Press the **PRG/mute** and **SET** buttons simultaneously for five seconds. The display shows "00". Set the password to "22" with the " ▲ " or " ▼ " buttons. Press the **SET** button to confirm the password.
2. Press " ▲ " or " ▼ " until reaching the parameter "5".
3. Press **SET** to display the value associated with the parameter: "0" is for °C and "1" is for °F. Modify the value using the " ▲ " or " ▼ " buttons. Press **SET** to temporarily save the value and return to the display of the parameter code.
4. To definitively store the new values of the modified parameters, press **PRG** for more than 5 seconds, thus exiting the parameter setting procedure.

### Setting temperature alarms

**NOTE:** *The controller has no memory to store alarms and alarms are not stored if unit is powered off.*

In addition to setting the internal temperature of the ColdCube (above procedure), the keypad can be used to set a temperature alarm.



**Figure 9: ColdCube Display and Keypad**

As an example, to set an alarm for 5°F over or under a 41°F setpoint (+/- 3°C), follow this procedure:

1. Press **PRG** and " ▲ " or " ▼ " together for more than 5 seconds. The display will show the number "0", representing the password prompt
2. Press " ▲ " or " ▼ " until the number "22" is displayed (the code of the password that allows access to the parameters).
3. Confirm by pressing **SET**. The display will show the code of the first modifiable type "C" parameter ("2")
4. Press " ▲ " or " ▼ " until reaching parameter "st" (temperature set point).
5. Press **SET** to display the value associated with the parameter: set "41F" by using the " ▲ " or " ▼ " buttons.
6. Press **SET** to temporarily save the new value and return to the display of the parameter code
7. Press " ▲ " or " ▼ " until displaying the parameter "A1" (Type of threshold "AL" and "AH").
8. Press **SET** to display the value associated with the parameter. It should be already "0" (relative threshold: with this selection the AL and AH values are not fixed but indicate the maximum permissible deviation from the set point). If not increase or decrease it using the " ▲ " or " ▼ " buttons respectively.

9. Press **SET** to temporarily save the new value and return to the display of the parameter code.
10. Press " ▲ " or " ▼ " until displaying the parameter "AL" (Minimum temperature alarm).
11. Press **SET** to display the value associated with the parameter. It should be "0.0". Modify the setting to "5" using the " ▲ " or " ▼ " buttons respectively. It means that the minimum temperature alarm is set at "temperature set point 36F".
12. Press **SET** to temporarily save the new value and return to the display of the parameter code.
13. Press " ▲ " or " ▼ " until displaying the parameter "AH" (High temperature alarm).
14. Press **SET** to display the value associated with the parameter. It should be "0.0". Modify the setting to "5" using the " ▲ " or " ▼ " buttons respectively. It means that high temperature alarm is set at "temperature set point 46F".
15. Press **SET** to temporarily save the new value and return to the display of the parameter code.
16. Press " ▲ " or " ▼ " until displaying the parameter "Ad" (Temperature alarm delay). This indicates the number of minutes the temperature alarm is signalled after the temperature threshold is exceeded. Setting a delay for signalling the temperature alarm may help eliminate false alarms due to interference on the probe signal or brief situations (for example, the lid opened for a short period).
17. Press **SET** to display the value associated with the parameter. It should be "120" (default values in minutes). Modify the setting (suggestion is not less than "15") using the " ▲ " or " ▼ " buttons respectively.
18. Press " ▲ " or " ▼ " until displaying the parameter "H2" (Disable keypad). Parameter "H2" can be used to inhibit some functions relating to the use of the keypad. For example, to restrict modification of the parameters and the set point if the ColdCube is accessible by the public.
19. Press **SET** to display the value associated with the parameter. It should be "1" (all functions available by keypad). If you do not want to allow modification of the preprogrammed set point 41°F (+5°C), change the setting to "2" using the " ▲ " or " ▼ " buttons.

20. Press **SET** to temporarily save the new value and return to the display of the parameter code.
21. To save the new parameters, press **PRG** for more than 5 seconds to exit the parameter setting procedure.

**NOTE:** *The alarms, when enabled, activate the buzzer and show a code on the display: “HI” for the high temperature and “LO” for the low temperature alarm. The following conditions generate the temperature alarms:*

*High temperature alarm: the temperature measured by the virtual control probe is above the threshold set for parameter “AH”*

*low temperature alarm: the temperature measured by the virtual control probe is below the threshold set for parameter “AL”.*

Warnings for the relative thresholds: The temperature alarm has automatic reset. This means that if the temperature returns above/below the minimum value needed, the alarm signal is cancelled automatically. To reset all alarms press **SET** and **DEF** for more than 5 seconds. Pressing **PRG** mutes only the buzzer.

## Energy saving tips

- Allow hot perishable items to cool down first before you place it into the ColdCube.
- Do not open the cooling container more often than necessary.
- Defrost the cooling container once a layer of ice forms.
- Avoid unnecessarily low temperature settings.

## Replacement of the ColdCube fuse



**CAUTION:** *Danger of electrocution! Disconnect the connection cable before you replace the ColdCube fuse. .*

1. Switch off the ColdCube.
2. Pull off the connection cable.
3. Pry out the fuse (Figure 2 or Figure 3) with a screwdriver.
4. Replace the defective fuse with a new fuse that has the same rating as shown on page 16.
5. Press the fuse back into the housing.

### Pre-Cooling Load

Pre-cool or freeze goods before putting them in the ColdCube. The ColdCube is designed to maintain product temperature, not to pull down product temperature.

### Pre-Cooling ColdCube

The ColdCube is a highly insulated unit designed to maintain product temperature with minimal electrical consumption. The ColdCube is not designed for fast temperature pull down. You may need to pre-cool or pre-freeze an empty ColdCube for several hours to reach the setpoint temperature before loading product.

### Cleaning and maintenance



**CAUTION: Danger of electrocution! Always disconnect the mains plug before you clean and service the ColdCube.**



**CAUTION: Danger of damaging the ColdCube! Do not wet the electronic components. They are not water proof!**



**CAUTION: Danger of damaging the ColdCube! Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the ColdCube. Never use brushes, scouring pads or hard or pointed tools to remove ice or to loosen objects which have frozen in place.**

Occasionally clean the inside of the ColdCube with a damp cloth. Dry the ColdCube with a cloth after cleaning.

### Defrost

The ColdCube is not designed for automatic defrosting. If excess frost builds up, clean out the frost.

Troubleshooting

*NOTE: The 242 gallon freezing unit does not have an alarm LED.*



*CAUTION: Before performing any service, disconnect the battery cables at the battery and also disconnect the AC supply.*

The ColdCube has a built-in self diagnostic program. If there is a detectable error, the red LED light positioned nearby the digital controller will flash 1 to 5 times and repeat the pattern, showing the possible reason for the operation stopping. (Note: the 242 gallon freezing unit does not have the diagnostic LED.)

<b>1 Flash</b>	Battery protection cut/out	The battery voltage has fallen below the cut/out setting. Check the source battery for proper operation and sufficient voltage output. If power source is adequate then check wire sizes and conditions of the connectors to avoid voltage drops. Charge source battery.
<b>2 Flashes</b>	An over- current cut/out	The fan loads the electronic unit with more than 0,5 A (avg) or 1,0 A (peak). Fan may be blocked, fan wires may be loose or damaged or the fan motor has failed and is drawing over/current to protect itself. Visually inspect fan for blockage, check wires for chafes or loose connections and repair. Or if fan has failed then replace it.

## ColdCube Operation

<b>3 Flashes</b>	Motor start error	The rotor is blocked or the differential pressure in the refrigeration system is too high (> 5 bar). Compressor may not start because of high refrigerant pressure due to a high heat situation. High ambient temperatures may cause excessive heat, if so then the area around the ColdCube must be cooled down before trying to restart compressor. Or, if compressor just cycled off, wait a few minutes for pressure to come down and try again.
<b>4 Flashes</b>	Minimum motor speed error	If the refrigerant system is too heavily loaded, the compressor motor cannot maintain minimum speed 1,900 rpm. As above this may happen when system and/or ambient area is very hot which increases refrigerant pressure. Solution is as above, let area cool down and wait awhile before starting ColdCube.
<b>5 Flashes</b>	Thermal cut/out of electronic unit	If the refrigeration system has been too heavily loaded, and if the ambient temperature is high, the electronic unit will run too hot. As with all electronics, the compressor module is sensitive to heat, The module has a temperature sensor on the heat sink and if it gets too hot, due to high amp draw or high ambient temperatures, the ColdCube will shut down.

If the test light shows 3, 4 or 5 flashes then verify that there is adequate ventilation around the refrigerator/freezer. Check that vents are not blocked or dirty. Ensure that the ColdCube is not installed near a heat source.

In case ColdCube does not function, with display off, check the fuse and/or the proper connection to battery/AC connection.

## ColdCube Operation

Apart from possible problems identified by the red LED light of the self diagnosis system, other possible problems are:

Problem	Possible Reason	Action
The ColdCube works connected to the AC but not connected to 12/24 V dc (everything off)	DC fuse burn out	Replace fuse
	DC cord defective or not properly connected on socket	Check and, in case, replace DC cord
	Main switch defective	Replace main switch
The ColdCube works connected to 12/24 V dc but not connected to the AC (everything off)	Electronic unit defective	Replace electronic
	Main switch defective	Replace main switch
	Electronic unit defective	Replace electronic

Problem	Possible Reason	Action
ColdCube switch on (controller glows) but compressor and fan don't run	Error in controller programming	Re-set on the right programming parameters
	Controller defective (in case compressor and fan icon on are lighted)	Replace controller
	Defective wire connection	Check or replace wires
ColdCube is working but fan is stopped (see also self diagnosis)	Defective wire connection	Check
	Fan defective	Replace fan
	Electronic unit defective	Replace electronic

## ColdCube Operation

Problem	Possible Reason	Action
ColdCube is working but not cooling down	Lack of refrigerant gas	Check for refrigerant gas leakage and vacuum / recharge the unit gas quantity on the serial number label.
	Oil in the circuit (probably the ColdCube has operated for some time with a high angle)	Repeat short operation cycles (few minutes on and then 5 minutes off) to let the oil turn back to compressor. If not solved then vacuum and recharge.
	Compressor defective	Replace compressor

# Unit Specifications

ColdCube Style	Gross Capacity (Litres)	Minimum Temp*	Max Amps @ 12 VDC**	Avg. Amps @ 12 VDC	External Dimensions L x W x H (mm)	Internal Dimensions L x W x H (mm)	Weight (kg)
Cooling	140	- 10 C	9 A	3 A	1000 x 620 x 710	620 x 425 x 540	40
Cooling	330	0 C	9 A	4.5 A	1020 x 1000 x 910	810 x 700 x 615	90
Cooling	915	0 C	18 A	6.5 A	1510 x 1200 x 1180	1210 x 934 x 830	160
Freezing	140	- 21C	18 A	3 A	1000 x 620 x 710	620 x 425 x 540	40
Freezing	330	- 21C	18 A	5 A	1020 x 1000 x 910	810 x 700 x 615	90
Freezing	915	- 21C	25 A	9.5 A	1510 x 1200 x 1180	1210 x 934 x 830	165

\* At ambient temperature of 30 C

\*\* Divide by 2 to get 24VDC Amps; divide by 10 to get 120VAC Amps



# Warranty

The ColdCube Unit Warranty is two years parts and labor.

A full description of the warranty is available upon request.

## **Recover Refrigerant**

**At Thermo King, we recognize the need to preserve the environment and limit the potential harm to the ozone layer that can result from allowing refrigerant to escape into the atmosphere.**

**We strictly adhere to a policy that promotes the recovery and limits the loss of refrigerant into the atmosphere.**

**In addition, service personnel must be aware of Federal regulations concerning the use of refrigerants and the certification of technicians. For additional information on regulations and technician certification programs, contact your local THERMO KING dealer.**