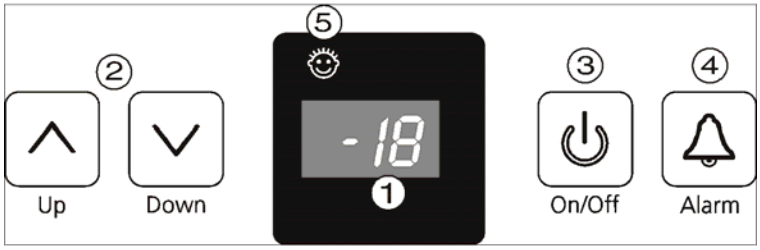
Appliance Documentation

GG 4010 / 4060 from Index 20

Commercial freezer

Contents

1.0 Operating and control elements



1 : Temperature display
2 : Temperature setting buttons
3 : ON/OFF button
4 : Alarm OFF button
5 : Display for activated child lock

2.0 Functions at a glance

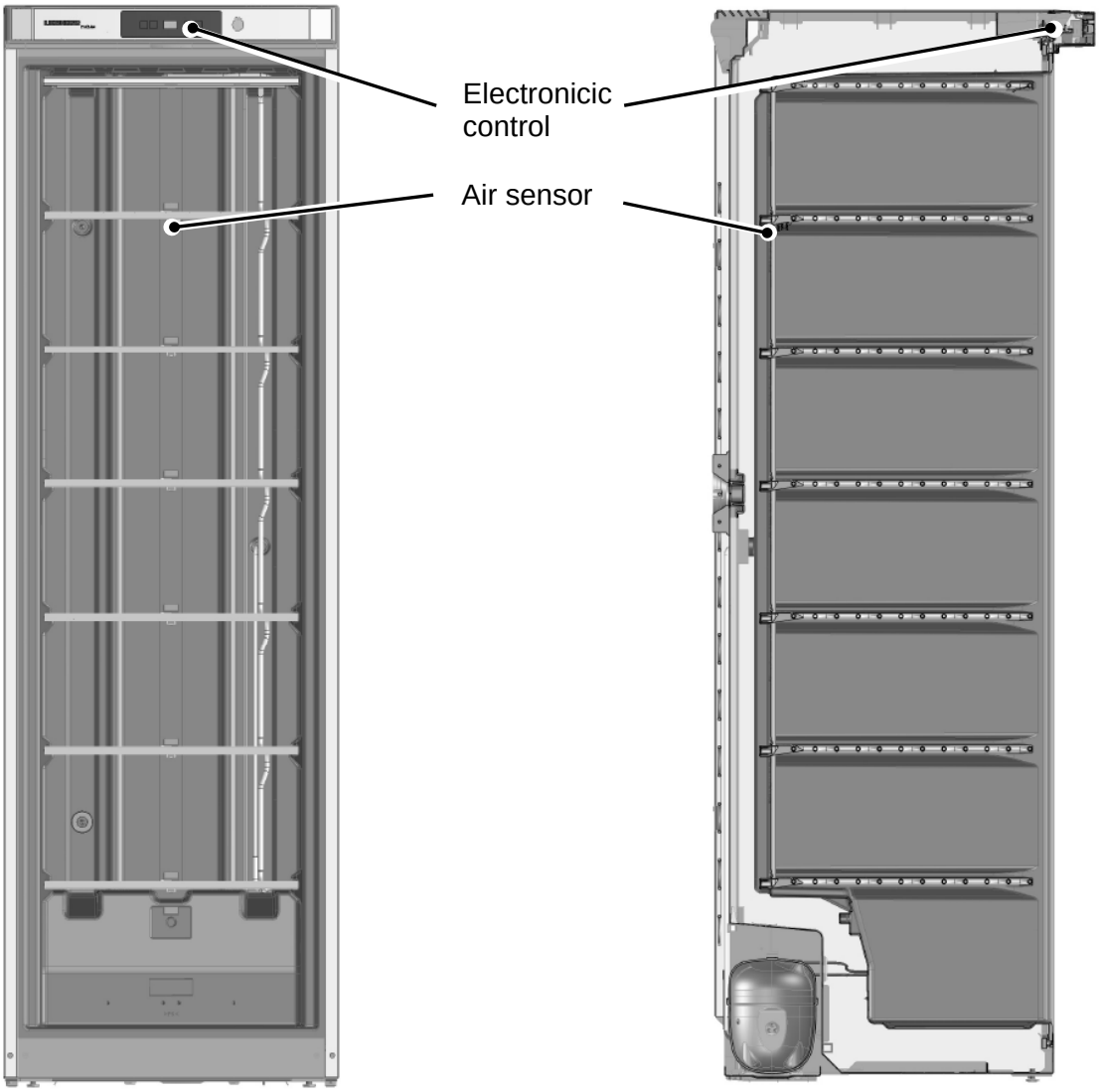
Control:	Electronic
Temperature display:	Actual value
Temperature range:	-14°C to -28°C
Temperature alarm:	Visual and audible
Door alarm:	Audible
Fan:	Not present
Defrosting:	Manual
Interior light:	Not present
Service menu:	Present
Compressor:	Standard
Solenoid valve refrigeration circuit:	Not present

3.0 Description of appliance

The GG 40.. model is a statically cooled freezer with wire tube evaporator.

The temperature is controlled by an air sensor.

3.1 Sensor positions, schematic diagrams



4.0 Main components and their functions

4.1 Electrical components and functions

Electronics			
Type:	Series 6 electronic control system		
Components:	Integral PCB		
Setting range:	-14°C to -28°C		
Display range:	-50°C to -1°C		
Functions			
Temperature alarm:	When:	Set value: Alarm value:	-14° C to -24 °C 4K warmer than set value.
		Set value: Alarm value:	-25°C to -28°C -20°C
		SuperFrost alarm value:	-20°C
	Audible:	4 beeps (suppressed during start-up)	
	Visual:	Flashing temperature display	
	Alarm is output with a 20-minute delay when the air sensor has reached the alarm value (e.g. set value: -18° C, actual value at -14° C for 20 minutes → alarm). On start-up the temperature display flashes until the switch-off value is reached, the audible alarm is suppressed.		
Door alarm:	When:	Door open longer than 3 minutes	
	Audible:	3 beeps	
Child lock:	Activated by the customer menu (see 7.1). When the child lock is active, the ON/OFF button and the temperature setting buttor are inactive. The remaining functions are available for unrestricted use.		
Defrosting:	Manual		
Sensors			
Air sensor:	Position:	Clipped into place behing the 2nd evaporator level.	
	Function:	Switches compressor ON and OFF.	

Switch				
Door switch:	Position:	In front panel.		
	Type:	Reed PCB		
	Contact type:	Make contact		
	Function:	Activated by magnet in the door, magnet is replaceable (under the end piece of the door)		
		Switching signal when:		
		door closed:	door alarm	OFF
		door open:	door alarm	ON
Loads				
Compressor:	Function:	**ON:**	Air sensor switch-on value.	
		OFF:	Air sensor switch-off value.	
		Special features:	On-delay time (8 minutes) must have elapsed.	

4.2 Refrigeration components and functions

Compressor:	1 standard compressor	
Evaporator:	Type:	Wire tube evaporator.
	Type of installation:	Between the baskets/drawers
	Injection point:	Top
	Flow sequence:	From top to bottom.
Frame heater:	Position:	Foamed-in in the region of the frame.
	Type:	Fluid heater
Condenser:	Type:	Wire tube condenser
	Type of installation:	Suspended freely at the rear

4.3 Other points

4.3.1 Door closing mechanism

At an opening angle between 0 and 30°, the hinge sleeve slides over the oblique curve of the hinge pin so that the door closes automatically. At an opening angle larger than 30° the door stays open.

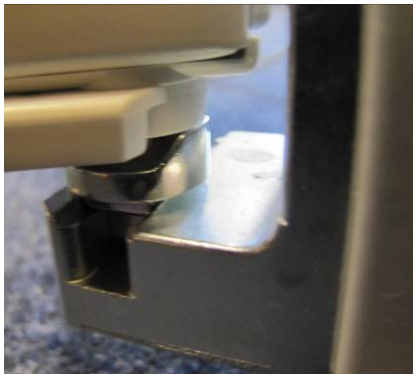


Fig. 4.3.1/ 1 Opening angle > 30°

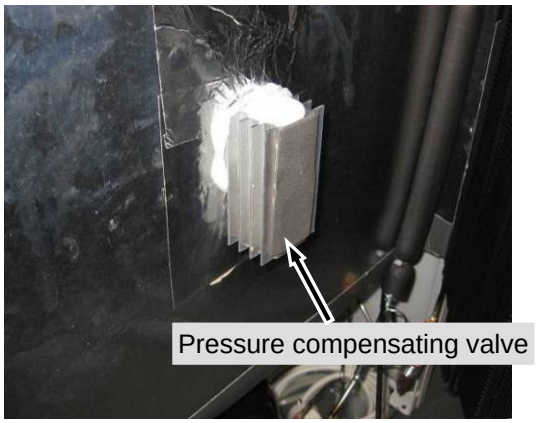
Fig. 4.3.1/ 2 Opening angle < 30°

Fig. 4.3.1/ 3 Opening angle = 0°

4.3.2 Pressure compensating valve

The pressure compensating valve is situated in the rear wall behind the second row of baskets from the bottom.

Fig. 4.3.2 / 1



5.0 Assembly instructions / replacement of parts

5.1 Electronic control system

Covers: Unclip the covers on the underside of the front housing.

Note: Short cover is easier to remove if the door is detached!

Fig. 5.1/ 1

Fig. 5.1./ 2

PCB carrier:

- Draw the front housing forwards and raise it.
- Detach the PCB edge connector and unclip the PCB carrier from the front housing.

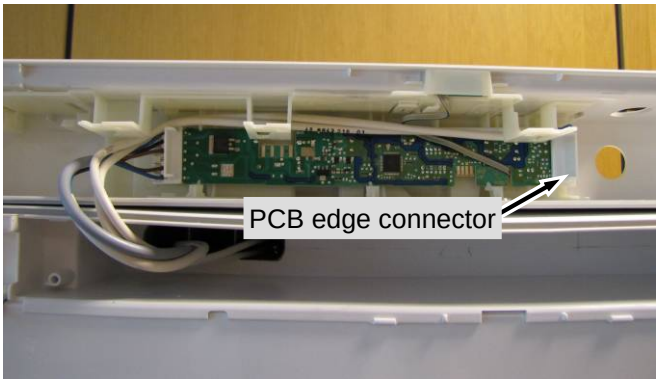


Fig. 5.1/ 3

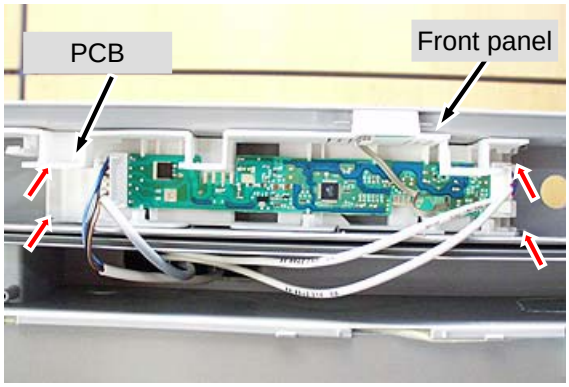


Fig. 5.1./ 4

PCB: Release the marked locking devices and remove the PCB from the PCB carrier.

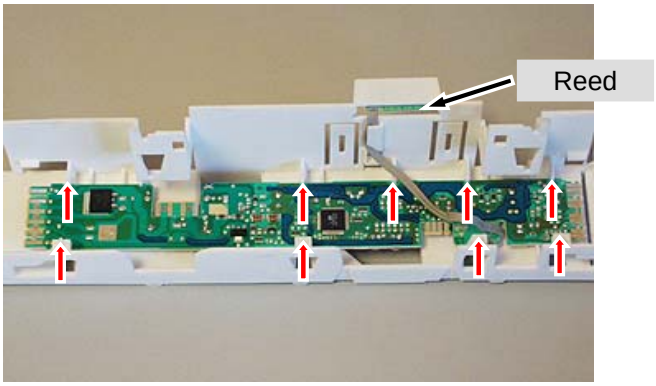


Fig. 5.1 / 5

5.2 Air sensor

Air sensor:

- Take the sensor out of the mount and extricate it through the rear wall.
- During assembly, make sure the sensor is clipped into place in the right position.

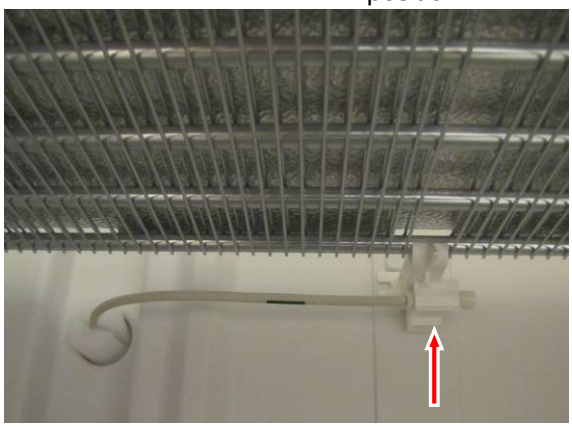


Fig. 5.2/ 1

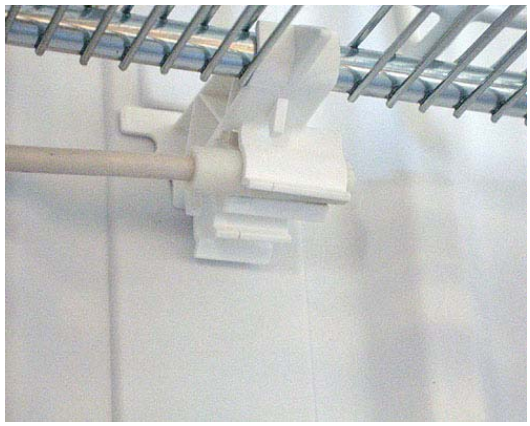


Fig. 5.2./ 2

5.3 Pressure compensating valve

Valve:

- Unfasten the condenser and swing it aside.
- Then the valve can be drawn out of the rear wall.

Fig. 5.3 / 1

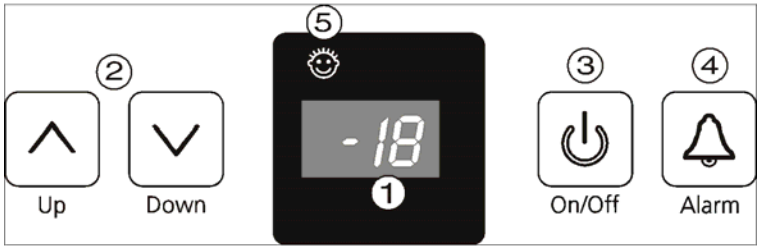
6.0 Technical data

Sensor values:

Temperature °C	Resistance value kOhm
+35	3.1
+30	3.8
+25	4.7
+20	5.9
+15	7.3
+10	9.3
+5	11.9
0	15.3
-5	19.8
-10	25.9
-15	34.1
-20	45.3
-25	60.8
-30	82.3
-35	112.8

7.0 Hidden functions

7.1 Customer menu



Step	Display	Operation	Display following operation	INFO
1	Actual value	Hold down "Alarm" for 3 seconds	c	Customer menu activation
2a	c	Press "Alarm"	c0	Child lock deactivated
2a	c0	Press "Up"	c1	Activate child lock
2a	c1	Press "Alarm" once and "ON/OFF" once	Actual value	Child lock ON
2b	c	Press "Alarm"	c1	Child lock activated
2b	c1	Press "Down"	c0	Deactivate child lock
2b	c0	Press "Alarm" once and "ON/OFF" once	Actual value	Child lock OFF
3	c	Press "Up"	h	Display brightness selection
3	h	Press "Alarm"	h1 to h5	Adjust display brightness
3	h1 to h5	Select brightness wanted by pressing "up" and confirm by pressing "Alarm"	h	Display brightness altered
3	h	Press "ON/OFF"	Actual value	Display brightness set

7.2 Service menu

The service menu may be used by service technicians only.

7.2.1 Demo mode

Step	Display	Operation	Display following operation	Testing option / Info
Service menu start				
1	Actual value	Press "Alarm" and "ON/OFF" simultaneously for 3 seconds	"d1" flashes	Service menu activation
Activating/ deactivating demo mode (DM can be deactivated only using the service menu, not by OFF/ON.)				
2a	"d1" flashes	Press "Alarm"	Set value	**Demo mode ON**
2b	"d0" flashes	Press "Alarm"	Current actual value	**Demo mode OFF**
Operation is switched to the mode wanted, demo mode or normal, as soon as "Alarm" has been actuated.				

7.2.2 Service mode

Step	Display	Operation	Display following operation	Testing option / Info
Service menu start				
1	OFF	Press "Alarm" and "ON/OFF" simultaneously for 3 seconds	"d1" flashes	Service menu activation
Customer service mode -- Check on display-LED, buttons, door contact				
1	"d1" flashes	Press "Up"	"L" flashes	Service mode selected
2	"L" flashes	Press "Alarm"	"rd" flashes	Service mode activated
3	"rd" flashes	Door open and closed	All LEDs and the display (88) shine	Door contact, LEDs
4	All LEDs and the display (88) shine *	Press all the buttons	2 seconds audible alarm "L0" shines	Buttons
Service mode -- testing electric loads--				
5	"L0" shines		"L0" shines	All OFF
6	"L0" shines	Press "Up"	"L1" shines	**Compressor ON**
Return to step 5 by pressing the "Up" button again.				
End		Press "On/Off"		

7.2.3 Sensor menu

Step	Display	Operation	Display following operation	Testing option / Info
Service menu start				
1	OFF	Hold down "Alarm" and simultaneously press "ON/OFF"	d1 flashes	Service menu activation
2	d1	Press "Up" until E flashes	E	Sensor selection
3a	E	Press "Alarm"	E3 in alternation with the respective temperature	Air sensor
3b	E3	Press "Up"	E8	Reed contact
4	E8	Open/close door	Displays the door status 1 open, 0 closed	
As soon as "Alarm" is pressed, one goes to the higher-level menu (d1, L, F).				

8.0 Table of error codes

Error code	Defective component	Emergency mode
"F3" flashes	Air sensor	**Continuous operation**