



## **Installation and Operating Instructions**

**Thermocold cooling units  
TL6 – TL10 – TL16**

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## Check-list before installation

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- The unit must stand upright for 2-3 hours before starting, so that the oil can drain back into the compressor.
- Remove the polystyrene packaging from the front of the compressor.
- Check that the copper pipe is not in contact with any metal or plastic; this also applies to the loop in the plastic vessel.
- Make sure that drainage tube lies down in the evaporation vessel.
- Push in the power plug, and check that both the fans and the compressor are operating normally.

## General

The cooling units are available in 3 models with different cooling capacity based on a room volume of up to 17,000 litres. In addition to the size of the cooling room, consideration must always be given to the cooling capacity in relation to traffic and product introduction.

Thermolux cooling units are installed from the cooling room side through the cooling room wall to the warm side. This offers much greater flexibility with regard to alternative installation solutions. The cooling units are dimensioned for cooling food products for private use.

A stable, correct cooling room temperature is dependent on correct insulation in the floor/ceiling/-walls, and on the ambient temperature on the warm side of the cooling room not exceeding an average temperature of 27°C.

Let the cooling unit remain installed on the wall for about 2 hours before it is started. This will allow the oil to drain back into the compressor after transport and handling.

It is important for the cooling unit to have a good supply of fresh air, and for the room into which it is installed to be well ventilated. In the case of installation with a small distance from the warm side of the unit to the opposite wall/ceiling, a physical barrier must always be installed between the inlet to and exhaust from the fan, so that the warm air is led away and replaced by cooler air to the unit.

The cooling unit requires a voltage of 220-240V and a 10A earthed plug as a minimum. The contact for the cooling unit can be installed on either the warm or the cold side. This must be taken into account when a contact is positioned inside a cover or louvre grille.

### Important

Thermocold A/S products are designed for normal use in private households. If the product is used for a purpose other than the envisaged application, this may require other approvals from the local electricity authority for the location.

In order to ensure that the product has a long service life, it is important to adhere closely to the installation and operating instructions. Thermocold A/S does not accept responsibility for unreported transport damage or incorrect installation.

Even under normal use, maintenance such as cleaning of the condenser/dust filter and fans is required.

The fan motor, compressor parts and starting equipment are components that are exposed to wear and may have a variable service life depending on the environment and maintenance, and they may require replacement.

The guarantee period is 2 years from the date of purchase by the end customer. If the equipment is intended to last for a significantly longer period under normal conditions of use, the deadline for any claims is 5 years. It is the customer's responsibility to submit a claim within a reasonable period after a fault is detected.

The supplier/producer shall have the right to repair the product within the time limits stipulated in the Sale of Goods Act, and by the most expedient means. The serial number of the cooling unit can be found on the rating plate at the bottom left of the compressor, and this must be stated in the event of a claim.

### Guarantee and claim conditions:

Electrical components/wearing parts such as thermostats, fan motors, starting equipment, lamps/bulbs and the like are guaranteed or can be the subject of a claim for a period of 2 years from the date of purchase or serial number. These are so-called wearing parts, which have a variable service life depending on maintenance and the environment.

Leaks in the system or a defective compressor, evaporator, condenser, and other components that are intended to have a long service life under normal conditions of wear and use, are covered for 5 years from the date of purchase.

Any faults that are attributable to a defective fan motor are covered under the 2-year rule.

### Trade purchases

Trade purchases include everything that is not a consumer purchase, for example if the product is installed in a business, café, institution, kindergarten, common household, catering establishment, etc. The right to make a claim in this case applies for 2 years, and the guarantee on wearing parts is 1 year under the terms of the Sale of Goods Act.

### Waste management



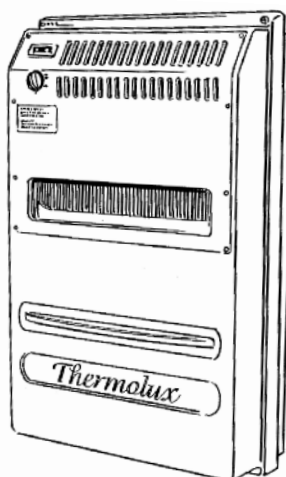
Products marked with this symbol must be taken to your municipal waste handling facility for disposal. Thermocold A/S is a member of the Renas recycling system. Discarded products can thus be delivered to most facilities in Norway. The producer must be contacted in the event of any claims and guarantee work.

Thermocold KFD A/S is not responsible for any typographic errors in the installation instructions.

# Dimensions and technical specifications

## Technical specifications

Model	TL6	TL10	TL16
External dimensions WxDxH	480x230x790	480x230x790	480x230x790
Aperture in wall WxH	440x740	440x740	440x740
Refrigerant	R134A CFC fri 0,29kg	R134A CFC fri 0,30kg	R134A CFC fri 0,39kg
Voltage	220-240V AC 50Hz	220-240V AC 50Hz	220-240V AC 50Hz
Compressor	Danfoss FR8,5G	Danfoss FR10G	Danfoss SC15G
Cooling effect	8000 litres/390 W	12000 litres/450 W	17000 litres/780 W
Thermostat setting	3-12°C	3-12°C	3-12°C
Ambient temperature	10-27°C	10-27°C	10-27°C
Net weight	23 kg	24 kg	26 kg
Dust filter	Yes	Yes	No
Evaporation of condensation water	Yes	Yes	No, added to wastewater/holding tank.
Timer for defrosting	No	Yes	Yes



### Extra equipment:

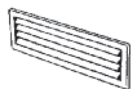
- Louvre grilles
- Plastic cover
- Insulation sleeve - Air barrier (foam strip)
- LED lamp with photo cell
- Warm cable/pressure switch (winter operation)

### Winter operation:

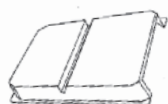
Winter operation is mandatory for installation in an external wall.



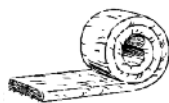
Air barrier (foam strip)



Grilles for cooling air  
• 2 grilles



Cover for cooling air (alternative to grilles)  
• 1 cover. - NB! The cover must be installed on a wall with a full opening below/above.



Insulating sleeve (taped/pinned in place):  
• 1 insulating sleeve for sealing against the cooling unit and recess in the wall.

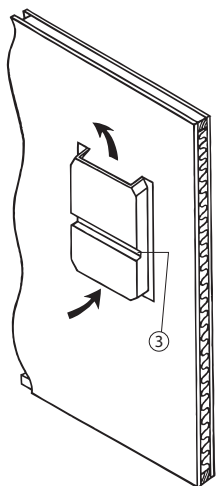


LED lamp (pre-wired) - Extra equipment

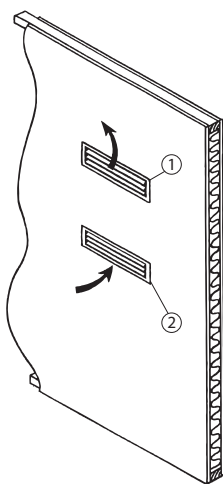
## Installation of Thermolux TL6-10-16 cooling unit

### The cooling unit gives off heat to the room adjoining the cooling room

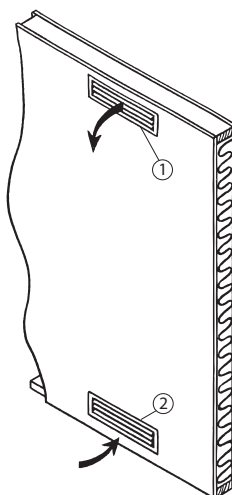
Installation can be done in several alternative ways; decide which alternative suits you best, and adhere closely to the installation instructions.



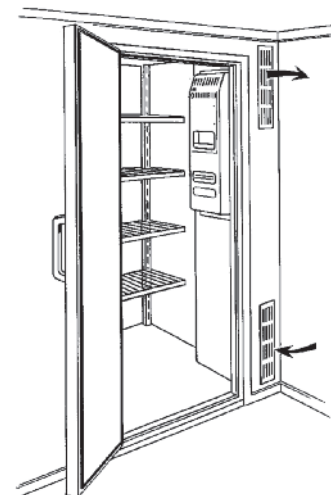
**Alternative 1.**



**Alternative 2.**



**Alternative 3.**



**Alternative 4.**

**Alternative 1.**

Self-assembly cooling room with plastic cover.

**Alternative 2.**

Self-assembly cooling room with louvre grilles directly behind the cooling unit.

**Alternative 3.**

Self-assembly cooling room with louvre grilles at floor and ceiling level.

**Alternative 4.**

Self-assembly cooling room with vertical louvre grilles to the side.

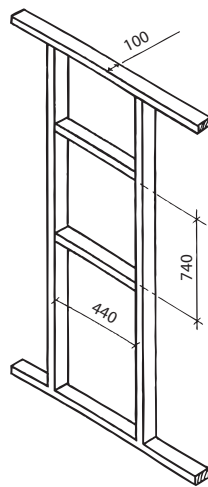
**Alternative 5.**

Element cooling room, free-standing.

**Alternative 6.**

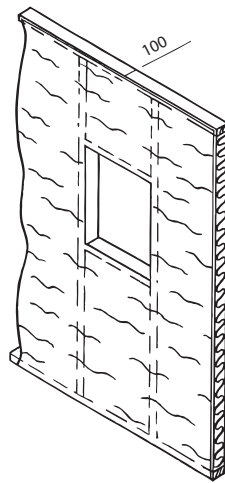
Element cooling room with louvre grilles.

## Alt. 1 - Self-assembly cooling room with plastic cover



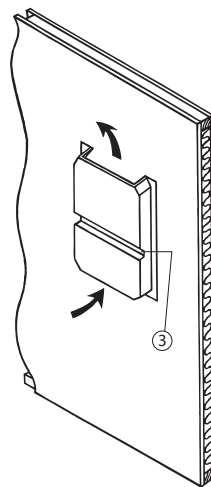
**Framework**

Seen from the warm side



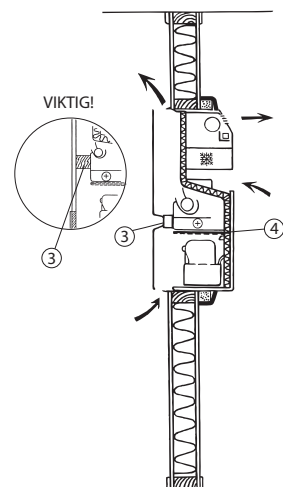
**Insulation and moisture barrier**

Seen from the warm side



**Plastic cover**

IMPORTANT!



**Sectional drawing**

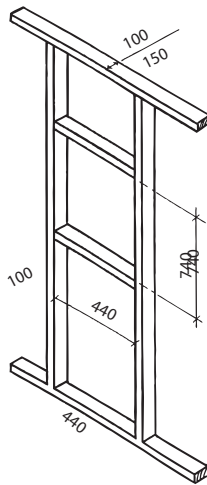
With a large plastic cover

- 3. Air barrier
- 4. Dust filter

1. Make a W440xH740 hole in the wall, as shown in the figure.
2. Secure the insulating sleeve around the inside of the opening into the cooling room with pins or tape.
3. Review the check-list on page 2.
4. The electrical connection with the power cord for the plug socket can be routed on the warm or cold side. If the cord exits on the top edge of the cover on the outside of the cooling room, the power cord must be secured in such a way that it is not able to fall down into the fan. If the contact is to be located inside the cooling room, the power cord is routed at the bottom in the corner, and it is secured with a clip so that it is not trapped under the unit. The corner of the unit is rounded, so that there is plenty of space for the power cord innermost in the corner of the unit housing. Cut out a little track for the power cord in the flange on the unit so that the power cord does not become trapped.
5. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
6. Fit an air barrier (foam rubber) to the cooling unit behind the fan. Make sure that it projects approx. 10 mm outside the wall, so that it lies with slight pressure against the depression in the plastic cover. See the sectional drawing, item 3. (This is important for the service life of the unit and for the guarantee to be valid).
7. Secure the air barrier with a screw to the upright on each side.
8. Screw the cover securely to the wall, and not to the unit. Make sure that the depression in the plastic cover touches the air barrier. The entire air gap above and below the air barrier behind the plastic cover must be open in order to ensure an unobstructed air flow.
9. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
10. Connect the power cord and check that the unit is operating as intended.

Any service access required for cleaning and to the fan is very good in this alternative.

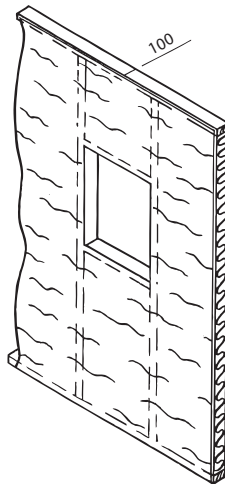
## Alt. 2 - Self-assembly cooling room with louvre grilles directly behind the cooling unit



### Framework

Seen from the warm side

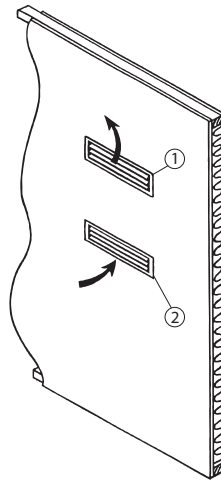
1. Grille (vanes facing upwards)
2. Grille (vanes facing downwards)
3. Air barrier



### Framework

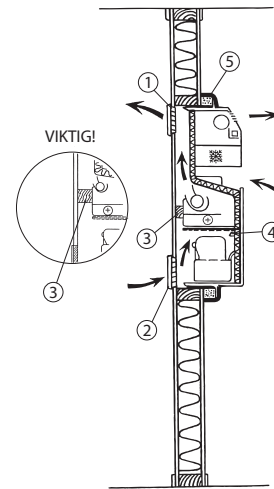
Seen from the warm side

4. Dust filter
5. Flange gasket



### Grilles behind the cooler

IMPORTANT!



### Sectional drawing

Grilles behind the cooler

1. Make a W440xH740 recess in the wall on the cooling room side, as shown in the figure. Keep the plasterboard/chipboard panel on the outside of the cooling room.
2. Make a W420xH110 cut-for ventilation grilles in the plasterboard/chipboard panel on the outside of the cooling room at the top and at the bottom in the recess.
3. Fit an air barrier (foam rubber) against the chipboard/plasterboard panel between the uprights. It must be 80 mm narrower than the wall thickness.
4. Secure the air barrier, 250 mm from the bottom of the recess with screws on either side of the upright so that it is held tightly between the chipboard/plasterboard panel and the broad field on the plastic cover for the fan. See the sectional drawing, item 3. (This is important for the service life of the unit and for the guarantee to be valid).
5. Secure the insulating sleeve around the inside of the opening into the cooling room with pins or tape.
6. The electrical connection with the power cord for the plug socket can be routed on the warm or cold side. If the cord exits on the top edge of the cooling unit on the outside of the cooling room, the power cord must be secured in such a way that it is not able to fall down into the fan. If the contact is positioned inside the louvre grille, this must be marked. If the contact is to be located inside the

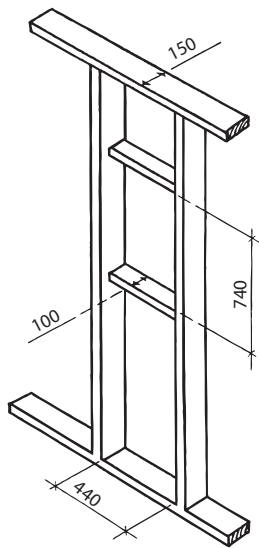
cooling room, the power cord is routed at the bottom in the corner, and it is secured with a clip so that it is not trapped under the unit. The corner of the unit is rounded, so that there is plenty of space for the power cord innermost in the corner of the unit housing. Cut out a little track for the power cord in the flange on the unit so that the power cord does not become trapped.

7. Review the check-list on page 2.
8. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
9. Screw the lower ventilation grille securely in place with the vanes facing downwards, and the upper grille with the vanes facing upwards.
10. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
11. Connect the power cord and check that the unit is operating as intended.

This alternative has a slightly higher noise level and can be damped to some extent by lowering the lower grille by 20-30 cm below the cooling unit, see alternative 3.



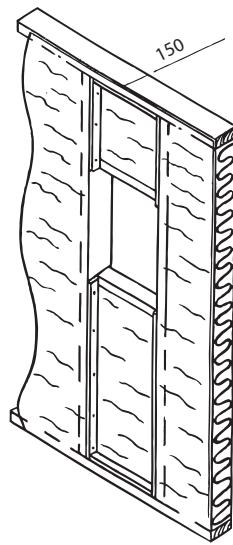
## Alt. 3 - Self-assembly cooling room with louvre grilles at floor and ceiling level



### Framework

Grilles at floor and ceiling level

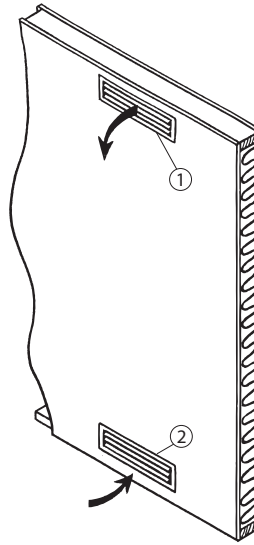
1. Grille (vanes facing upwards)
2. Grille (vanes facing downwards)



### Insulation and moisture barrier

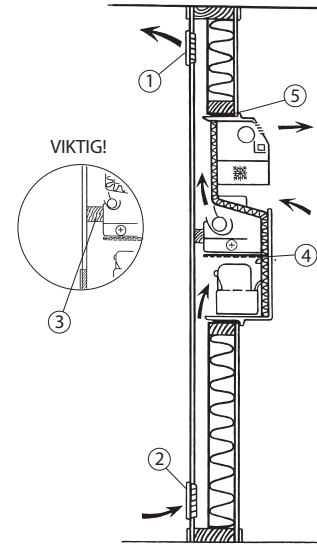
Grilles at floor and ceiling level.

3. Air barrier
4. Dust filter



### Grilles at floor and ceiling level

IMPORTANT!



### Sectional drawing

Grilles at floor and ceiling level

1. Make a W440xH740 recess in the wall on the side of the cooling room, as shown in the figure.
2. Position an air duct over and under the recess in the wall on the outside of the cooling room, as shown in the figure. Min 50x440 mm.
3. Make a W420xH110 cut-for ventilation grilles in the plasterboard/chipboard panel on the outside of the cooling room at the top and at the bottom in the air duct.
4. Fit an air barrier (foam rubber) to the chipboard/plasterboard panel between the uprights. It must be 80 mm narrower than the wall thickness.
5. Secure the air barrier 250 mm from the bottom of the recess with screws on either side of the upright so that it is held tightly between the chipboard/plasterboard panel and the broad field on the plastic cover for the fan. See the sectional drawing, item 3. (This is important for the service life of the unit and for the guarantee to be valid).
6. Secure the insulating sleeve around the inside of the opening into the cooling room with pins or tape.
7. The electrical connection with the power cord for the plug socket can be routed on the warm or cold side. If the contact is to be located inside the cooling room, the power cord is routed at the bottom

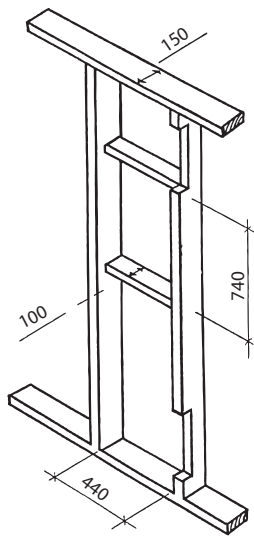
in the corner, and it is secured with a clip so that it is not trapped under the unit. The corner of the unit is rounded, so that there is plenty of space for the power cord innermost in the corner of the unit housing. Route the power cord in the depression in the slot/groove on the panel, or cut a small notch in the flange.

8. Review the check-list on page 2.
9. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
10. Screw the lower ventilation grille securely in place with the vanes facing downwards, and the upper grille with the vanes facing upwards.
11. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
12. Connect the power cord and check that the unit is operating as intended.

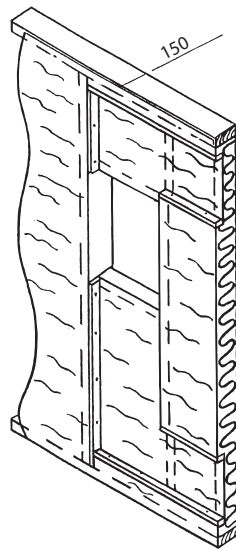
Alternatives 3 and 4 have the lowest noise level.



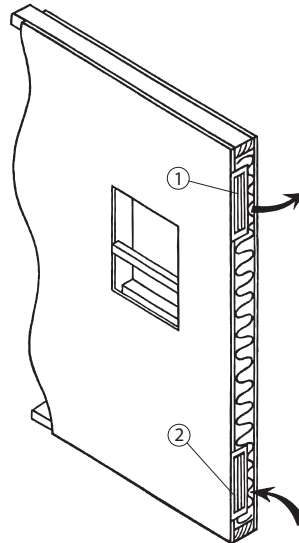
## Alt. 4 - Self-assembly cooling room with vertical ventilation grilles to the side



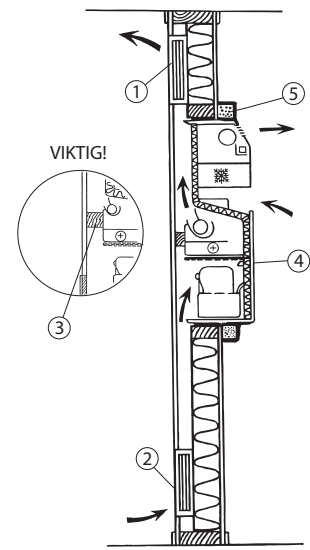
**Framework**  
Seen from the warm side



**Framework**  
Seen from the warm side



**Grilles at floor and ceiling level**  
IMPORTANT!



**Sectional drawing**  
Grilles behind the cooler

- 1. Grille
- 2. Grille
- 3. Air barrier
- 4. Dust filter

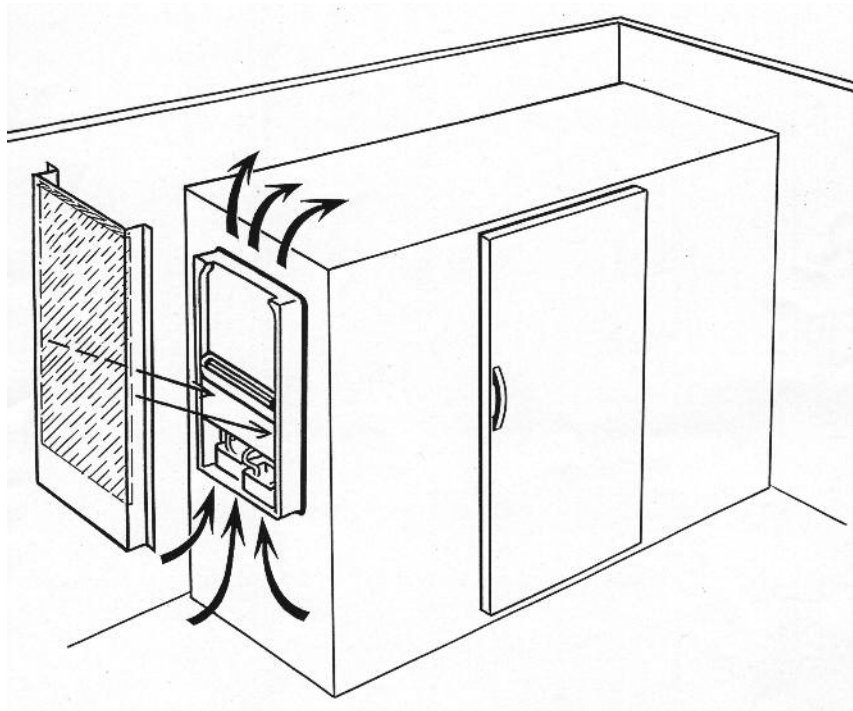
1. Set up a parallel wall inside the cooling room wall from floor to ceiling with a min. 50 mm air gap in between. This alternative can also be supplied ready-made from the factory. Make a W440xH740 recess in the wall on the cooling room side, as shown in the figure.
2. Make a W70xH465 cut-for vertical ventilation grilles in the plasterboard/chipboard panel on the outside of the cooling room at the top and at the bottom with an opening inside the gap between the walls.
3. Fit an air barrier (foam rubber), onto the chipboard/plasterboard between the uprights. It must be 80 mm narrower than the wall thickness.
4. Secure the air barrier, 250 mm from the bottom of the recess with screws on either side of the upright so that it is held tightly between the chipboard/plasterboard panel and the broad field on the plastic cover for the fan. See the sectional drawing, item 3. (This is important for the service life of the unit and for the guarantee to be valid).
5. Secure the insulating sleeve around the inside of the opening into the cooling room with pins or tape.
6. The electrical connection with the power cord for the plug socket can be routed on the warm or cold side. If the contact is to be located inside the cool-

ing room, the power cord is routed at the bottom in the corner, and it is secured with a clip so that it is not trapped under the unit. The corner of the unit is rounded, so that there is plenty of space for the power cord innermost in the corner of the unit housing. Route the power cord in the depression in the slot/groove on the panel, or cut a small notch in the flange.

7. Review the check-list on page 2.
8. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
9. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
10. Connect the power cord and check that the unit is operating as intended.

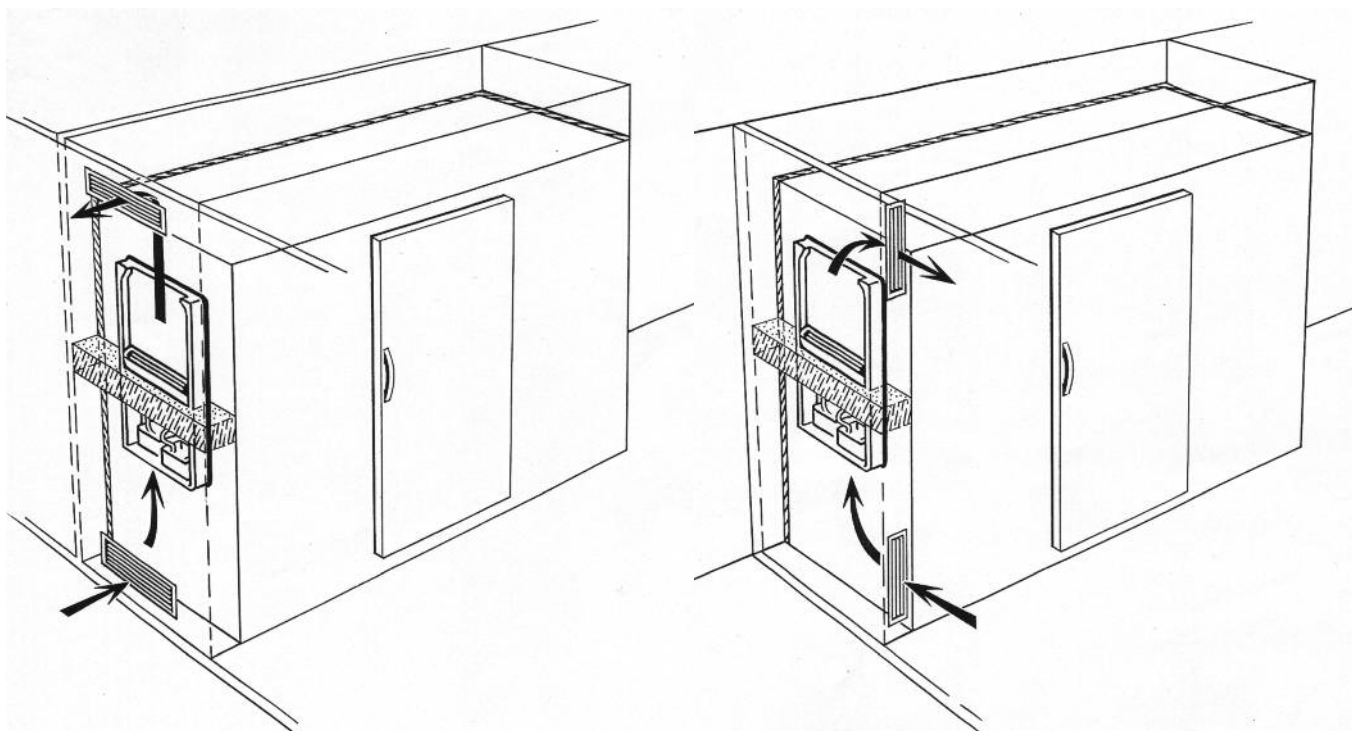
Alternatives 3 and 4 have the lowest noise level.

## Alt. 5 - Element cooling room, free-standing



1. Review the check-list on page 2.
  2. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
  3. If the power cord is to be routed over the ceiling, it must be secured with the supplied clips so that it is not able to drop down into the air duct and damage the fan.
  4. Install the air duct on the outside of the unit so that it is flush with the ceiling of the cooling room and with the acoustic mat facing upwards. (See the figure).
  5. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
  6. Connect the power cord and check that the unit is operating as intended.
- Any service access required for cleaning and to the fan is very good in this alternative.

## Alt. 6 - Element cooling room with louvre grilles/ventilation grilles



1. Make a W420xH110 cut-out for ventilation grilles in the wall on the outside where the cooling unit is to be positioned, or standing alongside it.
2. Fit an air barrier (foam rubber), to the unit, on the sides of the unit and along the ceiling, so that the heat which exists on top of the unit is not able to circulate and is sucked back again into the lower part of the unit. See the figure.
3. The electrical connection with the power cord for the plug socket can be routed on the warm or cold side. If the contact is to be located inside the cooling room, the power cord is routed at the bottom in the corner, and it is secured with a clip so that it is not trapped under the unit. The corner of the unit is rounded, so that there is plenty of space for the power cord innermost in the corner of the unit housing. At the same time, cut out a little notch in the flange on the unit as an entry for the power cord into the cooling room.
4. Review the check-list on page 2.
5. Lift in the unit from the cooling room side and screw the cooling unit securely (but not hard) at each corner until the gasket seals tightly against the wall on all edges.
6. Screw the lower ventilation grille securely in place with the vanes facing downwards, and the upper grille with the vanes facing upwards.
7. TL16 does not have evaporation of the condensation water and therefore must be connected to a drain with the help of a hose. The dimension of the hose should be 10 mm internally; the hose is not supplied. It is connected to a pipe stub on the bottom edge of the cooling unit on the cooling room side. (Not applicable to TL6 and TL10).
8. Connect the power cord and check that the unit is operating as intended.

## Start-up and commissioning

Adhere to the attached CHECK-LIST (page 2).  
Adhere to the installation instructions with desired alternative installations.

THE THERMOSTAT is set to a central position, and the plug is placed in the socket. The cooling unit must have reached stabile cooling periods after an operating time of approx. 10 hours, and the thermostat can be finely adjusted to the desired temperature of 2-9°C, as described below.

A steplessly variable thermostat button/switch positioned on the front of the unit ensures the correct temperature in the cooling room.

THE THERMOSTAT will normally be slightly above the central position. The cooling room temperature is checked with the help of a thermometer placed in a glass of water to indicate the correct product temperature. Turn the dial anticlockwise for warmer and clockwise for colder. Read the product temperature on the thermometer in the glass of water once stable periods have been reached.

The warning lamps for the thermostat indicate whether the power supply is connected (yellow lamp), and whether the cooler is in operating mode (green lamp).

Thermolux TL 10 and 16 have an adjustable timer for setting the desired time of defrosting or shut-down. Each stud on the timer indicates a quarter of an hour (adjusted at the factory).

MANUAL DEFROSTING is performed with the help of the thermostat, which is turned all the way back to the left, continuing until a resistance is felt and a click is heard from the switch.

Thermolux TL6-10 and 16 cooling units have identical physical dimensions.

Thermolux TL6 and 10 have automatic evaporation of the condensation water, and are equipped with a dust filter for simple and rapid cleaning.

Thermolux TL16 does not have a dust filter, and has a drain pipe stub under the unit where the condensation water must be led away in a hose to a drain or container.

The cooling unit is installed simply from the inside of the cooling room; see the installation instructions.

A quick coupling is applied to the top for connection to a light, if required, with a door switch or photocell.

The cooling unit emits heat into rooms next to the room where the unit is located, and therefore this room must be well ventilated.

*In the unlikely event that the drain becomes blocked, a piece of wire can be inserted into the tube or it can be blown clean with compressed air. Water will be produced in large quantities at extremely high humidity, or if the cooling room door has been left open for some time.*

## Simple troubleshooting

Fault	Årsak	Remedy
Poor cooling	Dust filter blocked	Clean the filter
	Excessively high ambient temperature	Improve ventilation
	Fan motor on the warm side defective	Replace the fan motor
	Evaporator blocked by ice	Manual defrosting
	Air barrier missing	
No cooling	Compressor not working (yellow lamp not lit)	Check fuse
		Call 69 10 24 00
Water overflowing	Drain blocked	Unblock drain
Vibration/noise	Screwed too tightly to the wall	Slacken fixing screws
	Fan out of balance	Ensure that the fan is balanced

## Cleaning and maintenance

### TL6 and TL10

It is the responsibility of the user to undertake cleaning of the unit, and this is important in order to be able to invoke the guarantee in the event of a fault in the cooling function.

Thermolux 6 and 10 have an integral dust filter, which must be vacuum cleaned every other month or more frequently if required. Remove the cover and pull out the dust filter. Vacuum clean the filter cloth. Replace the filter, and press in the cover.

In order to prevent mould, it is also important to perform regular cleaning in the cooling room.

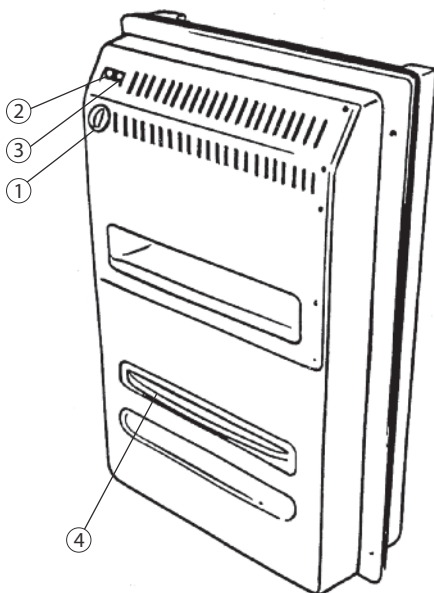
Clean using mild warm soapy water, and wipe with a damp cloth.

### TL16

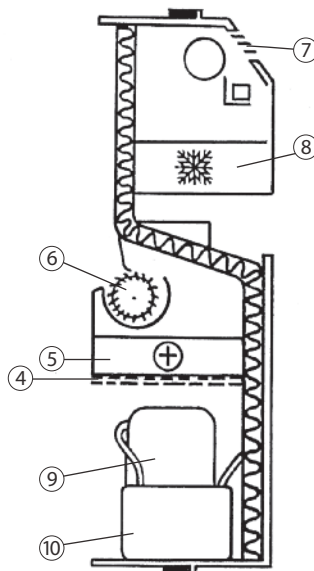
Any condenser fins that are visible above the compressor on the warm side of the Thermolux 16 should be vacuumed/brushed/blown clean of dust. Take care to ensure that the thin aluminium fins are not damaged, as this will impair the cooling function.

In order to prevent mould, it is also important to perform regular cleaning in the cooling room.

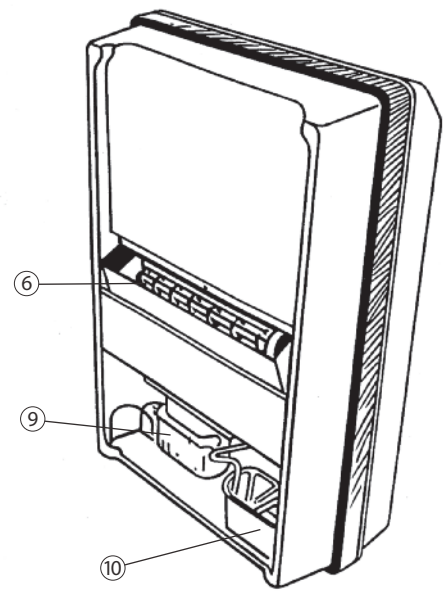
Clean using mild warm soapy water, and wipe with a damp cloth.



1. Operating thermostat
2. Yellow lamp indicating connection to the mains power supply
3. Green lamp indicating compressor running
4. Dust filter

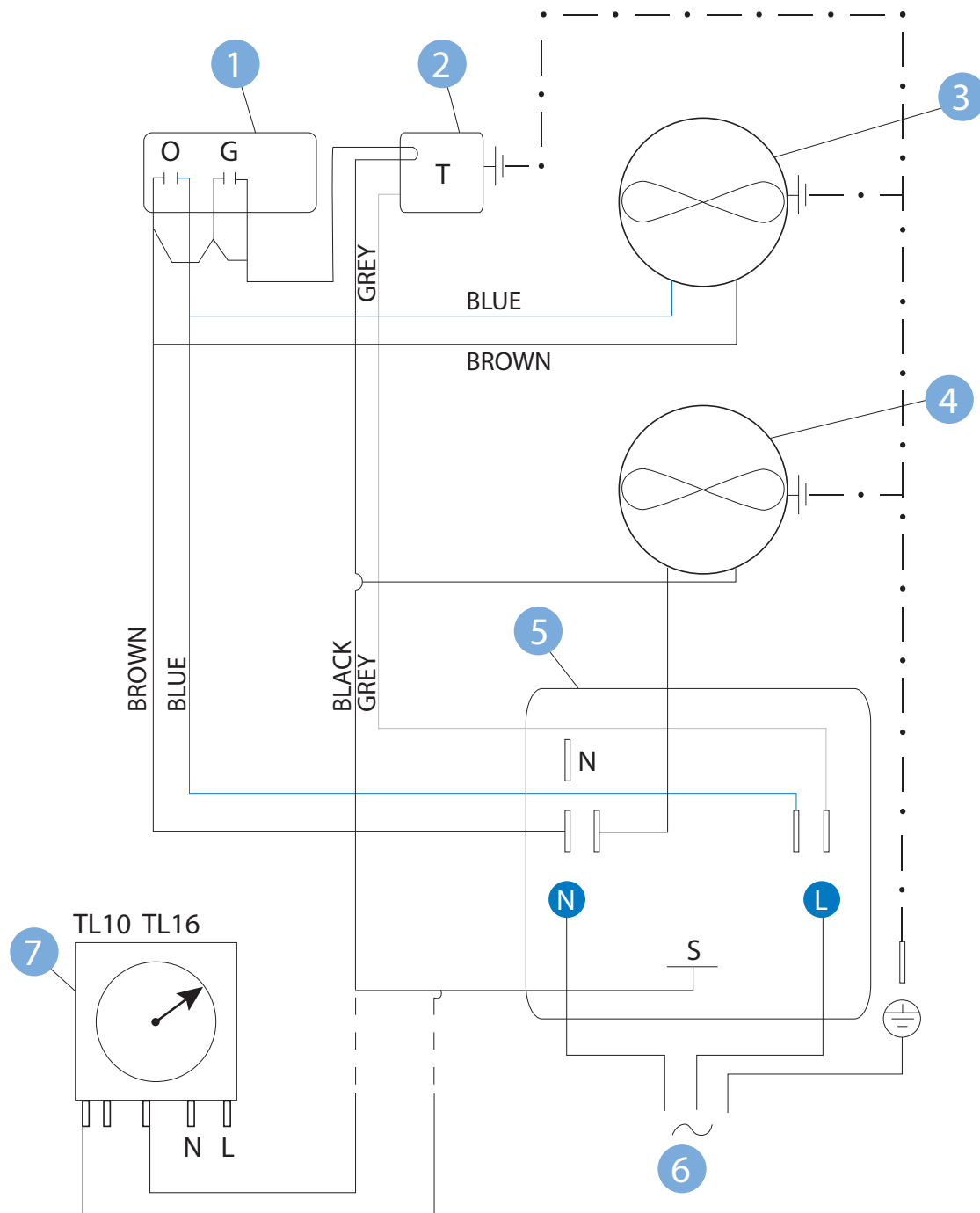


5. Condenser
6. Condenser fan
7. Evaporator fan
8. Evaporator



9. Compressor
10. Evaporation vessel

## Connection diagram for cooling unit



1. Warning lamps
2. Operating thermostat
3. Fan with motor for evaporator
4. Fan with motor for condenser

5. Compressor
6. Mains voltage
7. Timer

*If the cooling unit is used for a purpose other than as a cooling room unit, this may require other approvals from the local electricity authority for the location.*

*The customer/installer is responsible for the correct installation of the unit.*







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