Operating instructions
Freezer

7082 261-00

LGPv 910

LIEBHERR

Disposal notes

- **Keep packaging materials away from children - polythene sheets and bags can cause suffocation!**
- Please return the packaging to an official collection point.

Your old appliance: This contains some reusable materials and should be disposed of properly - not simply with unsorted household refuse.
- Discarded appliances should be disabled: Remove the plug, cut through the connection cable and render the catch unusable so that children cannot become trapped inside.
- Ensure that the refrigerant circuit is not damaged when the appliance that is no longer needed is taken away for disposal.
- Details of the refrigerant can be found on the type plate.
- Appliances which are no longer needed must be disposed of in a professional and appropriate way, in accordance with the current local regulations and laws.

Range of appliance use

The appliance is suitable for storing and cooling of laboratory preparations at temperatures of between
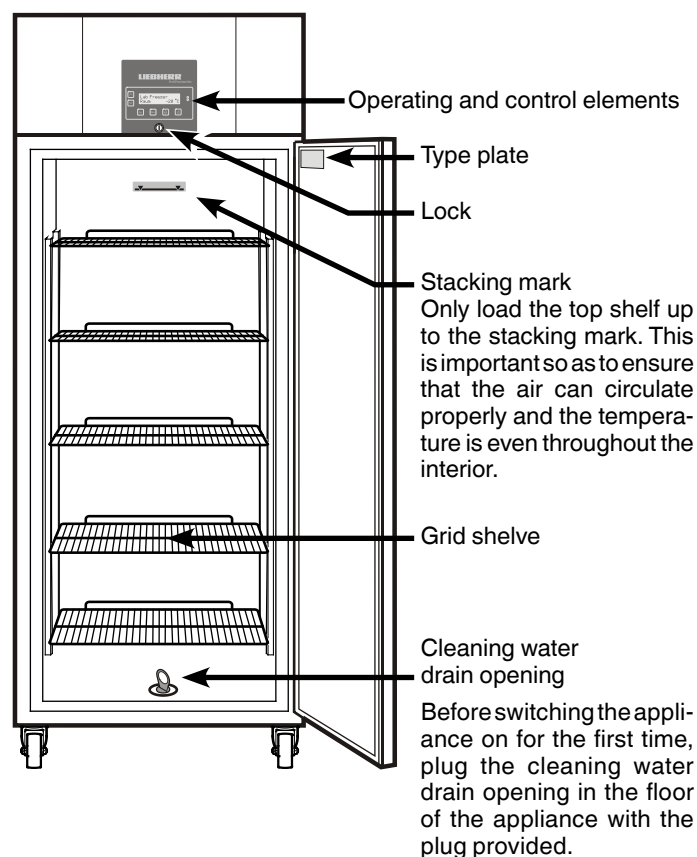-10°C and -35°C (LGPv 6520)
-10°C and -26°C (LGPv 1420).

The appliance is **not** suitable for use in explosion-hazard areas.

For the storage of valuable or temperature-sensitive substances or products the use of an independent, constantly monitoring alarm system is necessary.
This alarm system must be designed so that each alarm status is detected immediately by an authorised person who can then take appropriate action.
Position the temperature sensor for this system in the upper part of the interior container.

Description of appliance and equipment

Operating and control elements

Type plate

Lock

Stacking mark
Only load the top shelf up to the stacking mark. This is important so as to ensure that the air can circulate properly and the temperature is even throughout the interior.

Grid shelve

Cleaning water drain opening

Before switching the appliance on for the first time, plug the cleaning water drain opening in the floor of the appliance with the plug provided.

Safety instructions and warnings

- To prevent injury or damage to the unit, the appliance should be unpacked and set up by two people.
- In the event that the appliance is damaged on delivery, contact the supplier immediately before connecting to the mains.
- To guarantee safe operation, ensure that the appliance is set up and connected as described in these operating instructions.
- Disconnect the appliance from the mains if any fault occurs. Pull out the plug, switch off or remove the fuse.
- When disconnecting the appliance, pull on the plug, not on the cable.
- Any repairs and work on the appliance should only be carried out by the customer service department, as unauthorised work could prove highly dangerous for the user. The same applies to changing the mains power cable.
- Do not allow naked flames or ignition sources to enter the appliance. When transporting and cleaning the appliance ensure that the refrigerant circuit is not damaged. In the event of damage, make sure that there are no ignition sources nearby and keep the room well ventilated.
- Do not stand on the plinth, drawers or doors or use them to support anything else.
- 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 initial 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.
- Avoid prolonged skin contact with cold surfaces or chilled/frozen food. This could cause pain, numbness and frostbite. In the case of prolonged skin contact, protective measures should be taken, e.g. gloves should be worn.
- Do not store explosives or sprays using combustible propellants such as butane, propane, pentane etc. in the appliance. Electrical components might cause leaking gas to ignite. You may identify such sprays by the printed contents or a flame symbol.
- If you have a lockable appliance, do not keep the key near the appliance or within reach of children.
- Do not connect the appliance to the supply with other equipment using an extension cable. This can cause the extension socket to overheat.
- Do not install the appliance in the immediate vicinity of an air-conditioning unit. The appliance should also not be operated under a wall-mounted air-conditioning unit.
- The appliance is **not** suitable for storing drugs pursuant to DIN 58345.
- The appliance is **not** suitable for storing blood bottles pursuant to DIN 58371.
- In special fields of application which are subject to their own standard, the user is responsible for complying with this standard.
- The appliance is designed for use in enclosed areas. Do not operate the appliance outdoors or in areas where it is exposed to splash water or damp conditions.

Do not store and explosives or inflammable materials in the appliance.

Climate rating
The appliance is set to operate within specific ambient temperature limits according to its climate rating. These temperature limits should not be exceeded. The correct climate rating for your appliance is indicated on the type plate.

Climate rating	Ambient temperatures
SN (4)	+10°C to +32°C
N (4)	+16°C to +32°C
ST (5)	+18°C to +38°C
T (5)	+18°C to +43°C

Setting up

- Avoid positioning the appliance in direct sunlight or near cookers, radiators and similar sources of heat.
- The floor on which the appliance stands should be horizontal and level.
- There must be a gap of at least 30 cm between the upper edge of the appliance and the ceiling. Always ensure that there is good ventilation and that the outward flowing air is able to escape.
- Standard EN 378 specifies that the room in which you install your appliance must have a volume of 1 m^3 per 8 g of R 290 refrigerant used in the appliance, so as to avoid the formation of inflammable gas/air mixtures in the room where the appliance is located in the event of a leak in the refrigerant circuit. The quantity of refrigerant used in your appliance is indicated on the type plate on the inside of the appliance.

Back-up battery

Before the appliance is switched on, the battery which is fitted in the compressor compartment must be connected. This battery ensures that alarms are always reported, even in the event of a power failure.

The battery is fitted in the compressor compartment at the top of the appliance.
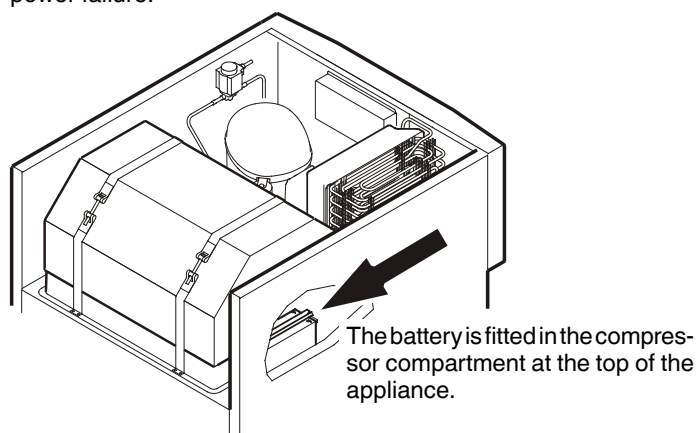
Important!
The appliance must not be connected to the electrical power supply yet.

Plug the connector onto the positive pole on the battery.
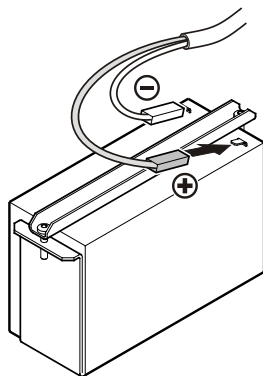
Disposal instructions for batteries

The battery must be removed when you wish to dispose of the appliance and sent for separate waste treatment for batteries.

Do not damage or short circuit the battery.

Dimensions

LGPv 6520: B = 700 mm
LGPv 1420: B = 1430 mm

B
830 mm
2150 mm
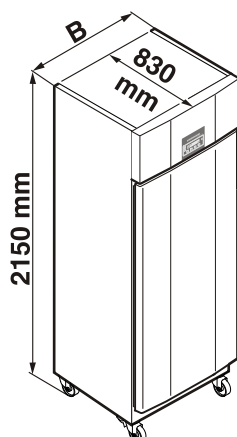
Connecting to the mains

Power supply (AC) and voltage at the operating point must comply with the details on the type plate. The socket must be fused with a 10 A fuse or higher, it must be away from the rear of the appliance and must be easily accessible.
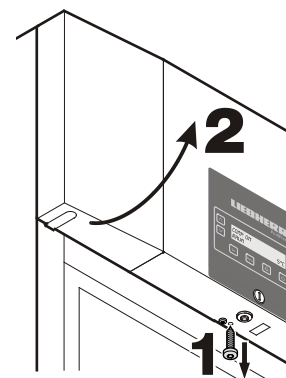
Connect the appliance with a properly earthed fused plug and socket only.
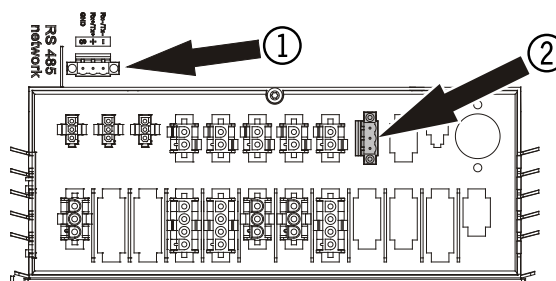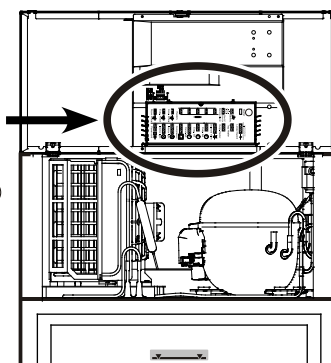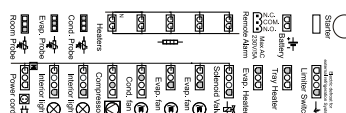
External alarm

We recommend connecting the appliance to an external alarm device.

The appliance may only be connected to an external alarm device by trained personnel.

Undo the screw on the underside of the front panel. Tilt the front panel upwards.
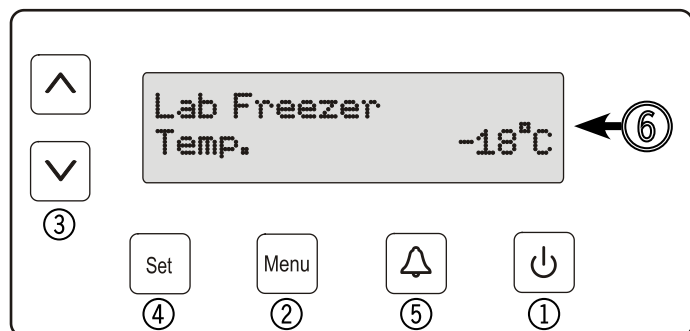
The contact assignment of the individual connectors is shown on the sticker on the cover.

① **RS485 interface**

② **Floating alarm output**

Operating and control elements

① **ON/OFF** button (to switch the appliance on and off)
② **Menu** button (to activate the main menu)
③ Selection buttons
④ **Set** button (Enter)
⑤ **Audible warning** on/off button
⑥ Display (above indication in display = standard indication)

Note: The Menu button can be used to cancel any unintentional actions and return to the standard indication without changing the value.

Set button

If the Set button is pressed in standard display mode, the date and time appear in the display.

DD/MM/YY

hh:mm:ss

Press the Set button again to return to the standard indication. **This is not automatic.**

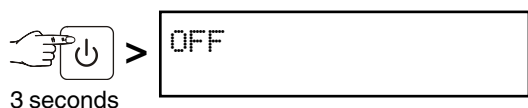## Switching the appliance on and off

You are advised to clean the appliance before switching it on for the first time (see "**Cleaning**").

• Connect the appliance to the mains - the display reads OFF.
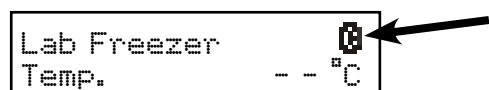
To switch the appliance on
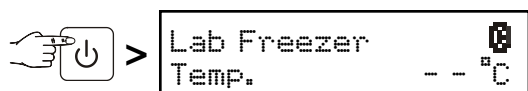
To switch the appliance off

3 seconds

Battery charge indicator

If the symbol 🔋 appears in the display, it is necessary to check whether the battery has been connected. See section entitled **Back-up battery**.
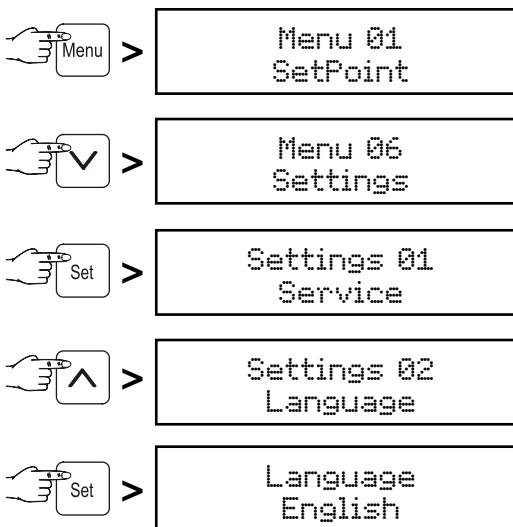
In normal operation, the symbol also appears while the battery is being recharged.

Setting the language

Note: The preset language is **English**.

If this is the language which should remain, the following procedure is not necessary.

Use buttons ∨ and ∧ to select the desired language.

Set > All menus will now appear in the set language.

Press the Menu button to return to the standard indication. If no button is pressed within 60 seconds, the electronic control system switches back automatically.

Main menu

Press the Menu button.

Use buttons ∨ and ∧ to select one of the menu items.

Menu 01
Setpoint = setting the temperature

Menu 03
Defrosting = activating the defrost function manually

Menu 04
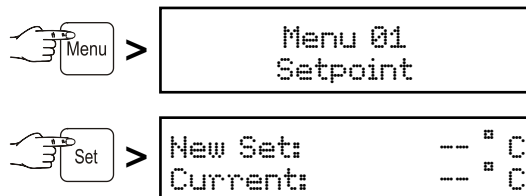Programs = resetting the temperature to the default setting

Menu 05
Alarm = list of alarms

Menu 06
Settings = settings on the control electronics

Menu 01 Setpoint = **setting the temperature**

Menu > | Menu 01
        | Setpoint

Set > | New Set: -- °C
       | Current: -- °C

The current temperature is then shown at the bottom of the display and the required temperature is shown at the top.

Use button ∨ to reduce the temperature = colder. Use button ∧ to increase the temperature = warmer.

Press the Set button to accept the new setting or the Menu button to cancel the procedure without saving.

Menu 03
Defrosting = **activating the defrost function manually**

The appliance defrosts automatically.

If the door has been left slightly open for a long time, a layer of ice may form in the interior and on the cooling plate. The defrost function can then be activated manually.
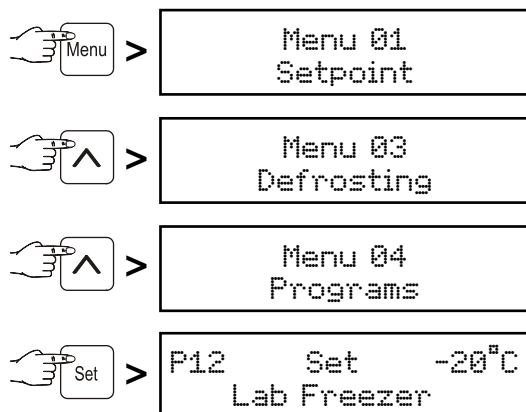
Menu > | Menu 01
        | SetPoint

∧ > | Menu 03
     | Defrosting

Set > | Start Defrosting?
       | No   Ok
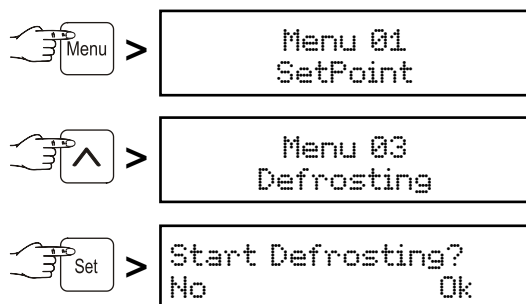
Press button ⏻ to start defrosting or press the Set button to cancel the procedure.

Menu 04 Programs
= resetting the temperature to the default setting

The temperature may be returned to the value set when the appliance was delivered.

Menu > | Menu 01
        | Setpoint

∧ > | Menu 03
     | Defrosting

∧ > | Menu 04
     | Programs

Set > | P12   Set   -20°C
       | Lab Freezer

Press the Set button to accept the new setting or the Menu button to cancel the procedure without saving.

Menu 05 Alarm = **list of alarms**

The alarm events are saved and can be called up if required.

Thanks to an integrated battery, the electronic control system is supplied with power, even in the event of a power failure, and the alarm status is indicated immediately.

The audible warning signal sounds every time an alarm event occurs.

The audible warning signal can be cancelled by pressing button Δ.

The following alarm can be rectified immediately:

| Door Open
| Temp.   -- °C
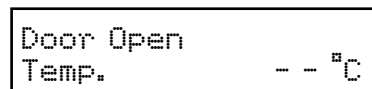
When the door is open, the above indication and the standard indication flash alternately. After 60 seconds, the audible warning signal sounds

Cancel the audible warning signal by pressing button Δ. Close the appliance door.

The following alarm events require the stored items to be checked:
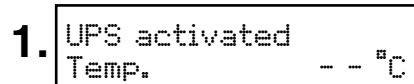
1. | UPS activated
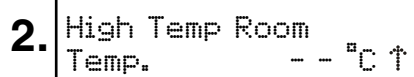 | Temp.   -- °C

The above indication and the standard indication flash alternately.

The audible warning signal sounds.

This indication is displayed after a power failure.

Call up the length of the power failure and the maximum temperature reached inside the appliance. See chapter "**Calling up the saved alarm events**".

2. | High Temp Room
       | Temp.   -- °C ↑

The above indication and the standard indication flash alternately.

The audible warning signal sounds.

This can be caused by:
• the appliance door being left open for a long time, allowing warm ambient air to enter;
• a long power failure;
• a fault in the appliance.

If a large quantity of warm items is placed in the appliance at once, this alarm may occur. This does not mean that there is an error.

Call up the length of the temperature rise and the maximum temperature reached inside the appliance. See chapter "**Calling up the saved alarm events**".

In both cases, the items must be checked and it must be decided if they can still be used.
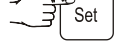
All other alarms which occur must be rectified by a customer service technician.

Calling up the saved alarm events

```
 Menu    >  ┌─────────────────────────┐
            │        Menu 01          │
            │        SetPoint         │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │        Menu 06          │
            │        Settings         │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │        Menu 05          │
            │        Alarm            │
            └─────────────────────────┘
```

Set > The last alarm which occurred is shown in the display.

30 alarm events are saved. The highest figure (A _ _) is the last alarm which occurred. Select a previous alarm event by pressing the buttons V and ∧.

```
 Set     >  ┌─────────────────────────┐
            │ A01          Door Open   │
            │ S hh:mm      DD/MM/YY    │
            └─────────────────────────┘
```

Start of the alarm event with time and date.

```
 Set     >  ┌─────────────────────────┐
            │ A01          Door Open   │
            │ E hh:mm      DD/MM/YY    │
            └─────────────────────────┘
```

End of the alarm event with time and date.

```
 Set     >  ┌─────────────────────────┐
            │ A01          Door Open   │
            │ Temp Max        - - °C   │
            └─────────────────────────┘
```

Highest temperature reached inside the appliance.

Return to the standard indication by pressing the Menu button.

Note

After this query, the alarm display will be deleted automatically.

Menu 06 Settings
= **settings on the control electronics**

Settings 01 Service
Settings 04 Inputs/Outputs
These settings can only be carried out by the customer service department.

Settings 02 Language
Setting the display language. See paragraph "**Setting the language**".
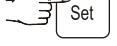
Settings 05 Communication
This menu item is described in the documentation on the accessories set "Serial data evaluation".

Settings 03 Clock Setting
Setting the time and date.

```
 Menu    >  ┌─────────────────────────┐
            │        Menu 01          │
            │        SetPoint         │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │        Menu 06          │
            │        Settings         │
            └─────────────────────────┘

 Set     >  ┌─────────────────────────┐
            │       Settings 01       │
            │        Service          │
            └─────────────────────────┘

 ∧       >  ┌─────────────────────────┐
            │       Settings 02       │
            │        Language         │
            └─────────────────────────┘

 ∧       >  ┌─────────────────────────┐
            │       Settings 03       │
            │      Clock Setting      │
            └─────────────────────────┘

 Set     >  ┌─────────────────────────┐
            │ Date:   DD/MM/YY         │
            │ Hour:   hh:mm:ss         │
            └─────────────────────────┘
```

The value to be changed flashes and can be changed by pressing the buttons V and ∧.

Save by pressing the Set button.

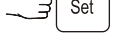Return to the standard indication by pressing the Menu button.
The conversion from summer to winter time is **not** automatic.

Settings 06 Display
Setting for permanent display light.

```
 Menu    >  ┌─────────────────────────┐
            │        Menu 01          │
            │        SetPoint         │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │        Menu 06          │
            │        Settings         │
            └─────────────────────────┘

 Set     >  ┌─────────────────────────┐
            │       Settings 01       │
            │        Service          │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │       Settings 08       │
            │     Restore Offset      │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │       Settings 07       │
            │      Calibration        │
            └─────────────────────────┘

 V       >  ┌─────────────────────────┐
            │       Settings 06       │
            │        Display          │
            └─────────────────────────┘

 Set     >  ┌─────────────────────────┐
            │ D03 = 0                  │
            │      Backlight ON        │
            └─────────────────────────┘

 Set     >  ┌─────────────────────────┐
            │ D03 =     0              │
            │           0              │
            └─────────────────────────┘

 ∧       >  ┌─────────────────────────┐
            │ D03 =     0              │
            │           1              │
            └─────────────────────────┘
```

Save by pressing the Set button.

Return to the standard indication by pressing the Menu button.

The display is now permanently lit.

Settings 07 Calibration

Adjustment of the displayed temperature to the actual interior temperature.
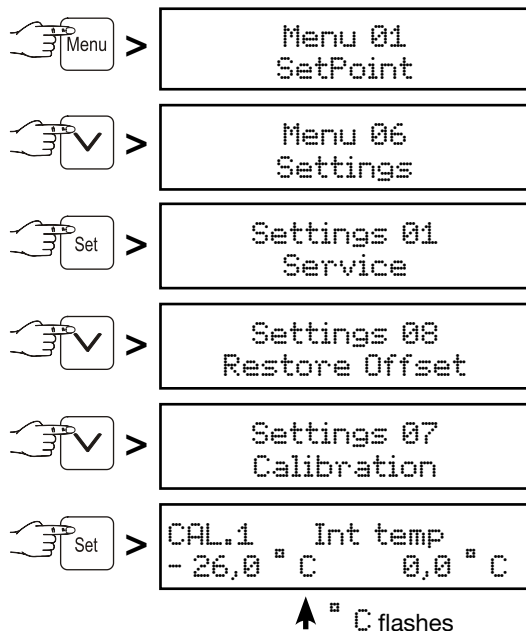Tolerances of temperature sensors can be offset with this function.

Adjustment is possible in three temperature ranges.

CAL1 = lower temperature range (approx. -26 °C, LGPv 14)
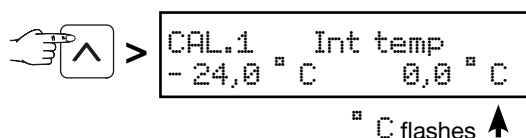CAL1 = lower temperature range (approx. -30 °C, LGPv 65)
CAL2 = middle temperature range (approx. -20 °C)
CAL3 = upper temperature range (approx. -10 °C)

Menu >
```
     Menu 01
     SetPoint
```

∨ >
```
     Menu 06
     Settings
```

Set >
```
    Settings 01
     Service
```

∨ >
```
    Settings 08
   Restore Offset
```

∨ >
```
    Settings 07
    Calibration
```

Set >
```
CAL.1    Int temp
- 26,0 ° C      0,0 ° C
```

↑ ° C flashes

Set >
```
CAL.1    Int temp
- 26,0 ° C      0,0 ° C
```
↑

The temperature range display flashes and can be changed using the buttons ∨ or ∧ (e.g. -1°C).

Save by pressing the Set button.

∧ >
```
CAL.1    Int temp
- 24,0 ° C      0,0 ° C
```
° C flashes ↑

Set >
```
CAL.1    Int temp
- 24,0 ° C      0,0 ° C
```
↑

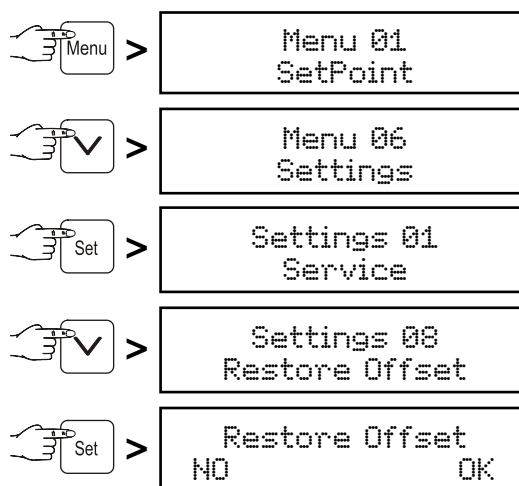The temperature correction value flashes and can be changed using the buttons ∨ or ∧.

Save by pressing the Set button.

Use button ∧ to proceed to CAL.2 and further to CAL.3 and adjust the settings in the same way as for CAL.1.

Return to the standard indication by pressing the Menu button.

Settings 08 Restore Offset

Setting the temperature correction values to 0.

Menu >
```
     Menu 01
     SetPoint
```

∨ >
```
     Menu 06
     Settings
```

Set >
```
    Settings 01
     Service
```

∨ >
```
    Settings 08
   Restore Offset
```

Set >
```
   Restore Offset
NO              OK
```

Press button ⏻ to set the temperature correction values for CAL1, CAL2 and CAL3, respectively, to 0 or cancel the procedure without any changes by pressing the Set button.

Return to the standard indication by pressing the Menu button.

Keypad lock

The keypad lock ensures that no unintentional changes are made to the electronic control system.

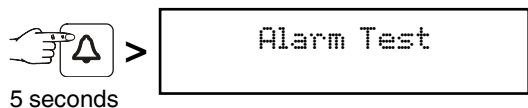**Activating the keypad lock**
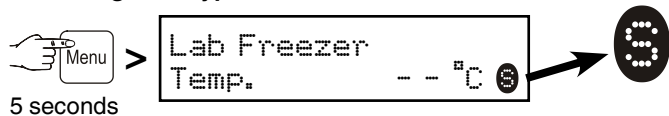
5 seconds

To deactivate, press again for 5 seconds.

Alarm test

To check that the alarm function is working correctly, an alarm test should be carried out at regular intervals.

5 seconds

The display flashes and the audible warning signal sounds. The alarm test is terminated automatically after a few seconds.

Product sensor (available accessory)

The temperature may be measured or recorded at any point in the interior using the product sensor.

Caution!
**The connection of the product sensor may only be made by trained personnel.**

The appliance must be disconnected from the mains before the work is started. Remove the plug.

1.
Feed the sensor through the opening in the compressor compartment and position inside the appliance.
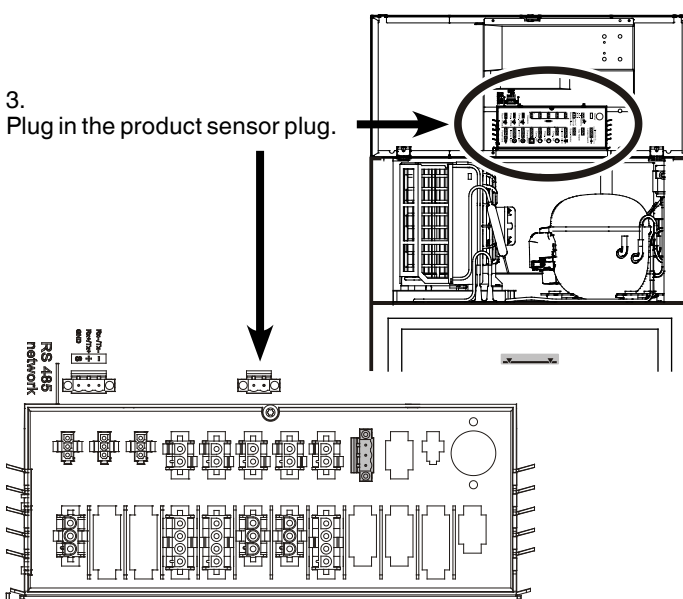
Seal the opening with sealant.
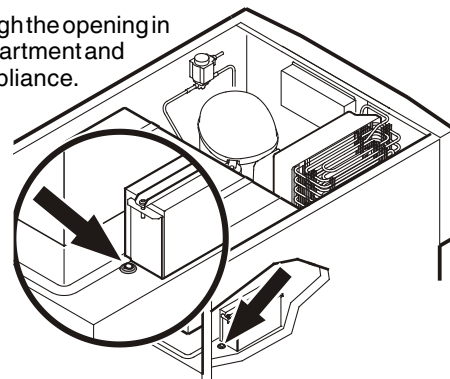
2.
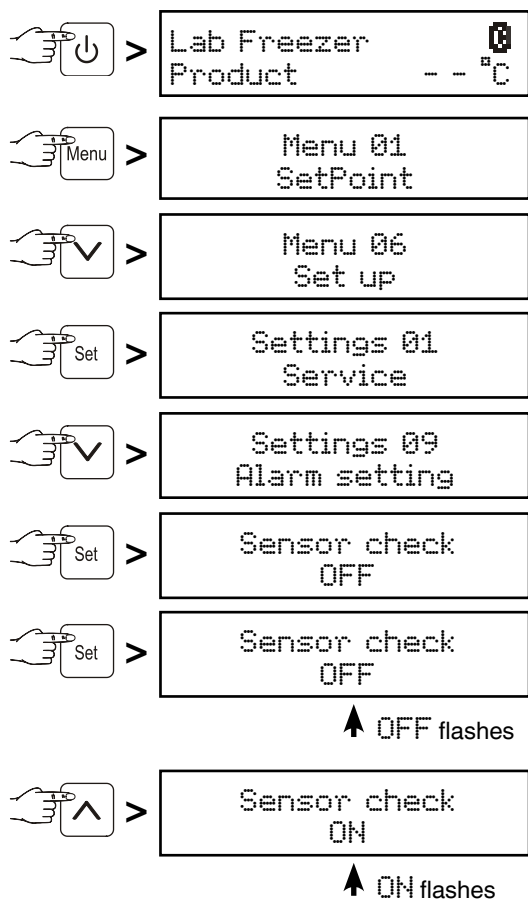Undo the screw on the underside of the front panel. Tilt the front panel upwards.
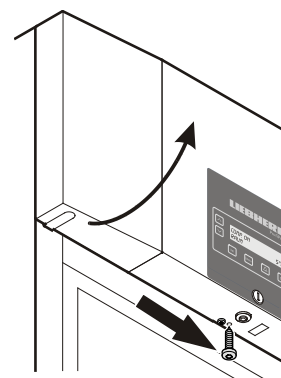
3.
Plug in the product sensor plug.

4.
Close the front panel and fix with the screw.

Product sensor settings

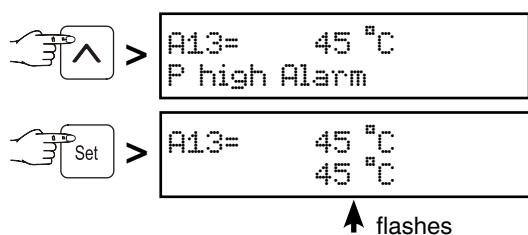• Connect the appliance to the mains - the display reads OFF.

⟜(power) >
```
Lab Freezer      🔋
Product       - - °C
```

⟜Menu >
```
     Menu 01
     SetPoint
```

⟜∨ >
```
     Menu 06
     Set up
```

⟜Set >
```
    Settings 01
    Service
```

⟜∨ >
```
   Settings 09
   Alarm setting
```

⟜Set >
```
   Sensor check
       OFF
```

⟜Set >
```
   Sensor check
       OFF
```
↑ OFF flashes

⟜∧ >
```
   Sensor check
       ON
```
↑ ON flashes

Save by pressing the Set button.

The sensor is now monitored by the electronic control system. In the event of a sensor error, an alarm will be signalled.

Adjusting the alarm limits
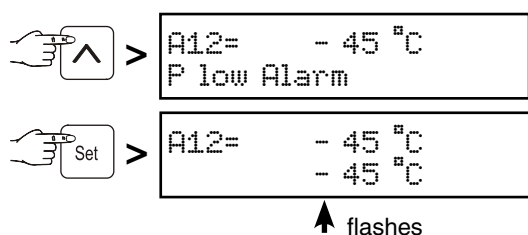
⟜∧ >
```
A12=      - 45 °C
P low Alarm
```

⟜Set >
```
A12=      - 45 °C
          - 45 °C
```
↑ flashes

Use buttons ∨ and ∧ to select the desired setting.

Save by pressing the Set button.

⟜∧ >
```
A13=       45 °C
P high Alarm
```
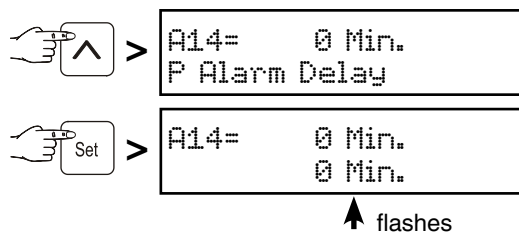
⟜Set >
```
A13=       45 °C
           45 °C
```
↑ flashes

Use buttons ∨ and ∧ to select the desired setting.

Save by pressing the Set button.

If an alarm delay needs to be set, carry out the steps in the next section or return to the default display by pressing the Menu button.
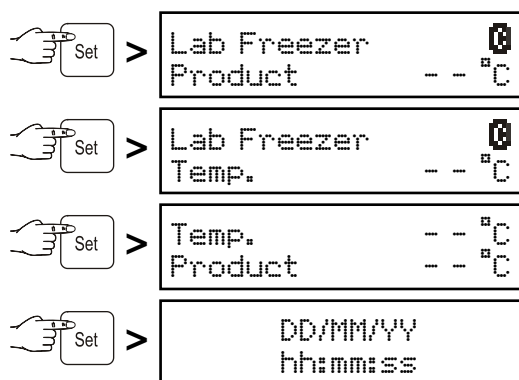
Adjusting the alarm delay

⟜∧ >
```
A14=      0 Min.
P Alarm Delay
```

⟜Set >
```
A14=      0 Min.
          0 Min.
```
↑ flashes

Use buttons ∨ and ∧ to select the desired setting.

Save by pressing the Set button.

Return to the standard indication by pressing the Menu button.

Note

When in standard display mode, it is possible to switch between product sensor, standard temperature sensor, both sensors and date/time using the Set button.

⟜Set >
```
Lab Freezer      🔋
Product       - - °C
```

⟜Set >
```
Lab Freezer      🔋
Temp.         - - °C
```

⟜Set >
```
Temp.         - - °C
Product       - - °C
```

⟜Set >
```
    DD/MM/YY
    hh:mm:ss
```

Equipment

The grid shelves are supported by shelf rails.

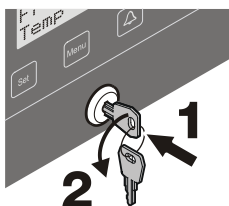Depending on the height of items, the shelf rails are adjustable in 27.5 mm increments.

First slide bars into the rear clip-in upright at the desired height and then hang in position at the front.
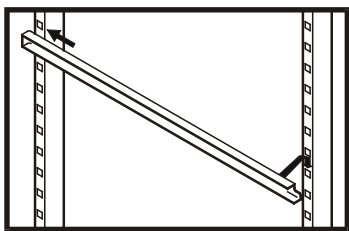
Note:
The maximum load per grid shelf is 60 kg.

Safety lock

The lock is equipped with a safety mechanism.

Locking the appliance:
• Insert the key as shown by arrow **1**.
• Turn the key 90°.

To unlock the appliance, the same procedure must be repeated in the same order.

Cleaning

Before cleaning always switch off the appliance. Pull out the mains plug or remove/unscrew the fuse.

• Transfer items to other appliances.
• Clean the inside and equipment with lukewarm water and a little detergent. Do not use abrasive or acid cleaners or chemical solvents.
• Ensure that no cleaning water penetrates into the electrical components or ventilation grille.
• Dry all parts well with a cloth.

Do not use steam cleaners because of the risk of injury and damage.

Cleaning water drain opening

A drain hose with an R 3/4 connection can be fitted to the underside of the appliance.
The water which collects in the interior during cleaning can be drained off in this way.

Malfunctions
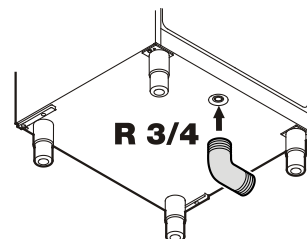
You may be able to rectify the following faults by checking the possible causes yourself:

• **Appliance does not function:**
– Is the appliance switched on?
– Is the plug correctly fitted in the mains socket?
– Is the socket fuse intact?
• **The temperature is not low enough:**
– Is the temperature setting correct (see "**Setting the temperature**")?
– Have excessive amounts of fresh products been placed in the appliance?
– Does the separately installed thermometer show the correct reading?
– Is the ventilation system working properly?
– Is the appliance set up too close to a heat source?

If none of the above causes apply and you cannot rectify the fault yourself, contact the nearest customer service department stating the type designation ❶, service number ❷ and appliance number ❸ as indicated on the type plate.

Shutting your appliance down
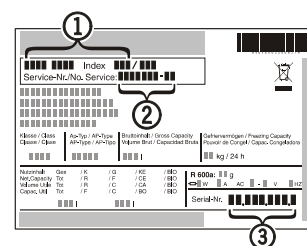
If your appliance is to be shut down for any length of time, switch it off and disconnect the plug or switch off or remove the fuse. Clean the appliance and leave the door open in order to prevent unpleasant smells.

The appliance complies with the relevant safety regulations and EC directives 2004/108/EC and 2006/95/EC.

Changing over door hinges

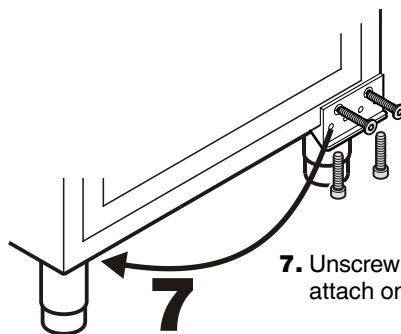Door hinges should only be changed by a trained expert.

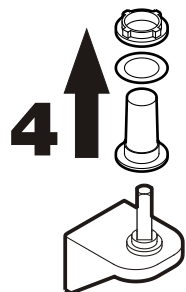Changing the door hinges must be done by two people.
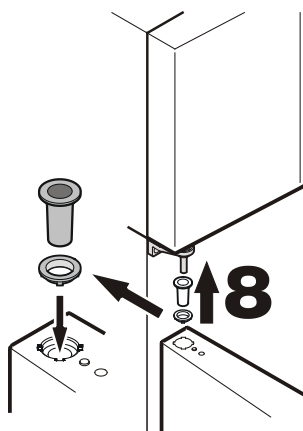
90°!
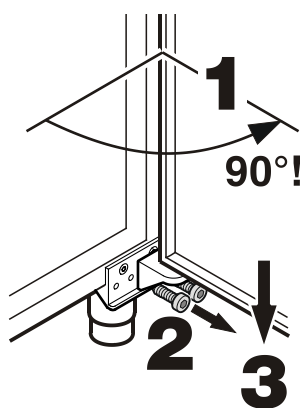
1. **Open door by about 90°.**

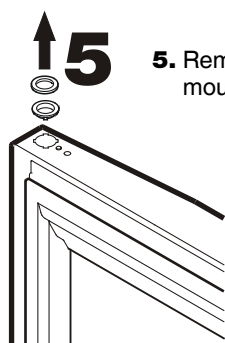2. Remove hinge bracket.

3. Pull the door out at the bottom and lift off.

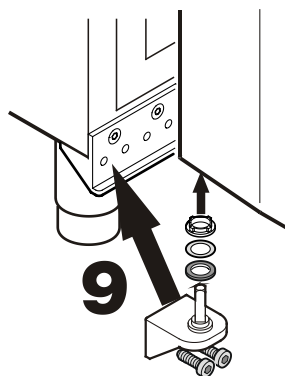7. Unscrew base mounting bracket and attach on the other side.

4. Remove plastic hinge bushing off hinge bracket.

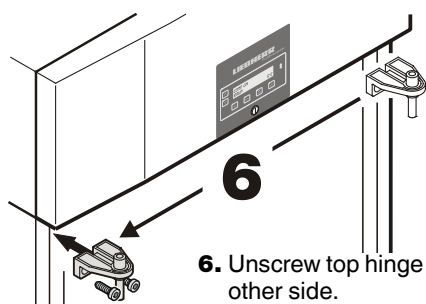8. **Keeping door open at 90°,** suspend in top square pin.

5. Remove bearing rings from upper door mounting.

9. Insert hinge bracket in lower door mounting and screw to base mounting bracket.

6. Unscrew top hinge bracket and attach on the other side.