Harvia Qube

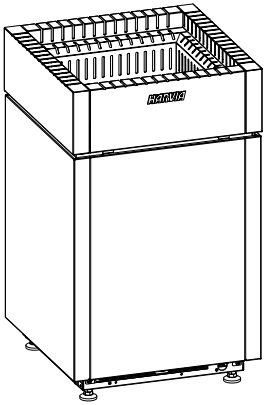
Electric sauna heater
Instructions for installation and use

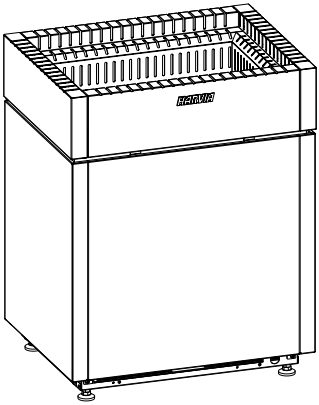
HARVIA
Sauna & Spa

Let's sauna.

Item no.	Type	Power
HQU904M	QU90E	9 kW
HQU1054M	QU105E	10.5 kW
HQU1204M	QU120E	12 kW
HQU1504M	QU150E	15 kW

EN
DE
FR
NL
FI
SV
ET
LV
LT
RU
PL
CS
SL
ES
IT





Y05-1398 06/25

Congratulations on your excellent choice of sauna heater!

A Harvia sauna heater works best and will serve you for a long time if used and maintained as described in this manual. Please read the instructions before installing or using the sauna heater. Keep the guide for future reference. Installation and operating instructions can also be found on our website at www.harvia.com.

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1. WARNINGS AND NOTES



Please read the warnings and instructions carefully before you use the device.

WARNING! Failure to heed this warning could result in serious injury or death.

CAUTION! Failure to heed this warning may result in minor or serious injury.



Do not cover!

Installation

- The sauna heater is designed to heat the sauna room to the required temperature. Use for any other purpose is prohibited. The control unit is designed to control the sauna heater and the sauna functions intended for the control unit. Use for any other purpose is prohibited.
- The device may only be connected to the mains by a qualified electrician in accordance with the regulations in force. The person responsible for the installation of the device must provide the user with the installation and operating instructions supplied with it, as well as the necessary training, before handing over the installation work.
- Always disconnect the device from the mains before servicing!
- Inspect the device for visible damage before installation and commissioning. Do not use a damaged device.
- Always observe the values given in the instructions for use of the device. Deviating from them causes a fire hazard.
- Only one electric heater may be installed in the sauna, unless otherwise stated in the instructions.
- The device must be installed in such a way that the warning texts remain easily readable after installation.
- The sauna heater or device must not be installed in a wall recess, unless otherwise specified in the instructions for use.
- If a guardrail is installed around the sauna heater, the safety distances indicated in the operating instructions for the heater must be observed.
- If you want to install accessories for the device, always follow the instructions for each specific accessory when installing or using them.
- Ensure adequate ventilation in the sauna room (air should be changed six times an hour).

- Do not position the supply air vent so that the air flow cools the heat sensor (see heat sensor installation instructions).
- If the mains cord is damaged, either the manufacturer or maintenance representative or other qualified person must change it to prevent any hazards.
- The use of a PVC insulated cable as the sauna heater connection cable is prohibited due to its thermal fragility.
- Always check the condition of the sauna junction box connectors when installing the sauna heater. We recommend screw connectors. Avoid spring-loaded connectors!
- Do not connect the power supply to the electric heater via a residual current circuit breaker.
- If the device is used in a public sauna without a timer, the power indicator light should be placed in the room from which the device is used.

- Always wear protective gloves during installation and maintenance and when adding sauna stones.
- Cover the heating elements completely with stones; a glowing bare heating element can cause a fire hazard!
- Do not place any objects or devices in or near the stone space of the sauna heater that could change the amount or direction of air flow through the heater.

Use and bathing

- This device may be used by children aged 8 or over and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, provided they are supervised or instructed in the safe use of the device and understand the risks involved.
- Children are not allowed to play with the device. Children must not clean the appliance or perform any maintenance on the device without supervision.
- Exercise caution with the sauna heater when it is hot. The stones and metal parts of the sauna heater are hot enough to burn the skin.
- Always check that there are no objects on or near the sauna heater before switching it on.
- Ensure adequate ventilation the first few times the sauna heater is heated, as the sauna heater might produce an odour.
- Do not throw or pour too much water on the sauna heater at once, as this could cause scalding splashes.
- Do not throw water on the sauna heater when someone is near it.
- Do not use a ladle with a capacity or more than 0.2 litres.

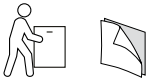
- Do not use any type of water other than that specified in the sauna heater instructions.
- If using sauna fragrances in the water, only use fragrances intended for sauna water and follow their instructions for use.
- Prolonged time in a hot sauna raises body temperature, which may be dangerous.
- Keep children away from the sauna heater.
- Do not leave children, individuals with reduced mobility, the ill or otherwise infirm in the sauna alone.
- Check with a doctor if you have any health restrictions related to sauna use.
- Be careful when moving in the sauna, as the sauna benches or floor surfaces can be slippery.
- Do not enter a hot sauna if you are under the influence of alcohol, medicines, narcotics or any other intoxicating substances.
- Do not sleep in a heated sauna.
- A marine climate and other humid climates can corrode the metal surfaces of the sauna heater.
- Due to the risk of fire, do not use the sauna as a drying room for laundry. Electrical devices can also be damaged by high humidity.
- Do not reset the overheat protector by pressing the reset button until the cause of its tripping has been determined. The overheat protector should only be reset by a qualified service technician, unless otherwise stated in the instructions.
- When the on-time has elapsed, check that the sauna heater has definitely switched off and stopped heating.
- Hot stone chips falling from the sauna heater can damage floor coverings and cause a fire hazard.
- In public saunas where the sauna heater is used without a timer or continuously for longer periods than the factory-set timer on the sauna heater or control unit allows, the device must be monitored continuously.
- The sauna room and the area around the sauna heater should always be inspected before the sauna heater is switched on again or switched on remotely.
- The sauna room and the sauna heater environment should always be inspected before the device is put into standby mode for remote control or pre-timed operation.
- According to the product standard IEC/EN 60335-2-53 for electrically heated sauna heaters, control units with a remote start function may be used to control and regulate the sauna heater when an appropriate safety switch-off mechanism (door or safety switch) is installed on the sauna heater or sauna door.

Maintenance

- All maintenance operations requiring special skills must be carried out by a trained professional.
- Wipe the sauna heater from time to time with a damp cloth to remove dust and dirt. Use mild detergents if necessary. Do not use running water when cleaning.
- Before starting cleaning, make sure that the device has cooled down completely.
- Rearrange the stones or replace broken ones at least every year.

2. BEFORE INSTALLATION

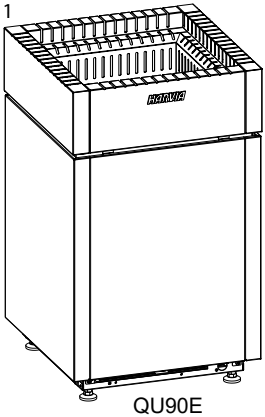
- **The sauna heater should always be transported in an upright position only.**
- **The sauna heater can be lifted and moved by supporting it from the outer casing.**
- **Remove the protective film from the sauna heater before use.**



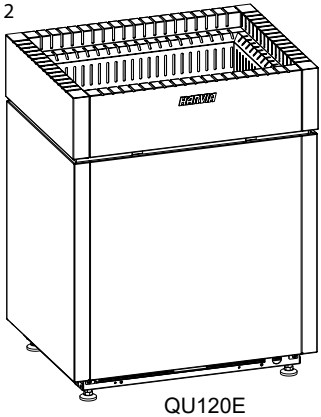
Checklist for installation of the sauna heater

- □ Check that the heater is intact. Do not use a defective sauna heater. Report any damage in transit to the supplier.
- □ The sauna heater is suitable in terms of power and type for the sauna room in question. The sauna volume values must not be exceeded or fallen short of (5. Technical information) (7.2. Sauna heater power)
- □ The supply voltage is suitable for the sauna heater.
- □ The sauna heater installation location meets minimum safety distances (6.1. Safety distances)
- □ The location of the temperature sensor/overheat protector is sauna heater-specific. Make sure that the sensor is installed according to the instructions.
- □ Make sure that the sauna heater stones are loaded according to the instructions.
- □ If accessories are to be installed, follow the product-specific instructions for installation and use.
- □ Make sure that the control unit is compatible with the sauna heater. You can check the compatibility of the latest control unit models on Harvia.com
- □ Please keep this manual for future reference.

3. DELIVERY CONTENTS



QU90E
QU105E

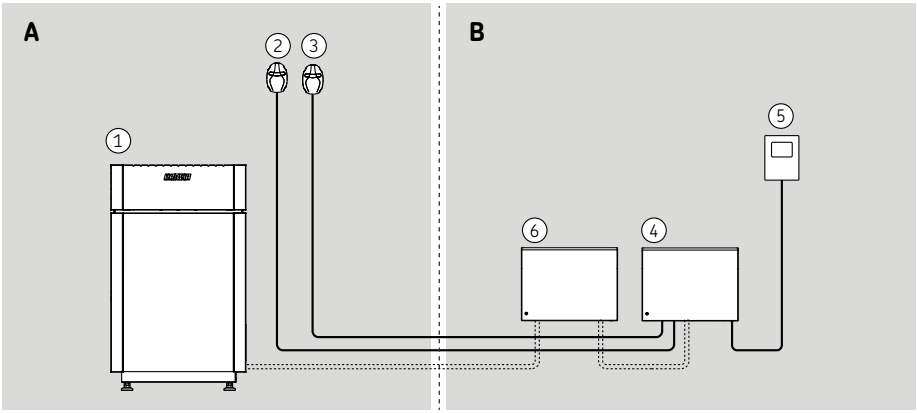


QU120E
QU150E

EN

1. Sauna heater
2. Instructions for installation and use

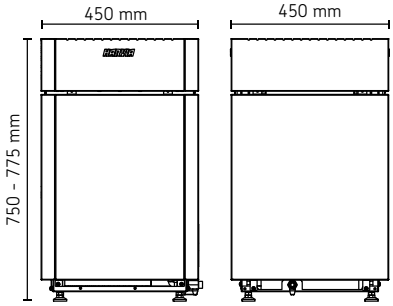
4. INSTALLATION EXAMPLE



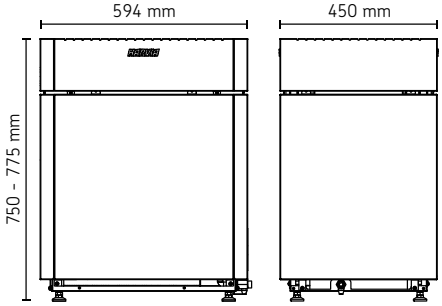
A. Sauna room	B. Dry space
1. Sauna heater	4. Power unit
2. Temperature sensor	5. Control panel
3. Bench sensor	6. Power extension (optional. Must use if 2 groups or more than 11kW)

5. TECHNICAL DATA

QU90E, QU105E



QU120E, QU150E



EN

INSTALLATION DATA				
	QU90E	**QU105E**	**QU120E**	**QU150E**
Power (kW) sauna heater	9	10.5	12	15
Operating voltages	400 V 3N~ 230 V 1N~	400 V 3N~ 230 V 1N~	400 V 3N~	400 V 3N~
Electrical groups	1 group	1 group	2 groups	2 groups
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60
Supply cable	5 x 2.5 mm²	5 x 2.5 mm²	5 x 2.5 mm²	5 x 2.5 mm²
Type of connection cable	H07RN-F or equivalent	H07RN-F or equivalent	H07RN-F or equivalent	H07RN-F or equivalent
Protection class	IPX4	IPX4	IPX4	IPX4
Storage temperature	0-50°C	0-50°C	0-50°C	0-50°C
STONES				
	QU90E	**QU105E**	**QU120E**	**QU150E**
Size of stones (cm)	Ø 5-10	Ø 5-10	Ø 5-10	Ø 5-10
Quantity of stones (kg)	25	25	40	40
DIMENSIONS				
	QU90E	**QU105E**	**QU120E**	**QU150E**
Height (mm)	750 - 775	750 - 775	750 - 775	750 - 775
Width (mm)	450	450	594	594
Depth (mm)	450	450	450	450
Weight (kg)	34	34	40	40

SAUNA ROOM				
	QU90E	**QU105E**	**QU120E**	**QU150E**
Room volume (m^3)	9-14	10-15	14-18	18-25
Minimum sauna height (mm)	1900	1900	1900	1900
APPROVED ACCESSORIES				
	QU90E	**QU105E**	**QU120E**	**QU150E**
Heater railing	QUBE-L5 QUBE-W5	QUBE-L5 QUBE-W5	QUBE-L6 QUBE-W6	QUBE-L6 QUBE-W6
SFE safety devices	SFE-500500	SFE-500500	SFE-500500	SFE-500500
COMPATIBLE CONTROL UNITS				
	QU90E	**QU105E**	**QU120E**	**QU150E**
See the latest control unit models on our web-site harvia.com	FX110 CX110 C105VKK Pro B2 Pro C2 Pro D2 Pro D2i	FX110 CX110 C105VKK Pro B2 Pro C2 Pro D2 Pro D2i	FX170 CX170 C105VKK *) Pro B2 *) Pro C2 *) Pro D2 *) Pro D2i *)	FX170 CX170 C105VKK *) Pro B2 *) Pro C2 *) Pro D2 *) Pro D2i *)
POWER EXTENTION *)				
	QU90E	**QU105E**	**QU120E**	**QU150E**
See the latest power boost models on our website harvia.com	LTY17 O-S2-18 O-S2-18S	LTY17 O-S2-18 O-S2-18S	LTY17 O-S2-18 O-S2-18S	LTY17 O-S2-18 O-S2-18S
*) Must use if 2 groups or more than 11kW				

Table 1. Technical information

6. INSTRUCTIONS FOR INSTALLATION

Always observe the values given in the instructions for use of the device. Deviating from them causes a fire hazard.

Only one electric heater may be installed in the sauna, unless otherwise stated in the instructions.

The device must be installed in such a way that the warning texts remain easily readable after installation.

6.1. Safety distances

- Minimum protective distances to combustible material are shown in figure (Figure 1. Safety distances).
- If a guardrail is installed around the sauna heater, the safety distances given in figure (Figure 1. Safety distances) or in the installation instructions for the guardrail must be observed.

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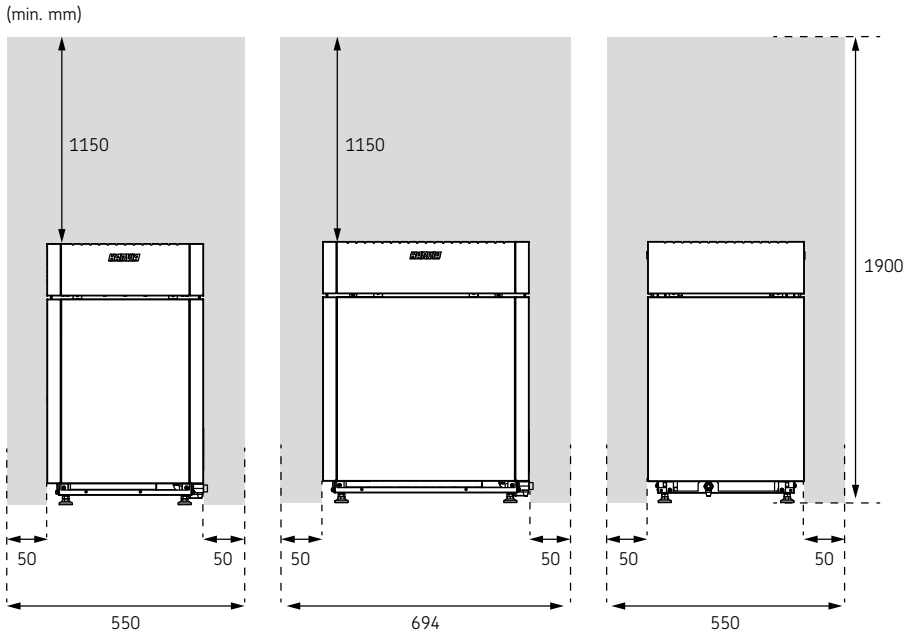


Figure 1. Safety distances

6.2. Sauna heater installation

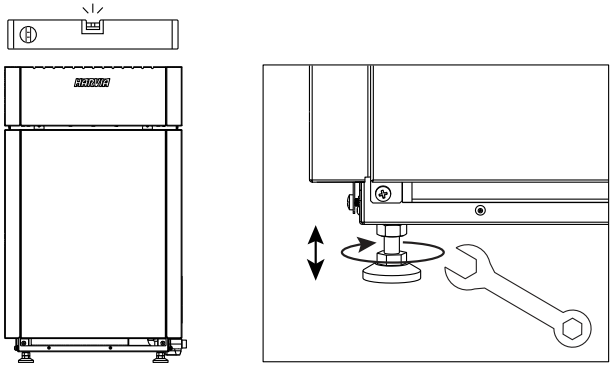


Figure 2. Sauna heater installation

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6.3. Installing the control unit and sensors

Do not position the supply air vent so that the air flow cools the heat sensor.

- The control unit comes with detailed instructions on how to mount it on the wall.
- Install the heat sensor as shown in the picture. If the sauna heater is installed further than 150 mm from the wall, the sensor must be installed on the ceiling.

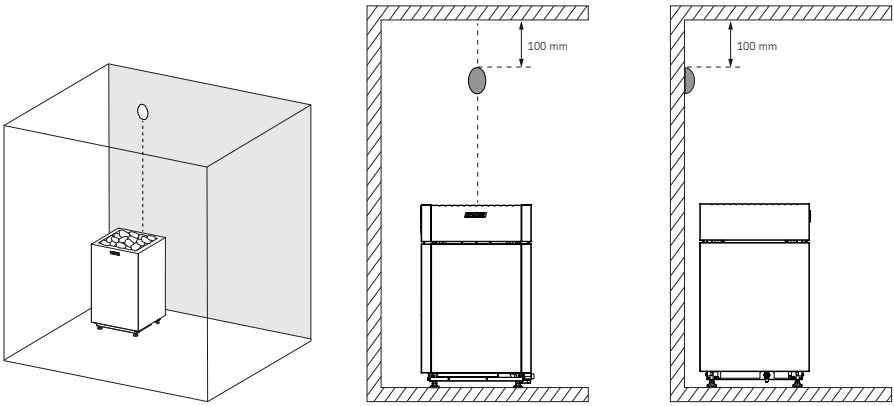


Figure 3a. Installing the heat sensor on the wall

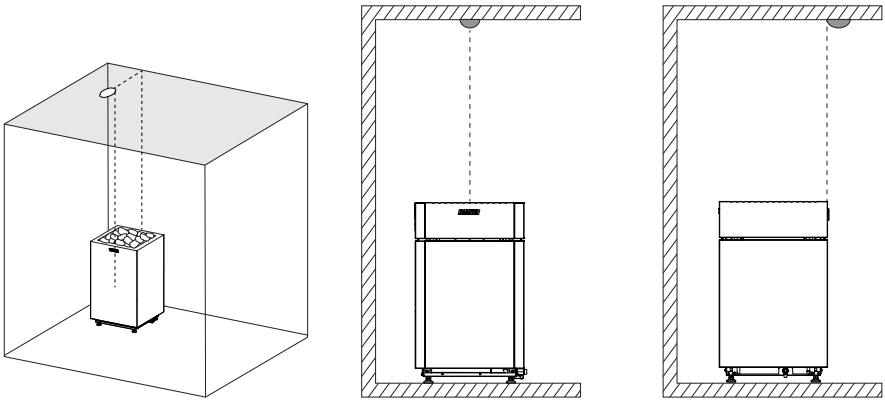


Figure 3b. Installing the heat sensor on the ceiling

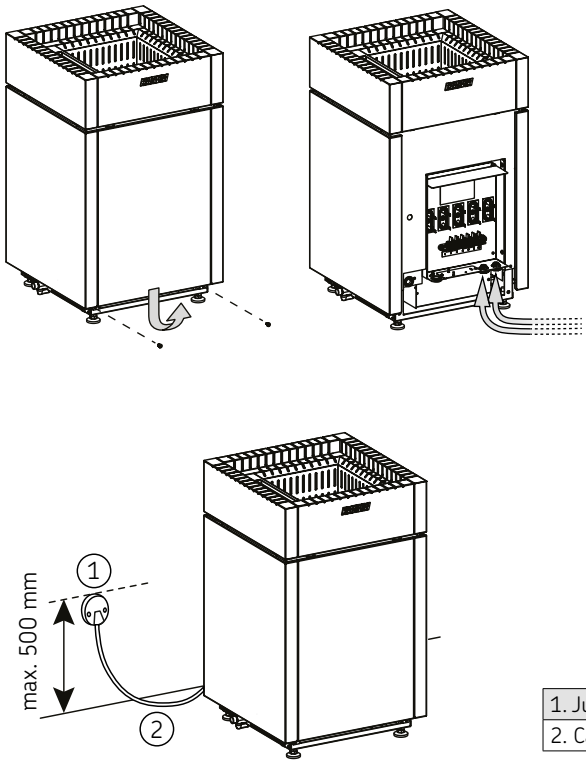
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6.4. Electrical connections

The sauna heater may only be connected to the mains by a qualified electrician in accordance with the regulations in force.

- The sauna heater is connected semi-fixed to the junction box on the sauna wall. The junction box shall be splash-proof and shall not be more than 500 mm above the floor.
- The connection cable should be of the rubber cable type H07RN-F or equivalent. NOTE: The use of a PVC insulated cable as the sauna heater connection cable is prohibited due to its thermal fragility.
- If the connection or installation cables are placed in the sauna or inside the sauna walls at a height of more than 1,000 mm above the floor, they must be able to withstand a temperature of at least 170°C under load (e.g. silicone sheathed cables). Electrical equipment installed more than 1,000 mm above the sauna floor must be approved for use at an ambient temperature of 125°C (marked T125).

EN



1. Junction box
2. Cable

Figure 4. Electrical connections

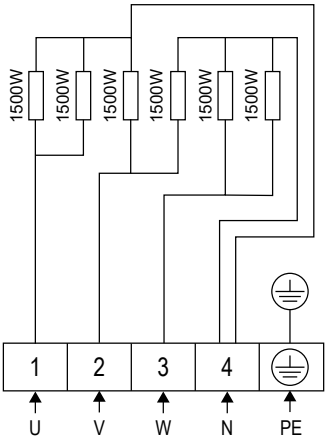


Figure 5. Wiring diagram QU90E

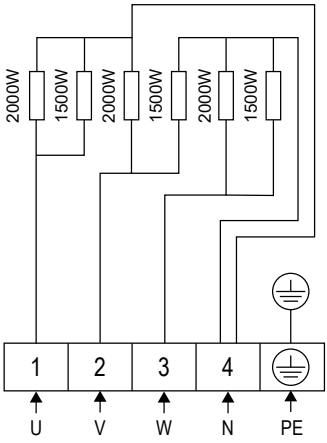


Figure 6. Wiring diagram QU105E

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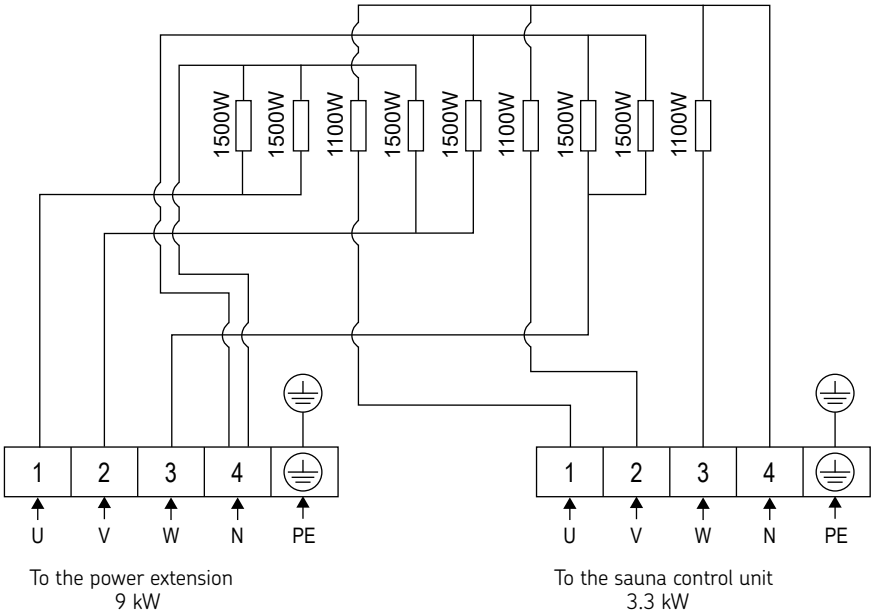


Figure 7. Wiring diagram QU120E

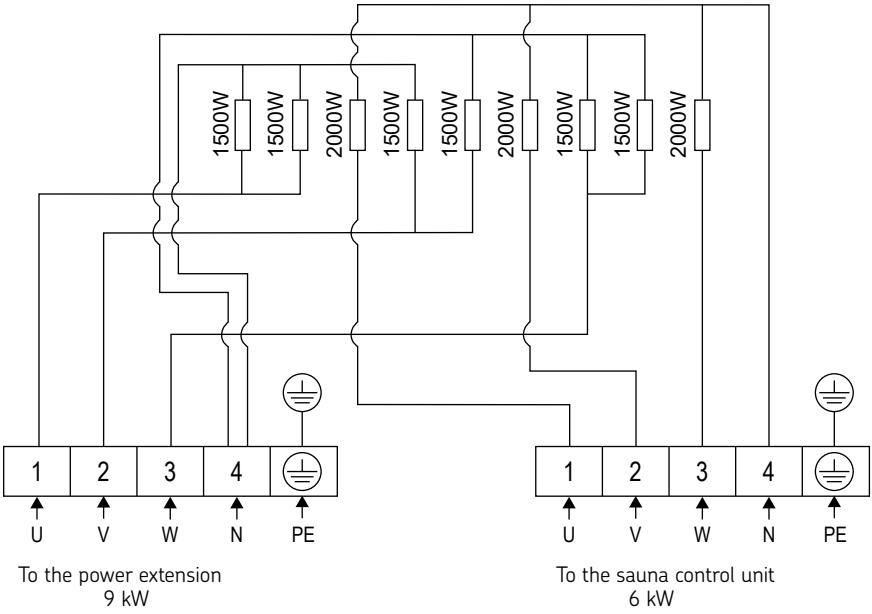


Figure 8. Wiring diagram QU150E

6.5. Insulation resistance of the electric sauna heater

Do not connect the power supply to the electric heater via a residual current circuit breaker!

At the final inspection of the electrical installations, the sauna heater insulation resistance measurement may show "leakage" due to humidity in the air being absorbed (during storage/transport) into the insulating material of the heating elements. Moisture can be removed from the heating elements after a couple of heating cycles.

6.6. Placing of sauna stones

Sauna heater stones are important for the safety of the sauna heater. In order for the warranty to remain valid, the user is responsible for proper maintenance of the stone space in accordance with the specifications and instructions.

Do not place any items or devices in the sauna heater's stone space or vicinity that can change the amount or direction of air flowing through the sauna heater.

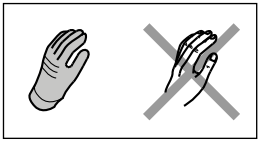
If a heating element is not surrounded by stones, it can heat materials dangerously hot, even beyond the sauna heater's safety distances. Make sure that the heating elements are not visible beyond the stones. As the user, you are responsible for ensuring that the stone space is properly maintained throughout the sauna heater's life cycle.

Important information on suitable sauna stones:

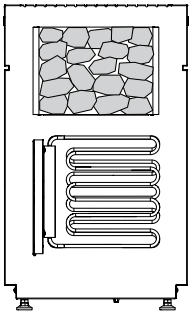
- Suitable sauna stone materials are peridotite, olivine diabase, olivine and vulcanite.
- Only use cleavage surface and/or rounded stones for your sauna heater.
- If the heating elements of an electric sauna heater are in contact with the stones, rounded stones may only be used in the outer layers of the stone space, so that they do not come into contact with the heating elements.
- Ceramic stones and decorative stones may only be used if they have been approved by the manufacturer and are used according to the their instructions.
- Note that decorative stones are only suitable on the top layer of the stone space. Decorative stones must be placed loosely to ensure sufficient air circulation. Place any decorative stones so that they do not touch the heating elements of an electric sauna heater.
- The warranty does not cover any defects that have been caused by the use of decorative stones or by sauna stones not recommended by the manufacturer.
- Rinse any stone dust off the stones before placing them in the heater.

How placing the stones, observe the following:

- Start with the biggest stones, placing them at the bottom and sides. This ensures sufficient air ventilation and forms a steady base for the stone space.
- Place stones one by one. Do not drop them in the stone space.
- Do not pile a stack of stones on the heater. The stones may reach the level of the heater's air ducts. An excessive amount of stones reduces ventilation and weakens the heater's properties.
- We recommended that you keep some extra stones in store to replace broken ones or to add any if the stone level becomes lower over time.



	QU90E QU105E	QU120E, QU150E
	Ø 5-10cm	Ø 5-10cm
	25kg	40kg



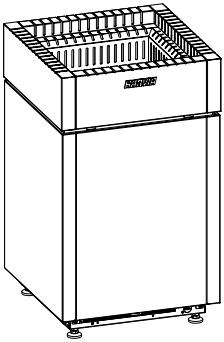
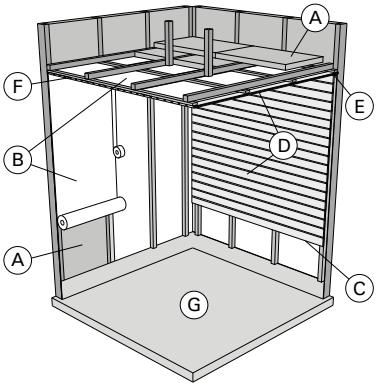


Figure 9. Placing of sauna stones

7. SAUNA ROOM

7.1. Sauna room structure



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A. Insulating wool, thickness 50-100 mm. The sauna room must be carefully insulated to keep the sauna heater output at a reasonably low level.
B. Humidity barrier, e.g. aluminium paper. Place the shiny side of the paper facing the interior of the sauna. Tape the seams tightly with aluminium tape.
C. Approximately 10 mm ventilation gap between the humidity barrier and the panel (recommended).
D. Panel board with a small mass and a thickness of 12-16 mm. Before starting the panelling, check the electrical wiring of the devices and the reinforcements required for the sauna heater and the benches in the walls.
E. Approximately 3 mm ventilation gap between the wall and ceiling panels.
F. The height of the sauna is usually 2,100-2,300 mm. The minimum height depends on the sauna heater. The distance between the upper bench and the ceiling should not exceed 1,200 mm.
G. Use ceramic floor coverings and dark jointing materials. Loosened particles from the stones and contaminants in the sauna water can soil and/or damage delicate floor coverings.

NOTE: Check with the fire authorities which parts of the firewall can be insulated. Flues in use must not be insulated.
NOTE: Lightweight protection installed directly on the wall or ceiling surface can create a fire hazard.
NOTE: Water on the sauna floor must be directed to a floor drain

7.2. Sauna heater power

When the walls and ceiling are panelled and there is sufficient insulation behind the panels, the sauna heater power is determined based on the volume of the sauna. Uninsulated wall surfaces (brick, glass brick, glass, concrete, tile, etc.) increase the need for sauna heater power. Add 1.2 m^3 to the sauna volume for every square metre of uninsulated wall surface. For example, a 10 m^3 sauna room with a glass door is equivalent to a sauna room of about 12 m^3 in terms of its a power requirement. If the sauna room has log walls, multiply the volume of the sauna by 1.5. (5. Technical information)

7.3. Darkening of sauna walls

It is normal for the wooden surfaces in the sauna room to darken over time. Darkening may be accelerated by

- sunlight
- sauna heater heat
- protective materials for wall surfaces (protective materials have poor heat resistance)
- fine particles loosening from the sauna heater stones and rising with air currents.

7.4. Ventilation in the sauna room

The temperature sensor must always be installed in the specified place. If the minimum distance from the supply air vent is not met, the ventilation must be altered!

Do not position the supply air vent so that the air flow cools the heat sensor!

- The air in the sauna room should change six times an hour.
- **Mechanical ventilation:** The supply air vent must be located in the upper part of the sauna so that it does not interfere with the operation of the temperature sensor. (Figure 9. Minimum distance from the supply air vent to the temperature sensor)
- **Pressure ventilation:** The supply air vent should be installed below or next to the sauna heater. The diameter of the supply air vent should be between 50 mm and 100 mm.
- Exhaust air vent: Place the exhaust air vent as far away from the sauna heater as possible and close to the floor. The diameter of the exhaust air vent should be twice the diameter of the supply air vent.
- Possible drain valve (closed during heating and bathing). You can also dry the sauna by leaving the door open after the sauna.
- If the exhaust air vent is on the washroom side, the threshold gap of the sauna door must be at least 100 mm. Mechanical exhaust ventilation is mandatory.

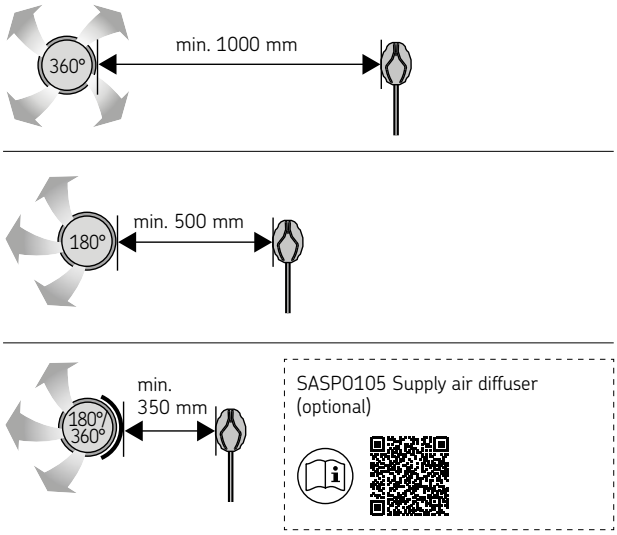


Figure 10. Minimum distance from the supply air vent to the temperature sensor

7.5. Sauna room hygiene

- We recommend using a seat cover when bathing to prevent sweat dripping onto the benches.
- At least every six months, you should give your sauna's benches, walls and floor a thorough wash. Use a root brush and sauna detergent.
- Wipe the sauna heater with a damp cloth to remove dust and dirt. Remove limescale stains from the sauna heater using a 10% citric-acid solution and rinse.

8. INSTRUCTIONS FOR USE

8.1. Use of the sauna heater

Always check that there are no objects on or near the sauna heater before switching it on.

- The sauna heater is operated via a separate control unit. Please refer to the instructions for use supplied with the control unit.
- The sauna heater and the stones produce odours during the first use, the removal of which requires good ventilation in the sauna room.
- If the sauna heater is of the right power for the sauna room, a properly heat-insulated sauna room heats up to operating temperature in about an hour. The sauna heater stones usually heat up in the same amount of time as the sauna room.
- A suitable temperature in the sauna room is around 65–80°C.

8.2. Throwing water

Do not use a ladle with a capacity of more than 0.2 litres. If too much water is thrown or poured onto the sauna heater at once, it can splash over the bathers as it boils hot.

To avoid the risk of burns, do not throw water on the sauna heater when anyone is near it.

- The air in the sauna dries out when the sauna is heated. It is therefore necessary to increase the humidity by throwing water on the sauna heater stones.
- Everyone experiences the effects of heat and humidity in their own way – experiment to find the right temperature and humidity for you.
- Aim to throw water only on the sauna heater stones.

8.3. Water-quality requirements

- The water used in the sauna should meet the quality requirements for domestic water (Table 2.).
- Only fragrances intended for sauna water may be used. Follow the instructions provided with the fragrance.

Properties of water	Effects	Recommendation
Organic impurity	Colour, taste, precipitates	<12 mg/l
Iron content	Colour, smell, taste, precipitates	<0,2 mg/l
Manganese content (Mn)	Colour, smell, taste, precipitates	<0,10 mg/l
Water hardness: the main ingredients are calcium (Ca) and magnesium (Mg)	Precipitates	Ca: <100 mg/l Mg: <100 mg/l
Chloridic water	Corrosion	Cl: <100 mg/l
Chlorinated water	Health risk	Use prohibited
Sea water	Rapid corrosion	Use prohibited
Arsenic and radon concentrations	Health risk	Use prohibited

Table 2.

8.4. Bathing instructions

- Start your sauna session by washing yourself.
- Sit in the sauna for as long as you feel comfortable.
- Slow your mind down and relax.
- Good sauna manners include paying attention to other sauna users without disturbing them with loud behaviour.
- Don't drive others off the benches with excessive water throwing.
- Cool down your skin. If you're healthy, you can enjoy swimming while cooling down.
- Wash yourself to conclude your sauna session.
- Rest and let yourself settle down. Enjoy a refreshing drink to restore your fluid balance.

9. REGULAR UPKEEP AND MAINTENANCE

All maintenance operations requiring special skills must be carried out by a trained professional.

9.1. Sauna heater stones

- Due to intense thermal cycling, the sauna heater stones will gradually deteriorate and crumble during use. Replace the stones at least once a year, or more often if the sauna is used very frequently.
- At the same time, remove any accumulated stone debris and replace any broken stones. This will ensure that the sauna heater's steaming properties are maintained and there is no risk of overheating.
- Check occasionally whether the stone level has become lower. Make sure that the heating elements do not become visible over time. The stone level is likely to become lower in about two months after the stones have been placed.

9.2. Troubleshooting

The sauna heater will not heat up
- Check that the sauna heater's fuses in the electrical panel are intact.
- Check that the sauna heater's connection cable is plugged in.
- Check that the overheat protector has not tripped (see control unit installation instructions).

The sauna room heats up slowly. Water thrown onto the sauna heater cools the stones quickly
- Check that the sauna heater's fuses in the electrical panel are intact.
- Check that all the heating elements glow when the sauna heater is on.
- Set the temperature higher (see the installation instructions for the control unit).
- Check that the sauna heater power is not too low.
- Check that the ventilation in the sauna room is correctly arranged.

The sauna room heats up quickly, but the stones do not have time to warm up. Water thrown onto the sauna heater does not evaporate, but flows through the stone space
- Check that the sauna heater power is not too high.
- Check that the ventilation in the sauna room is correctly arranged.

Panels or other material near the sauna heater darken quickly
- Make sure that the safety distance requirements are met.
- Make sure that the heating elements are not visible beyond the stones. If visible, restack the stones and make sure that the heating elements are completely covered.
- See also point (7.3. Darkening of sauna walls).

The sauna heater produces an odour
- See point (8.1. Use of the sauna heater)
- A hot sauna heater may intensify odours mixed in the air, but the sauna or the heater do not produce odours themselves. Examples: paints, glues, heating oil and spices.

The sauna heater produces noise
- Occasional bangs are usually caused by stones that crack in the heat.
- Thermal expansion of the sauna heater parts may cause noise when the sauna heater heats up.

9.3. Changing of heating elements

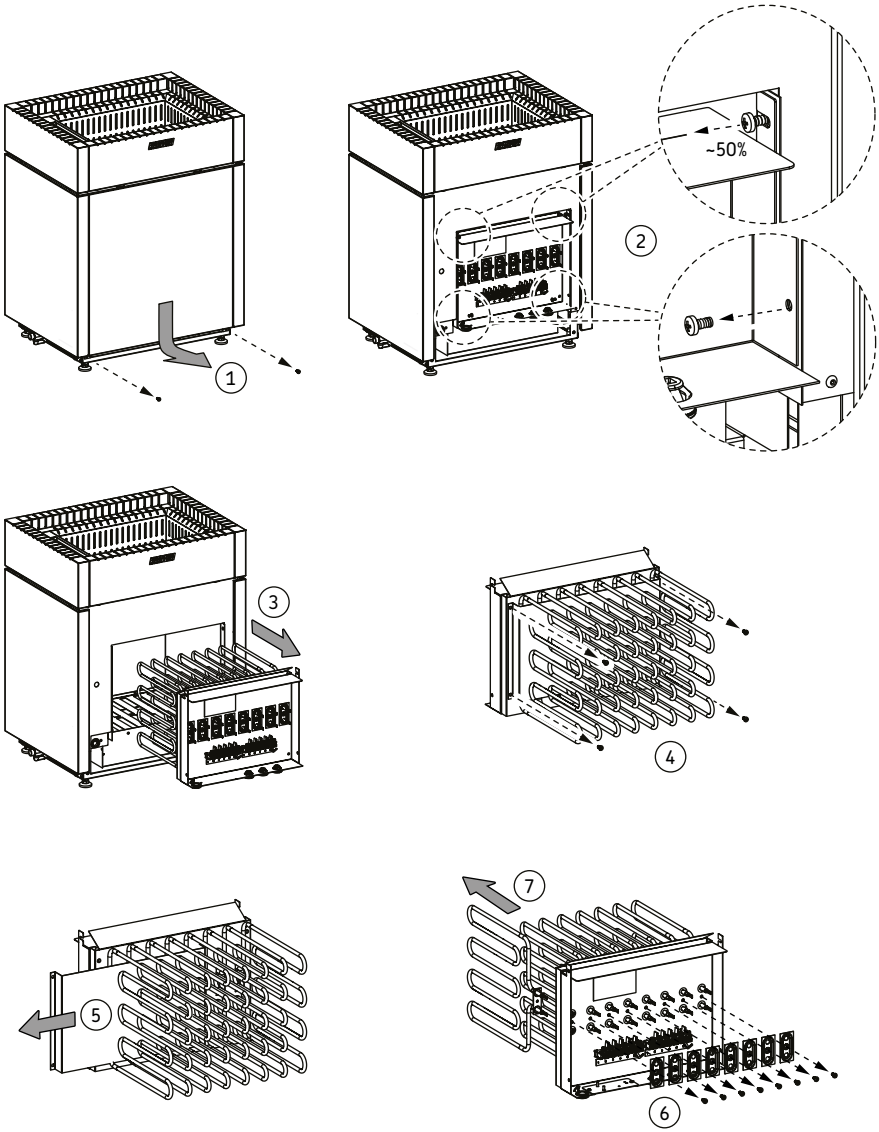


Figure 11. Changing of heating elements

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10. SPARE PARTS

spareparts.harvia.com

11. WARRANTY TERMS

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Harvia Qube

Elektrosaunaofen
Installations- und Betriebsanleitung

Let's sauna.

Artikel Nr.	Typ	Leistung
HQU904M	QU90E	9 kW
HQU1054M	QU105E	10,5 kW
HQU1204M	QU120E	12 kW
HQU1504M	QU150E	15 kW

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