

## Manuale d'uso

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### **Informazioni indispensabili per stabilire se il caso è coperto dalla garanzia:**

- Codice prodotto (indicato sull'etichetta posto sul prodotto)
- S/N (n° di serie) (indicato sull'etichetta posto sul prodotto)
- Fattura o ricevuta d'acquisto (oppure eventualmente documento di immatricolazione, vedi sopra nel capitolo Periodo di validità)
- Descrizione dettagliata del difetto. (Se possibile allegare foto)
- Descrizione dell'installazione con particolare attenzione alla ventilazione e al cablaggio. (Se possibile allegare foto)

(Se viene stabilito che il caso non sia coperto dalla garanzia il cliente deve pagare tutte le spese per eventuali riparazioni, sostituzioni, manodopera, spostamento di persone e trasporti. IWM non è tenuto a sostenere nessuna spesa.)

### **Modalità operative da applicare una volta accertato che il caso è coperto dalla garanzia:**

#### Frigoriferi installati in una barca:

Interventi in garanzia devono essere effettuati esclusivamente da centri di assistenza (CAT) della rete di Indel Webasto Marine. IWM non copre costi di interventi fatti da altri. Trovate il centro di assistenza più vicino su [www.indelwebastomarine.com](http://www.indelwebastomarine.com)

Per prodotto installato in una barca, il tecnico del CAT autorizzato da IWM si reca sulla barca se questa si trova ad una distanza di al massimo 100km dal CAT. IWM copre il costo di tale spostamento. Se la barca si trova ad oltre 100 km, il cliente può scegliere se pagare il costo della trasferta del tecnico (in quel caso paga direttamente al tecnico), oppure avvicinare la barca.

IWM non rimborsa nessuna spesa per ricambi acquistati altrove, non dalla rete IWM.

#### Frigoriferi installati in Veicoli Recreazionali(RV):

Interventi in garanzia devono essere effettuati esclusivamente da centri di assistenza della rete Webasto.

Il veicolo deve essere portato al centro di assistenza.

Trovate il centro di assistenza più vicina su [www.webasto.com](http://www.webasto.com)

## Summary

<b>1. Instructions and Use .....</b>	<b>36</b>
<b>1.2 Environment .....</b>	<b>37</b>
<b>1.3 Safety Standards .....</b>	<b>38</b>
<b>2. Usage instructions .....</b>	<b>41</b>
<b>2.1 Thermostat-controlled temperature regulation .....</b>	<b>41</b>
<b>2.2 Usage recommendations .....</b>	<b>42</b>
<b>2.3 Defrosting .....</b>	<b>43</b>
<b>3. Maintenance .....</b>	<b>43</b>
<b>3.1 Low voltage protection .....</b>	<b>44</b>
<b>4 Installation Warnings .....</b>	<b>45</b>
<b>4.1 Installation .....</b>	<b>47</b>
<b>4.2 Ventilation .....</b>	<b>48</b>
<b>4.3 Door Panelling .....</b>	<b>48</b>
<b>4.4 Door Reversibility .....</b>	<b>48</b>
<b>4.5 Electrical Connections .....</b>	<b>49</b>
<b>4.6 Size of the electrical cables .....</b>	<b>50</b>
<b>4.7 Internal lighting .....</b>	<b>50</b>
<b>4.8 SEC - "Smart Energy Control" (optional) .....</b>	<b>51</b>
<b>5 Technical data (standard configurations) .....</b>	<b>52</b>
<b>6 Troubleshooting .....</b>	<b>53</b>
<b>7 LEDs for diagnostics .....</b>	<b>56</b>
<b>8 Dimensions .....</b>	<b>57</b>
<b>9 Warranty .....</b>	<b>59</b>
<b>Wiring diagrams .....</b>	<b>243</b>

## 1. Instructions and Use








This manual contains warnings to signal dangers to the user or particular behaviour to comply with; these warnings are indicated as follows:



**WARNING!**



Do not start the product before reading this instruction manual.

<p>Obligation to read instructions The presence of this symbol mandates reading of instructions before putting the unit into operation.</p>	
<p>Obligation to disconnect The presence of this symbol mandates immediate disconnection of the unit from the mains in case of failures.</p>	
<p>Obligation to wear gloves The presence of this symbol mandates each operator wear suitable protective gloves.</p>	
<p>Obligation to wear shoes The presence of this symbol mandates each operator wear shoes designed to decrease the risk of injury.</p>	
<p>General hazard The presence of this symbol mandates special attention by the operator.</p>	
<p>Shock Hazard The presence of this symbol tells personnel involved that the described operation may present a risk of electric shock.</p>	
<p>High intensity light hazard The presence of this symbol indicates that you must take special care with the high intensity bright lights, risk to eyesight.</p>	

# User Manual

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WARNING! This manual must be kept for future reference. We recommend that users:

- Store this manual in an accessible location protected from moisture and heat and protected from the direct rays of the sun.
- Use the manual in such a way as to avoid damaging it or any part of its content.
- Do not remove, alter or tear on any part of the manual.


Despite the care and thoroughness with which this manual has been prepared, Indel Webasto Marine Srl cannot guarantee that the information within covers every possible event associated with installation of the product. Contact our technicians immediately in the event of uncertainty. In the event of selling or transferring the unit to another person, this manual and related documents should be delivered intact to the new user.

## 1.2 Environment

This product complies with the Directive 2002/96/EC regarding waste electrical and electronic equipment (WEEE).

The product's proper disposal is essential to preventing negative consequences for the environment and human health.




The symbol  on the product, the packaging and/or the accompanying documentation indicates that the product should not be disposed of as household waste. The product must be taken to an authorized collection centre for the recycling of electrical and electronic equipment. The product must be disposed of in compliance with the current local environmental regulations regarding waste disposal.


For more information regarding the disposal, recycling and reuse of the product, please contact your local authorities, your local waste collection service or the retailer/distributor from whom the product was purchased.

Packaging is manufactured from recyclable material. It bears the



recycling symbol and  must be delivered to a collection centre.



The symbol  indicates that the product complies with all European Union provisions provided for its use.



**WARNING!** This unit contains fluorinated greenhouse gas R134a within a hermetically sealed system whose operation depends on the presence of said gas.



**WARNING!** Never open the refrigerant circuit except for the normal connection/disconnection of couplings (where present). The R134a refrigerant contained within the unit is non-flammable in normal conditions. Never dispose of the refrigerant R134a in the environment.

Contact a qualified certified technician for handling fluorinated gases in the event of damage to the refrigerant circuit.

### 1.3 Safety Standards



**WARNING!** Indel Webasto Marine Srl disclaims all liability for any malfunction or damage to persons or property due to improper use of the machine or with materials with different characteristics than those described in this manual.

Improper use or use of the product not in line with the information contained in this manual cannot result in claims against the manufacturer and/or supplier.



**WARNING!** The refrigerator is only suitable for the preservation and/or storage of food items. The food items must be stored in their original packing or else in suitable containers. Do not consume expired food products as such behaviour could result in food poisoning.



**WARNING!** If medicines are to be stored in the refrigerator, check that the unit has a cooling capacity that will meet the requirements of the respective medicines.

## User Manual

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WARNING! The only purpose and function of the product when used as a freezer is to maintain already frozen food completely frozen.

The refrigerator will not freeze non-frozen or partially frozen food products. If a non-frozen or partially frozen food product is stored in the freezer, this is considered improper use and can cause possible unintended thawing of food which may lead to problems related to safety, illness or injury if swallowed.

The preservation of non-frozen or partially frozen food in the freezer can also affect the quality of other frozen food products stored in the freezer.

Exposure to temperatures above the temperature of the climatic class range for which the freezer was built, power supply interruptions and/or frequent opening of the freezer can influence the effectiveness of the refrigerator and the quality of the contents of the freezer.

The user should always check food quality before ingesting.



WARNING! For extended periods of disuse or when defrosting, remove the



unit's light bulb or disconnect all of its power supplies. Leave the refrigerator door slightly open to air out the inside of the product and prevent the formation of mould.



WARNING! Eliminate all sources of heat and sparks within the unit's vicinity; in the event of coolant leakage, remove the unit's power plug and ventilate the room thoroughly.



WARNING!



Disconnect the unit from the mains power supply immediately in the event of any malfunction. Never touch any damaged or non-insulated electrical cables while the electrical power supply is enabled. This observation is particularly true when the unit is connected to 115V or 230V mains voltage.

If the power cable is damaged, it must be replaced. Contact qualified personnel or the Service Centre.



WARNING! Do not store inside the unit or in the vicinity of its electrical parts: flammable substance-based spray cans, explosive materials, electrical equipment, live animals.

Spray cans containing flammable substances may have leakage of these gases which, in contact with electrical parts, can ignite or cause explosions.

Keep any drinks with high alcohol content tightly closed and upright.

Avoid flames or sparks inside the unit.

Do not use electrical equipment inside the refrigerator.



WARNING! The unit can be used by children under 8 years of age and by people with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, provided they are supervised or after they have received instructions on safe use of and understanding of the dangers inherent in it.

Children should not play with the unit. Cleaning and maintenance meant to be performed by the user and must not be performed by unsupervised children.



WARNING! Do not use plugs and switches if you have wet hands or feet.

# User Manual

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## 2. Usage instructions

The climate class is indicated on the data plate inside the unit itself.

**SN** or **extended temperate class** (ambient temperature from 10°C to 32°C)

**N** or **temperate class** (ambient temperature from 16°C to 32°C)

**ST** or **subtropical class** (ambient temperature from 16°C to 38°C)

**T** or **tropical class** (ambient temperature from 16°C to 43°C)

### 2.1 Thermostat-controlled temperature regulation

The refrigerator's temperature is continuously regulated by the thermostat, which also includes a power-off function if turned counter clockwise to the end position.

In order to turn off the unit, it is necessary to overcome the slight resistance of the knob. The location of the thermostat knob depends on the type of refrigerator.

To adjust the temperature, proceed as follows: turn the thermostat clockwise to lower the temperature, and vice versa.

It is recommended to keep the refrigerator at a temperature of 5-6°C. Since the outside temperature can affect the refrigerator's internal temperature, it can be difficult to maintain the desired temperature when the refrigerator is exposed to heat and/or direct sunlight.

Thermostat Knob





## 2.2 Usage recommendations

- If possible, the refrigerator should be turned on for about 6 hours prior to inserting the food items.
- Frequent opening of the refrigerator door will result in greater power consumption.
- Ensuring adequate ventilation for the compressor and the condensing unit will significantly reduce power consumption.
- Never obstruct the refrigerator's ventilation system.
- The electrical system must be kept in good condition. Inspect the batteries and check the charge levels regularly. Always use a starter battery separate from the motor.
- Keep the inside of the refrigerator clean and dry. Remove the condensation water from the drip tray beneath the refrigerator's freezer compartment where present.
- To keep the surface of the door in good conditions and intact, make sure that it is always clean and dry.
- The unit has been designed with a product lock protection in the event of low battery voltage. In the event of a compressor block, follow the instructions in this manual and/or contact specialised technicians or Indel Webasto Marine Srl service centres.
- The compressor can operate up to an angle of 30°, while greater angles can cause permanent damage to the compressor.

# User Manual

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## 2.3 Defrosting

Since the evaporator operates at temperatures well below freezing, ice and frost will inevitably form upon it.

The humidity in the air, the temperature and the number of times the door is opened will have a significant impact on frost formation.

The refrigerator should always be defrosted when the layer of frost on the evaporator reaches a thickness of 3-4 mm or more.

Turn off the refrigerator by turning the thermostat to its 0 position.

Defrosting should be performed when the products can remain as cool as possible outside of the refrigerator itself. Do not use sharp objects to remove ice and frost from the evaporator, as this could damage it and result in leaks.

Only turn the refrigerator back on once it has been defrosted, cleaned and thoroughly dried. Remove, empty and dry the drip tray beneath the evaporator. A towel can be placed at the base of the refrigerator during the defrosting procedure in order to facilitate water collection.

## 3. Maintenance

Isotherm Cruise & Cruise Elegance refrigerators are equipped with closed cooling systems, which do not require maintenance or refrigerant refills.

The compressor is specifically designed for mobile applications and guarantees maximum performance and durability. In the winter, the refrigerator must be stored inside the vehicle, but the compressor will not work at temperatures near or below 0°C. Seasonal maintenance is limited to the cleaning of the condensing unit behind the refrigerator. In particular, it is necessary to brush/vacuum out all the dust that has accumulated due to the fan. This can be done using a soft brush and a vacuum cleaner. It is important to keep the inside of the refrigerator clean by washing it with warm water and mild soap and by drying any water/condensation that may be encountered.

To keep the surface of the door in good conditions and intact, make sure that it is always dry and clean.

In order to prevent damage to the electrical/mechanical components and/or the formation of mould, when shutting off the refrigerator for extended periods of time it is necessary to wait for the unit to defrost completely and to eliminate any

condensation that may have formed, both inside the unit and in the external water collection tray. The natural defrosting time can vary from a few minutes to several hours. In the wintertime and when the refrigerator is shut off, the door should be left slightly ajar for ventilation and **all power disconnected**.

### Classic model ventilation:

Classic models are equipped with a handle with special stopper designed to leave the door in position for ventilation.

To set the door in the ventilation position, use a knife or coin to release the stopper (Fig. 5). Once the stopper has been released, hook the door in the ventilation position.

### Elegance model ventilation:

Elegance models are equipped with a special door stopper system to set the door in the ventilation position inserted in the top of the refrigerator.

To set the door in ventilation position, push the door stopper toward the right to the ventilation position "--> TO VENT" (Fig. 6).

## 3.1 Low voltage protection

In order to prevent excessive battery depletion, a protection device shuts off the compressor in case of insufficient voltage and turns it back on when the voltage in the system increases after the batteries have been charged.

System Voltage	Shut-down Voltage	Minimum Operating Voltage
12V	9.6 (10.4) V	10.9 (11.7) V
24V	21.3 (22.8) V	22.7 (24.2) V

If the bridge is removed between C and P, the values indicated in the parentheses are valid.



**WARNINGS:** Before switching on the unit, always make sure that the batteries are in optimal condition.

## 4 Installation Warnings



WARNING!



In order to guarantee the unit's safe functionality, follow the indications included with in these instructions when installing and connecting the unit.



WARNING! Always use PPE



(Personal Protective Equipment) during product handling and installation.



WARNING! Any changes made to the product without the knowledge of the manufacturer will be the sole responsibility of those carrying out said changes. Changes made without the permission of Indel Webasto Marine Srl will void all warranties and may void the declaration of conformity to applicable directives.



WARNING! Check for any visible damage on the refrigerator's mechanical and electrical components prior to use.



WARNING! Do not damage refrigerant circuit pipes. Coolant sprays can damage eyesight.



WARNING! In the event of damage to the unit itself, notify the supplier immediately before performing the connections.



WARNING! If the power cable is damaged, it must be replaced by the manufacturer, an authorized Service Centre or a qualified technician.



WARNING! Install the refrigerator in a dry place that's sheltered against water spray. The unit's electrical components must NOT be exposed to rainfall and/or

sprays of water.



WARNING! Install the refrigerator away from gas or LPG cylinders.



WARNING! The product must be installed in an area accessible for any maintenance. The housing space of live parts and of the condensing unit/compressor must only be opened voluntarily and not directly accessible.



WARNING! The compressor/condensation unit installation area must be made with a material resistant to the needle-flame test required by standard EN 60335-1 or else be more than 5 cm from electrical and/or electronic components.



WARNING! If there is a battery charger, it must be connected to the battery and never directly to the refrigerator.



WARNING! The appliance must be protected against indirect contact in accordance with the "Heavy Current Regulations".



WARNING! In case of power connection from AC mains, to avoid the risk of serious personal injury, ensure that it is equipped with cut-off devices (switches) which permit total disconnection of the unit current and protective devices which automatically intervene in the event of malfunction.



WARNING! Never touch any damaged or non-insulated electrical cables while the electrical power supply is enabled. This observation is particularly true when the unit is connected to 115Volt or 230Volt mains voltage.

## 4.1 Installation

Isotherm refrigerators have been designed and constructed exclusively for recessed installation and installation that is in compliance with standard dimensions. The refrigerator must always be in a horizontal position, with the compressor's rubber feet at the bottom. The compressor is capable of functioning at angles of up to 30°. The compressor can become damaged with any higher inclinations.

In the CR42 model, the compressor is installed on a removable corner plate and comes supplied with extra tubing made from a particularly flexible material, so it can be set for remote operation up to nearly 1.5m from the refrigerator. The tubing must be carefully arranged so that it does not get pinched or broken at the curves.

Also remote operation compressors must be installed with its rubber feet downward.

Mounting flanges are available as an accessory in order to simplify the refrigerator's installation (for models that don't come supplied with a standard fastening flange). The refrigerator must always remain resting upon its rubber support feet, and must be fixed in place by the mounting flanges.

Elegance models can be fixed to the lodgings by means of the Easy Fix system. This system involves four special pre-drilled points inside a trunk, for easy and effective installation that is not visible from the outside (Fig. 12).

With Easy Fix, you can install Cruise Elegance units with the door flush to the furniture without using a special mounting flange. For this installation, you must leave 10 mm of space between the refrigerator and the furniture unit at least for the entire thickness of the door, thus ensuring its free movement (Fig. 11).

When it is not possible to use the mounting flange, secure the refrigerator in such a way so that it will not tip/slide forward when the drawer is opened or in the case of sudden vehicle movement. The unit should be anchored by at least 2 fastening points, in accordance with the provisions of the EN 60335-2-24 standard.

## 4.2 Ventilation

It is extremely important for the compressor/condensing unit located behind the refrigerator to be well ventilated so that the fresh air can enter at the bottom and pass behind the refrigerator, with the hot air being allowed to escape from the top or sides (Fig. 1). The illustrations (Fig. 2-3) show an example of how the refrigerator housing should be set.

## 4.3 Door Panelling


Cruise Classic refrigerators are supplied as standard with gray door panels. Optional panels are available in other colours and finishes.

Cruise Elegance refrigerators are supplied with silver aluminium door panels. Optional panels are available in other colours and finishes.

Inox models come equipped with a stainless steel door without replaceable door panels.

A replacement door panel can be installed over top of the standard gray panel on Cruise Classic models. To do so, remove the lower plastic gasket, pulling it downward, and then remove the door handle equipped with three screws (Fig. 10).

To change door panelling on Cruise Elegance models, delicately remove the 4 lateral panel locking strips, remove the small handle frame and then it will be possible to remove the panel. Insert the new panel and delicately reinstall the lateral strips and the handle frame (Fig. 9).

This procedure is illustrated on our “Indel Webasto Marine”  channel.

## 4.4 Door Reversibility

The opening direction of Isotherm Cruise (not including CR200) & Cruise Elegance refrigerator doors can be reversed to meet installation requirements.

To reverse the opening direction of the door in Cruise Classic and Inox models, remove the screws securing the top (no top is present on Inox models) and the fastening pins, remove the door, reverse the fastening hinges as illustrated (Fig.7) and re-insert the door and re-tighten all parts. To reverse the opening direction of the door in Cruise Elegance models, remove the screws securing the top and the fastening pins, remove the door, reverse the fastening hinges as illustrated (Fig. 8) and re-insert the door and re-tighten all parts.

# User Manual

## 4.5 Electrical Connections

- In order connect the unit to the vehicle's electrical system, proceed as follows:
- Before turning on the appliance, check to make sure that the voltage of the electrical system and/or battery complies with that which is indicated on the unit's data plate.
- Connect the refrigerator directly to the battery or to the relative main switch and make sure that the system is equipped with an electric device that's capable of protecting the circuit against possible overcurrents.

If the power supply voltage is different from 12/24Vdc, install a  $\Delta I$  0.03A differential circuit breaker. Avoid connecting the unit via the vehicle's control panel as this could result in voltage drops.

- Insert a fuse upstream from the refrigerator (see the table below). Connect the red wire to the electrical system's positive terminal, and connect the black wire the negative terminal. Use a pressed lug terminal that's suitable for the cable's size.
- A separate switch that simultaneously disconnects the power cables must be installed upstream from the refrigerator. Check to make sure that the installed switch supports the corresponding load indicated in the table below.

Models	12Vdc	24Vdc
CR36, CR40CUBE, CR42, CR49, CR63F, CR65, CR65F, CR85, CR90F, CR90BIG, CR100, CR130, CR130D (Elegance models included)	15A	7.5A
CR195	25A	12.5A
CR200	20A	10A



**WARNING!** If there is a battery charger, it must be connected to the battery and never directly to the refrigerator.

All wiring diagrams can be found at the end of the manual.



## 4.6 Size of the electrical cables

Always use cables of a suitable cross-section. The minimum cross-sections are listed in the table below:

Cross-section in mm <sup>2</sup>	AWG section	Max 12 V cable length m/ft	Max 24V cable length m/ft
BD1.4F / BD35F / BD50F			
2.5	13	2.5/8	5/16
4	11	4/13	8/26
6	9	6/19	12/39
10	7	10/33	20/66
BD80F			
6	9	2,5/8	5/16
10	7	4/13	8/26

## 4.7 Internal lighting

In order to replace the LED light bulb, slide the lighting unit's glass down using the appropriate lever. Replace the light bulb and to return the lighting unit to its original state (Fig. 4).

Only use original Indel Webasto Marine Srl spare parts.

## 4.8 SEC - “Smart Energy Control” (optional)

With the Isotherm “Smart Energy Control” System, Indel Webasto Marine offers its clients the unique opportunity to drastically reduce the power consumption of their on board refrigeration systems. This kit can be easily installed in order to update and improve the energy-saving capabilities of your Isotherm refrigeration product. The new Cruise Elegance line already comes with a predisposed cabinet for "SEC" system installation.

### How does it work?

The sophisticated technology of the processor-based Isotherm Smart Energy Control system ensures significant energy savings by continuously scanning a series of key environmental factor (using advanced proprietary algorithms) in order to determine the best compressor speed to maximize the battery’s coefficient of performance (COP).

The device not only renders your refrigerator more intelligent, but also allows for a significant amount of cold energy stored in food and soft drinks to be saved. The Isotherm Smart Energy Control system reduces the temperature of the cabinet more than traditional refrigerators, without freezing the food. The temperature is continuously monitored by an air sensor in the cabinet. The cooling energy is stored and reutilized whenever a power surplus is available (with the motor running or with a connection to the mains network available), before the refrigerator switches to battery power.

The result: savings of up to 35% thanks to more efficient use of the compressor and up to 50% thanks to the combined effects of the cooling energy stored in the food and drinks.

Please see our “Indel Webasto Marine”  channel for correct, safe installation of the "SEC" system.

## 5 Technical data (standard configurations)

Operating voltage: 12 or 24 VDC

Average consumption measured with internal temperature +5°C and outside temperature 25°C. Average consumption is influenced considerably by the way the refrigerator is used and the type of ventilation.

Refrigerant: R134a (the system's capacity is indicated on the refrigerator's data plate).

The refrigerators meet the requirements of the EMC directive and bear the CE marking.

Model	Instantaneous consumption 12/24Vdc (Amperes)	Instantaneous consumption 12/24Vdc (Watt)	Average consumption at 25°C (Watt/24h)
CR36	6.0/3.0	72	300
CR40 CUBE	6.0/3.0	72	186
CR42	5.5/2.25	66	300
CR42 EL	5.5/2.25	66	285
CR49	6.0/3.0	72	280
CR49 EL	6.0/3.0	72	265
CR63F	6.0/3.0	72	440
CR65	6.0/3.0	72	290
CR65 EL	6.0/3.0	72	275
CR65F	6.0/3.0	72	440
CR85	6.0/3.0	72	380
CR85 EL	6.0/3.0	72	368
CR90F	6.0/3.0	72	550
CR90 BIG	6.0/3.0	72	520
CR100	6.0/3.0	72	400
CR130	6.0/3.0	72	440
CR130 EL	6.0/3.0	72	418
CR130 D	6.0/3.0	72	400
CR195	6.0/3.0	72	840
CR200	7.0/3.5	84	800

## 6 Troubleshooting

All work on electrical parts or electrical connections and the refrigerant circuit must be carried out by qualified and authorised personnel.

Warning: Disconnect electrical power before performing any operations on electrical parts or on electrical connections.

Defect	Possible cause	Intervention
The refrigerator does not cool, the compressor will not start.	No electrical power. Battery in poor conditions. Faulty thermostat. Defective electronic control unit.	Check to make sure that the electronic control unit is receiving sufficient power and voltage; check the fuse. Verify that the internal lighting is working and that the compressor is receiving power. Check the cables, lugs and connectors. Verify that the battery is charging properly. Check the thermostat: Bridge T - C with a separate cable. If the compressor will not start, its electronics are probably defective. Replace. If the compressor starts up with the bridge, the thermostat is defective. Replace the thermostat.
The compressor only performs brief attempts at starting up.	There is insufficient voltage or else a drop in voltage during the attempt to start. The protection device is activated. The Batteries are drained.	Check the cables and connections; remove any traces of oxidation or corrosion. Charge the batteries, start the motor or connect the battery charger.
The compressor functions but doesn't cool.	Loss of refrigerant through the evaporator or the tubing. Tubing clogged.	Carry out a leak check and repair any leaks, drain and refill the proper amount of R134a refrigerant. (This operation must be carried out by a qualified technician.)
The compressor runs for a long time but doesn't cool properly (reduced efficiency).	Insufficient ventilation, the condensation unit is overheating. The fan is not working properly. There is too much frost on the evaporator. The door does not close properly and lets in warm, moist air. The condenser is blocked by dust.	Increase the ventilation. Replace the fan. Defrost the unit. Correct the position of the door and check the gasket. Clean the condensing unit.

The fuse blows.	The wrong fuse is being used. Defective electronic control unit.	Check the fuse: see table in section 4.4. Replace the electronic control unit.
The compressor is operating intermittently.	Battery low or electrical cables in poor conditions.	Check wiring conditions, examining for loose connections, rust or verdigris. If wiring needs to be replaced, see the manual for correct sizing. If wiring is in good conditions, check battery function and replace if in poor condition.
The compressor never stops (correct fridge performance)	Incorrect thermostat connection on the electronic control unit. Thermostat broken. Condensation is not working properly, evaporator cools but not enough to cause the thermostat to stop the compressor.	Rotate the thermostat to off position. If the refrigerator continues to function, then there is continuity on the control unit. Correct the problem on thermostat connections (make sure the bridge is present on C and P and not on C and T on the electronic control unit). Rotate the thermostat to off position. If the compressor switches off but it is impossible to regulate temperature, replace the thermostat or recharge the cooling system.
The compressor never stops (poor fridge performance)	Environment very hot + insufficient ventilation or little gas in the refrigerant circuit.	Check ventilation. The compressor must be installed in a well-ventilated location. If possible, remove the refrigerator from the installation hole. If the refrigerator operates better, improve ventilation, consulting the manual for correct installation. If ventilation is instead optimal, check for the presence of gas in the system, contacting a specialised technician.
The freezer compartment is cold but the refrigerator is not	Insufficient ventilation, little gas in the refrigerant circuit, electrical power not continuous.	Check ventilation. The compressor must be installed in a well-ventilated location. If possible, remove the refrigerator from the installation hole. If the refrigerator operates better, improve ventilation, consulting the manual for correct installation. Check electrical connection and battery conditions. If ventilation is instead optimal, check for the presence of gas in the system, contacting a specialised technician.

# User Manual

Excess ice on the evaporator.	Moisture infiltrations in the refrigerator.	Check the conditions of the gasket on all four sides of the door. The gasket must close perfectly on the unit. If the formation of ice is thicker on one side, most likely there is moisture infiltration in the refrigerator is coming from that side. Use a moderate heat source to model the gasket into position. If the gasket cannot be modelled, replace the entire door.
The refrigerator cools too much.	The thermostat sensor is too covered or incorrectly positioned	The end of the sensor must be in contact with the evaporator. Set the sensor in the correct position. If the refrigerator continues to cool too much, replace the thermostat.
The compressor is noisier than normal.	The compressor is not properly secured on its support or it is touching the wall.	Check that compressor screws are properly tightened and that nothing is in contact with it. The compressor vibrates and, if something is in contact with it, vibrations increase.
The fan/s is/are noisier than normal.	The fan structure is bent or the fan is broken.	Remove the clamps/screws used to secure the fan. Replace if the fan continues to make noise. Make sure that all of the fan is intact. Replace if one or more fins is missing.
The internal light does not switch on.	Polarity reversed or broken bulb.	Check bulb polarity. Replace light bulb if polarity is correct.
Door/Drawer not closing properly.	Incorrect position of hinges or deformed gasket.	Re-position hinges so that the door closes correctly. Use a moderate heat source to remodel the gasket. Replace door if problem persists. In the case of drawer refrigerators, use the adjustable guides to align the door.

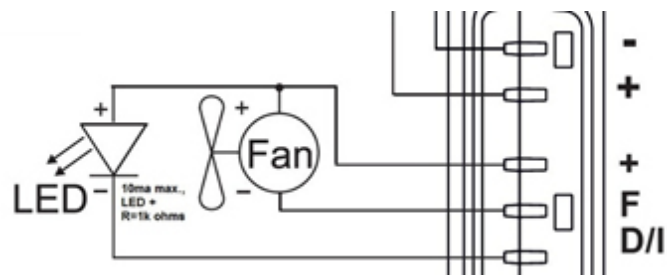
For more complicated defects requiring specialised assistance, please contact Indel Webasto Marine S.r.l. Italia or your nearest Isotherm retailer.

## 7 LEDs for diagnostics

The electronic control unit has a troubleshooting function when a LED is connected as shown below.

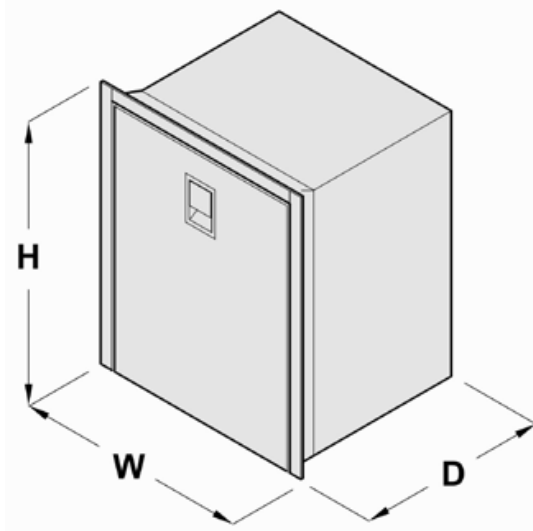
The number of flashes indicates the type of error.

Number of LED Flashes	Type of Error	Solution
6	Defective sensor (the sensor is defective or disconnected).	Re-connect the sensor and verify that the compressor starts working again. Replace sensor if the compressor does not work.
5	<b>Thermal protection of the electronic control unit.</b> (the electronic control unit overheats if the refrigeration system has become overloaded or the environmental temperature is too high)	Remove excess gas or increase ventilation.
4	<b>Minimum motor speed error.</b> (if the refrigeration system has been overloaded, the motor cannot maintain minimum speed of approximately 1.850 RPM).	Remove excess gas.
3	<b>Motor starting error</b> [the rotor is blocked or pressure inside the refrigerant circuit is too high (> 5 bar)]. Defective electronic control unit.	The first operation to attempt is to replace the electronic control unit. Replace compressor if problem persists.
2	<b>Fan short-circuited</b> (the fan absorbs more than 1A from the electronic control unit).	Replace the fan.
1	<b>Battery protection</b> (voltage is outside the maximum and minimum voltages).	Check power cable conditions. Replace with new cables if necessary. Check battery conditions.



# User Manual

## 8 Dimensions



Model	Width (mm) [W]	Height (mm) [H]	Depth (mm) [D]	Door Thickness (mm) [S]	Cut-Out (mm) W:H	Flange Size (mm) Left:Right:Top:Bottom	Notes
CR 36	440	250	550+135(1)	35	442:252	/:/::/	REM
CR 40 CUBE	420	430	500+90(2)	40	422:432	/:/::/	REM
CR 42 BD Micro	380	522	345+107	40	383:526	/:/:5:/	REM
CR 42 ELEGANCE	380	525	345+107	50	383:526	/:/:5:/	REM
CR 49	386	523	450	40	391:528	20:20:20:/	
CR 49 ELEGANCE	381	520	450	50	383:525	/:/:9:/	
CR 50	412	532	360+130(1)	40	416:537	/:/:10:/	REM
CR 63 FREEZER	477	620	515	40	481:625	/:/:10:/	
CR 65	455	527	480	40	460:532	20:20:20:/	
CR 65 ELEGANCE	448	527	480	50	450:532	/:/:9:/	
CR 65 FREEZER	527	610	540	40	531:615	/:/:10:/	
CR 85	477	620	505	40	481:625	/:/:10:/	
CR 85 ELEGANCE	477	620	505	50	479:625	/:/:9:/	
CR 90 FREEZER	527	746	520	40	531:751	/:/:10:/	
CR 90 BIG	478	845	430	40	482:847	/:/::/	
CR 100	487	746	455	40	491:748	/:/::/	



CR 130	527	746	505	40	531:751	/:/:10:/	
CR 130 ELEGANCE	528	746	505	50	530:751	/:/:9:/	
CR 130 DRINK	527	746	520	40	531:751	/:/:10:/	
CR 195	550	1345	580	/	555:1350	35:35:30:/	
CR 200	730	880	620	/	735:890	20:20:20:/	
CR 36 INOX	453	255	580+135(1)	/	458:260	30:30:30:30	REM
CR 63F INOX	495	620	555	/	500:625	20:20:20:/	
CR 65F INOX	545	610	580	/	550:620	20:20:20:/	
CR 90F INOX	545	743	555	/	550:748	20:20:20:/	
CR 130D INOX	545	743	560	/	550:748	20:20:20:/	
CR 160 INOX	626	870	610	/	630:870	20:20:20:/	
CR 195 INOX	545	1345	580	/	550:1350	20:20:20:/	
CR 200 INOX	730	868	620	/	735:873	20:20:20:/	
CR 320 INOX	628	1790	610	/	630:1790	20:20:20:/	

REM: the product is provided with the possibility of moving the compressor unit based on the length of the supplied hoses.

Note(1) depth that takes into account the curvature of the tube at the point of tube exit from the trunk "D"=35mm

Note(2) depth that takes into account the curvature of the tube in the case of remote control "D"=80mm (the tube is very rigid)

FOR AC/DC VERSIONS, KEEP IN MIND THAT, DUE TO LACK OF SPACE, DEPTHS EXCEEDING 50 mm WILL HAVE TO BE EVALUATED ON A CASE BY CASE BASIS.

AS PER REGULATIONS AND FOR PROPER OPERATION, THE WALLS OUTSIDE OF THE REGRIGERATOR SHOULD BE SET AT THE FOLLOWING DISTANCES FROM THE INTERNAL WALLS OF THE UNIT: 20mm ON WALLS WHERE THE COMPRESSOR IS NOT PRESENT AND 50MM ON THE WALLS WHERE THE COMPRESSOR IS PRESENT. IF THESE RULES CANNOT COMPLIED WITH, THE MINIMUM DISTANCE MEASUREMENTS MUST BE 5mm AND THE MATERIALS WITH WHICH THE WALLS ARE MADE MUST BE EXPLOSION PROOF.

# User Manual

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## 9 Warranty

The Indel Webasto Marine warranty complies with EU Directive 1999/44/EC.

### Validity period

The warranty for Isotherm marine refrigerators and freezers is valid for 2 years with regard to the cost of labour for repair or replacement, but only if carried out by IWM network, and therefore authorised, service centres.

The validity period starts from:

- a) The date of sale indicated on the product invoice or sales receipt
- b) The date of the invoice or registration document of the first sale of the boat in which it is installed, if installed by the manufacturer of the vehicle
- c) In the absence of one of the above documents, the week of production indicated in the S/N (serial number)

Replacement of a product or component does not change the validity period.

### The warranty covers:

- Replacement or repair of the product or of one or more components acknowledged to be faulty due to manufacturing defects.
- Breakage or malfunction of components under warranty validity despite proven proper installation and proper use.
- Labour and transport according to the operating methods described below.
- Costs for shipping the replacement product (not including charges for customs clearance).

### The warranty does not cover defects, damage or malfunctions caused by:

- Negligence, neglect or improper use
- Incorrect installation or incautious handling
- Insufficient ventilation
- Incorrect electrical connection
- Undersized wiring
- Improper maintenance or maintenance performed by unauthorised personnel
- Failure to follow the instructions contained in this manual
- Transport damage
- Charges for customs clearance
- Items subject to wear, fuses etc.
- Professional use
- Damage caused by weathering