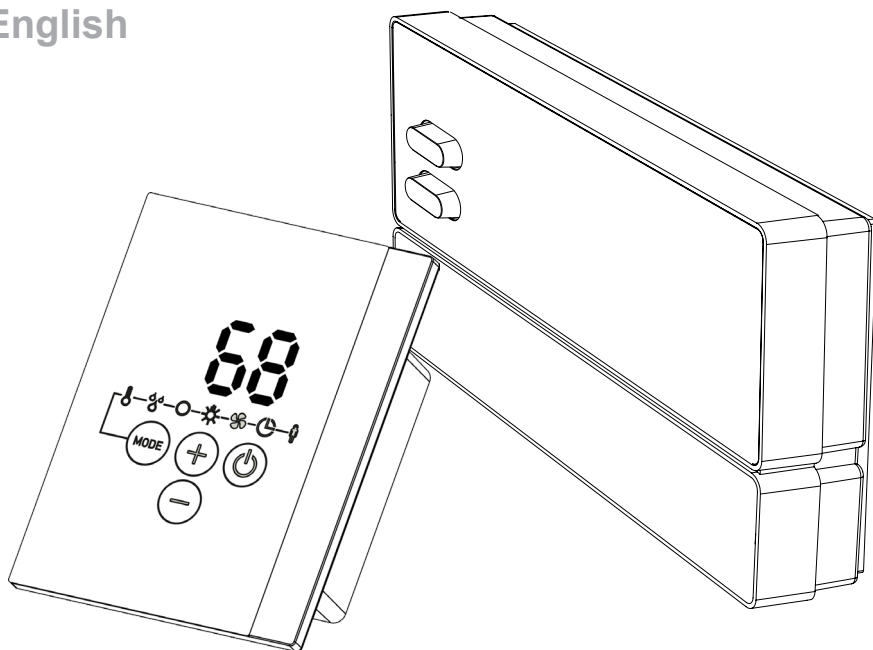


Sauna control unit

Pro D

INSTRUCTIONS FOR INSTALLATION AND USE

English



Pro D2	1-041-288 / PRO-D2
Pro D2 white	1-041-290 / PRO-D2W
D2i	1-041-291 / PRO-D2I
Pro D2i white	1-041-292 / PRO-D2IW
Pro D3	1-041-293 / PRO-D3
Pro D3 white	1-041-294 / PRO-D3W
Pro D3i	1-041-295 / PRO-D3I
Pro D3i white	1-041-296 / PRO-D3IW

EN

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FR

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NL

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FI

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1. About this instruction manual

Read these installation and operating instructions carefully and keep them within reach of the sauna control unit. This ensures that you can refer to information on safety and operation at any time.



These installation and operating instructions can also be found in the downloads section of our website: www.mediabank.harvia.com.

Symbols used for warning notices

In these instructions for installation and use, a warning notice located next to an activity indicates that this activity poses a risk. Always observe the warning notices. This prevents damage to property and injuries, which in the worst case may be fatal.

The warning notices contain keywords, which have the following meanings:



DANGER!

Serious or fatal injury will occur if this warning notice is not observed.



WARNING!

Serious or fatal injury can occur if this warning notice is not observed.



CAUTION!

Minor injuries can occur if this warning notice is not observed.

ATTENTION!

This keyword is a warning that damage to property can occur.

Other symbols



This symbol indicates tips and useful information.

2. Important information for your safety

The sauna control units of the Pro D series have been produced in accordance with the applicable safety rules and regulations. However, hazards may arise during use. Therefore adhere to the following safety information and the specific warning notices in the individual chapters. Also observe the safety information for the devices connected.

2.1. Intended use

The sauna control units of the Pro D series are used exclusively for operating and controlling the sauna functions in accordance with the technical data.

The sauna control units of the Pro D series may only be used for operating and controlling a sauna heater which has been certified as satisfying the combustion test described in paragraph 19.101 of EN 60335-2-53. If the heater does not meet this requirement, an appropriate safety precaution must be taken (for example: safety shut-off/door sensor, see 5.11 on page **26**).

The sauna control units of the Pro D series may only be used for operating and controlling 3 heating circuits with a maximum heating capacity of 3.5 kW per heating circuit. The maximum vaporizer output is 3.5 kW. The maximum additional output totals 3.5 kW.

Any use exceeding this scope is considered improper use. Improper use can result in damage to the product, severe injuries or death.

2.2. Safety information for the installer

- Installation may only be performed by a qualified electrician or similarly qualified person.
- Work on the sauna control unit may only be performed when the power has been disconnected.
- A fully disconnecting all-pole isolating device compliant with overvoltage category III must be fitted on site.
- The sauna control unit must be installed outside the sauna cabin at a height of approx. 1.70 m or in accordance with the recommendation issued by the sauna manufacturer. The ambient temperature must be within a range spanning -10 °C to +40 °C.
- The heater sensor must be installed in such a way that it is not affected by inflowing air.
- The heater supply cable must have a minimum cross-sectional area of 2.5 mm² and be temperature-resistant up to 150 °C.
- Also comply with the regulations applicable at the installation location.
- For your own safety, consult your supplier in the event of problems that are not explained in sufficient detail in the installation instructions.

2.3. Safety information for the user

- The sauna control unit must not be used by children under 8 years of age.
- The sauna control unit may be used by children over 8 years of age, by persons with limited psychological, sensory or mental capabilities or by persons with lack of experience/knowledge, but only if:
 - They are supervised.
 - They have been shown how to use the device safely and are aware of the hazards that could occur.
- Children must not play with the sauna control unit.
- Children under 14 years of age may only clean the sauna control unit if they are supervised.
- For health reasons, do not use the sauna when under the influence of alcohol, medication or drugs.
- Make sure that no flammable objects have been placed on the sauna heater before the sauna control unit is switched on.
- Make sure that no flammable objects have been placed on the sauna heater before activating the preset time function or the standby mode for remote start.
- Make sure that no flammable objects have been placed on or in front of the infrared heater before the sauna control unit is switched on.
- Make sure that no flammable objects have been placed on or in front of the infrared heater before activating the preset time function or the stand-by mode for the remote start.
- For your own safety, consult your supplier in the event of problems that are not described in sufficient detail in the operating instructions.

3. Product description

3.1. Scope of delivery

- Control panel (depending on version Pro D2 / D2i / D3 / D3i)
- Power unit
- Heater sensor with integrated overheat cut-out
- Sensor cables
- Installation material
- Wire jumper for bridging terminals **V1** and **Wm** for combi heaters without low-water shut-off

3.2. Optional accessories

- Bench sensor (1-009-231 / O-F2)
- Humidity/temperature sensor (1-010-081 / O-FTS2)
- Foil sensor (1-014-445 / P-ISX-FF)
- Power booster (1-008-779 / O-S2-18, 1-009-280 / O-S2-30)
- Safety shutdown (SFE-xxxxx)
- Home door sensor (1-052-723 / SAB00103)
- Control panel Pro D2 (1-040-159/PRO-D2-CU)
- Control panel Pro D2 white (1-040-161 / PRO-D2W-CU)
- Control panel Pro D2i (1-040-163 / PRO-D2I-CU)
- Control panel Pro D2i white (1-040-165 / PRO-D2IW-CU)
- Control panel Pro D3 (1-040-167 / PRO-D3-CU)
- Control panel Pro D3 white (1-040-169 / PRO-D3W-CU)
- Control panel Pro D3i (1-1040-173 / PRO-D3I-CU)
- Control panel Pro D3i white (1-1-040-173 /PRO-D3IW-CU)
- Additional output control panel Pro D (1-040-174 / PRO-DA-CU)
- Additional output control panel Pro D white (1-040-175 / PRO-DAW-CU)
- Pro D BUS converter RS485 (1-053-348 / BUS-CON-D)
- MySentio Wifi (1-053-313 / S-WIFI01)
- MySentio Remote (1-053-314 / S-WIFI02)

3.3. Product features

Pro D2 / Pro D2 white

The sauna control unit Pro D2 / Pro D2 white features the following functions:

- Regulation of sauna heaters with a heating output of up to 10.5 kW in the temperature range spanning 30 °C to 110 °C.
- A power booster allows the maximum switching capacity to be increased from 10.5 kW to 18 kW or 30 kW.
- Optional dimming or switching of a cabin light (up to 100 W)
- Optional modulation or switching of a fan (up to 100 W)
- Remote start function
- Door monitoring system
- Status output
- Preset time function

The maximum heating period can be set to 6 h, 12 h, 18 h or 24 h.

- User programs

The user programs enable favourite sauna settings to be saved and accessed again. There are 5 preset user programs available which can be modified according to user requirements.

- Automatic heating time limit

The sauna control unit shuts down automatically after the maximum heating time for safety reasons. The maximum heating period can be set to 6 h, 12 h, 18 h or 24 h.

- Overheat cut-out

The overheat cut-out is installed in the housing for the heater sensor. If a defect causes the sauna heater to continue heating after reaching the preferred temperature, the overheat cut-out switches the sauna heater off at a temperature of around 139 °C.

PRO D3 / PRO D3 white

Same functional scope as the Pro D2 / Pro D2 white, with the following additional features:

- Regulation of combi-model sauna heaters with a heating output of up to 10.5 kW and vaporizer output of up to 3.5 kW in the temperature range spanning 30 °C to 110 °C and a humidity range spanning 0% to 100%.
- Post-drying program
After operation in combined mode, the post-drying program starts automatically to prevent mould or rot from forming in the sauna cabin. This involves heating the sauna cabin to 80°C with the fan running.
The duration can be set from OFF - 60 minutes.

PRO D2i / PRO D2i white / PRO D3i / PRO D3i white

Same functional scope as the Pro D2 / Pro D2 white and the PRO D3 / PRO D3 white, with the following additional features:

- **Auxiliary output**
Either for dimming (up to 500 W), switching (up to 3.5 kW) or regulating the sauna cabin temperature via the additional output.

The additional output has no overheat cut-out. For this reason, only intrinsically safe devices should be operated using the additional output.

- If infrared heaters are connected to the additional output, they must have an overheat cut-out. We recommend using the following infrared heaters:
 - 1-027-780 / DIR-350-R, 1-027-845 / WIR-350-R, 1-027-781 / DIR-500-R, 1-027-846 / WIR-500-R, 1-027-782 / DIR-750-R, 1-027-847 / WIR-750-R, 1-027-779 / DIR-1300-R
 - 1-027-785 / ECO-350-R, 1-027-784 / ECO-350-G, 1-027-788 / ECO-500-R, 1-027-787 / ECO-500-G, 1-027-790 / ECO-750-R
- If one of the following infrared heating plates is connected to an additional output, the foil sensor 1-014-445 / P-ISX-FF must be used and activated on the technician menu (see **“Activating/deactivating the foil sensor (Pro D2i / Pro D3i only)” on page 32**):
 - 1-028-348 / IR-WP-100, 1-028-343 / IR-WP-175, 1-028-784 / IR-WP-390, 1-028-938 / IR-WP-510
 - 1-028-149 / IR-WPHL-100, 1-028-941 / IR-WPHL-175, 1-028-601 / IR-WPHL-390, 1-027-885 / IR-WPHL-510

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	Sauna mode	Combi operating mode	Auxiliary output	Light	Fan	Preset time	User programs
Pro D2 (white)	X			X	X	X	X
Pro D2i (white)	X		X	X	X	X	X
Pro D3 (white)	X	X		X	X	X	X
Pro D3i (white)	X	X	X	X	X	X	X

Fig.1 Overview of Pro D functions

3.4. Sauna operating modes

The sauna control unit Pro D2 / Pro D2i enables sauna mode. The sauna control unit Pro D3 / Pro D3i enables two operating modes, sauna mode and combi mode.

Sauna mode

Dry heat is provided in sauna mode. The temperature in the cabin is high (80 to 100°C). The humidity is low (no more than 10%).

Combi mode

In combined mode, the vaporizer operates along with the heater. The temperature in the sauna cabin is lower (around 40 to 65 °C) than in sauna mode, but the relative humidity is much higher, ranging from 35% to 70%. The maximum humidity that can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set (see characteristic curve on page 13).

3.5. Sensor operating modes

The sauna control units of the Pro D series can be operated with one or two sensors. A temperature sensor (bench sensor F2) or a humidity/temperature sensor (FTS2, Pro D3 / Pro D3i only) can be used as the second sensor.

Single sensor mode (F1)

Single sensor mode is the factory setting.

In single-sensor mode, the sauna control unit is operated with the heater sensor with overheat cut-out (F1) only. This is included in the scope of delivery.

The sauna control unit displays the actual temperature by default. The set temperature is displayed during setting. If it is to be permanently displayed it must be activated during commissioning (see “**Temperature/humidity display (actual/set value)**” on page 31)

The maximum humidity level (only Pro D3 / Pro D3i) which can be set in single-sensor mode is based on the temperature above the heater and the humidity is timed. Only the setpoint for the humidity (in % relative humidity) is shown on the display of sauna control unit. The actual humidity in the sauna cabin when the humidity is timed depends on the size of the cabin and the vaporizer output, and may differ from the setpoint.

Two-sensor mode with bench sensor (F2)

Two-sensor mode must be activated using the function selection switch (see **“Remote start release” on page 30**).

In two-sensor mode with bench sensor, a second temperature sensor (bench sensor) is installed above the rear sauna bench. The sauna control unit displays the temperature measured by the bench sensor as the actual temperature.

In two-sensor mode with bench sensor, the humidity (Pro D3 / Pro D3i only) is timed. Only the setpoint for the humidity (in % relative humidity) is shown on the display of the sauna control unit. The actual humidity in the sauna cabin when the humidity is timed depends on the size of the cabin and the vaporizer output, and may differ from the setpoint.

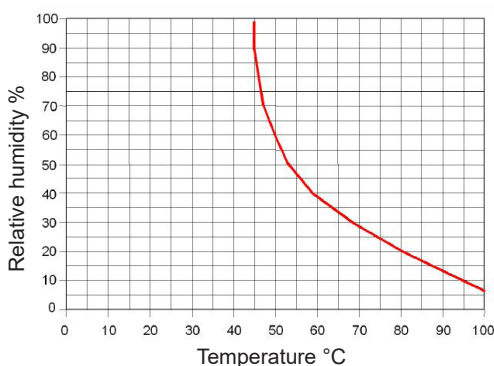
Two-sensor mode with humidity/temperature sensor (FTS2, Pro D3 / Pro D3i only)

Two-sensor mode must be activated using the function selection switch (see **“Remote start release” on page 30**).

When a humidity/temperature sensor is used in two-sensor mode, the sauna control unit displays the temperature which is measured by the humidity/temperature sensor as the actual temperature.

In two-sensor mode with humidity/temperature sensor, the vaporizer is regulated in accordance with the humidity level measured in the sauna cabin. The sauna control unit displays the actual humidity (in % relative humidity) in the sauna cabin.

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EN 60335-2-53:2011; characteristic temperature / relative humidity for proper use.

4. Installation

4.1. Installing the power supply unit

ATTENTION!***Damage to the unit***

The sauna control unit is resistant to splashing water, but direct contact with water could still damage it.

- Install the sauna control unit in a dry place at which a maximum humidity of 95% is not exceeded.
-

ATTENTION!***Interference can impair signal transmission***

- Route all sensor cables separately from other mains cables and control cables.
 - Protect cables with only one layer of insulation by using a conduit (double insulation).
-

Observe the following points when installing the sauna control unit:

- The power unit of the sauna control unit must be installed outside the sauna cabin or in accordance with the recommendation issued by the sauna manufacturer.
- The ambient temperature must be within a range spanning -10°C to +40°C.
- The sensors may only be connected using the sensor cables supplied with the unit, which are heat-resistant up to 150°C.



The sensor leads may be extended under the following conditions:

- A silicon cable resistant to temperatures up to 150 °C is used.
 - The minimum cross-sectional of the cable is 0.5 mm².
 - The heater sensor cables may NOT be longer than 10 m.
-

To install the sauna control unit, perform the following steps:

1. Screw two cross-head screws (16 mm) into the wall of the sauna at a height of approx. 1.70 m and leaving a protruding length of 7 mm. The two screws must be placed at a distance of 145 mm from each other (see **Fig.2**).

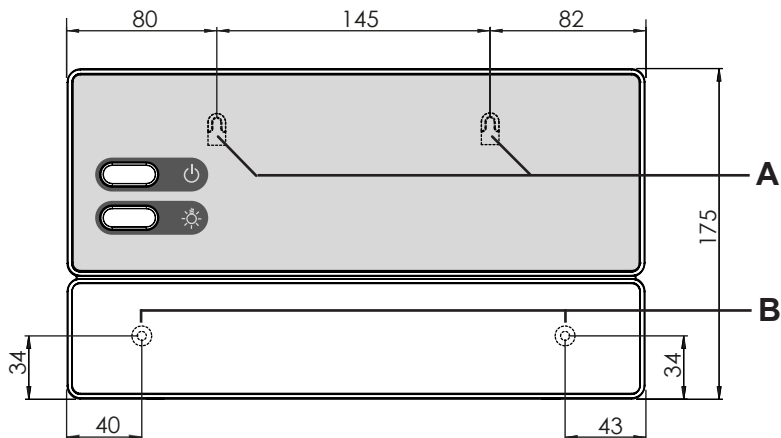


Fig.2 Position of the attachment device and the installation holes (dimensions in mm)

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2. Press the clip locks **C** in lightly using a screwdriver and remove the cover from the housing (see **Fig.3**).
3. Fasten the sauna control unit onto the cross-head screws using attachment device **A** as an aid (see **Fig.2**).
4. Screw two cross-head screws (16 mm) into the lower fastening holes **B** (see **Fig.2**).

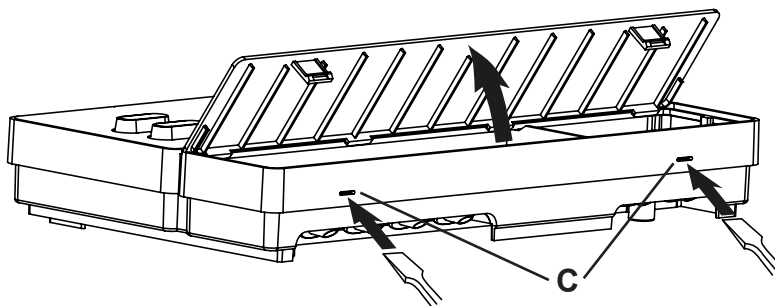


Fig.3 Removing the cover from the housing

4.2. Installing the control panel

The control panel 2 is installed on the cabin wall at a maximum distance of 10 metres from the power unit 1 (see **Fig.4**).

For the installation, a standard jigsaw is required to cut out the recess for the control panel. The control panel can be installed both inside and outside the cabin.

*For installation inside a sauna cabin, maintain a minimum distance of 30 cm to the ceiling. (see **Fig.4**).

ATTENTION!

Damage to the unit

- The control panel 2 of the sauna control unit is splash-proof (protection class IP IPX4).
 - Work on the control panel may only be carried out using a standard screwdriver. Using a cordless screwdriver may irreparably damage the housing.
-

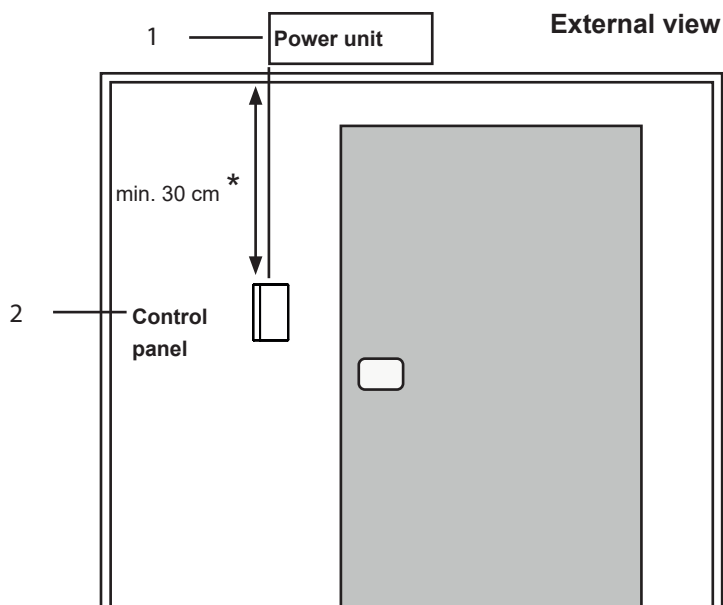


Fig.4 Control panel position

* when installed inside the cabin

1. Cut out the 70 x 65 or 60 x 48 mm recess using a jigsaw, for example (see **Fig.5** and **Fig.6**).
2. Provide cable guides for the connecting cables.
3. Screw the housing to the cabin wall through the hole with the 4 or 2 wood screws enclosed.

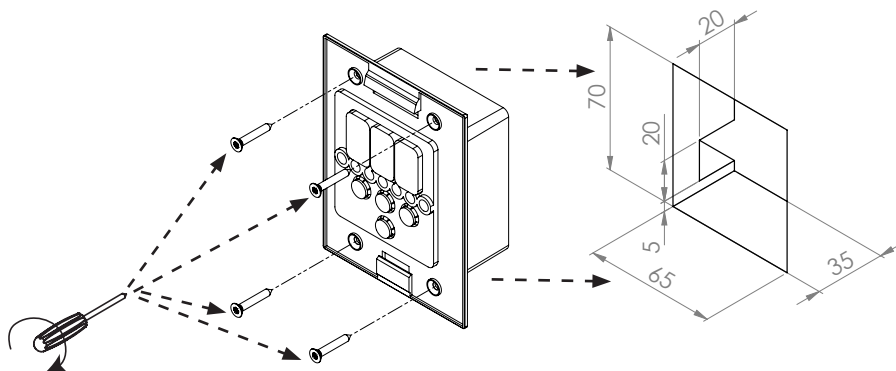


Fig.5 Installing the Pro D control panel

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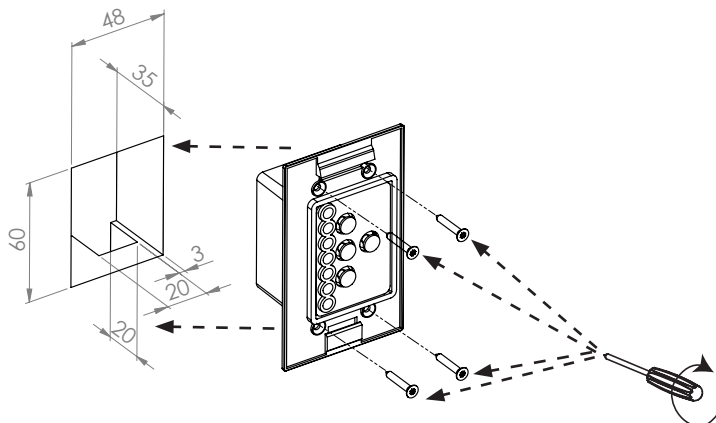


Fig.6 Installing the control panel additional output (optional)

4. The front panel of the control panel is inserted with slight pressure into the housing. Ensure that the lower catches engage noticeably.

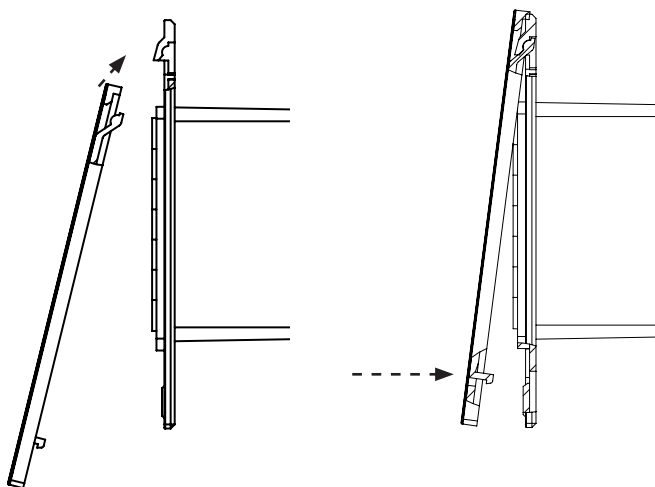
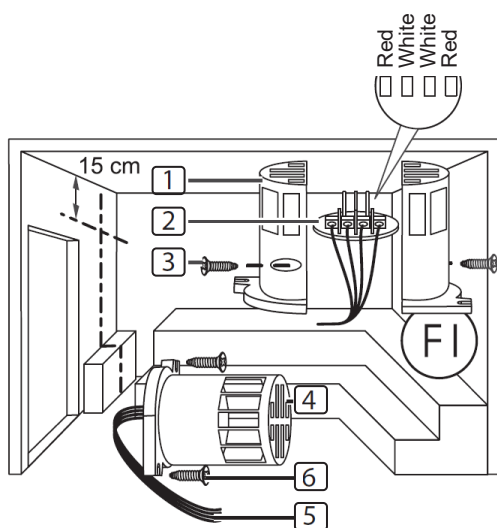


Fig.7 Installing the control panel

5. Connect the 4-pin plug to the RJ11 socket on the control panel.



- 1 Heater sensor half-shells
- 2 Connection panel
- 3 Cross-head screws (9 mm)
- 4 Heater sensor
- 5 Heater sensor leads
- 6 Wood screws (16 mm)

Fig.8 Installing the heater sensor

4.3. Installing the heater sensor F1 with overheat cut-out

Note the following points when installing the heater sensor:

- The heater sensor must be installed on the rear of the heater, above the middle of the sauna heater. A distance of about 15 cm from the ceiling of the cabin must be maintained.
- The heater sensor must be installed in such a way that it is not affected by inflowing air.

To install the heater sensor, perform the following steps (see **Fig.8**):

1. Route the two 2-pole heater sensor cables in the wall of the sauna cabin to the installation location of the heater sensor and affix the heater sensor cables using cable clips.
2. Pull the two half-shells 1 of the heater sensor apart.
3. Connect the four connections for the heater sensor cable 5 in accordance with the **Fig.8**.
4. Place the connection panel 2 crossways (as shown in **Fig.8**) in the heater sensor half-shells.
5. Place the two half-shells together, screw them together using two cross-head screws 3 (9 mm) and check whether the heater sensor has been securely closed.
6. Install the heater sensor on the rear of the heater using the two wood screws 6 supplied (16 mm).

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4.4. Installing the bench sensor F2 (optional)

The bench sensor must be installed on the wall of the cabin above the rear bench seat. A distance of about 15 cm from the ceiling of the cabin must be maintained.

To install the bench sensor, carry out the following steps:

1. Route the 2-pole bench sensor lead in the wall of the sauna cabin to the mounting location of the bench sensor and affix the bench sensor leads using cable clips.
2. Connect the two connections for the bench sensor cable to the two middle terminals on the connection panel.
3. Install the bench sensor on the wall of the sauna cabin using the two supplied wood screws (16 mm).

4.5. Installing humidity/temperature sensor FTS2 (optional, Pro D3 / Pro D3i only)

The humidity/temperature sensor must be installed on the wall of the cabin above the rear bench seat. A distance of approx. 15 cm from the ceiling of the cabin must be maintained.

To install the humidity and temperature sensor, perform the following steps:

1. Route the 5-pole sensor cable in the wall of the sauna cabin to the mounting position of the humidity/temperature sensor and affix the sensor leads using cable clips.
2. Install the humidity/temperature sensor to the wall of the sauna cabin using the two supplied wood screws (16 mm). Maintain a clearance of 15 cm to the roof of the sauna cabin.

4.6. Installing foil sensor FTS2 (optional, Pro D2i / Pro D3i only)

If one or more infrared heating plates is connected to the additional output, the foil sensor 1-014-445 / P-ISX-FF must be used:

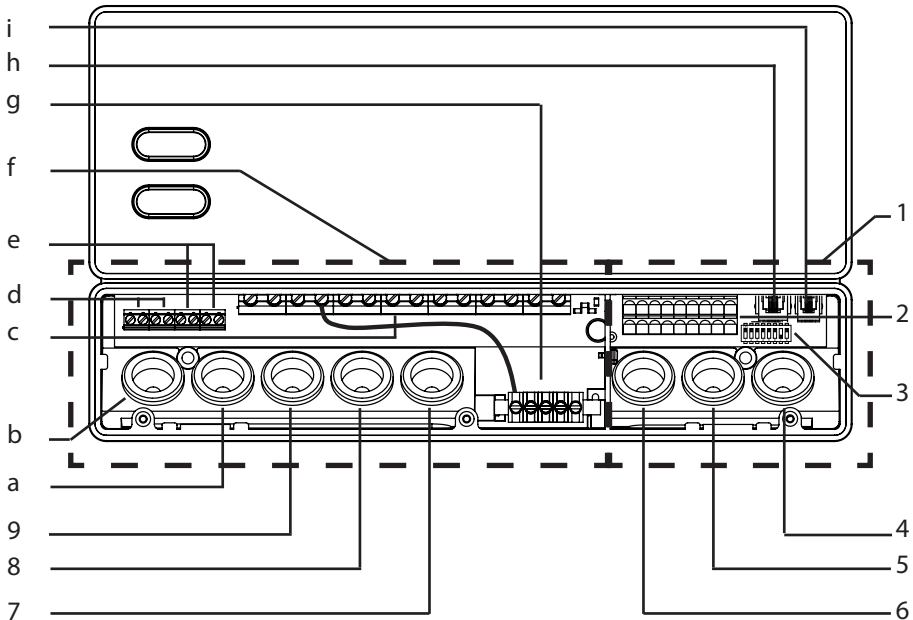
- When installing and positioning the foil sensor, observe the operating instructions for the infrared heating plates.
- Use of a foil sensor must be activated in the technician menu (see “**Activating/deactivating the foil sensor (Pro D2i / Pro D3i only)**” on page 32).

5. Electrical connection

ATTENTION!

Damage to the unit

- The sauna control unit may only be used for operating and controlling 3 heating circuits with a maximum heating capacity of 3.5 kW per heating circuit. The maximum vaporizer output (Pro D3 / Pro D3i only) is 3.5 kW. The maximum additional output (Pro D2i / Pro D3i only) is 3.5 kW.



- | | |
|--|---|
| 1 Low-voltage connection area | 8 Cable gland for heater cable |
| 2 Terminal strips for safety shut-off, remote start, status output and sensor cables | 9 Cable gland for power supply cable |
| 3 Function selection switch | a Cable gland for power booster |
| 4 Cable gland for F2, FTS2 and foil sensor | b Cable gland for light and fan |
| 5 Cable gland for F1 sensor and status output | c Terminal strip for heater and vaporizer wires, power supply cable and additional device |
| 6 Cable gland for safety shut-off and remote start | d Terminal strip for lights and fan |
| 7 Cable gland for vaporizer wire and additional output | e Terminal strip for power booster |
| | f Connection area for 230 V/400 V |
| | g Earthing bar |
| | h RJ12 socket for the BUS converter |
| | i RJ10 socket for the control panel |

Observe the following points when connecting the power to the sauna control unit:

- Installation may only be performed by a qualified electrician or similarly qualified person.



Please observe that in the event of a guarantee claim, a copy of the bill from the electrician performing the work must be presented.

- Work on the sauna control unit may only be performed when the power has been disconnected.
- There must be a fixed connection for the electrical power supply.
- A fully disconnecting all-pole isolating device compliant with overvoltage category III must be fitted on site.
- Observe the connection diagram (**Fig.10**) on page **28**.

5.1. Connecting the power supply cable, heater and vaporizer

1. Feed the power supply, heater and vaporizer cables (Pro D3 / Pro D3i only) through the cable glands⁹, 8, 7 into the connection area for 230 V/400 V f.
2. Connect the cables to the terminal strip c in accordance with the connection diagram. Follow the operating instructions for each device.
3. If the vaporizer does not feature an automatic low-water indicator, then perform the following step as well:
 - Use the wire jumper enclosed to connect terminal "**V1**" to terminal "**Wm**".

5.2. Connecting the control panel

1. Feed the connection cable for the control panel through the cable gland 4 into the low-voltage connection area 1.
2. Connect the plug of the RJ-10 cable to the connection socket h.

5.3. Connecting the light



The sauna control units of the Pro D series enable operation of up to 2 Pro D control panels and an additional output control panel on one power supply unit. Always use the "Y adapter" supplied with the control panels for connecting the optional control panels ("**3.2. Optional accessories**" on page 9).

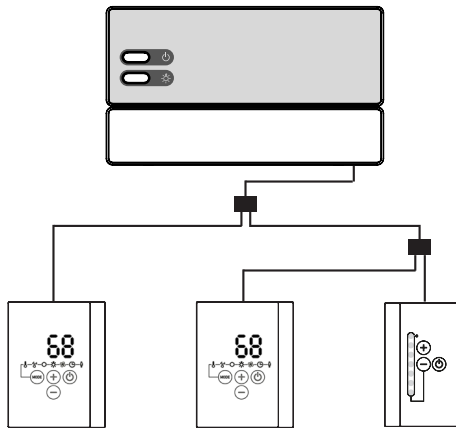


Fig.9 Connection example for the Pro D3i

1. Feed the light cable through the cable gland b into the connection area for 230 V/400 V f.
2. Connect the light cable to the terminal strip d in accordance with the connection diagram. Observe the operating instructions for the respective device.

5.4. Connecting a fan (optional)

1. Feed the fan cable through the cable gland b into the connection area for 230 V/400 V f.
2. Connect the fan cable to the terminal strip d in accordance with the connection diagram. Observe the operating instructions for the respective device.

5.5. Connecting an additional output (optional, Pro D2i / Pro D3i only)

The additional output can, for example, be used for an infrared heater or infrared heating plates.

1. Feed the connection cable for the additional device through the cable gland 7 into the connection area for 230 V/400 V f.
2. Connect the cables to the terminal strip c in accordance with the connection diagram. Observe the operating instructions and safety information for the respective device.

5.6. Connecting the power booster (optional)

1. Feed the cable for the power booster through the cable gland a into the connection area for 230 V/400 V g.
2. Connect the cable for the power booster to the terminal strip e in accordance with the connection diagram. To do so, use terminal “**ST1**” for the safety circuit, and terminal “**ST2**” for the control circuit. Follow the operating instructions for each device.



WARNING!

Risk of fire

The additional output has no overheat cut-out. For this reason, only intrinsically safe devices should be operated using the additional output.

- If infrared heaters are connected to the additional output, they must have an overheat cut-out.
 - If infrared heating plates are connected to the additional output, the foil sensor 1-014-445 / P-ISX-FF must be used and activated in the technician menu (see “**Activating/deactivating the foil sensor (Pro D2i / Pro D3i only)**” on page 32).
-

5.7. Connecting the heater sensor F1

1. Feed the wires for the heater sensor through the cable gland 5 into the low-voltage connection area 1.
2. Connect the red wires for the heater sensor to the terminals labelled “**STB**” in terminal strip 2.
3. Connect the white wires for the heater sensor to the terminals labelled “**F1**” in terminal strip 2.

5.8. Installing bench sensor F2 (optional)

1. Guide the cables for the bench sensor through the cable gland 4 into the low-voltage connection area 1.
2. Connect the wires for the bench sensor to the terminals labelled “**F2**” in terminal strip 2.

5.9. Connecting the humidity/temperature sensor FTS2 (optional, Pro D3 / Pro D3i only)

1. Feed the wires for the sensor through the cable gland 4 into the low-voltage connection area 1.
2. Connect the wires for the temperature sensor to the terminals labelled "**F2**" in terminal strip 2.
 - a. Connect the black wire to the right terminal.
 - b. Connect the brown wire to the left terminal.
3. Connect the wires for the humidity sensor to the terminals labelled "**+ S -**" in terminal strip 2.
 - c. Connect the green wire to terminal "**+**".
 - d. Connect the orange wire to terminal "**S**".
 - e. Connect the red wire to terminal "**-**".

5.10. Connecting the foil sensor (optional, Pro D2i / Pro D3i only)

1. Feed the wires for the sensor through the cable gland 4 into the low-voltage connection area 1.
2. Connect the sensor cables for the sensor to the terminals labelled "**FF**" in terminal strip 2.

5.11. Connecting the safety shut-off/door sensor

EN 60335-2-53 states that sauna control units with a remote control function may only be used for controlling a sauna heater which has satisfied the combustion test in section 19.101. Alternatively, a suitable safety shut-off/door-open sensor can be installed. This shuts the sauna heater off if items (such as a towel) are placed on the sauna heater or the sauna door is opened.

To install the safety shut-off device, perform the following steps:

1. Install the safety shut-off device in accordance with the operating instructions for the device.
2. Feed the cables for the safety shut-off through the cable gland 6 into the low-voltage connection area 1.
3. Connect the cables to the terminals labelled **“OSG”** in terminal strip 2.



If a safety shut-off is not installed, a jumper must be fitted at the terminals labelled **“OSG”**.

5.12. Remote start

The remote start device is connected using terminals **“S”**, **“B”** and **“C”**. **“S”** stands for sauna mode and **“C”** for vaporizer mode. **“B”** is a +24 V DC output. The preferred operating mode must be activated using a switch or actuator on the terminal. **“S”** and **“C”** can optionally be allocated to user program 1 and 2 (see **“Remote start mode”** on page 31).

5.13. Status output

Any electrical device can be connected to the status output terminal which is suitable for 24 V DC voltage and draws a current no greater than 200 mA. Make sure the polarity is correct when connecting a device. If LEDs are used, a suitable series resistor must be used.

5.14. Finishing the installation

1. Connect the protective earth conductors for the power supply cable and all devices to the earthing bar g.
2. Place the cover of the housing on the upper edge of the junction box.
3. Push the clip locks inwards lightly, and turn the cover of the housing downwards until it engages audibly.

6. Testing

The following tests must be performed by a qualified electrician.



WARNING!

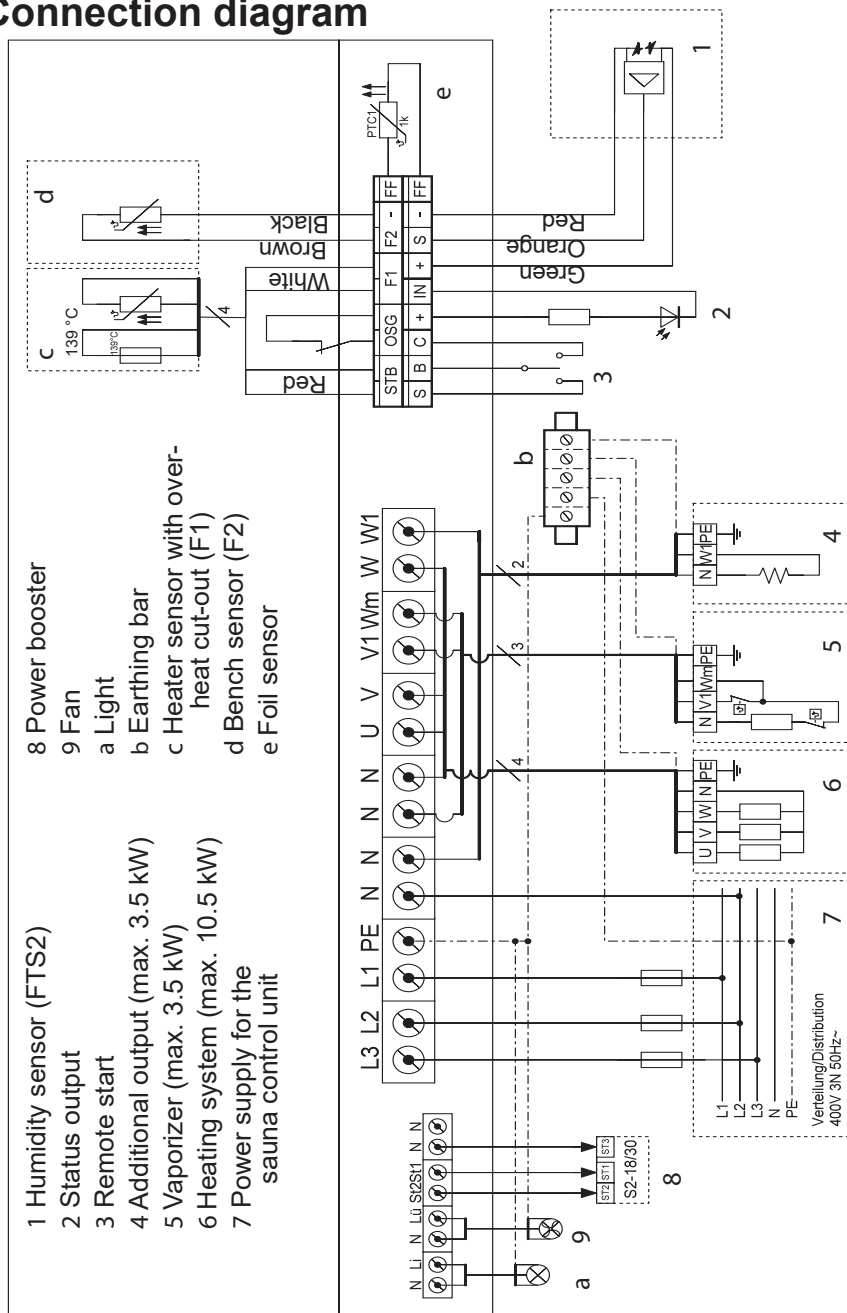
The following tests must be carried out with the power supply switched on. There is a danger of electric shock.

- NEVER touch live parts.

1. Check the contact of the earth conductors on the earth conductor terminal.
2. Check the overheat cut-out on the heater sensor F1.
 - a. Switch on the sauna control unit.
 - b. Open the heater sensor and disconnect one of the two red heater sensor wires.
 - ▶ A recurring warning tone sounds, "002" appears in the display.
 - ▶ The controller switches off the heater.
 - c. Switch off the sauna control unit.
 - d. Reconnect the red heater sensor wire.
 - e. Now disconnect one of the white heater sensor wires.
 - f. Switch on the sauna control unit.
 - ▶ A recurring warning tone sounds, "4F1" appears in the display.
 - ▶ The controller switches off the heater.
 - g. Switch off the sauna control unit.
 - h. Reconnect the white heater sensor wire.
3. Check the phase circuit for sauna mode L1, L2, L3 is connected to U, V, W.
4. Pro D3 / Pro D3i only: Check that the phase circuit for vaporizer mode L1, L2, L3 is connected to U, V1, W.
5. Pro D2i / Pro D3i only: Ensure the phase circuit for L3 is connected to W1 when the device connected to the additional output is activated.
6. Check the maximum permissible heating output of 3.5 kW per phase on the sauna control unit.
7. If there is an optional power booster:
 - a. Check the control cables ST1, ST2 and ST3.
 - b. Check the maximum permissible heating output of 3 kW per phase on the power booster S2-18.
 - c. Check the maximum permissible heating output of 7 kW per phase on the power booster S2-30.

7. Connection diagram

Fig.10 Connection diagram



8. Commissioning

8.1. Setting the function selection switch

The function selection switch in the low-voltage connection area allows a variety of product functions to be activated. The figure at the right shows the standard setting for the function selection switch.

Note that the control unit needs to be switched off for 10 seconds after making changes so that the settings are saved.

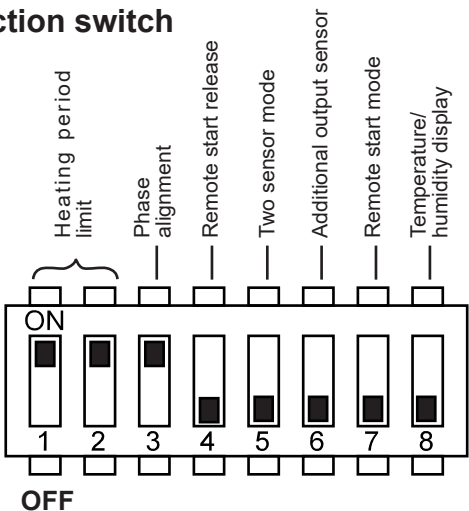


Fig.11 Function selection switch - Standard setting

Setting the heating time limit

The maximum heating time is set to 6 hours as standard. The sauna control unit shuts down automatically after the maximum heating time for safety reasons.

The function selection switch in the low-voltage connection area allows the maximum heating period to be set to 12 hours, 18 hours or 24 hours. The required positions of the function selection switch can be found in the table on the right.

Function selection switch	1	2
6 hours	ON	ON
12 hours	OFF	ON
18 hours	ON	OFF
24 hours	OFF	OFF



EN 60335-2-53 specifies a maximum heating time limit of 6 hours for private saunas. For saunas in hotels, apartment blocks and similar locations, a maximum heating time limit of 12 hours is permissible. Extending the heating period limit to 18 hours or 24 hours is only permitted in public saunas.

Activating/deactivating phase alignment

Phase alignment is activated or deactivated using the function selection switch **3**.

- The function selection switch **3** is set to the ON position as standard. Phase alignment is therefore activated.
- If you wish to deactivate phase alignment, place the function selection switch **3** in the OFF position.

Remote start release

Function selection switch **4** can be used to select the function of the remote start output (please see EN60335-2-53).

- Function selection switch **4** is set to the OFF position as standard. The remote start is activated using "Standby for remote control".
- If you want to enable the remote start output for various devices (e.g. coin-operated unit, remote start system, door monitoring), set function selection switch **4** to the ON position.

Connection: see **"5.12. Remote start" on page 26**

Activating two-sensor operation

The two-sensor operation is activated or deactivated using the function selection switch **5**. In two-sensor mode, the sauna control unit is operated with the heater sensor with an overheat cut-out (F1 sensor) and the bench sensor (F2/FTS2 sensor).

- Function selection switch **5** is set to the OFF position as standard. Single-sensor mode is therefore activated.
- If you wish to activate two-sensor mode, place the function selection switch **5** in the ON position.

Selecting sensor for room temperature regulation with additional output (Pro D2i / Pro D3i only)

For room temperature regulation using additional output (see **"Room temperature control with the additional output" on page 46**) the sensor for the regulation can be selected with the function selection switch **6**.

- Function selection switch **6** is set to the OFF position as standard. The heater sensor (F1 sensor) is used for the regulation.
- If you wish to use the bench sensor (F2/FTS2 sensor), activate two-sensor operation (see: **"Remote start release" on page 30**) and place the function selection switch **6** in the ON position.

Remote start mode

Function selection switch **7** is used to select start of sauna/vaporizer operation or user program 1/2.

- Function selection switch **7** is set to the OFF position as standard. The start of sauna/vaporizer operation is activated. Terminal “S” starts the sauna operation and terminal “C” starts the vaporizer operation.
- If you wish to activate user program 1/2, place the function selection switch **7** in the ON position. Terminal “S” starts user program 1 and terminal “C” starts user program 2.

Connection: see “**5.12. Remote start**” on page 26

Temperature/humidity display (actual/set value)

Using function selection switch **8**, you can select whether the actual value is displayed or the set level continues to be displayed after entering the setting (temperature, humidity).

- Function selection switch **8** is set to the OFF position as standard. The display of the actual values is activated.
- If you wish to activate the set values, place the function selection switch **8** in the ON position.

8.2. Settings in the technician menu

Opening the technician menu

Additional settings can be made in the technician menu. To access the technician menu, perform the following steps:

1. Switch on the power unit. Press the On/Off button **F**.
 - ▶ The sauna control unit is in stand-by mode.
 - ▶ The display 1 on the control panel shows “---”.
2. Press the plus **B**, minus **C** and On/Off **A** buttons simultaneously.
 - ▶ The display 1 on the control panel shows “SEt”
 - ▶ The temperature symbol 5 and the user program symbol 4 light up.
3. Press the mode button **D** to access the setting you wish to change.

Saving settings and exiting the technician menu

1. Press the On/Off button **A** for about 3 seconds.

Then switch the power unit off for about 10 seconds. (see “**Switching off the power unit**” on page 53).

Reducing the maximum temperature

The preset temperature can be set to between 30 °C and 110 °C as standard. If you wish to decrease the maximum temperature from 110 °C to 105 °C, 90 °C or 80 °C, perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “tHI” by pressing mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired setting using the plus button **B** and the minus button **C**:
possible values: 110 (standard) / 105 / 90 / 80
5. Confirm the selection by pressing the On/Off button **A**.

Activating vaporizer single mode (Pro D3 / Pro D3i only)

The vaporizer is factory set so that it can only be operated together with the heating system. To operate the vaporizer on its own without the heating system, this function must be activated. Perform the following steps:



The settings are saved as soon as you exit the technician menu and the power unit has been switched off for about 10 seconds (see “**Switching off the power unit**” on page 53).

1. Open the technician menu (see **Page 31**).
2. Select “SIU” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired setting using the plus button **B** and the minus button **C**:
 - “oFF” means vaporizer single mode is deactivated (standard)
 - “on” means vaporizer single mode is activated
5. Confirm the selection by pressing the On/Off button **A**.

Activating/deactivating the foil sensor (Pro D2i / Pro D3i only)

If infrared heating plates are connected to the additional output, the 1-014-445 / P-ISX-FF foil sensor must be used. The foil sensor must be activated. Perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “FS” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “oFF” means that the foil sensor is deactivated (standard)
 - “on” means that the foil sensor is activated
5. Confirm the selection by pressing the On/Off button **A**.

Changing the light dimming characteristic

Because incandescent bulbs and LEDs react differently to the dimming function, it is possible to select the dimming characteristic according to the light system used. Perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “dl” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “bUL” means the dimming characteristic for incandescent bulbs is activated (standard)
 - “LED” means the dimming characteristic for LEDs is activated
5. Confirm the selection by pressing the On/Off button **A**.

Setting the light operating mode

The light for the sauna cabin can either be dimmed or switched on and off. Perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “dIL” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “on” means that the light is dimmable (standard)
 - “oFF” means that the light is switchable
5. Confirm the selection by pressing the On/Off button **A**.

Setting the fan operating mode

The fan can either be modulated or switched on and off. The dimmer switch function for the fan is activated as standard. If you wish to deactivate the dimmer switch function for the fan, perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “FAn” by pressing mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “on” means that the fan is dimmable (standard)
 - “oFF” means that the fan is switchable
5. Confirm the selection by pressing the On/Off button **A**.

Setting operating mode of the additional output (Pro D2i / Pro D3i only)

The additional output can either be modulated or switched on and off. The dimmer switch function is activated as standard. If you wish to deactivate the dimmer switch function for the additional output, perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select "IdS" by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - "on" means that the additional output is dimmable/the temperature can be regulated (standard; max. 500 W - see "Id" page 35)
 - "oFF" means that the additional output is switchable (max. 3.5 kW)
5. Confirm the selection by pressing the On/Off button **A**.

Activating the simultaneous display of the temperature and the humidity (Pro D3 / Pro D3i only)

To activate simultaneous display (automatic switching between the temperature and humidity display) of the temperature and humidity, carry out the following steps:

1. Open the technician menu (see **Page 31**).
2. Select "dUA" by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - "oFF" means the display stays at the selected function (standard)
 - "on" means the display switches between temperature and humidity automatically
5. Confirm the selection by pressing the On/Off button **A**.

Status output (Pro D3 / Pro D3i only)

You can decide here whether the status output should be activated during sauna mode or during the post-drying program. Activation during the post-drying program allows the vaporizer to be drained automatically when a combi heater with an auto refill function is being used. Then perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select "SL" by pressing the mode button **D**.
3. Press the On/Off button **A**.

4. Select the desired value using the plus button **B** and the minus button **C**.
 - “oFF” the status output is activated during the sauna operation (standard)
 - “on” the status output is activated during the post-drying program
5. Confirm the selection by pressing the On/Off button **A**.

Setting mode of the additional output (Pro D2i / Pro D3i only)

Two different modes are available for the additional output:

1. Intensity regulation
2. Room temperature regulation

Perform the following steps to switch between the two modes:

1. Open the technician menu (see **Page 31**).
2. Select “Ir” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “oFF” means intensity regulation (standard; dimmable/switchable see: **Page 34**)
 - “on” means room temperature regulation (see: **Page 45**)
5. Confirm the selection by pressing the On/Off button **A**.

Setting the maximum temperature for the additional output (Pro D2i / Pro D3i only)

A maximum cabin temperature can be set for the additional output, above which it automatically switches off. When the temperature falls back below this maximum temperature, it switches on again.

To set a maximum temperature, carry out the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “IrH” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**: settable value: oFF (no maximum temperature specified = standard) / 45 / 60/ 70
5. Confirm the selection by pressing the On/Off button **A**.

***Setting mode of the foil operating mode with temperature regulation
(Pro D2i / Pro D3i only)***

Here you can specify that if temperature regulation is set (see “*Set operating mode of auxiliary output-Ir*” on page 35), the additional output remains in temperature regulation mode even when the sauna heater is switched on.

1. Open the technician menu (see **Page 31**).
2. Select “blr” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired value using the plus button **B** and the minus button **C**.
 - “oFF”: The additional output changes to intensity mode when the sauna heater is switched on (standard; dimmable/switchable, see: Page 34)
 - “on”: The additional output always remains in temperature regulation
5. Confirm the selection by pressing the On/Off button **A**.

Setting the maximum preset time

The maximum preset time is set to 6 hours as standard. If you wish to change this setting, perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “tL” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired setting using the plus button **B** and the minus button **C**:
settable values: 6 h (standard) / 12 h / 18 h / 24 h
5. Confirm the selection by pressing the On/Off button **A**.

Activating the safety shut-off/door sensor

1. Open the technician menu (see **Page 31**).
2. Select “SdO” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired setting using the plus button **B** and the minus button **C**:
 - “SAF” means the safety shut-off is activated (standard)
 - “dor” means DOOR - the door sensor is activated
5. Confirm the selection by pressing the On/Off button **A**.

Setting the duration of the post-drying program

The maximum duration of the post-drying program is set to 30 min as standard. If you wish to change this setting, perform the following steps:

1. Open the technician menu (see **Page 31**).
2. Select “drY” by pressing the mode button **D**.
3. Press the On/Off button **A**.
4. Select the desired setting using the plus button **B** and the minus button **C**: possible values from “oFF” to “60” minutes (30=standard)
5. Confirm the selection by pressing the On/Off button **A**.

Querying the software version

To query the software version of your sauna control unit, carry out the following steps:

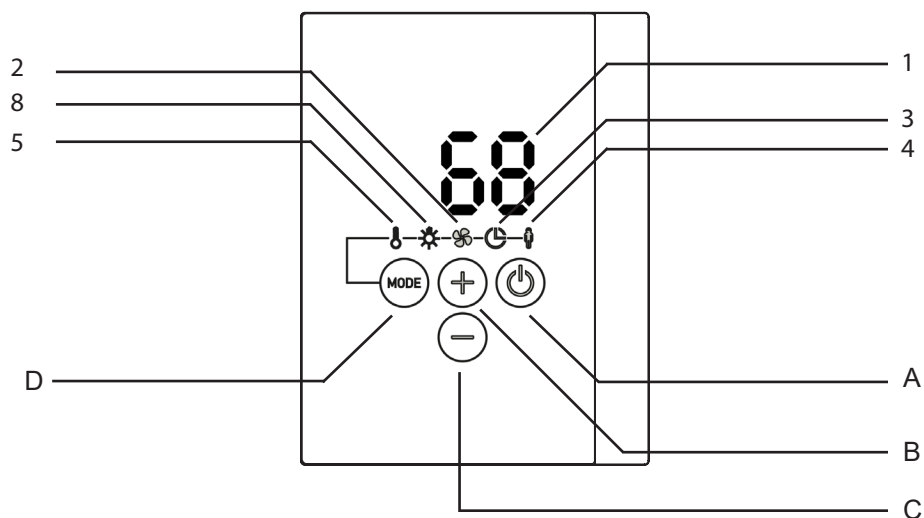
1. Open the technician menu (see **Page 31**).
2. Select “SOC” or “SOP” by pressing the mode button **D**.
 - “SOC” displays the control panel software version (e.g. 202)
 - “SOC” displays the power unit software version (e.g. 306)
3. Exit the technician menu by pressing the On/Off button **A** for about 3 seconds.

Exiting the technician menu

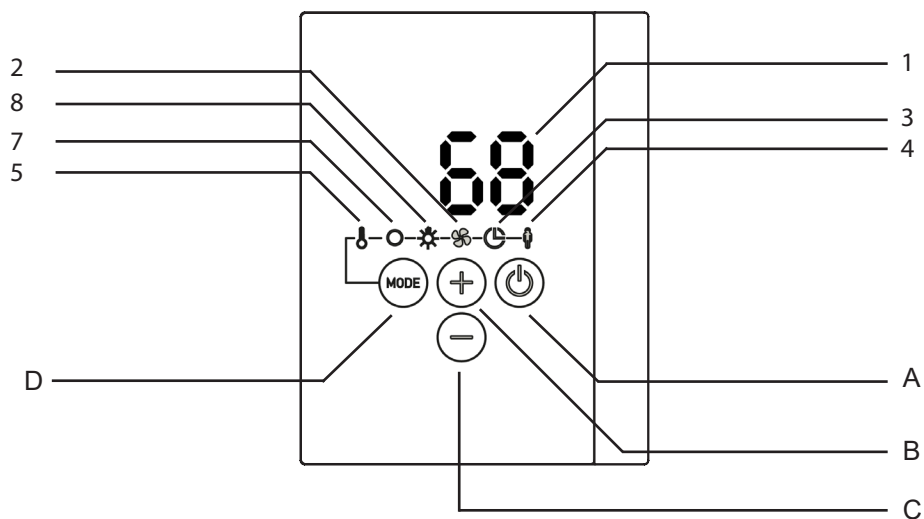
1. The technician menu is closed by pressing the On/Off button for about 3 seconds.
2. Then switch the power unit off for about 10 seconds. (see “**Switching off the power unit**” on page 53).

9. Controls

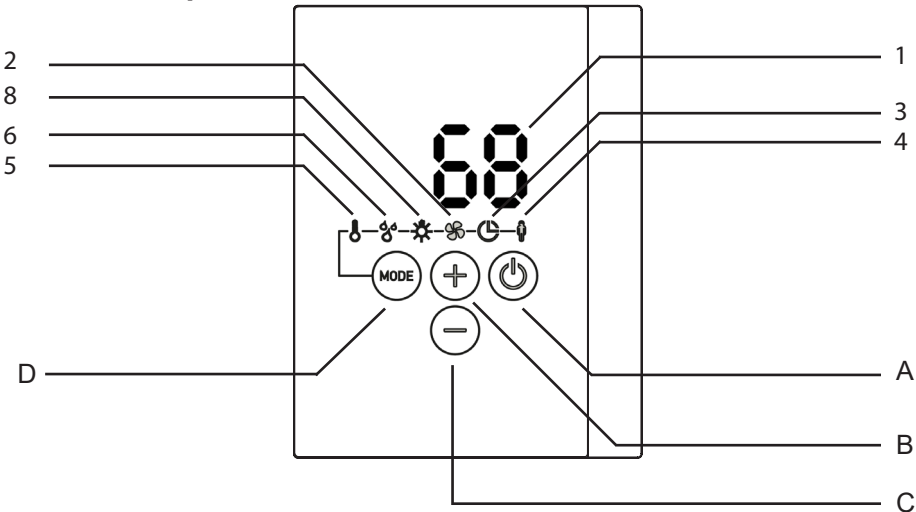
9.1. Control panel Pro D2



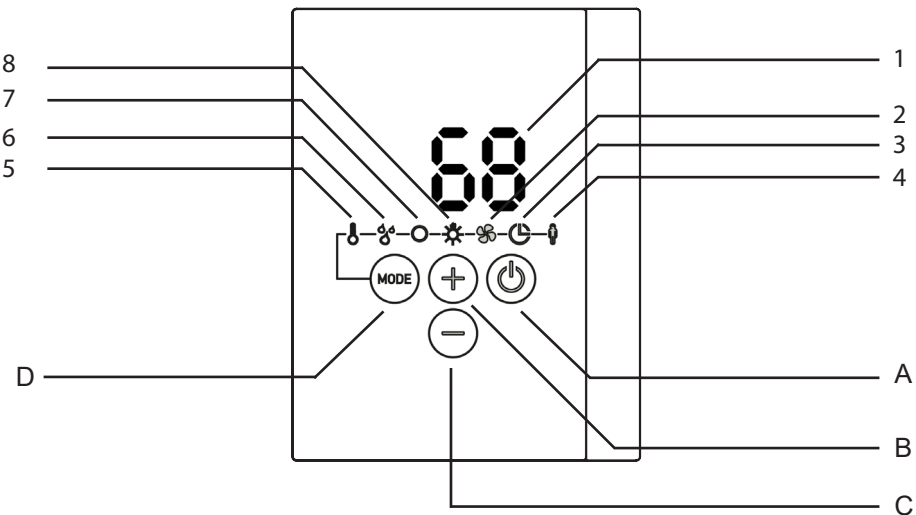
9.2. Control panel Pro D2i



9.3. Control panel Pro D3



9.4. Control panel Pro D3i



1 Display

2 Fan

3 preset time

4 User programs

A On/Off button

B Plus button

5 Temperature

6 Humidity (Pro D3 / Pro D3i only)

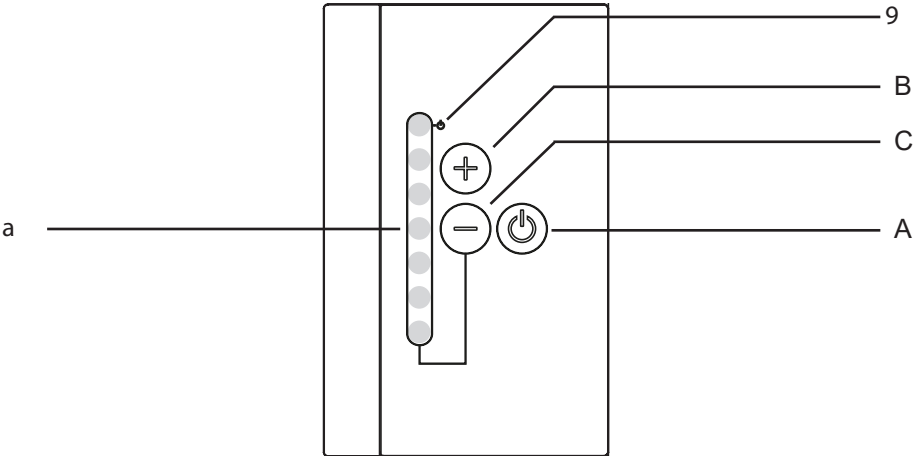
7 Additional output (Pro D2i/Pro D3i only)

8Light

C Minus button

D Mode button

9.5. Additional output control panel Pro D (optional)



9 Standby for remote operation display

a Intensity display

A On/Off button

B Plus button

C Minus button

9.6. Power unit



10. Operation

10.1. Switching on the light on the power unit (cleaning lights)

The light in the sauna cabin can be switched on and off at the power unit independently of the On/Off switch **F**.

- To switch the light on or off at the power unit, press the light switch **E**.



If the light switch **E** is switched on, the sauna cabin light will operate at full power. If you wish to dim the light using the control panel, switch off the light switch **E**.

10.2. Switching on the power unit



WARNING!

Risk of fire

Flammable objects that are placed on the sauna heater could ignite and cause fires.

- NEVER place combustible objects on the sauna heater.
- Make sure that NO flammable objects have been placed on the sauna heater before the sauna control unit is switched on.

In order to be able to use the control panel, the power unit must be switched on.

- Press the On/Off button **F** to switch the power unit on.
 - ▶ The control panel is in standby mode.
 - ▶ The display 1 on the control panel shows “---”.

10.3. Activating the control panel

The control unit can be started with the last used settings for temperature, humidity* and light or with the standard settings.

- For activation with the last used settings, press the On/Off button **A** for one second.
 - ▶ The control panel is activated.
 - ▶ The symbol 5 lights up. The last used settings for temperature, humidity* and light are active.
- For activation with the standard settings, press the On/Off button **A** for about 3 seconds.
 - ▶ The control panel is activated.
 - ▶ The symbol 5 lights up. The standard settings for temperature (90 °C), humidity* (off) and light (50%) are active.

* The humidity function is only available on the Pro D3 / Pro D3i models.

10.4. Additional output control panel Pro D (optional)

If the control unit has been activated as described in **10.3. Activating the control panel**, for the Pro D2i and Pro D3i models the function 7 (additional output) can also be activated with “Additional output control panel Pro D”.

- Press the On/Off button **A** of the additional output control panel for one second.
 - ▶ The additional output function is active.
 - ▶ The display a shows the set intensity.

10.5. Starting sauna mode

1. Select the temperature symbol 5 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The sauna heater switches on.
2. Set the desired temperature with the plus button **B** and the minus button **C**.
 - ▶ The display 1 shows the desired temperature for a few seconds.
 - ▶ Depending on the setting (see: **“Temperature/humidity display (actual/set value)” on page 31**) the display 1 then shows the actual value (standard setting) or the set value.

10.6. Switching off sauna mode

- Select the temperature symbol 5 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The sauna heater switches off.
 - ▶ The display 1 shows “oFF”

10.7. Starting combi mode (Pro D3 / Pro D3i only)

1. Select the temperature symbol 5 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The sauna heater switches on.
2. Set the desired temperature with the plus button **B** and the minus button **C**.
 - ▶ The display 1 shows the desired temperature for a few seconds.
 - ▶ Depending on the setting (see: **“Temperature/humidity display (actual/set value)” on page 31**) the display 1 then shows the actual value (standard setting) or the set value.
3. Select the humidity symbol 6 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The vaporizer switches on.
4. Set the desired humidity with the plus button **B** and the minus button **C**.
 - ▶ The display 1 shows the desired humidity for a few seconds.
 - ▶ Depending on the setting (see: **“Temperature/humidity display (actual/set value)” on page 31**) the display 1 then shows the actual value (standard setting) or the set value.



The vaporizer (humidity function 6) can only be started when the sauna heater (temperature function 5) is switched on. The maximum humidity that can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set (see **characteristic curve on page 13**).

Exception: Vaporizer single mode is activated (see “**Activating vaporizer single mode (Pro D3 / Pro D3i only)**” on page 32). The vaporizer can also be operated here without the sauna heater, with the maximum humidity depending on the current sauna cabin temperature.



If the sauna control unit is used without a humidity/temperature sensor (FTS2), cyclic mode is activated. If the sauna cabin temperature is less than 30° C, the vaporizer is activated continuously for 10 minutes. This ensures that the water in the tank reaches a basic temperature level. Cycle mode then starts.

10.8. Switching off combi mode (Pro D3 / Pro D3i only)

- Select the temperature symbol 5 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The sauna heater and the vaporizer are switched off.
 - ▶ The display 1 shows “oFF”

10.9. Starting additional output (Pro D2i / Pro D3i only)

Infrared heaters or infrared heating plates, for example, can be connected to the additional output on the sauna control unit.



WARNING!

Risk of fire

Flammable objects that are placed on or in front of the infrared heater could ignite and cause fires.

- NEVER place flammable objects on or in front of the infrared heater.
- Make sure that NO flammable objects have been placed on or in front of the infrared heater before you switch it on.

Two different modes are available for the additional output:

1. Intensity regulation

2. Room temperature regulation

To change the mode, see: “**Setting mode of the additional output (Pro D2i / Pro D3i only)**” on page 35

Intensity regulation when the dimmer switch function is activated

When the dimmer switch function for the additional output is activated, the power for the additional device can be set on a scale of 1 to 7. The value of 7 corresponds to full power.

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1. Select the additional output symbol 7 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - The additional device switches on.
 - The display 1 shows the intensity.
2. Set the desired power of the additional output with the plus button **B** and the minus button **C**.
 - The display 1 shows the set intensity.

Intensity regulation when the dimmer switch function is deactivated

When the dimmer switch function for the additional output has been deactivated, you can only switch the additional device on and off. The device will always operate at full power.

1. Select the additional output symbol 7 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The additional device switches on.
 - ▶ The display 1 shows “on”.

Room temperature control with the additional output

If the additional output mode is set to room temperature regulation (see: “**Setting mode of the additional output (Pro D2i / Pro D3i only)**” on page 35), a cabin temperature can be set that is regulated via the additional output. This can be used to regulate the cabin temperature using only infrared heaters or infrared heating plates.

Setting options

- Infrared heaters (without foil sensor): 30 - 70 °C
- Infrared heating plates (with foil sensor): 30 - 60 °C



If the sauna heater is already active or if it is started additionally, temperature regulation of the additional output is not possible. The mode is automatically changed to intensity regulation and the additional output continues operating at the highest level.

Using the optional control panel “Additional output control panel Pro D”

The optional control panel enables the switching on and off of the additional output as well as the modulation or changing of the temperature. The additional output can only be activated if the control unit is already switched on.

1. The additional output is switched on and off using the On/Off button **A**.
 - ▶ The additional device switches on.
 - ▶ The display a on the control panel lights up.
2. Set the desired power of the additional output with the plus button **B** and the minus button **C**.
 - ▶ The set value is displayed in the form of points (see a “9.5. Additional output control panel Pro D (optional)” on page 40).



At “Room temperature regulation of the additional output” the temperature can only be set in 7 steps, these correspond to the following temperatures:

<i>Intensity</i>	<i>corresponds to temperature regulation of heating plates [°C]</i>		<i>corresponds to temperature regulation of radiator [°C]</i>
1	30	30	30
2	33	35	37
3	35	40	43
4	38	45	50
5	40	50	57
6	42	55	63
7	45	60	70

10.10. Switching off additional output (Pro D2i / Pro D3i only)

1. Select the additional output symbol 5 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The additional device switches off.
 - ▶ The display 1 shows “oFF”

10.11. Switching on the light

When the dimmer switch function is activated

When the dimmer function for the light is activated, the power for the light can be set to any level between level 0 to level 100. At 0, the light is switched off. The value of 100 corresponds to full power.

1. Select the light symbol 8 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The light switches on.
 - ▶ The display 1 shows the intensity.
2. Set the desired light intensity with the plus button **B** and the minus button **C**.
 - ▶ The display 1 shows the set intensity.



If the light switch **E** is switched on, the sauna cabin light will operate at full power. If you wish to dim the light, switch off the light switch **E**.

When the dimmer switch function is deactivated

When the dimmer function for the light has been deactivated, you can only switch the light on and off. The light will always operate at full power.

1. Select the light symbol 8 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The light switches on.
 - ▶ The display 1 shows “on”.

10.12. Switching off the light

1. Select the light symbol 8 by pressing the mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The light switches off.
 - ▶ The display 1 shows “oFF”

10.13. Starting the fan

When the dimmer switch function is activated

When the dimmer switch function for the fan is activated, the power for the fan can be set to a scale of 0 to 100. The value of 100 corresponds to full power.

1. Select the fan symbol 2 by pressing mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The fan switches on.
 - ▶ The display 1 shows the intensity.
2. Set the desired power of the fan with the plus button **B** and the minus button **C**.
 - ▶ The display 1 shows the set intensity.

When the dimmer switch function is deactivated

When the dimmer switch function for the fan has been deactivated, you can only switch the fan on and off. The device will always operate at full power.

1. Select the fan symbol 2 by pressing mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The fan switches on.
 - ▶ The display 1 shows "on".

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10.14. Switching off fan

1. Select the fan symbol 2 by pressing mode button **D**. Then briefly press the On/Off button **A**.
 - ▶ The fan switches off.
 - ▶ The display 1 shows "oFF"

10.15. Setting the preset time

You can set the preset time according to the setting in the technician menu:

- To the minute: for a maximum preset time of 6 hours
- In hours: for a maximum preset time of 12h / 18h / 24h



WARNING!

Risk of fire

Combustible objects that are placed on the heater will ignite and cause fires.

- NEVER place combustible objects on the sauna heater.
- Make sure that NO flammable objects have been placed on the sauna heater before you activate the preset timer function.

1. Start the functions to be started after the preset time.
2. Select the preset time symbol 3 by pressing the mode button **D**.
 - ▶ The display 1 shows the “hours” (flashes slowly).
3. Set the desired duration in hours with the plus button **B** and the minus button **C**.
4. Press the mode button **D** for about 3 seconds.
 - ▶ The display 1 shows the “minutes” (flashes quickly).
5. Set the desired duration in minutes with the plus button **B** and the minus button **C**.
6. Press the On/Off button **A** to start the set preset time.
 - ▶ The sauna control unit changes to standby mode and the timer starts running.
 - ▶ The display 1 shows the remaining preset time. If this is longer than 1 h, the display shows hours (flashes slowly). If this is shorter than 1 h, the display shows minutes (flashes quickly).
 - ▶ The preset time symbol flashes.
 - ▶ Once the preset time has elapsed, the selected functions are started.



The preset time can be exited by briefly pressing the mode button **D** (without effect).

10.16. Cancelling the preset time feature

- Press the On/Off button **A**, to cancel the preset function.
 - ▶ The preset time countdown is cancelled.
 - ▶ The control unit starts immediately with the previously set functions.

10.17. Setting the duration

When you start the sauna, you can already determine how long the sauna is to operate. In this case, the maximum heating time cannot be exceeded (e.g. 6 h for private saunas). The sauna operation must already be started before the operating time can be set.

1. Select the temperature symbol 5 by pressing the mode button **D**.
2. Press the On/Off button **A** and the minus button **C** simultaneously for about 3 seconds.
 - ▶ The display 1 shows the “hours” (flashes slowly).
3. Set the desired duration in hours with the plus button **B** and the minus button **C**.
4. Press the mode button **D** for about 3 seconds.
 - ▶ The display 1 shows the “minutes” (flashes quickly).
5. Set the desired duration in minutes with the plus button **B** and the minus button **C**.
6. Press the On/Off button **A** to save the set operating time.
 - ▶ The sauna control unit switches off all functions after the set operating time.
 - ▶ Then the sauna control unit is in standby mode.

10.18. Cancelling the post-drying program (Pro D3 / Pro D3i only)

After combined mode, the post-drying programme is started automatically. This involves heating the sauna cabin to 80°C with the fan running (standard = 30 minutes - depends on the setting in the technician menu). In the display 1, the text “dry” is displayed and the temperature symbol flashes.

- Press the On/Off button **A** for about 3 seconds to cancel the post-drying program.



To prevent mould and rot from forming, the post-drying programme should NOT be stopped.

10.19. Activating standby for remote operation

EN 60335-2-53 specifies that sauna control units with a remote start function must be set manually to “Standby for remote operation” mode.



This activation must take place again after each remote start and stop procedure.

Perform the following steps:

With safety shut-off activated (standard)

The setting “SdO” in the technician menu is set to “SAF”.

1. Make sure that the sauna control unit is in standby mode.
2. Press the On/Off button **A** and the mode button **D** simultaneously for about 3 seconds.
 - ▶ In the display 1 “rc” (remote control) flashes and the remote control symbol 9 flashes on the optional control panel for the additional output (Pro D2i / Pro D3i only).
 - ▶ The sauna control unit is then ready to be started using a remote start signal the display “rc” goes out.
 - ▶ After a remote stop or manual switching off of the sauna control unit, the mode has to be activated again.

When the door sensor is activated

The setting “SdO” in the technician menu is set to “dor”.

1. Make sure that the sauna control unit is in standby mode.
2. Press the On/Off button **A** and the mode button **D** simultaneously for about 3 seconds.
 - ▶ In the display 1 a countdown of 30 seconds is displayed. The door can be opened and closed as many times as desired during this time. After the 30 seconds has elapsed, the door must be closed!
 - ▶ “rc” (remote control) flashes in the display 1.
 - ▶ The sauna control unit is then ready to be started using a remote start signal the display “rc” goes out.
 - ▶ After a remote stop or manual switching off of the sauna control unit, the mode has to be activated again.



To cancel the “Standby for remote control” function, press the On/Off button **A** for about 3 seconds.

If the door is opened - “dor” appears on the display

1. In “Standby for remote operation” mode: To continue the mode, close the door and press the On/Off button **A** for about 3 seconds.
 - ▶ In the display 1 a countdown of 30 seconds is again displayed.
2. In standby mode (---): acknowledgement takes place automatically when the door is closed.

10.20. Switching off functions

You can switch off each function individually.

1. Select the function you wish to switch off by pressing the mode button **D**.
2. Press the On/Off button **A**.
 - ▶ The respective function is switched off.
 - ▶ The display 1 shows “oFF”.



If you switch off the sauna heater (temperature function **A**), the vaporizer (humidity function **B**) is automatically switched off.

10.21. Deactivating the control panel

- Press the On/Off button **A** for about 3 seconds.
 - ▶ The display 1 shows “---”.
 - ▶ The sauna control unit is in standby mode.

EN**10.22. Switching off the power unit**

If you will not be using the sauna control unit for an extended period of time, switch the sauna control unit off at the power unit.

- Press the On/Off button **F**.
 - ▶ The display 1 goes out.
 - ▶ The sauna control unit is switched off.

11. User programs

The user programs enable favourite sauna settings to be saved and accessed again. There are 5 preset user programs available which can be modified according to user requirements.

The settings of the following functions are stored in the user programs:

- Temperature
- Humidity
- Additional output (intensity or room temperature regulation)
- Light
- Fan

11.1. Preset user programs

The following user programs are already predefined. The “humidity” value is not included in the Pro D2 and Pro D2i control units. The “additional output” value is not included in the Pro D2 and Pro D3 control units.

<i>User program</i>	<i>Temperature</i> °C	<i>Humidity</i> %	<i>Auxiliary output</i>	<i>Light</i> %	<i>Fan</i> %	<i>Operating time</i> Hrs
1	90	0	0	50	0	2
2	70	0	0	50	0	2
3	50	60	0	50	0	2
4	60	35	0	50	0	2
5	0	0	7	50	0	1

11.2. Accessing user programs

1. Select the user program symbol 4 by pressing the mode button **D**.
 - The user program symbol lights up.
2. Select the desired user program (1 - 5) with the plus button **B** and the minus button **C**.
3. Press the On/Off button **A**.
 - The user program is started.
 - The display 1 shows the started user program.

11.3. Creating your own user programs

You can create user programs as you would like. A preset user program is overwritten in the process. Perform the following steps:

1. Start all functions that are to be switched on with the future user program with the preferred intensity. Leave the control unit to operate for about 3 minutes.
2. Select the user program symbol 4 by pressing the mode button **D**.
 - ▶ The user program symbol lights up.
3. Use the plus button **B** and minus button **C** to select which number (1 - 5) the new user program is to be saved under.
4. Press the plus button **B** and the minus button **C** for about 3 seconds.
 - ▶ The saving of the user program is confirmed with a short flashing of the user program symbol 4.
 - ▶ The settings are stored in the selected user program.

Example

User program	Temperature °C	Humidity %	Auxiliary output	Light %	Fan %	Operating time Hrs
2	45	55	0	50	0	3

12. The Eco-function

The ECO function allows you to save energy in breaks between sauna sessions. When the ECO function is activated, the connected devices run with reduced power. You can choose between a 20, 40 or 60-minute sauna break.

The sauna heater and the vaporizer are switched on again before the end of the break. In this way the preset temperature and preset humidity are reached again at the end of the sauna break.

Perform the following steps to activate the Eco-function:

1. Select the temperature symbol 5 by pressing the mode button **D**.
2. Press the plus button **B** and the minus button **C** simultaneously for about 3 seconds.
 - ▶ The temperature symbol 5 and the humidity symbol 6 light up.
3. Set the desired duration of the break in minutes with the plus button **B** and the minus button **C**.
 - 20 stands for a 20-minute sauna break.
 - 40 stands for a 40-minute sauna break.
 - 60 stands for a 60-minute sauna break.
4. Then briefly press the On/Off button **A**.
 - ▶ The display 1 shows the remaining break time.
 - ▶ The temperature symbol 5 and the humidity symbol 6 flash.



To cancel the ECO function, press the On/Off button **A** for about 3 seconds.

13. Cleaning and maintenance

13.1. Cleaning

ATTENTION!

Damage to the unit

The sauna control unit is resistant to splashing water, but direct contact with water could still damage it.

- NEVER immerse the unit in water.
- Do not pour water over the unit.
- Do not get the unit too wet when cleaning it.

1. Soak a cleaning cloth in a mild, soapy water.
2. Wring out the cloth well.
3. Carefully wipe the housing of the sauna control unit.

13.2. Maintenance

The sauna control unit does not require any maintenance.

14. Disposal



- Dispose of packaging materials in accordance with the applicable waste disposal regulations.
- Used devices contain reusable materials as well as hazardous substances. Therefore, do not dispose of your used device with household waste, but do so in accordance with the locally applicable regulations.

15. Troubleshooting

15.1. Error messages

The sauna control unit is equipped with diagnostic software which monitors system statuses when it is switched on and during operation. As soon as the diagnostic software identifies an error, the sauna control unit switches off the sauna heater.

Errors are indicated by a recurring warning tone and by flashing of the symbols 2 to 8. Furthermore, the error number is shown in the display 1.

Switch the sauna control unit off using the On/Off switch 6 and rectify the error before switching the sauna control unit on again.

The following table describes the possible faults and their causes. If necessary, quote the error number to your customer service specialist.

<i>Error</i>	<i>Description</i>	<i>Cause/remedy</i>
001	Safety shut-off	An object has been placed on the sauna heater. Remove any objects before starting up the sauna heater again. If no safety shut-off is fitted, note 5.11 on page 26.
002	Overheat cut-out	The maximum temperature of 139 °C has been exceeded above the heater.
4F1	Heater sensor error	Defective heater sensor, poor contact, or short circuit.
005	Foil sensor error	Defective foil sensor, poor contact, or short circuit.
6F2	Bench sensor error	Defective bench sensor, poor contact, or short circuit.
007	Humidity sensor error	Defective humidity sensor, poor contact, or short circuit
008	Foil sensor excess temperature	The maximum foil temperature of 100°C was exceeded.
bEr	Communication error	Check the cables between the power unit and the control panels.
dor	Sauna door open	The sauna control unit is equipped with a door sensor. Close the door or check the connections and settings.

15.2. Low-water display (Pro D3 / Pro D3i only)

The sauna control unit features an automatic low-water cut-out feature which is active in combi mode, as long as your combi heater supports it.

If the water tank in the vaporizer is empty, this is indicated by a recurring warning tone and the message **"FIL"** appears on the display 1. The vaporizer switches off at the same time.

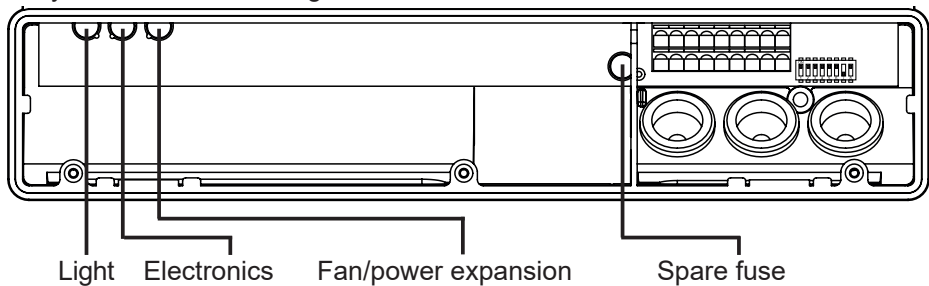
- Pour water into the water tank in the vaporizer.
 - ▶ After a short period, the message "FIL" disappears and the vaporizer starts heating up again.

15.3. Fuses

Fuses for light, fan/power expansion and electronics as well as a spare fuse are located in the sauna control unit's connection area.

These are 1A time delay micro fuses.

They can be ordered using the item number PRO-FUSE.



In order to replace the fuse, pull the fuse link straight out and insert the new fuse.

16. Technical data

16.1. Power unit

Ambient conditions

Storage temperature:	-25 °C to +70 °C
Ambient temperature:	-10 °C to +40 °C
Air humidity:	max. 95%

Sauna control unit

Dimensions (W × H × D):	307 x 175 x 57 mm
Voltage rating/three-phase 3N:	400 V AC
Frequency:	50 Hz
Power rating/heater:	3 x 3.5 kW
Current rating per phase/heater:	16 A
Switching capacity / vaporizer (Pro D3 / Pro D3i only):	3.5 kW
Switched current / vaporizer (Pro D3 / Pro D3i only):	16 A
Switching capacity/additional output (dimmable)*	500 W
Switching capacity/additional output (switchable)*	3.5 W
Switched current/additional output*:	16 A
Status output:	24 V/200 mA
Rated voltage:	230 V
Protection class (protected against splashing water):	IPX4
Connection to the mains supply as fixed wiring (fixed connection)	

Light

Power rating:	100 W
Fuse:	1A T

Fan

Power rating:	100 W
Fuse:	1A T

Setting ranges

Temperature:	30 °C to 110 °C
Humidity:	0 % to 100 %

The maximum humidity that can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set.

Thermal safety

- Heater sensor with overheat cut-out (139 °C cut-out temperature)
- Adjustable automatic heating period (6 h, 12 h, 18 h, 24 h)*
- Optional single-sensor mode or two-sensor mode

Connection cables

Power supply cable:	min. 5 × 2.5 mm ²
Heater supply cable (temperature-resistant up to 150 °C):	min. 2.5 mm ²
Sensor cables (temperature-resistant up to 150 °C):	min. 0.5 mm ²
Light cable:	min. 1.5 mm ²
Fan cable:	min. 1.5 mm

16.2. Control panel Pro D2 / Pro D2i / Pro D3 / Pro D3i

Ambient conditions

Storage temperature:	-25 °C to +70 °C
Ambient temperature:	0 °C to +100 °C
Air humidity:	max. 99% non-condensing
Dimensions (W × H × D):	80 x 104 x 38 mm
Dimensions (W x H):	65 x 70 mm
Protection class (protected against splashing water):	IPX4

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16.3. Additional output control panel Pro D (optional)

Ambient conditions

Storage temperature:	-25 °C to +70 °C
Ambient temperature:	0 °C to +100 °C
Air humidity:	max. 99% non-condensing
Dimensions (W × H × D):	63 x 104 x 38 mm
Dimensions (W x H):	48 x 60 mm
Protection class (protected against splashing water):	IPX4

* Only the Pro D2i / Pro D3i models have an additional output. The additional output has no overheat cut-out. For this reason, only intrinsically safe devices should be operated using the additional output.