Installation and operation manual

Medical and Laboratory Cabinets
MED, MEDLAB, MED SAVE, MEDLAB SAVE

DESIGN FROM FINLAND

PORKKA

Contents

Purpose of use

The Med and Medlab refrigerators and freezers and combination cabinets are specifically designed for use in the health care and laboratory sectors. They are for the storage of temperature sensitive pharmaceuticals or samples. The operator is responsible that if the cabinet is being used for the storage special items that the equipment is compliant with the standards required for such storage.

Reception

Examine the product carefully as soon as you receive it. If you notice that it has suffered from damages during transportation, you must indicate this in the delivery document and report to the carrier and the retailer.

Note!
The manufacturer's guarantee does not cover damages caused by transportation!

Installation

The ambient temperature must not exceed +32°C or fall under +16°C. Avoid placing the cabinet close to any equipment that radiates heat.

Note!
The cabinet must not be used outdoors nor exposed to rain.

Note!
According to the electric safety regulations no liquid materials must be kept above the cabinet.

Note!
Make sure there is enough room for the air circulation around the cabinet. Never cover the air intake at the bottom of the cabinet.

The cabinet may be fastened to the back and side surfaces, but if the side surface is in contact with another refrigeration unit or an exterior wall, it is required to leave a 1-5 cm ventilation gap between the surfaces. Keep the rear edge gap free for air circulation.

Note!
**High ambient humidity may condense on the surface of the glass door.**

Condensation in the form of ice will be generated on the evaporator of the refrigerator/freezer, this is defrosted by the cabinet automatically or manually (optional feature) by user. Defrost water is lead to the evaporation vessel in the compressor section or to into the bacterial protected water tank inside the cabinet. Water evaporates from the evaporation vessel automatically. In the case of a malfunction of the unit some water can be spilled onto the floor. We recommend placing a safety container at the location of the compressor.

Adjust the cabinet to ensure it is horizontal in all directions, by using the adjustable feet, check with spirit level if necessary, always ensure that all feet are in contact with the ground.

1
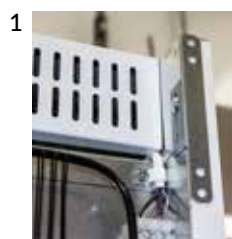
Fasten a double-door refrigeration cabinet, a combination cabinet, glass door cabinet and MEDLAB 320 to the wall so as to prevent it from falling forward. There is a fastening brackets at the back edge of the unit (photos 1 and 2). Screw a screw through the bracket into the wall. Note! There is no bracket installed in LAB 400 models.

2
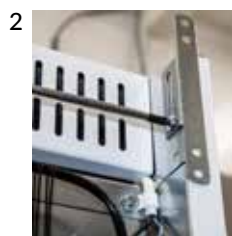
When cabinet is delivered and if temperature is cold, condensation may form on the exterior surface. Do not connect power until unit is dry and at room temperature!

Connect the connection cord of the cabinet to an earthed 230 V / 50 Hz wall socket with its own 10 A safety fuse. Check the voltage and frequency of the cabinet from the rating plate. The power socket must be positioned such that it is possible to pull the unit's plug from the socket without having to move the unit.

Note!
The damaged power supply cord must only be changed by a professional electrician, authorized by the manufacturer.

Note!
Do not use electrical equipment inside the unit, unless it is recommended by the unit's manufacturer.

Introduction

Before using it, clean the cabinet carefully with mild cleaning agent, e.g. liquid dishwasher detergent. Rinse and wipe dry. Leave the door open for airing for a moment.

Put the shelves and drawers in place. The high edge of the shelf is placed against the back wall of the cabinet.

Before loading with goods, ensure the cabinet has reached the required holding temperature (See chapter "Use of temperature control").

Cabinet is equipped with automatical defrost water evaporation system.

Note!
Cabinets are very hermetic. Freezer (F) cabinet door does not open just after closing. Wait for a moment until the pressure is equalized and door opens slightly.

Note!
To avoid evaporator corrosion, it is important to keep goods with high acid content / vinegar etc. in air tight containers.

Note!

Do not prevent ventilation on the floor. Products must never be placed directly on the floor of the cabinet, but only on the bottom shelf. When placing goods on to the shelves ensure they do not overhang the front of the shelves, as this will also interrupt air circulation. Never cover the fan on the back wall, or the vents on the both sides of the back wall.

Light items can be placed on top of the medical refrigeration cabinet, but the condensation vent on the back must not be covered. If the items stored on top of the device or placing the device in, for example, a cabinet blocks the flow of the condensing air, 50 mm of free space must remain on top of the cabinet cover. The temperature of the cover of the device is slightly higher than the room temperature. Condensing air may also heat the air space above the medicine refrigerator, so check the storage temperature of products stored on top of the lid and, if necessary, measure the temperature of the air and the lid.
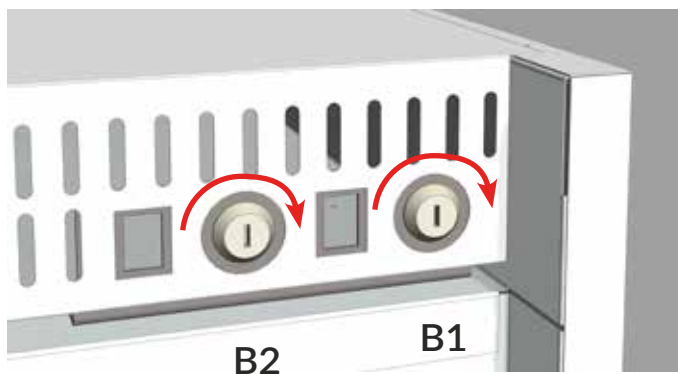
50 mm
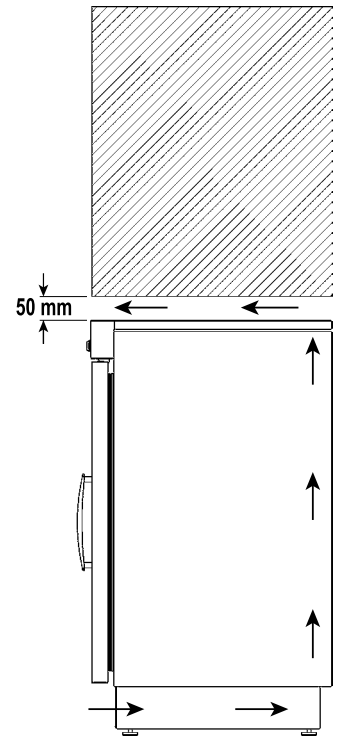
SAVE models - temperature control battery switches

MEDLAB SAVE 400 and MED SAVE standard models with a press switch
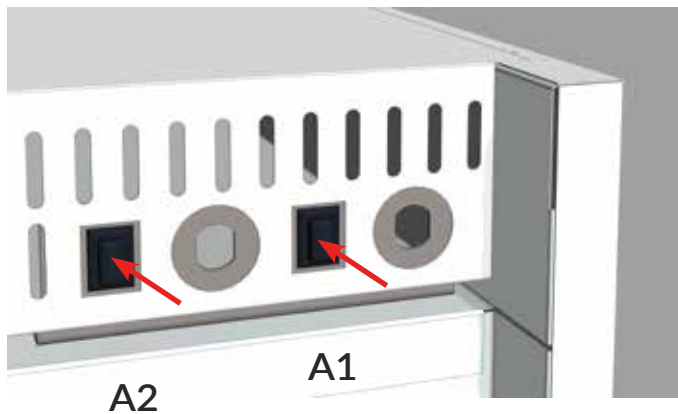
A1 = 1-door devices and 2-doors lower cabinet

A2 = 2-doors upper cabinet

A1

A2

MEDLAB SAVE 400 DIN accessory with lockable key switch

B1 = 1-door devices and 2-doors lower cabinet

B2 = 2-doors upper cabinet

B1

B2

Standard equipment:
Switch on the battery from the black push switch (A) on the back panel of the appliance.
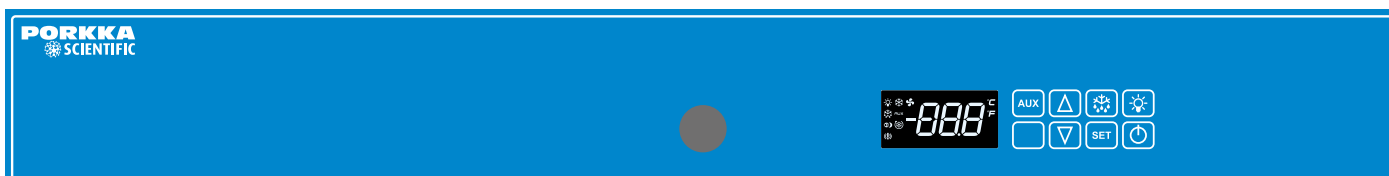
DIN accessory:
Switch on the battery from the lockable key switch (B). Turn the key from the back to the right. Do not leave the key in lock, but keep the key in the agreed location. Battery backup can be turned off during transport or transfer of the unit. Turn the key 90° to the left, so that battery backup is switched off.

Note!

The battery charge indicator ⚡ **flashes on the control display if the battery is not switched on.**

Control unit MED XW70L

Single- and double door refrigerators, single door freezer cabinets

Double door combination cabinets

Lower part chiller   Upper part chiller
or freezer

ENGLISH

Control unit keys

AUX	Not in use
△	Temperature control key
▽	Temperature control key
❄	manual defrost
SET	To display target set point: in programming mode it selects a parameter or confirm an operation
☀	LED light This switch can be used in models with glass doors if having the light on when the door is closed is preferred. Normally, the light switches on and off automatically with the door switch. A signal light displays on the screen when the light has been switched on from the controller switch ☀ .
⏻	ON/OFF controller

Use of temperature control

Switch on the cabinet

- Switch the power on by pressing the key ⏻ .

Adjust temperature

- Press once key **SET** , then the display will show the set temperature.

- Adjust temperature with keys △ and ▽ .

- Press again key **SET** or wait for 15 seconds and the display will revert to the normal state.

Additional defrost (manual defrost)

- Press key ❄ , for more than 3 seconds to start additional defrost.

  Additional defrost cannot be terminated by pressing the key. The defrost function stops automatically.

  Note!
  Additional defrost does not turn on if there is no need for defrosting.

To lock and unlock the keyboard

- Keep pressed together for more than 3 s the ⬆ and ⬇ keys. The "POF" message will be displayed and the keyboard will be locked. If the keyboard is locked it is impossible to adjust the temperature or switch of the power of the unit.

- Keep pressed together for more than 3 s the ⬆ and ⬇ keys till the "Pon" message will be displayed.

### Control of the minimum and maximum temperatures recorded

- Press button ⬇ once. "Lo" will appear on the display for a moment followed by the minimum temperature logged.

- Press button ⬆ . once. "Hi" will appear on the display for a moment followed by the maximum temperature logged.

- The equipment will revert to the normal operation in 5 seconds.

Reset the the minimum and maximum temperatures recorded

- Press button ⬇ "Lo" or ⬆ "Hi" and the recorded temperature will appear on the display. Immediately press and hold SET button more than 3 s and the "rst" will blink on the display. Recorded temperature will be reset during blinking. The equipment will revert to the normal operation automatically.

  Reset both minimum and maximum recorded temperature separately.

Function display lights
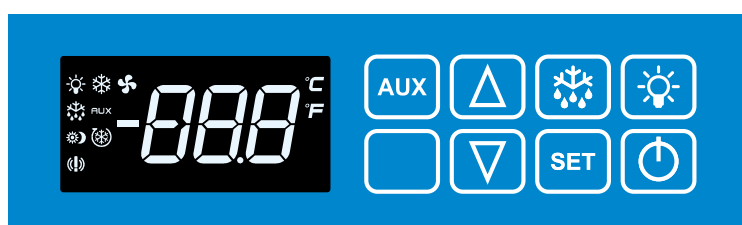
❄	Light on	Compressor is running
❄	Light flashing	Time delay to protect compressor after start-up
🍃	Light on	The evaporator fan is on
🍃	Light flashing	Fans delay after defrost in progress.
❄	Light on	Defrost is on
❄	Light flashing	Time delay after defrost
☀	Light on	Internal LED light is on
🔔	Light on	Alarm; see chapter "Alarms"

Alarms

Note!

Reset the alarm signal by pressing any button. The alarm code stays on the display.

HA High temperature alarm

The temperature inside the cabinet has exceeded the set alarm temperature. The alarm can be instigated by sudden icing of the evaporator. Initiate additional manual defrost. See instructions on the previous page. Ensure the cabinet has not been loaded with warm products. Check that a door has not been left open. Check that any product is not blocking air circulation within the cabinet. The cabinet is meant to keep ready chilled products cold.

LA Low temperature alarm

The temperature inside the cabinet has fallen below the set value. Ensure that the products put into the cabinet are not too cold.

The temperature alarm will reset automatically after the interior of the cabinet returns to the set temperature range. If this does not happen, move the products to another cabinet and contact your service provider.

dA Door open alarm

Close the door carefully and the alarm will reset automatically.

HA2 Condenser alarm (MEDLAB 400 series and freezers only)

MEDLAB 400 cabinet alarms of dirty condenser / condenser filter. Check that ambient temperature is not more than +32°C and clean condenser / filter. If alarm recurs call to service.

P1 Cooling control probe failure *

P2 Defrost control probe failure *

P4 Condensing temperature probe failure (MEDLAB 400 series and freezers only)*

*Note! The cabinet operates on its standby system and will hold normal temperature, but reset the alarm signal and immediately contact your service provider.

EE Data failure

To reset an 'EE' Alarm on the display and resume normal function of the equipment press any key for 3 seconds. After this 'rSt' message will be displayed again for 3 seconds and the equipment should return to normal function.

Pr1 user level parameters for temperature and door alarms and their delay times as well as sensor temperature values

Press simultaneously **SET** + ▽ A text "ALC" will appear on the screen.

To change the parameter ALC, ALU, ALL, ALd or did search with the arrow buttons △ or ▽ and press **SET** at the desired parameter. Adjust the value with the arrow buttons △ or ▽ and confirm with selection button **SET** .

The easiest way to turn the alarm on when using factory settings is by leaving the door ajar (door switch activates) for one minute, which results in open door alarm (voltage free alarm relay control)

Alarms

ALC alarm mode (rE or Ab)

rE (default factory setting)

- temperature alarm limit changes when adjusting the temperature

  > for example with the settings Set=4, ALU=4 and ALL=2 the alarm thresholds will be at temperatures of +8°C and +2°C after ALd delay.

ALU maximum temperature alarm

- setting **4** in both C and F models

ALL minimum temperature alarm

- setting **2** in C models and **3** in F models

Ab (option):

- fixed alarm threshold with ALU and ALL remaining unchanged while adjusting temperature
- ALU and ALL are set to preferred alarm threshold

Delays

- Ald; temperature alarm delay (setting: 20 min)

- did; door alarm delay (setting 1 = 1 minute, 0 = immediate)

db1-db4 sensor temperature values

Move with the arrow buttons △ and ▽ to the desired sensor, and press **SET** , The screen will display the temperature of the selected sensor. If the sensor is not in use, a text "noP" appears on the screen. Return to the menu using the button **SET** . The device will return automatically to normal mode within 15 seconds.

Control unit MED SAVE XW757K

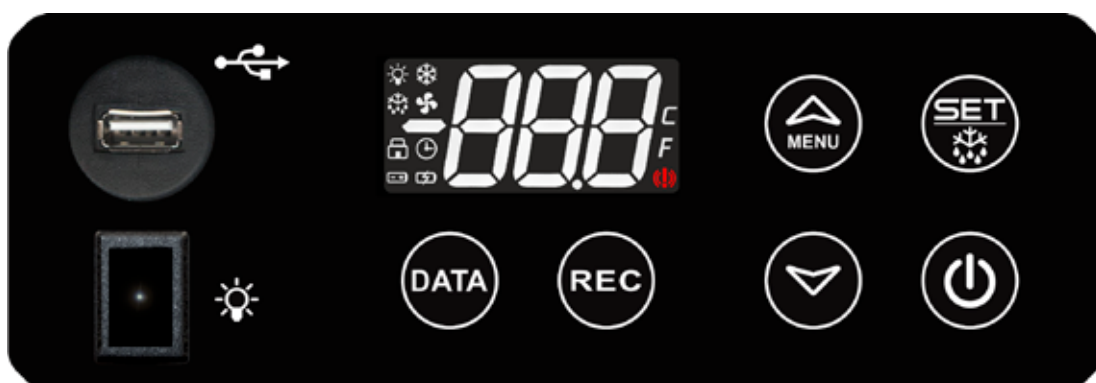SIngle- and double door refrigerators, single door freezer cabinets

Double door combination cabinets

Lower part chiller
or freezer   Upper part chiller

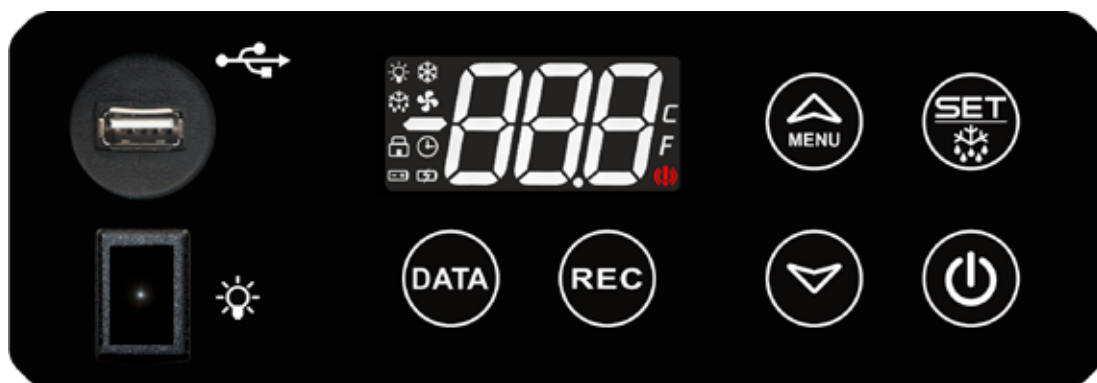|	
	USB connector for copying data stored in the controller
	LED light switch (standard in GD models)
	Copying the recorded data to a memory stick
	Temperature and alarm recording button
	Temperature control key In programming mode it browses the parameter codes increases the displayed value.
	Temperature control key in programming mode it browses the parameter codes or decreases the displayed value.
	To display target set point: in programming mode it selects a parameter or confirm an operation. Push for 3s to access SET point programming Push for 5s to start a manual defrost
	ON/OFF controller

Function display lights

❄	Light on	Compressor is running
❄	Light flashing	Time delay to protect compressor after start-up
✺	Light on	The evaporator fan is on
✺	Light flashing	Fans delay after defrost in progress
❊	Light on	Defrost is on
❊	Light flashing	Drip time in progress
((!))	Light on	An alarm is occurring, see "Larms"
⏱	Light on	Data recording (REC) is on
🔋	Light on	Battery status OK (battery backup)
🔋	Light flashing	The battery charge level is low and the battery is charging (battery backup)
🔋	Light flashing	The battery is defective, the battery is empty or the battery switch is in the OFF position (battery backup)

Use of temperature control

1. Switch on the cabinet

- Switch the power on by pressing the key ⏻ 3 seconds.

2. Adjust temperature

- Checking temperature settings: Press the button 🔲 shortly, and the temperature setting displays on the screen.

- Press key 🔲 for 3 seconds and "SEt" message will be displayed. Release the button 🔲 immediately then the display will show the set temperature.

- Adjust temperature with keys 🔼 and 🔽.

- Press again key 🔲 or wait for 60 seconds and the display will revert to the normal state.

    Note!
    Press key 🔲 for more than 5 seconds an additional defrost will be activated (dEF).

3. Additional defrost (manual defrost)

- Press the button 🔲 for 5 seconds, and the screen will display the text "SET". Keep the button pressed down and the text "dEF" will appear on the screen. The extra thawing will start. The additional thaw function cannot be switched off using the button. Thawing will end automatically.

    Note!
    Additional defrost does not turn on if there is no need for defrosting.

4. To lock and unlock the keyboard

- Keep pressed together for more than 3 s the 🔼 and 🔽 keys. The "POF" message will be displayed and the keyboard will be locked. In lock mode, only minimum and maximum temperatures can be checked. Other functions are locked.

- Keep pressed together for more than 3 s the 🔼 and 🔽 keys till the "Pon" message will be displayed.

5. Control of the minimum and maximum temperatures recorded (P4 additional probe)

- Press button 🔼 once. "Hit" will appear on the display for a moment followed by the maximum temperature logged.

• Press button once. "Lot" will appear on the display for a moment followed by the minimum temperature logged.

• wait for 5 seconds and the display will revert to the normal state.

6. Reset the the minimum and maximum temperatures recorded

• Press button "Hi" or "Lo" once and the recorded temperature will appear on the display.

Immediately press button more than 3 s and the "rst" will blink on the display.

Recorded temperature will be reset during blinking. The equipment will revert to the normal operation automatically.

Reset both minimum "Lo" and maximum "Hi" recorded temperature separately.

Set the clock time

Set the clock time by pressing 3 s and message will be displayed

Press and message will be displayed

Confirm by pressing and select HOURS (for example. 9) by buttons och .

Confirm by pressing and go through all the time settings:

Hur = hour
Min = minutes
Udy = day of the week (Sun,Mon,tuE,Ued,thE,Fri,SAt)
dAy = day of the month
Mon = month
yEa = year

Wait for 60 seconds and the display will revert to the normal state.

Storage of temperature and alarm data

Press the button 🔘 REC for 3 seconds. Use the arrow keys to select 🔘 or 🔘 parameter "YES" and confirm the function with the button 🔘, so the recording starts and the indicator light is displayed 🔘 . The device stores the information in its memory.

When you want to stop recording, select "no" according to the previous instruction, and the recording stops and the indicator light 🔘 the display turns off.

How to export data and alarms to USB

If you want to copy the data stored on the device, connect the external USB memory device to the USB connector of the device.

Note!
2GB external USB-memory (USB 1.1 or 2.0, FAT formatting).

Press the button 🔘 DATA for 3 seconds, in which case the stored data is copied to an external USB memory. During copying, texts dAt, Lod, ALr, and Lod are displayed.

When the data is copied, the word "End" is displayed.

If data copying fails, "Err" will be displayed.

Reading temperature and alarm data from USB memory

Connect the USB memory to your computer and read the USB memory information.

Two files, ALARM and DATA, are stored in USB memory.

ALARM FILE

```
ALARM – Muistio

Tiedosto  Muokkaa  Muotoile  Näytä  Ohje
IDX,LABEL,DESCRIPTION,START,STOP

  1,PWF,Power Failure,12-30-21 11:54,12-30-21 11:54
  2,dA,Door Open Alarm,12-30-21 11:22,12-30-21 11:23
  3,HA4,High Temperature Alarm Probe TL2,12-30-21 07:58,12-30-21 08:31
  4,HA1,TR3 High Alarm,12-30-21 07:58,12-30-21 08:36
```

Cause of alert:

	Alarm	High temperature alarm	Low temperature alarm	Faulty probe alarm
Probe 1 cooling control probe TR3		HA1	LA1	P1
Probe 2 defrost control probe EVP				P2
Probe 3 condensing temperature control probe TL1		HA3	LA3	P3
Probe 4 display temperature monitoring probe TL2		HA4	LA4	P4
Door open	dA			
Power failure	PWF			

DATA FILE

```
DATA – Muistio

Tiedosto  Muokkaa  Muotoile  Näytä  Ohje
IDX,DATE,TR3,EVP,TL1,TL2,ST

1,12/31/21  08:34,-26,-28,+35,-27,C
2,12/31/21  08:24,-25,-27,+34,-27,C
3,12/31/21  08:14,-26,-26,+30,-27,-
4,12/31/21  08:04,-26,-27,+30,-28,-
5,12/31/21  07:54,-26,-27,+31,-28,-
6,12/31/21  07:44,-15,-34,+33,-26,C
7,12/31/21  07:34,-18,-16,+27,-27,D
8,12/31/21  07:24,-26,-27,+29,-27,-
9,12/31/21  07:14,-26,-27,+29,-28,-
```

IDX	Measurement cycle
DATE	Date, time
TR3	Cooling control probe
EVP	Defrost control probe, evaporator probe
TL1	Condensing temperature control probe
TL2	Display temperature monitoring probe
ST	Compressor status
-	Compressor status: compressor is not running
C	Compressor status: compressor is running
D	Compressor status: defrosting is in progress
OFF	Compressor status: compressor is switched off

Clearing temperature and alarm information from the devices memory

Press simultaneously 🔽 + ⚙ for 3 seconds, whereby text "Pr1" will be displayed.

Confirm the selection with ⚙ and select with arrows 🔽 and 🔼 "rSd" or stored temperature data.

Press the button ⚙ and use the arrow keys to select 🔼 and 🔽 "YES". Confirm the selection with the button ⚙, whereby the temperature data is erased from the memory.

When the temperature data is erased from the memory, "rSA" i.e., the stored alarms is displayed.

Press the button ⚙ and use the arrow button to select 🔽 "YES". Confirm the selection with ⚙, whereby the alarm information is erased from the memory.

Wait 60 seconds after which the unit will return to normal mode.

Alarms

Note!
Reset the alarm signal by pressing any button. The alarm code stays on the display.

HA I High temperature alarm (internal temperature probe 1, TR3)
The temperature inside the cabinet has exceeded the set alarm temperature. The alarm can be instigated by sudden icing of the evaporator. Initiate additional manual defrost. See instructions on the previous page. Ensure the cabinet has not been loaded with warm products. Check that a door has not been left open. Check that any product is not blocking air circulation within the cabinet. Temperature alarm will be cancelled automatically when the inside temperature has returned to set limits. The cabinet is meant to keep ready chilled products cold.

LA I Low temperature alarm (internal temperature probe 1, TR3)
The temperature inside the cabinet has fallen below the set value. Ensure that the products put into the cabinet are not too cold.

The temperature alarm will reset automatically after the interior of the cabinet returns to the set temperature range. If this does not happen, move the products to another cabinet and contact your service provider.

PFI Cooling control probe failure (internal temperature probe 1, TR3)

PF2 Defrost control probe failure (probe 2)

HA3 Condenser high temperature alarm (condenser probe 3, TL1, MEDLAB 400 series and freezers only*)
Cabinet alarms of dirty condenser / condenser filter. Check that ambient temperature is not more than +32°C and clean condenser / filter. If alarm recurs call to service.

LA3 Condenser low temperature alarm (condenser probe 3, TL1*)

PF3 Condensing temperature probe failure (condenser probe 3, TL1*)

HA4 Additional probe high temperature alarm (additional probe 1, TL2)

LA4 Additional probe low temperature alarm (additional probe 1, TL2)

PF4 Display temperature probe failure (additional probe 1, TL2)

dA Door open alarm
Close the door carefully and the alarm will reset automatically.

RTC
Set the clock time (see section "Set the clock time")

Pr1 user level parameters for temperature and door alarms and their delay times as well as sensor temperature values

1. Pr1 user level parameters for temperature and door alarms

Press simultaneously ⊞ + ▽ buttons for about 3 seconds whereby text "Pr1" will be displayed.

Press the button ⊞ and use the arrow keys ⌂ and ▽ to search parameter itP, AIC, AIU, AIL, Ald, A4U, A4L, A4d or did to be changed.

Press the button ⊞ at the parameter to be changed.

Change the value with the arrow button ⌂ and ▽. Confirm your selection with ⊞ button.

By default, the alarm can be accessed by holding the door ajar (door switch releases) for one minute, after which the door-open alarm releases (checking for potential-free alarm relay).

itp = recording interval

AIC = alarm mode

AIU = upper limit for alarm P1

AIL = lower limit for alarm P1

AIL = alarm delay P1

A4U = upper limit for alarm P4

A4L = lower limit for alarm P4

A4d = alarm delay P4

did = door alarm delay

2. P1 cooling control probe Alarms

AIC alarm mode (rEL or AbS)

rEL (selected as factory default):

- the temperature alarm limit changes when the temperature changes.

  For example, with the setting Set = 4 and AIU = 4 and AIL = 2, alarms come at + 8C and + 2 ° C after AId delay

AIU maximum temperature alarm

- setting value 4 for C and F models

AIL minimum temperature alarm

- setting value 2 for C models and 3 for F models

AbS (selectable):

- fixed alarm limit, whereby AIU and AIL do not change when the temperature is changed
- AIU and AIL are set to preferred alarm threshold

3. P4 Display temperature probe alarms (average temperature)

P4 sensor has always set (AbS) alarm thresholds, which are set with parameters A4L and A4U:

Factory value:	MED chiller		MED freezer	
	A4L	A4U	A4L	A4U
	1	19	-30	-13

4. Delays

- AId temperature alarm delay (setting value 20 min) P1
- A4d temperature alarm delay (setting value 10 min) P4
- did Door alarm delay alarm (Setpoint 1 = 1 minute, 0 = immediately)

5. db1-db4 temperature values

db1 = temperature control probe P1
db2 = defrost control probe (vapor probe) P2
db3 = condensing temperature probe /condenser filter P3
db4 = display temperature monitoring (average temperature, so-called P4 monitoring sensor)

Press the button 🔼 for 3 seconds and use the arrow keys 🔼 and 🔽 to move to the desired sensor and press 🔧, whereby the temperature value of the selected sensor is displayed.

Press the button 🔼, to access the next parameter. If the sensor is not in use, text **"nPr"** is displayed.

Keep browsing the menu by 🔧 button. The unit will automatically return to normal mode within 60 seconds.

P4 display temperature monitoring probe (average temperature)

The P4 control sensor is installed in the bottle on the rear wall of the cabinet. Loosen the bottle cap to remove it from the rack. Make sure the tip of the probe is in the middle of the bottle. It must not catch on the wall of the bottle.

Cleaning

Clean spillages immediately.

Ensure effective operation of the equipment and the quality of the products being stored, by defrosting and cleaning the equipment regularly, we recommend at least once per month.

Remove all products and store them in a back-up store.

Note!
Switch off the cabinet from the main electrical supply by removing cable and plug from the wall socket.

Remove the shelves.

Wash the stainless steel, glass and plastic surfaces of the cabinet with a mild detergent mixed with water, e.g. dishwasher detergent or other suitable food safe cleaning product. Use a cloth or paper towel to prevent scratching the steel surface.

Wipe with down with a cloth and allow the cabinet to dry.

Note!
Do not use detergents or disinfectants containing chlorine i.e. bleach, solvents, scouring products, or a knife or other sharp tools when cleaning.

Note!
Do not use running water to wash the cabinet.

Note!
Refer to the product description of the disinfectant to see which materials it is suitable for. Dry the equipment after the disinfection and let it ventilate.

Regularly, once a year clean any dust and other dirt from the compressor section and the condenser on the back wall of the cabinet. Unfasten the anti-fall band from the top edge at the back of the unit and move the cabinet away from the wall. Use for instance the brush attachment of a vacuum cleaner to the clean the unit. Dirt in the compressor section and on the condenser impairs the unit's functioning and increase power consumption.
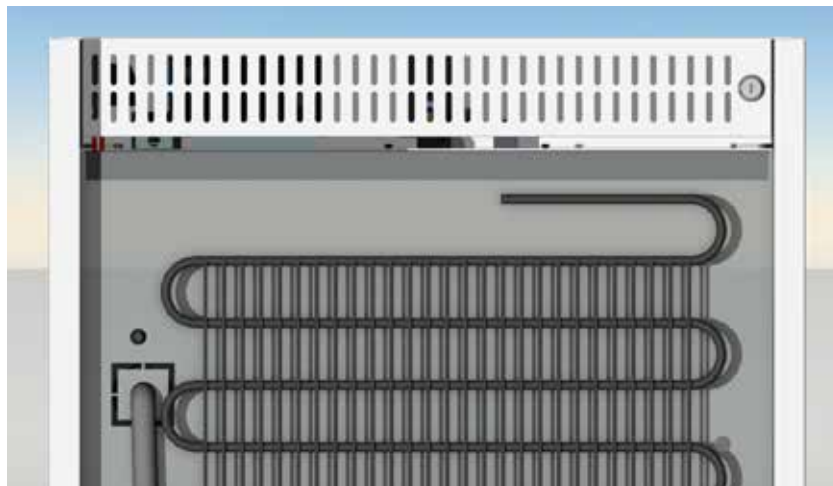
MEDLAB 400 condenser

MEDLAB 400 cabinets has been equipped with a filter system for air pollutants. Lift up the lower panel on both edges and pull it out. Remove the filter behind the bottom cover plate and wash the filter with running water and e.g. dishwasher detergent.

Clean the cabinet door gasket using a mild water soluble detergent and check the condition of the gasket. A silicone spray makes the gaskets flexible and dirt-rejecting.

Shelves and or drawers inside the cabinet may be washed in a dishwasher.

Put back all removed parts and switch on the equipment.

Ensure that the temperature has become to the normal level before using the equipment again.

Noises generated by the cabinet's refrigeration system

The cooler cabinet features a refrigeration system driven by a compressor. Therefore it is completely normal that the unit generates some noise the level of which can vary. The volume of the noise is affected i.e. by the materials in the environment where it is placed (e.g. stone floors), the manner of positioning the unit, the way it is used and its age.

Resonance can be caused if the cabinet is not completely level or if parts of its pipe work touch each other. Pipes can be bent carefully away from each other with hands.

Following the start or stop of the unit it is possible to hear noises generated by thermal expansion of metal parts.

When refrigerant flows in the pipelines one can hear hissing or bubbling noises. The compressor is started and stopped by a thermostat. The thermostat activates the compressor more frequently the more the door is being opened or the higher is the ambient temperature. When the unit is started or stopped the cabinet will vibrate slightly. When refrigerant flows in the pipelines the compressor can generate slight buzzing noises.

Operation failures

In case of alarm:

- see chapter "Alarms"

If the cabinet fails to cool check that:

- door is closed. If the door has been slightly open for a long time evaporator can be frozen.

  Start the manual defrost. Repeat the manual defrost after cabinet has been reached the set temperature.

If the machinery makes a strange sound:

- check that feet have been properly adjusted.

- check that loose items such as bottles in the cabinet are not knocking against each other

If the malfunction cannot be corrected by checking the above points prevent the goods from spoiling by moving them to another cooling or freezing unit. Switch the faulty cabinet off, remove the power supply from the wall socket and contact your dealer or service company.

Disposal of the equipment

Once the equipment becomes redundant it must not be disposed of with normal waste because the equipment is governed by the WEEE directive. It has to be disposed of following the WEEE act which became effective on August 13th 2005.

Guarantee

Check the guarantee period at your merchandiser.

The guarantee does not cover faults caused by:

- transportation

- overloading or user's negligence

- negligence due to not reading manuals, proper care and maintenance

- changes in current (max ± 10% allowed) caused for example by lightning etc.

- modifications or repairs performed by an unauthorized service agent

- use of parts not supplied and approved by the manufacturer

The guarantee does not cover:

- incidental scratches/marks or other minor faults caused when unpacking or during installation that does not effect operation or performance of the equipment

  Festivo Service
 **Puh. (03) 553 8681**
  service@festivo.fi

Note!
The manufacturer or his selling agent is not at any time, or under any circumstances liable for food loss howsoever it occurs. the owner/user should ensure the contents are insured at all times.

All goods are supplied under our terms and conditions of sale a copy of which may be obtained upon request.
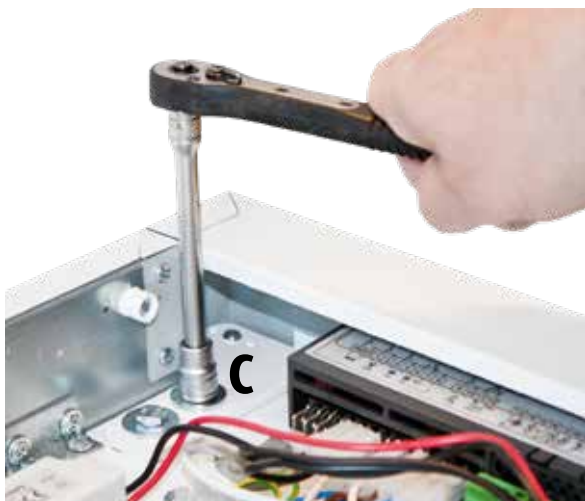
Change of the door handedness, one door models 80, 120, 200

1.   **Remove the cover plugs (A) and unscrew the screws (B)**
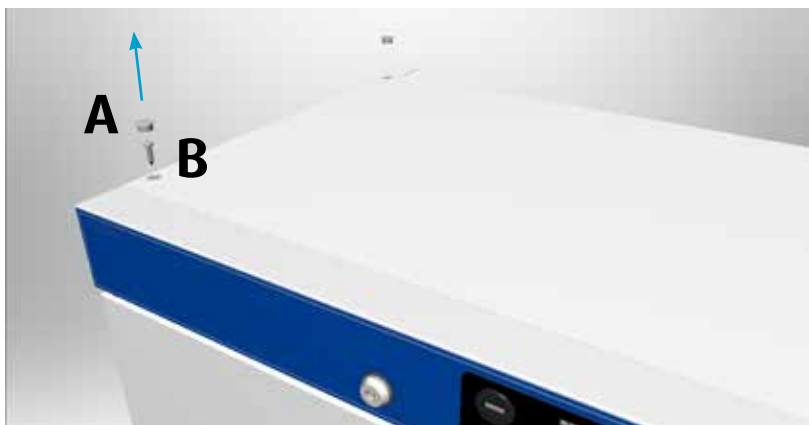
•   Lift up the cover and remove it from the cabinet.

2.   **Remove the hinges and the door**

•   Remove the hex bolts and the hinge plate (C).

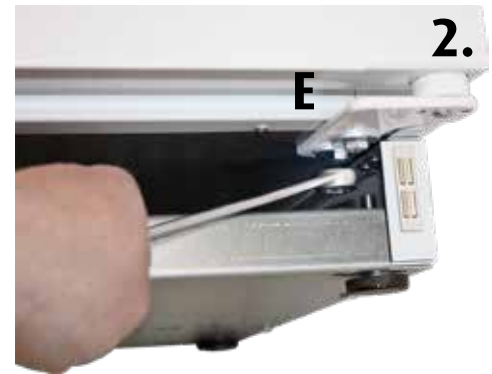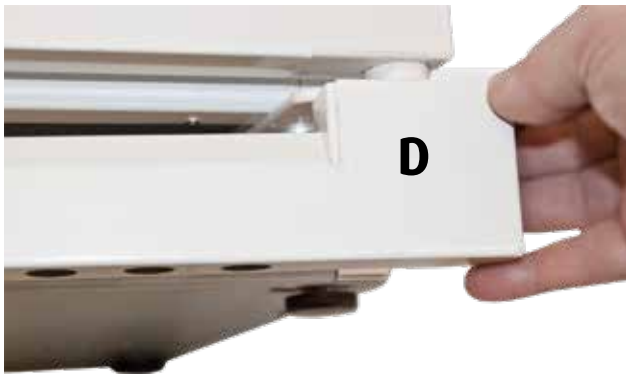•   Turn the top edge of the door slightly outward and lift the door off from the bottom hinge pin.

1. **2.**

- There is a flat hinge sleeve (1) on the upper edge of the door and a 2-part sliding sleeve on the lower edge of the door (2).

- The hinge sleeve on the upper edge of the door is lightly glued in place. Carefully twist the sleeve with a screwdriver, for example, until the sleeve comes off.

- Remove the bottom cover plate (D) by pulling it strongly outward from both ends.

- Remove the hex bolts and the hinge plate (E).

3. **Install the hinges and the door back**

- Attach the upper hinge (C) to the lower hinge of the other side and put the sliding sleeves (2) of the lower hinge in place. Turn the door upside down and lift it onto the bottom hinge. Support the door during installation.

- Attach the bottom hinge (E) as the top hinge on the other side. Adjust the clearance of the door using the hinge plates, ensuring that the door seal is set tightly against the frame all round.

Change of the door handedness, one door models 320 and 400

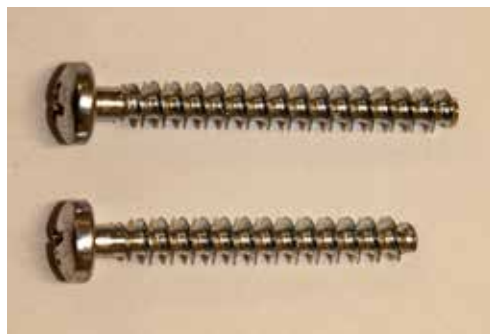**Please contact the maintenance and order the opening pusher for the change of switch handle.**

1.   Remove the handle

- Open two screws from the opening pusher, which releases the handle and opening pusher.

Opening pusher

Screws

Note!
There are screws of two lenghts. Shorter screw goes for lower hole and the longer screw into the upper hole.

2. **Remove the door according to the previous instructions.**

3. **Turn the door 180 degrees upside down and install it again following the instructions.**

4. **Install the handle back**

- Move the plastic bushing inside the upper hole into the lower hole.

- Install the opening pusher ordered from the maintenance and the handle back into their places.

  Note!
  Ensure that the short screw goes into the lowest hole. Long screw breaks the handle, if it is screwed into the lowest hole.

Change of the door handedness, two doors models 160/160 and 400

Note!
MEDLAB C GD/F 400 model, please contact service.

Upper door become the lower door and vice versa by turning the doors 180°.

1. Remove upper door and lock panel in the middle

- Remove the upper door hinge and door by following the previous instructions.

- Move the upper hinge on the opposite side.

- Open the lower door. Loosen 4 screws (A) under the lock panel and pull out the panel.

2. Remove the lower door

- Remove the lower door hinge and door by following the previous instructions. Pull the door's lower edge outward a little and move the door down.
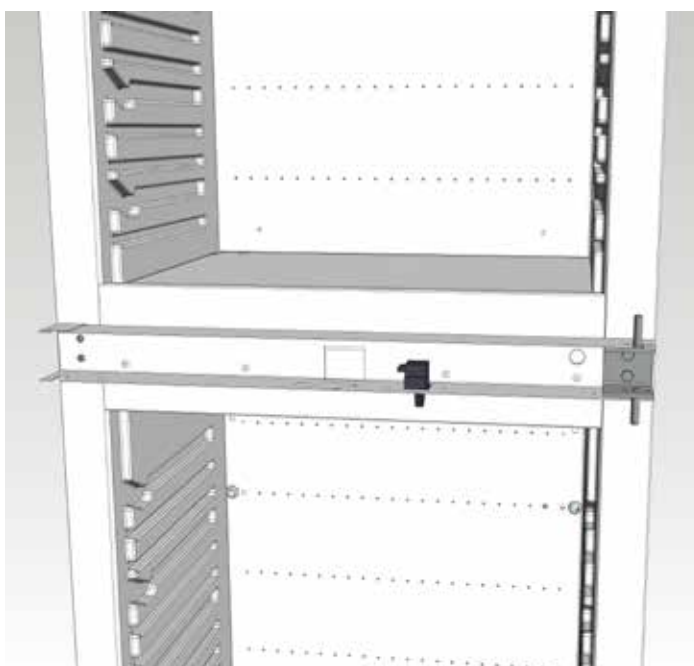
3. Move the center hinge

- Remove and turn the center hinge part 180° and mount it on the opposite side. Re-install the lock pane
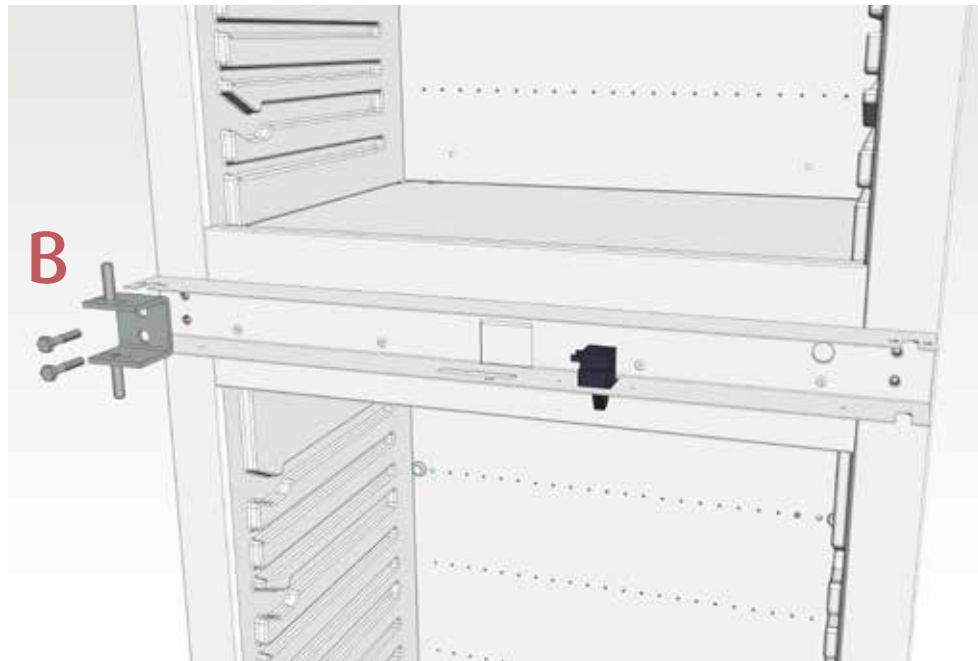
4. Re-install the hinge parts and doors

- Place the upper edge of the lower door in hinge part. Support the lower edge of the door and mount the lower hinge part.

- Place the lower edge of the upper door in hinge part. Support the door and mount the upper hinge.

- Mount the bottom cover plate and roof cover.

DIN 58345 accessory package for MED SAVE control unit

There is a potential-free connection point (A) at the back of the cabinet for alarms. DIN 58345 equipment package includes a battery backup for MED SAVE controller power failure and temperature registering during 12 hours, lockable battery back-up user switch (B), and antifreeze function.
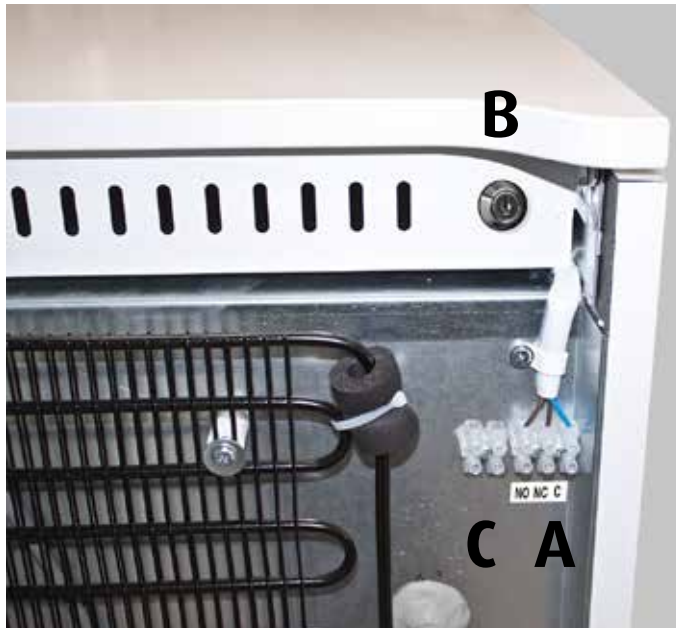
Additional NTC probe and RJ45 cabel (client's probe, accessory)

Client's probe

• Remove the protective cap (E)

• Twist to open the bushing of the push through plug (F)

• Push sensor (G) through the push through hole into the box

• Plug in the cables into the switch strip (C)

• Twist to close the push through plug (F)

Note!
Client's probe must be calibrated according to the box temperatures. Sensor calibration depends on its location.

RJ45 connection cable

Alarm switch factory setting:

4/blue
5/blue-white

Also a separate sensor for continuous temperature control can be connected to RJ45 cable, which can then be monitored through the property control centre (VAK).

We recommend a customer sensor installation at the factory.

Connect RJ45 cable (D) to connector A (connector A, see picture on previous page).
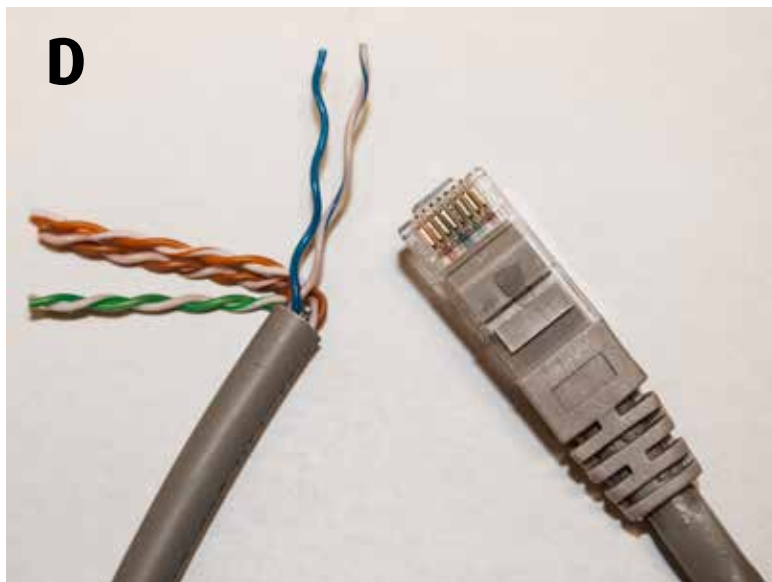
Cable colour codes:

		Pin		Pin	RJ45	
	orange/white	1		1	orange/white	
	orange	2		2	orange	
	green/white	3		3	green/white	
	blue	4		4	blue	
	blue/white	5		5	blue/white	
	green	6		6	green	
	brown/white	7		7	brown/white	
	brown	8		8	brown	

Notes

Notes

PORKKA

MED and MEDLAB appliances are manufactured in Hollola, Finland, where our research & development, factory, administration and service are also situated.

MED and MEDLAB appliances are genuine Finnish products. Label on the front panel of your cooling appliance is guarantee of high Finnish quality, evolving from long experience, strong materials, and construction, proven over decades.