

6.0

INSTALLATION GUIDE

On installation of the appliance, the technical and administrative regulations of the country in which the vehicle will first be used must be adhered to. Otherwise the refrigerator must be installed as described in these instructions. In some OEM applications it may not be possible for these instructions to be followed exactly. In this case an authorised Dometic representative may issue supplementary instruction

In Europe, for example, gas appliances, cable laying, installation of gas cylinders, as well as approval and checking for leaks must comply with DIN EN 1949 for liquid gas units in vehicles.

6.1

Installation

The appliance and its fume extraction shall be installed in such a way as to be accessible for servicing at all times and must be capable of easy removal and installation.

The appliance may only be installed by authorised personnel.

Installation and connection of the appliance must comply with the latest technical regulations, as follows:

- Technical regulations, liquid gas (TRF 1996)
- Technical regulations, DVGW Worksheet G 607 (DIN EN 1949)
- Technical regulations, EN 732
- The electrical installation must comply with national regulations (EN 60335-1 for Europe).
- The gas installation must comply with national regulations.
- Local and building control department requirements
- The appliance shall be installed in such a way that it is shielded from excessive heat radiation.

Excessive heat impairs performance and raises the energy consumption of the refrigerator.

 **Any installation that is not carried out by qualified persons will jeopardize the manufacturer's guarantee.**

6.1.1

Side Installation

If the appliance is installed on the same side of the vehicle as the entrance door, it is desirable that the door does not cover the refrigerator's vents.

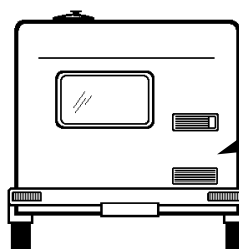
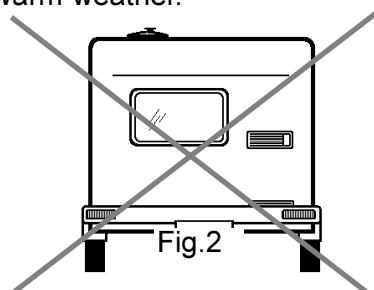
If this cannot be avoided there must be a gap of at least 25mm between the door and the vents.

6.1.2

Rear installation

If the refrigerator is mounted at the rear of the vehicle you must ensure the lower grille is not covered by the bumper or rear lights.

This would prevent the air from circulating properly and cause problems in warm weather.



Air vent grille not blocked: OK!

6.2

Draught-free installation

Your refrigerator must be sealed in accordance with EN 1949. Illustrated below are two typical approved methods of sealing.

Proposal 1:

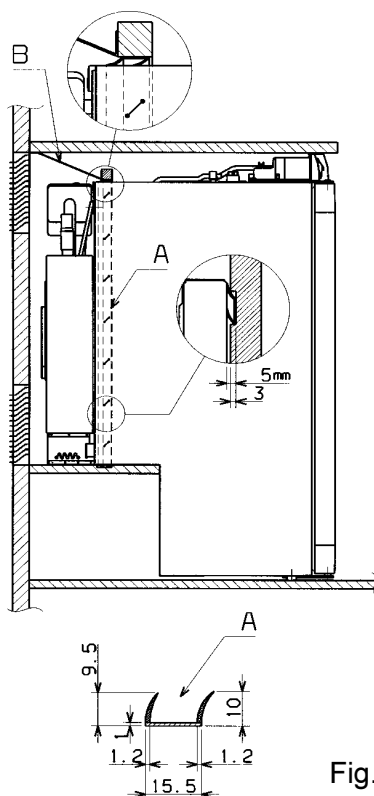


Fig.1

Insert lipped seals (A) into the installation recesses at the bottom and at each side.

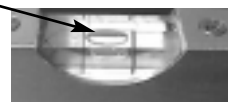
Insert deflector plate (B), fitted with a lipped seal (A) of heavy-duty, nonflammable material, into the installation recess (see Fig. 1).

Insert deflector plate (B) in such a way that the hot air escapes through the air vent grating into the open air.

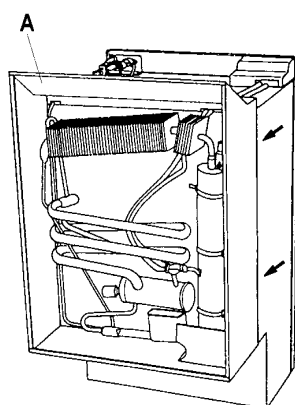
Affix the discharge plate to the caravan wall, not to the refrigerator!

In addition, discharge plate (B) with its lipped seal (A) must seal the refrigerator off from the living area (see Fig. 1).

Ensure that the refrigerator is installed level in the recess.



Proposal 2:



Another option is to provide the refrigerator with a cowl (A). The cowl (A) should ideally be affixed to the caravan wall, not to the refrigerator. Insert sealing strips at the bottom and sides of the cover.


Finally, push the refrigerator into the cover from the front.

Both of these installation options facilitate the removal and installation of the appliance for servicing.

Comment:


Other methods of sealing may be approved. However the chosen method must prevent draughts entering the living space of the caravan or motorhome. Failure to seal correctly will allow warm air to collect around the refrigerator and its performance will be affected.

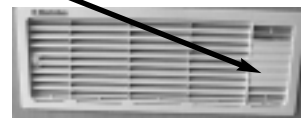
If the cavity between the caravan wall and the refrigerator is sealed so that fumes cannot penetrate the living area it is possible to vent the flue gas directly through the upper grille without using the aluminium flue pipe. For this installation method, it is recommended that the same air vent grille should be used at the top and at the bottom (L200), and that the T-piece of the flue pipe is turned 45 degrees.

 **In this case, for gas operation, do not use the upper winter cover!**

If even with draught-free installation a fume chimney is desirable, you must incorporate the L100 ventilation and extraction system into the upper air vent opening.

Installation of fume chimney: please refer to point 6.7.

 **Deviations shall require the consent of the manufacturer.**

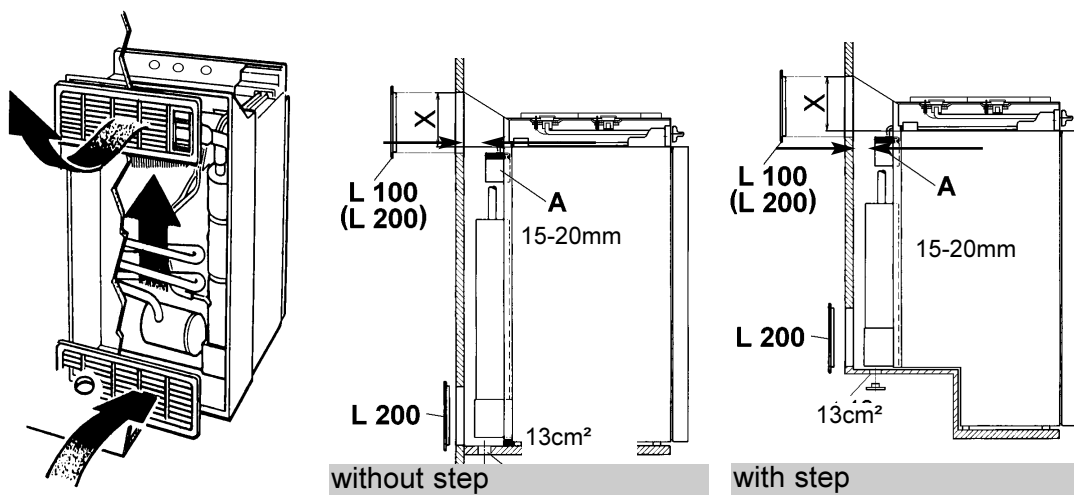


6.3

Ventilation and extraction

A correct installation is important for correct operation of the appliance to ensure, there is no a build-up of heat at the back of the appliance; this heat must be allowed to escape into the open air.

In the event of high ambient temperatures, full performance of the cooling unit can only be achieved by means of adequate ventilation and extraction.



Ventilation is provided for the unit by means of two apertures in the caravan wall. Fresh air enters at the bottom, extracts the heat and exits through the upper grille.

The **upper** ventilation grille should be positioned as high as possible above condenser (A).

The lower ventilation grating should be **flush with the floor of the vehicle**, allowing any gas leakages (heavier than air) to escape directly into the open air.

If such an arrangement is not possible a hole must be provided under the refrigerator (not close to the burner) so that any leaking LP gas can escape. This must have an effective area of at least 13cm². It is desirable to fit the hole with wire mesh or similar, and an angle plate to protect it from stones, mud etc., the wire mesh must not reduce the effective area of 13cm²

The ventilation gratings must have a free cross-sectional area of at least 250 cm².

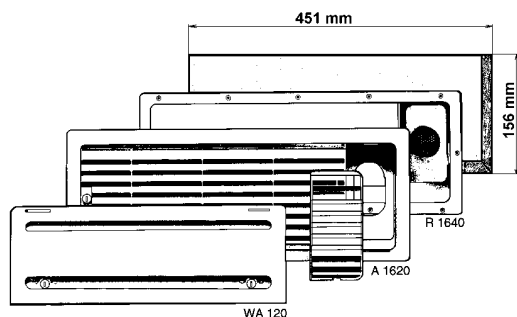
Dometic recommends using the L100/L200 ventilation and extraction system.

Comment:

If the distance between the wall and the refrigerator is greater than 20 mm the gap can be reduced to 20 mm by fitting a suitable baffle piece.

6.4

Installing the ventilation system



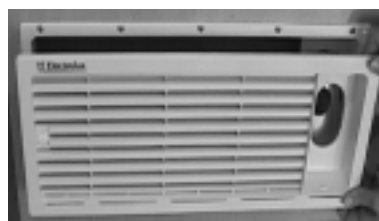
To install the ventilation grilles, cut two rectangles (451mm x 156mm) in the outer wall of the vehicle (for position of the cuts, see point 6.3).



1. Seal the mounting frame, making it waterproof.



2. Insert the frame and screw into position.



3. Insert the ventilation grilles.



4. Lock the ventilation grilles.



5. Clip the extractor insert in position (only for upper ventilation system)

6.5

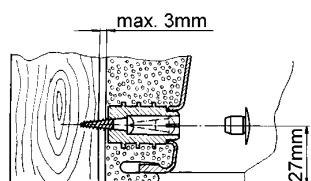
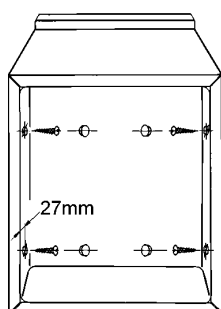
Securing the refrigerator

In the sidewalls of the refrigerator, there are four plastic sleeves with screws for securing the refrigerator. The sidewalls or rails attached for securing the refrigerator must be designed in such a way that the screws will remain firmly in place even when under increased load (while the vehicle is moving).

Always insert screws through the sleeves provided; otherwise, structural parts embedded in the foam, such as cables, etc., may be damaged.

Once the refrigerator is in its final position, secure the screws into the wall of the recess.

The screws must penetrate through the sheet metal casing of the refrigerator.



6.6

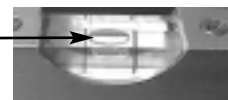
Installation recess

The refrigerator must be installed draught-free in a recess.

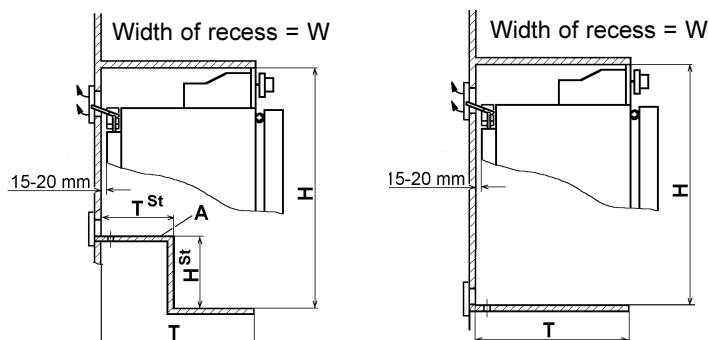
The measurements of the recess are given in the table below.

Step (A) is only required for cabinets with a step. Push the appliance far enough into the recess until the front edge of the refrigerator casing is flush with the front of the recess. Allow a gap of 15-20 mm between the back wall of the recess and the refrigeration unit. The floor of the recess must be level, allowing the appliance to be pushed easily into its correct position. The floor must be substantial enough to bear the weight of the appliance.

Ensure that the refrigerator is installed level in the recess.



Recess measurements:



Model	Hight H	Width W	Depth T	Hight HSt	Depth TSt
RM 6270	825 mm	490 mm	515 mm	220 mm	235 mm
RM 6271	825 mm	490 mm	515 mm	220 mm	235 mm
RM 6290	825 mm	529 mm	515 mm	220 mm	235 mm
RM 6291	825 mm	529 mm	515mm	220 mm	235 mm
RM 6360	825 mm	490 mm	515 mm	-	-
RM 6361	825 mm	490 mm	515 mm	-	-
RM 6400	825 mm	529 mm	515 mm	-	-
RM 6401	825 mm	529 mm	515 mm	-	-

6.7

Fume extraction

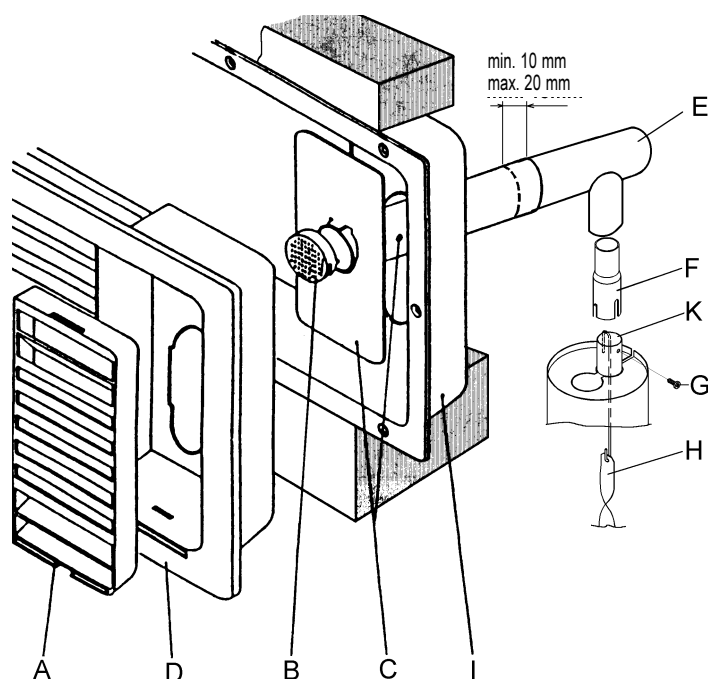
Fume extraction must be arranged in such a way as to provide complete extraction of all products of combustion to an area outside the living area. The flue system must slope in an upward direction in order to avoid a build-up of condensation.



An installation that is not carried out by qualified persons causes a reduction in the cooling capacity and will jeopardize the manufacturer's guarantee.

6.7.1

Fitting the fume flue in the upper ventilation grille



4. Put cap (B) on flue pipe (C).

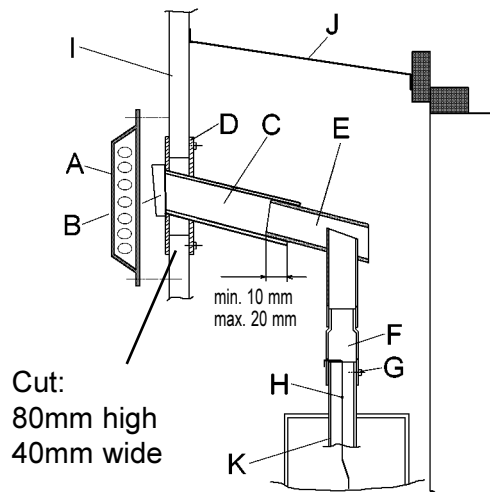
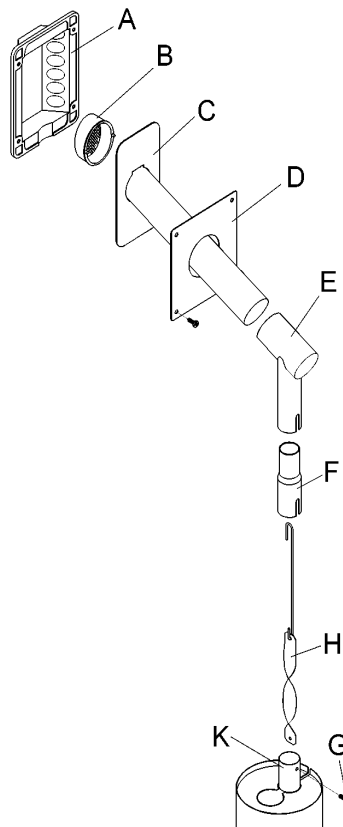
5. Insert extractor insert (A) into ventilation grille (D).

This type of fume extraction allows use a winter cover.

1. Connect T-piece (E) to adaptor (F) or flue pipe (K) as required and affix with screw (G). Ensure that heat baffle (H) is lodged in the correct position.
2. Insert flue pipe with cover plate (C) through the appropriate aperture in frame (I) and connect to T-piece (E). If necessary, shorten flue pipe (C) to the required length.
3. Insert ventilation grille (D) into mounting frame (I) and fasten, using the locking handle on the left of the grille.

6.7.2

Separate fume extraction



1. Cut an 80mm x 40mm rectangle in the outer wall of the caravan. The position of the cut must be appropriate to the particular model of refrigerator and installation conditions.
2. Connect T-piece (E) to adaptor (F) or flue pipe (K) as required and affix with screw (G). Ensure that heat distributor (H) is lodged in the correct position.

3. Insert flue pipe (C) through the aperture.
4. Connect flue pipe (C) to T-piece (E). If necessary, shorten flue pipe (C) to the required length.
5. Pack the cut with non-flammable material (e.g. Rock Wool).
6. Screw securing plate (D) into position.
7. Put cap (B) on flue pipe (C).
8. Screw on outer plate (A).

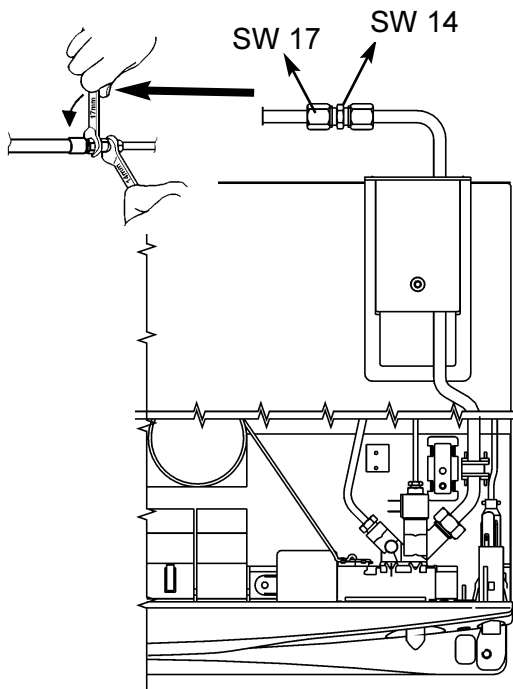
6.8

Gas installation

- The rules in point 6.1 must be adhered to.
- When running on gas, these appliances are intended exclusively to use liquid gas (propane/butane) - under no circumstances should town gas or natural gas be used (EN 27418).
- A fixed, pre-set pressure regulator complying with EN 12864 must be connected to the liquid gas cylinder.
- The pressure regulator must concur with the operating pressure specified on the data plate of the appliance. The operating pressure corresponds to the standard pressure of the country of specification (EN 1949, EN 732).
- Only one connection pressure is permissible for any one vehicle. A plate showing the permanent, clearly legible notice must be displayed in full view at the point where the gas cylinder is installed.
- The gas connection (1) to the appliance must be installed securely and at zero potential using tube connectors and must be securely connected to the vehicle (a hose connection is not permissible).
- Inflamable material should not be in immediate proximity to the burner.

- The gas connection to the appliance is effected by means of a suitable coupling tube fitting L8, DIN 2353-ST, complying with Worksheet G607 of DVGW or EN1949 respectively. (e.g. Ermeto)

⚠ The gas connection may only be carried out by a qualified personnel.



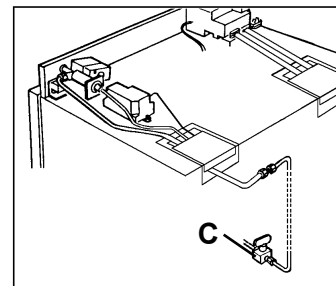
Following proper installation, a testing for leakage and a flame test must be carried out by *qualified personnel in compliance with Worksheet G607 or EN1949 respectively.

A certificate of testing must be issued.

* qualified personnel

Qualified personnel are accredited experts who are able, by virtue of their training and knowledge, to vouch for the correct implementation of the leakage test.

The refrigerator must be equipped with a gas cock (C) in the supply line to allow the supply to be disconnected. Such a cutout device must be readily accessible to the user.




Gas-pressure

Category	I _{3P} (30)	I _{3P} (37)	I _{3P} (50)	I ₃ +		I _{3B/P} (50)	I _{3B/P} (30)
mbar	30	37	50	28-37	30-37	50	30
BE				X			
DK							X
DE						X	X
FI							X
FR				X			
GR					X		X
IE		X		X			
IS							X
IT				X			
LU	X						X
NL	X						X
NO							X
AT						X	X
PT		X			X		
SE							X
CH				X			X
ES				X			
UK		X		X			

6.9

Electrical installation

 Electrical installation may only be carried out by qualified personnel. The connection cables must be laid in such a way that they do not come in contact with hot components of the unit/burner or with sharp edges.

The electrical installation must comply with national regulations (EN 60335-1 for Europe).


6.9.1

Power line connection

 The power must be supplied via a properly earthed socket outlet or hardwired connection.

Where a socket outlet is used for the mains connection lead, the outlet must be freely accessible.

It is advisable to run the incoming supply through an on-board fuse or automatic circuit breaker. The power cable must be laid in such a way that it does not come in contact with hot components of the unit/burner or with sharp edges.

 If the connection cable is damaged it must be replaced by the Customer Service at Dometic, or by respectively qualified personnel, in order to prevent any hazards.

6.9.2

Battery connection

The machine's mains 12V connection cable is connected (observing correct polarity) to a terminal strip.

The cabling must be direct and by the shortest possible route to the battery and alternator respectively.

The heating element circuit must be connected to the vehicle battery by a suitable ignition operated relay in order that the 12V supply is only live while the vehicle ignition is switched on.

It is recommended that the electronic re-igniter and the interior light is connected to the on-board auxiliary battery.

Cross-sectional area of cable

4mm²

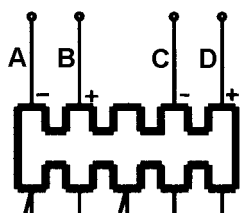
6mm²

Length of cable

< 6m

> 6m

The 12V circuit must be protected with a 16A fuse.



A = ground heating element DC (white)

B = connection to the heating element DC (**only live while the vehicle ignition is switched on**, red).

C = ground for lighting or/and reigniter (black),

D = connection for lighting or/and reigniter, **permanent DC (12V) available** (violet).