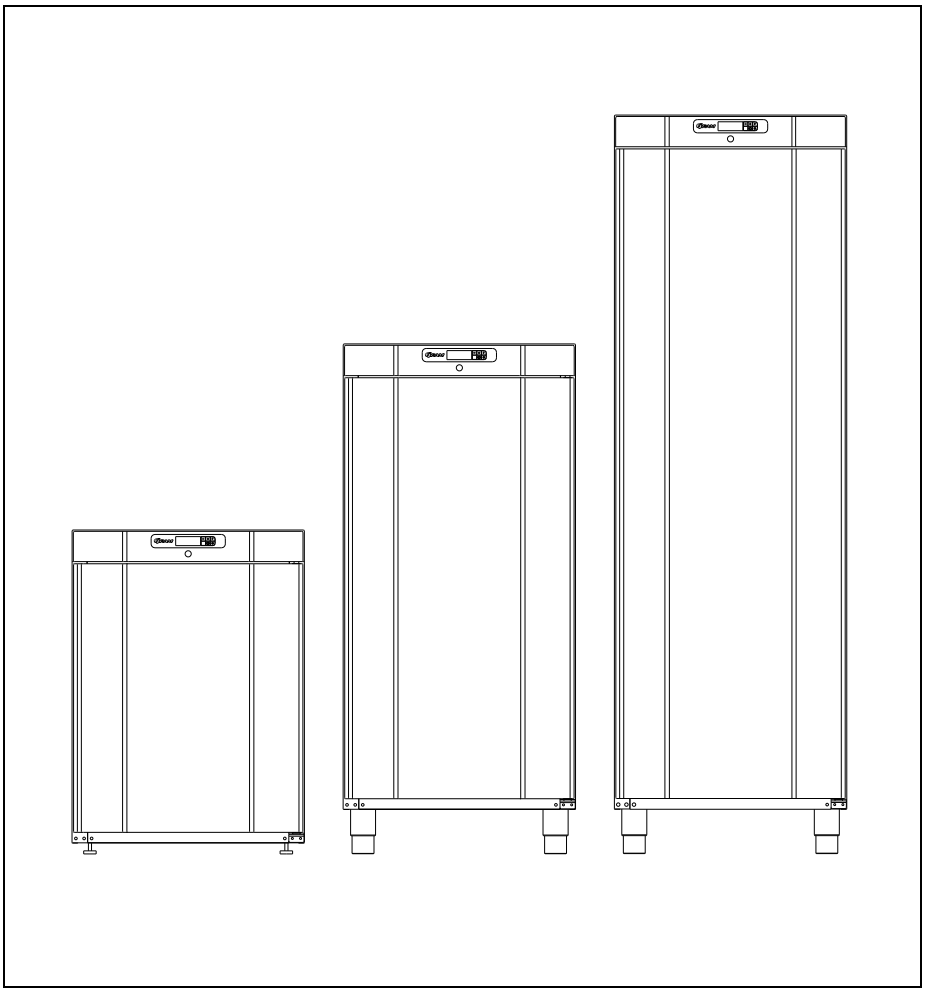
GRAM COMPACT 220/320/420



Betjeningsvejledning
User manual
Bedienungsanleitung
Mode d’emploi
Gebruiksaanwijzing
Bruksanvisning

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ENGLISH

Thank you for choosing a quality product from Gram Commercial.

This manual will advise you how to install, use and maintain your new product.

Before our products leave the factory, they undergo a full function and quality test.

Should you nevertheless experience problems with the product, then contact your local dealer. Gram Commercial representatives and dealers placed all over the world are ready to help you.

Please refer to your dealer for information about the warranty coverage of your new Gram product.

Any warranty is subject to correct use according to specifications in this user manual, where e.g. common maintenance and eventual repairs are carried out by authorized technicians with proper knowledge of the product and only using original spare parts.

Changes in installation and other use of the product than specified in this manual, might affect the operation and durability of the product.

The manual is written according to our current technical knowledge. We constantly work on updating this information, and we reserve the right to make technical changes.

Intended use

The product is intended for the storage of foodstuffs in non-household environments but not for the display to or access by customers.
The product is designed for storage at a constant temperature and is not to be used for chilling down or freezing hot/fresh foodstuff.
The product is only to be used for the purpose for which it has been expressly designed. Any other use could cause that the foodstuff stored in the product is not kept at the correct temperature or even cause damage to the product.

The product is not suited for storing blood plasma, laboratory samples, pharmaceuticals or similar substances.

The manufacturer will not be held liable or responsible for any damage caused by improper, incorrect or unreasonable use of the product.

Safety information

Important

Description of symbols used in this manual.

Warning Lacking observation to these instructions might result in accidents with personal injury.

Important If these instructions are not observed, the product might be damaged or destroyed.

Be aware that Gram Commercial has taken precautions to ensure that the safety of the product is in order.

Please read carefully the following information regarding safety.

It is important, that everyone who are to use or install the product, to have access to this manual.

This appliance is not intended for use by persons 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.

The appliance might contain parts with sharp edges in the compressor compartment, and in the inside compartment.

The appliance is not to be transported on a sack truck, there is a danger of losing the balance, causing danger to persons.

Do not pull the power cord to disconnect the appliance, or when moving the appliance.

Location

When receiving the cabinet, check the packaging material for damage.

If any damage occurs at the packaging material, it should be considered if the cabinet might have been damaged too. If the damage is substantial, please contact your dealer.

How to remove the transport pallet:

<u>COMPACT 220 with skids/small wheels:</u>

The cabinet can be lifted off the pallet. (see Fig.1)

COMPACT 220/320/420 with castors or legs:
The cabinet is tilted slightly backward, and the front part of the pallet can be removed. Then the cabinet is tilted slightly forward, and the rear part can be removed. (see Fig.2)

This task requires at least 2 persons.

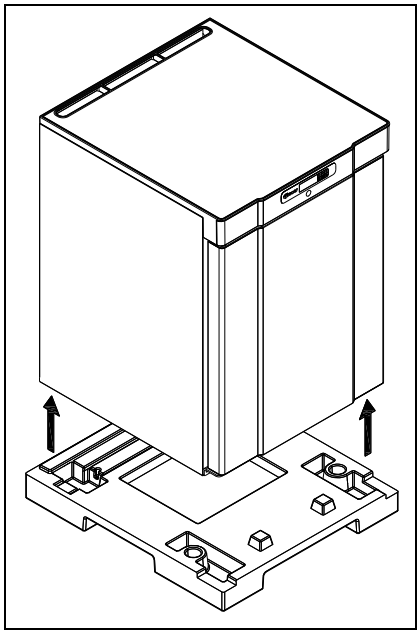


Fig.1

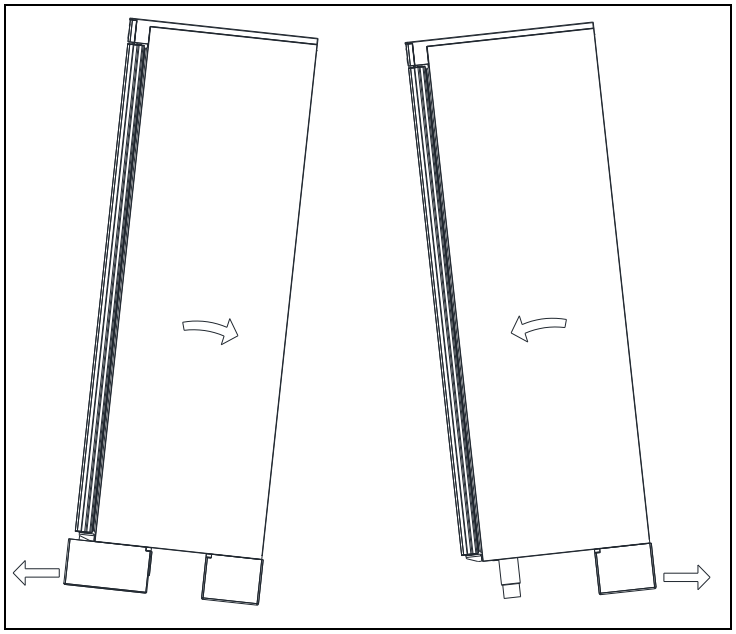


Fig. 2

If the cabinet has been transported in horizontal position it must stand upright at least 2 hours before it is started to allow the oil from the compressor to run back.

Because of the heavy weight of the product, the floor might be damaged or scratched when moving the product.

Correct set up gives the most effective operation.

The product should be located in a dry and adequately ventilated room.

To ensure efficient operation, it may not be placed in direct sunlight or against heat-emitting surfaces. The product is designed to operate in an ambient temperature between +16°C and +30°C.

Avoid placement of the product in a chlorine/acid-containing environment (swimming bath etc.) due to risk of corrosion.

Parts of the product is equipped with a protecting film, which should be removed before use.

Clean the product with a mild soap solution before use.

The set-up place must be level and horizontal.

For versions with legs, use the adjustable legs to make sure that the product stands level and upright, see Fig.3.

For versions with castors, the locking devices of the two front castors must be activated, when the product is in place, see Fig.3. The base must be level, and the product may not be placed on frames or the like.

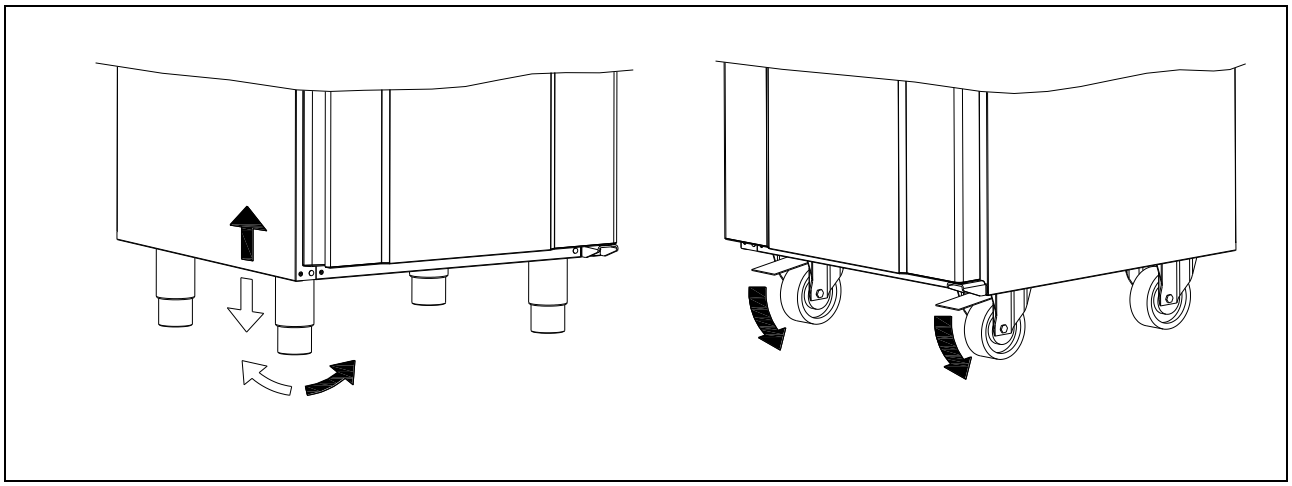


Fig. 3

Cabinets equipped with a glass door, must be fastened to a stable surface to ensure the cabinet does not tilt, when the door is open. Brackets for fastening are supplied with the cabinet (fasteners not supplied, use fasteners according to wall material/type).

See how to mount brackets in Fig.4

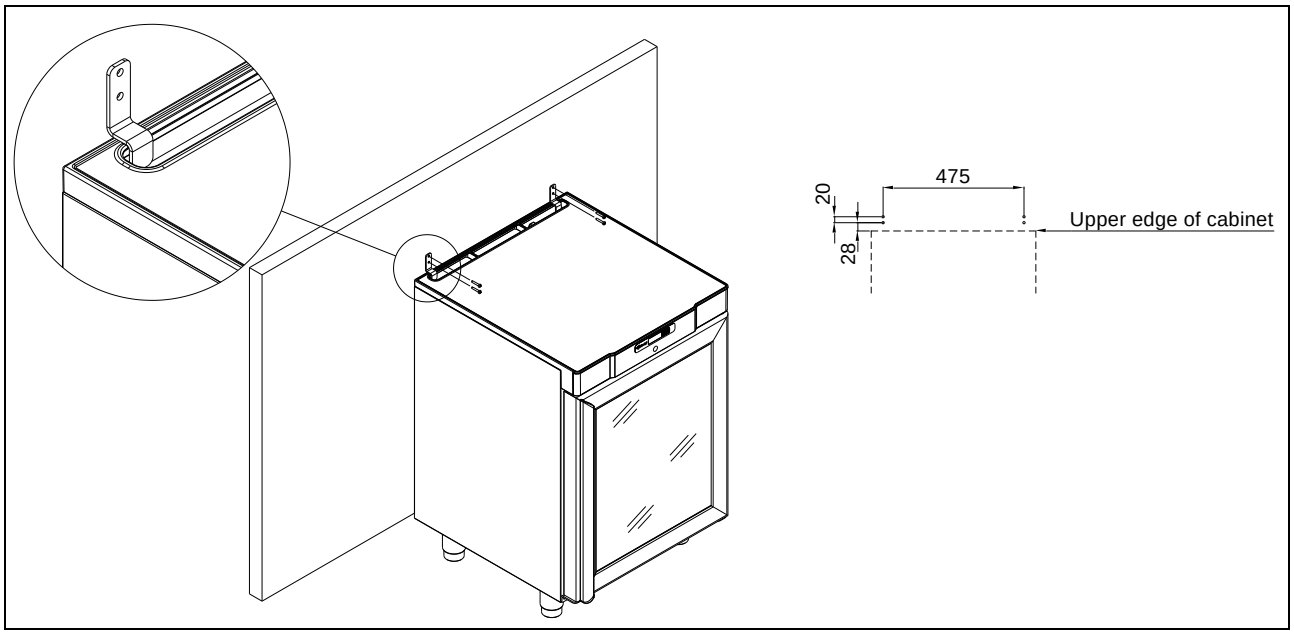


Fig. 4

⚠ To ensure that users, surroundings and stored items are not injured/damaged if the cabinets tilts, these brackets must be mounted.

The cabinet can be installed freestanding, against a wall or COMPACT 220 can be built under a worktop.
The cabinet must have sufficient ventilation and free air circulation beneath, above and behind the cabinet. There must be a minimum clearance of 30 mm above the cabinet, and 20 mm at the sides.

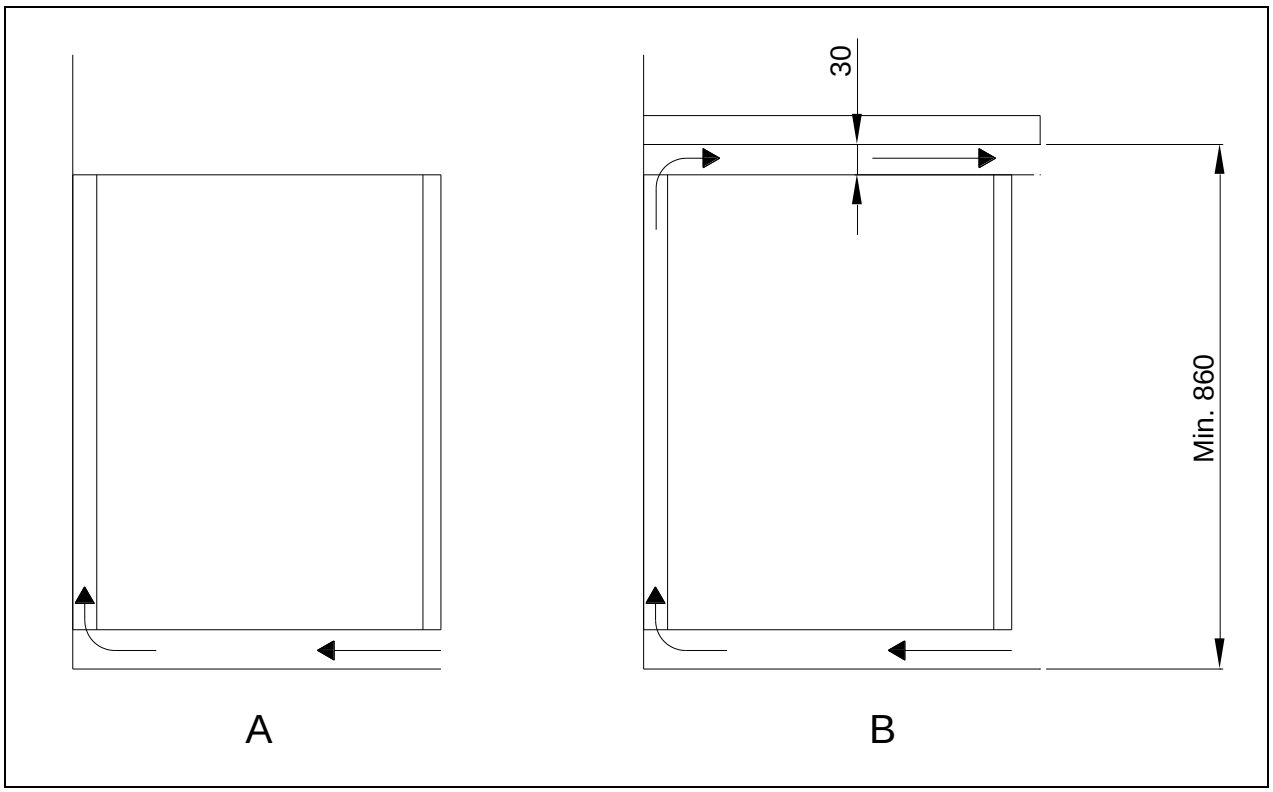


Fig. 5

Optimizing the energy consumption

- Correct set up gives the most effective operation.
- The product should be located in a dry and adequately ventilated room.
- To ensure efficient operation, it may not be placed in direct sunlight or against heat-emitting surfaces. The product is designed to operate in an ambient temperature between +16°C and +30°C.
- Do not keep the door open for too long.
- Do not set the temperature setpoint too low.
- The product should be placed as close as possible up against the wall.

General description

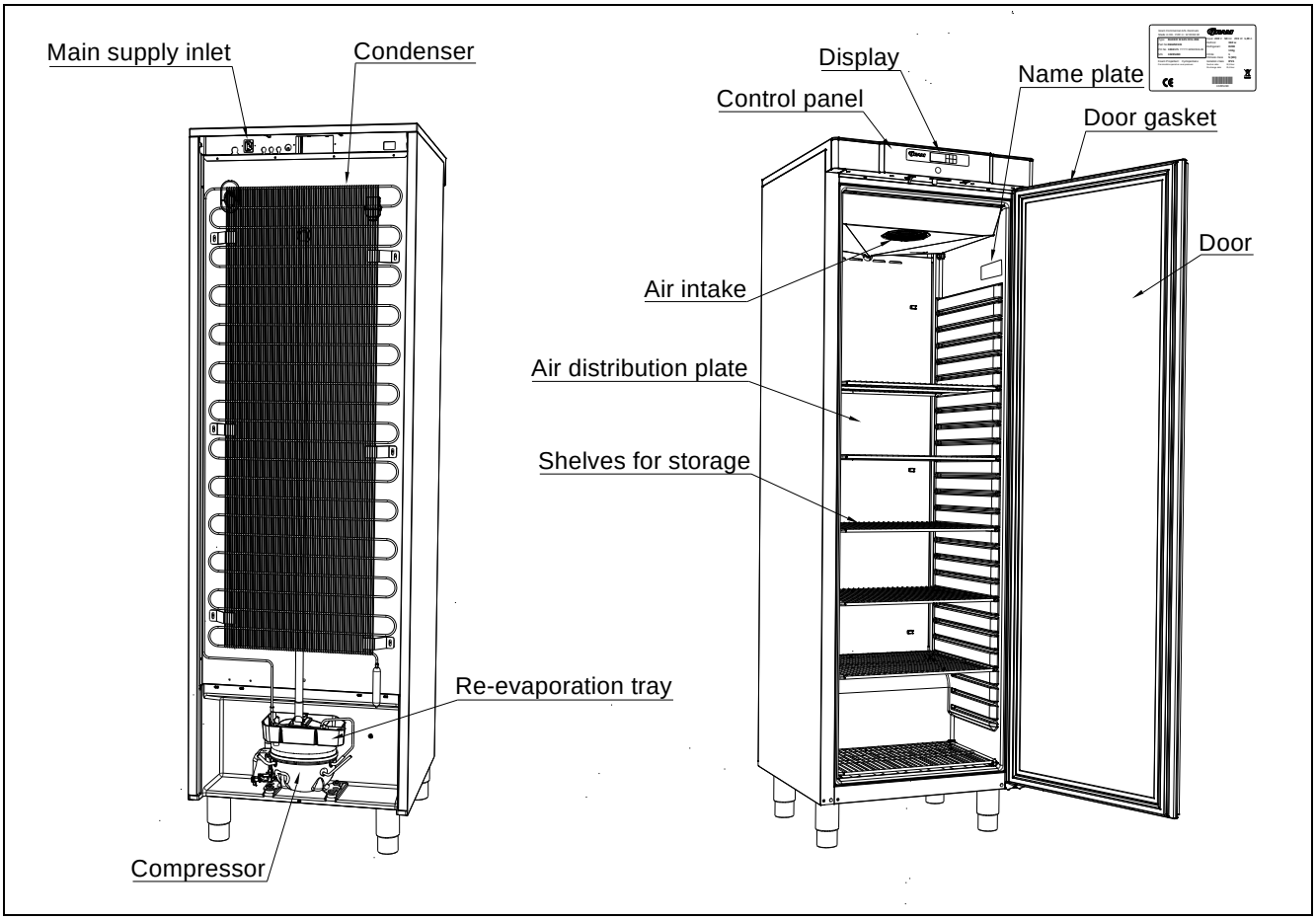


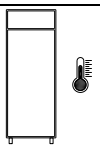
Fig. 6

Refrigerant / GWP value

Refrigerators	Refrigerant	Charge kg	GWP	CO_2 equivalent
COMPACT K 220	R600a	0,033	3	0,10
COMPACT KG 220	R600a	0,031	3	0,09
COMPACT K 320	R600a	0,043	3	0,13
COMPACT KG 320	R600a	0,043	3	0,13
COMPACT K 420	R600a	0,045	3	0,14
COMPACT KG 420	R600a	0,045	3	0,14
Freezers				
COMPACT F 220	R600a	0,029	3	0,10
COMPACT FG 220	R600a	0,029	3	0,10
COMPACT F 320	R600a	0,035	3	0,11
COMPACT F 420	R600a	0,060	3	0,18

Climate / temperature class

Products are tested according to the following climate and temperature classes.
Information about the product's climate and temperature class can be found on the name plate (see fig.6)

Climate class	
3	25°C / 60 % RH
4	30°C / 55 % RH

Temperature class	
L1	-18°C
M1	+5°C

Electrical connection

Read the text below thoroughly before electrical connection.
Connect the power cord found at the back of the cabinet to main supply inlet (see fig 6).

The product is intended for connection to alternating current. The connection voltage (V) and frequency (Hz) are shown on the name plate in the cabinet (see Fig.6). Only the supplied cord is to be used.

Never use an extension cord for this appliance!
If a wall socket is placed in a longer distance than the length of the supplied power cord, contact an electrician to establish a wall socket within the range of the supplied power cord.

If the product is defective, it must be examined by a properly skilled technician with proper knowledge of the product during the warranty period.
Outside the warranty period, it is advisable to use the service advised by your dealer. If this is not the case, assistance is required from a properly skilled technician with proper knowledge of the product.

Always disconnect the power if interruptions in power supply occur, and when electrical parts are removed/put on, and before cleaning and maintenance of the product.

Repairing of electrical/technical parts may only be performed by properly skilled technicians with proper knowledge of the product.

Do not use the product before all coverings are installed, so that live or rotating machine parts cannot be touched.

The product is not to be used outdoor.

All earthing requirements stipulated by the local electricity authorities must be observed. The plug and wall socket should then give correct earthing. If necessary, contact an electrician.

Make sure the product is switched off at the socket before service is performed on electrical parts. It is not sufficient to switch off the product by the START/STOP key as there will still be voltage to some electrical parts of the product.

General use

Do not damage the refrigeration system parts.

During normal operation, some parts of the refrigeration system in the compressor compartment might reach high temperatures and could therefore cause burns if touching these components.

Do not use electrical devices inside the product.

To ensure correct and efficient air flow in the cabinet, the shaded areas must be kept free of items (see Fig. 7).

All items to be stored, that are not wrapped or packed, must be covered in order to avoid unnecessary corrosion of the inner parts of the cabinet.

If any controller parameters are changed from default, this could cause that the product is not functioning normally, and harmful temperatures could damage items that are kept inside the product.

If the product is turned off, wait minimum 3 minutes before turning it on again. This is to protect the compressor from damage

Maximum loading of wire shelf: 40 kg

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

Be aware, if bottles are stored near the air outlet, they may freeze up and break, causing a risk of injury (only K and KG products).

Do not overpack the product with foods. Allow some space between them to ensure a good airflow.

Moist or fresh foods and those with a strong smell should be wrapped up in a plastic film or packed in a container. Otherwise the food may dry out or give their smell to other foods.

Foods containing acetic acid or yeast should be wrapped up in plastic film. Otherwise they may accelerate corrosion of the evaporator and metal parts, resulting in failure.

To ensure correct and efficient air flow in the product, the shaded areas and the area above the top load line must be kept free of items. (see Fig. 7)

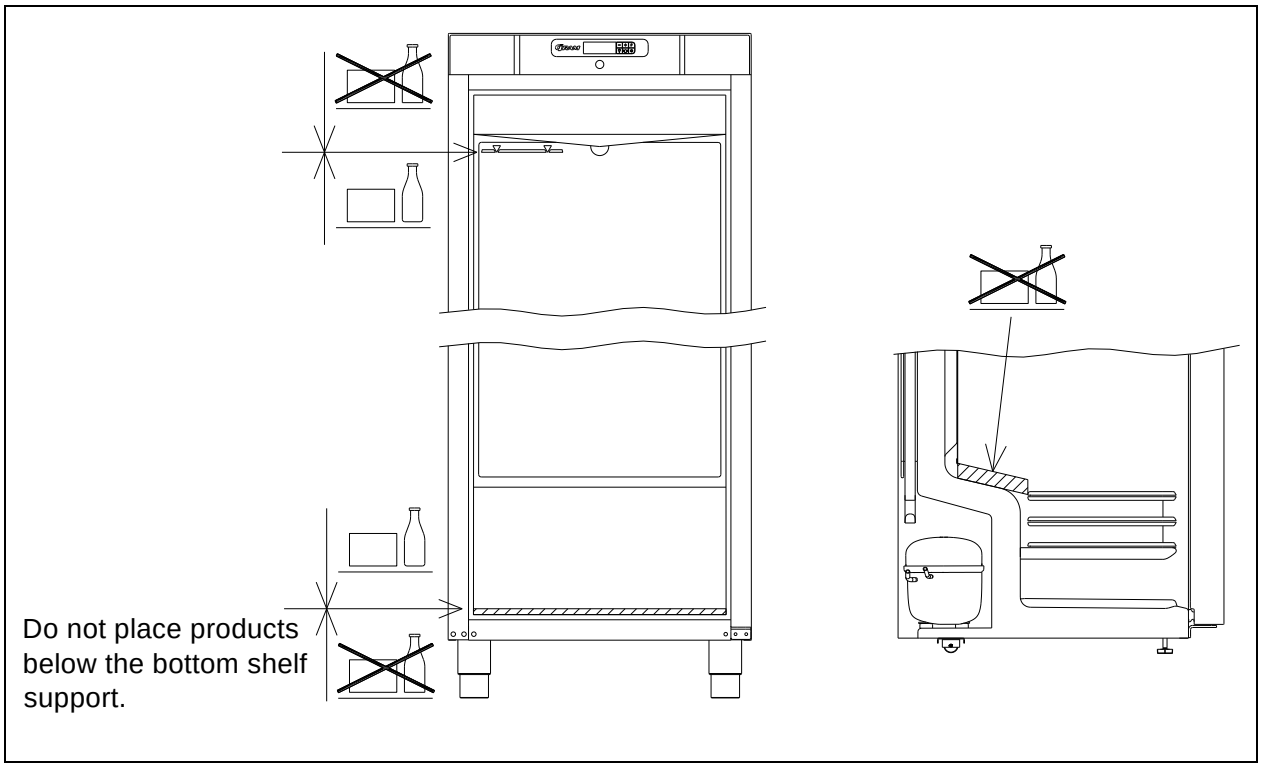
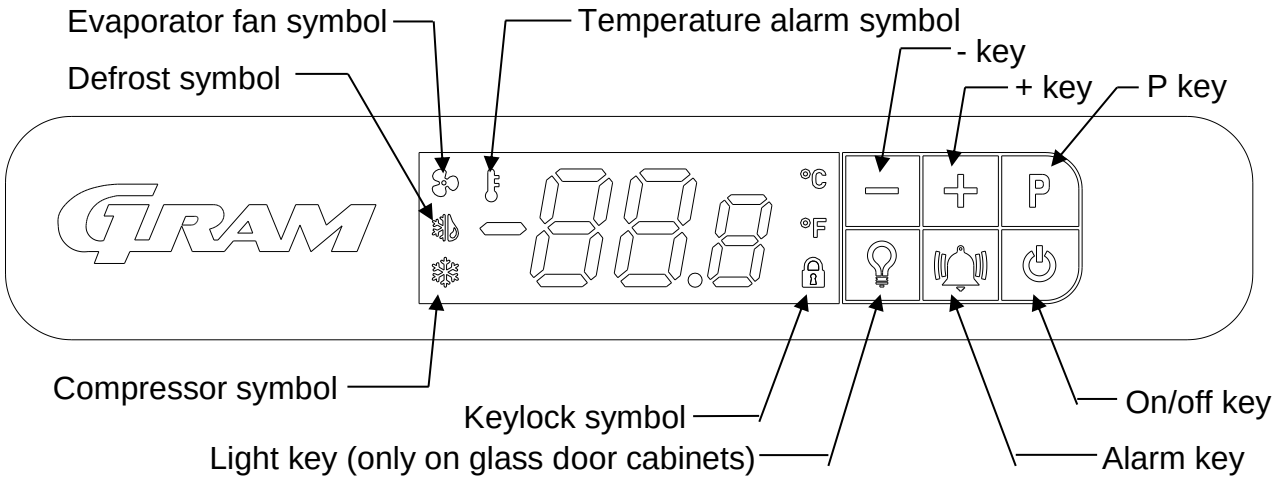


Fig. 7

Operating the product

Display overview



When the product is connected to main supply a short boot sequence is performed. During this all light segments in the display are lit.

After that, the controller starts up in normal operation mode.

If the cabinet is not turned on when connecting it to main supply, the display will show oFF.

To turn the cabinet on, push and hold ⏻ for 5 seconds.

The controller starts up in normal operation mode displaying the current cabinet temperature.

The refrigeration system will follow the factory default set temperature:

For refrigerators (K and KG) the set temperature is 5°C (adjustable from 2 to 12°C)
For freezers (F and FG) the set temperature is -18°C (adjustable from -10 to -22°C)

To turn the cabinet off, push and hold for 5 seconds.

Control lights

The following control lights are located on the display:

	Compressor symbol. This LED is on while the compressor is running. Flashes during temperature setting.
	Defrost symbol. This LED is lit constantly during the defrosting cycle.
	Evaporator fan symbol. This LED is on while the evaporator fan is running.
	Temperature alarm symbol. This LED is on if a temperature alarm occurs.

Keylock

When is lit the display keys are locked.

To unlock the keys:

Push and hold any key for 5 seconds to unlock the controller keys. When the controller has been successfully unlocked, turns off.

Automatic keylock:

Not touching the controller for two minutes, will automatically activate the keylock.

Adjusting the cabinet temperature

To change the set temperature, push P once, flashes, and the current set point is shown in the display, with one decimal place after the comma.

Push + or − to change the temperature set point. The new set point temperature is confirmed/saved by pushing P once. The display returns to normal operation.

To exit without change push once, or do not touch any key for 60 seconds

After power failure the controller returns to stored settings.

Setting temperature alarm parameters

Adapting the below parameters to suit the real conditions of use, it is important to ensure that the settings do not make the alarm system either too sensitive or too insensible.

Adjusting the difference between temperature set point and **hAL** / **LAL** alarm settings to narrow, will result in unintended alarms. A narrow gab combined with a too short **dAh** could result in an **AH** alarm, just by opening the door.
dAh should never be adjusted to less than 30 minutes.

To access the temperature alarm parameters, push and hold and P simultaneously for 5 seconds. The display will flash the first temperature alarm parameter **hAL**.

To access the individual parameters push P.

To move between and adjust the parameters use + and —.

Push P to store the new setting. The controller automatically jumps to the next parameter.
Adjustable parameters are:

		Factory default
hAL	**H**igh **A**larm **L**imit	+ 25° C
LAL	**L**ow **A**larm **L**imit	- 29° C
dAh	Time **d**elay **A**larm **h**igh	120 minutes
dAL	Time **d**elay **A**larm **L**ow	20 minutes
Atd	**A**larm **t**emperature **d**ifferential	2K

The above parameter settings will result in the following:
To trigger a high temperature alarm **(Ah)** the cabinet temperature must be above **hAL** = 25°C for more than **dAh** = 120 minutes. This will result in being lit and the display alternating between **Ah** and the present cabinet temperature.
Once the temperature goes below 23°C **(hAL – Atd)** the alarm changes from present to being logged. The display will show current temperature and will remain lit indicating there has been a temperature alarm.
To trigger a Low temperature alarm **(AL)** the cabinet temperature must be below **LAL** = -29°C for more than **dAL** = 20 minutes. This will result in being lit and the display alternating between **AL** and the present cabinet temperature.
Once the temperature goes above -27°C **(LAL + Atd)** the alarm changes from present to being logged. The display will show current temperature and will remain lit indicating there has been a temperature alarm.

Temperature alarms

The following temperature alarms can be displayed:
Ah **A**larm **h**igh temperature
AL **A**larm **L**ow temperature
If an alarm occur, **Ah** or **AL** will be shown alternating with the current temperature.
If the temperature gets back within the accepted limits, the current temperature will be shown in the display and will remain lit until the alarm has been reset. After 3 days will be turned off, but the alarm will still be kept in the alarm log.

<u>Displaying alarms:</u>
The temperature alarm log stores information related to the latest 10 temperature alarms (named A 1 to A10). If a new alarm occurs the oldest alarm (A10) will be erased.

Push once to open the log.

- If there is no present or logged temperature alarm the display will show "**no**" flashing for 4 seconds. After that the controller will revert to normal operation.

- If there are present or logged temperature alarms the display will show the most recent temperature alarm being:

  A 0 Present / ongoing temperature alarm.
  A 1.. A10 Not present temperature alarms logged

Once the cabinet temperature, related to a present temperature alarm (A 0), is no longer outside the alarm ranges, this A 0 alarm becomes the new A 1. Etc.

Use + and − to navigate between the different alarms.

Push P to open a temperature alarm in order to show:

Example 1 – alarm A 0: (Present temperature alarm)

Ah Indicating it is a high temperature alarm (AL indicating a low temperature alarm)
10.0 the maximum temperature in °C during the alarm (If AL the minimum temperature)

dur alarm duration until now

01h the alarm has been ongoing for 1 hour

15' …. and 15 minutes

Example 2 – alarm A1 to A10: (alarms in the log – not present)

Ah Indicating it is a high temperature alarm (AL indicating a low temperature alarm)
11.0 the maximum temperature in °C during the alarm (If AL the minimum temperature)

dur alarm duration
01h the alarm lasted for 1 hour
15' …. and 15 minutes
tSE time since the end of the alarm
08h the alarm ended 8 hours ago (maximum 99 hours)

Each value is displayed alternately for approx. 1 second.

It is not possible to reset or delete a present temperature alarm A 0

Resetting alarm symbol

Look through all non-present alarms, after each alarm Push P to verify having seen the alarm. To exit an alarm without verifying, push ⏻. Once all alarms have been verified, the alarm symbol will turn off, unless there is a present alarm.

Push ⏻, to leave alarm log.

Deleting alarms:

Push 🔔 once to open the log.

Display shows A 1. Delete all non-present temperature alarms by holding 🔔 for 5 seconds. Once the alarm log is deleted the display flashes " - - - " for 3 seconds.

Messages and alarms shown in the display

OP **OP** shown constantly, indicates door open. If alternating with temperature, door has been open for more than 2 minutes. Close the door and **OP** will disappear.

E1 **E1** indicates defective room sensor. Monitor temperature until replaced. **Request service assistance immediately**.

E2 Alternating between **E2** and temperature indicates defective evaporator sensor. Defrosting will be time-based. (freezer) **Request service assistance**.

Ah **A**larm **h**igh temperature – See explanation under temperature alarms

AL **A**larm **L**ow temperature – See explanation under temperature alarms

Defrosting

COMPACT K/KG:

Defrosting is automatically performed 4 times every 24 hours. is lit.

COMPACT F/FG:

Defrosting is automatically performed 4 times every 24 hours. is lit.

Manual defrosting:

If operating with frequent door opening and replenishment, manual defrosting can be necessary. Manual defrosting is started by holding for 5 seconds.

Defrost water

The cabinet produces water during defrosting, which is led into a tray in the compressor compartment (see Fig.6). A re-evaporation pipe from the refrigeration system, placed in the tray, re-evaporates the water

It is recommended to clean the tray and water trap when necessary - at least once a year. Remember to disconnect the cabinet before cleaning.
Be careful not to damage the re-evaporation pipe during cleaning.

Reversing the door

Always disconnect the power supply prior to starting the reversing of the door.

The door can be changed from right-hinged to left-hinged, or vice versa.

To do so, proceed as follows:

Models with solid door:

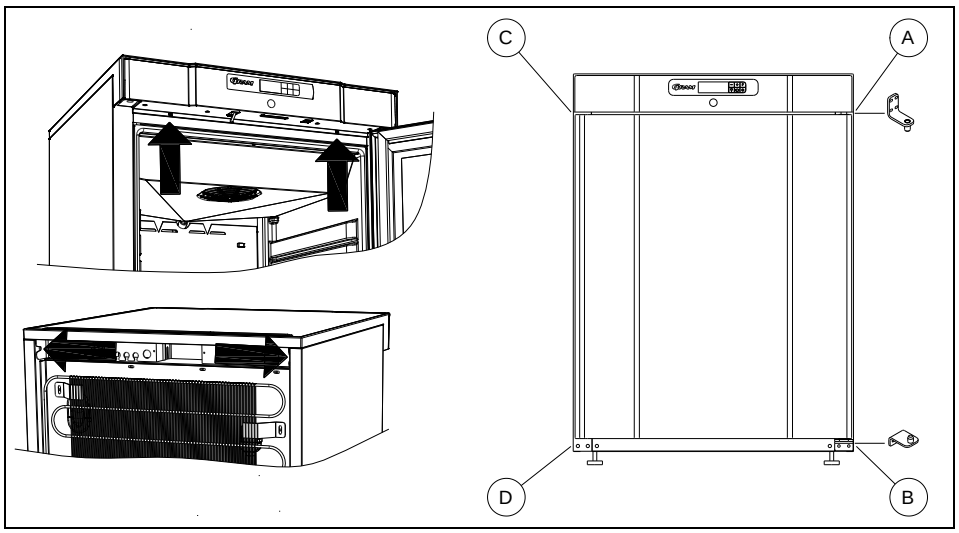


Fig.8

1. Switch off the power at the mains socket.
2. Open the door
3. Dismantle the two screws that hold the control panel at the front and loosen the two screws the hold the tabletop in the back, pull the complete tabletop a little forward, and then tilt it upwards.
4. Dismantle the hinge in pos. A, and lift off the door.
5. Dismantle the hinge in pos. B, and mount it in pos. D.
6. Turn the door 180°, and fit it to the hinge in pos. D.
7. Mount the hinge from pos. A in pos. C, and move the bracket from pos. C to pos. A.
8. Re-position and fasten the tabletop.
9. Apply power to the cabinet again.

Models with glass door:

The door should only be reversed by a properly skilled service technician with knowledge of the product.

Light - glass door

The light in the glass door, can be switched to work in two different ways.
Light constantly on (Lco) or light off when door closed (Ldo).
Push and hold for 5 seconds to change between Lco and Ldo.

Cleaning

Insufficient cleaning will cause that the product will not work at optimum performance, or eventually it will be defective.

Before cleaning, the product should always be disconnected.

Do not flush the product with water, do not use water jet or steam hose as this may cause short-circuits in the electrical system.

Cleansing agents containing chlorine or compounds of chlorine as well as other corrosive means, **are not to be used**, as they might cause corrosion to the cabinet and the refrigeration system.

- The compressor compartment and in particular the condenser must be kept free from dust and dirt. This is best done with a vacuum cleaner and a brush.
- For the external maintenance and cleaning – Use a hot soapy damp cloth. After cleaning rinse off with a moist cloth only containing water. Finalize the cleaning by wiping the cabinet dry, using a dry cloth. Cabinets with stainless steel exterior, should be treated with stainless steel polish at the end.
- The product should be cleaned internally with a mild soap solution at suitable intervals and checked thoroughly before it is put into operation again.

Door gaskets

This chapter deals with the importance of a well-functioning door gasket.

The door gasket is an important part of a refrigerator/freezer. A door gasket with reduced functionality, reduces the tightness of the cabinet. This might cause increased internal humidity resulting in an iced-up evaporator (leading to reduced refrigeration capacity), and in worst case reduced lifecycle of the cabinet.

Therefore, it is important to be aware of the condition of the gasket. Regular inspection is recommended.

The gasket should be cleaned regularly with a mild soap solution.

If a gasket needs replacement, contact your dealer.

Long term storage

If the product is taken out of operation, and need to be prepared for long-term storage, clean the inside compartment, the door and door gasket thoroughly with a hot soapy damp cloth.
Eventual remnants of food do create mold.

It is advisable to leave the cabinet door open during long term storage, in order to minimize the risk of bad smell and the building of mold inside the cabinet.

Service

The refrigerating system and the hermetically sealed compressor require no maintenance - they merely must be kept clean.

If refrigeration fails, first investigate whether the unit has been unintentionally disconnected or switched off at the socket, or whether a fuse has blown.

If it is not possible to find the cause of the refrigeration failure, please contact your dealer.

When reporting a malfunction please state the type and the 8-digit serial number (S/N) of the cabinet. This information is found on the name plate, see Fig. 6.

Disposal

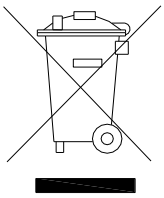
Electrical and electronic equipment (EEE) contains materials, components and substances that can be dangerous and harmful to human health and the environment if the waste (WEEE) is not disposed of properly.
Products that are labelled with a “crossed-out wheelie bin” is considered electric and electronic equipment. The crossed-out wheelie bin symbolizes that waste of this type cannot be disposed of with unsorted municipal waste but must be collected separately. Contact your local dealer when the product needs to be disposed of.
Please be aware of not damaging the refrigeration system and piping when a product is taken out of use. This will prevent the uncontrolled escape of the refrigerant from the refrigeration system.

The below only concerns the United Kingdom.

Disposal of an old cabinet is only available when we are delivering a new one at the same time. Cabinets must be fully defrosted and emptied prior to collection.

Gram recognises that our products for the catering market are considered as WEEE when they become obsolete. To ensure that Gram’s responsibilities are handled correctly and environmentally friendly, we are signed up the largest Business to Business compliance scheme in the UK – B2B Compliance
http://www.b2bcompliance.org.uk

B2B Compliance will on our behalf deal with all areas of our responsibilities when collecting and disposing of equipment which fall under the UK WEEE regulations.
B2B Compliance can be contacted on telephone number 01691 676124.



EC-Declaration of conformity

Producer

Name: Gram Commercial (CVR-nr. 41423986)
Address: Aage Grams Vej 1, 6500 Vojens

Tel.: +45 73 20 12 00

Product

Model: Compact 220
Compact 320
Compact 420

Refrigerant: R600a

Year: 2020

Directives

The product is in compliance with all the essential health- and safety requirements and provisions in:

Directive for Machinery 2006/42/EF

The product is where relevant in compliance with the following other directives:

Electromagnetic Compatibility Directive – 2014/30/EU

Design of energy related products 2009/125/EF

Regulation 2015/1095

FCM regulation 10/2011

Regulation 1935/2004

RoHS 2 - 2011/65/EU

RoHS 3 - (EU) 2015/863

Standards

The following standards are used to the extent necessary to comply with the relevant directives:

DS/EN 12100:2011 - Safety of machinery -- General principles for design -- Risk assessment and risk reduction

DS/EN 60335-1:2012 – Household and similar electrical appliances. Safety. General requirements

DS/EN 60335-2-89:2010 – Household and similar electrical appliances. Safety. Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor

DS/EN ISO 22041:2019 – Refrigerated storage cabinets and counters for professional use. Performance and energy consumption

Person responsible for technical dossier

Company: Gram Commercial (CVR-nr. 41423986)
Address: Aage Grams Vej 1
Name: John Lund

Signature

Vojens 13/10-2020 R&D Manager

