THERMOCOLD COOLING UNIT

TYPE: EC5, EC6, EC10



OPERATING AND INSTALLATION INSTRUCTION

ENGLISH 2



V.2.0

Safety and usage advisory

Please read the following information. If you do not comply with this, damages to persons or equipment may occur, and all warranty and reliability duties will be void.



WARNING!
Risk of fire and electrocution.
Risk of damage to persons or cooling unit.



WARNING!
Risk of fire
Flammable materials

Intended use

- ☐ This product is designed for private use.
- The cooling unit must not be placed outdoors. It is not suited for outdoor use even if the area is covered with a tarp.

General safety warnings

- When the product is worn out, it must not be disposed of as household waste. It must be submitted to an appropriate collection site for recycling EE waste (electric and electronic waste)
- Contact Thermocold or the nearest service partner for any inquiries and issues with the cooling unit.
- Do not destroy the cooling circuit where the coolant is circulating using a drill or cutting tool.
- Refrigerant that may pour out in the event of a puncture may cause skin irritation and eye damage.
- Do not cover or block the vents of the cooling unit.
- Repairs to the cooling unit must only be conducted by trained personnel. Repairs conducted by untrained personnel may result in danger to users.
- Disconnect the power supply during repairs/maintenance on the cooling unit.
- Do not pull by the cable when unplugging the unit.
- Do not connect the cooling unit if the power outlet is loose.
- Ensure that the power cable is not crushed or damaged after the cooling unit is installed.
- Do not connect the plug of the cooling unit to an extension cord.

- Do not use portable or other external power supplies unless these are approved by Thermocold.
- Flammable objects or products that contain flammable gases, e.g. spray bottles, as well as explosive materials must not be stored in refrigerated rooms or corner refrigerators along with the cooling unit
- Do not use flammable spray materials such as propane gas near the cooling unit.
- Do not use mechanical equipment or other means to increase the speed of the defrosting process other than such equipment recommended by Thermocold. Make an inquiry to Thermocold or a service partner if you are in doubt.
- It is dangerous to expose the product to rain, snow and wind due to electrical safety.
- Do not spray water directly onto the outer or inner components of the cooling units.
- Electrical devices must not be used inside the refrigerated room/corner refrigerator unless recommended by Thermocold
- The label that describes technical specifications is located behind the dust filter drawer in the cooling unit.
- Children may not play with the cooling unit.
- Children between the ages of 3 and 8 are permitted to load things into and out of the corner refrigerator/refrigerated room.
- This cooling unit is not intended for use by persons (including children) with reduced physical, sensory or mental capacity, or a lack of experience and knowledge, unless they have received guidance and instruction on the use of the device by a person responsible for their safety.
- These usage and assembly instructions shall be provided to the next owner of the cooling unit when ownership is transferred.

Disposal of waste product, Compliance with WEEE directive

□ This product complies with the EU directive involving electronic and electrical equipment (2012/19/EU). This product has the classification symbol for the sorting of electrical waste (WEEE).

This product is made from high-quality parts and materials that can be re-used and recycled.

The product must not be disposed of alongside normal household waste and other waste at the end of its service life.

Bring it to a collection point for the recycling of electrical and electronic products.

Please consult with local authorities to get information on sorting and collection sites.



Information on packaging

 The packaging for this cooling unit is produced from recyclable materials in accordance with national environmental regulations.

HC warning

 The product is equipped with a cooling system that contains the cooling medium R600a:

This gas is flammable. Be careful so that the cooling system and pipes are not damaged during use or transport. In the event of any damage, keep the cooling unit a distance away from potential fire sources that may cause ignition. Air out the refrigerated room, corner refrigerator or the premises in which the cooling unit is located. The refrigerant may cause eye damage if it leaks.

Please contact Thermocold for further advice.



WARNING! Fire hazard Flammable refrigerant

Thermocold KFD A/S' liability does not cover:

- 1. Repairs / Actions taken by unauthorised personnel or non-original parts, and the assembly of the device in other installations or products Thermocold does not have control over.
- 2. Installation that does not comply with the local electrical safety authority's provisions and installation instructions.
- **3.** Use of the cooling unit in violation of the user manual. Inadequate maintenance.
- **4.** Transport damage not reported to transporter/Thermocold and accidents after delivery that are beyond the control of the provider/dealer, such as lightning strikes, electrical disruptions and high/low voltage variation beyond indicated voltage.
- **5.** Improper refrigerated room construction. Poor or inadequate ventilation. Inadequate dust filter maintenance. Corrosion and deposits resulting from surrounding environment.

Repairs and compensation:

- 1. Thermocold or the dealer may themselves decide between them whether errors or issues should be repaired at the customer\s location, or at their own or other designated workshop.
- 2. The customer is entitled to compensation for financial loss pursuant to the Sale of Goods Act. However, the supplier is not in any circumstances liable for compensation for indirect losses, section 67 (2).
- 3. If damage is dealt to objects with a direct or close connection to the product's use or function, the supplier is only liable to the extent this follows from inalienable legal provisions. This also applies to personal injuries, and injuries of this nature shall be handled in cooperation between the customer and the supplier.

Table of contents

Safety and usage advisory	2
Buyer's rights	6
Read before assembling the cooling unit	7
Energy saving and food storage	8
Adjusting the temperature of the cooling unit	9
Dimensions and technical specifications EC 5, EC 6, EC 10	10
Cleaning and maintenance	11
Troubleshooting and service	12
Equipment list installation option 1 – 6	13
Installation option 1 – Self-assembled cold room with plastic cover	14
Installation option 4 – Modular cold room, free-standing A/B	17
Installation option 5 – Modular cold room, free–standing A/B	18
Installation alternative 6 – Corner refrigerator with air vent	19

Buyer's rights

Guarantee

Thermocold guarantees that the product provided has the features and quality described in brochures and other such materials. Small changes due to product changes may occur. The warranty runs 2 years from when the product is delivered to the customer. It is important that the customer follows the use and installation instructions closely. Even in normal use, the product will be subject to wear, necessitating preventive maintenance and thus the replacement of disposable components such as fans, starting equipment for the compressor, thermostats and lights. These are components with variable lifespans depending on installation, use and maintenance. These are not covered beyond the complaints period of 5 years, but by the warranty in accordance with the Sale of Goods Act.

Consumer purchases:

These terms regulate the customer's rights with regard to Thermocold as a supplier of new products intended for use in private households. The supplier is obligated to correct errors or flaws, provided the customer has the receipt.

Buyer's rights:

The deadline for complaints is two years. When the product or parts of the product are intended to last significantly longer, the deadline is five years. All complaints are subject to a requirement that the defect was present at the time of delivery.

However, the customer will lose the right to raise a complaint if they do not complain within a reasonable time frame after the flaw is discovered or should have been discovered.

In the event of flaws subject to sales legislation, Thermocold retains the right to repair the product within the deadline in accordance with the Sale of Goods Act.

Trade purchases

Trade purchases are all purchases not made by consumers. If the product is located in cafés, restaurants, street kitchens, hotels, motels, businesses with other commercial activities, or in schools, institutions, dormitories, kindergartens, sports facilities, shared households and where the customer fully or partially pays for the use of the product or in a rental situation, as well as if the product is used to preserve a product the customer sells. The complaint period and guarantee period will then be 1 year. This applies to any losses the flaw may cause due to, e.g. operational losses, lost profits and other consequences involving financial losses. This limitation to the supplier's responsibility does not apply if the customer has been found grossly negligent. In general, the terms and conditions for consumer purchases apply.

Thermocold makes reservations for potential printing errors and retains the right to change any product specifications.

Read before assembling the cooling unit

- Wait for two to three hours after assembling the cooling unit to the wall before starting it. This is done because the oil for the compressor must first run back.
- Check that the copper pipes are not in contact with metal or plastic, this also applies to the hose in the plastic tub.
- Make sure that the drainage tube is in the bottom of the evaporation tray.
- Connect the plug and check that both the fans and the compressor are running normally.

Thermocold cooling units are assembled from the refrigerated room side through the wall to the warm side.

This provides much greater flexibility with regard to assembly solutions.

A stable, appropriate cold room is contingent on appropriate insulation in the floor/ceiling/walls, and that the ambient temperature on the warm side of the cold room

remains 16 to 27°C. These are the most optimal operating conditions, causing the least wear.

It is important that the cooling unit has a good supply of fresh air and that the room in which it is installed is well-ventilated.

All walls adjacent to the cold room/corner refrigerator should be insulated.

The cooling unit requires a voltage of 220-240V and a minimum 10A grounded fuse. The plug can be installed to the warm or cold side of the cooling unit. Use a label when placing the plug within the plastic cover or ventilation grates.

Ensure that a physical barrier / air barrier or air vent is used to separate intake and exhaust from the fan on the warm side. This is so that the warm air can be removed and replaced by cooler fresh air.

See assembly alternatives 1-6 to see what is required for your assembly alternative.

Winter operations kit should be installed in temperatures below +16°C

Energy saving and food storage

Thermocold products place a strong focus on the best possible storage of food and raw ingredients in corner refrigerators and cold rooms.

Energy-saving measures:

- If the door stands open, this will increase running hours and energy consumption.
- Good tidiness is required for the air to circulate properly.

Tips for storing food:

The temperature will vary from bottom to top. This is because food goods will best be stored at different temperatures. Proper storage is essential for preserving taste and for maintaining the shelf life of food goods.

In short, we recommend the following:

Milk, meat and bread topping products shall be placed so that there is proper circulation around the products, allowing for quicker cooling.

Vegetables that contain a lot of water, such as carrots and cucumbers, should be packed in plastic or freezer bags.

We recommend placing other vegetables in plastic containers with lids.

This also applies if you store fruit such as apples, oranges, salad and tomatoes. Potatoes

should be kept in light-proof sacks or in light-proof boxes with lids.

This is to protect the goods from cold circulating air and to provide additional protection against the loss of moisture, in addition to the plastic packaging.

As maintaining good hygiene in the room is important, the walls have a food-safe protective surface, reducing bacterial growth and making it easier to clean surfaces.

A full overview of the storage of the most common products can be found on Thermocold's website.

Adjusting the temperature of the cooling unit

The temperature can be set from 3 - 20 °C The operating display indicates the room's air temperature. When setting 4°C, the displayed temperature will vary by +/- approx. 2.5°C

Place a thermometer in a glass of water to measure the temperature of the food goods.



Temperature adjustment:

- 1. Press "up" to increase the temperature
- 2. Press "down" to decrease the temperature
- 3. Wait 10 seconds The new temperature has now been set.

Manual defrosting:

Use manual defrosting if a mass of ice has built up on the heat sinks of the cooling unit. Duration 30 minutes.

- 1. Press "manual defrosting" for 6 seconds to activate manual defrosting.
- 2. Press "manual defrosting" for 6 seconds to deactivate manual defrosting.

On/Off Standby mode:

Use Standby mode when you want to turn off cooling on the cooling unit.

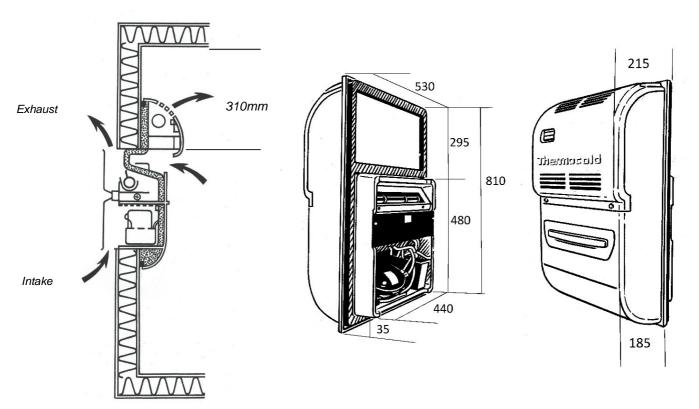
- 1. Press and hold "On/Off" for 10 seconds to deactivate cooling on the cooling unit
- 2. Press and hold "On/Off" for 10 seconds to activate cooling

Parameter settings: (Intended for service technician)

- 1. Press "up/down" and hold for 5 seconds to access the parameter menu.
- 2. First parameter group is displayed "tHE"
- 3. Press "up/down" to find the desired group
- 4. Press "OK"
- 5. First parameter is displayed
- 6. Press "up/down" to find the desired parameter
- 7. Press "OK"
- 8. Press "up/down" to find the desired setting.
- 9. Press "OK"

The display will automatically return to the indicated temperature after 30 seconds, or after you press "back" twice

Dimensions and technical specifications EC 5, EC 6, EC 10



Installation option 1 in example illustration Air is led through the plastic cover.

	EC 5	EC 6	EC 10	
Light aperture in wall installation	440x480	440x480	440x480	
Minimum distance from ceiling to top of light	310mm	310mm	310mm	
Minimum air volume	200cm ²	200cm ²	200cm ²	
Climate class	T	T	T	
Ambient temperature	15-43°C	15-43°C	15-43°C	
Voltage:	220-240V 50Hz	220-240V 50Hz	220-240V 50Hz	
Amperage draw:	1.55 A	1.46 A	1.67 A	
Net weight	20 kg	27 kg	27kg	
Cooling capacity (W /	169W/ 1100 litres	390W / 8000 litres	450W / 12,000 litres	
Refrigerant	R600a 84g R600a 106g		R600a 106g	
Automatic defrosting	YES	S YES YES		
Condensation drain	YES	YES	YES	
Dust filter	YES	YES	YES	

Cleaning and maintenance

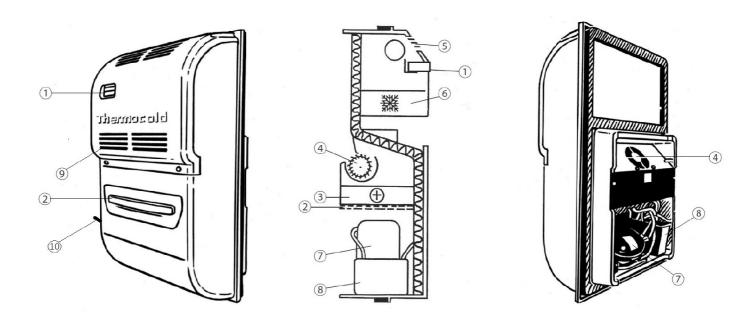
The consumer is responsible for conducting cleaning and maintenance on the cooling unit. This is required to maintain warranty.

Dust filter cleaning

Clean the dust filter of the cooling unit every 3 months or more frequently where needed. Loosen the dust filter drawer (2), pull out the dust filter frame (2) and vacuum clean the sheet of dust.

Cleaning cold room/corner refrigerator

To prevent mould growth, it is important to regularly clean the cold room. Use mild soap and dry using a damp cloth.



- 1. Thermostat
- 2. Dust filter / Dust filter drawer
- 3. Condenser
- 4. Condenser fan
- 5. Evaporator fan
- 6. Evaporator/heat sink
- 7. Compressor
- 8. Evaporation basin
- 9. Condensation drainpipe. Rubber gasket on inside of cover
- 10. Condensation drain/overflow drain

Troubleshooting and service

Issue	Cause	Needs	Action
Poor cooling	Dust filter is clogged	Clean dust filter	To be corrected by customer
	Ambient temperature is too high	Improve ventilation	To be corrected by customer
	Condenser fan defect	Replace fan motor	To be corrected by service partner or trained personnel. Contact Thermocold or service to purchase parts
	Evaporator is clogged with ice	Manual removal	To be corrected by user
	Lack of air barrier	Install air barrier	To be corrected by customer/service partner. Contact Thermocold or
No cooling	Compressor is not running	Check fuse	Contact Thermocold
	Thermostat set to Standby mode	Deactivate Standby mode	or service partner To be corrected by customer
Water pouring over the front end of the unit.	Drainpipe for condensed water is clogged	Poke up drainpipe for condensed water with a 35-cm length of wire	To be corrected by customer
	Door has been left open	Close the door	To be corrected by customer
	Magnetic seal of cold room door does not seal against frame/wall	Adjust the door so that it seals against frame or wall. Use magnetic seal if necessary.	To be corrected by customer/service partner. Contact Thermocold or service
	Sealing gasket around the cooling unit is unsealed or worn out.	Ensure that the gasket seals all around between the cooling unit and the wall. Change the gasket if necessary.	To be corrected by customer/service partner. Contact Thermocold or service partner to purchase parts
	Air leaks into cold room or corner refrigerator. In the event of high humidity, this occurs more often.	Check that all seals in walls, ceiling and floor are sealed. Inspect the magnetic seal of the door and sealing gasket around the cooling unit. Seal joints with silicone. Replace sealing gasket and/or magnetic seal if necessary.	To be corrected by customer/service partner. Contact Thermocold or service partner to purchase parts
Water out of drainage	Door has been left open	Close the door	To be corrected by customer
	Air leak into cold room or corner refrigerator. In the event of high humidity, this occurs more often.	Check that all seals in walls, ceiling and floor are sealed. Inspect the magnetic seal of the door and sealing gasket around the cooling unit. Seal joints with silicone. Replace sealing gasket and/or magnetic seal if necessary.	To be corrected by customer/service partner. Contact Thermocold or service partner to purchase parts
Vibration or noise	The plastic edge of the cooling unit is in contact with the wall of the cold room	Loosen the cooling unit so that the sealing gasket, rather than the plastic edge of the cooling unit, is in contact with the wall.	To be corrected by customer/service partner
	Evaporator or condenser fan imbalanced	Replace fan motor	To be corrected by service partner or trained personnel. Contact Thermocold or service to purchase parts
	Condenser fan defect	Replace fan motor	To be corrected by service partner or trained personnel. Contact Thermocold or service to purchase parts

For service needs, contact:

Have the serial number at hand. This can be found behind the dust filter drawer (point 2 under cleaning and maintenance)

⁻ Thermocold KFD AS service department Tel. +47 69 10 24 00

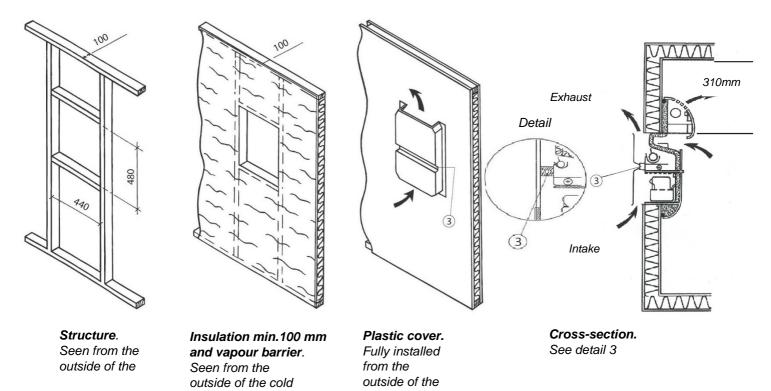
⁻ Local service partner/dealer: See the Thermocold website <u>www.thermocold.no</u>

Equipment list installation option 1 – 6

	Type of cooling unit	Plastic cover / Plastic cover for modular	Metal air vent	Ventilation grates	Insulatin g strip	Air barrier short (55cm)	Air barrier long (240cm)
Alt. 1	EC 6 / EC10	X			X	X	
Alt. 2	EC 6 / EC10			X	X	Χ	
Alt. 3	EC 6 / EC10			X	X	Χ	
Alt. 4 A	EC 6 / EC10		Χ				
Alt. 4 B	EC 6 / EC10	X			X	X	
Alt. 5	EC 6 / EC10			X	X	X	
Alt. 6	EC 5		X				

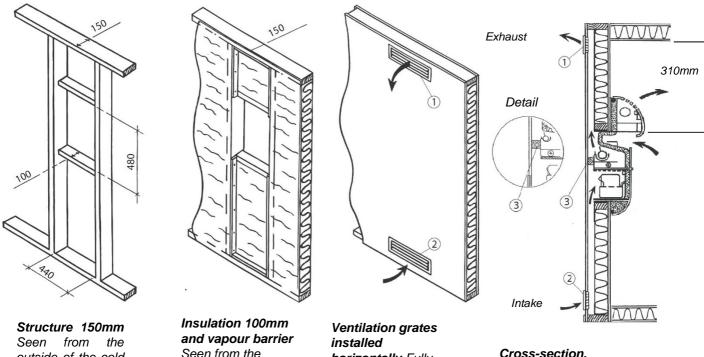
Plastic cover
Plastic cover for modular room
Metal air pilot duct
Ventilation grates 2 pcs
Insulating strip
Air barrier short 55 cm
Air barrier long 240 cm

Installation option 1 - Self-assembled cold room with plastic cover



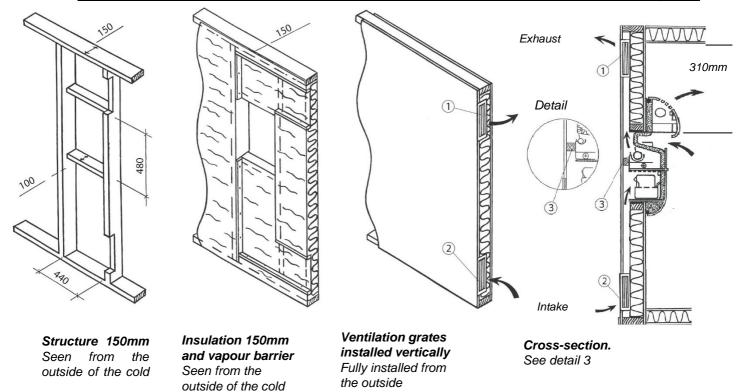
- Adapt hole in wall 440x740mm as illustrated. Distance from ceiling to top of light aperture minimum 310 mm. Minimum air flow 200 cm²
- 2. The plug for the mains cable is installed outside the cold room. If it protrudes beyond the plastic cover, the mains cable must be fastened so that it cannot fall down into the condenser fan.
- 3. Build the cold room in accordance with prevailing laws and regulations. See the Thermocold website www.thermocold.no for tips and advice for construction.
- 4. Fix the insulating strips around the opening on the inside of the cold room side using staples or tape.
- 5. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 6. Adjust the air barrier that separates intake and exhaust. Make sure that the air barrier protrudes approx. 10 mm outside the wall, so that it is placed in contact with the recess in the plastic cover, see detail marked 3.
- 7. Attach the air seal with one screw in the truss on each side.
- 8. Screw the plastic cover to the wall and not to the unit. Make sure the recess in the plastic cover is correctly placed against the air barrier. The entire air slot above and below the air barrier behind the plastic cover must be open for free air flow.
- 9. Plug in the mains lead and ensure that the unit starts up.

Installation option 2 – Self-assembled cold room with ventilation grate



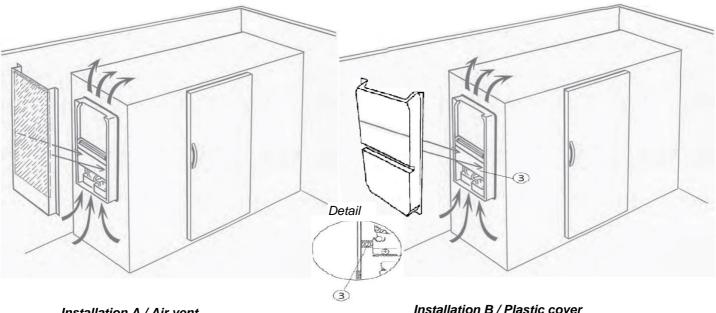
- outside of the cold
- Seen from the outside of the cold
- horizontally Fully installed from the
- Cross-section. See detail 3
- 1. Adapt hole in wall 440x740mm as illustrated. Distance from ceiling to top of light aperture minimum 310 mm. Minimum air flow 200 cm²
- 2. The plug for the mains cable is installed outside the cold room. If it protrudes beyond the plastic cover, the mains cable must be fastened so that it cannot fall down into the condenser fan.
- 3. Build the cold room in accordance with prevailing laws and regulations. See the Thermocold website www.thermocold.no for tips and advice for construction.
- 4. Make an air vent above and below the recess in the wall on the outside of the cold room as illustrated. Min 50x440 mm.
- 5. Cut out for the ventilation grates w420xh110 in the wall on the outside of the cold room at the top and bottom of the air vent.
- 6. Adjust the air barrier against the chipboard/plasterboard between the posts. It should be 80 mm narrower than the thickness of the wall.
- 7. Adjust and attach the air seal 250 mm from the bottom of the recess. It should be 8 and screw it stuck so that it remains pressed between the posts in the air vent. Ref. cross-section figure item 3
- 8. Fix the insulating strips around the opening on the inside of the cold room side using staples or tape.
- 9. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 10. Screw stuck the lower ventilation grate with slats down (2), upper with slats up (1).
- 11. Plug in the mains lead and ensure that the unit starts up.

Installation option 3 - Self-assembled cold room with ventilation grate



- 1. Adapt hole in wall 440x740mm as illustrated. Distance from ceiling to top of light aperture minimum 310 mm. Minimum air flow 200 cm
- 2. The plug for the mains cable is installed outside the cold room. If it protrudes beyond the plastic cover, the mains cable must be fastened so that it cannot fall down into the condenser fan.
- 3. Build the cold room in accordance with prevailing laws and regulations. See the Thermocold website www.thermocold.no for tips and advice for construction.
- 4. Make an air vent above and below the recess in the wall on the outside of the cold room as illustrated. Min 50x440 mm.
- 5. Cut out for the ventilation grates w420xh110 in the wall on the outside of the cold room at the top and bottom of the air vent.
- 6. Adjust the air barrier against the chipboard/plasterboard between the posts. It should be 80 mm narrower than the thickness of the wall.
- 7. Adjust and attach the air seal 250 mm from the bottom of the recess. It should be 8 and screw it stuck so that it remains pressed between the posts in the air vent. Ref. cross-section figure item 3
- 8. Fix the insulating strips around the opening on the inside of the cold room side using staples or tape.
- 9. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 10. Screw stuck the lower ventilation grate with slats down (2), upper with slats up (1).
- 11. Plug in the mains lead and ensure that the unit starts up.

Installation option 4 - Modular cold room, free-standing A/B

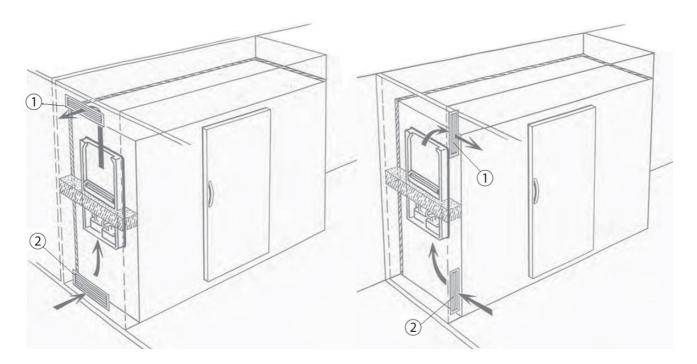


Installation A / Air vent

Installation B / Plastic cover for modular room

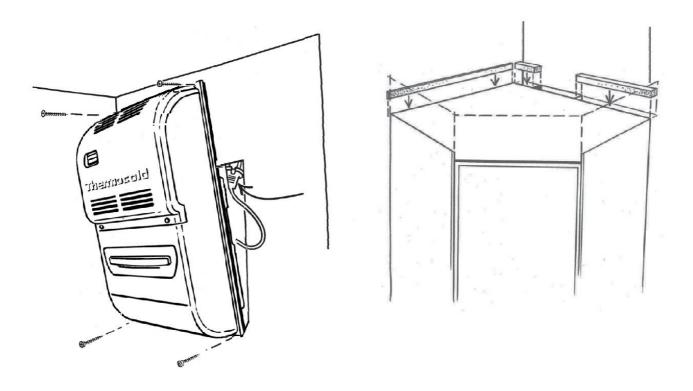
- 1. Ensure that the hole in the modular wall is 440x480 mm Distance from the ceiling to the top of the cooling unit minimum 110 mm. Minimum air flow 200 cm²
- 2. The plug for the mains cable is installed outside the cold room. If it protrudes beyond the air vent, the mains cable must be fastened so that it cannot fall down into the condenser fan.
- 3. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 4. Installation A: Screw the air vent to the outside of the cooling unit. Ensure that the air vent is even with the ceiling of the cold room. (see figure installation A)
- 5. Installation B: The plastic cover for the modular room is installed to the cold room wall, not the cooling unit. Ensure that the recess in the plastic cover is in contact with the air barrier. (see figure installation B and detail 3)
- 6. Plug in the mains lead and ensure that the unit starts up.

Installation option 5 - Modular cold room, free-standing A/B



- 1. Ensure that the hole in the modular wall is 440x480 mm Distance from the ceiling to the top of the cooling unit minimum 110 mm. Minimum air flow 200 cm²
- 2. The plug for the mains cable is installed outside the cold room. If it protrudes beyond the air vent, the mains cable must be fastened so that it cannot fall down into the condenser fan. If the plug is installed behind the ventilation grates, this must be labelled.
- 3. Make a cut for the ventilation grates w420xh110 in the wall on the outside of where the cooling unit is to be placed, horizontally or vertically.
- 4. Make an air vent on the outside of the cold room as illustrated. Min. size 50x440 mm.
- 5. Adjust and attach the air seal 250 mm from the bottom of the recess. Screw it/fasten it so that it remains pressed between the wall and the cooling unit.
- 6.7. Adjust the air barrier along the ceiling so that the warm air exiting the unit does not have an opportunity to circulate and get sucked into the lower end of the unit again. See figure
- 8. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 9. Screw stuck the lower ventilation grate with slats down (2), upper with slats up (1).
- 10. Plug in the mains lead and ensure that the unit starts up.

Installation alternative 6 - Corner refrigerator with air vent



- 1. Ensure that the hole in the modular wall is 440x480 mm Distance from the ceiling to the top of the cooling unit minimum 110 mm. Minimum air flow 200 cm²
- 2. Install the plug 2200mm from the floor and up, and 800mm from the corner and out. NB! Must be conducted by an authorised electrician.

Take the mains cable out over the air vent and attach the mains cable so that it cannot fall down into the condenser fan.

- 3. Lift the unit into position from the cooling room side and fasten with screws in each corner. The gasket should be against the wall, not the cooling unit.
- 4. Plug in the mains lead and ensure that the unit starts up.