

DR42-DR49-DR55-DR65-DR70
DR85-DR100-DR105
DR130-DR160-DR190
Drawer

Installation and usage instructions

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1. SAFETY

1.1 Before putting the product into operation

Read the usage and assembly instructions carefully. They contain important information for the installation, use and maintenance of the product.

The manufacturer cannot be held liable for any damage resulting from improper and/or unreasonable use.

Keep all documentation for future use or for any subsequent owners.

- 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, the Manufacturer 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 product to another person, this manual and related documents should be delivered intact to the new user.

IMPORTANT



This manual refers to the standard version of the product. Non-standard machines may have minor differences not described in this manual. Contact the Manufacturer with any concerns or questions.

1.2 Technical safety

This product contains a small amount of refrigerant R134a, a gas classified as non-hazardous and non-flammable, but if mixed with pressurised air and exposed to certain temperatures (above 50° C), it may ignite.

When transporting and installing the product, take care not to damage any part of the refrigerant circuit.

If the refrigerant should forcefully exit from the circuit:

- Keep open flames or potential sources of fire away from the product
- Ventilate the room where the product is located well for a few minutes
- Switch off the product and pull out the power plug
- Notify the authorised Customer Service Department

DANGER



Contact a doctor immediately in case of inhalation, skin or eye contact.

Never switch on the product if it shows signs of damage. Contact the Manufacturer with any concerns or questions.

If this product's mains connection cable is damaged, it must be replaced by the manufacturer, customer service or a similarly qualified person authorised by the Manufacturer.

Installations and repairs carried out by unqualified persons can create considerable danger to the user.

Repairs may only be carried out by the manufacturer, customer service or a similarly qualified person authorised by the Manufacturer.

Only original manufacturer spare parts may be used. The manufacturer can guarantee that the safety requirements are met on when these parts are used.

1.3 Intended use

This product is designed to preserve food at low temperatures and is intended exclusively for use in recreational vehicles and boats. The product is not suitable for any other use. Any use that does not comply with the indications in this manual is to be considered improper and dangerous.

WARNING



The Manufacturer declines all responsibility for accidents to persons or property deriving from the non-observance of the provisions and instructions listed in this manual and from the non-observance of the safety and accident prevention regulations in force in the various countries.

This product must not be handled and/or used by children under 8 years of age and/or persons with reduced physical, sensory or cognitive abilities unless they are supervised and/or adequately instructed with regard to the methods of use by a person responsible for their safety and aware of all the possible risks involved.

1.4 Contraindications of use

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.

DANGER



The purpose of the product when used as a freezer (only for models pre-set for this function) is solely to keep food products that are already completely frozen in the same frozen state.

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 product 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



If medicines are to be stored in the product, check that the product has a cooling capacity that meets the requirements of the respective medicines.

WARNING



The packaging elements (plastic bags, expanded polystyrene, etc.) must not be left within the reach of children or incapacitated persons: they are potential sources of danger.

DANGER



This product must not be handled and/or used by children under 8 years of age and/or persons with reduced physical, sensory or cognitive abilities unless they are supervised and/or adequately instructed with regard to the methods of use by a person responsible for their safety and aware of all the possible risks involved. Keep the product and its power cable out of reach of children under 8 years of age and prevent them from playing with the product (avoid the risk of entrapment and suffocation inside the product). Cleaning and maintenance meant to be performed by the user and must not be performed by unsupervised children.

DANGER



Keep children under 8 years of age away from the product or under constant supervision. Do not allow children to play with the product. Children may become entangled and suffocate. Do not allow children to clean or perform maintenance on the product without supervision.

WARNING



Do not use mechanical, electrical or chemical methods to accelerate defrosting, which must occur automatically; doing so creates a risk that the refrigerant circuit can be perforated. Do not touch the internal cooling parts: doing so creates a danger of burn or injury.

WARNING



Do not store inside the product 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 product. Do not use electrical equipment inside the product.

1.5 List of dangers

DANGER



REFRIGERANT GAS

Warning! When transporting and installing the machine, take care not to damage any part of the refrigerant circuit. Make sure that the circuit has not been damaged during transport and, if it has, please promptly contact qualified personnel certified to handle fluorinated gases.

Always keep any sources of ignition at a safe distance during use, maintenance and disposal.

DANGER



REFRIGERANT GAS

This product contains refrigerant gas R134a within a hermetically sealed system whose operation depends on the presence of said gas.

DANGER



RISK OF INJURY FROM LEAKING REFRIGERANT

Never open the refrigerant circuit except for the normal connection/disconnection of couplings (where present). Never release the refrigerant R134a contained in the product into the environment.

Operations on the refrigeration circuit must be carried out by specialised technicians who are familiar with the basic principles of refrigeration, the refrigeration system, refrigerants and the potential dangers that high pressure units can cause.

Appropriate PPE such as gloves and goggles must worn during these operations. Contact with refrigerant can cause serious damage to eyesight and contact with the skin can cause freezer burns.

In addition, respiratory protection must also be provided if the environment in which the product is located is not sufficiently ventilated.

DANGER



ELECTRICAL MAINS

Always disconnect the power supply from the product before carrying out any work on it in order to avoid damage and health hazards.

DANGER



HIGH INTENSITY LIGHT HAZARD

The product is equipped with high luminous intensity LED lighting. Avoid direct exposure to the light beam with eyes.

DANGER



AUTHORISED TECHNICAL PERSONNEL

Only technical personnel specialised in electrical, hydraulic and refrigeration fields can work on the product. All wiring and hydraulic components must comply with national and local laws (use only original spare parts certified by the Manufacturer when replacing components).

DANGER



For extended periods of disuse or when defrosting, remove the unit's light bulb or disconnect all of its power supplies. Leave the product door slightly open to air out the inside and prevent the formation of mould.

DANGER



Disconnect the product 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 product is connected to 115V or 230V mains voltage.

The power cable must be replaced if damaged. Contact qualified personnel or your nearest Service Centre.

DANGER



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

1.6 Residual risks

The product is safe in its operating conditions. There are, however, residual risks, listed in the list of dangers which are contained when the product is used correctly, following the instructions in the use and maintenance manual.

2. General information

The use and maintenance manual is an integral and essential part of the product and must be delivered to the user. It is important that it be well kept and carefully consulted as it contains specifications on the operation, maintenance and safety and product and the people and/or property that come into contact with it.

Please contact the Manufacturer with any concerns or questions about the indications provided in this manual.

The Manufacturer is excluded from any contractual and extra-contractual liability for damage caused by errors in the use and installation of the product, or in any case by failure to comply with the instructions given by the Manufacturer.

IMPORTANT



The Manufacturer reserves the right to modify the product and the related technical documentation without incurring any obligation towards third parties and does not accept responsibility for any errors or inaccuracies in the contents of this manual. This use and maintenance manual describes the characteristics of the standard product as of the date on which this publication was licensed for printing.

2.1 Manufacturer identification

Indel Webasto Marine Srl
Via Montefeltro, 118/c - Secchiano
47863 - Novafeltria (RN) - ITALY
www.indelwebastomarine.com

The Manufacturer is at your disposal for technical assistance or for the request of spare parts.

The use of original spare parts is recommended when replacing product parts. The Manufacturer declines all responsibility for any deterioration in product performance or for damage caused to the product due to the use of non-original parts.

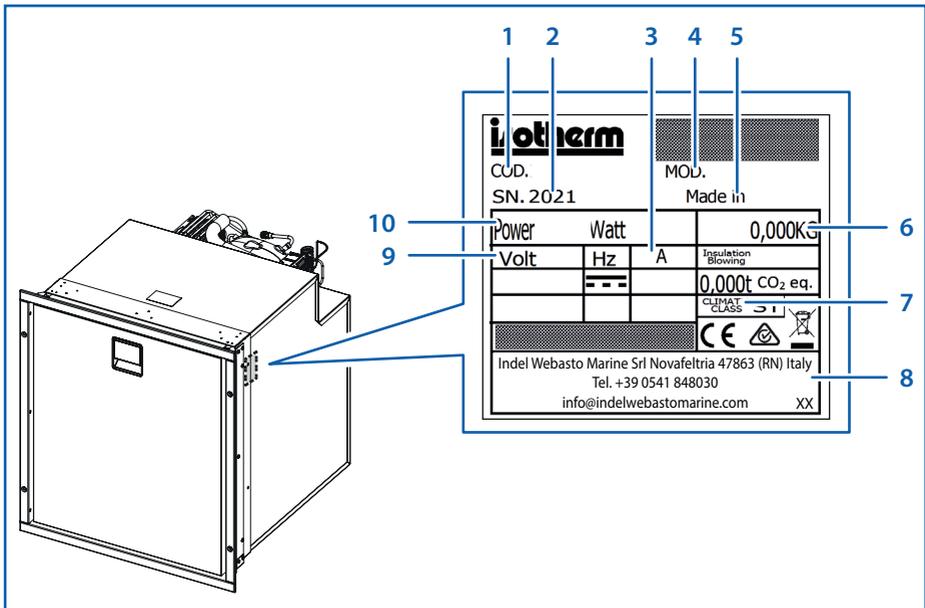
2.2 Product identification

This manual refers to the following machines:

**Drawer DR42 - Drawer DR49 - Drawer DR55 - Drawer DR65 - Drawer DR70 - Drawer DR85 -
Drawer DR100 Drawer DR105 - Drawer DR130 - Drawer DR160 - Drawer DR190**

Make sure that the product delivered to you has the identification plate located inside the compartment and containing the following information, below:

- 1) Code
- 2) Serial number
- 3) Rated current
- 4) Model
- 5) Country of production
- 6) Type and quantity of gas
- 7) Climate class
- 8) Manufacturer identification
- 9) Working voltage
- 10) Rated power



It contains the model, serial number and all the technical data of the product necessary to request spare parts or to report technical problems to the service centre.

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

2.3 Consulting the manual

Warnings or instructions considered critical or dangerous are highlighted with the following symbols for a better understanding of the information provided in this manual:

DANGER



Indicates information or a message which may seriously endanger the health and safety of operators if not strictly observed.

WARNING



Indicates information or a precaution that must be observed to avoid operations that may damage the product.

IMPORTANT



Indicates important information that must be observed to avoid operations that may damage the product, or any part of the text that you want to highlight.

OBLIGATION TO READ INSTRUCTIONS



The presence of this symbol mandates reading of instructions before putting the product into operation.

OBLIGATION TO DISCONNECT



The presence of this symbol mandates immediate disconnection of the product from the mains in case of failures.

OBLIGATION TO WEAR GLOVES



The presence of this symbol mandates each operator wear suitable protective gloves.

OBLIGATION TO WEAR SHOES



The presence of this symbol mandates each operator wear shoes designed to decrease the risk of injury.

OBLIGATION TO WEAR GOGGLES



The presence of this symbol requires each operator to wear eye protection equipment, such as safety goggles with side protection.

2.4 Operator qualification

In order to ensure that all operations carried out on the product are performed in safe conditions, the operators in charge must have the qualification and requirements to carry out the relative operations.

The operators are classified as follows:

USER



Unqualified operator, or rather without specific skills, able to carry out only simple tasks, i.e. use of the product through the use of the controls located on it and intervention for simple cleaning situations, following the instructions of this manual during use of the product.

Cannot perform operations intended for an installer.

INSTALLER



Operator qualified to carry out complex operations such as installation or maintenance. This is an operator who has been adequately trained through specific activities.

IMPORTANT



The pictogram at the beginning of each paragraph indicates the person authorised to carry out the operations described.

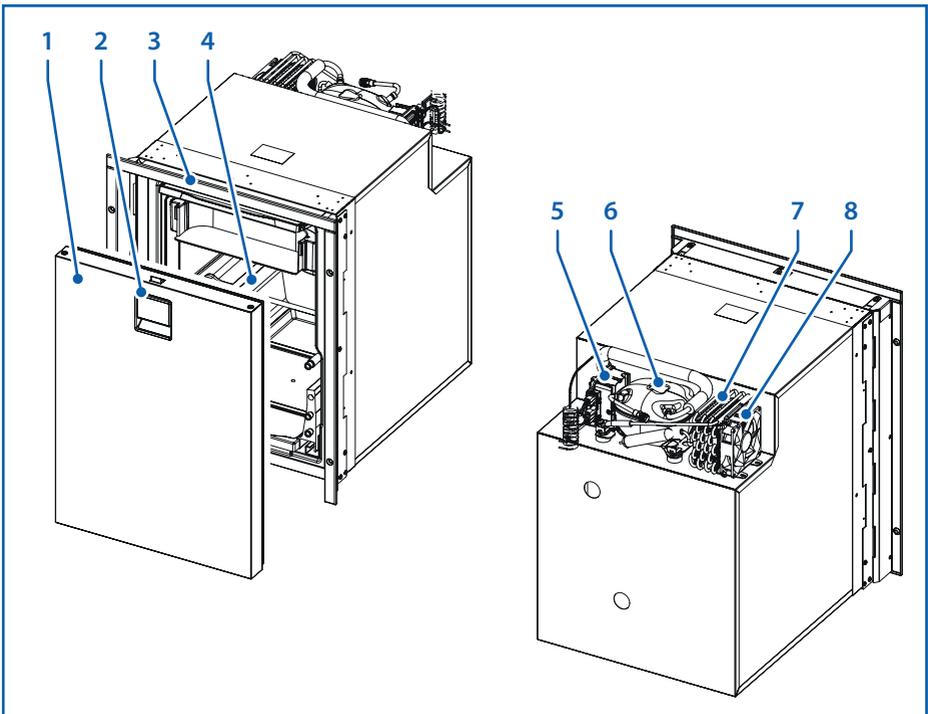
3. Product description

3.1 Main components

IMPORTANT



The following image shows a generic version of the product with the main parts indicated. Please refer to paragraph 3.4 on page 22 for all the various configurations and accessories for the available models.



- 1) Door
- 2) Opening handle
- 3) Mounting flanges
- 4) Internal compartment
- 5) Electrical control unit
- 6) Compressor
- 7) Condensation unit
- 8) Fan

3.2 Technical data

Model	Total capacity (L)	Compressor	Climate class
DR42 FRIDGE	42	BD1.4FVSD	ST
DR49 FRIDGE	49	BD1.4FVSD	ST
DR55 NO FROST FREEZER	55	BD35F	ST
DR65 FRIDGE	65	BD1.4FVSD	ST
DR65 NO FROST FRIDGE	65	BD35F	ST
DR70 FRIDGE	70	BD35F	T
DR70 FREEZER	70	BD50F	T
DR70 ICE 115V	70	TLS4.5F	T
DR70 ICE 230V	70	TLES5.7FT.3	T
DR85 FRIDGE	85	BDN45F	T
DR100 FRIDGE	100	BD35F	T
DR100 FREEZER	100	BD50F	T
DR100 ICE 115V	100	TLS4.5F	T
DR100 ICE 230V	100	TLES5.7FT.3	T
DR105 FRIDGE	105	BD35F	ST
DR130 FRIDGE	130	BDN45F	T
DR160 FRIDGE	160	BD50F	ST
DR160 FREEZER	160	BD80F	ST
DR160 FRIDGE/FREEZER	160	BD80F	ST
DR190 FRIDGE	190	BD50F	ST

The refrigerant gas used for all product models is R134a.

3.2.1 Energy consumption

The operating voltage can be 12 or 24 VDC, while for some models the operating voltage is only 115V / 60Hz or 230V / 50Hz (see table).

Model	Instantaneous consumption 12/24Vdc (A)	Instantaneous consumption 12/24Vdc (W)	Average consumption at 25°C (Wh/24h)*
DR42	3,3/1,6	40	333
DR49	3,8/1,9	45	305
DR55 NO FROST	7,0/3,5	85	740
DR65	3,8/1,9	45	324
DR65 NO FROST	6,0/3,0	72	320
DR70 FRIDGE	4,0/2,0	48	295
DR70 FREEZER	4,9/2,45	58	800
DR70 ICE 115V	3,3**	330**	1380
DR70 ICE 230V	1,7**	330**	1055
DR85	3,0/1,5	36	300
DR100 FRIDGE	4,2/2,1	50	252
DR100 FREEZER	4,84/2,42	58	503
DR100 ICE 115V	3,3**	330**	1031
DR100 ICE 230V	1,7**	330**	790
DR105	6,0/3,0	72	480
DR130	3,0/1,5	36	381
DR160 FRIDGE	7,0/3,5	85	530
DR160 FREEZER	10,0/5,0	120	1100
DR160 FRIDGE/FREEZER	10,0/5,0	120	1100
DR190	7,0/3,5	85	700

IMPORTANT (*)



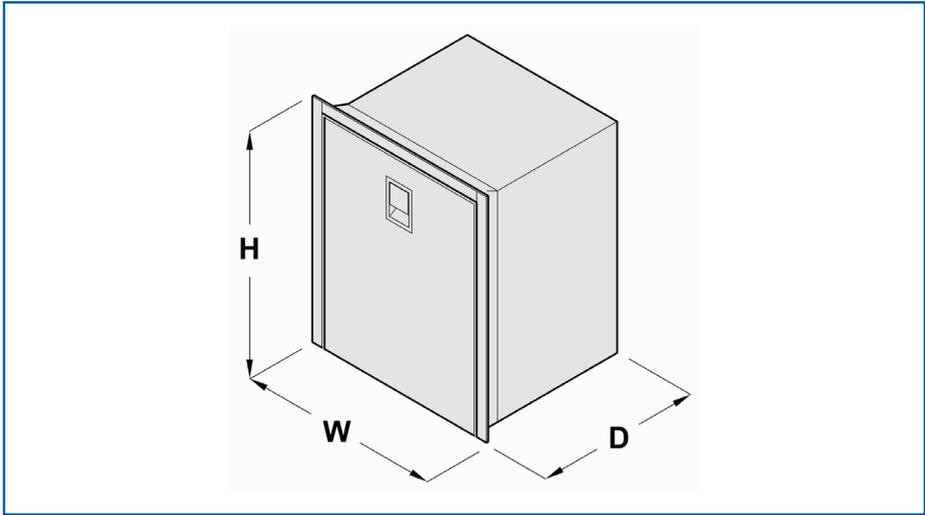
Average consumption is measured with internal temperature +5°C and outside temperature +25°C. Average consumption is influenced considerably by the way the product is used and the type of ventilation.

IMPORTANT (**)



Values calculated at an operating voltage of 115V and 230V.

3.3 Dimensions



Model	Version	Width (mm) [W]	Height (mm) [H]	Depth (mm) [D]	Cut-Out (mm) W:H
DR42	CLEAN TOUCH STAINLESS STEEL	400	520	500	405:525
DR49	CLEAN TOUCH STAINLESS STEEL	400	520	510	405:525
	CUSTOM	385	520	515	389:522
DR55	FROST FREE STAINLESS STEEL	470	526	560	475:531
	FROST FREE CUSTOM	455	525	570	459:527
DR65	CLEAN TOUCH STAINLESS STEEL	470	526	545	475:531
	CUSTOM	455	525	550	459:527
	FROST FREE STAINLESS STEEL	470	526	560	475:531
	FROST FREE CUSTOM	455	525	570	459:527

Model	Version	Width (mm) [W]	Height (mm) [H]	Depth (mm) [D]	Cut-Out (mm) W:H
DR70	CLEAN TOUCH STAINLESS STEEL FRIDGE	627	444	709	631:448
	CLEAN TOUCH STAINLESS STEEL FREEZER	627	444	709	631:448
	CUSTOM FRIDGE	611	444	711	615:448
	CUSTOM FREEZER	611	444	711	615:448
	CLEAN TOUCH STAINLESS STEEL 115V ICE	627	444	771	631:448
	CUSTOM 115V ICE	611	444	773	615:448
	CLEAN TOUCH STAINLESS STEEL 230V ICE	626	444	771	615:448
	CUSTOM 230V ICE	611	444	773	615:448
DR85	CLEAN TOUCH STAINLESS STEEL	494	619	546	496:621
	CUSTOM	473	619	543	475:621
DR100	CLEAN TOUCH STAINLESS STEEL FRIDGE	546	501	763	550:505
	CLEAN TOUCH STAINLESS STEEL FREEZER	546	501	763	550:505
	FRIDGE CUSTOM	529	501	765	533:505
	FREEZER CUSTOM	529	501	765	533:505
	CLEAN TOUCH STAINLESS STEEL 115V ICE	546	501	840	548:503
	CUSTOM 115V ICE	529	501	841	531:503
	CLEAN TOUCH STAINLESS STEEL 230V ICE	546	501	840	548:503
	ICE CUSTOM 230V	529	501	841	531:503
DR105	STAINLESS STEEL	515	515*	770**	519:517
DR130	CLEAN TOUCH STAINLESS STEEL	544	744	551	546:746
	CUSTOM	523	744	557	525:746

Model	Version	Width (mm) [W]	Height (mm) [H]	Depth (mm) [D]	Cut-Out (mm) W:H
DR160	STAINLESS STEEL FRIDGE	627	865	610	632:870
	STAINLESS STEEL FREEZER	627	865	610	632:870
	STAINLESS STEEL FRIDGE-FREEZER	627	865	610	632:870
	CUSTOM FRIDGE	613	868	622	617:872
	CUSTOM FREEZER	613	868	622	617:872
	CUSTOM FRIDGE-FREEZER	613	868	622	617:872
DR190	STAINLESS STEEL	900	800	845	905:805
	CUSTOM	898	798	551	902:802

NOTES:

(*) condensation draining (H)+ 70 mm.

(**) without compressor 600 mm.

Flange dimensions (CLEAN TOUCH STAINLESS STEEL - STAINLESS STEEL models)

Model	Version	Left (mm)	Right (mm)	Top (mm)	Bottom (mm)
DR42	CLEAN TOUCH STAINLESS STEEL	20	20	20	/
DR49	CLEAN TOUCH STAINLESS STEEL	20	20	20	/
DR55	FROST FREE STAINLESS STEEL	20	20	20	/
DR65	CLEAN TOUCH STAINLESS STEEL	20	20	20	/
	FROST FREE STAINLESS STEEL	20	20	20	/
DR70	CLEAN TOUCH STAINLESS STEEL FRIDGE	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL FREEZER	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL 115V ICE	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL 230V ICE	20	20	20	/
DR85	CLEAN TOUCH STAINLESS STEEL	20	20	20	/
DR100	CLEAN TOUCH STAINLESS STEEL FRIDGE	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL FREEZER	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL 115V ICE	20	20	20	/
	CLEAN TOUCH STAINLESS STEEL 230V ICE	20	20	20	/
DR105	STAINLESS STEEL	10	10	10	12
DR130	CLEAN TOUCH STAINLESS STEEL	20	20	20	/
DR160	STAINLESS STEEL FRIDGE	20	20	20	/
	STAINLESS STEEL FREEZER	20	20	20	/
	STAINLESS STEEL FRIDGE-FREEZER	20	20	20	/
DR190	STAINLESS STEEL	20	20	20	/

3.4 Available model combinations

IMPORTANT



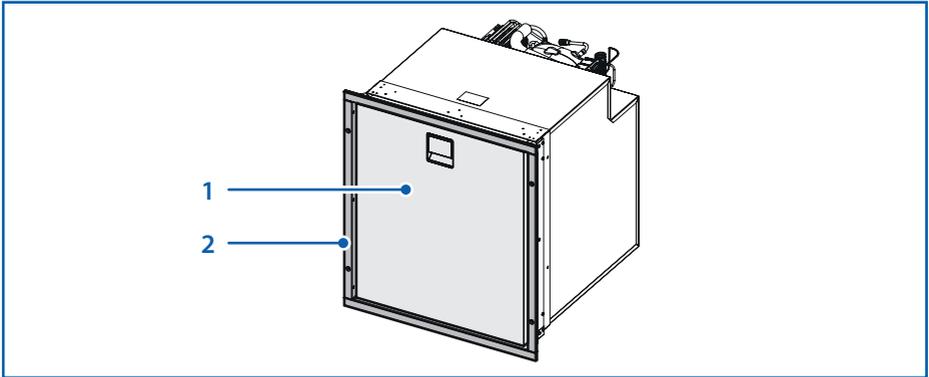
- o = Multiple versions available
- = Only version available

3.4.1 Type of finish

Model	Clean Touch Stainless Steel	Stainless Steel	Custom
DR42	•		
DR49	o		o
DR55 FROST FREE		o	o
DR65	o		o
DR65 FROST FREE		o	o
DR70	o		o
DR85	o		o
DR100	o		o
DR105		o	o
DR130	o		o
DR160		o	o
DR190		o	o

Stainless steel models

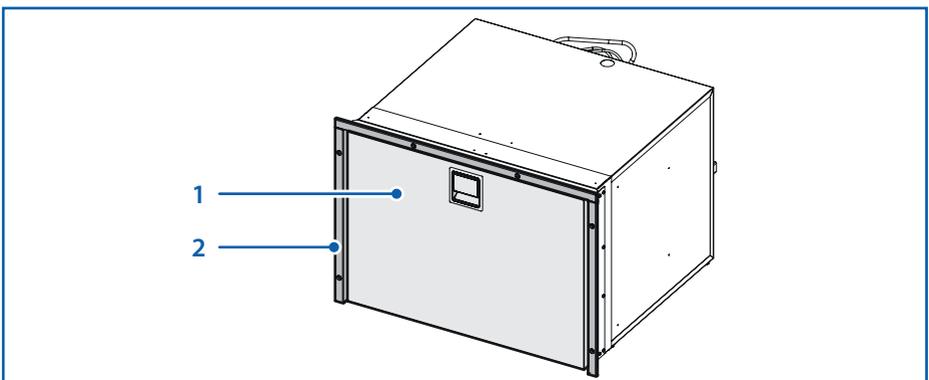
STAINLESS STEEL models are equipped with a stainless steel door drawer (1) and a three-sided (standard) or four-sided (optional) flange (2) for flush mounting on the cabinet.



Clean Touch Stainless Steel Models

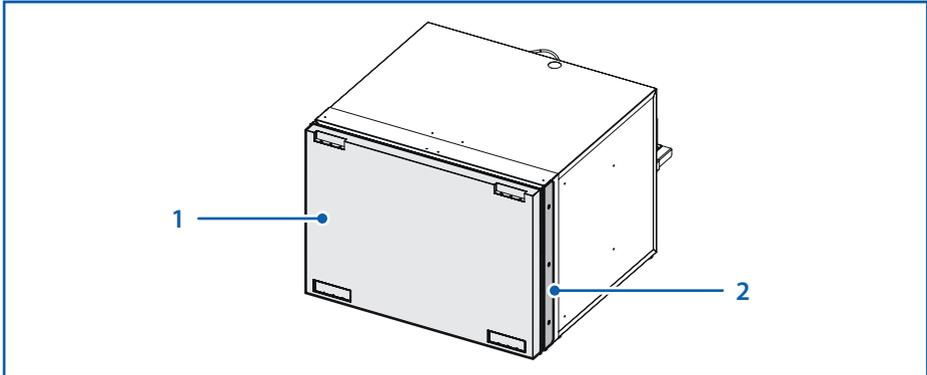
CLEAN TOUCH STAINLESS STEEL models are equipped with a stainless steel door drawer (1), which has been specially treated to leave no fingerprints on the surface (fingerprint resistant stainless steel material). In addition, these models are equipped with a three-sided (standard) or four-sided (optional) flange (2) for flush mounting on the cabinet.

Thanks to the increased thickness of the door, CLEAN TOUCH STAINLESS STEEL models guarantee better performance than STAINLESS STEEL models. Moreover, these models allow for enhanced performance thanks to better door insulation.



Custom models

CUSTOM models are equipped with doors (1) prepared for front panelling by the customer (not supplied by the Manufacturer) and two side brackets (2) for mounting.



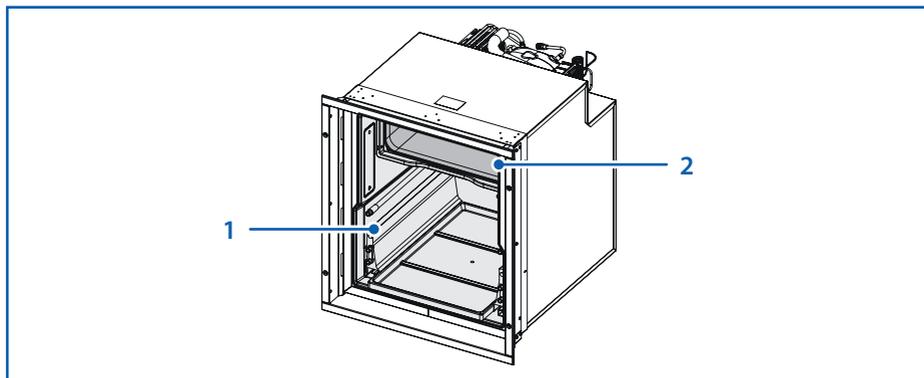
3.4.2 Functionality

Models	Fridge + freezer compartment	Fridge	Freezer	Fridge + Freezer	Ice Maker
DR42	•				
DR49	•				
DR55 FROST FREE			•		
DR65	•				
DR65 FROST FREE		•			
DR70		o	o		o
DR85	•				
DR100		o	o		o
DR105		•			
DR130	•				
DR160		o	o	o	
DR190		•			

Fridge + Freezer Compartment models

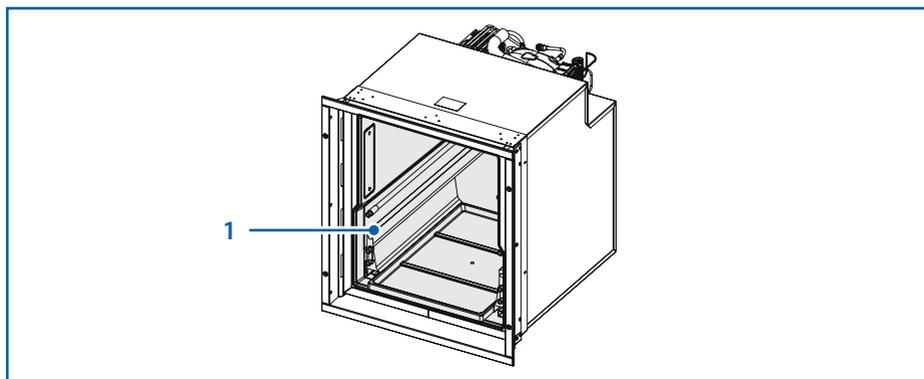
These models are designed to be used as a refrigerator (1) with the addition of a compartment dedicated to freezer function (2).

Freezer compartment performance in these models is 1 star  (-6° C).



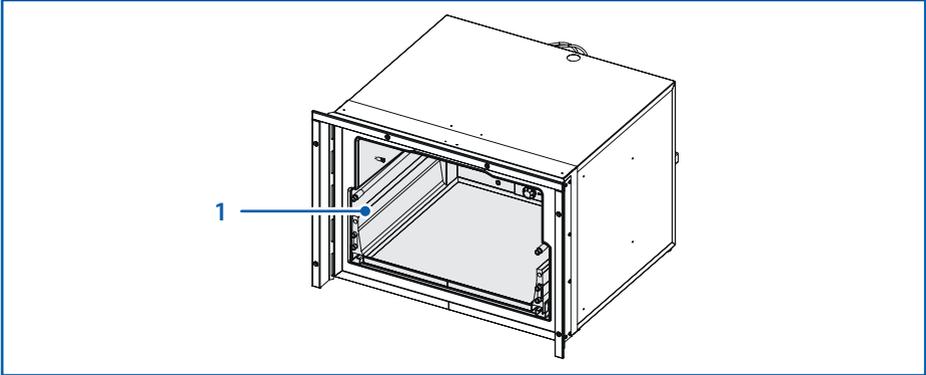
Fridge models

These models are designed to be used entirely as a refrigerator (1).



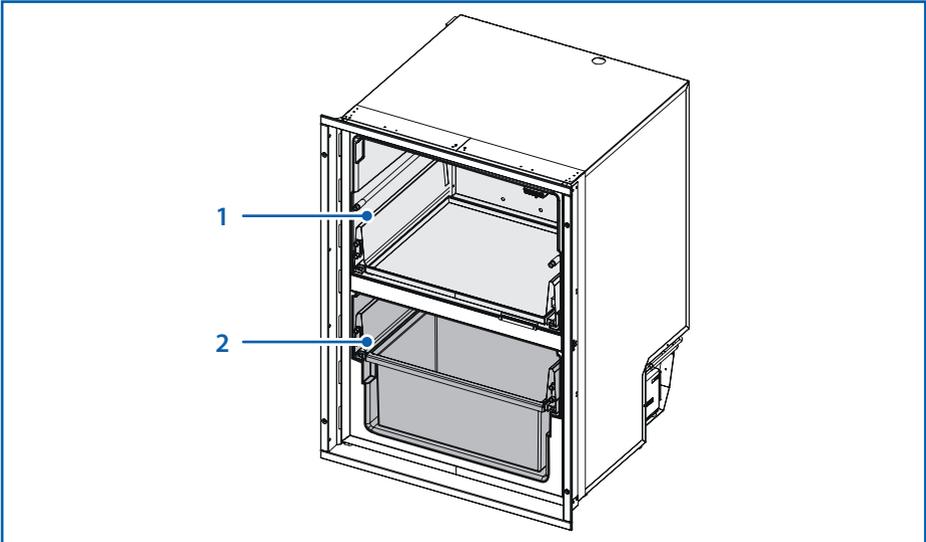
Freezer models

These models are designed to be used entirely as a freezer **(1)**.



Fridge + Freezer models

These models are equipped with two totally separate compartments, each of which has a different function. The compartment with the upper drawer perform the function of a Fridge **(1)**, the compartment with the lower drawer perform the function of a Freezer **(2)**.

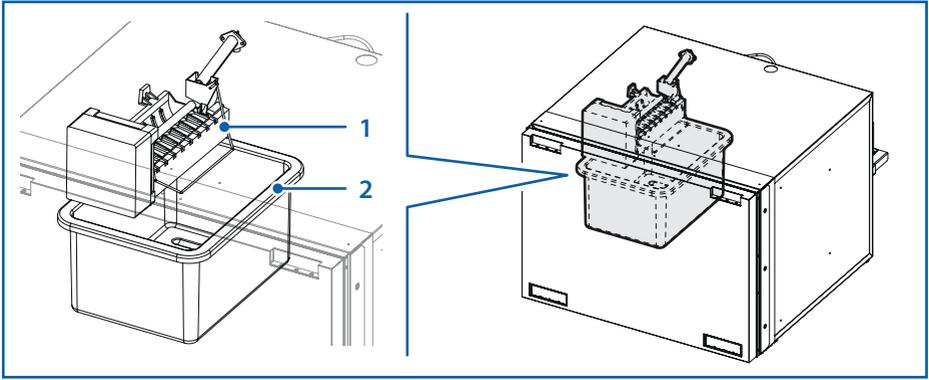


Models with Ice Maker

These models are designed to be used mainly for the production and keeping of ice.

Inside the compartment is an automatic ice production module (1) with a basket (2) for collecting the cubes produced.

The model has a production capacity of about 8 kg of ice per day. The ice is produced by means of trays in which water is collected and frozen before being pushed out into the collection container. The entire compartment is cooled as a freezer.



The ice produced is white with a special half-moon shape (see photo below).



IMPORTANT



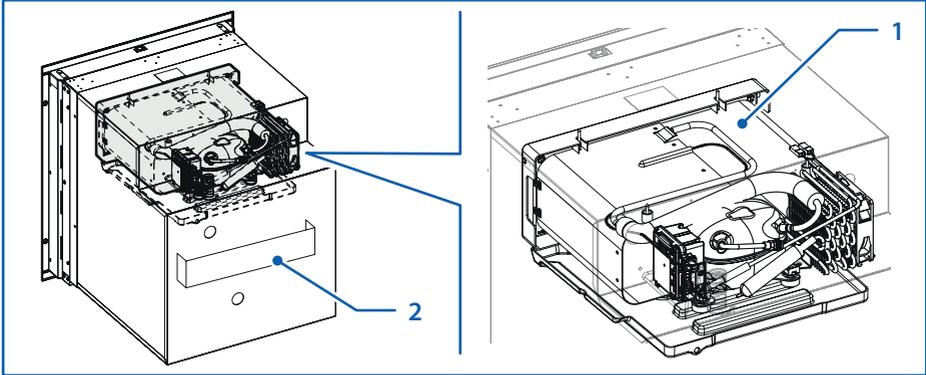
These models operate on alternating current only.

A hydraulic connection is required for these models; follow the instructions in paragraph 4.6 on page 56.

Frost Free models

The Frost Free system eliminates the frost deposited inside the evaporator **(1)** and conveys it to an external tray where it is evaporated.

The Frost Free system works automatically and periodically, thus avoiding the need for manual defrosting.



3.4.3 CoNtrol modes

Model	Mechanical	Digital panel
DR42		•
DR49		•
DR55 FROST FREE	•	
DR65		•
DR65 FROST FREE	•	
DR70	•	
DR85		•
DR100	•	
DR105	•	
DR130		•
DR160	•	
DR190	•	

Models with mechanical control

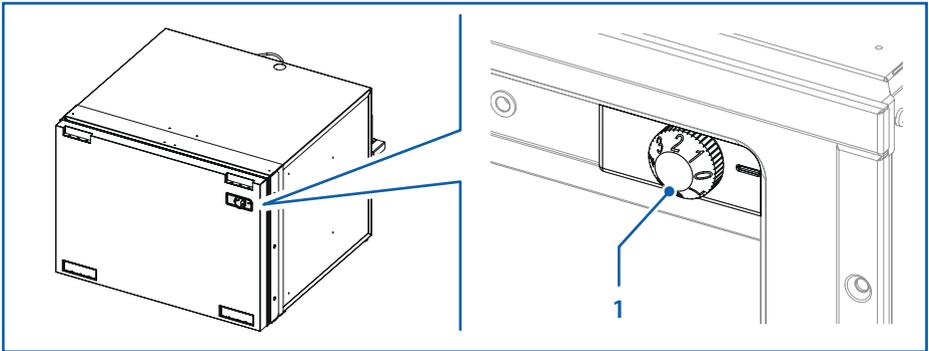
These models allow for temperature adjustment using the knob **(1)** on the mechanical thermostat inside the compartment.

The position of the thermostat knob inside the compartment depends on the type of product.

IMPORTANT

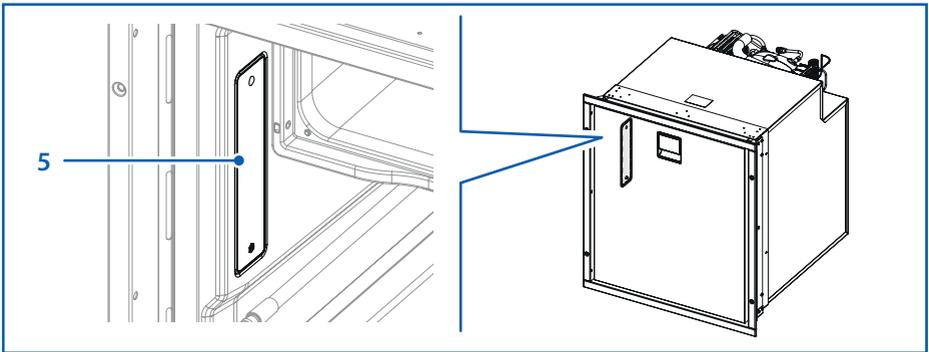


To find out how the mechanical control works, please refer to paragraph 5.3 on page 59.



Models with electronic control

These models are equipped with a digital panel **(5)**.



IMPORTANT



To find out how the digital panel works, please refer to paragraph 5.4 on page 60.

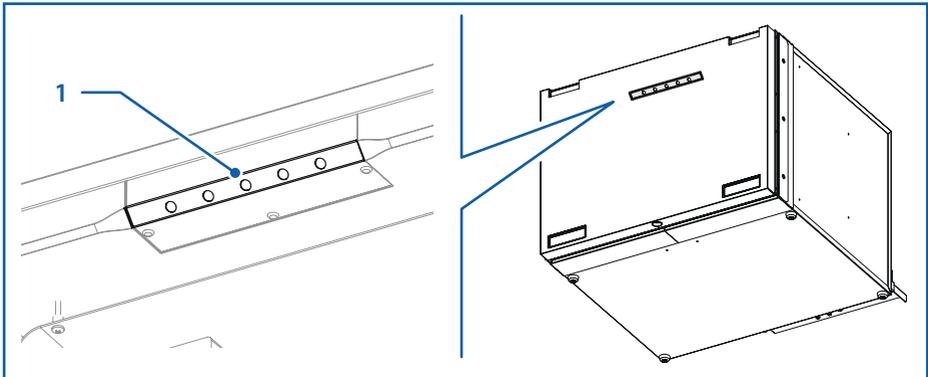
3.4.4 Lighting modes

Model	LED strip	LED bulb	Digital panel	No light
DR42			•	
DR49			•	
DR55	•			
FROST FREE				
DR65			•	
DR65	•			
FROST FREE				
DR70	•			
DR85			•	
DR100	•			
DR105				•
DR130			•	
DR160		•		
DR190		•		

Models with LED strip

These models feature a strip **(1)**, consisting of five blue LEDs installed in the upper part of the compartment. The LEDs light up each time the drawer is opened and switch off when the drawer is closed.

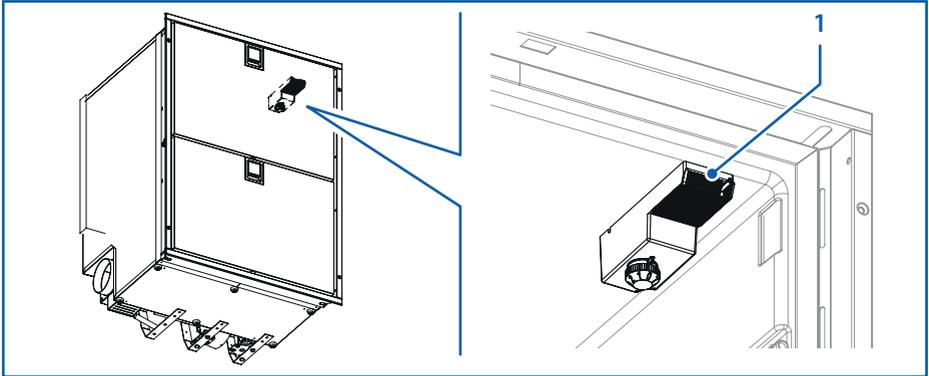
Lighting is deactivated when the product is switched off.



Models with LED bulb

These models feature an LED bulb (1), installed in the upper part of the compartment. The bulb lights up every time the drawer is opened and switches off when the drawer is closed.

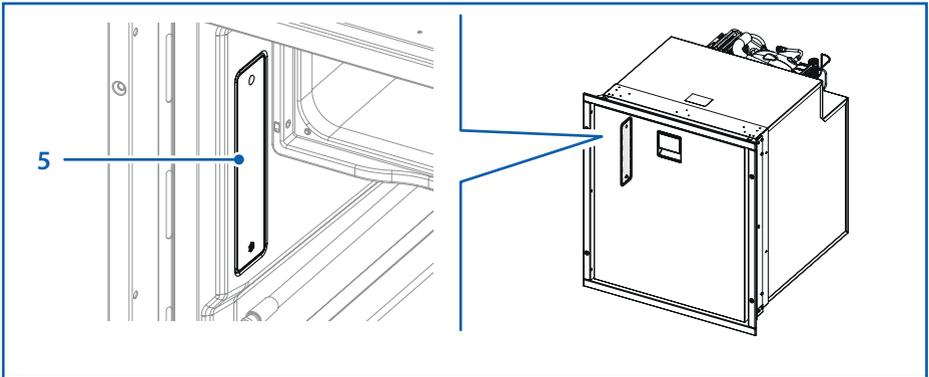
Lighting is deactivated when the product is switched off.



Models with Digital Panel

These models feature a digital panel (5) that incorporates five high-intensity LED lights. The LEDs light up each time the drawer is opened and switch off when the drawer is closed.

Lighting is deactivated when the product is switched off.



Models without light

These have no lighting inside the compartment.

3.4.5 Available accessories

The accessories available for the various products are as follows, though they may vary slightly in shape and size between models:

Model	ACCESSORIES											
	1	2	3	4	5	6	7	8	9	10	11	12
DR42	•	•										
DR49	•	•										
DR55		•										
FROST FREE				•								
DR65	•	•	•									
DR65		•		•	•	•	•					
FROST FREE												
DR70			•			•		•	•			
DR85	•	•	•			•						
DR100			•			•		•	•			
DR105												
DR130	•	•	•			•						
DR160					•							
DR190						•	•	•		•	•	•

- 1) Plastic shelf
- 2) Bottle divider bar
- 3) Dividing rack
- 4) Upper drawer
- 5) Plastic compartment
- 6) Basket
- 7) Bottle rack
- 8) Bottle shelf
- 9) Ice basket
- 10) Container
- 11) Plastic drawer
- 12) Plastic basket rack

IMPORTANT



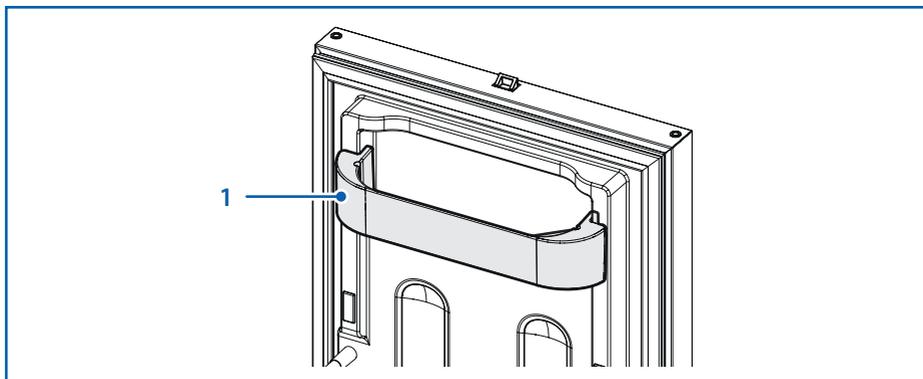
Please refer to paragraph 5.6 on page 63 for the positioning of detachable accessories.

IMPORTANT

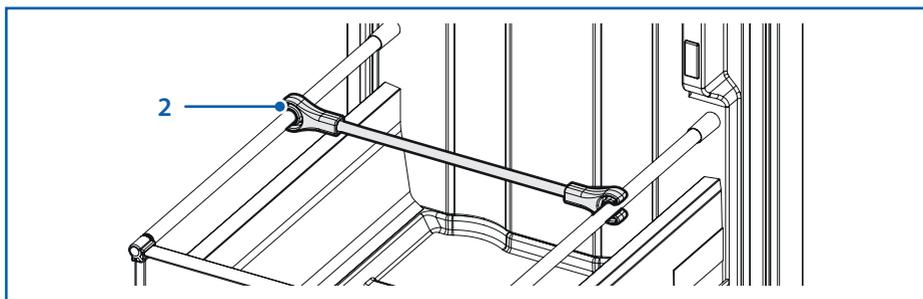


The following pages illustrate the available accessories; shapes, sizes and positions may vary depending on the product model you have.

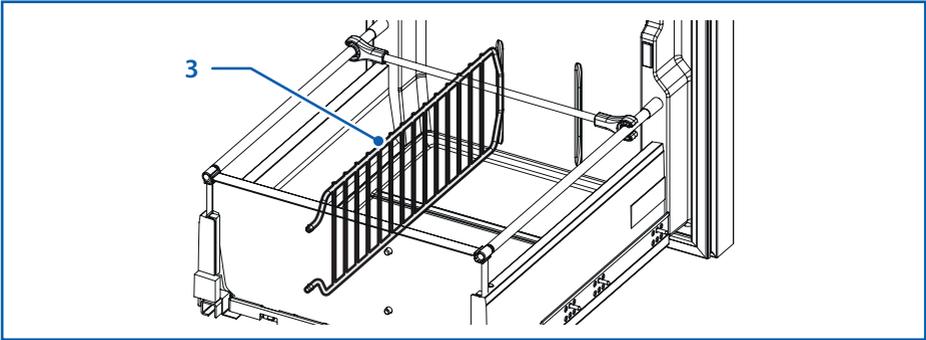
1) Plastic shelf



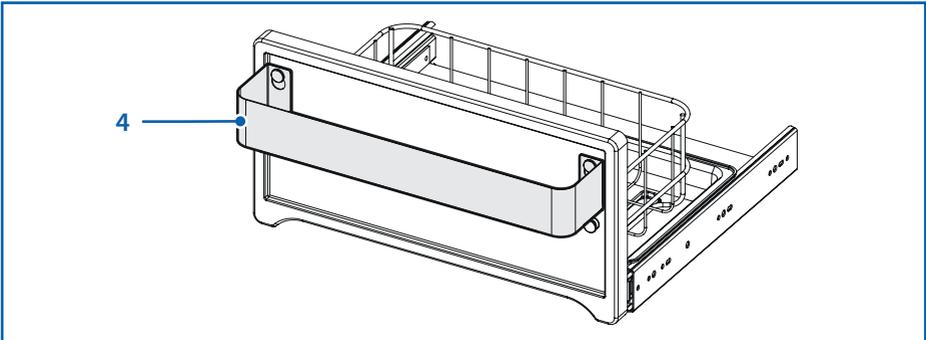
2) Bottle divider bar



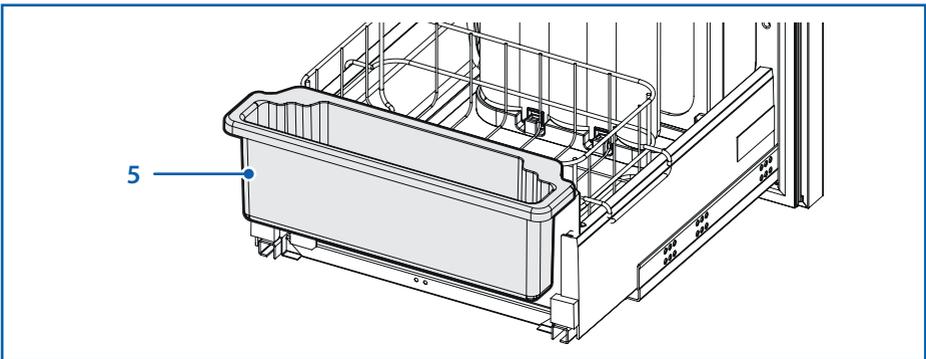
3) Dividing rack



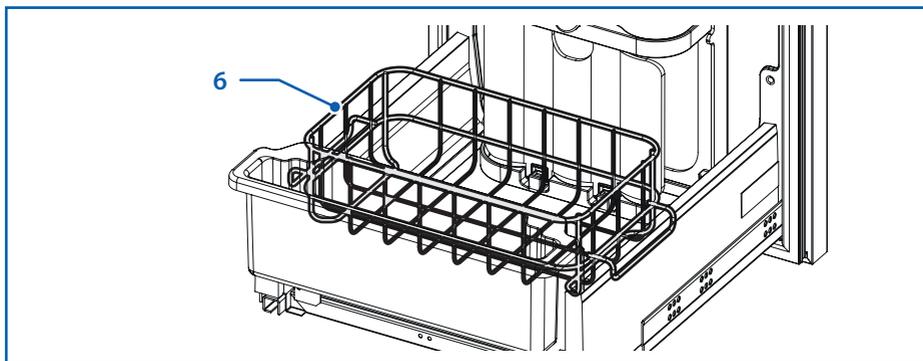
4) Upper drawer



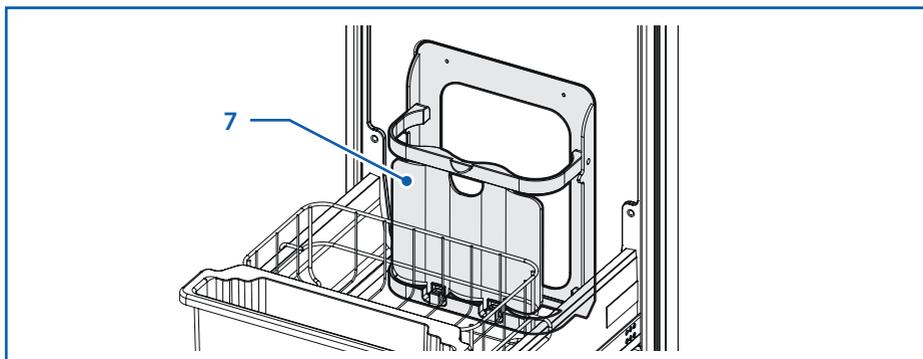
5) Plastic compartment



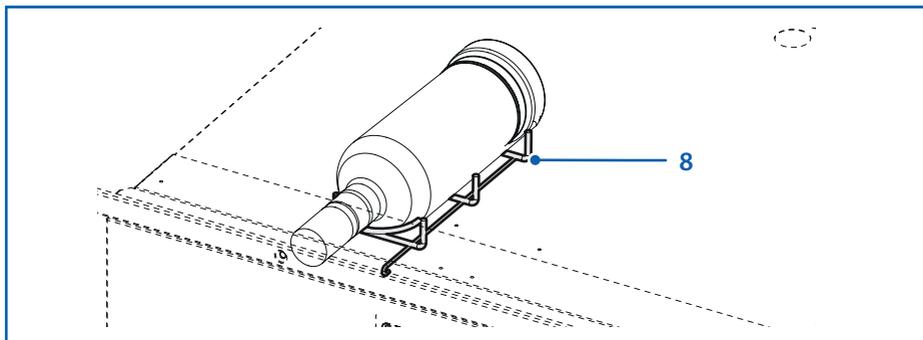
6) Basket



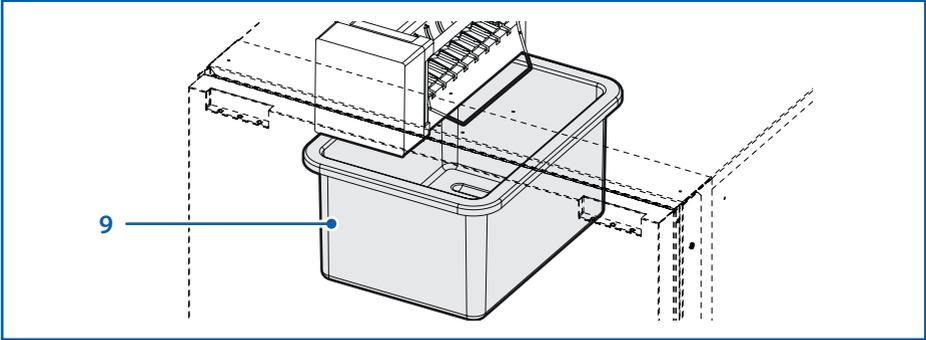
7) Bottle rack



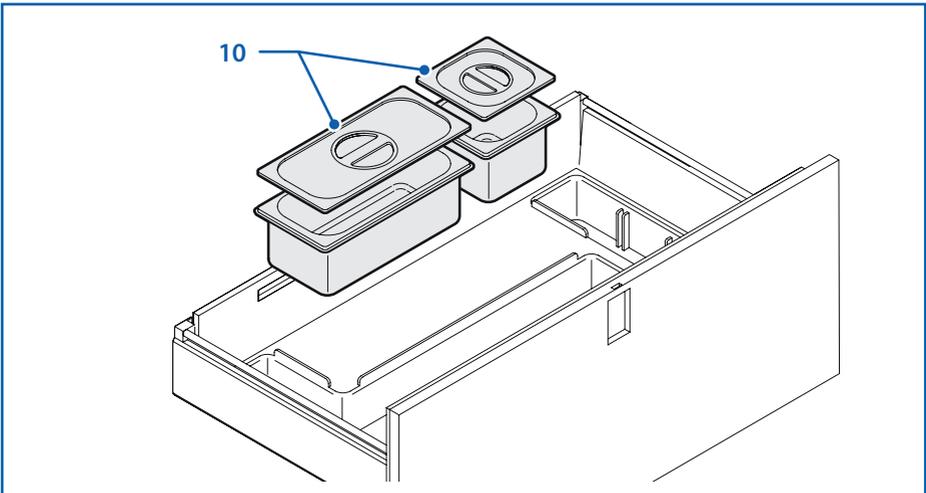
8) Bottle shelf



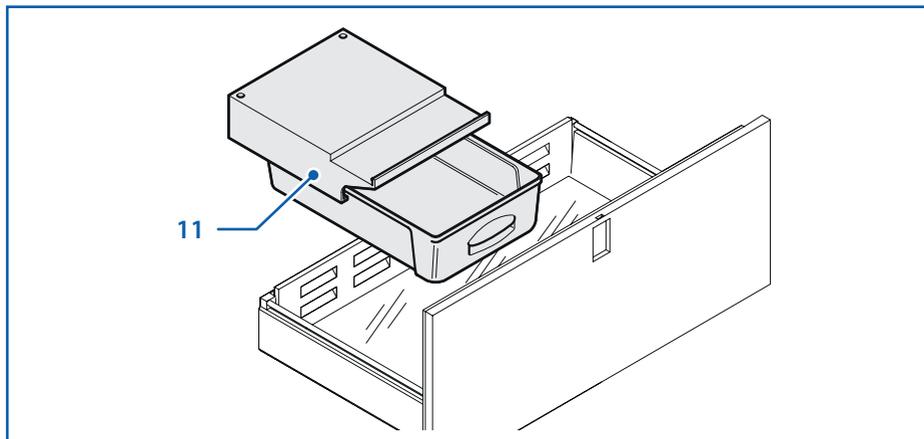
9) Ice basket



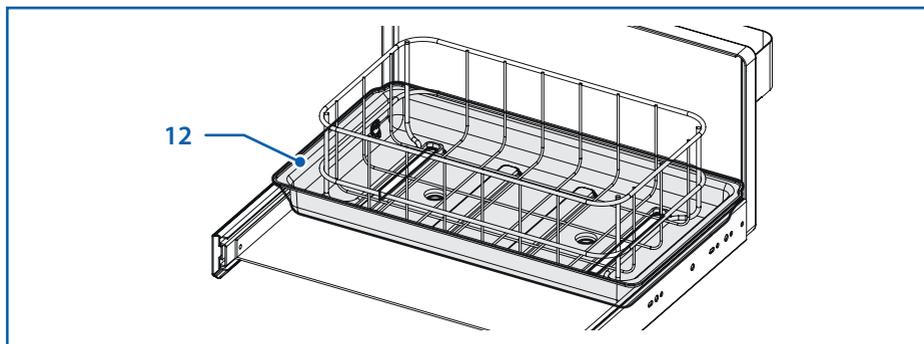
10) Container



11) Plastic drawer



12) Plastic basket rack



4. Installation

WARNING



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

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 the Manufacturer will void all warranties and may void the declaration of conformity to applicable directives.

WARNING



Do not damage the refrigerant circuit pipes, as leaking refrigerant can cause serious damage to eyesight and contact with the skin can cause freezer burns. In the event of damage to the product itself, notify the Manufacturer 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 product 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 product 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 IEC 60335 or else be more than 5 cm from electrical and/or electronic components.

WARNING



The product must be installed in power supply circuits whose sources are car/caravan/RV batteries or boat batteries.

WARNING



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

WARNING



Never short-circuit the poles of the power source.

WARNING



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

WARNING



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

4.1 Packaging checks and removal



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

After unpacking, check all parts for transport damage.

In case of complaints, please contact the supplier from whom the product was purchased or our customer service department.

IMPORTANT



The product and accessories are wrapped with buffer materials or fixed with some adhesive tape to avoid movement of the moving parts during transport: remove them all before installation. Always transport the product in a vertical position.

IMPORTANT



The packaging protects the product from transport damage. All materials used are environmentally friendly and recyclable. Please do your part: dispose of packaging in accordance with environmental regulations. Please ask your specialised dealer or your local authority for information on current disposal routes.

4.2 Environmental conditions

The product must be positioned away from rain, sprays of water and in an environment with a temperature corresponding to the climate class (indicated on the data plate inside the product), otherwise the factory warranty will be void and faults may occur.

The product is not suitable for outdoor use.

The climate class is indicated on the data plate:

- 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)

4.3 Ventilation



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

It is extremely important for the compressor/condensing unit located behind the product to be well ventilated so that the fresh air can enter at the bottom and pass behind the product, with the hot air being allowed to escape from the top or sides (see figure).

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

WARNING



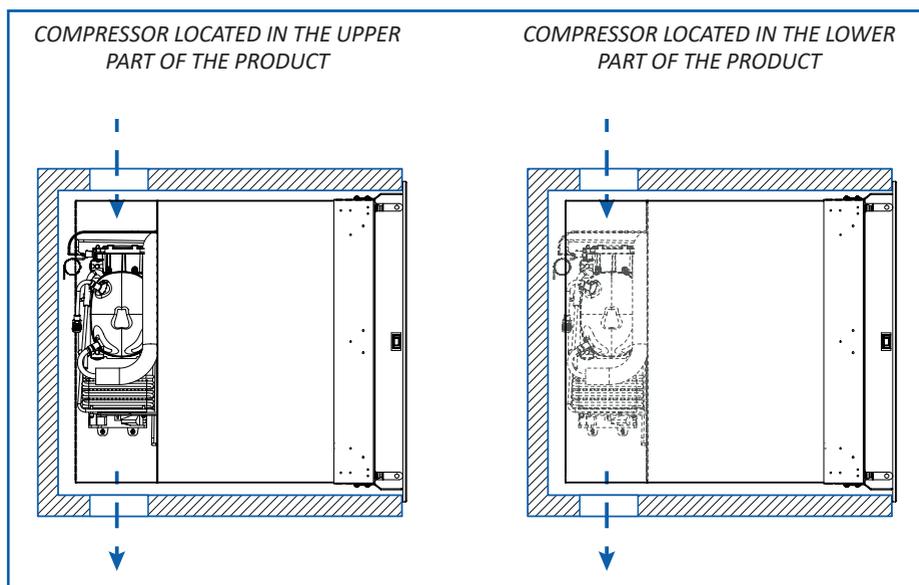
Do not obstruct the ventilation windows.

WARNING



If the compressor is remote controlled, it is necessary to maintain the same air circulation that is required for the non-remote compressor.

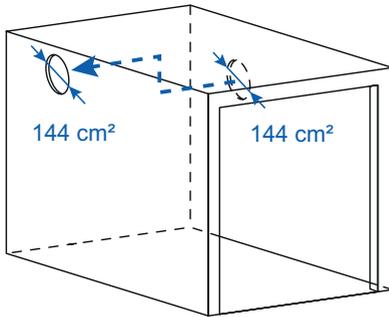
The illustration shows an example of how the product housing must be set up to allow air recirculation for proper compressor operation.



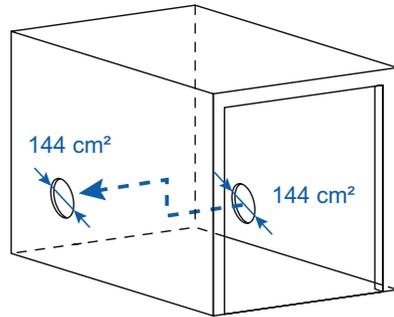
After identifying the position of the compressor on the product, make the ventilation windows to allow proper air circulation in compliance with the following requirements (see also the indications in the figure):

- There must be at least two ventilation windows to ensure the correct intake of fresh air and exit of warm air.
- The ventilation windows must be positioned in such a way as to ensure the correct cooling flow, bearing in mind that the hot air outlet window must be positioned higher than the fresh air inlet window.
- The minimum surface area of each ventilation window must be 144 cm^2 .

COMPRESSOR LOCATED IN THE UPPER PART OF THE PRODUCT



COMPRESSOR LOCATED IN THE LOWER PART OF THE PRODUCT



WARNING

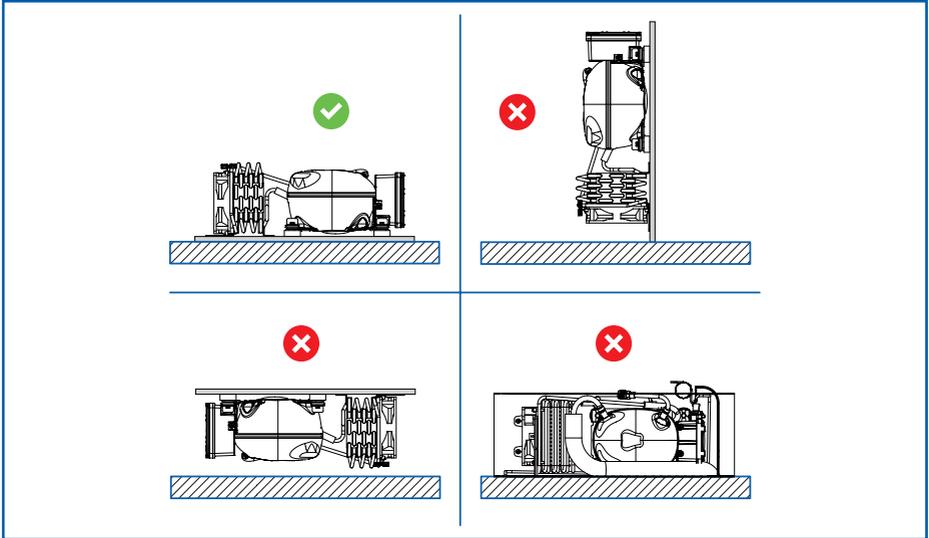


Consider adding additional ventilation windows if the product is installed near other heat-generating equipment. This will prevent this heat from affecting the cooling flow required for the product and thus prevent a decrease in product performance.

4.4 Positioning

The product is designed exclusively for built-in installation. The product must always be in a horizontal position.

In particular, the compressor base must be positioned horizontally (see figure).



WARNING



Remember that the compressor can operate up to a maximum inclination of 30°; a greater inclination may damage the compressor.

IMPORTANT



If the installation compartment is not deep enough to accommodate the compressor, in some models it can be moved to one of the other sides of the product. Contact a qualified installer to perform this procedure.

WARNING



The compartment in which the product is placed and installed must guarantee a lower support surface of sufficient capacity to support the weight of the product when fully loaded.

4.4.1 Compressor remote control



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

Some models offer the possibility of remote control of the compressor.

To disassemble the compressor unit, remove the fixing screws of the bracket supporting it and position it in the housing provided.

WARNING



For remote control compressors, it is necessary to maintain the same air circulation as that required for the compressor installed on the machine (see paragraph 4.3 on page 40).

The DR 105 model is supplied with a separate compressor unit.

The installation position of the compressor is at the discretion of the person carrying out the installation. In any case, take into consideration all the previous indications on the correct positioning and ventilation of the compressor unit.

4.4.2 Compressor/product connection



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks and risks deriving from refrigerant.

The Drawer 105 model (as well as some custom models) is supplied with pairs of couplings (male and female) to connect the remote compressor unit.

Follow the operations below to connect:

- Connect the female compressor coupling with the male evaporator coupling, turning only the nut on the female coupling.
- Connect the second pair of couplings by turning only the nut on the female coupling.

WARNING



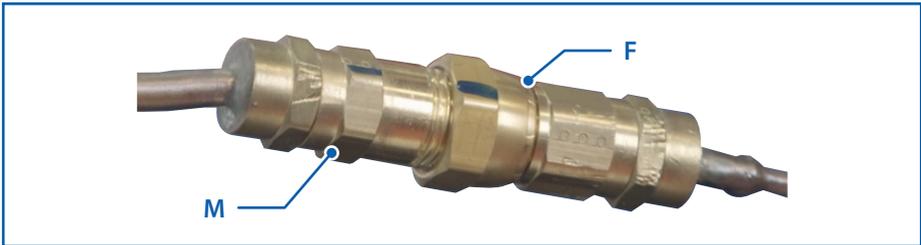
Do not dispose of the protective covers!
If you need to reposition the compressor unit, the couplings can be disconnected without releasing refrigerant gas. In this case, immediately screw on protective covers to prevent dust from depositing on joints.

There are two types of quick couplings, named "X" or "O".

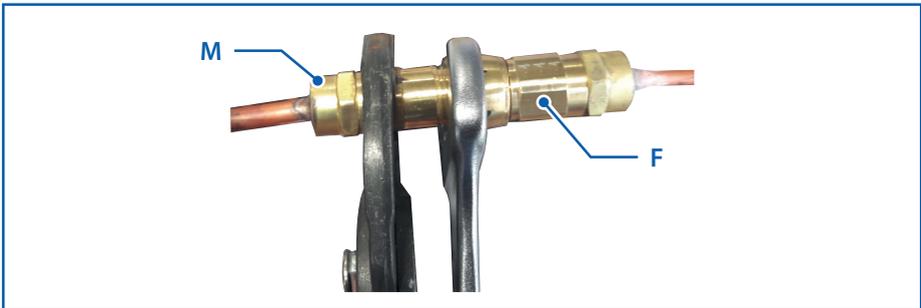
- If necessary, use two appropriate size spanners (one on the hexagonal body of the male coupling (**M**) and the other on the nut of the female coupling (**F**) as shown in the figure) to tighten the connection of the two parts until the two couplings no longer tighten.

Proceed as follows to connect and tighten the couplings:

- Remove the covers of the couplings to be connected.
 - Check that the gasket seal in the male coupling is properly lubricated.
 - Move the female coupling closer to the male coupling and insert them by hand to ensure that the threads are properly matched.
 - Make sure that the male coupling is stationary and hand-tighten the rotating nut of the female coupling as far as possible.
-
- Use a felt-tip pen to mark a line parallel to the couplings as shown in the figure.

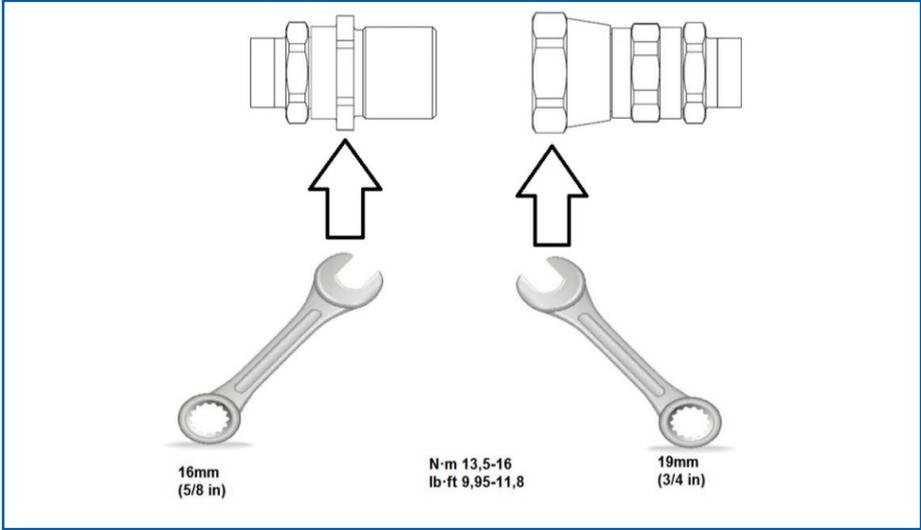


- Use two suitably sized spanners (one on the hexagonal body of the male coupling **(M)** and the other on the nut of the female coupling **(F)** as shown in the figure) and tighten the couplings further: 1/4 turn for 'O' couplings and 1/8 turn for 'X' couplings. Misalignment of the line marked will act to indicate the degree of tightening. The final turn has the purpose of ensuring that the metal edge enters into the brass housing of the two joint components, forming a leak-proof connection.

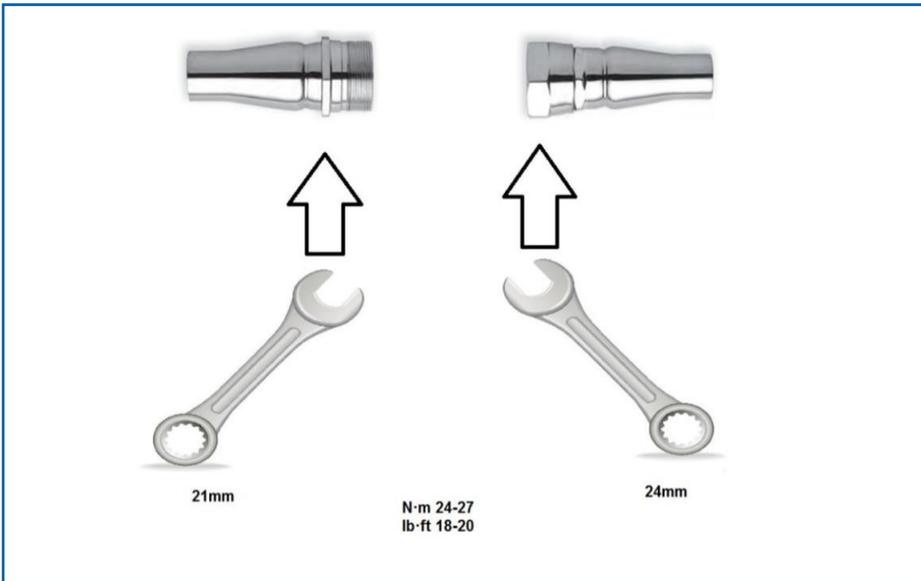


- Observe the tightening torque values shown in the figures below.
- Observe these operations for each pair of couplings.

“X” coupling tightening torque



“O” coupling tightening torque



4.4.3 STAINLESS STEEL / CLEAN TOUCH STAINLESS STEEL model positioning



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

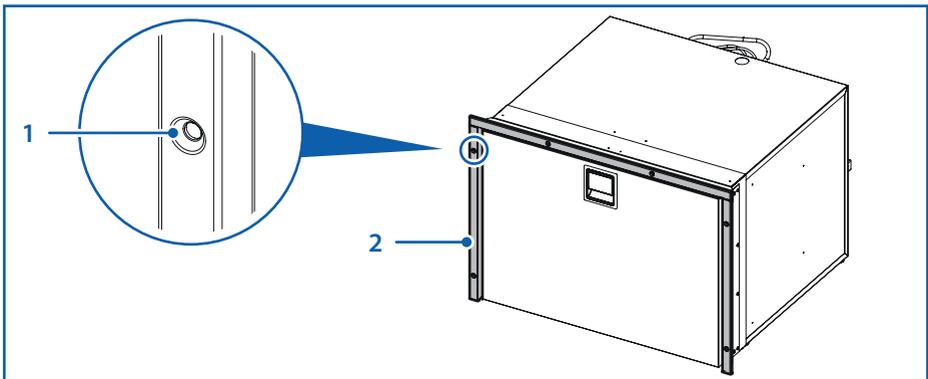
Use the holes **(1)** on the mounting flange **(2)** to secure the product to the vehicle using suitable screws (not supplied).

Where the mounting flange cannot be used, the product should be anchored by at least 2 fastening points.

IMPORTANT



Secure the product so that it cannot tip/slide in the event of rough seas or in the case of sudden vehicle movement. The product should be anchored by at least 2 fastening points, in accordance with the provisions of standard EN 60335-2-24.

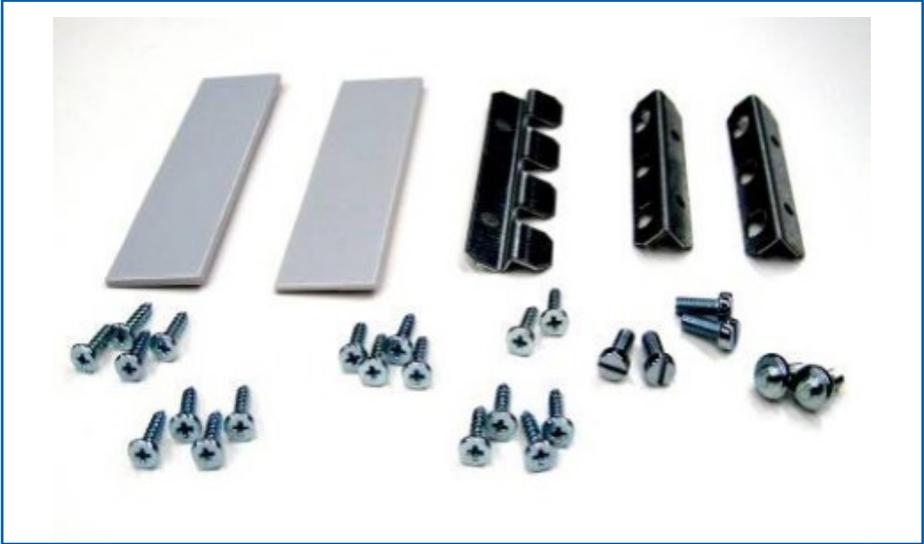


4.4.4 CUSTOM model positioning



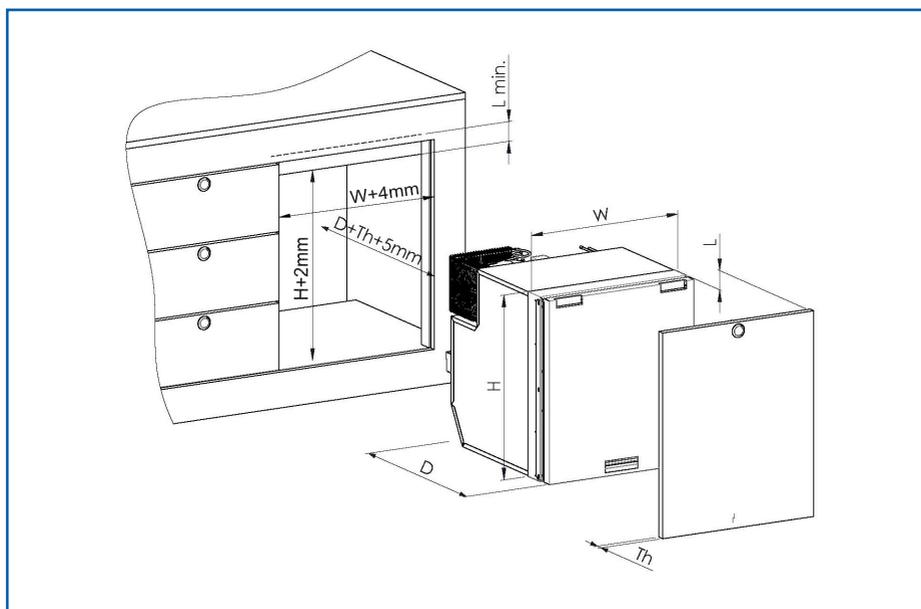
The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

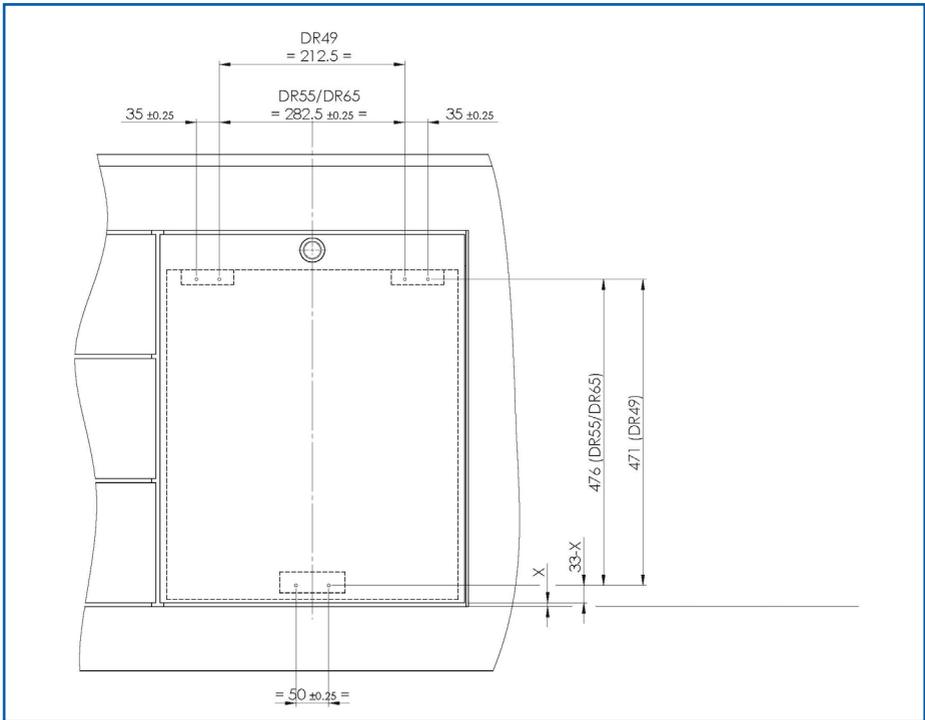
Custom models are supplied with a fixing kit (see figure below).

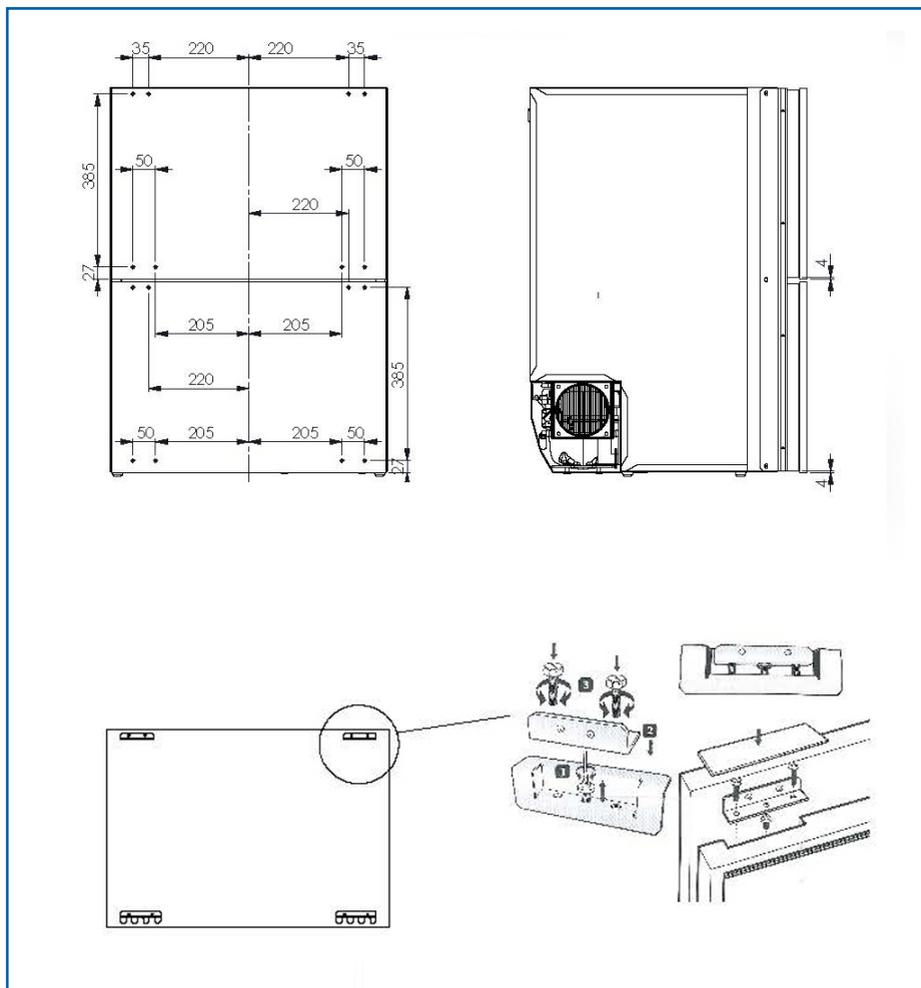


Perform the operations below for correct installation:

- Verify installation tolerances for panel application.
- Provide a door locking system to prevent accidental opening (lock not included with supply).
- Fasten the three brackets included in the kit on the panel (see figure), according to the distances indicated in the diagrams below.





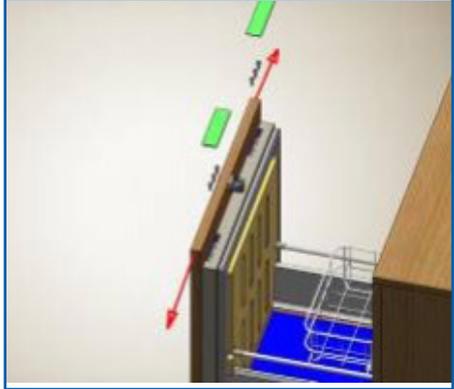
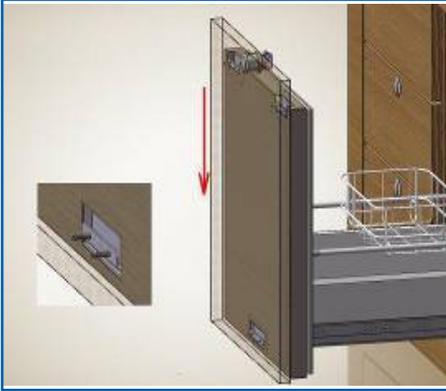


- Affix the CUSTOM panel to the product door and centre it horizontally and vertically using the adjustments on the brackets (see figure).

IMPORTANT



Depending on the model, three or four brackets can be used to install the panel.



- Insert the product in the compartment, positioning it so that the door panel is flush with the rest of the unit and tighten the two side mounting brackets (see figure).
- Cover the fastening points with the two plastic plaques provided in the kit.



4.4.5 DR 105 model positioning



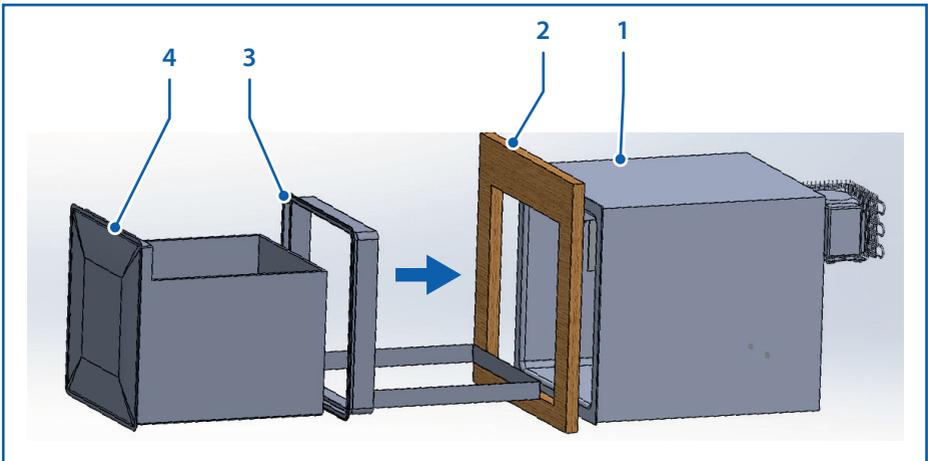
The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

The DR 105 is supplied in three different packages:

- Compressor unit
- Compartment and drawer
- Product storage box

Perform the operations below for correct installation:

- Position the storage box **(1)**.
- Make a wooden frame **(2)** (at the installer's discretion) to be applied to the front of the storage box **(1)**. The frame must be cut so as to allow the compartment **(3)** to pass through it. For correct fastening of the frame and the storage box, use silicone to prevent moisture from entering inside the product.
- Insert the compartment **(3)** inside the storage box **(1)**, having it pass inside the wooden frame **(2)**.
- Fasten the compartment internally to the storage box using the holes provided on the brackets of the compartment itself. For correct fastening of the compartment to the frame, use silicone to prevent moisture from entering inside the product.
- Insert the drawer **(4)** inside the compartment.
- Position and connect the compressor unit (see paragraph 4.4.1 on page 44 and see paragraph 4.4.2 on page 44). The pipes to be connected are located at the rear of the product.



4.5 Electrical connection



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

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 product current and protective devices which automatically intervene in the event of malfunction.

In order connect the unit to the vehicle's electrical system, proceed as follows:

- Before turning on the product, 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 product 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.

IMPORTANT



If the power supply voltage is different from 12/24Vdc, install a ΔI 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 product (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 product.

Model	12Vdc	24Vdc
DR42, DR49, DR55, DR65, DR70, DR100, DR105, DR160 FRIDGE, DR190	15A	7,5A
DR85, DR130	15A	15A
DR160 FRIDGE-FREEZER, DR160 FREEZER	30A	15A

WARNING



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

IMPORTANT



All wiring diagrams can be found in paragraph 10 on page 83.

4.5.1 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 mm ²	AWG cross-section	Max cable length 12V m/ft	Max cable length 24V m/ft
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

For DR85/130

Cross-section mm ²	AWG cross-section	*Max cable length 12V m/ft	*Max cable length 24V m/ft
2.5	12	2.5/8	5/16
4	12	4/13	8/26
6	10	6/20	12/39
10	8	10/33	20/66

*Length between battery and electronic unit

For DR160 FRIDGE/FREEZER & FREEZER

Cross-section mm ²	AWG cross-section	Max cable length 12V m/ft	Max cable length 24V m/ft
6	9	6/19	12/39
10	7	10/33	20/66

4.5.2 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.

WARNING



Before switching on the product, always make sure that the batteries are in optimal condition.

4.6 "ICE-MAKER" module water connection



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

The ice-making unit located in the product compartment of models with the "ICE-MAKER" module must be hydraulically connected.

WARNING



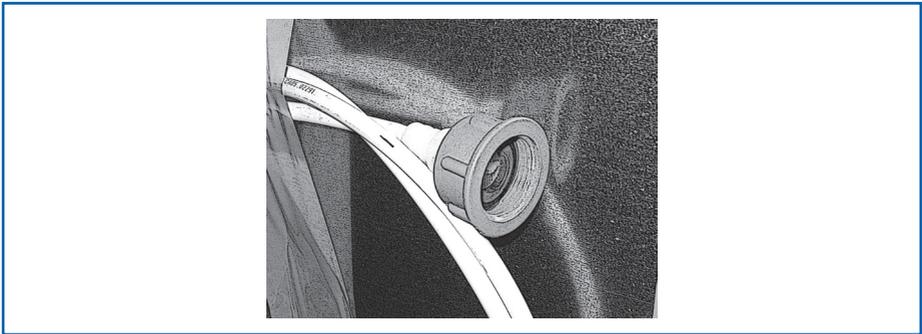
The ice-making unit is installed by the manufacturer and can only be replaced by the manufacturer or authorised service centre if necessary.

WARNING



This product must only be supplied with cold fresh water that is free of impurities.

The water supply pipe is located on the back of the product. When the unit is packaged, the pipe is fastened with tape to the rear wall.



The product can be directly connected to the water supply on board. The operating pressure must be between 250 KPa (2.5 bar) and 600 KPa (6.0 bar).

NOTE



IMPORTANT!
The ice produced is not intended for food consumption.

WARNING



The product is supplied with a seal for water connection. Use new seals each time the water network is disconnected/re-connected. Old seals must not be reused.

5. Usage instructions

WARNING



If you notice any irregular operation, first of all consult the "TROUBLESHOOTING" section later in this manual. It will help you solve problems that are not caused by faults and can be resolved easily.

In any other case, do not try to repair the product yourself but contact qualified personnel or your dealer to avoid possible damage or danger, including to yourself. Any unauthorised tampering will void the product warranty.

WARNING



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

Before using the product:

- Switch off the product if it is on.
- Make sure that all packaging materials have been removed.
- Thoroughly clean the inside of the product and its accessories with warm water and neutral soap, then dry completely with a cloth.
- Clean the outside of the product with a soft damp cloth.
- Wait for the product to dry completely.
- Connect the product to the power supply as indicated in the relative paragraph.

5.1 Switching on



The operations indicated in this paragraph can be performed by a user.

To switch on the product:

- Use the knob to start the product (see paragraph 5.3 on page 59) for models with mechanical control.
- For models with a digital panel, press the on/off button and hold it down for 4 seconds to start the product. The display lighting will switch on (see paragraph 5.4 on page 60).

5.2 Usage recommendations

- Turn the product on for about 6 hours prior to inserting the food items.
- Open the product less frequently for lower power consumption.
- Do not obstruct the product ventilation system.
- Check the batteries and their level of charge regularly.
- Keep the inside of the product clean and dry. Remove the condensation water from the drip tray beneath the product's freezer compartment where present.
- To keep the aesthetic surfaces in good conditions and intact, make that they are always clean and dry.

5.3 Setting the temperature via mechanical thermostat



The operations indicated in this paragraph can be performed by a user.

To adjust the thermostat, turn the knob to match the desired cooling intensity with the reference on the thermostat.

Cooling intensity varies from **1** to **7**, where **1** corresponds to the minimum and **7** to the maximum.

To switch off the product, turn the knob until **0** matches the reference on the thermostat.



NOTE



The temperature and active operating time of the product depend on the room temperature, the size and condition of the battery, the electrical load of other devices in the vehicle, the content of the product and the frequency of use.

NOTE



When the vehicle is exposed to full sunlight, it is strongly recommended that adequate ventilation of the vehicle/cab be activated.

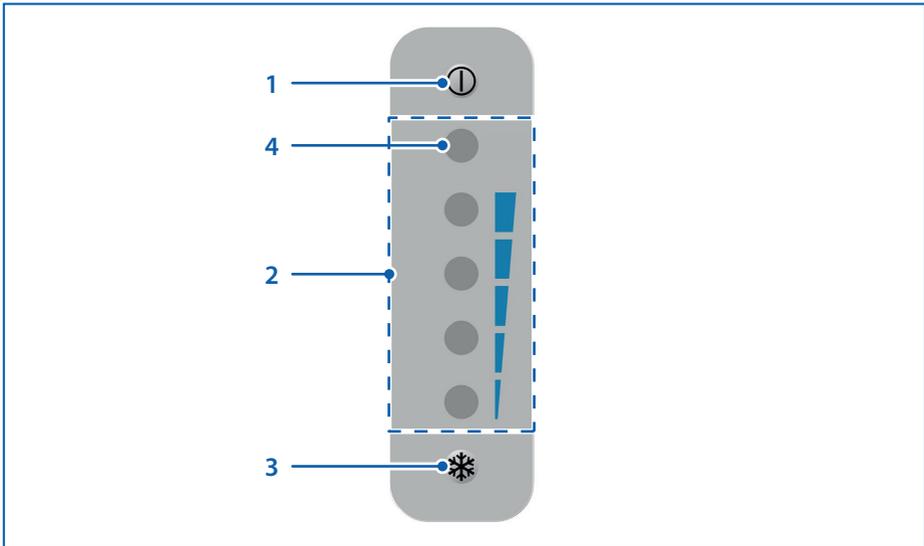
5.4 Setting the temperature via display



The operations indicated in this paragraph can be performed by a user.

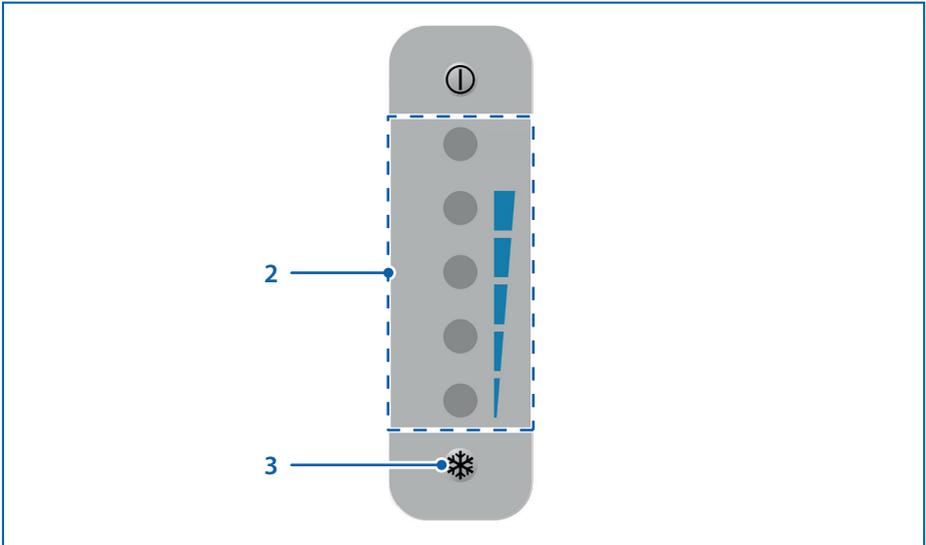
Digital panel functions:

- 1) ON/OFF button
 - Switches on/off.
- 2) LEDs
 - Indication of the selected cooling intensity level.
 - Indication of SMART mode selection via LED **(4)**.
 - Indication of possible errors (see paragraph 7.2 on page 79).
- 3) Cooling intensity button
 - Selection of the cooling intensity.
 - Activation/deactivation of SMART mode operation.



The digital panel must be switched on for it to display the set cooling intensity.

- Press the button  once to display the set cooling intensity.
- Press the button  again to select the desired cooling intensity.
- Press the button  consecutively to select the cooling intensity levels in sequence (1 to 5).
- Wait 3 seconds for the desired setting to be stored.



NOTE



The temperature and active operating time of the product depend on the room temperature, the size and condition of the battery, the electrical load of other devices in the vehicle, the content of the product and the frequency of use.



When the vehicle is exposed to full sunlight, it is strongly recommended that adequate ventilation of the vehicle/cab be activated.

5.4.1 SMART function

When this mode is active, the product constantly measures the amount of energy available, accumulating cold in the food during periods when it is abundant and reducing energy consumption when it is limited.

- Press the button **(3)** for 3 seconds to activate the mode.

The LED **(4)** will light up to indicate that Smart mode is activated.

- Press the button **(3)** for 3 seconds to deactivate the mode.

The SMART function is suspended when the supply voltage to the product drops below 12.5Vdc or 24.5Vdc for a period of more than 60 seconds, returning the cooling intensity to the last value set.

If the product is switched off or disconnected from the power supply when the SMART function is active, the SMART function will still be active when it is switched on again.

5.5 “ICE MAKER” module activation



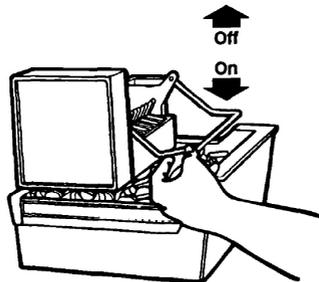
The operations indicated in this paragraph can be performed by a user.

To activate the ice maker, move the lever to the ON position (see figure below).

When the collecting basket is filled, the volume of ice produced moves the lever upwards, thus stopping ice production.

Remove the ice and return the lever to the ON position to start another cycle.

To stop ice production, bring the lever to the OFF position.



5.6 Positioning accessories



The operations indicated in this paragraph can be performed by a user. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

NOTE



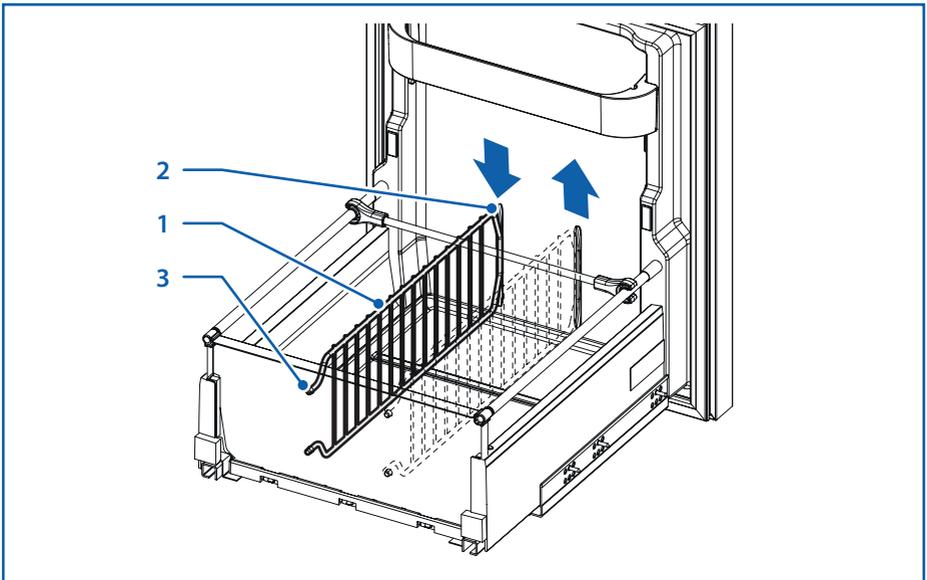
After positioning the available accessories, make sure that no food inside the product can move while driving.

5.6.1 Dividing rack

Use the rack **(1)** as indicated in the figure to organise the fridge compartment as desired.

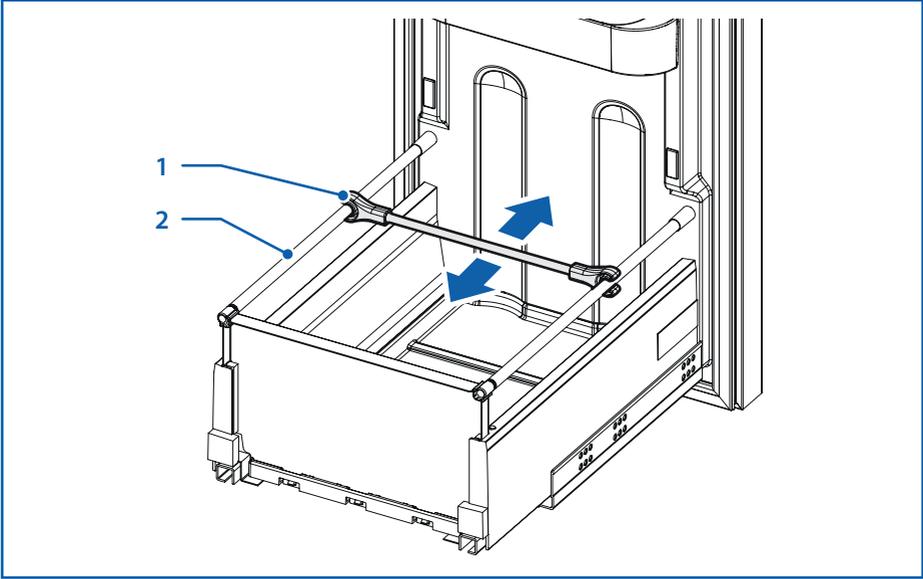
To remove the dividing rack, slide it along the seat **(2)** on the product drawer door.

Position the rack by inserting it in the two rear pre-drilled holes **(3)** and slide it along the seat **(2)** until it is correctly positioned.



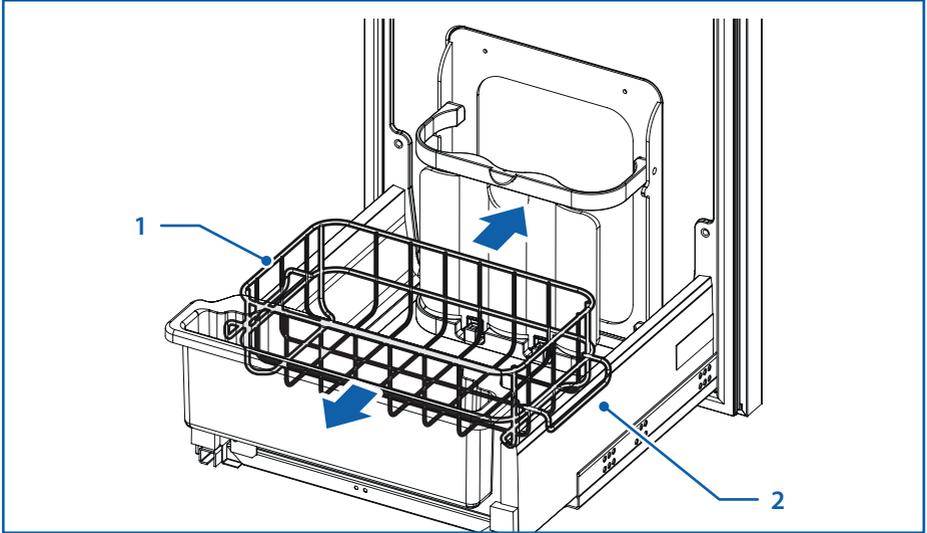
5.6.2 Bottle divider bar

The bottle divider bar **(1)** can be used to keep bottles from moving during travel. To position the bar as desired, simply slide it along the side bars **(2)** of the drawer.



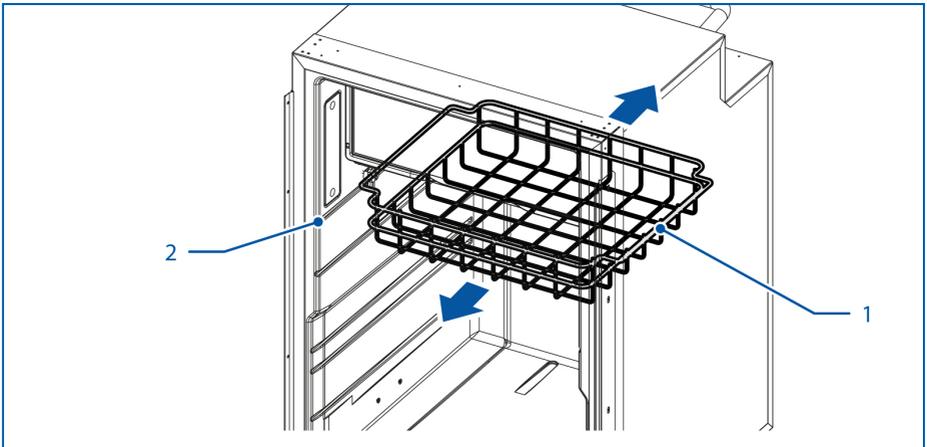
5.6.3 Basket

Use the basket (1) as indicated in the figure to organise the fridge compartment as desired. Rest the basket (1) on the sides (2) of the drawer.



For prearranged models only

To organize the refrigerator compartment as desired, use the basket (1) as shown in the figure. Bring the basket (1) to rest on the guides (2) of the product. To remove the basket, turn the lever counterclockwise and then pull the basket out completely.

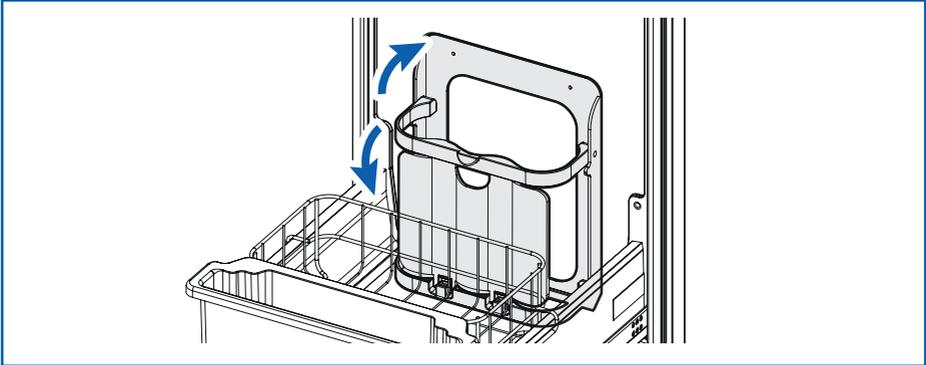


5.6.4 Bottle rack

The bottle rack can be opened or closed as needed.

To close the bottle rack, simply remove any bottles and turn it upwards.

To open the bottle rack, simply turn it downwards.



5.7 Shut-down and putting out of service



The operations indicated in this paragraph can be performed by a user.

Switch off the product before defrosting or storing the vehicle:

- On models with mechanical control, set the knob to "0" (zero) (see paragraph 5.3 on page 59).
- On models with a digital panel, press and hold the on/off button for 4 seconds (see paragraph 5.4 on page 60).

If you will not be using the product for a long period of time:

- Empty the product.
- Defrost the product completely and remove any condensation that has formed, to avoid damage to the product or to electrical/mechanical components and/or the formation of mould.
- Thoroughly clean the entire product.

NOTE



The natural defrosting time can vary from a few minutes to several hours.

Keep the refrigerator door open and disconnect all power supplies while it is not in use.

6. Maintenance

WARNING



All maintenance and replacement operations, disposal of the power circuit upstream of the product and of the power source must be handled by qualified personnel.

This chapter contains a complete list of requirements and procedures related to maintenance of this product. Good maintenance includes periodic operations that include various types of cleaning.

If you do not understand any of the information or procedures contained in this chapter, please contact the Manufacturer for clarification before proceeding.

If product maintenance is carried out in a manner that does not comply with the instructions supplied, with non-original spare parts or without written authorisation from the Manufacturer, or in any case in such a way as to compromise its conditions or modify its characteristics, the Manufacturer will be relieved of any responsibility regarding the safety of persons or faulty operation of the product.

Any unauthorised modifications will invalidate the contractually defined warranty.

NOTE



Do not perform any kind of intervention, modification or repair other than those indicated in this manual.

DANGER



Always disconnect the product power supply before carrying out any work on it in order to avoid damage and health hazards.

The products referred to in this manual 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 product must be stored inside the vehicle, but the compressor will not work at temperatures near or below 0°C.

6.1 Routine maintenance

6.1.1 Cleaning



The operations indicated in this paragraph can be performed by a user. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

It is important to clean the product regularly for optimum performance:

- Switch off the product.
- Remove any dividers, removable racks and drawers.
- Thoroughly clean the inside of the product and its accessories with warm water and neutral soap, then dry completely with a cloth, avoiding any condensation/water residue.
- Clean and dry completely the mechanical parts inside the product.
- Completely clean the outside of the product (especially the aesthetic parts) with a soft, damp microfibre cloth.
- Wait for the product to dry completely.
- Turn the product back on.

WARNING



Do not use abrasive cleaners, metal abrasive sponges or hard brushes.
These may damage the product.
Do not clean the product with aggressive, caustic or soda-based soaps or cleaners.

WARNING



Do not expose the product to water.

NOTE



For CUSTOM models, cleaning of the external surface of the product must be adapted to the type of panel installed.

NOTE



The free parts of the product are not suitable for washing in dishwashers.

NOTE



The presence of dust under the product can block the air flow necessary for correct operation.
Therefore, frequently remove all dust in this area using, for example, a Hoover.

6.1.2 Defrosting (for models without the “FROST-FREE” function)



The operations indicated in this paragraph can be performed by a user. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

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 frequency with which the doors are opened can also greatly influence the formation of frost.

Ice can accumulate in the freezer compartment and on the surface of the refrigerator compartment.

The product should always be defrosted when the layer of frost reaches a thickness of 3-4 mm or more. Otherwise the product may suffer a drop in performance.

To defrost the product, proceed as follows:

- Remove all food.
- Switch off the product (see paragraph 5.7 on page 66).
- Remove ice and frost from the walls, avoiding using sharp objects as this could damage the product and cause refrigerant leaks.
- Remove, empty and dry the drip tray beneath the evaporator (if present). A towel can be placed at the base of the product during the defrosting procedure in order to facilitate water collection.
- Only turn the product back on once it has been defrosted, cleaned and thoroughly dried. Some models are equipped with a hole at the base of the inside drawer to facilitate condensate discharge. A towel can be placed at the base of the product during the defrosting procedure in order to facilitate water collection.

NOTE



Defrosting should be performed when the products can remain as cool as possible outside of the product.

NOTE



Avoid using sharp objects as this could damage the product and cause refrigerant leaks.

WARNING



Do not accelerate the defrosting process by forcing removal of the layer of ice or with sharp objects or using a hair dryer or other electrical device.

6.1.3 Cleaning the condensing unit



The operations indicated in this paragraph can be performed by a user. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

- Switch off the product and disconnect it from the power supply.
- Use a gentle brush, Hoover or low pressure compressed air to clean the condensing unit foils, removing all accumulated dust.
- Remove any dust present on the mechanical and electrical components.
- Re-connect the product to the power supply and switch it back on.

WARNING



Do not use compressed air jets.

Do not use metal brushes.

Do not use high pressures as doing so may cause deformation to the condensing unit foils.

NOTE



The accumulation of dust and grease on the refrigeration condensing unit can cause overheating that can irreparably compromise compressor operation. The condensing unit must always be cleaned when necessary.

6.2 Special maintenance

Special maintenance operations are those carried out following breakdowns or malfunctions which may involve the replacement of certain components by specialised and authorised technical personnel.

WARNING



All special maintenance operations must be carried out by technical personnel authorised by the Manufacturer.

6.2.1 Replacing the LED bulb



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

DANGER



HIGH INTENSITY LIGHT HAZARD

If the product is equipped with high luminous intensity LED lighting, avoid direct beam exposure to eyes.

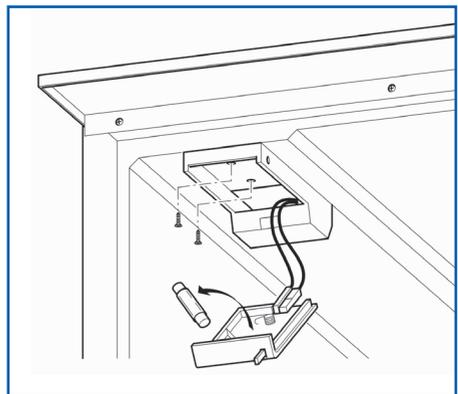
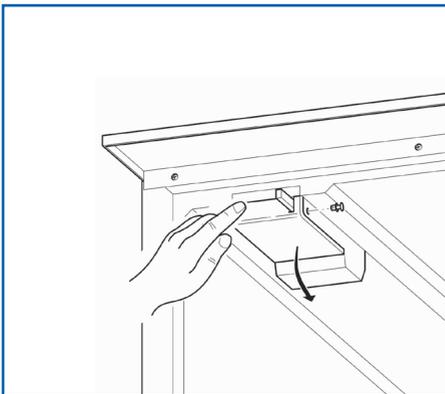
WARNING



Replacement of the LED lamp must only be carried out by qualified personnel or by Service Centres.

Proceed as indicated below to replace the bulb:

- Switch off the product and disconnect it from the power supply.
- Press down the glass of the lighting unit as shown in the illustration.
- Replace the bulb with a new one.
- Reposition the lighting unit as shown in the figures below.
- Re-connect the product to the power supply and switch it back on.



WARNING



Use only original Manufacturer spare parts.

6.2.2 Replacing the LED strip



The operations indicated in this paragraph must be performed by a qualified installer. Always use PPE (Personal Protective Equipment) to avoid cutting risks.

DANGER



HIGH INTENSITY LIGHT HAZARD

If the product is equipped with high luminous intensity LED lighting, avoid direct beam exposure to eyes.

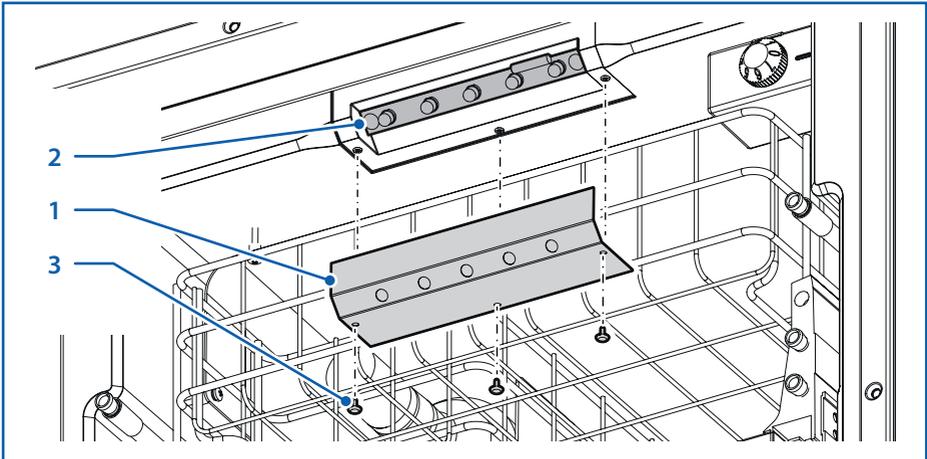
WARNING



Replacement of the LED strip must only be carried out by qualified personnel or by Service Centres.

Proceed as indicated below to replace the strip:

- Switch off the product and disconnect it from the power supply.
- Remove the protective plate (1) from the LED strip (2), removing the corresponding screws (3).
- Remove the LED strip (1) and replace it with a new one.
- Refit the protective plate (1) using the screws removed earlier (3).
- Re-connect the product to the power supply and switch it back on.



WARNING



Use only original Manufacturer spare parts.

7. Troubleshooting

WARNING



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

DANGER



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

Defect	Possible cause	Intervention
The product 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 it. 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.

Defect	Possible cause	Intervention
The compressor runs for a long time but doesn't cool properly (reduced efficiency).	<p>Insufficient ventilation, the condensation unit is overheating.</p> <p>The fan is not working properly.</p> <p>Too much frost in the internal compartment, which prevents the door from closing properly, letting hot, moist air enter.</p> <p>The condenser is blocked by dust.</p>	<p>Check the conditions of product installation. If possible, remove the product from the installation cabinet: if performance improves, make improvements in the ventilation system (see 4.3 on page 40).</p> <p>Replace the fan.</p> <p>Defrost. Correct the position of the door and check the gasket.</p> <p>Clean the condensing unit.</p>
The fuse blows.	<p>The wrong fuse is being used.</p> <p>Defective electronic control unit.</p>	<p>Check the fuse: see table in section 4.5 on page 54.</p> <p>Replace the electronic control unit.</p>
The compressor is operating intermittently.	<p>Battery low or electrical cables in poor conditions.</p>	<p>Check wiring conditions, examining for loose connections, rust or verdigris.</p> <p>If the wiring must be replaced, please refer to the manual for the correct size.</p> <p>If the wiring is in good condition, check the functionality of the battery and replace it if it is in bad condition.</p>
The compressor never stops (correct product performance)	<p>Incorrect thermostat connection on the electronic control unit.</p> <p>Thermostat broken.</p> <p>Condensation is not working properly, evaporator cools but not enough to cause the thermostat to stop the compressor.</p> <p>Room temperature exceeding the climate class of the product.</p> <p>Insufficient ventilation.</p>	<p>Rotate the thermostat to off position. If the product continues to function, then there is continuity on the control unit.</p> <p>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).</p> <p>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.</p> <p>Check the room temperature against that of the product.</p> <p>Check the conditions of product installation. If possible, remove the product from the installation cabinet: if performance improves, make improvements in the ventilation system.</p>

Defect	Possible cause	Intervention
The compressor never stops (poor product performance)	<p>Room temperature exceeding the climate class of the product.</p> <p>Insufficient ventilation.</p> <p>Little gas in the refrigerant circuit.</p>	<p>Check the room temperature against that of the product.</p> <p>Check the conditions of product installation. If possible, remove the product from the installation cabinet: if performance improves, make improvements in the ventilation system (see 4.3 on page 40).</p> <p>If ventilation is instead optimal, check for the presence of gas in the system, contacting a specialised technician.</p>
The freezer compartment is cold but the refrigerator is not	<p>Insufficient ventilation.</p> <p>Little gas in the refrigerant circuit.</p> <p>Non-continuous power supply.</p>	<p>Check the conditions of product installation. If possible, remove the product from the installation cabinet: if performance improves, make improvements in the ventilation system (see 4.3 on page 40).</p> <p>If ventilation is instead optimal, check for the presence of gas in the system, contacting a specialised technician.</p> <p>Check electrical connection and battery conditions.</p>
Excess ice on the evaporator.	Moisture infiltrations in the product.	<p>Check the conditions of the gasket on all four sides of the door. The gasket must close perfectly on the unit.</p> <p>If the formation of ice is thicker on one side, most likely there is moisture infiltration in the product is coming from that side.</p> <p>Use a moderate heat source to model the gasket into position. Replace the entire door if problem persists.</p>
The product 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 product 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.	<p>Check that compressor screws are properly tightened and that nothing is in contact with it.</p> <p>The compressor vibrates and, if something is in contact with it, vibrations increase.</p>

Defect	Possible cause	Intervention
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.	Inverted polarity. Bulb broken.	Check bulb polarity. Replace light bulb if polarity is correct.
Door/Drawer not closing properly.	Incorrect position of the hinges. Gasket deformed.	Check the positioning of the hinges and realign them if necessary. Use a moderate heat source to remodel the gasket. Replace door if problem persists.
A continuous buzzing noise is heard.	The water valve is in operation.	No operation.
Water drops are noted.	The water is filling the ice production tray.	No operation.
The noise of falling ice is heard.	Ice is beginning to fall into the collection tray.	Once the tray is full, remove the produced ice.
The ice has a stale taste.	The ice is old.	Make new ice.
The Ice-Maker is too full of water.	The Ice Maker is not perfectly level.	Level the Ice Maker. If after levelling the product, water continues to overflow, close the water supply and move the stop arm to the "OFF" position. Contact an authorised service centre.
The Ice Maker is not making enough ice.	The Ice Maker compartment drawer is being opened too often.	Adjust the temperature of the freezer compartment to a colder setting. Verify that the right amount of fresh air is present for compressor cooling.

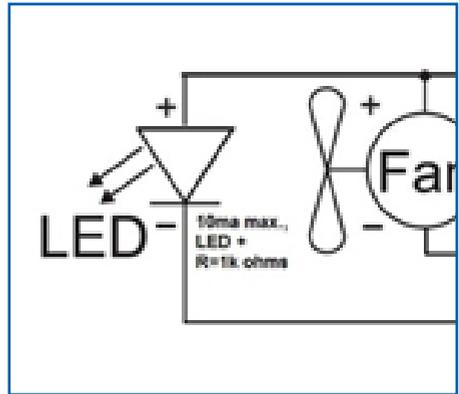
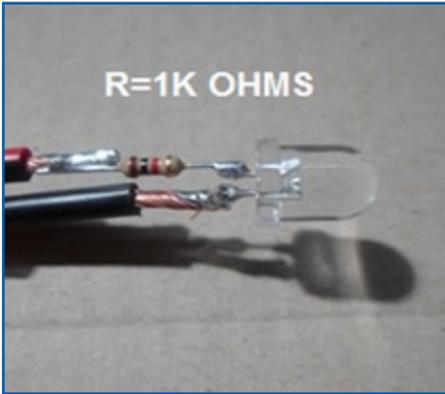
Defect	Possible cause	Intervention
The Ice Maker is stopped.	<p>Check that the stop arm is in operating position.</p> <p>Check that the water valve is working.</p> <p>Make sure that the water valve is not clogged.</p>	<p>Reposition the stop arm in the right position.</p> <p>If the water valve is clogged or not working, contact an authorised service centre.</p>

For more complicated defects requiring specialised assistance, please contact the Webasto network or an Authorised Distributor.

7.1 LEDs for diagnostics

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

This check can be carried out on models with mechanical temperature control.



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	Thermal protection of the electronic control unit (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	Minimum motor speed error (if the refrigeration system has been overloaded, the motor cannot maintain minimum speed of approximately 1.850 RPM)	Remove excess gas.
3	Motor starting error [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	Fan short-circuited (the fan absorbs more than 1A from the electronic control unit)	Replace the fan.
1	Battery protection (voltage is outside the maximum and minimum voltages)	Check power cable conditions. Replace with new cables if necessary. Check battery conditions.

7.2 Display Diagnostics

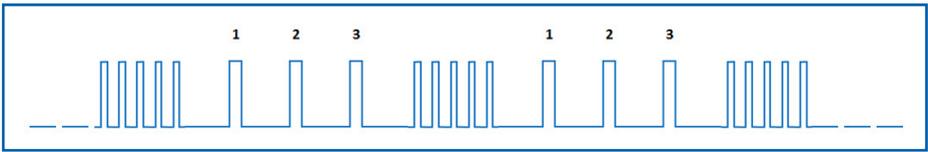
The display is equipped with a self-diagnostic system. Errors will be shown on the display as follows if any malfunctions occur:

- 5 quick flashes in sequence (1.5 sec) to signal that the product is in error conditions
- slow flashes (see table below) to signal the type of error

The error signal sequence will repeat until the system is reset.

All 5 LED lights will flash during error reporting.

Example of flashing logic for error "E3" = Compressor failure



Error	Error Identification	Solution
1	Battery protection (voltage is outside the maximum and minimum voltages)	Check voltage on the control unit. Check power cable conditions. Replace with new cables if necessary. Check battery conditions.
2	Fan short-circuited (the fan absorbs more than 1A from the electronic control unit)	Replace the fan.
3	Motor starting error [the rotor is blocked or pressure inside the refrigerant circuit is too high (> 5 bar)] Defective electronic control unit	Replace the electronic control unit or replace the compressor.
4	Minimum motor speed error (if the refrigeration system has been overloaded, the motor cannot maintain a speed of 1850 RPM).	Remove excess gas.
5	Thermal protection of the electronic control unit	Check compressor/condensing unit ventilation.
6	Defective sensor (the sensor is defective or disconnected).	Reconnect the sensor and verify operation or replace the sensor.
7	Communication error with display	Check connections, replace the compressor control unit and/or the display.

8. Warnings for disposal

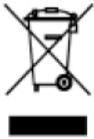
WARNING



All maintenance and replacement operations, disposal of the power circuit upstream of the product and of the power source must be handled by qualified personnel.

This product complies with the Directive 2012/19/EU 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 shown 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 disposed of at an appropriate collection centre.

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

The refrigerant contained in the product must be handled in accordance with current environmental regulations and good industrial practice. Avoid any leakage or spillage into the environment or emission into the atmosphere.

9. Warranty

The Indel Webasto Marine warranty complies with EU Directive 2019/771.

Validity period

The product warranty 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.

For specific conditions of validity in the USA, please contact Indel Webasto Marine USA.

The validity period starts from:

- 1) The date of sale indicated on the product invoice or sales receipt.
- 2) The date of the invoice or registration document of the first sale of the vehicle in which it is installed, if installed by the manufacturer of the vehicle.
- 3) 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
- Objects subject to wear
- Professional use
- Damage caused by weathering
- Costs for dismantling and/or reassembling cabinets or other structures

Essential information for determining whether the case is covered by the warranty:

- Product code (indicated on the product label)
- S/N (serial number) (indicated on the product label)
- Invoice or sales receipt (or possibly registration document, see above in Validity period section)
- Detailed description of the defect (Attach photos if possible)
- Description of installation with particular attention to ventilation and wiring (Attach photos if possible)
- (If it is determined that the case is not covered under warranty, the customer must pay all expenses for repairs, replacements, labour, travel of persons and transport. IWM is not required to bear any expense.)

Operating procedures to be applied once it is ascertained that the case is covered by warranty:

Warranty repair of products installed in boats must be performed exclusively by service centres (CAT) that are part of the IWM network (see list at www.indelwebastomarine.com). IWM does not cover costs for service performed by others.

For products installed on boats, an IWM authorised CAT technician will come to the boat if it is located at a distance of maximum 100km from the CAT. IWM shall cover the cost of this transfer. If the boat is over 100 km away, the customer can choose whether to pay the cost of the technician's transfer (in this case paying the technician directly), or to move the boat closer.

To locate the nearest service point and for travel coverage terms in the USA, please contact Indel Webasto Marine USA. IWM does not reimburse any expenses for spare parts purchased elsewhere.

Products installed on Recreational vehicles (RV):

Warranty repairs must be performed exclusively by service centres that are part of the Webasto network.

The vehicle must be brought to the service centre.

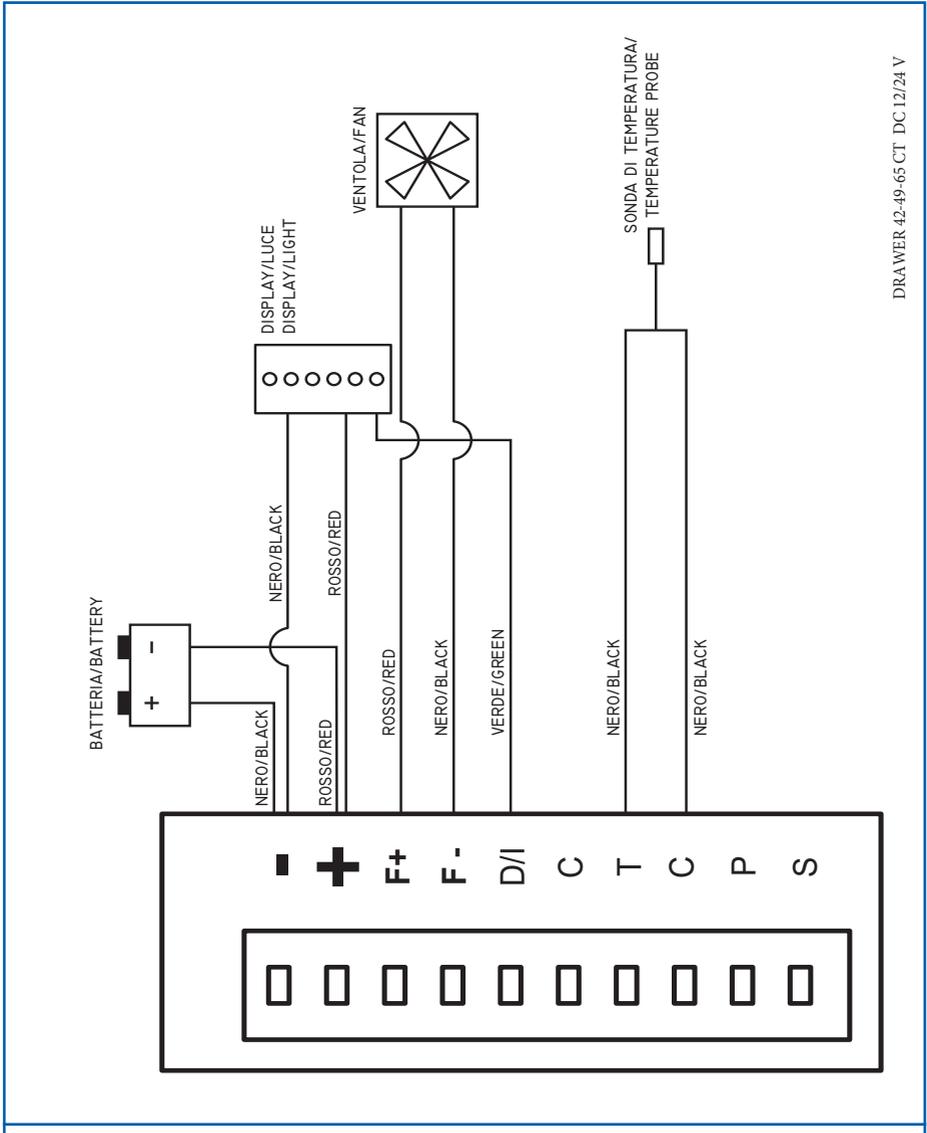
Find the service centre nearest to you at www.webasto.com

For the condition of products installed in recreational vehicles in the USA, please contact Indel Webasto Marine USA.

10. Attachments

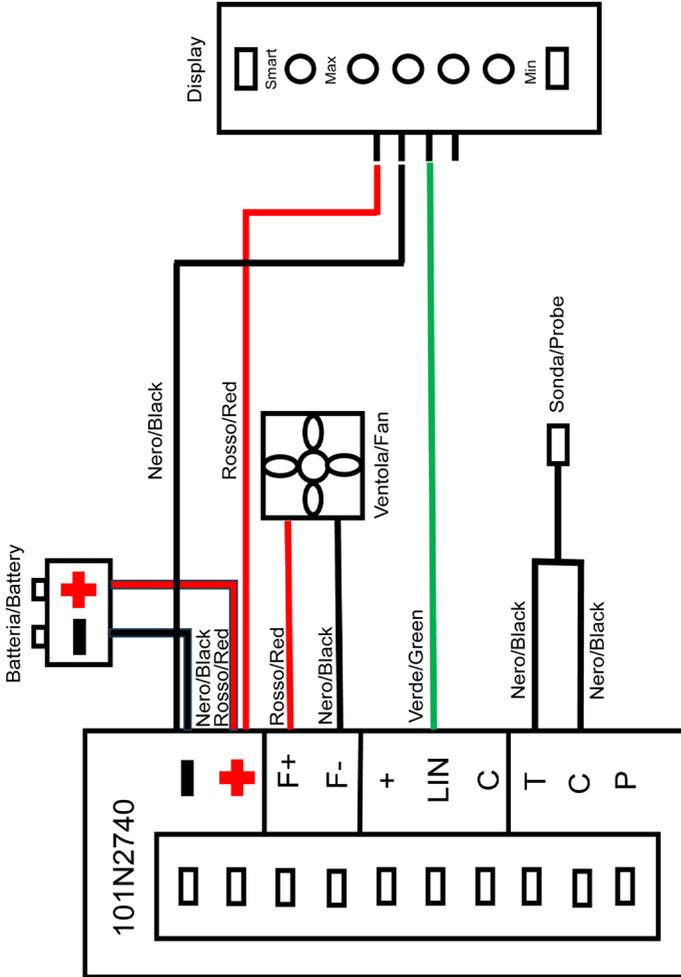
10.1 Wiring diagrams

10.1.1 Drawer 42/49/65 Fridge Clean-touch DC 12/24V

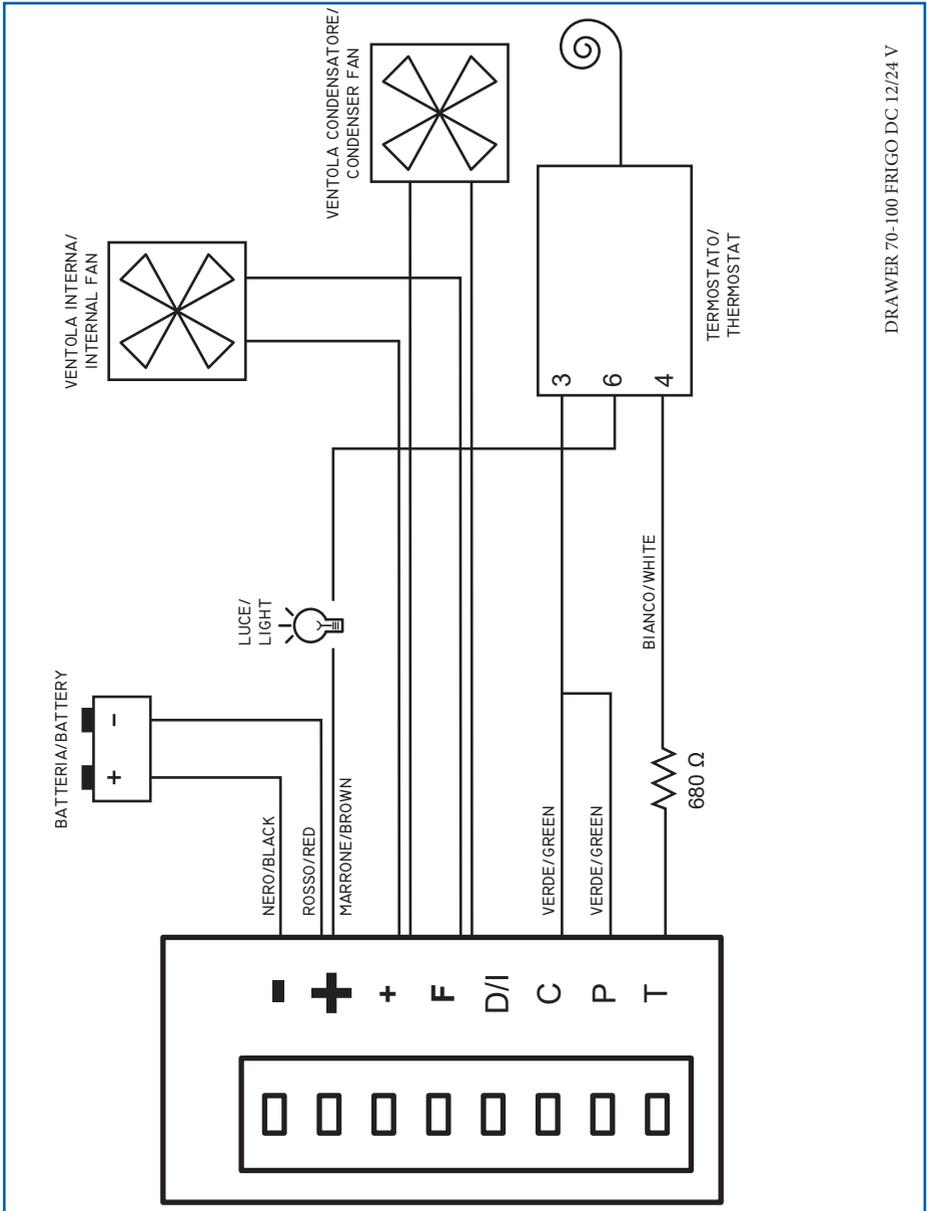


DRAWER 42-49-65 CT DC 12/24 V

10.1.4 Drawer 85/130 Fridge Clean touch DC 12/24 V

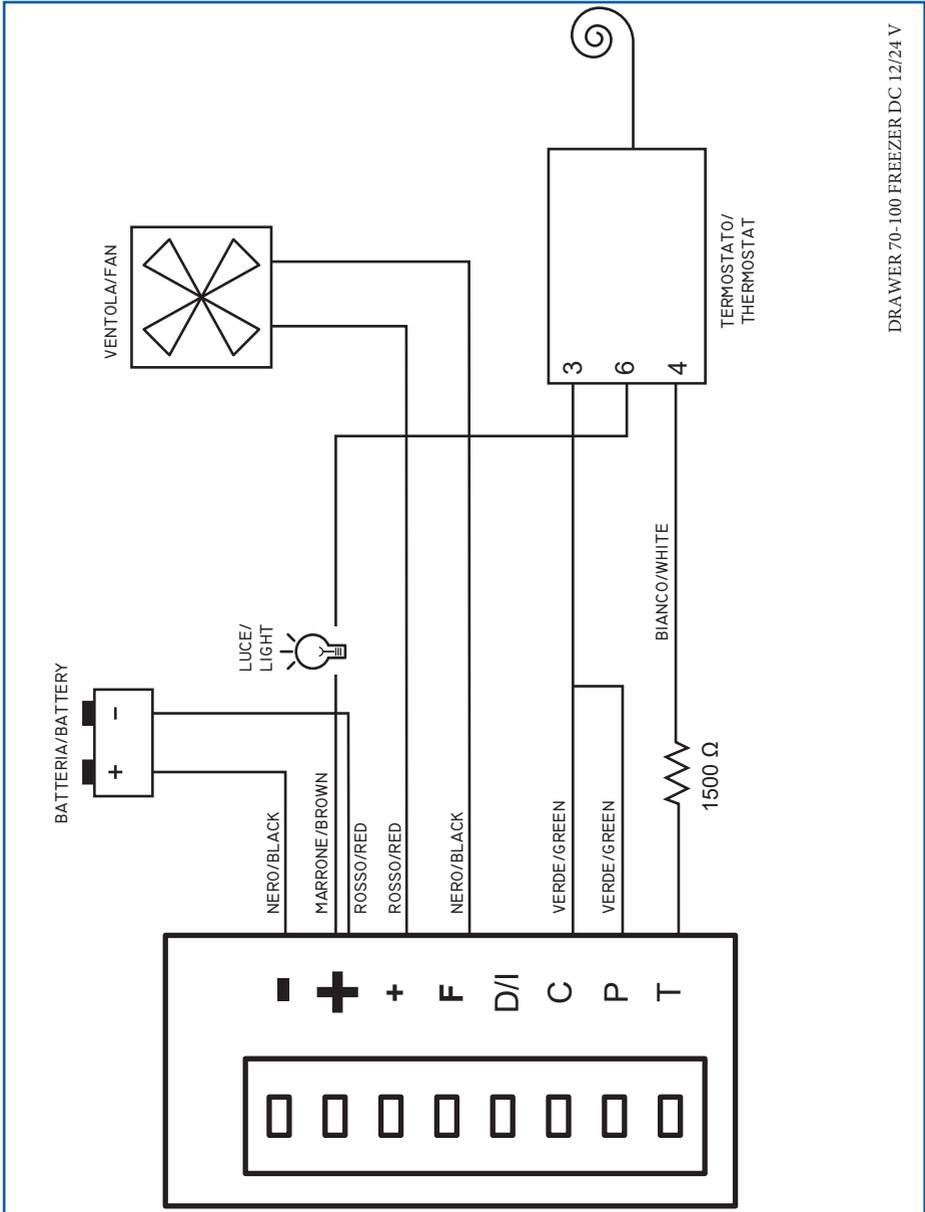


10.1.5 Drawer 70/100 Fridge 12/24 V



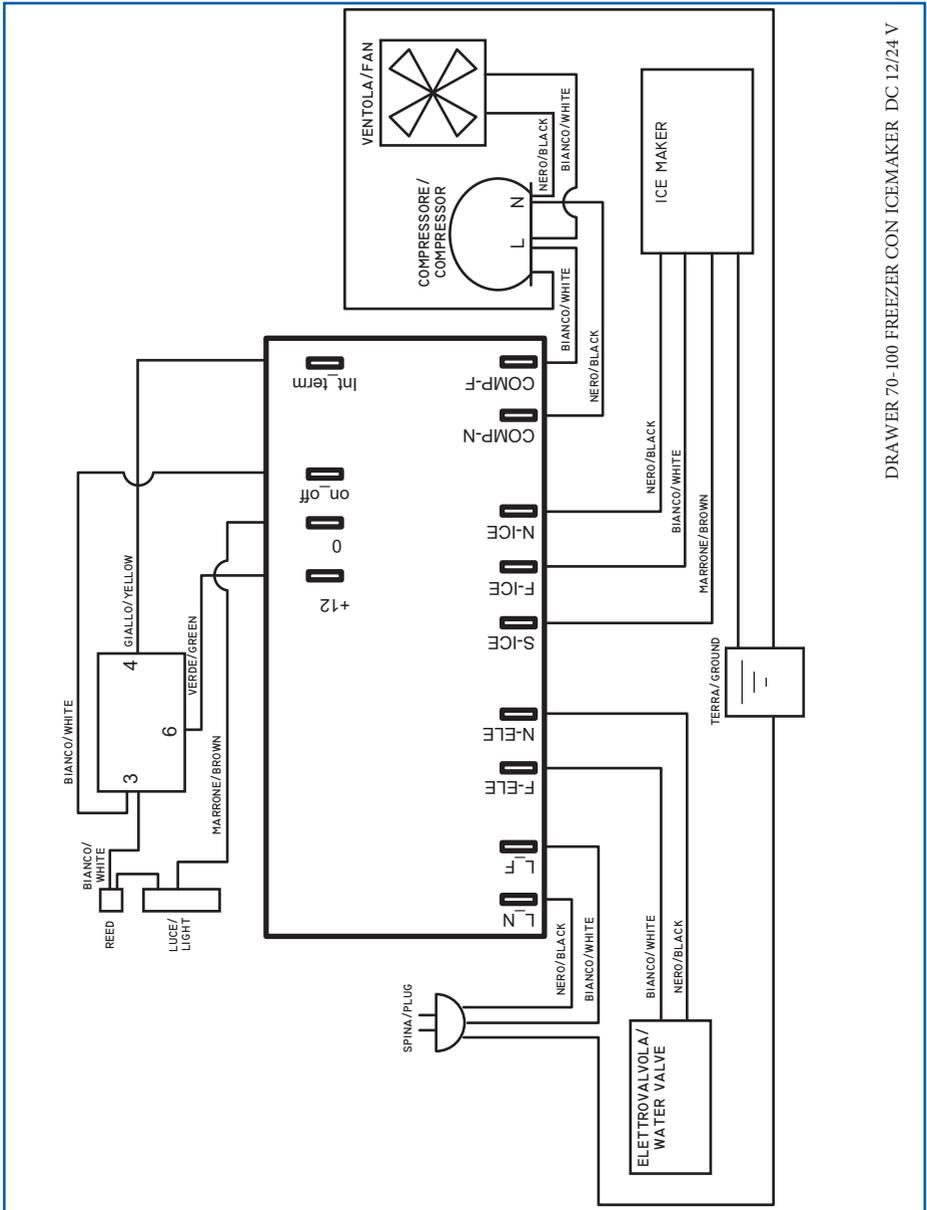
DRAWER 70-100 FRIGO DC 12/24 V

10.1.6 Drawer 70/100 Freezer 12/24 V



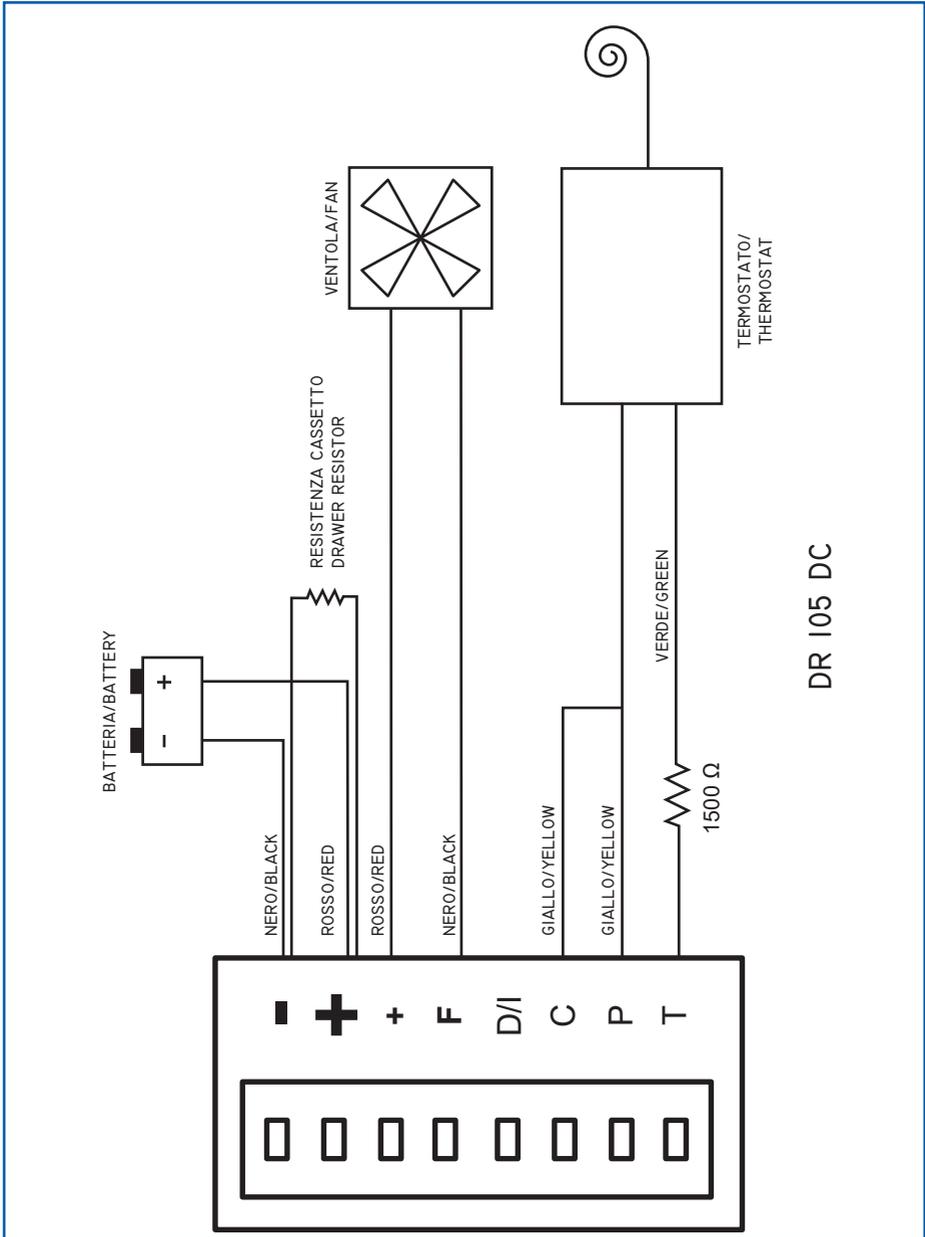
DRAWER 70-100 FREEZER DC 12/24 V

10.1.7 Drawer 70/100 with Ice Maker 115/230 V

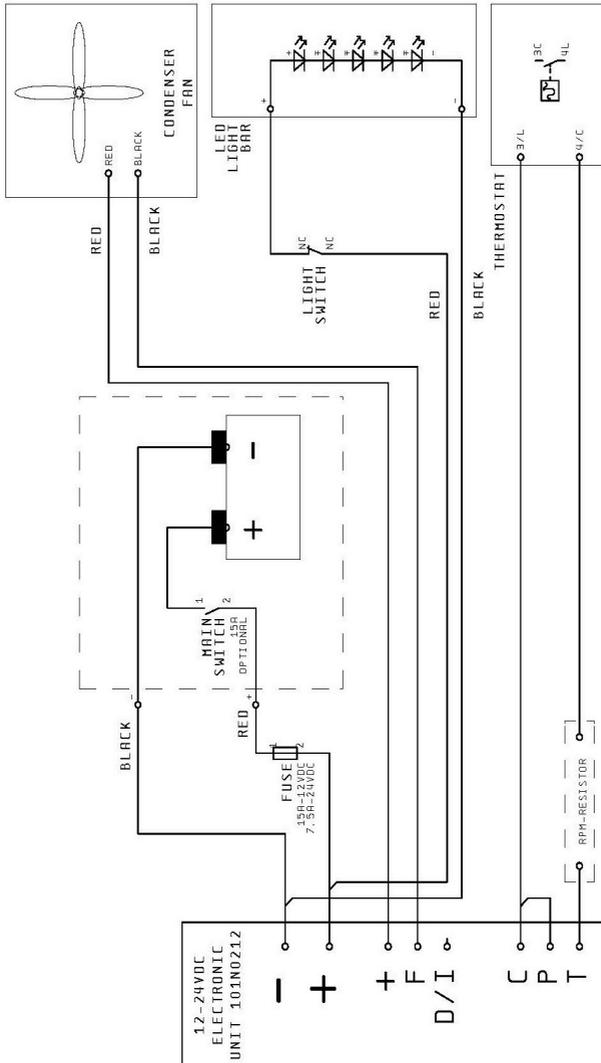


DRAWER 70-100 FREEZER CON ICEMAKER DC 12/24 V

10.1.8 Drawer 105 Fridge DC 12/24 V

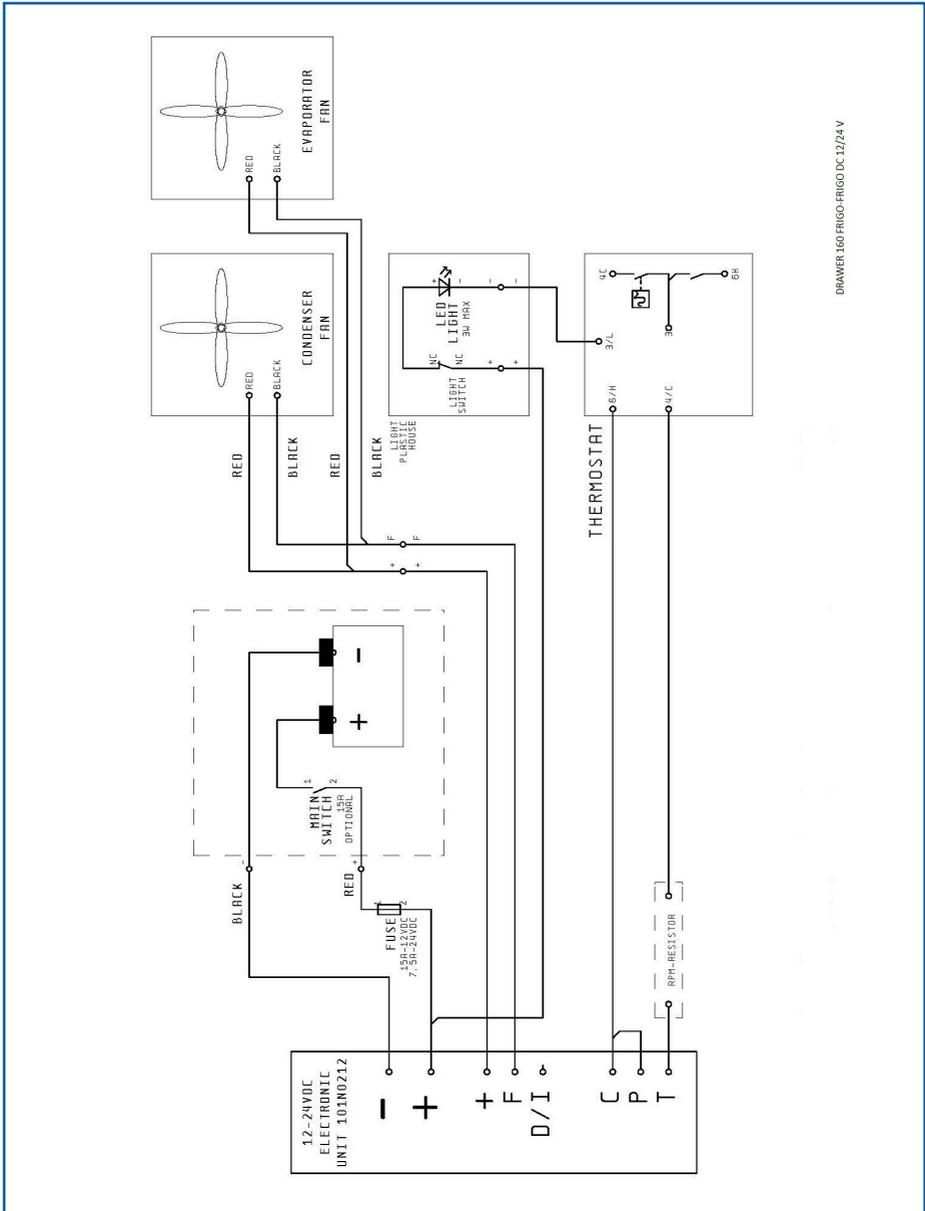


10.1.9 Drawer 130 inox Fridge DC 12/24



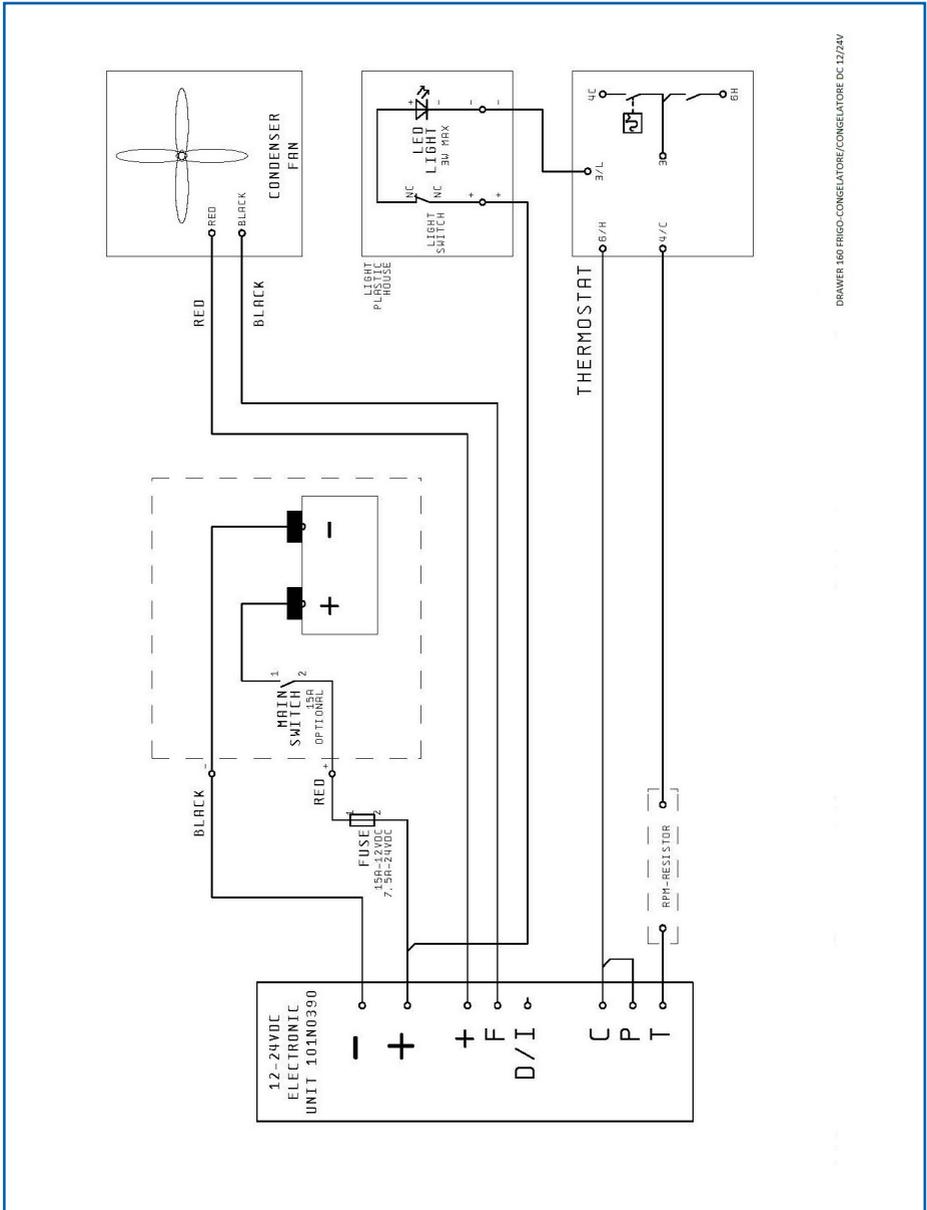
DRAWER 85-130 FRIGO DC 12/24

10.1.10 Drawer 160 Fridge-Fridge DC 12/24 V



DRAWER 160 FRIGO-FRIGO DC 12/24 V

10.1.11 Drawer 160 Fridge-Freezer / Freezer DC 12/24 V



DRAWER 160 FRIGO-CONGELATORE/CONGELATORE DC 12/24V



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