

**HARVIA**

## Harvia Spirit

HSPE604M / HSPE904M / HSP604MXW / HSP904MXW

- FI Sähkökiukaan käyttö- ja asennusohje
- SV Monterings- och bruksanvisning för bastuaggregat
- EN Instructions for installation and use of Electric Sauna Heater
- DE Gebrauchs- und Montageanleitung des Elektrosaunaofens
- ES Instrucciones de instalación y uso del calentador eléctrico para sauna
- IT Istruzioni per l'installazione e l'uso del riscaldatore elettrico per sauna
- FR Instructions d'installation et mode d'emploi du poêle électrique
- NL Instructies voor installatie en gebruik van de elektrische saunaoven

FI  
SV  
EN  
DE  
ES  
IT  
FR  
NL



**FI: Toimituksen sisältö**

- ✓ Kiuas
- ✓ Lämpöanturi
- ✓ Kiinnitysruuvit
- ✓ Seinäteline
- ✓ Asennus- ja käyttöohje

**SV: Leveransinnehåll**

- ✓ Bastuaggregat
- ✓ Temperaturgivare
- ✓ Monteringskruvar
- ✓ Vägkonsolen
- ✓ Användning- och Monteringsanvisning

**EN: Delivery contents**

- ✓ Sauna heater
- ✓ Temperature sensor
- ✓ Mounting screws
- ✓ Wall mounting bracket
- ✓ Instructions for Installation and Use

**DE: Lieferumfang**

- ✓ Saunaöfen
- ✓ Temperaturfühler
- ✓ Befestigungsschrauben
- ✓ Wandhalterung
- ✓ Installations- und Gebrauchsanleitung

**ES: Contenido de la entrega**

- ✓ Calentador de sauna
- ✓ Sensor de temperatura
- ✓ Tornillos de montaje
- ✓ Montaje en pared
- ✓ Руководство по установке и эксплуатации

**IT: Contenuto della confezione**

- ✓ Stufe per sauna
- ✓ Sensore temperatura
- ✓ Viti di montaggio
- ✓ Montaggio a parete
- ✓ Paigaldus- ja kasutusjuhend

**FR: Contenu de la livraison**

- ✓ Poêle électrique
- ✓ Capteur de température
- ✓ Vis de montage
- ✓ Support mural
- ✓ Instrucciones de instalación y uso

**NL: Leveringsomvang**

- ✓ Saunakachel
- ✓ Temperatuursensor
- ✓ Montagebouten
- ✓ Beugel voor wandbevestiging
- ✓ Instructies voor installatie en gebruik

These instructions for installation and use are intended for the owner or the person in charge of the sauna, as well as for the electrician in charge of the electrical installation of the heater. After completing the installation, the person in charge of the installation should give these instructions to the owner of the sauna or to the person in charge of its operation. Please read the instructions for use carefully before using the heater.

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Diese Montage- und Gebrauchsanleitung richtet sich an den Besitzer der Sauna oder an die für die Pflege der Sauna verantwortliche Person, sowie an den für die Montage des Saunaofens zuständigen Elektromonteur. Wenn der Saunaofen montiert ist, wird diese Montage- und Gebrauchsanleitung an den Besitzer der Sauna oder die für die Pflege der Sauna verantwortliche Person übergeben. Lesen Sie vor Inbetriebnahme des Ofens die Bedienungsanleitung sorgfältig durch.

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FI	ASENNUSKUVAT
SV	INSTALLATIONSBILDER
EN	INSTALLATION IMAGES
DE	MONTAGEILLUSTRATIONEN
ES	IMÁGENES DE LA INSTALACIÓN
IT	IMMAGINI DELL'INSTALLAZIONE
FR	IMAGES D'INSTALLATION
NL	AFBEELDINGEN VOOR INSTALLATIE

FI: 1. Mitat

SV: 1. Mått

EN: 1. Dimensions

DE: 1. Abmessungen

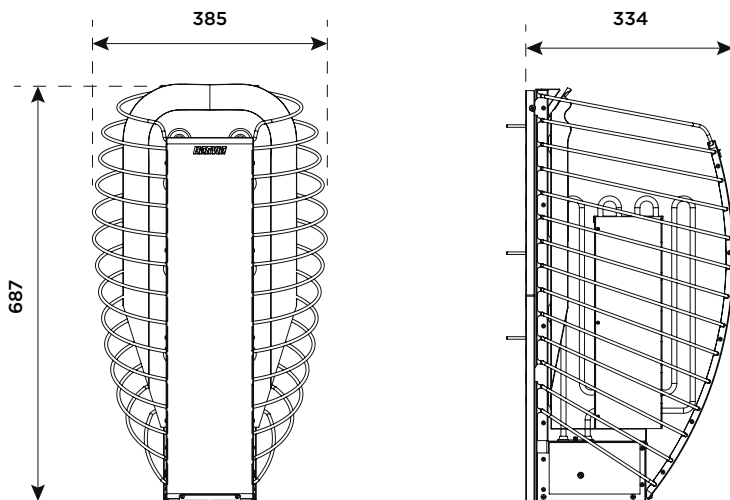
ES: 1. Dimensiones

IT: 1. Dimensioni

FR: 1. Dimensions

NL: 1. Afmetingen

(mm)



FI: 2. Suojaetäisyydet

SV: 2. Säkerhetsavstånd

EN: 2. Safety distances

DE: 2. Sicherheitsabstände

ES: 2. Distancias de seguridad

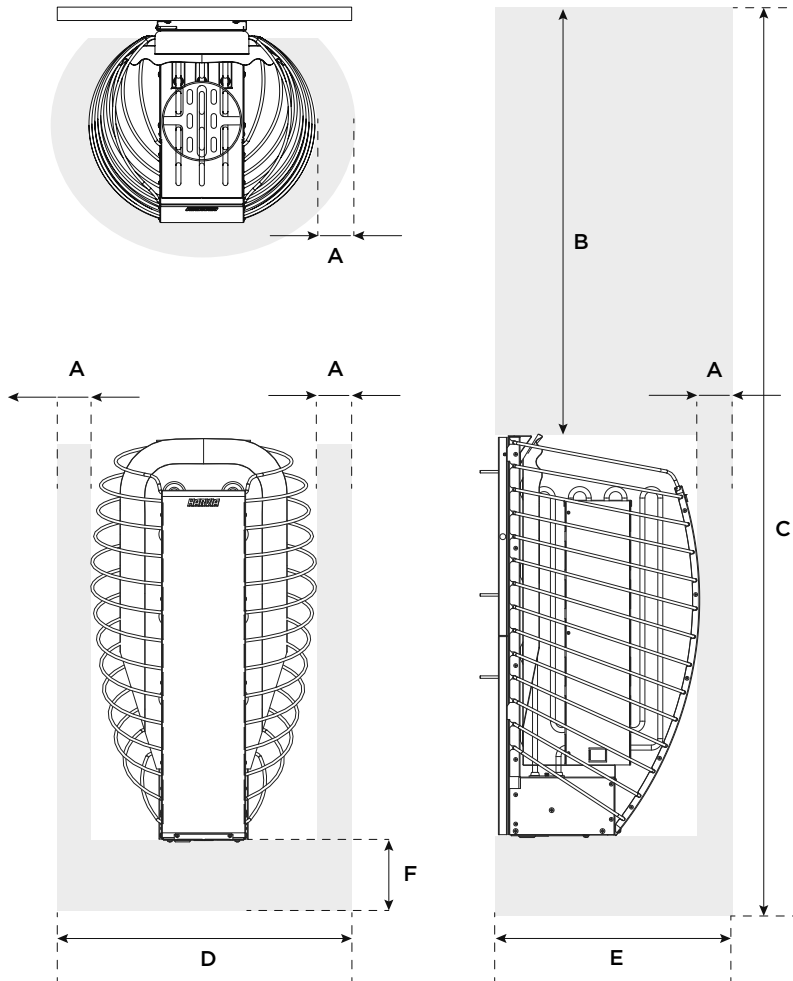
IT: 2. Distanze di sicurezza

FR: 2. Distances de sécurité

NL: 2. Veiligheidsafstanden

(min. mm)

	A	B	C	D	E	F
HSPE604M HSP604MXW	60	900	1900	505	394	100-300
HSPE904M HSP904MXW	80	900	1900	545	414	100-300



**FI: 3. Kiukaan asentaminen**

**ES: 3. Fijación del calentador a la pared**

**SV: 3. Installation av aggregatet**

**IT: 3. Come fissare la stufa alla parete**

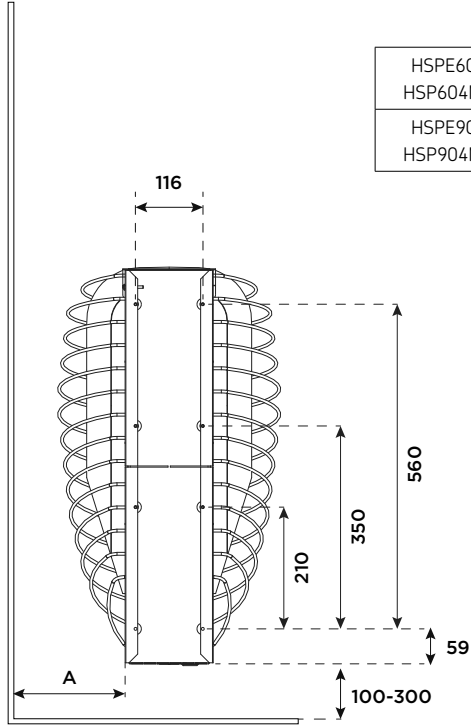
**EN: 3. Installing the heater**

**FR: 3. Installation du poêle**

**DE: 3. Montage des Saunaofens**

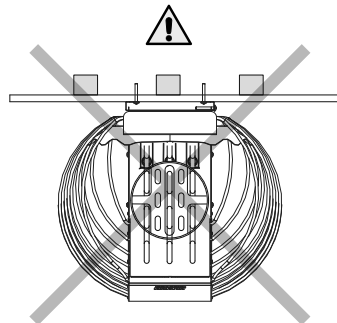
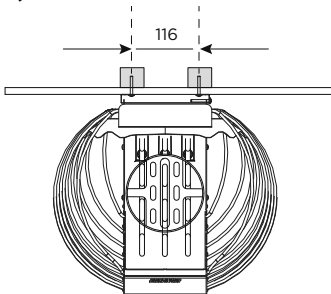
**NL: 3. De saunaoven installeren**

(mm)



	A
HSPE604M	177
HSP604MXW	
HSPE904M	197
HSP904MXW	

(mm)



FI: 4. Kiukaan asentaminen

SV: 4. Installation av aggregatet

EN: 4. Installing the heater

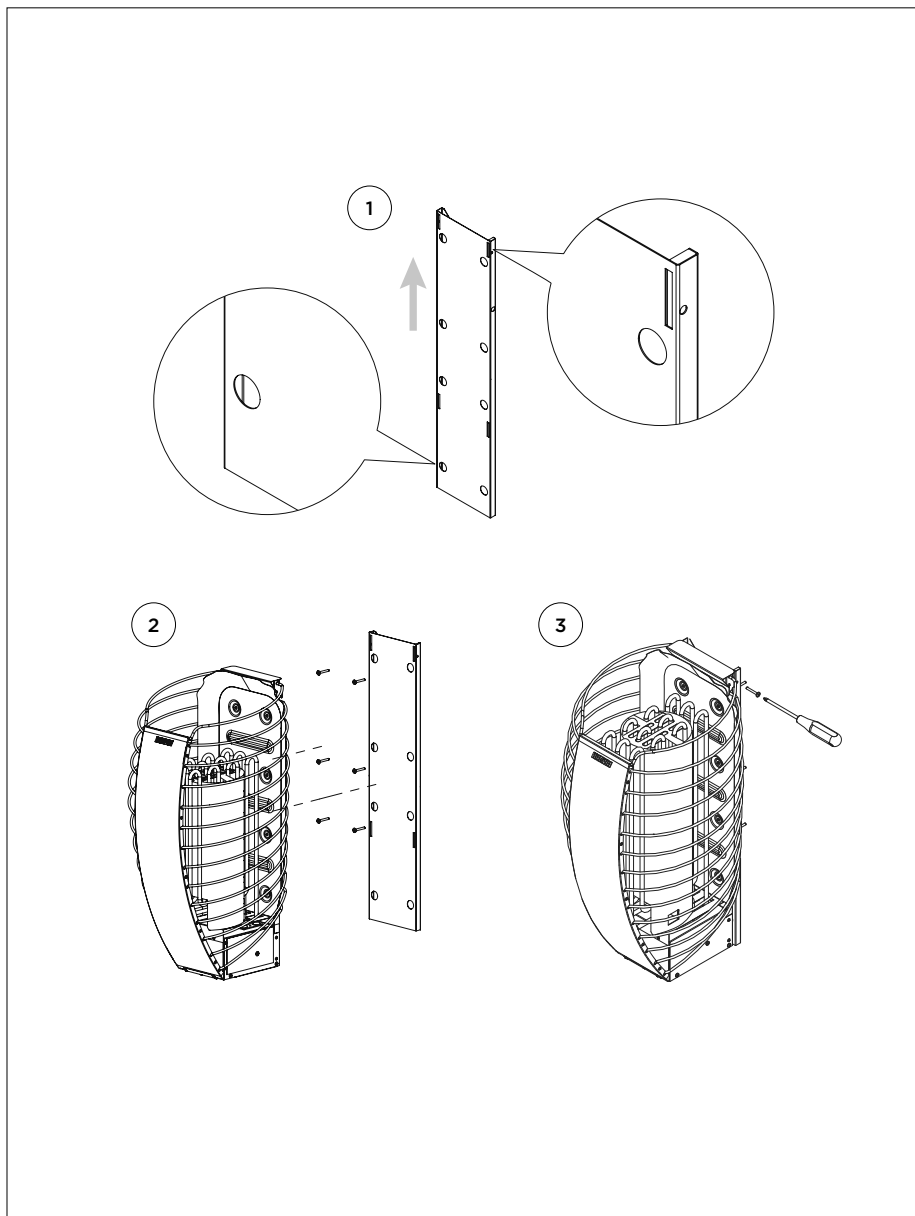
DE: 4. Montage des Saunaofens

ES: 4. Fijación del calentador a la pared

IT: 4. Come fissare la stufa alla parete

FR: 4. Installation du poêle

NL: 4. De saunaoven installeren



FI: 5. Anturin asentaminen

ES: 5. Instalación del sensor

SV: 5. Montering av givaren

IT: 5. Installazione del sensore

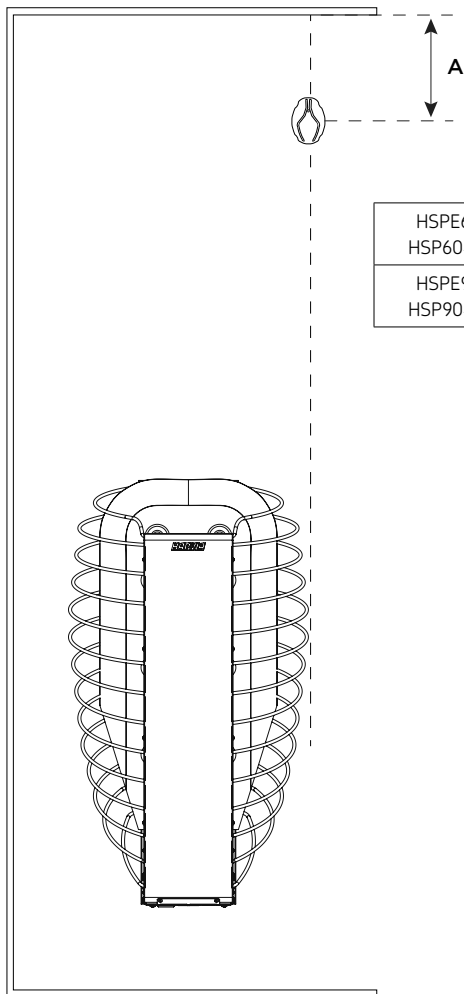
EN: 5. Installation of the Sensor

FR: 5. Installation du capteur

DE: 5. Anschluß der Fühler

NL: 5. Installatie van de sensor

(mm)



	A
HSPE604M HSP604MXW	50
HSPE904M HSP904MXW	100



FI: 6. Sähkökytkennät

ES: 6. Conexiones eléctricas

SV: 6. Elanslutningar

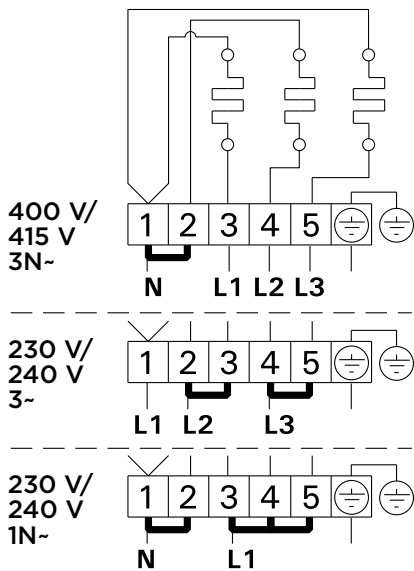
IT: 6. Collegamenti elettrici

EN: 6. Electrical Connections

FR: 6. Connexions électriques

DE: 6. Elektroanschlüsse

NL: 6. Elektrische aansluitingen



**FI: 7. Sähkökytkennät**

**SV: 7. Elanslutningar**

**EN: 7. Electrical Connections**

**DE: 7. Elektroanschlüsse**

**ES: 7. Conexiones eléctricas**

**IT: 7. Collegamenti elettrici**

**FR: 7. Connexions électriques**

**NL: 7. Elektrische aansluitingen**

**HSPE604M**

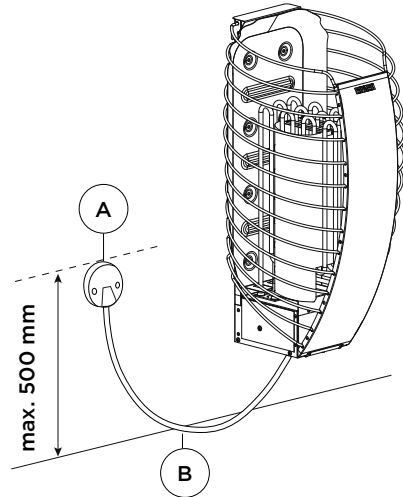
**HSPE904M**

**A**

Kytentärasia  
Kopplingsdosa  
Junction box  
Klemmdose  
Caja de terminales  
Scatola di giunzione  
Boîtier de jonction  
Aansluitdoos

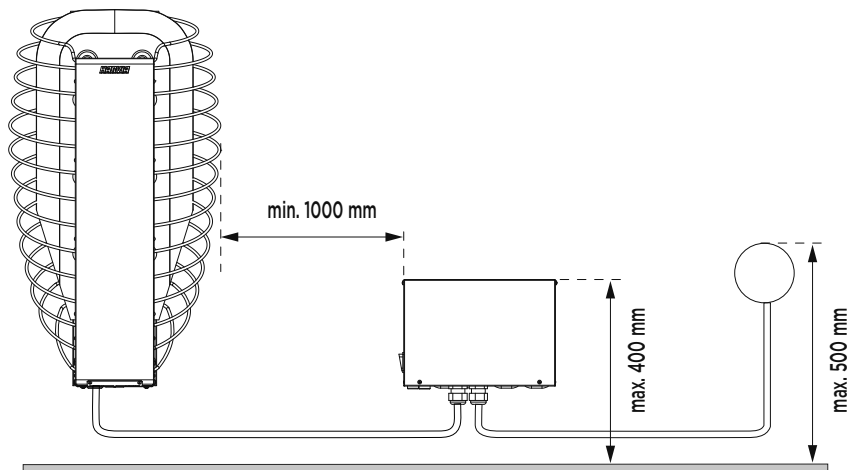
**B**

Litântäkaapeli  
Anslutningskabel  
Connecting cable  
Anschlußkabel  
Cable de conexión  
Cavo di connessione  
Câble de raccordement  
Aansluitkabel



**HSP604MXW**

**HSP904MXW**



FI: 8. Kiuaskivien latominen

SV: 8. Stapling av bastustenar

EN: 8. Piling of the Sauna Stones

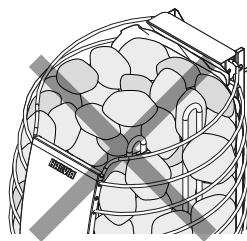
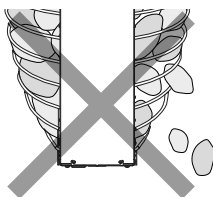
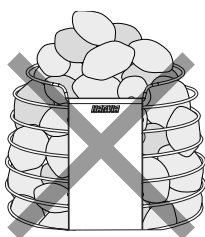
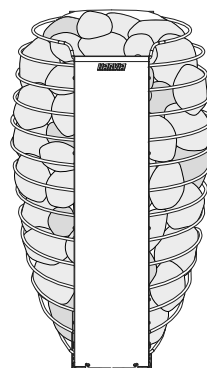
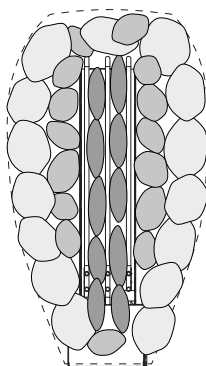
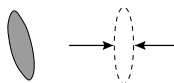
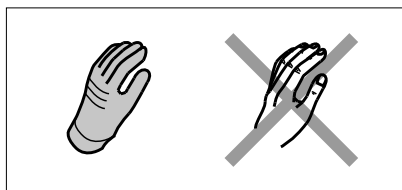
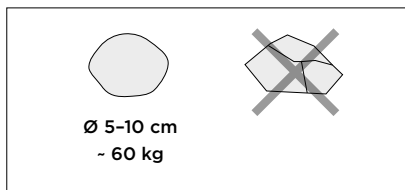
DE: 8. Einlegen der Steine

ES: 8. Colocacion de las piedras

IT: 8. Come impilare le pietre della stufa

FR: 8. Empilement des pierres du poêle

NL: 8. Saunastenen opstapelen



FI: 9. Vastusten vaihtaminen

SV: 9. Byte av element

EN: 9. Replacing the Heating Elements

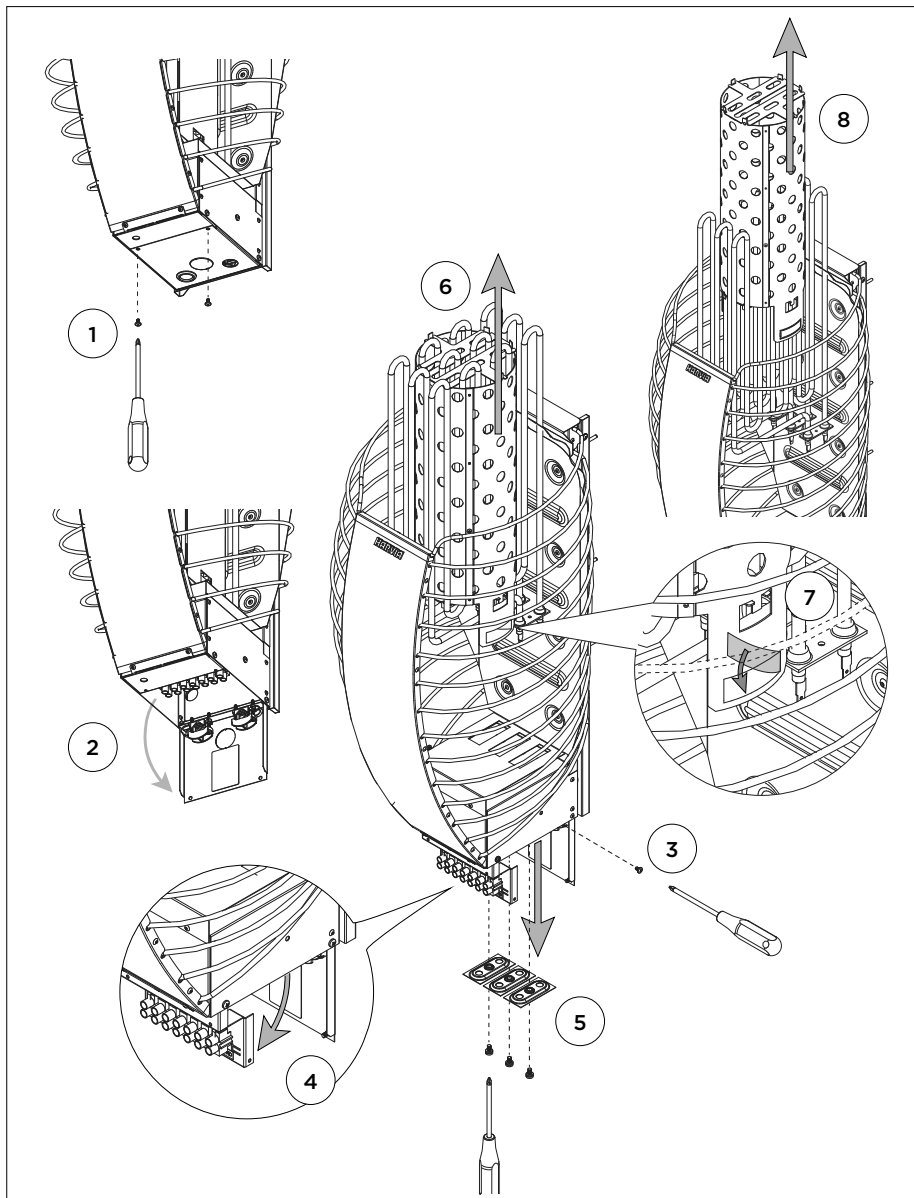
DE: 9. Austausch der Heizstände

ES: 9. Cambiación del elemento calefactor

IT: 9. Cambio delle resistenze

FR: 9. Remplacement des résistances

NL: 9. Verwarmingselementen vervangen





## READ THE WARNINGS AND MANUAL CAREFULLY BEFORE USING THE PRODUCT!



### Installation and maintenance

- The sauna heater is designed for the heating of a sauna room to bathing temperature. It is not to be used for any other purpose! The control unit is meant for controlling the functions of a sauna and a sauna heater. It is not to be used for any other purpose!
- The heater may only be connected to the electrical network in accordance with the current regulations by an authorised, professional electrician. After completing the installation, the person in charge of the installation should give these instructions to the owner of the sauna or to the person in charge of its operation.
- All maintenance that requires special skills must be performed by a trained professional.
- Always disconnect the device from the electricity network before carrying out any maintenance work!
- Check the device for visible damage before installing and using the device. Do not use a damaged device.
- This device is allowed to use by 8 years old or older children and persons with reduced physical, sensory or mental capabilities, or persons with lack of experience and knowledge, if they are supervised or they have been instructed to use the device safely and if they are aware of the dangers involved. Children should not play with the device. Children should not clean or do operations to the device without supervision.
- It is absolutely necessary to install the heater according to values stated in the instructions of installation and use. Neglecting them causes a risk of fire.
- Only one electrical heater may be installed in the sauna room, unless otherwise stated in the instructions.
- The device must be installed in such a way that the warning texts are easy to read after installation.
- The heater or device must not be installed in a wall recess, unless otherwise stated in the instructions.
- If a guardrail is made around the heater, the safety distances specified in the instructions of installation and use manual must be observed.
- If suitable accessories are installed in the device, follow the accessory-specific operating and installation instructions!
- Ensure adequate ventilation in the sauna room (Air should change six times per hour).
- Do not place the supply air vent so that the air flow cools the temperature sensor (see temperature sensor installation instructions!)
- If the supply cord is damaged, it must be replaced by the manufacturers' service person or a similarly qualified person in order to avoid a hazard.
- Use of a PVC-insulated cable as a connection cable for the heater is prohibited due to its thermal fragility.
- Always check condition of the junction box connectors when installing the heater. We recommend screw connectors. Avoid spring-loaded connectors!
- Do not connect power supply to electric heater via a residual current device.
- If device is used in public saunas without a timer, the indicator light, which tells if the device is on, must be placed in the room where the device is controlled.
- Use protective gloves when piling the stones.
- A bare heating element can endanger combustible materials even outside the safety distances. Check that no heating elements can be seen behind the stones.
- No such objects or devices should be placed inside the heater stone space or near the heater that could change the amount or direction of the air flowing through the heater.
- Wipe the heater from time to time with a damp cloth to remove dust and dirt. If necessary, use mild detergents. Do not use running water for cleaning.
- Before cleaning, make sure that the device has cooled down completely.
- Pile the stones or replace the broken stones with new ones at least every year.
- **Note! Use only rounded heater stones.**



## Instructions for use and bathing

- **Beware of hot heater. The stones and metal parts of the heater may burn the skin.**
- **Always check that there is no objects on the heater or near the heater before switching it on.**
- During the first heating sessions, the heater may produce an odour, ensure adequate ventilation of the sauna room
- Do not throw or pour too much water on the heater at once, boiling water may splash on bathers.
- Never throw water on the stones when there are people near the heater.
- The maximum volume of the ladle is 0.2 litres.
- Do not throw any other water on the heater than that specified in the instructions manual of the heater.
- Only special aromas designed for sauna water may be used according to their instructions.
- Staying in the hot sauna for long periods of time makes the body temperature rise, which may be dangerous.
- Keep children away from the heater.
- Do not let young, handicapped or ill people bathe in the sauna on their own.
- Consult your doctor about any health-related limitations to bathing.
- Be very careful when moving in the sauna, as the platform and floors may be slippery.
- Never go to a hot sauna if you have taken alcohol, strong medicines or narcotics.
- Never sleep in a hot sauna.
- Sea air and a humid climate may corrode the metal surfaces of the heater.
- Do not hang clothes to dry in the sauna, as this may cause a risk of fire. Excessive moisture content may also cause damage to the electrical equipment.
- Do not press the overheating protection button before the cause of the fault has been found. Only persons authorised to carry out electrical installations can reset the overheat protector, unless otherwise stated in the instructions manual.
- Always check that the heater has switched off and stopped heating after the on-time period has elapsed.
- Particles disintegrating from the sauna stones may damage sensitive floor coverings and cause fire hazard.
- In public saunas, where the heater is used without a timer or continuously for longer than the timer of the heater or the control unit allows with the factory settings, the device must be constantly supervised.
- The sauna room and surroundings of the heater must always be checked before the heater is switched on again or it is switched on with the remote control system.
- The sauna room and surroundings of the heater must always be checked before the device is brought into standby mode required by remote control or pre-timed operation.
- According to the product standard IEC/EN 60335 -2-53 regulating electrical sauna heaters, the control unit can be used to remotely control the heater once the heater or sauna room door is equipped with a secure switch (safety or door switch).

EN



**Do not cover!**



**Be careful of hot steam when using the appliance!**

## EN INSTRUCTIONS FOR INSTALLATION



See **WARNINGS AND NOTES!**  
See **INSTALLATION IMAGES!**

### Technical data

		HSPE604M HSP604MXW	HSPE904M HSP904MXW	
Installation details	Max. power	6 kW	9 kW	
	Operating voltages	400 V 3N- 230 V 1N- 230 V 3-		
	Frequency	50 / 60 Hz	50 / 60 Hz	
	Supply cord	400 V 3N-	5 x 1,5 mm <sup>2</sup>	5 x 2,5 mm <sup>2</sup>
		230 V 1N-	3 x 6 mm <sup>2</sup>	3 x 10 mm <sup>2</sup>
		230 V 3-	4 x 1,5 mm <sup>2</sup>	4 x 2,5 mm <sup>2</sup>
	Connection cable type	H07RN-F or equivalent		
	Protection class	IPX4		
Weight kg	11 kg	12 kg		
Stones	Ø 5-10 cm / 60 kg			
Storage temperature	0-50 °C			
Dimensions	Height	687 mm	687 mm	
	Width	385 mm	385 mm	
	Depth	334 mm	334 mm	
Sauna room	Volume m <sup>3</sup>	5-8 m <sup>3</sup>	8-14 m <sup>3</sup>	
	Sauna room height min. mm	1900	1900	
Approved accessories	Embedding flange	HSP1		
	Safety railing	HSP3M		
Suitable control units	<b>HSPE604M / HSPE904M:</b> C150400, C150400VKK, CX170400, CX110400, CS110400, CF9400, C170400VKK, C090400 <b>HSP604MXW / HSP904MXW:</b> CX110XW (See the latest control unit models in our website <a href="http://www.harvia.com">www.harvia.com</a> .)			

### Before installation

Before installing the heater, study the instructions for installation. Check the following points:

- Is the output and type of the heater suitable for the sauna room? The cubic volumes must be followed > *Technical data* .
- Is the supply voltage suitable for the heater?
- The location of the heater fulfils the minimum requirements concerning safety distances > *Technical data*, > *Installation Images: 2. Safety distances*.

**Note! Only one electrical heater may be installed in the sauna room. The heater should be installed so that the warning texts can be read without difficulty after the installation.**

### Safety distances

The minimum safety distances are shown in figure 2.



**It is absolutely necessary to install the heater according to these values. Neglecting them causes a risk of fire.**

## Safety Railing

If a safety railing is built around the heater, the minimum distances given in fig. 2 or in the railing's instructions for installation must be observed.

## Electrical connections



**The heater may only be connected to the electrical network in accordance with the current regulations by an authorised, professional electrician.**

- **Installation Images: 6.-7.**
- The heater is semi-stationarily connected to the junction box on the sauna wall. The junction box must be splash-proof, and its maximum height from the floor must not exceed 500 mm. (Figure 7)
- The connecting cable must be of rubber cable type H07RN-F or its equivalent. NOTE! Due to thermal embrittlement, the use of PVC-insulated wire as the connecting cable of the heater is forbidden.
- If the connecting and installation cables are higher than 1000 mm from the floor in the sauna or inside the sauna room walls, they must be able to endure a minimum temperature of 170 °C when loaded (for example, SSJ). Electrical equipment installed higher than 1000 mm from the sauna floor must be approved for use in a temperature of 125 °C (marking T125).

EN

## Electric Heater Insulation Resistance

When performing the final inspection of the electrical installations, a "leakage" may be detected when measuring the heater's insulation resistance. The reason for this is that the insulating material of the heating elements has absorbed moisture from the air (storage, transport). After operating the heater for a few times, the moisture will be removed from the heating elements.



**Do not connect the power feed for the heater through an RCD (residual current device)!**

## Installation of the Control Unit and Sensor

The control unit includes detailed instructions for fastening the unit on the wall. Install the sensor as shown in figure 5.



**Do not place the supply air vent so that the air flow cools the temperature sensor. Figure 11.**

## Installing the Heater

**Installation Images: 3.-4.**

## Replacing the Heating Elements

**Installation Images: 9.**

## Resetting the Overheat Protector

See the instructions for use of the selected control unit model.



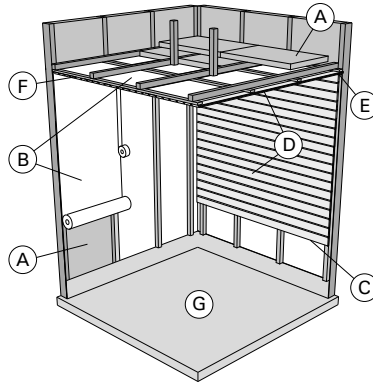
**The reason for overheating must be resolved before resetting the overheat protector!**





See **WARNINGS AND NOTES!**  
See **TECHNICAL DATA!**

### Sauna room structure



10.

- A. Insulation wool, thickness 50–100 mm. The sauna room must be insulated carefully so that the heater output can be kept moderately low.
- B. Moisture protection, e.g. aluminium paper. Place the glossy side of the paper towards the sauna. Tape the seams with aluminium tape.
- C. Vent gap of about 10 mm between the moisture protection and panel (recommendation).
- D. Low mass 12–16 mm thick panel board. Before starting the panelling, check the electric wiring and the reinforcements in the walls required by the heater and benches.
- E. Vent gap of about 3 mm between the wall and ceiling panel.
- F. The height of the sauna is usually 2100–2300 mm. The minimum height depends on the heater (> *Technical data*). The space between the upper bench and ceiling should not exceed 1200 mm.
- G. Use floor coverings made of ceramic materials and dark joint grouts. Particles disintegrating from the sauna stones and impurities in the sauna water may stain and/or damage sensitive floor coverings.

**NOTE! Check from the fire authorities which parts of the firewall can be insulated.**

**Flues which are in use must not be insulated.**

**NOTE! Light protective covers which are installed directly to the wall or ceiling may be a fire risk.**

**NOTE! Make sure that the water dripping onto the sauna floor enters the floor drain.**

### Heater Output

When the walls and ceiling are covered with panels and insulation behind the panels is adequate, the heater output is defined according to the volume of the sauna. Non-insulated walls (brick, glass block, glass, concrete, tile, etc.) increase the need for heater output. Add 1,2 m<sup>3</sup> to the volume of the sauna for each non-insulated wall square meter. For example, a 10 m<sup>3</sup> sauna room with a glass door equals the output requirement of about a 12 m<sup>3</sup> sauna room. If the sauna room has log walls, multiply the sauna's volume by 1,5. **Choose the correct heater output > *Technical data***

## Blackening of the Sauna Walls

It is perfectly normal for the wooden surfaces of the sauna room to blacken in time. The blackening may be accelerated by:

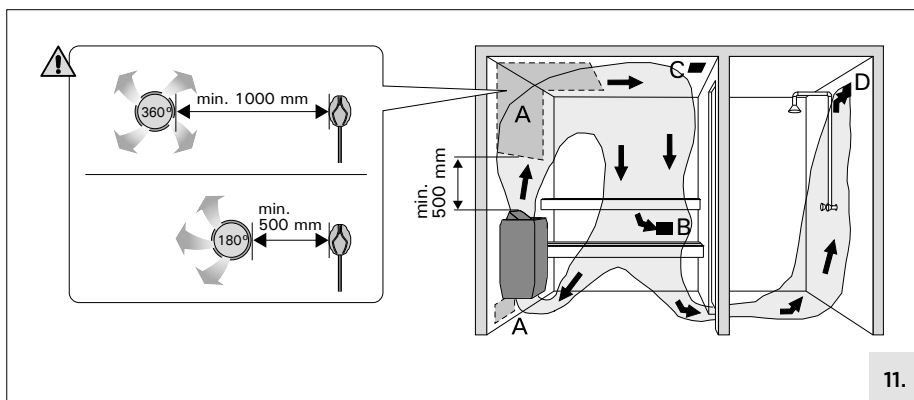
- sunlight
- heat from the heater
- protective agents on the walls (protective agents have a poor heat resistance level)
- fine particles disintegrating from the sauna stones which rise with the air flow.

## Sauna room ventilation

The air in the sauna room should change six times per hour. Figure 11 illustrates different sauna room ventilation options.



**Note! Do not place the supply air vent so that the air flow cools the temperature sensor**



EN

- A. Placement area for air supply vent ( $\varnothing$  50 – 100 mm). If mechanical ventilation is used, air supply vent should be placed above the heater. If natural ventilation is used, air supply vent should be placed under or next to the heater. The diameter of the supply air pipe must be 50–100 mm.
- B. Exhaust air vent ( $\varnothing$  100 – 200 mm). Place the exhaust air vent near the floor, as far away from the heater as possible. The diameter of the exhaust air pipe should be twice the diameter of the supply air pipe.
- C. Optional vent for drying (closed during heating and bathing). The sauna can also be dried by leaving the door open after bathing.
- D. If the exhaust air vent is in the washroom ( $\varnothing$  100 – 200 mm), the gap underneath the sauna door must be at least 100 mm. Mechanical exhaust ventilation is mandatory.

## Sauna Room Hygiene

- Bench towels should be used during bathing to prevent sweat from getting onto the benches.
- The benches, walls and floor of the sauna should be washed thoroughly at least every six months. Use a scrubbing brush and sauna detergent.
- Wipe dust and dirt from the heater with a damp cloth. Remove lime stains from the heater using a 10% citric acid solution and rinse.



See **WARNINGS AND NOTES!**  
 See **TECHNICAL DATA!**  
 See **INSTALLATION IMAGES!**

### Placing of sauna stones



**The placing of sauna stones has a major effect on the heater's safety and steam-creation properties.**

#### Important information about sauna stones:

- 60 kg is a suitable amount. The amount of stones varies, depending on the type of stone.
- Only stones with a diameter of 5–10 cm are allowed.
- **The stone surface may be rounded. The use of stones with a cleavage surface is not allowed.**
- Suitable stone materials are peridotite, olivine diabase and olivine.
- Ceramic 'stones' and soft soapstone are not allowed. They do not absorb enough heat as the heater is being used. Soft stones may crumble and block the air vents. This may break the heating elements and cause the product to behave unlike it was designed.
- Rinse any stone dust off the stones before placing them in the heater.

#### How placing the stones, observe the following:

- **Installation Images: 8.**
- 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 the stones closely against the steel grid, and loosely at the top. Make sure the heating elements are not visible between the stones. A dense layer will prevent direct heat radiation from overheating materials around the heater. Pay particular attention to the corners where the heating elements are closest to the frame. Placing stones loosely in the middle will allow air to flow through the heater, heating the sauna and sauna stones well.
- Place stones one by one. Do not drop them in the stone space.
- Do not wedge stones tightly between the heating elements. Make sure that the heating elements retain their original position and shape despite the stones.
- Support the heating elements with stones so that they remain perpendicular to the heater.
- Do not place anything in heating element tunnel.
- Place the stones so that the weight of each stone rests on another stone, not on the heating elements.
- 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.
- Before using the heater for the first time, make sure that the stones cannot fall off.
- We recommend that you keep some extra stones in store to replace broken ones or to add any if the stone level becomes lower over time.



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



**If a heating element is not surrounded by stones, it can heat materials dangerously hot, even beyond the 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 heater's life cycle.**

### Maintenance:

Due to large variation in temperature, the sauna stones disintegrate in use. Rearrange the stones at least once a year or even more often if the sauna is in frequent use. At the same time, remove any pieces of stones from the bottom of the heater and replace any disintegrated stones with new ones. By doing this, the heating capability of the heater stays optimal and the risk of overheating is avoided. **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.

### Heating of the Sauna

When operating the heater for the first time, both the heater and the stones emit smell. To remove the smell, the sauna room needs to be efficiently ventilated. If the heater output is suitable for the sauna room, it will take about an hour for a properly insulated sauna to reach the required bathing temperature. The sauna stones normally reach the bathing temperature at the same time as the sauna room. A suitable temperature for the sauna room is about 65–80 °C.

### Using the Heater



**Before switching the heater on always check that no objects have been placed on top of the heater or inside the given safety distance.**

Heaters are controlled using a separate control unit. See the instructions for use of the selected control unit model.

### Throwing Water on Heated Stones

The air in the sauna room becomes dry when warmed up. Therefore, it is necessary to throw water on the heated stones to reach a suitable level of humidity in the sauna. The effect of heat and steam on people varies – by experimenting, you can find the levels of temperature and humidity that suit you best. Aim water only on the stones.



**The maximum volume of the ladle is 0.2 litres. If an excessive amount of water is poured on the stones, only part of it will evaporate and the rest may splash as boiling hot water on the bathers. Never throw water on the stones when there are people near the heater, because hot steam may burn their skin.**

### Water quality requirements

**The water to be thrown on the heated stones should meet the requirements of clean household water. Only special aromas designed for sauna water may be used. Follow the instructions given on the package.**

Water properties	Effect	Recommendation
Humus concentration	Colour, taste, precipitates	<12 mg/l
Iron concentration	Colour, odour, taste, precipitates	<0,2 mg/l
Manganese (Mn) concentration	Colour, odour, taste, precipitates	<0,10 mg/l
Hardness: most important substances are magnesium (Mg) and lime, i.e. calcium (Ca)	Precipitates	Ca: <100 mg/
Chloride-containing water	Corrosion	Cl: <100 mg/l
Chlorinated water	Health risk	Forbidden to use
Seawater	Rapid corrosion	Forbidden to use
Arsenic and radon concentration	Health risk	Forbidden to use

## Instructions for Bathing



See **WARNINGS AND NOTES!**

- Begin by washing yourself.
- Stay in the sauna for as long as you feel comfortable.
- Forget all your troubles and relax.
- According to established sauna conventions, you must not disturb other bathers by speaking in a loud voice.
- Do not force other bathers from the sauna by throwing excessive amounts of water on the stones.
- Cool your skin down as necessary. If you are in good health, you can have a swim if a swimming place or pool is available.
- Wash yourself after bathing.
- Rest for a while and let your pulse go back to normal. Have a drink of fresh water or a soft drink to bring your fluid balance back to normal

## Troubleshooting



**All service operations must be done by professional maintenance personnel**

### **The heater does not heat up.**

- Check that the fuses of the heater are in good condition.
- Check that the connection cable is connected.
- Check that the overheat protector has not gone off. (*See the instructions for use of the control unit*)

### **The sauna room heats slowly. Water thrown on the sauna stones cools down the stones quickly**

- Check that the fuses to the heater are in good condition.
- Check that all heating elements glow when the heater is on.
- Turn the temperature to a higher setting (*See the instructions for use of the control unit*)
- Check that the heater output is sufficient
- Check that the sauna room ventilation has been arranged correctly.

### **The sauna room heats quickly, but the temperature of the stones remain insufficient. Water thrown on the stones runs through.**

- Check that the heater output is not too high
- Check that the sauna room ventilation has been arranged correctly

### **Panel or other material near the heater blackens quickly.**

- Check that the requirements for safety distances are fulfilled.
- Check that no heating elements can be seen behind the stones. If heating elements can be seen, rearrange the stones so that the heating elements are covered completely.
- Also see section > *Blackening of the Sauna Walls*

### **The heater emits smell.**

- See section > *Heating of the Sauna*
- A hot heater may emphasize odours mixed in the air that are not, however, caused by the sauna or the heater.  
Examples: paint, glue, oil, seasoning.

### **The heater makes noise.**

- Occasional bangs are most likely caused by stones cracking due to heat.
- The thermal expansion of heater parts can cause noise when the heater warms up.

## FI: Takuu

- Perheikäytössä kiukaiden ja ohjauslaitteiden takuu-aika on kaksi (2) vuotta.
- Yhteisöikäytössä kiukaiden ja ohjauslaitteiden takuu-aika on yksi (1) vuosi.
- Laitosikäytössä oleville kiukaille ja ohjauslaitteille takuu-aika on kolme (3) kuukautta.
- Takuu ei ole voimassa, jos kiukaassa käytetään muita kuin valmistajan suosittelemia kiuskiviä.
- Suosittelemme käyttämään vain valmistajan varaosia.
- Takuu ei ole voimassa, jos ohjeessa esitetyt veden laatuvaatimukset eivät täyty, laitetta ei huolleta ohjeessa esitetyllä tavalla ja/tai asennusta ei ole tehty ohjeessa esitetyllä tavalla.

## SV: Garanti

- Garantitiden för de bastuaggregat och den kontrollutrustning som används i familjebastur är två (2) år.
- Garantitiden för de bastuaggregat och den kontrollutrustning som används i bastur i flerfamiljshus är ett (1) år.
- Garantitiden för de bastuaggregat och den kontrollutrustning som används i bastur på institutioner är tre (3) månader.
- Garantin täcker inte fel som förorsakas av att andra bastustenar än sådana som rekommenderats av tillverkaren använts.
- Använd endast tillverkarens reservdelar.
- Garantin blir ogiltig om de kvalitetskrav som anges i bruksanvisningen inte uppfylls, om apparaten inte servas eller underhålls enligt instruktionerna och/eller om enheten inte installeras enligt instruktionerna.

## EN: Guarantee

- The guarantee period for heaters and control equipment used in saunas by families is two (2) years.
- The guarantee period for heaters and control equipment used in saunas by building residents is one (1) year.
- The guarantee period for heaters and control equipment used in saunas by institutions is three (3) months.
- The guarantee does not cover any faults resulting from the use of stones not recommended by the heater manufacturer.
- We recommend to use only the manufacturer's spare parts.
- The warranty is void if the quality requirements stated in the instructions are not met, the appliance is not serviced or maintained as described in the instructions and/or if the appliance is not installed as described in the instructions.

## DE: Garantie

- Die Garantiezeit für in Familiensaunen verwendete Saunaöfen und Steuergeräte beträgt zwei (2) Jahre.
- Die Garantiezeit für Saunaöfen und Steuergeräte, die in öffentlichen Saunen in Privatgebäuden verwendet werden, beträgt ein (1) Jahr.
- Die Garantiezeit für in öffentlichen Saunen verwendete Saunaöfen und Steuergeräte beträgt drei (3) Monate.
- Die Garantie kommt nicht für Schäden auf, die durch Verwendung anderer als vom Werk empfohlener Saunaofensteine entstehen.
- Es dürfen ausschließlich die Ersatzteile des Herstellers verwendet werden.
- Die Garantie erlischt, wenn die in der Gebrauchsanweisung angegebenen Qualitätsanforderungen nicht erfüllt werden, das Gerät nicht wie in der Gebrauchsanleitung beschrieben instand gehalten oder gewartet wird und/oder wenn das Gerät nicht wie in der Gebrauchsanleitung beschrieben installiert wird.

## ES: Garantía

- El periodo de garantía para calentadores de sauna y equipos de control utilizados en saunas familiares es de dos (2) años.
- El periodo de garantía para calentadores de sauna y equipos de control utilizados en saunas de edificios residenciales es de un (1) año.
- El periodo de garantía para calentadores de sauna y equipos de control utilizados por instituciones es de tres (3) meses.