

Polarman

TOPPING RAIL

Service, Installation and Care Manual

Please read this manual completely before attempting to install or operate this equipment.
Notify carrier of damage! Inspect all components immediately.



IMPORTANT INFORMATION
READ BEFORE USE
PLEASE SAVE THESE INSTRUCTIONS!

COMMERCIAL REFRIGERATOR SAFETY

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.

Our product instructions will be uploaded on our company official website.



This is the Safety Alert Symbol. This symbol alerts you to potential hazards that can kill or injure you and others. All safety messages will follow the Safety Alert Symbol and either the words "DANGER", "WARNING" or "CAUTION".



Danger means that failure to heed this safety statement may result in severe personal injury or death.



Warning means that failure to heed this safety statement may result in extensive product damage, serious personal injury, or death.



Caution means that failure to heed this safety statement may result in minor or moderate personal injury, or property or equipment damage.

All safety messages will alert you to what the potential hazard is, tell you how to reduce the chance of injury, and let you know what can happen if the instructions are not followed.

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.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

This appliance can be used by children aged from 8 years and above and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Keept the appliance and its cord out of reach of children less than 8 years.

Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

The max. loading of shelves is 10kg.

This appliance is intended to be used in house hold and similar applications in this appliance.

- staff kitchen areas in shops, offices and other working environment;
- farm houses and by clients in hotels, motels and other residential type environment;
- bed and breakfast type environment;
- catering and similar non-retail applications.

The appliance shall be used at an ambient temperature listed according to its climate class:

*32 °C ± 2 °C on appliances of climatic class 0, 1, 2, 3, 4, 6 or 8;
43 °C ± 2 °C on appliances of climatic class 5 or 7.*

The appliance use flammable insulation blowing gas C5H10, disposal of the appliance shall in accordance with the regulations of local authorities.

The appliance provided with double-capped fluorescent lamps, the lamp has to be replaced by identical lamps only.

The key for appliance electric box should be safe kept by qualified persons in order to avoid a hazard.

When positioning the appliance socket-outlets or portable power supplies at the rear of the appliance.

Based on business order(s) to EU market, give true EU authorized representative information on the label with full business name and full EU address in the marking plate.

If the appliance use flammable refrigerant, such as R600a, R290:



WARNING: Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

WARNING: Do not damage the refrigerant circuit.

WARNING: Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.

Handling, moving, and use of the refrigerator or freezer to avoid either damaging the refrigerant tubing, or increasing the risk of a leak

L'opération, le mouvement et l'utilisation du réfrigérant ou le congélateur doivent éviter les dommages du tuyau réfrigérant ou le risque de la fuite.

Cautions – Risk of Fire or Explosion due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with U.S. Government Regulations

Component parts shall be replaced with like components and that servicing shall be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

Les pièces de rechange doivent être remplacées par les composants relatifs et les opérations doivent être faites par les professionnels afin de minimiser le risque d'allumage à cause des parts incorrects ou des opérations impropres.

CAUTION – Risk Of Fire Or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used

DANGER: Risk of child entrapment. Before you throw away your old refrigerator or freezer:
Take off the doors

Lean the shelves in place so that children may not easily climb inside

The instructions shall contain information regarding the maximum loading of each type of shelf.

For appliances which use FLAMMABLE REFRIGERANTS, the instructions shall include information pertaining to the handling, servicing and disposal of the appliance.

An explanation shall be given of the meaning of the alpha-numeric characters, indicating the climatic class of the appliance, that are marked on the appliance.

The installation and operating instructions for appliances that use a flammable refrigerant shall indicate that component parts shall be replaced with like components so as to minimize the risk of possible ignition due to incorrect parts.

The installation instructions for appliances that use a flammable refrigerant shall indicate the appliance is to be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.

Apply the requirements of Annex 101. DVS to appliances using flammable refrigerants: self-contained appliance., All services shall be done by the accredited persons by the manufacturer according to local regulation. Services related to breaking into the refrigerating circuit, opening of sealed components are not allowed to be done in the user condition, must be taken to the designed location **WARNING**

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odour. and MISE EN GARDE

Ne pas utiliser de moyens autres que ceux recommandés par le fabricant pour accélérer le processus de dégivrage ou pour nettoyer l'appareil.

L'appareil doit être entreposé dans un local ne contenant pas de sources d'inflammation permanentes (flammes nues, appareil à gaz ou dispositif de chauffage électrique en fonctionnement, par exemple).

Ne pas percer ou brûler.

Attention, les fluides frigorigènes peuvent ne pas dégager d'odeur.

- **WARNING:** Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.

- **WARNING:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

- **WARNING:** Do not damage the refrigerant circuit.

- **WARNING:** Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.

For appliances which use flammable insulation blowing gases, the instructions shall include information regarding disposal of the appliance.

The height of the triangle in the symbol " Caution: risk of fire" shall be at least 15 mm.

The height of the letters used for the marking of the type of flammable insulation blowing gas shall be at least 40 mm.

WARNING

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The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames an operating gas appliance or an operating electric heater.

Do not pierce or burn.

Be aware that refrigerants may not contain an odour.

MISE EN GARDE

Ne pas utiliser de moyens autres que ceux recommandés par le fabricant pour accélérer le processus de degivrage ou pour nettoyer l'appareil.

L'appareil doit être entreposé dans un local ne contenant pas de sources d'inflammation permanentes (flammes nues, appareil à gaz ou dispositif de chauffage électrique en fonctionnement, par exemple).

Ne pas percer ou brûler.

Attention, les fluides frigorigènes peuvent ne pas dégager d'odeur.

Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of **FLAMMABLE REFRIGERANTS**, the sensitivity might not be adequate. or might need recalibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine can react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system. or isolated (by means of shut off valves) in a part of the system remote from the leak. All services shall be done by the accredited persons by the manufacturer according to local regulation. Services related to breaking into the refrigerating circuit, opening of sealed components are not allowed to be done in the user condition, must be taken to the designed location.

Sealed electrical components shall be replaced.

Intrinsically safe components must be replaced.

Item a) DANGER - Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing. and
DANGER-Risque d'incendie ou d'explosion. Fluide frigorigène inflammable utilisé. Ne pas utiliser des moyens mécaniques pour décongeler le réfrigérateur. Ne pas perforer la conduite de fluide frigorigène.

Item b) DANGER - Risk Of Fire Or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing. And
DANGER-Risque d'incendie ou d'explosion. Fluide frigorigène inflammable utilisé. Doit uniquement être réparé par un technicien de service formé. Ne pas perforer la conduite de fluide frigorigène.

Item c) CAUTION - Risk Of Fire Or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Install or Service This Product. All Safety Precautions Must be Followed. and
ATTENTION-Risque d'incendie ou d'explosion. Fluide frigorigène inflammable utilisé. Consulter le guide du propriétaire ou le manuel de réparation avant d'essayer d'installer ou de réparer ce produit. Toutes les précautions de sécurité doivent être prises.

Item d) CAUTION-Risk Of Fire Or Explosion. Dispose Of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used. and
ATTENTION - Risque d'incendie ou d'explosion. Mettre au rebut conformément aux règlements fédéraux ou locaux. Fluide frigorigène inflammable utilisé.

Item e) CAUTION-Risk Of Fire Or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used. and
CAUTION - Risque d'incendie ou d'explosion en cas de perforation d'une canalisation de fluide frigorigène; suivez attentivement les instructions de maintenance. Fluide frigorigène inflammable utilisé.

Item f) DANGER-Risk of Fire or Explosion due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance. with National Regulations. and
DANGER-Risque d'incendie ou d'explosion dû à l'utilisation d'un fluide frigorigène. Suivez attentivement les instructions de maintenance conformément aux règlements nationaux.

Note:

a) The marking specified in Item (a) shall be provided on or near any evaporators that can be contacted by the user.

b) The markings specified in Items (b) and (c) shall be provided near the machine compartment.

c) The marking specified in Item (d) shall be provided on the exterior of the refrigerator.

d) The marking specified in Item (e) shall be provided near any and all exposed refrigerant tubing.

e) The marking specified in Item (f) shall be provided on appliance packaging if factory charged.

f) All the markings shall be in letters no less than 6.4mm (1/4in) high.

The marking in Item b) shall also contain the symbol "Caution, risk of fire" (Fire in a triangle): The color and format of this sign shall be as shown in Symbol W021 in ISO 7010. The perpendicular height of the triangle containing the "Caution, risk of fire" sign shall be at least 15 mm (9/16in).

g) Refrigeration tubing or other devices through which the refrigerant is intended to be serviced shall be painted, colored red. This color shall be present at all places where service puncturing or otherwise creating an opening in the refrigerant circuit might be expected. In the case of a process tube on a compressor, the color mark shall extend at least 2.5cm (1 inch) from the compressor.

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CONGRATULATIONS ON YOUR NEW COOLER

Note these instructions apply to all coolers. Installations of equipment may not exactly correspond to your model.

INSTALLATION

Make sure that the cooler is not damaged on arrival. Your supplier must be notified of any transport damage, within 24 hours of delivery.

The cooler should be placed in a warm, dry room, with suitable ventilation.

Place the cooler in such a way, as to allow the free circulation of air around it. That is, with at least 100mm space all around it.

Never place the cooler in strong sunlight. The cooler be placed on a level surface. Make sure that it does not rock.

If the cooler has been stored or transported cold, it must not be started before the compressor is judged to have reached a temperature at least +5°C. It is recommended to clean up the cooler before starting it.

SPECIFICATION

TOPPING RAIL								
MODEL#	V/Hz/Ph	AMPS	PAN 1/6 Size	HP	BTU	CHARGE OZ	SHIP WEIGHT LBS	NEMA PLUG
PLM-PD40	115/60/1	2.0	6	1/5	1670	3.17	80	5-15P
PLM-PD46	115/60/1	2.0	8	1/5	1670	3.17	117	5-15P
PLM-PD55	115/60/1	2.0	10	1/5	1670	3.35	107	5-15P
PLM-PD60	115/60/1	2.0	12	1/5	1670	3.35	112	5-15P
PLM-PD63	115/60/1	2.0	14	1/5	1670	3.35	140	5-15P

TOPPING RAIL WITH FLAT GLASS								
MODEL#	V/Hz/Ph	AMPS	PAN 1/6 Size	HP	BTU	CHARGE OZ	SHIP WEIGHT LBS	NEMA PLUG
PLM-PDX-40G	115/60/1	2.0	6	1/5	1670	3.17	80	5-15P
PLM-PDX-48G	115/60/1	2.0	8	1/5	1670	3.17	117	5-15P
PLM-PDX-55G	115/60/1	2.0	10	1/5	1670	3.35	107	5-15P
PLM-PDX-60G	115/60/1	2.0	12	1/5	1670	3.35	112	5-15P
PLM-PDX-63G	115/60/1	2.0	14	1/5	1670	3.35	140	5-15P

ELECTRICAL CONNECTION

The cooler must be connected to a socket with the correct voltage/frequency, as show on the nameplate. The standard for u.s is 115V/50HZ. Voltage variations of $\pm 10\%$ are acceptable. Greater variations can damage the cooler, and in such cases the factory warranty is not valid. In the case of extreme voltage variation, above or below the standard, your local supplier will be able to advise you, what to do.

The cooler requires extra protection according to the Danish Heavy Current Regulations.

This also applies, if a new cooler is replaced, which did not have such protection. The purpose of extra protection, is to protect the user from dangerous electric shocks, in the case of defect.

OPERATION INSTRUCTIONS

The temperature in the cooler is automatically regulated by a pre adjusted thermostat.

The position of the cooler, the ambient temperature, the number of times the lid is opened and for how long the lid is opened, all these factors affect the temperature in the cooler, which should therefore not be placed in sunlight or closed to a heat-radiating surface.

If your cooler is fitted with a lock, the key should be kept out of the reach of children. If your new cooler is to replace an older one, which is not in use any more, you should remove the lock mechanism, on the old one, before disposing it.

STORAGE OFF FOOD STUFFS

The cooler is only designed as a conserver, and is the not suited to cold freeze foodstuffs. In other words, only refrozen food must be placed in the cooler. Next to that the cooler must not be filled beyond the height limit of the contents line, or in cases where there is no such line, to within 100mm below the lid. This is to ensure the product temperature less than $+2^{\circ}\text{C}$.

OPERATION



Do not throw items into the storage area. Failure to heed these recommendations could result in damage to the interior of the cabinet.

Refrigerated cycle

Refrigerators: During the refrigeration cycle, the evaporator fans will run continuously even when one or more doors are open. The door switch will activate the lights when opened.

1. Every 6 hours, the unit will turn off and to allow the evaporator coil to defrost. The controller now displays the defrost symbol. When the coil temperature reaches 41°F or after 20 minutes of defrost, the unit will turn on again.
2. Anti-condensation heaters on door frames work in conjunction with the compressor.
3. The factory setting for the temperature range is 34°F to 38°F.

On/Off Switch:

An on/off switch is located on the front of the panel. When the unit is on, the switch will glow green.

SOLID-STATE THERMOSTAT DESCRIPTIONS

1. FRONT PANEL COMMANDS



SET: To display target set point; in programming mode it selects a parameter or confirms an operation.

❄️ (DEF) To start a manual defrost

▲ (UP) To view the latest alarm occurrence; in programming mode it browses the parameter codes or increases the display value

▼ (DOWN) To view the latest alarm occurrence; in programming mode it browses the parameter codes or decreases the display value

KEY COMBINATION

▲ + ▼ To lock & unlock the keyboard

SET + ▼ To enter in programming mode

SET + ▲ To return to the room temperature display

1.1 Function of LEDS

LED	MODE	SIGNIFICATO
❄️	On	Compressor enabled
	Flashing	Anti-short cycle delay enabled (AC parameter)
❄️💧	On	Defrost in progress
	Flashing	Dripping in progress
🌀	On	Fans output enabled
	Flashing	Fans delay after defrost
°C	On	Measurement unit
	Flashing	Programming mode
°F	On	Measurement unit
	Flashing	Programming mode

2. MAIN FUNCTIONS

2.1 HOW TO SEE THE SETPOINT

1. Push and immediately release the **SET** key: the display will show the set point value.
2. Push and immediately release the **SET** key or wait for 5 seconds to display the sensor value again.



2.2 HOW TO CHANGE THE SETPOINT

1. Hold the **SET** key for more than 2 seconds to change the set point value.
2. The value of the set point will be displayed and the ❄️ LED starts blinking.
3. To change the set value push the ▲ or ▼ key within 10s.
4. To set a new point value, push the SET key again or wait 10s.

2.3 HOW TO START A MANUAL DEFFROST

Hold the ❄️ key for more than 2 seconds and the manual defrost will start



2.4 HOW TO LOCK THE KEYBOARD

1. Hold the ▲ and ▼ keys for more than 3s.
2. The "POF" message will be displayed and the keyboard will be locked. At this point, it will be possible only to see the set point or the MAX or Min temperature stored.
3. If a key is pressed more than 3s the "POF" message will be displayed.



2.5 HOW TO UNLOCK THE KEYBOARD

Hold the ▲ and ▼ keys together for more than 3s, till the "POF" message is displayed.

3. ALARM SIGNALS

HOW TO SEE THE ALARM AND RESET THE RECORDED ALARM

1. Hold the ▲ or ▼ key to display the alarm signals.
2. When the signal is displayed, hold the **SET** key until the "rst" message is displayed, and push the **SET** key again. The "rst" message starts blinking and the normal temperature will be displayed.

Message	Cause	Outputs
"P1"	Room probe failure	Compressor output according to par. "Con" and "COF"
"P2"	Evaporator probe failure	Defrost end is timed
"HA"	Maximum temperature alarm	Outputs unchanged.
"LA"	Minimum temperature alarm	Outputs unchanged.
"dA"	Door open	Regulation restarts
"EA"	External alarm	Output unchanged.
"CA"	Serious external alarm (i1F=bAL)	All outputs OFF.
"CA"	Pressure switch alarm (i1F=PAL)	All outputs OFF

MAINTENANCE

This cooler can be cleaned using warm water and a mild detergent. Rinse with clean water to finish off.

Never use detergents that contain chlorine.

The lid may be cleaned in the same way as the cooler.

If a condenser and associated fan are fitted at the back bottom of the cooler, they can gather dust and dirt. If cleaning is necessary, they should be vacuumed with a soft brush.

Please note that the parts behind the protective grille can be hot and rotating.

TROUBLE SHOOTING

If you are having problems with your cooler, please check the following point before calling service personnel:

- Is the cooler connected to the power supply?
- Is the socket switch on?
- Is the fuse in the switch cabinet intact?
- Has the earth leak circuit breaker (if there is one) cut out?
- Has there been power cut?

If the cooler is in a place that is very hot or with bad ventilation, make sure to provide adequate ventilation. If the condenser mentioned in Section Maintenance is not clean, make sure to vacuum it.

If the above points have been checked and the cooler is still not working, please call service personnel. Inform them the nature of the problem, the type of cooler, serial number and item number (provided on the nameplate at the back of the cabinet).

Do not open the cabinet, as every opening hastens the thawing point. As a rule, the goods will not suffer damage at the first 12 hours. If more time passes, the goods must be moved to another cooler.

DISPOSAL

When a worn-out cooler is to be disposed off, this must be done in a correct manner, with respect to the environment. Please be aware of the rules covering the disposal of such terms; there may be special requirements or conditions to be observed.

Information about disposal may be obtained from:

- your supplier;
- the relevant authorities (the Local Authority, environmental agencies, etc.).

SPECIAL POINTS TO NOTE

The information contained in these instructions for use, was correct at the time of printing. On account of our constant product development, however, we reserve the right to make changes in the cooler described here. Naturally, we will attempt to keep instructions for use up to date.

If you are in doubt as to the correct use of the cooler, please contact your supplier, who will be able to advise you.

The producer is not responsible for accident or problems, occurred as a result of wrong connection of the cooler.

PLM-PDX-40G/PLM-PDX-48G/PLM-PDX-55G/PLM-PDX-60G/PLM-PDX-63G



