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› Harvia C90 Sauna Control Unit User Manual

Harvia HAR-S-C90

Harvia C90 Sauna Control Unit User Manual

Model: HAR-S-C90

1. PRODUCT OVERVIEW

The Harvia C90 is a sophisticated digital control unit designed for electric sauna heaters with a maximum power output of 9 kW. It provides precise control over sauna temperature and operating time, ensuring a comfortable and safe sauna experience. The unit features a clear digital display for temperature readings and intuitive controls for easy operation.

Package Contents:

- Harvia C90 Control Unit
- Temperature Sensor with approximately 4 meters of cable



Figure 1: Front view of the Harvia C90 Control Unit, showing the digital display, control knobs, and power switches.



2. SAFETY INSTRUCTIONS

Please read these safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or personal injury.

- **Professional Installation:** All electrical connections must be performed by a qualified electrician in accordance with local and national electrical codes.
- **Power Disconnection:** Always disconnect power to the sauna heater and control unit before performing any installation, maintenance, or troubleshooting.
- **Water and Moisture:** Do not expose the control unit to water or excessive moisture. Ensure it is installed in a dry location.
- **Damage Inspection:** Do not operate the unit if it appears damaged. Contact a qualified service technician for inspection and repair.
- **Children and Pets:** Keep the control unit out of reach of children and pets.
- **Ventilation:** Ensure adequate ventilation around the control unit to prevent overheating.

3. FEATURES

- **Digital Temperature Display:** Shows current temperature up to 125 °C.
- **Adjustable Temperature Range:** Allows setting the sauna temperature from +40 °C to +110 °C (precision +/- 1 °C).
- **Operating Time Control:** Selectable operating duration from 1 to 12 hours. Factory setting is 4 hours.
 - For family saunas, the maximum operating time is 6 hours.
 - For collective saunas, the maximum operating time is 12 hours.
- **Programmable Pre-setting:** Ability to program the unit to start heating 0 to 12 hours in advance.
- **Integrated Temperature Sensor:** The sensor housing contains a temperature sensor (NTC thermistor 22 k Ω /T=25 °C) and a resettable overheat protection safety device.
- **Error Diagnostics:** Displays error messages (Er1, Er2, Er3) to assist in troubleshooting potential issues.

4. SETUP AND INSTALLATION

Installation of the Harvia C90 control unit and its components should only be carried out by a certified electrician.

4.1 Mounting the Control Unit

- Choose a dry location outside the sauna room, protected from high temperatures and moisture.
- Ensure sufficient space for ventilation and access to connections.
- Mount the unit securely to a wall using appropriate fasteners.

4.2 Connecting the Temperature Sensor

The temperature sensor is crucial for accurate temperature control and safety.



Figure 3: Harvia C90 Temperature Sensor with its approximately 4-meter cable.

- Connect the temperature sensor cable to the designated terminals on the control unit as per the wiring diagram provided in the full installation manual (not included here).
- Mount the temperature sensor on the sauna wall, approximately 10-15 cm from the ceiling and at least 20 cm away from the heater. Avoid placing it directly above the heater or near ventilation openings.
- Ensure the sensor cable is routed safely and is not exposed to excessive heat or physical damage.

4.3 Electrical Connections

The Harvia C90 operates on 400V 3N power. All electrical wiring must comply with local regulations and be performed by a licensed professional.

- Connect the main power supply to the control unit.
- Connect the sauna heater to the control unit's output terminals.
- Verify all connections are secure and correctly wired before restoring power.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- To power on the unit, flip the main power switch (usually marked with a power symbol) to the 'ON' position.
- To power off, flip the switch to the 'OFF' position.

5.2 Setting Temperature

- Use the temperature control knob (marked with °C) to adjust the desired sauna temperature.
- The digital display will show the current temperature. The heater will activate to reach and maintain the set temperature.

5.3 Setting Operating Time

- Use the operating time control (often a rotary switch or button) to select the desired duration for the sauna heater to operate (1-12 hours).

- The heater will automatically shut off after the set time has elapsed.

5.4 Programming Pre-setting Time

- The C90 allows you to program a delayed start for the sauna heater, from 0 to 12 hours in advance.
- Refer to the specific markings on your control unit for the programming interface. Typically, this involves setting a delay time before the operating time begins.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your Harvia C90 control unit.

- **Cleaning:** Clean the exterior of the control unit with a soft, damp cloth. Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the surface or internal components.
- **Sensor Check:** Periodically check the temperature sensor for any dust or debris accumulation. Ensure it is securely mounted and its cable is intact.
- **Connection Inspection:** Annually, have a qualified electrician inspect all electrical connections to ensure they are tight and free from corrosion.
- **Storage:** If the sauna is not in use for an extended period, ensure the control unit is powered off and stored in a dry environment.

7. TROUBLESHOOTING

The Harvia C90 control unit is designed to display error messages to help diagnose potential issues. If an error occurs, the heater will be switched off, and an error message will appear on the display.

Error Code	Description	Possible Cause / Solution
Er1	Temperature sensor fault.	Check the temperature sensor connection. Ensure the sensor cable is not damaged. If the issue persists, the sensor may need replacement.
Er2	Overheat protection activated.	The sauna temperature has exceeded safe limits, or the overheat protection in the sensor housing has tripped. Allow the sauna to cool down. Check for proper ventilation in the sauna room. If the issue persists, inspect the sensor and heater.
Er3	Internal fault / System error.	This indicates a more general internal error. Try resetting the control unit by turning off the main power for a few minutes and then turning it back on. If the error persists, contact Harvia customer support or a qualified service technician.

The error message will disappear once the fault has been rectified. For any persistent issues or if you are unsure about troubleshooting steps, always consult a qualified electrician or Harvia customer support.

8. SPECIFICATIONS

Feature	Specification
Model	HAR-S-C90
Adjustable Temperature Range	40 - 110 °C
Max. Heater Power	9 kW

Feature	Specification
Operating Time Limit	1 - 12 hours (Factory default: 4 hours)
Programmable Pre-setting	0 - 12 hours
Temperature Display Max	125 °C
Dimensions (L x W x H)	250.01 x 70 x 223.01 mm
Weight	1.4 kg
Voltage	400V 3N

9. WARRANTY AND SUPPORT

The Harvia C90 control unit comes with a manufacturer's warranty. Please refer to the warranty card included with your product for specific terms and conditions. Keep your proof of purchase for warranty claims.

For technical support, spare parts, or service inquiries, please contact Harvia customer service or your authorized Harvia dealer. Contact information can typically be found on the Harvia official website or on your product packaging.

Harvia Official Website: www.harvia.fi/en/