THETFORD

Refrigerator N4000 Series

Installation Manual for Australian market

EN
Original Installation Manual

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1. Introduction

This is the installation manual for the Thetford N4000 series refrigerator. The manual is meant for those installing the refrigerator in a mobile leisure vehicle. Read the information and instructions carefully and follow them strictly to install the refrigerator safely and correctly.

Also read the warnings in the user manual before testing the refrigerator after installation.

Our policy is one of continuous development and improvement. Specifications and illustrations may change subsequent to publication.

For the latest version of this manual, please visit www.thetford.com.

If the appliance is not installed in accordance with local and national regulations, rules and standards this will void the warranty.

This appliance must be installed in accordance with AS/NZS 5601 and local and national authorities.

2. Symbols

Key to symbols:

Warning. Risk of injury and/or damage.

Attention. Important information.

Note. Additional information.

3. Regulations and standards

Do not modify this appliance, unless the modification is authorised and carried out by the manufacturer or their agent.

Use only genuine and approved parts and materials.

Wear the correct Personal Protective Equipment during the installation. Also follow the applicable safety regulations.

Do not install this refrigerator in below deck marine applications or in fixed indoor cabin or other dwelling applications. This refrigerator is made for use in RV and towable applications, and is correct for camping use.

Do not install the refrigerator directly on carpet. Put the refrigerator on a metal or wood panel that extends the full width and depth of the refrigerator.

The refrigerator is designed for powering by ULPG, 12V DC or 240V AC.

Never open, damage, bend, drop, weld, move, drill, puncture, or hit the cooling device at the rear of the refrigerator. The cooling system is pressurised and contains substances harmful to health. The cooling system contains sodium chromate. The breathing of certain chromium compounds can cause cancer. The cooling system contents can cause severe skin and eye burns, and can ignite and burn with an intense flame.

Only a qualified person is allowed to install the refrigerator and its electrical and gas components. Incorrect installation or maintenance of the refrigerator may cause physical injury and/ or damage to the refrigerator.

Install the refrigerator in accordance with the local/national laws.

Do not bypass or change the refrigerator's electrical components or features.

Do not drill, cut or use excessive force on the refrigerator walls, except for screwing predefined positions. This may damage the vacuum insulation panels that have been foamed in.

Never expose the refrigerator to water or moisture, or spray liquids near electrical outlets, connections, or the refrigerator components. Many liquids are electrically conductive and can cause a shock hazard, electrical shorts, and in some cases fire.

The electrical connections and gas components must be installed in accordance with the latest technical regulations.

There are sharp edges and corners at the rear of the refrigerator and the installation frame. Always wear protection against cuts when installing the refrigerator.

Incorrect installation or maintenance of the refrigerator may cause physical injury and/or damage to the refrigerator.

The refrigerator must be sealed from the living area of the caravan or motor home according AS NZS 5601. Air for the burner must not be drawn from the living area of the caravan or motor home and combustion gases must not enter the living area.

Make sure that no sawdust, insulation, or other construction debris is on the refrigerator or in the enclosure. Debris can cause a combustion hazard and prevent the refrigerator from operating correctly.

The performance of the refrigerator may be affected by adjacent heat sources such as an oven or stove. Make sure the refrigerator is completely isolated from its heat generating components through the correct use of baffles and panel construction.

The refrigerator must be installed in a way that allows easy access for maintenance and repairs.

This refrigerator must use only Thetford designed and approved outside air intake and exhaust ventilation for correct and safe operation. Any other ventilation could cause lethal combustion exhaust fumes and/or explosive ULPG fumes to be in the living area and/or to be below deck.

To cool the system and to supply the burner with sufficient airflow, make sure that there is always sufficient ventilation through the outside vents.

Make sure there is sufficient intake of fresh air for combustion.

Pay close attention to current regulations on ventilation in the country of use. the installation must provide for adequate air supply for combustion to the burners, safe removal of combustion products and avoidance of accumulation of unburned gases.

Make sure the bottom of the opening of the lower intake vent is even with or immediately below the floor level. This allows any leaking ULPG to escape to the outside and not to collect at floor level.

The fully installed refrigerator must allow proper and complete discharge of combustion gases. Combustion gases may contain carbon monoxide. Inhalation of this gas may cause tightness of the chest, dizziness and can lead to death.

Combustion gases must always be discharged upwards.

Only a qualified installation person is allowed to maintain, remove or repair (electronic or gas components of) the refrigerator.

Disconnect all energy sources before you remove the refrigerator or do servicing to the refrigerator.

Never reposition or change the electronic or gas components or parts.

Never use naked flames or create sparks whilst performing maintenance or repairs on gas lines or when checking fittings for leaks. Gas may ignite and cause an explosion resulting in damage to the product, serious physical injury or death.

The refrigerator only runs on ULPG. It does not run on natural gas or coal gas.

The gas pipe has to be installed free of tension. Always use two wrenches to tighten or loosen the gas supply line connections.

Do not store or use gasoline or other flammable vapours and liquid in the vicinity of this or any other appliance.

If you smell gas directly close the valve of the gas bottle, extinguish any naked flames, do not switch on any electrical devices or lighting, open the windows and leave the room. Then contact the Customer Service Department in your country.

If after installation and commissioning, the appliance does not function correctly, it is recommended to isolate the appliance from the gas and electricity supply (turn off the gas and electricity supply) and contact the local Thetford Customer Service Department.

To avoid a hazard due to instability of the appliance, it must be fixed in accordance with the instructions.

Make sure the power plug is accessible so that the appliance can be disconnected from the supply after installation.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

When positioning the appliance, ensure the supply cord is not trapped or damaged.

A filter must be used when operating on Liquefied Petroleum Gas (LPG). The filter must be prescribed by a qualified technical person.

The volume is based on the AS 4555-2002 standard. The energy consumption is based on the AS/NZS 62552-3:2018 standard.

Suitable for camping use.

The appliance may be connected to more than one source of energy.

4. Serviceability

The installer of Thetford products is responsible for proper installation to ensure the correct functionality and serviceability of the appliance. In terms of serviceability, this means that a dealer or an authorised Thetford service partner must be able to de-install and re-install the Thetford products within the time that is allowed according to the Thetford time-list, using standard tools and equipment.

This is to claim any warranty during the period of 3 years after purchase date. In case of any queries on this subject, please contact the Thetford local service representative before installing the product.

5. Position and placement

- Use the mounting dimensions as shown below.

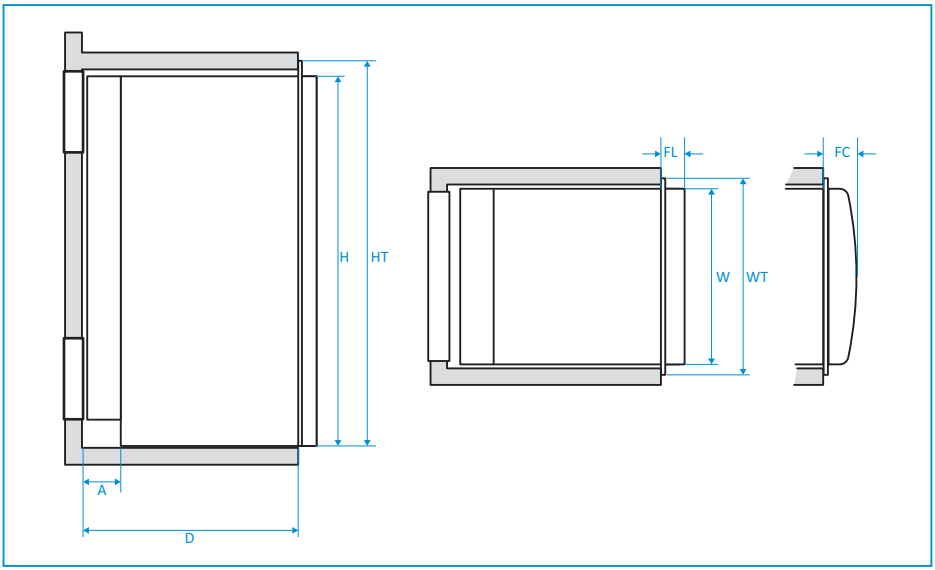


Table 1: Mounting dimensions

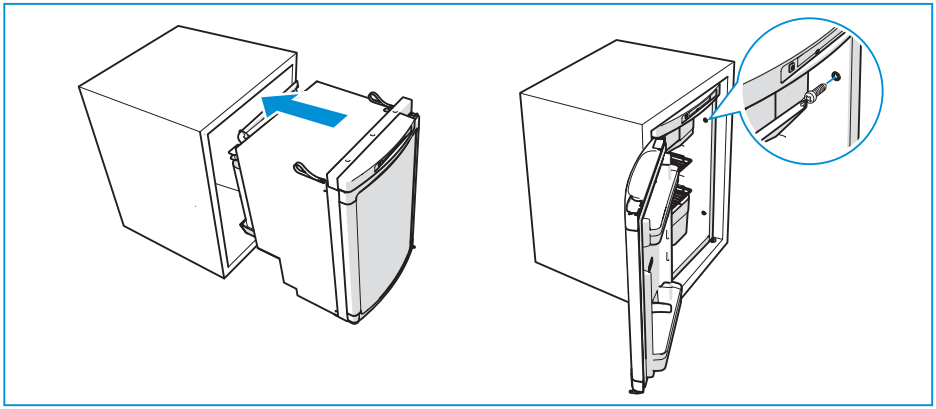
Model	HT	H*	WT	W**	D	FL	FC	A
N4141	1510	1504	438.5	427	530 - 570	49	-	130 - 170
N4175	1255	1249	545.5	534	566 - 606		84	130 - 170

* Height is including feet (8mm) for model N4175. Model N4141 has no feet. For this model, maintain a minimum distance of 15mm from the floor to prevent the door from scratching the floor.

** If there is more than 13 mm of clearance between either side of the refrigerator and the wall, fill the space with fiberglass insulation or add a baffle to eliminate the excess clearance.

Never lift or handle a refrigerator at the power supply cables.

- Fix the refrigerator with 6 supplied screws, using the predefined positions in the cabinet.



The foam tape at the back of the installation frame is isolation foam strip only.

When a model N4141 refrigerator is put next to a wall, it is important to keep a minimum distance of 15mm between the door and the wall, to be able to open the door completely.

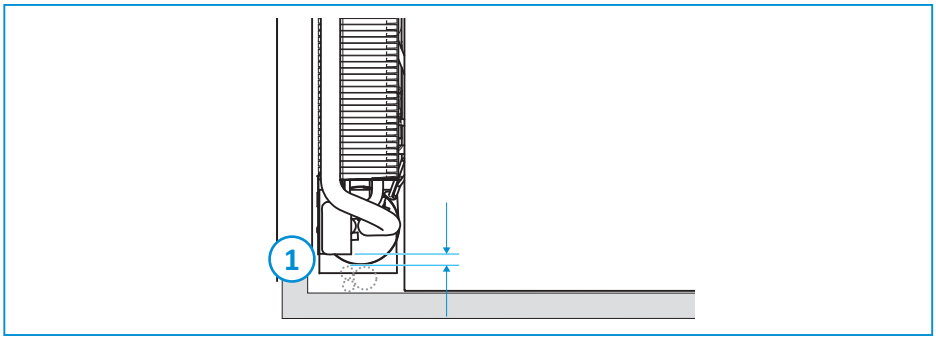
For flat door models there is also the possibility to build in the refrigerator in such a way that the refrigerator door is aligned with the front of the installation cabinet.

- Use the 6 supplied white caps for finishing.

Do not screw into the refrigerator cabinet.

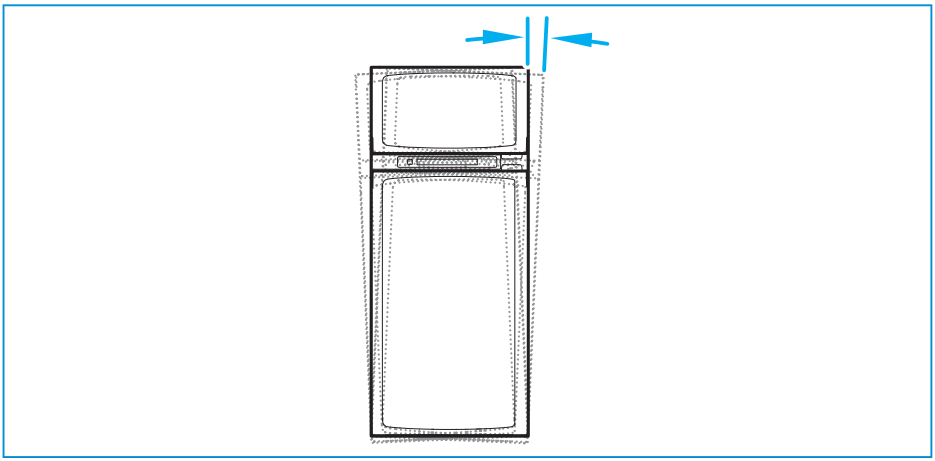
Combustion gasses will be extracted via the independent flue kit directly to the outside. The independent flue kit is sold separately (part number 636974) and should be installed according the included installation manual (part number 636976A).

For PVC tubes and/or water tubes within the sealing space, Thetford recommends using a heat shield or creating a minimum distance of 35mm (1) between heat cap and tubes.



- Place the refrigerator on a flat and stable floor.

- For optimum performance the refrigerator must be level. Performance is still guaranteed within the limit of ±2.5 degrees.



Notice that the tilt of the chassis or floor can already be a few degrees.

6. Connecting gas and electrical supplies

The refrigerator is designed for powering by ULPG, 12V DC or 240V AC. These are the values of the gas and electrical supplies.

Install the electrical and gas connections in such a way that wires cannot come into contact with hot or sharp parts.

Table 2: Gas

Gas type	For universal ULPG use only
Diameter gas tube	3/8 inch
Gas pressure	2,75kPa

The gas inlet connection is 5/18"-18UNF-2A thread.

The gas connection must be in accordance with AS/NZS 5601.

The electrical connections have to comply with AS/NZS 3001:2008. All electrical components must be in accordance with the latest technical regulation. Only a authorized person is allowed to install the electrical and gas connections, in such a way that wires can't come into contact with hot or sharp parts. Cables, except heater cables, should not touch the burner box.

Table 3: AC

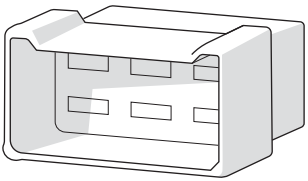
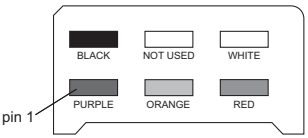
AC	240V
Operating window	220-240V/50Hz
Fuse	2A slow

It is obligated to connect the AC wiring to a properly earthed power point.

Table 4: DC

DC	12V
Power requirement 12V high current	12V- 14.4V at the fridge
Cable dimensions (Cable thickness vs cable length)	• $4mm^2$ = < 2.5m • $6mm^2$ = < 3.5m • $10mm^2$ = < 6m
Fuse high-current	25A
High current supply	red cable (+) and white cable (-) for heating element. Only switched if signal on D+
Fuse low-current	1.1A
Low current supply	purple (+) and black (-) for electronics
D+ signal	orange, + when engine runs
If D+ signal is not present on vehicle	No cooling on DC/12V. Possible solution: bridge D+ with LC+

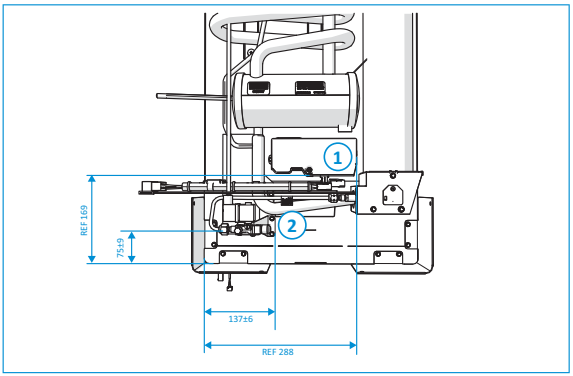
Table 5: Connector plug

Connector plug (on refrigerator)	Connector plug (counter part)
• STOCKO VV2028.110 G PA6 V2 • Cable length: 250 mm	• TE 880297-1, or any other equivalent
	

The bridge D+ with LC+ can drain the battery, when cooling on DC/12V while the engine is not running.

D+ is an "engine run" signal that is only present while the engine of the tow vehicle is running. Additional information with recommended wire schemes is available upon request.

The connection points for gas and electricity are located at the rear of the refrigerator.

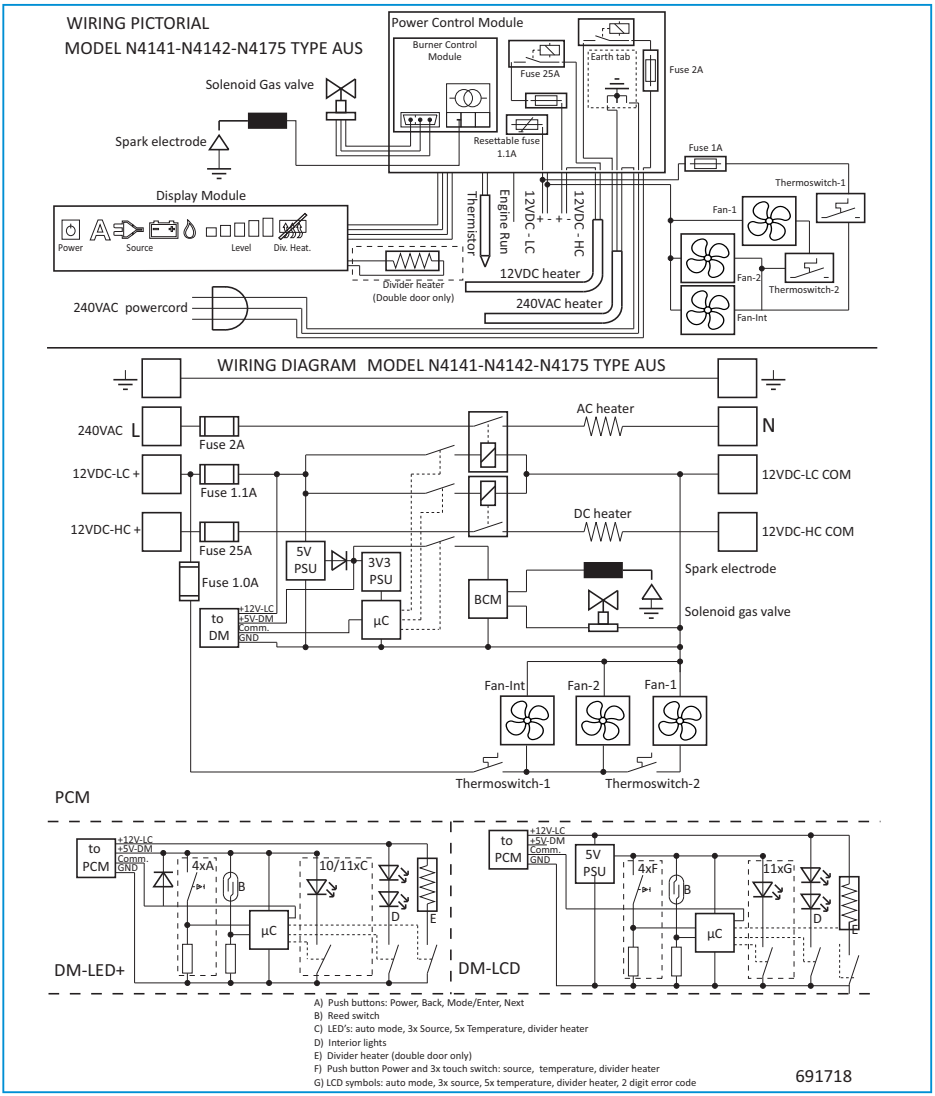


1. Electricity connection point
2. Gas connection point

- Connect a 3/8" gas tube to the gas connecting point of the refrigerator.

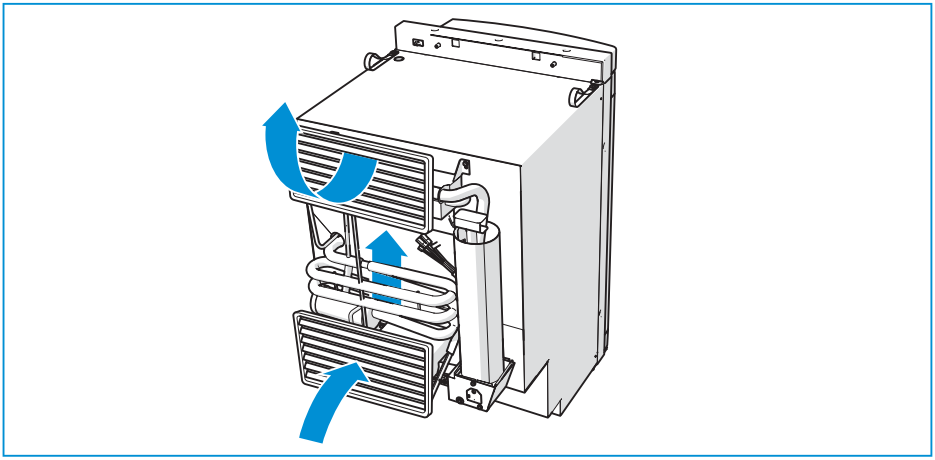
Never use rubber tubing.

- Connect the AC and DC power supply according to this diagram.



7. Installing vents

The refrigerator performance depends on good ventilation through two vents in the wall of the vehicle. Cold air comes in through the lower vent, passes the cooling unit and leaves hot through the upper vent.

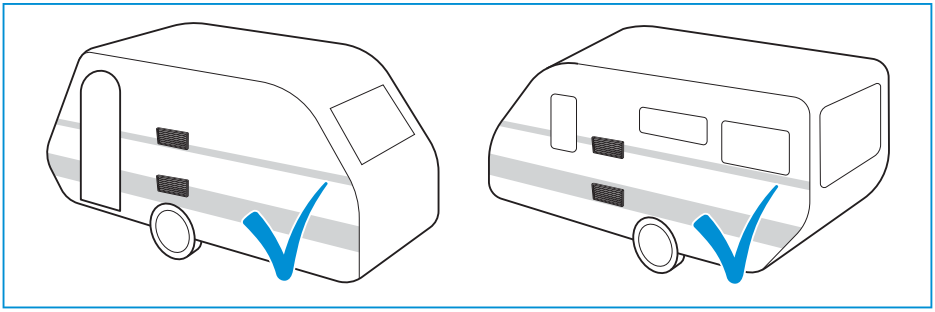


- Use the proper vents for your refrigerator model. The correct measurements are shown in Table 6: Vent size.

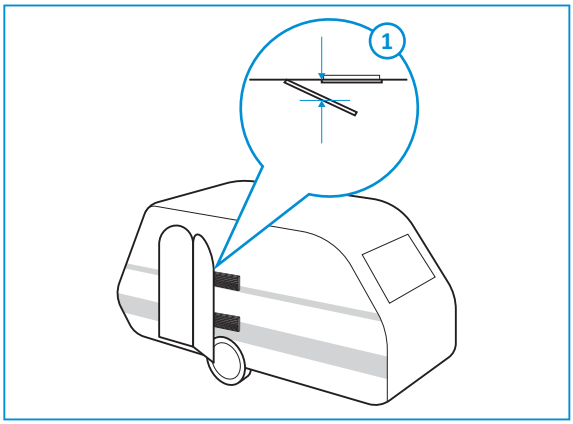
Table 6: Vent size

Model	257 x 432mm	281 x 523mm
N4141	X	-
N4175	-	X

- The recommended installation is when the vents are not covered.



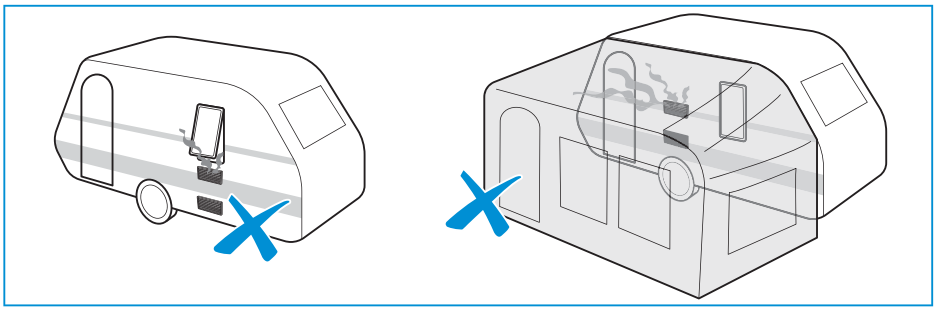
- When installation is next to the caravan door, make sure that there will be at least a 25mm distance between the vents and the door.



1. Min. 25mm

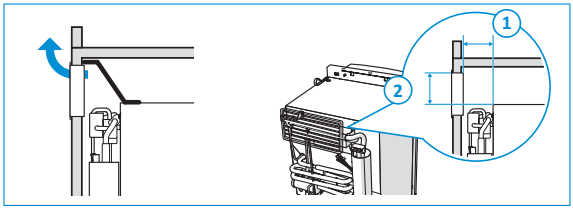
Make sure vents cannot be blocked by the door or other objects. An insufficient air supply can result in incomplete combustion, the forming of carbon monoxide and reduction of cooling performance.

- Make sure that combustion gases can not enter the living area.



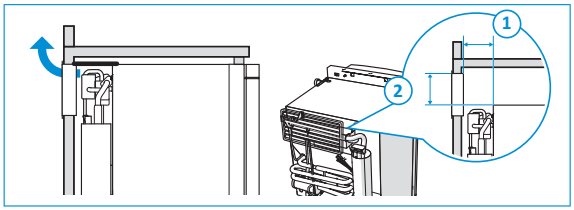
Upper vent 257 x 432mm:

- Option 1 (preferred): Install the upper vent in the wall of the vehicle at the top of the refrigerator.



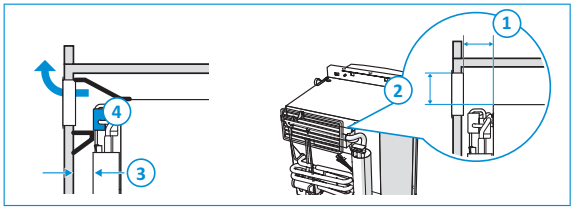
1. 135 ± 5mm
2. Min. 130mm

- Option 2: Install the upper vent in line with the top of the refrigerator.



1. 135 ± 5mm
2. 0 ± 5mm

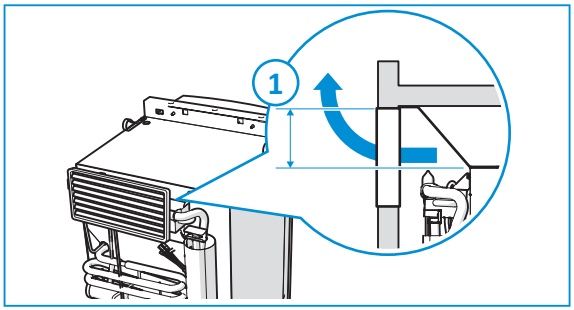
- Option 3: Install the upper vent with a baffle (3) from the bottom of the condenser (4).
- Baffle dimensions:
  - If (1) is 140-150mm, then baffle (3) should be 30mm.
  - If (1) is 150-160mm, then baffle (3) should be 40mm.
  - If (1) is 160-170mm, then baffle (3) should be 50mm.



1. 140-170mm
2. > 70mm

Upper vent 281 x 523mm:

- Install the upper vent in the wall of the vehicle at the top of the refrigerator.



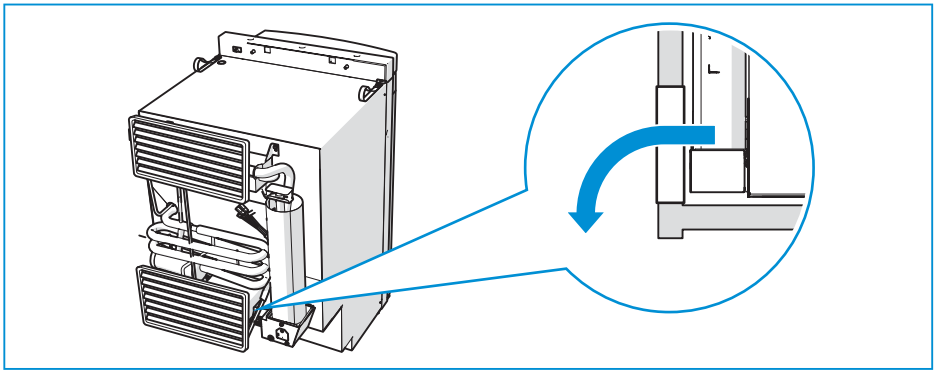
1. Min. 150mm

Lower vent all sizes:

- Install the lower vent in the wall of the vehicle on the floor level behind the power board.

If the lower vent is not on floor level, make sure all unburned gas will go to the outside (for example via a hole in the floor).

This vent is also used for periodical maintenance or repairs of the refrigerator.

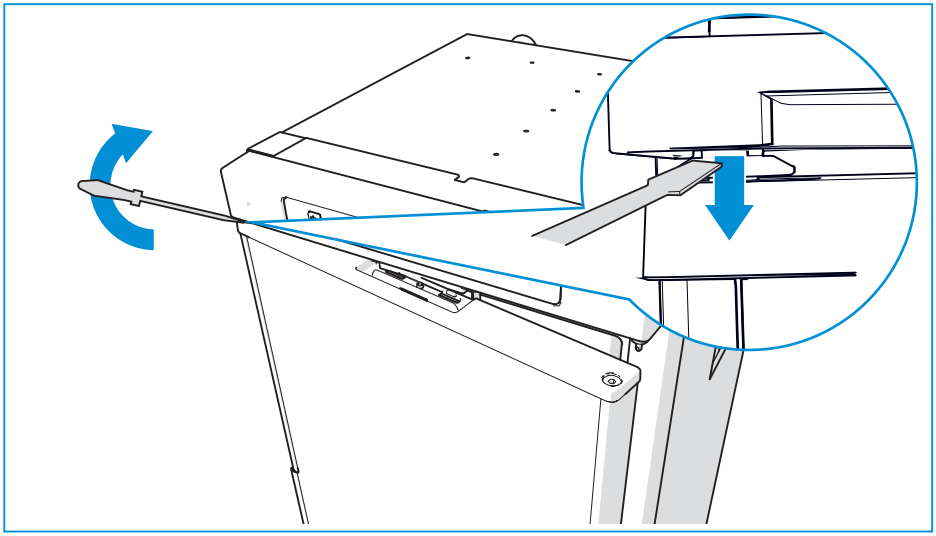


8. Door conversion

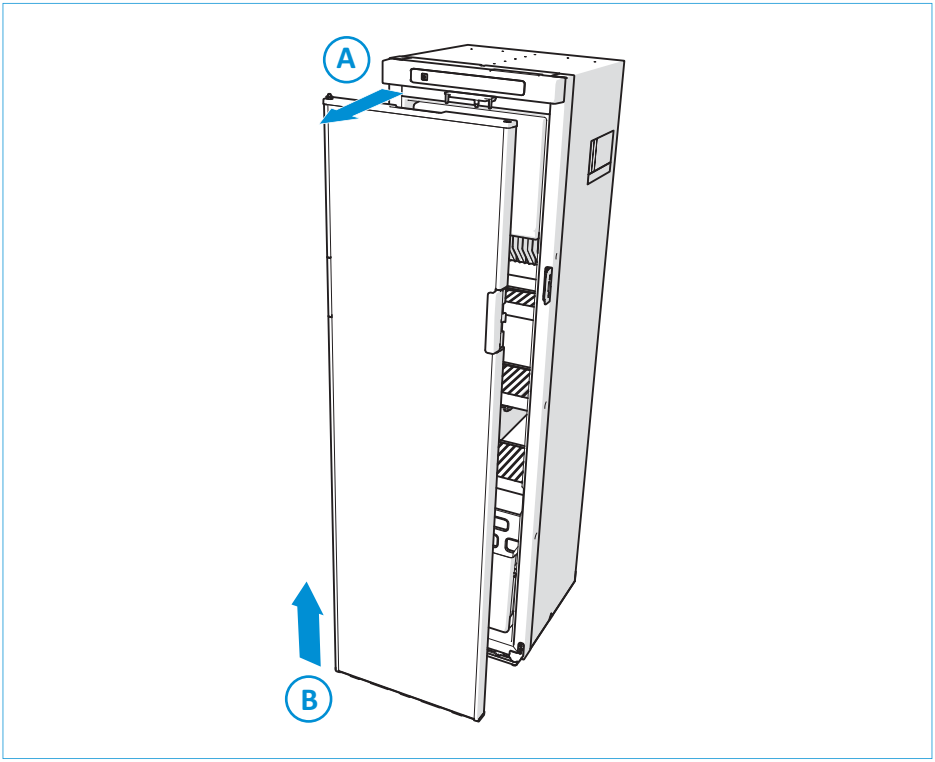
Only for N4141

Images may differ from your model.

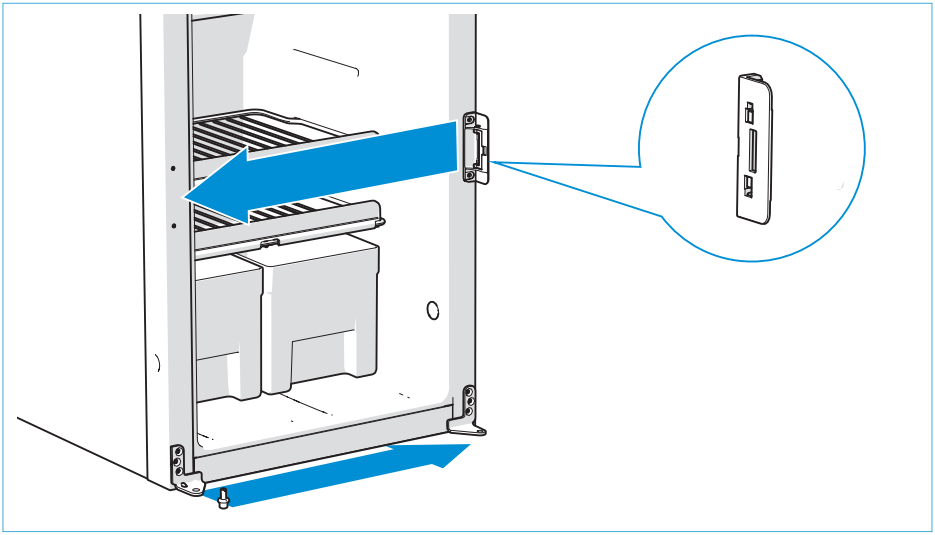
- Open the door a little and remove the hinge pin.



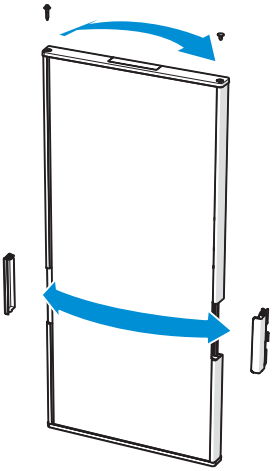
- Lift the door out of the hinges.



- Move the lock on the refrigerator from one side to the other.



- Move the hinges, handle, hinge pin and hinge hole plug from one side to the other on the door.



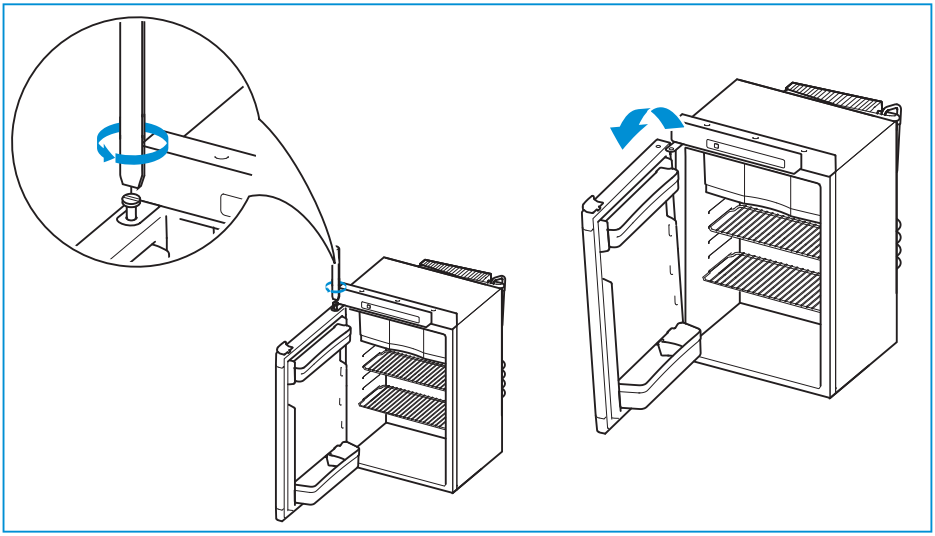
9. Installing door panel

To match the refrigerator with the interior, a door panel can be installed as shown below.

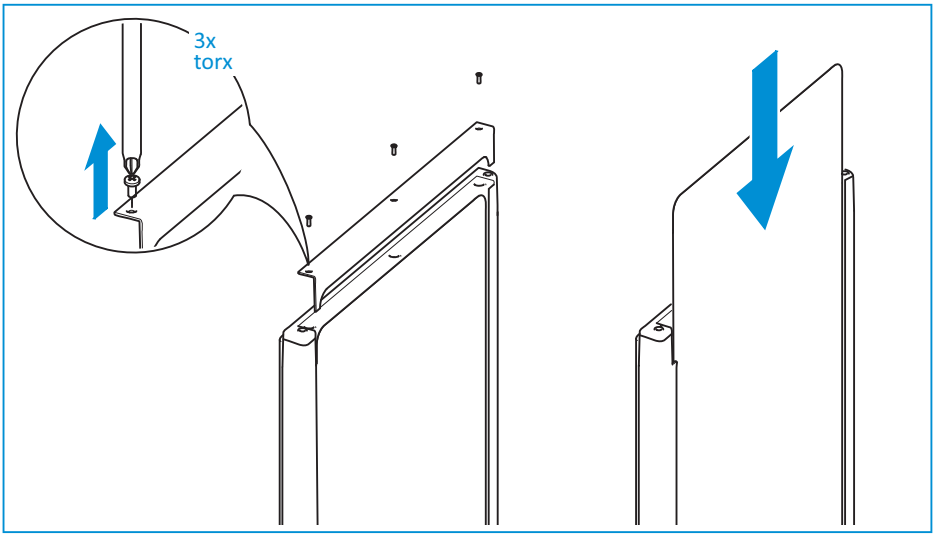
The door panel for a framed door should be fitted before installing the refrigerator.

For N4175:

- Demount the door from the refrigerator.

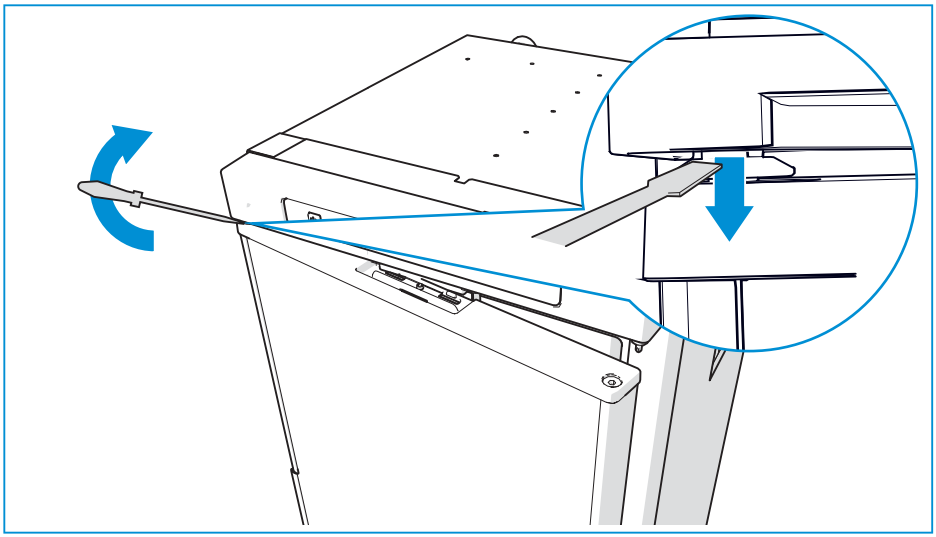


- Remove the panel retainer.
- Slide the door panel into the holder.

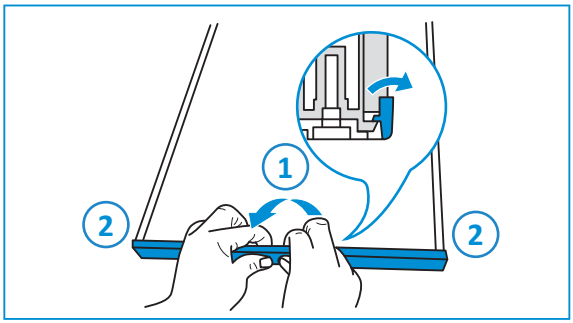


For N4141:

- Remove the cabinet door.



- Remove the panel retainer.



1. Pull and rotate the panel retainer in the middle.
2. Pull and rotate the panel retainer on the left and right.

- For N4141: Slide the panels in the door and the drawer (A).
- Click the panel retainer(s) in place (B).

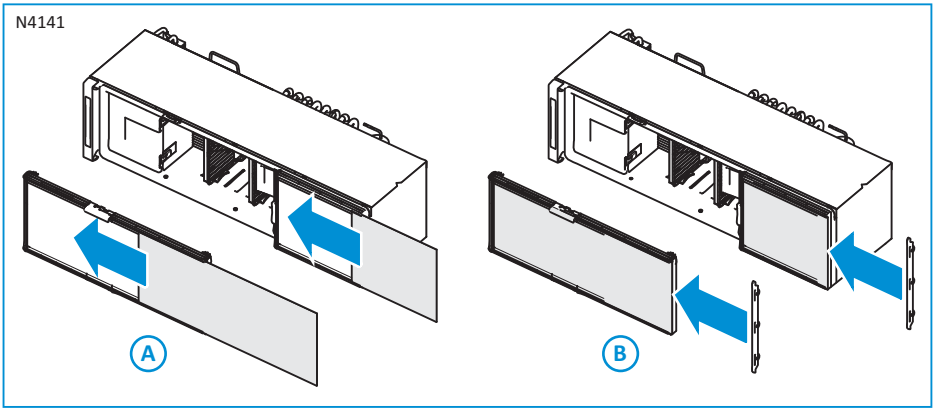


Table 7: Panel sizes

Model	Door type	Thickness (mm)	Panel size (mm)
N4141	Flat cabinet	2.7	H 950 x W 393
		2	H 950 x W 394
		1.5	H 950 x W 395
	Flat drawer	2.7	H 453 x W 393
		2	H 453 x W 394
		1.5	H 453 x W 395
N4175	Curved cabinet	3	H 876 x W 469
	Curved compartment		H 275 x W 469

10. After installation

- Ensure that all packaging materials have been removed.
- Test all gas piping and connections and make sure they do not leak.
- Check all electrical connections.
- Check if the sealing has been applied correctly.
- Check if the vegetable bins can be removed from the appliance.
- Check if the door can be closed correctly.
- Check for correct operation.

11. Technical specifications

Table 8: Refrigerator specifications

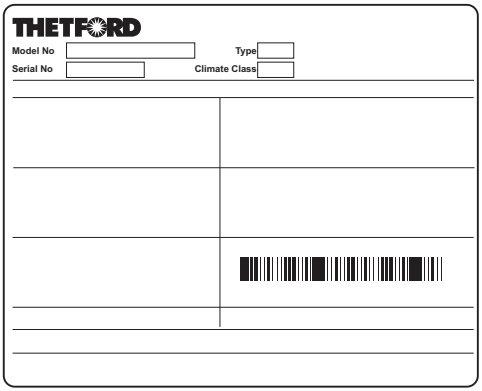
Model	Display	Total gross volume (L)	Volume (L) frozen food comp.	Energy consumption				Net weight (kg)
				by 16ºC (kWh/24h)	by 32ºC (kWh/24h)	by 16ºC (g/24h)	by 32ºC (g/24h)	
N4141-A	LCD	138	15	2.8	5.5	290	540	38
N4175-A	LCD	170	31	2.7	5.4	400	600	45

Average energy consumption at an ambient temperature of 25ºC.

12. Servicing

All servicing must be carried out by an authorized person. Before any service work is started, the appliance must be disconnected from both the gas and the electrical supplies. After each service the appliance must be checked for gas soundness and must be sealed from the living area.

For service, please contact your authorised local Service Centre giving details of the model and serial number on the Serial ID label plus date of purchase.



13. Questions / customer service

- Visit www.thetford.com.au
- Contact Customer Service Thetford in your area.

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