

HARVIA XENIO INFRA

EN Control unit



These instructions for installation and use are intended for owners of infrared cabins, radiators and control units, persons in charge of managing infrared cabins, radiators and control units, and for electricians responsible for installing radiators and control units. Once the control unit is installed, these instructions of installation and use are handed over to the owner of the infrared cabin, radiators and control unit, or to the person in charge of maintaining them.

CONTROL UNIT HARVIA XENIO INFRA (CX36I)

Control unit's purpose of use: The control unit is meant for controlling the functions of infrared radiators. It is not to be used for any other purpose.

Congratulations on making an excellent choice!

CONTENTS

1. HARVIA XENIO INFRA.....	17
1.1. General	17
1.1.1 Warnings	17
1.2. Technical Data	17
1.3. Troubleshooting	18
2. INSTRUCTIONS FOR USE.....	19
2.1. Radiators On	19
2.2. Radiators Off.....	19
2.3. Changing the Settings.....	19
2.4. Lighting	20
3. INSTRUCTIONS FOR INSTALLATION.....	22
3.1. Installing the Temperature Sensor.....	22
3.2. Installing the Power Unit.....	23
3.2.1. Electrical Connections	23
3.2.2. Multidrive	23
3.2.3. Power Unit Fuse Faults.....	23
3.3. Installing the Control Panel.....	25
3.4. Ventilation	26
4. SPARE PARTS.....	26

1. HARVIA XENIO INFRA

1.1. General

The purpose of the Harvia Xenio Infra control unit is to control 1–8 infrared radiators. The maximum total output of the radiators is 3.6kW. The control unit consists of a control panel, a power unit and a temperature sensor. See figure 1.

The control unit regulates the temperature in the infrared cabin based on information given by the sensor. The temperature is sensed by an NTC thermistor.

1.1.1 Warnings

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

1.2. Technical Data

Control panel:

- Temperature adjustment range 25–50°C
- On-time adjustment range: 1–12h. For longer operating times consult the importer/manufacturer.
- Control of lighting
- Dimensions: 85 mm x 24 mm x 110 mm
- Length of data cable: 5m (10 m extension cables available, max. total length 30m)

Power unit:

- Supply voltage: 230V 1N~
- Max. load: 3.6 kW (example: 8 x 0.45 kW)
- Lighting control, max. power 300W, 230V 1N~
- Dimensions: 272 mm x 70 mm x 193 mm

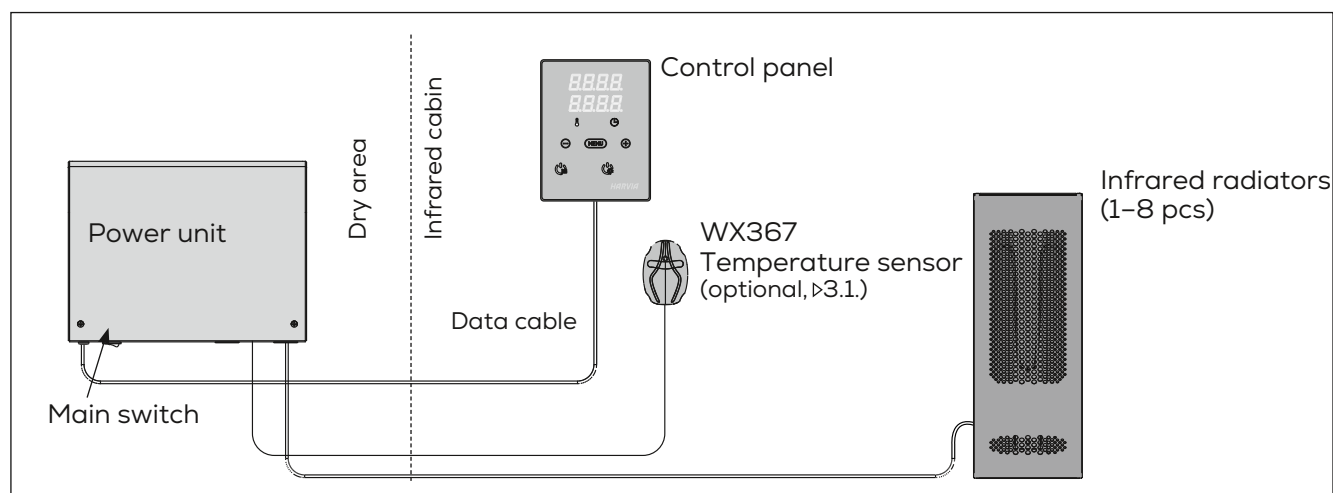


Figure 1. System components

Sensor (WX367):

- Temperature sensor: NTC thermistor (22 kΩ/
T=25 °C)
- Weight: 175 g with leads, ca 4 m
- Dimensions: 51 mm x 73 mm x 27 mm

1.3. Troubleshooting

If an error occurs, the radiator power will cut off and the control panel will show an error message "E (number)", which helps troubleshooting the cause for the error. Table 1.

Note! All service operations must be done by professional maintenance personnel. No user-serviceable parts inside. Replace a broken radiator with the same model from the same manufacturer.

	Description	Remedy
E1	Temperature sensor's measuring circuit broken.	Check the blue and brown wires to the temperature sensor and their connections (see figure 7) for faulties.
E2	Temperature sensor's measuring circuit short-circuited.	Check the blue and brown wires to the temperature sensor and their connections (see figure 7) for faulties.
E16	A sensor is connected both to the control panel and the power unit.	Only one sensor can be used (§3.1.). Remove extra sensors.

Table 1. Error messages. Note! All service operations must be done by professional maintenance personnel.

2. INSTRUCTIONS FOR USE

When the control unit is connected to the power supply and the main switch (see figure 1) is switched on, the control unit is in standby mode and ready for use. I/O button's background light glows on the control panel.

2.1. Radiators On



Switch the radiators on by pressing the I/O button on the control panel.

When the radiators switch on, the top row of the display will show the set temperature and the bottom row will show the set on time for five seconds.

When the desired temperature has been reached in the infrared cabin, the radiators are automatically switched off. To maintain the desired temperature, the control unit will automatically switch the radiators on and off in periods.

2.2. Radiators Off

The radiators turn off and the control unit switches to standby-mode when

- the I/O button is pressed
- the on-time runs out or
- an error occurs.

NOTE! It is essential to check that the control unit has cut power off from the radiators after the on-time has elapsed or the radiators have been switched off manually.

2.3. Changing the Settings

The settings menu structure and changing the settings is shown in figures 3a and 3b.

The programmed temperature value and all values of additional settings are stored in memory and will also apply when the device is switched on next time.

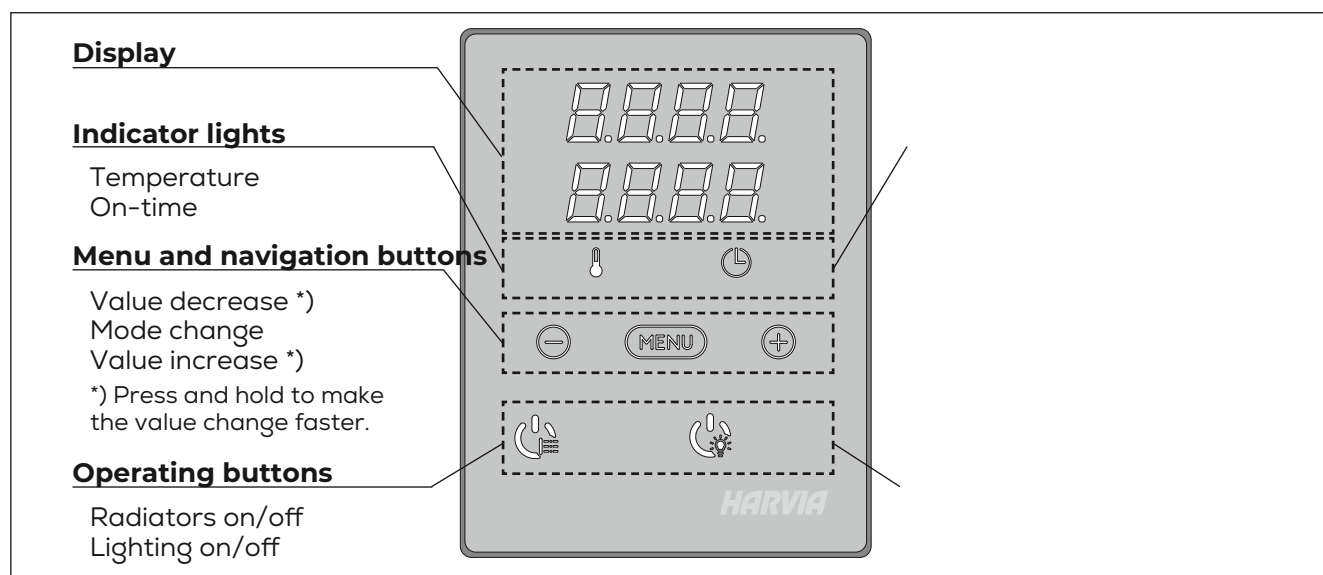


Figure 2. Control panel

2.4. Lighting

The lighting of the infrared cabin can be set up so that it can be controlled from the control panel. (Max 300 W.) Lighting can be switched on and off separately from other functions.



Switch the lights on/off by pressing the control panel button.

BASIC SETTINGS



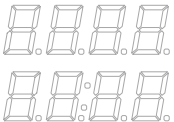
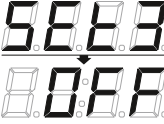
Basic mode (radiators on)

The top row shows the infrared cabin temperature. The bottom row shows the remaining on-time.

	Press the MENU button to open the settings menu.	
	Infrared cabin temperature The display shows the infrared cabin temperature setting. • Change the setting to the desired temperature with the – and + buttons. The range is 25–50°C.	
	Press the MENU button to access the next setting.	
	Remaining on-time Press the – and + buttons to adjust the remaining on-time. Example: the radiators will be on for 3 hours and 30 minutes.	
	Press the MENU button to exit.	

Figure 3a. Settings menu structure, basic settings

ADDITIONAL SETTINGS

	Control unit standby I/O button's background light glows on the control panel.
	Open the settings menu by simultaneously pressing the locations of the buttons -, MENU and + (see figure 2). Press for 5 seconds.  The buttons do not glow when the control unit is in standby mode.
	Maximum on-time The maximum on-time can be changed with the - and + buttons. The range is 1-12 hours (1 hour*). Example: the radiators will be on for 1 hour from the start. (Remaining on-time can be changed, see figure 3a.)
	Press the MENU button to access the next setting.
	Sensor reading adjustment The reading can be corrected by +/- 5 units. The adjustment does not affect the measured temperature value directly, but changes the measuring curve.
	Press the MENU button to access the next setting.
	Memory for power failures The memory for power failures can be turned ON or OFF*). • When turned on, the system will start again after a break in electricity. • When turned off, the break will shut the system down. I/O button must be pressed to restart. • The safety regulations for memory usage vary from region to region.
	Press the MENU button. The control unit switches to standby-mode.

*) Factory setting

Figure 3b. Settings menu structure, additional settings

3. INSTRUCTIONS FOR INSTALLATION

The electrical connections of the control unit may only be made by an authorised, professional electrician and in accordance with the current regulations. When the installation of the control unit is complete, the person in charge of the installation must pass on to the user the instructions for installation and use that come with the control unit and must give the user the necessary training for using the infrared cabin and the control unit.

3.1. Installing the Temperature Sensor

There are 2 options for temperature sensor placement. Choose either of the following options (figure 4).

- Option A: Connect the internal temperature sensor inside the control panel (see figure 9). Fasten the control panel inside the infrared cabin at a minimum height of 1 m.
- Option B: Connect the temperature sensor WX367 to the power unit. Fasten the temperature sensor to a wall inside the infrared cabin at a minimum height of 1 m. The control panel can be placed outside the cabin.

Note! Do not install the temperature sensor closer than 1000 mm to an omnidirectional air vent or closer than 500 mm to an air vent directed away from the sensor. See figure 5. The air flow near an air vent cools down the sensor, which gives inaccurate temperature readings to the control unit. As a result, the radiators might overheat.

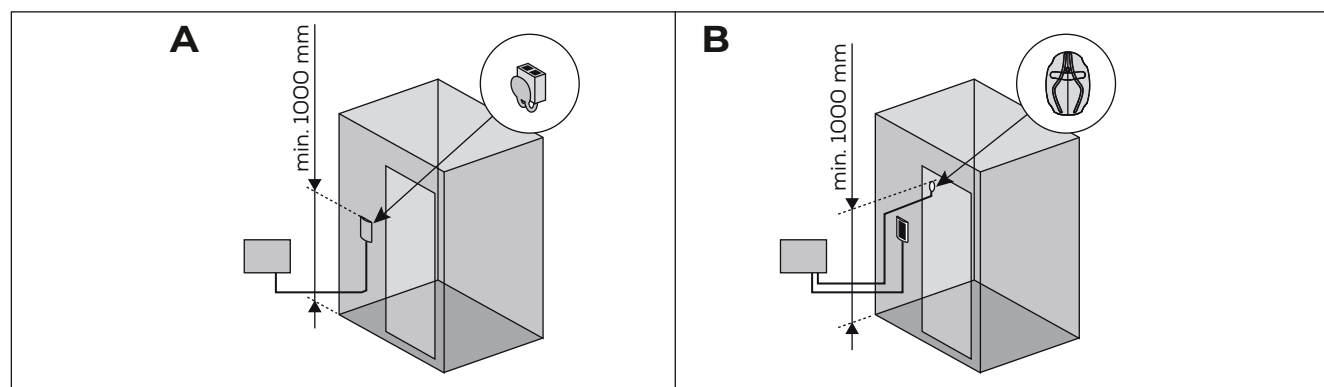


Figure 4. Options for sensor type and placement

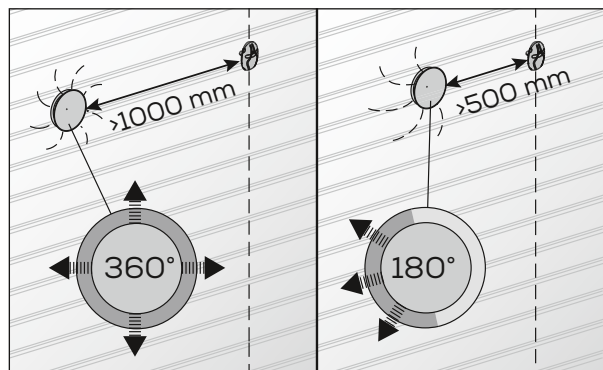


Figure 5. Sensor's minimum distance from an air vent

3.2. Installing the Power Unit

Install the power unit outside the infrared cabin, in a dry place with an ambient temperature of $>0^{\circ}\text{C}$. See figure 6 for instructions on how to open the power unit cover and how to mount the unit.

Note! Do not embed the control unit into structures, since this may cause excessive heating of the internal components of the unit and lead to damage. Allow proper ventilation around the unit. See figure 6.

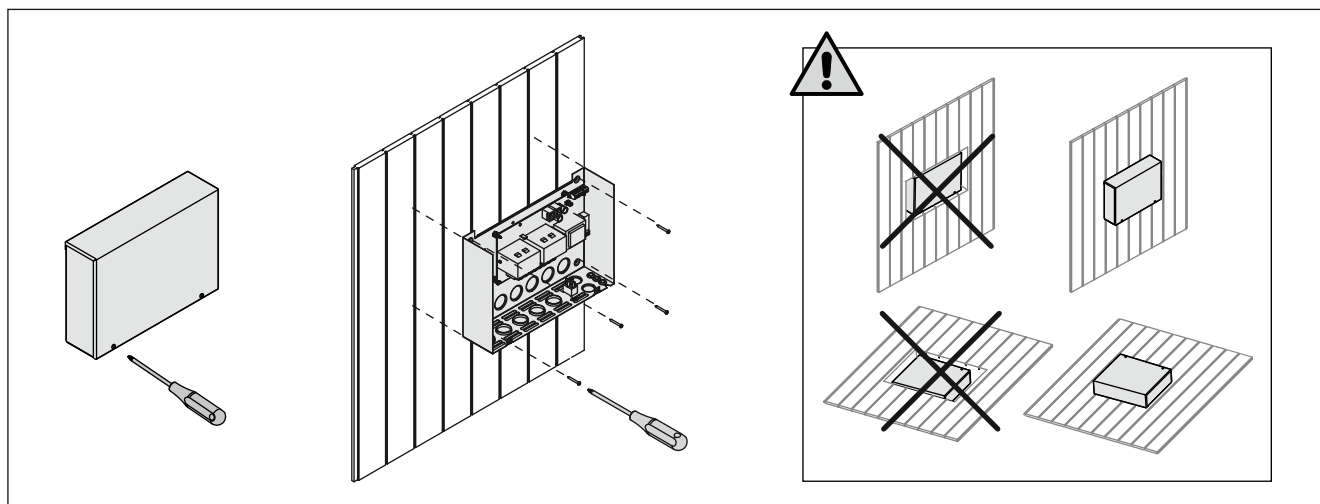


Figure 6. Opening the power unit cover and mounting the unit

3.2.1. Electrical Connections

Figure 7 shows the electrical connections of the power unit. Also see the instructions for installation delivered with the infrared radiators.

The connecting cable must be of rubber cable type H07RN-F if the wiring from the infrared radiator is not inside the structures. Primarily the wiring should be inside the structures (outside the insulating layer).

Note! If the mains cable is damaged, the manufacturer or its service agent or an equivalent-qualified person has to replace it to avoid hazards.

3.2.2. Multidrive

Up to 8 power units can be connected in series so that they share the same control panel. The connection principle is shown in figure 8.

Only one temperature sensor can be used. The sensor must either be connected to the first power unit in the chain or to the control panel (3.1.).

3.2.3. Power Unit Fuse Faults

Replace a blown fuse by a new one with the same value. The placement of the fuses in the power unit is shown in figure 7.

- If the fuses for relay outputs have blown, there is a problem with lighting. Check the wiring and functioning of lighting.

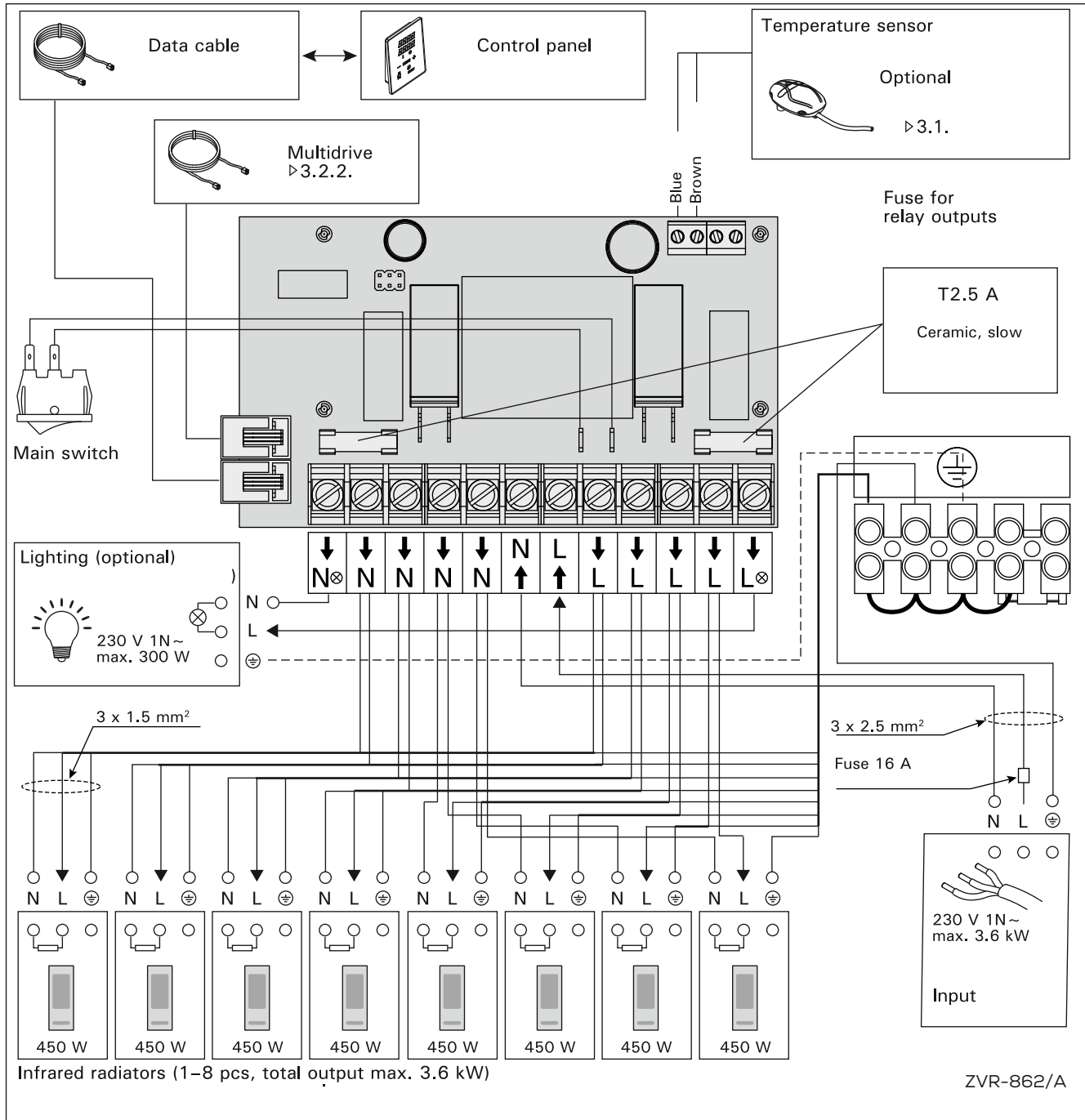


Figure 7. Electrical connections

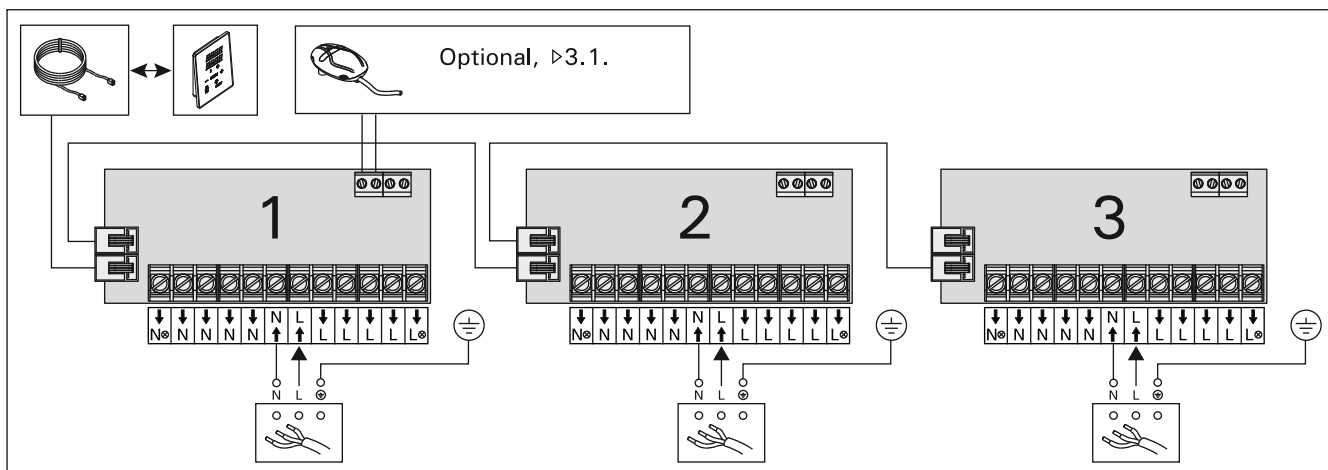


Figure 8. Power unit chain (Multidrive)

3.3. Installing the Control Panel

Install the control panel in or outside the infrared cabin, in a dry place with an ambient temperature of $>0^{\circ}\text{C}$ where it can be accessed conveniently. See figure 9.

1. Thread the data cable through the hole in the back cover.
2. Fasten the back cover to a wall with screws.
3. Push the data cable to the connector.
4. Connect the temperature sensor (see options in section 3.1.)
5. Press the front cover into the back cover.

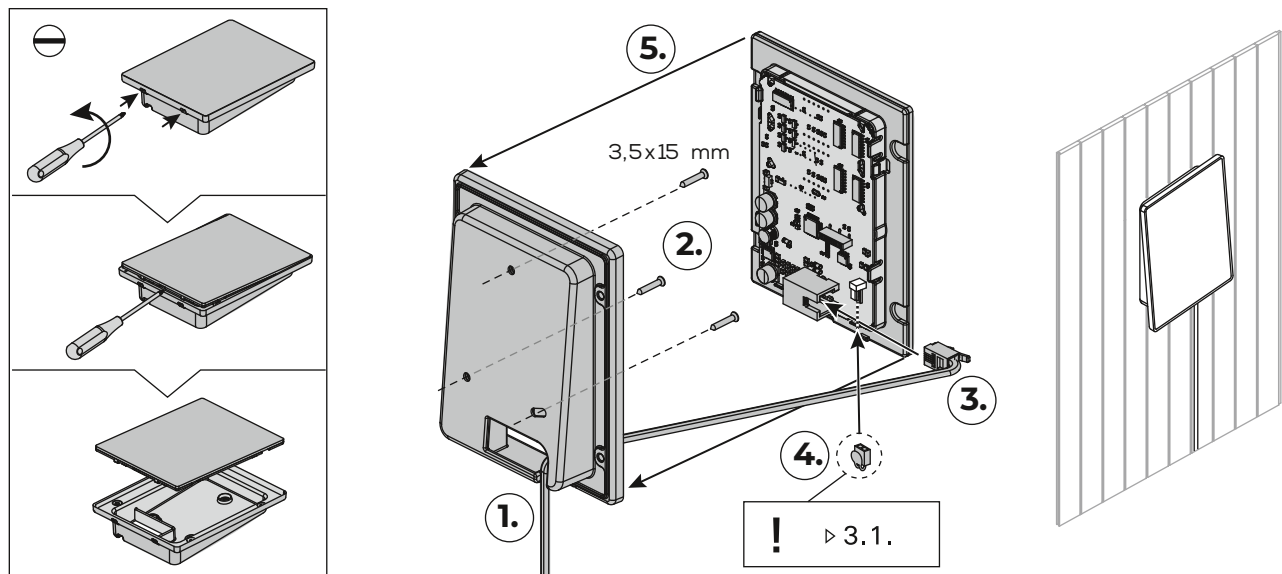


Figure 9. Fastening the control panel

3.4. Ventilation

The air in the infrared cabin should change six times per hour. Figure 10 illustrates different ventilation options.

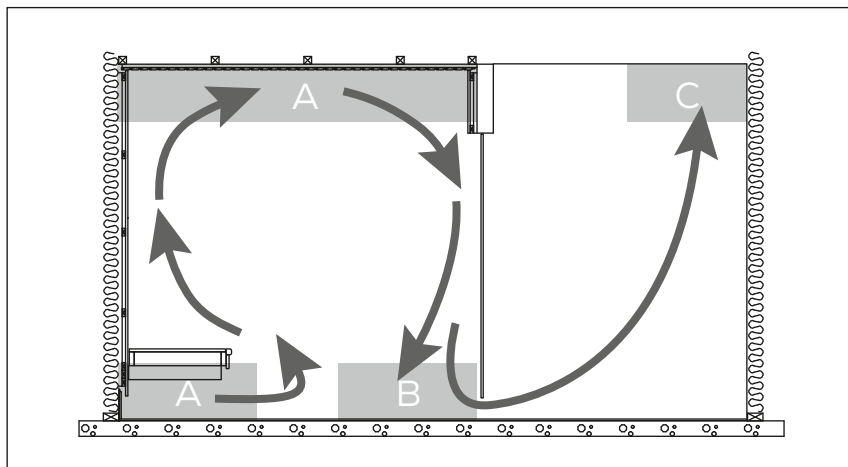
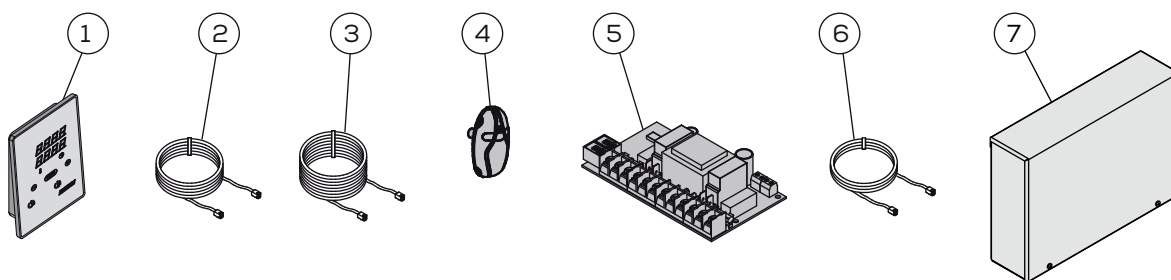


Figure 10.

- A. Supply air vent location. If mechanical exhaust ventilation is used, place the supply air vent on the infrared cabin's ceiling or on the wall near the ceiling. If gravity exhaust ventilation is used, place the supply air vent on the wall near the floor. The diameter of the supply air pipe must be 50–100 mm.
- B. Exhaust air vent. Place the exhaust air vent near the floor, as far away from the supply air vent as possible. The diameter of the exhaust air pipe should be twice the diameter of the supply air pipe.
- C. If the exhaust air vent is in the next room, the gap underneath the infrared cabin door must be at least 100 mm. Mechanical exhaust ventilation is mandatory.

4. SPARE PARTS



1	Control panel (CX36I)	WX382
2	Data cable 5 m	WX311
3	Data cable extension 10 m (optional)	WX313
4	Temperature sensor	WX367
5	Circuit board	WX366
6	Multidrive cable 1,5 m (optional)	WX312
7	Additional power unit for Multidrive, incl. WX312 (optional)	CX36IL

We recommend to use only the manufacturer's spare parts.



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