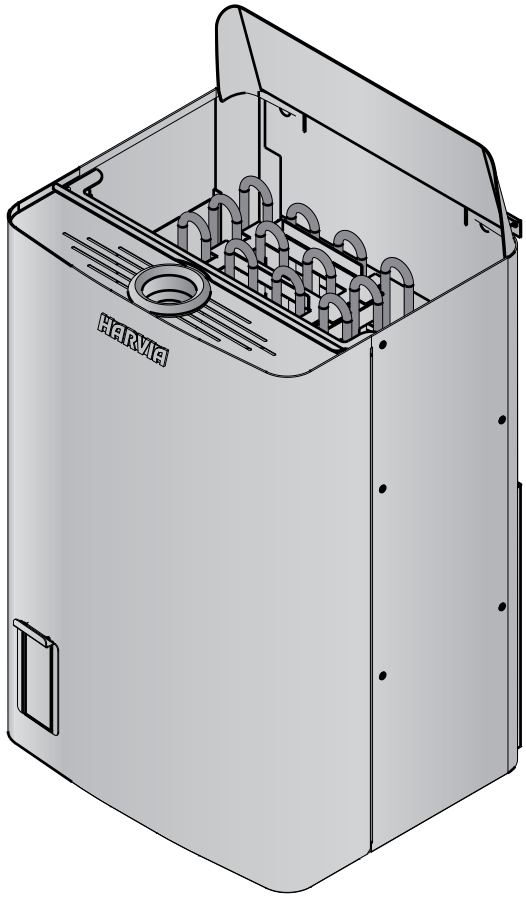
SW45S, SW70S, SW90S, SW45SA, SW70SA, SW90SA

EN **Instructions for Installation and Use of Electric Sauna Heater**

SR **Uputstvo za ugradnju i upotrebu električne saune**



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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.

The heater is designed for the heating of a sauna room to bathing temperature. It is not to be used for any other purpose.

Congratulations on your choice!

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 failure to comply with installation, use or maintenance instructions.**
- **The guarantee does not cover any faults resulting from the use of stones not recommended by the heater manufacturer.**

CONTENTS

SR

Ova uputstva za instalaciju i upotrebu su namenjena za vlasnika ili osobu zaduženu za saunu, kao i za električara zaduženog za elektrotehniku i ugradnju grejača. Nakon završetka instalacije, osobi zaduženoj za instalaciju treba dati ovo uputstvo, vlasniku saune ili licu zaduženom za njen rad.Pre toga pažljivo pročitajte uputstva za upotrebu korišćenja grejača.

Grejač je namenjen za grejanje sauna sobe do temperature za korišćenje. Ne sme se koristiti za bilo koju drugu svrhu.

Čestitamo na izboru!

Garancija:

- **Garantni rok za grejače i kontrolnu opremu koju porodice koriste u saunama su dve (2)godine.**
- **Garantni rok za grejače i kontrolnu opremu koju u saunama koriste stanovnici zgrada je jedna (1) godina.**
- **Garantni rok za grejače i kontrolnu opremu koju u saunama koriste institucije je tri (3) meseca.**
- **Garancija ne pokriva nikakve greške koje nastaju usled nepoštivanja uputstva za instalaciju, upotrebu ili održavanje.**
- **Garancija ne pokriva nikakve greške koje proizlaze iz upotrebe kamenja nepreporučenog od strane proizvođača grejača.**

SADRŽAJ

EN

1. INSTRUCTIONS FOR USE

1.1. Piling of the Sauna Stones

The piling of the sauna stones has a great effect on the functioning of the heater (figure 1).

Important information on sauna stones:

- The stones should be 5–10 cm in diameter.
- Use solely angular split-face sauna stones that are intended for use in a heater. Peridotite, olivine-dolerite and olivine are suitable stone types.
- **Neither light, porous ceramic "stones" nor soft soapstones should be used in the heater. They do not absorb enough heat when warmed up. This can result in damage in heating elements.**
- Wash off dust from the stones before piling them into the heater.

Please note when placing the stones:

- Do not drop stones into the heater.
- Do not wedge stones between the heating elements.
- Place the stones sparsely to ensure that air can circulate between them.
- Pile the stones so that they support each other instead of lying their weight on the heating elements.
- Do not form a high pile of stones on top of the heater.
- 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.

SR

1. UPUTSTVO ZA UPOTREBU

1.1. Nagomilavanje kamenja za saunu

Nagomilavanje kamenja za saunu ima veliki uticaj na funkcionisanje grejača (slika 1).

Važne informacije o kamenju za saunu:

- Kamenje treba biti prečnika 5–10 cm.
- Koristite isključivo ugaono kamenje za saunu koje je namenjeno za korišćenje u grejalici. Peridotit, olivin-dolerit i olivin su odgovarajući tipovi kamenja.
- **Ni svetlo, porozno keramičko „kamenje" niti mekano kamenje ne treba koristiti u grejaču. Oni ne apsorbuju dovoljno toplote kada se zagreje.To može dovesti do oštećenja grejnih elemenata.**
- Operite prašinu s kamenja pre gomilanja u grejač.

Prilikom postavljanja kamenja imajte na umu:

- Nemojte bacati kamenje u grejač.
- Nemojte uglavljivati kamenje između grejnih elemenata.
- Kamenje postaviti razmaknuto kako biste obezbedili da vazduh može da kruži između njih.
- Nagomilajte kamenje tako da podupire jedno drugo umesto da svoju težinu leže na grejne elemente.
- Ne formirajte visoku gomilu kamenja na vrhu grejača.
- Ne treba postavljati takve predmeti ili uređaje unutar prostora grejnog kamena ili u blizini grejača koji bi mogao promeniti količinu ili smer vazduha koji struji kroz grejač.

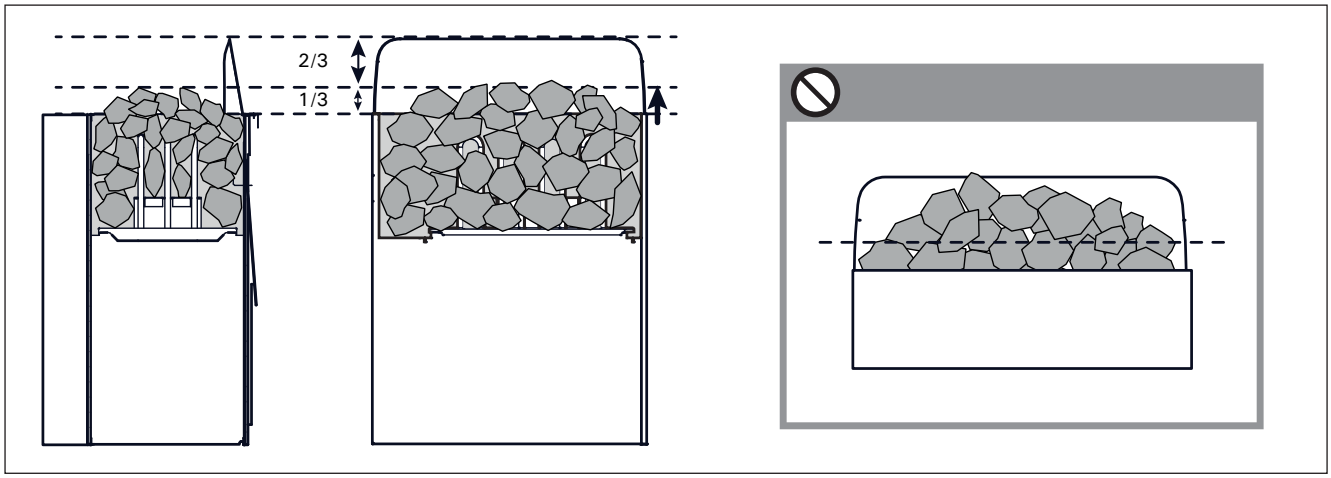

Figure 1. Piling of the sauna stones
Slika 1. Gomilanje saunskog kamenja

1.1.1. 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.

1.1.1. Održavanje

Zbog velikih varijacija u temperaturi, saunsko kamenje se raspada tokom upotrebe. Presložite kamenje barem jednom godišnje ili čak i češće ako se sauna često koristi. Istovremeno, uklonite sve komade kamenja s dna grejača i zamenite sve raspadnuto kamenje novim. Na taj način, sposobnost grejanja grejača ostaje optimalna i izbegava se rizik od pregrejavanja.

EN

1.2. 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 (▷ 2.3.). 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.

Before switching the heater on always check that there isn't anything on top of the heater or inside the given safety distance. ▷1.8.

1.2.1. 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.

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.

The water to be thrown on the heated stones should meet the requirements of clean household water (table 1). Only special aromas designed for sauna water may be used. Follow the instructions given on the package.

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1.2. Grejanje saune

Prilikom prvog uključivanja grejalice i grejalica i kamenje emituju miris. Da biste uklonili miris, prostoriju saune potrebno je efikasno provetriti.

Ako je snaga grejača pogodna za prostoriju saune, potrebno je oko sat vremena da pravilno izolovana sauna dostigne potrebnu temperaturu za kupanje (2.3.). Kamenje za saunu obično dostiže temperaturu za kupanje u isto vreme kada i prostorija za saunu. Pogodna temperatura za saunu je oko 65-80 °C.

Pre uključivanja grejača uvek proverite da nema ničega na vrhu grejača ili unutar zadate sigurnosne udaljenosti 1.8. ▷

1.2.1. Prelivanje vodom zagrejano kamenje

Vazduh u sauni postaje suv kada se zagreje. Zbog toga je potrebno prelivati vodom zagrejano kamenje kako bi se dostigao odgovarajući nivo vlažnosti u sauni. Efekat toplote i pare na ljude varira – eksperimentisanjem možete pronaći nivoe temperature i vlažnosti koji vam najviše odgovaraju.

Maksimalna zapremina posude je 0,2 litra. Ako se sipa prevelika količina vode na kamenje, samo deo će ispariti, a ostatak može prskati kao ključala voda na kupače. Nikada nemojte prelivati vodom kamenje kada se u blizini grejne peći nalaze ljudi, jer im vruća para može opeći kožu.

Voda kojom se preliva zagrejano kamenje treba zadovoljavati zahteve čiste vode za domaćinstvo (tabela 1). Smeju se koristiti samo posebne arome namenjene vodi saune. Pratite uputstva navedena na pakovanju.

Water property Svojstvo vode	Effect Efekat	Recommendation Preporuka
Humus concentration Koncentracija humusa	Colour, taste, precipitates Boja, ukus, taloženja	< 12 mg/l
Iron concentration Koncentracija gvožđa	Colour, odour, taste, precipitates Boja, miris, ukus, taloženja	< 0,2 mg/l
Hardness: most important substances are manganese (Mn) and lime, i.e. calcium (Ca) Tvrdoća: najvažnije supstance su mangan (Mn) i kamenac, odnosno kalcijum (Ca)	Precipitates Taloženja	Mn: < 0,05 mg/l Ca: < 100 mg/l
Chlorinated water Hlorisana voda	Health risk Zdravstveni rizik	Forbidden to use Zabranjeno za upotrebu
Seawater Morska voda	Rapid corrosion Brzina korodiranja	Forbidden to use Zabranjeno za upotrebu

Table 1. Water quality requirements
Tabela 1. Zahtevi za kvalitet vode

1.3. Heating of the Sauna Using the Steamer

With the Combi heater, the sauna can be heated either in the usual way or by using its evaporator.

- **Always fill the water reservoir before use!**
- The evaporator has a 5 l water tank so it can be on continuously for approximately 2 hours. The tank should be filled when the heater is cold.
- To ensure ideal humidity, the sauna temperature should be quite low, preferably about 40 ºC, and the evaporator should be left on for approximately 1 hour to heat the sauna.

1.3.Grejanje saune korišćenjem parogeneratora

Sa Combi grejačem, sauna se može zagrevati na uobičajen način ili korišćenjem njenog isparivača.

- **Uvek napunite rezervoar za vodu pre upotrebe!**
- Isparivač ima rezervoar za vodu od 5 l tako da može biti neprekidno uključen oko 2 sata. Rezervoar treba napuniti kada je grejač hladan.
- Da bi se obezbedila idealna vlažnost, temperatura saune treba biti prilično niska, najbolje oko 40 ºC, a isparivač treba ostaviti uključen oko 1 sat kako bi se sauna zagrejala.

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1.3.1. Filling the Water Reservoir, Cold Steamer

Fill the reservoir with clean household water. The maximum capacity of the reservoir is approximately 5 litres. Figure 2.

1.3.2. Filling the Water Reservoir, Hot Steamer

When the steamer is hot, filling or adding water should be avoided, because the hot steam and hot steamer may cause burns. If, however, you have to fill the water tank while it is hot, proceed as follows, exercising extreme caution:

1. Switch the steamer off.
2. Pour cold water carefully onto the grille of the water reservoir. The water runs into the reservoir cooling down the hot water inside.
3. Drain off the cool water from the reservoir into a can or bucket and pour it down the drain.
4. Fill the water reservoir as instructed in section 1.3.1.

SR

1.3.1. Punjenje rezervoara za vodu, aparat za hladnu paru

Napunite rezervoar čistom vodom za domaćinstvo. Maksimalni kapacitet rezervoara je oko 5 litara. Slika 2.

1.3.2. Punjenje rezervoara za vodu, aparat za paru

Kada je parogenerator vruć, treba izbegavati punjenje ili dodavanje vode, jer vruća para i vreo parogenerator mogu izazvati opekotine. Međutim, ako morate da napunite rezervoar za vodu dok je vruć, postupite na sledeći način, izuzetno oprezno:

1. Isključite parogenerator.
2. Pažljivo sipajte hladnu vodu na rešetku rezervara za vodu. Voda teče u rezervoar hladeći toplu vodu unutra.
3. Ispustite hladnu vodu iz rezervoara u limenku ili kantu i sipajte je u odvod.
4. Napunite rezervoar za vodu prema uputstvima u odeljku 1.3.1.

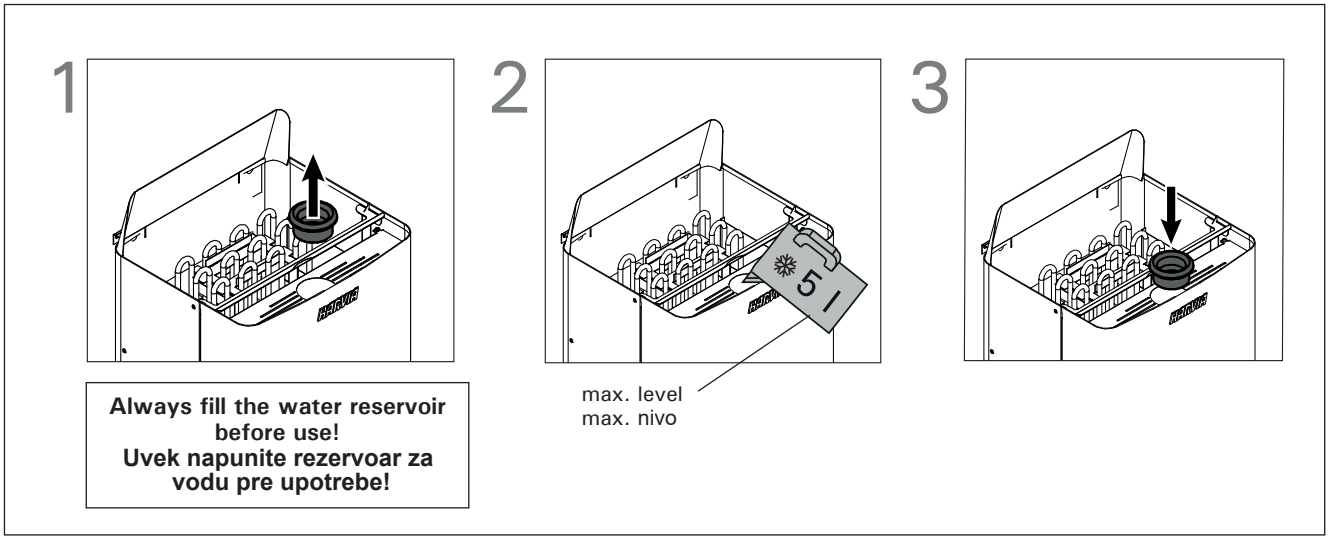

Figure 2. Filling the water reservoir (SW45S, SW70S, SW90S)
Slika 2. Punjenje rezervoara za vodu (SW45S, SW70S, SW90S)

1.3.3. Draining the Water Reservoir

In order to ensure faultless operation of the steamer, the water reservoir must always be emptied after use. This procedure removes impurities condensed in the reservoir as result of evaporation.

Because the water in the reservoir is very hot immediately after use, it should be drained only after the water has cooled for a few hours after switching the steamer off. Figure 3.

Please also see subsections 1–3 of section 1.3.2.

1.3.4. Combi Heaters with an Automatic Water Filling System (SW45SA, SW70SA, SW90SA)

Combi heaters that have an automatic water filling system fill the tank automatically. Close the tank drainage valve and open the filling shut-off valve of the tank. See figures 3 and 10.

Close the shut-off valve once you have ended bathing. See also 1.3.3.

1.3.3. Pražnjenje rezervoara za vodu

Kako bi se obezbedio besprekoran rad parogeneratora, rezervoar za vodu se uvek mora isprazniti nakon upotrebe. Ovim postupkom se uklanjaju nečistoće kondenzovane u rezervoaru kao rezultat isparavanja.

Pošto je voda u rezervoaru veoma vruća odmah nakon upotrebe, treba je ispustiti tek nakon što se voda ohladi nekoliko sati nakon isključivanja . Slika 3..

Takođe pogledajte pododeljke 1-3 odeljka 1.3.2.

1.3.4. Kombinovani grejači s automatskim sistemom za punjenje vodom (SW45SA, SW70SA, SW90SA)

Kombinovani grejači koji imaju automatski sistem za punjenje vode automatski pune rezervoar. Zatvorite odvodni ventil rezervoara i otvorite zaporni ventil rezervoara za punjenje. Vidi slike 3 i 10.

Zatvorite zaporni ventil kad završite sa kupanjem.

Vidi takođe 1.3.3.

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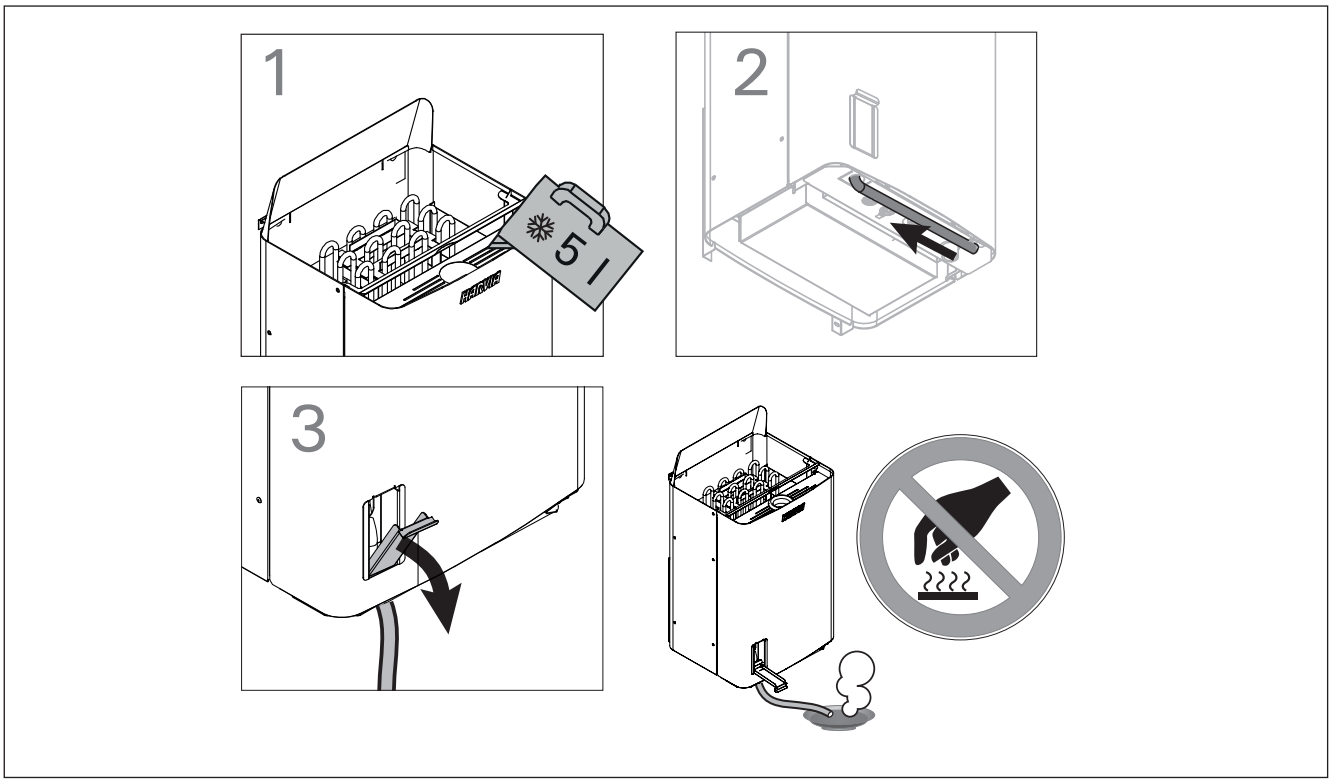

Figure 3. Emptying the water reservoir (SW45S, SW70S, SW90S)
Slika 3. Pražnjenje rezervoara sa vodom (SW45S, SW70S, SW90S)

1.4. Use of Fragrances

Liquid fragrances and fragrance bags can be used in the steamer. Liquid fragrances are poured into the stone cup in the steamer. Fragrance bags are placed on top of the steam grating.

When using fragrances, mind the hot steam evaporating from the steamer as it may burn. Avoid adding of water and placing of fragrances to a hot steamer.

The stone cup must be washed with running water as often as necessary.

1.5. Drying the Sauna Room

The sauna room must always be allowed to dry thoroughly after the steamer has been used. In order to speed up the drying process, the heater can be left on with the sauna ventilation also on to the maximum.

If the heater is used to help dry out the sauna room, remember to switch it off after the given period of time.

1.6. Cleaning the Steamer

Impurities from water, e.g. lime, will accumulate on the walls of the steamer's water reservoir. For decalcification we recommend decalcifying agents intended for household appliances, e.g. coffeemakers and water kettles. These agents are to be used as instructed by the manufacturer. The outside of the steamer can be cleaned with the damp cloth. When cleaning the outside, ensure that the steamer's operating switch is OFF.

1.4. Upotreba mirisa

Tečni mirisi i kese sa mirisima mogu se koristiti u aparatu za paru. U kamenu čašu u pari se sipaju tečni mirisi. Vrećice za mirisie stavljaju se na parnu rešetku.

Kada koristite mirise, obratite pažnju na to da vruća para isparava iz aparata za paru jer može da izgori. Izbegavajte dodavanje vode i stavljanje mirisa u vrelu paru.

Kamena šolja se mora prati tekućom vodom onoliko često koliko je potrebno.

1.5. Sušenje prostorije za saunu.

Prostor za saunu mora se uvek ostaviti da se dobro osuši nakon upotrebe parogeneratora. Kako bi se ubrzao proces sušenja, grejač se može ostaviti uključen uz maksimalno uključenu ventilaciju saune.

Ako se grejač koristi za sušenje prostorije saune, ne zaboravite ga isključiti nakon određenog vremenskog perioda.

1.6. Čišćenje parogeneratora

Nečistoće iz vode, npr. kamenac, nakupiće se na zidovima rezervoara za vodu parogeneratora. Za uklanjanje kamenca preporučujemo sredstva za uklanjanje kamenca namenjena za kućne aparate, npr. aparati za kafu i kuvala za vodu. Ova sredstva treba koristiti prema uputstvima proizvođača. Spoljašnja strana parogeneratora se može čistiti vlažnom krpom. Prilikom čišćenja spoljne strane, proverite da li je prekidač za rad isključen.

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1.7. Warnings

- **Staying in the hot sauna for long periods of time makes the body temperature rise, which may be dangerous.**
- **Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.**
  - **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.**
- **Consult your child welfare clinic about taking little babies to the sauna.**
- **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.**

1.7.1. Symbols descriptions


Read operators manual.


Do not cover.

1.8. Troubleshooting

If the steamer does not work, check the following:

- is the water level in the reservoir sufficient? (see section 1.3.)
- has the overheat protector engaged? (reset button on bottom of steamer)
- is the humidity in the sauna too high?
- is the steamer thermostat set at maximum?

If the heater does not heat, check the following:

- the electricity has been switched on
- the thermostat shows a higher figure than the temperature of the sauna.
- the fuses to the heater are in good condition.

1.7. Upozorenja

- **Duži boravak u vrućoj sauni dovodi do povećanja telesne temperature, što može biti opasno.**
- **Držite se podalje od grejača kada je vruć. Kamenje i spoljna površina grejača mogu opeći vašu kožu.**
- **Držite decu podalje od grejača.**
- **Nemojte dopustiti da deca, hendikepirani ili bolesni ljudi sami koriste saunu.**
- **Posavetujte se sa svojim lekarom u vezi sa zdravstvenim ograničenjima kupanja.**
- **Posavetujte se sa klinikom za zaštitu dece o odvođenju malih beba u saunu.**
- **Budite vrlo oprezni kada se krećete u sauni, jer platforma i podovi mogu biti klizavi.**
- **Nikada nemojte ići u vruću saunu ako ste uzeli alkohol, jake lekove ili narkotike.**
- **Nikada nemojte spavati u vrućoj sauni.**
- **Morski vazduh i vlažna klima mogu korodirati metalne površine grejača.**
- **Ne kačite odeću da se suši u sauni, jer to može izazvati požar. Prekomerni sadržaj vlage takođe može prouzrokovati oštećenje električne opreme.**

1.7.1. Opis simbola


Pročitajte uputstvo za upotrebu.


Ne prekrivati.

1.8. Rešavanje problema

Ako parogenerator ne radi, proverite sledeće:

- da li je nivo vode u rezervoaru dovoljan? (videti odeljak 1.3.)
- da li je uključena zaštita od pregrevanja? (dugme za resetovanje na dnu parogeneratora)
- da li je vlažnost u sauni previsoka?
- da li je termostat pare podešen na maksimum?

Ako grejač ne greje, proverite sledeće:

- da li je struja uključena.
- termostat pokazuje višu cifru od temperature saune.
- da li su osigurači za grejač u dobrom stanju.

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2. SAUNA ROOM

2.1. Sauna Room Structure

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 (see table 2). 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.

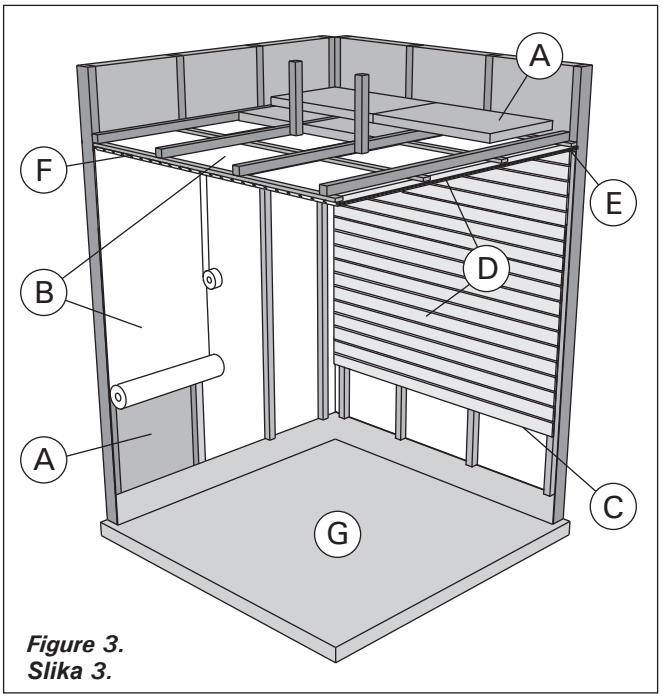

Figure 3.

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.

2.1.1. 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.

SR

2. SAUNA SOBA

2.1. Struktura Saune

A. Izolaciona vuna, debljine 50–100 mm. Prostorija za saune mora biti pažljivo izolovana kako bi se snaga grejača mogla održavati umereno niskom.
B. Zaštita od vlage, npr. aluminijumski papir. Sjajnu stranu papira postavite prema sauni. Zalepite šavove aluminijskom trakom.
C. Ventilacioni razmak od oko 10 mm između zaštite od vlage i panela (preporuka).
D. Panel ploča male mase debljine 12–16 mm. Pre početka oblaganja, provjerite električno ožičenje i ojačanja u zidovima potrebna za grejalicu i klupe.

Slika 3.

E. Ventilacioni razmak od oko 3 mm između panela zida i plafona.
F. Visina saune je obično 2100–2300 mm. Minimalna visina zavisi od grejača (pogledajte tabelu 2). Razmak između gornje klupe i plafona ne bi trebalo da prelazi 1200 mm.

G. Koristite podne obloge od keramičkih materijala i tamnih fuga. Čestice koje se raspadaju iz kamenja u sauni i nečistoće u vodi saune mogu zaprljati i/ili oštetiti osetljive podne obloge.

NAPOMENA! Proverite od vatrogasnih organa koji delovi zaštitnog zida mogu biti izolovani. Dimni kanali koji su u upotrebi ne smeju biti izolovani.

NAPOMENA! Lagani zaštitni poklopci koji se postavljaju direktno na zid ili plafon mogu predstavljati opasnost od požara.

NAPOMENA! Pazite da voda koja kaplje na pod saune uđe u podni odvod.

2.1.1. Zacrnjenje zidova saune

Sasvim je normalno da drvene površine saune s vremenom pocrne. Zacrnjenje se može ubrzati:

- sunčevom svetlošću
- toplotom iz grejača
- zaštitnim sredstvima na zidovima (zaštitna sredstva imaju nizak nivo otpornosti na toplotu)
- sitne čestice koje se raspadaju sa kamenja u sauni koje se podiže sa strujom vazduha.

EN

2.2. Sauna Room Ventilation

The air in the sauna room should change six times per hour. Figure 4 illustrates different sauna room ventilation options.

SR

2.2. Ventilacija saune

Vazduh u sauni trebao bi se menjati šest puta na sat. Slika 4. prikazuje različite mogućnosti ventilacije saune.

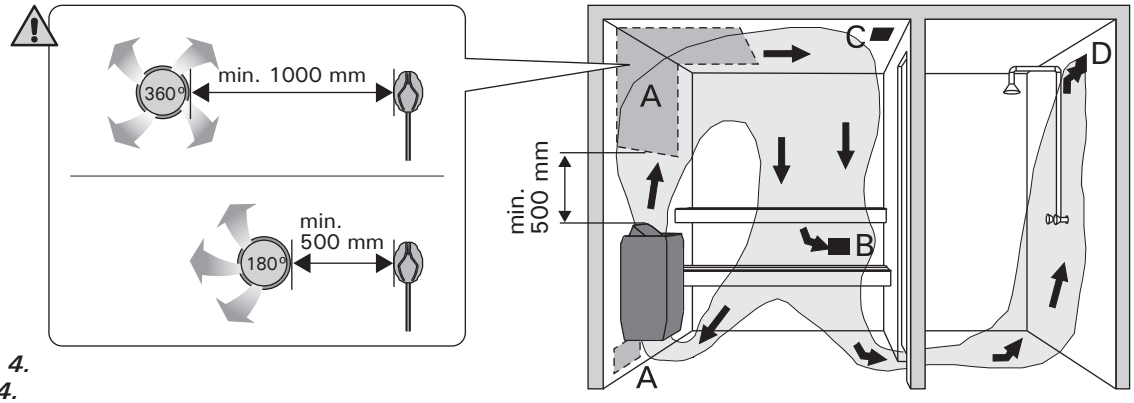

Figure 4.
Slika 4.

A. Supply air vent location. If mechanical exhaust ventilation is used, place the supply air vent above the heater. If gravity exhaust ventilation is used, place the supply air vent below or next to the heater. The diameter of the supply air pipe must be 50–100 mm. **Do not place the supply air vent so that the air flow cools the temperature sensor (see the temperature sensor installation instructions in the control unit installation instructions)!**
B. Exhaust air vent. 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, the gap underneath the sauna door must be at least 100 mm. Mechanical exhaust ventilation is mandatory.

A. Lokacija otvora za dovod vazduha. Ako se koristi mehanička izduvna ventilacija, postavite otvor za dovod vazduha iznad grejača. Ako se koristi gravitaciona izduvna ventilacija, postavite otvor za dovod vazduha ispod ili pored grejača. Prečnik cevi za dovod vazduha mora biti 50-100 mm. **Ne postavljajte otvor za dovod vazduha tako da protok vazduha hladi temperaturni senzor (pogledajte uputstva za montažu senzora temperature u uputstvu za montažu kontrolne jedinice)!**
B. Otvor za izduv vazduha. Postavite otvor za odvod vazduha blizu poda, što dalje od grejača. Prečnik cevi za izduvni vazduh treba da bude dvostruko veći od prečnika cevi za dovod vazduha.
C. Opcioni otvor za sušenje (zatvoren tokom grejanja i kupanja). Sauna se takođe može sušiti i tako da nakon kupanja ostavite otvorena vrata.
D. Ako je otvor za izduv vazduha u kupatilu, razmak ispod vrata saune mora biti najmanje 100 mm. Obavezna je mehanička izduvna ventilacija.

2.3. 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 m³ to the volume of the sauna for each non-insulated wall square meter. For example, a 10 m³ sauna room with a glass door equals the output requirement of about a 12 m³ sauna room. If the sauna room has log walls, multiply the sauna's volume by 1,5. Choose the correct heater output from Table 2.

2.3. Snaga grejača

Kada su zidovi i plafon obloženi panelima i izolacija iza panela je adekvatna, snaga grejača definiše se prema zapremini saune. Neizolovani zidovi (cigla, stakleni blok, staklo, beton, pločice, itd.) povećavaju potrebu za izlazom grejača. Za svaki kvadratni metar neizolovanog zida dodajte 1,2 m³ zapremini saune. Na primer, prostorija za saunu od 10 m³ sa staklenim vratima jednaka je zahtevu za izlazom od oko 12 m³ prostorije za saunu. Ako prostorija saune ima zidove od balvana, pomnožite zapreminu saune sa 1,5. Izaberite tačnu snagu grejača iz tabele 2.

2.4. 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.

2.4. Higijena u sauni

Za vreme kupanja potrebno je koristiti peškire za klupe kako bi se sprečilo da znoj dospe na klupe.

Klupe, zidove i pod saune treba temeljno prati najmanje svakih šest meseci. Koristite četku za ribanje i deterdžent za saunu.

Obrišite prašinu i prljavštinu s grejača vlažnom krpom. Uklonite mrlje od kamenca sa grejača pomoću 10% rastvora limunske kiseline i isperite.

EN

3. INSTRUCTIONS FOR INSTALLATION

3.1. 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 given in table 2 should be followed.**
- Is the supply voltage suitable for the heater?
- The location of the heater fulfils the minimum requirements concerning safety distances given in fig. 5 and table 2.

It is absolutely necessary to ensure that the installation is carried out according to these values. Neglecting them can cause a risk of fire.

- **Only one electrical heater may be installed in the sauna room.**
- **The heater should be installed so that the warning texts can also be read without difficulty after the installation.**
- **The heaters must not be mounted in a recess.**

3.2. Safety Railing

If a safety railing is built around the heater, the minimum distances given in fig. 5 and table 2 must be observed.

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3. UPUTSTVO ZA UGRADNJU

3.1. Pre ugradnje

Pre instaliranja grejača, proučite uputstva za ugradnju Proverite sledeće tačke:

- Da li je snaga i tip grejača pogodan za prostoriju saune? **Treba pratiti kubične zapremine date u tabeli 2.**
- Da li je napon napajanja odgovarajući za grejač?
- Lokacija grejača ispunjava minimalne zahteve u pogledu sigurnosne udaljenosti date na sl. 5 i tabela 2.

Apsolutno je neophodno osigurati da se instalacija izvede u skladu sa ovim vrednostima. Njihovo zanemarivanje može izazvati opasnost od požara.

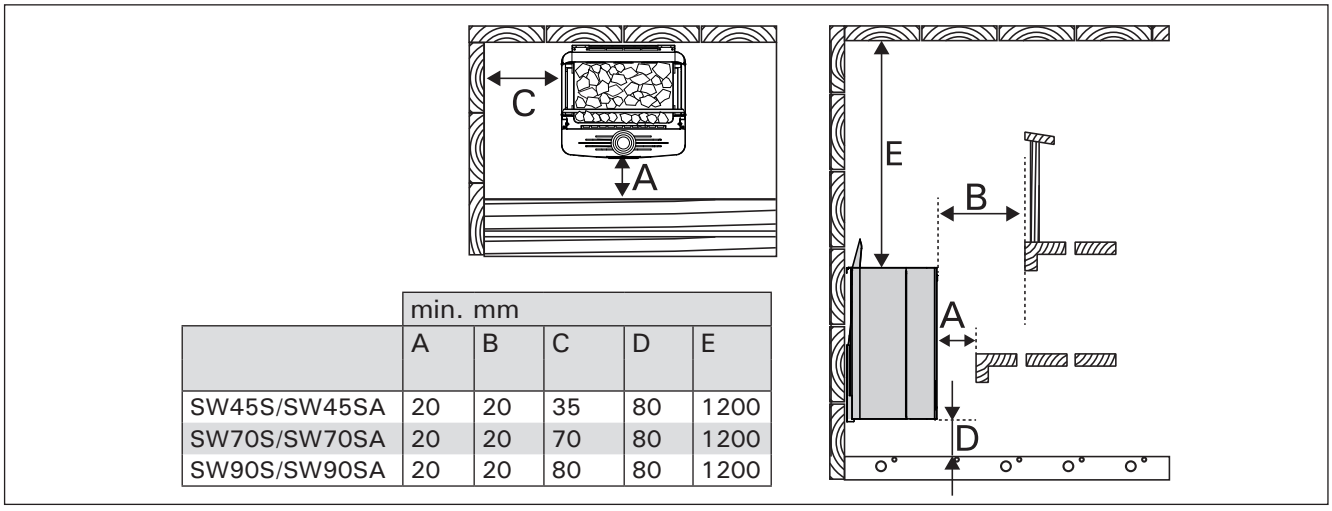
- **U saunu se sme ugraditi samo jedan električni grejač.**
- **Grejač treba postaviti tako da se tekstovi upozorenja mogu čitati bez poteškoća i nakon ugradnje.**
- **Grejači se ne smeju montirati u udubljenje.**

3.2. Sigurnosna ograda

Ako je oko grejača ugrađena sigurnosna ograda, minimalne udaljenosti navedene na sl. 5 i tabeli 2 se moraju poštovati.

Heater Grejač	Output Izlaz	Vaporizer Isparivač		Dimensions Dimenzije		Stones Kamenje	Sauna room Sauna soba		
		Output Izlaz	Max. vaporisation efficiency Maks. efikasnost isparavanja	Lev./syv./kork. Širina/dubina/visina	Weight Težina		Volume Zapremina		Height Visina
							▷2.3.!		
	kW	kW	kg/h	mm	kg	max. kg	min. m³	max. m³	min. mm
SW45S/SW45SA	4,5	2,0	2,5	380/355/710	16,0	20	3	6	1900
SW70S/SW70SA	7,0	2,0	2,5	380/355/710	16,8	20	6	9	1900
SW90S/SW90SA	9,0	2,0	2,5	380/355/710	16,8	20	8	14	1900

Table 2. Installation details of a Combi heater
Tabela 2. Detalji instalacije kombinovanog grejača



	min. mm				
	A	B	C	D	E
SW45S/SW45SA	20	20	35	80	1200
SW70S/SW70SA	20	20	70	80	1200
SW90S/SW90SA	20	20	80	80	1200

Figure 5. Safety distances (all dimensions in millimeters)
Slika 5. Sigurnosne udaljenosti (sve dimenzije su u milimetrima)

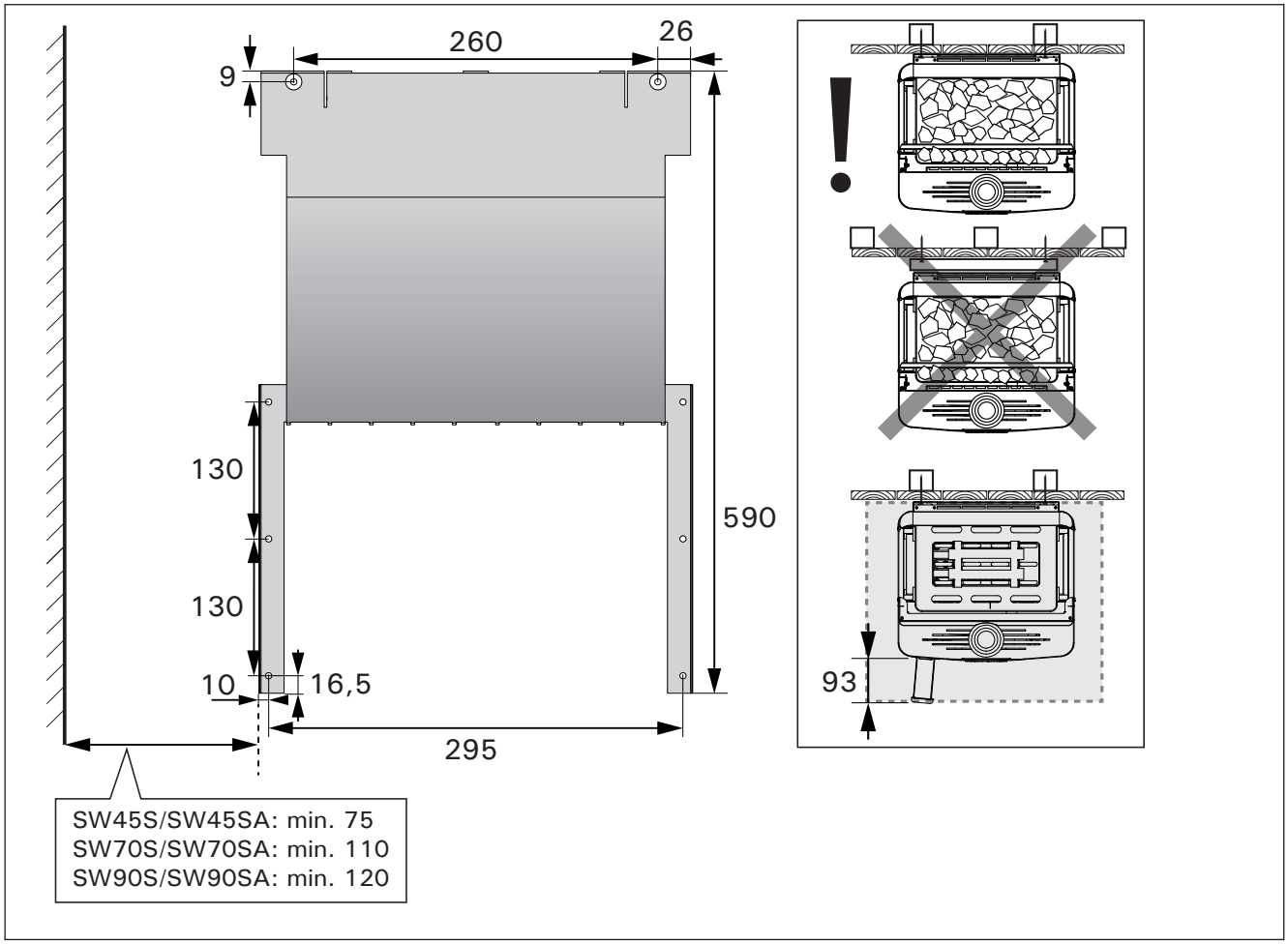


Figure 6. ***Wall mount (measurements in millimeters***
Slika 6. ***Zidni nosač (Maße in Millimetern)***

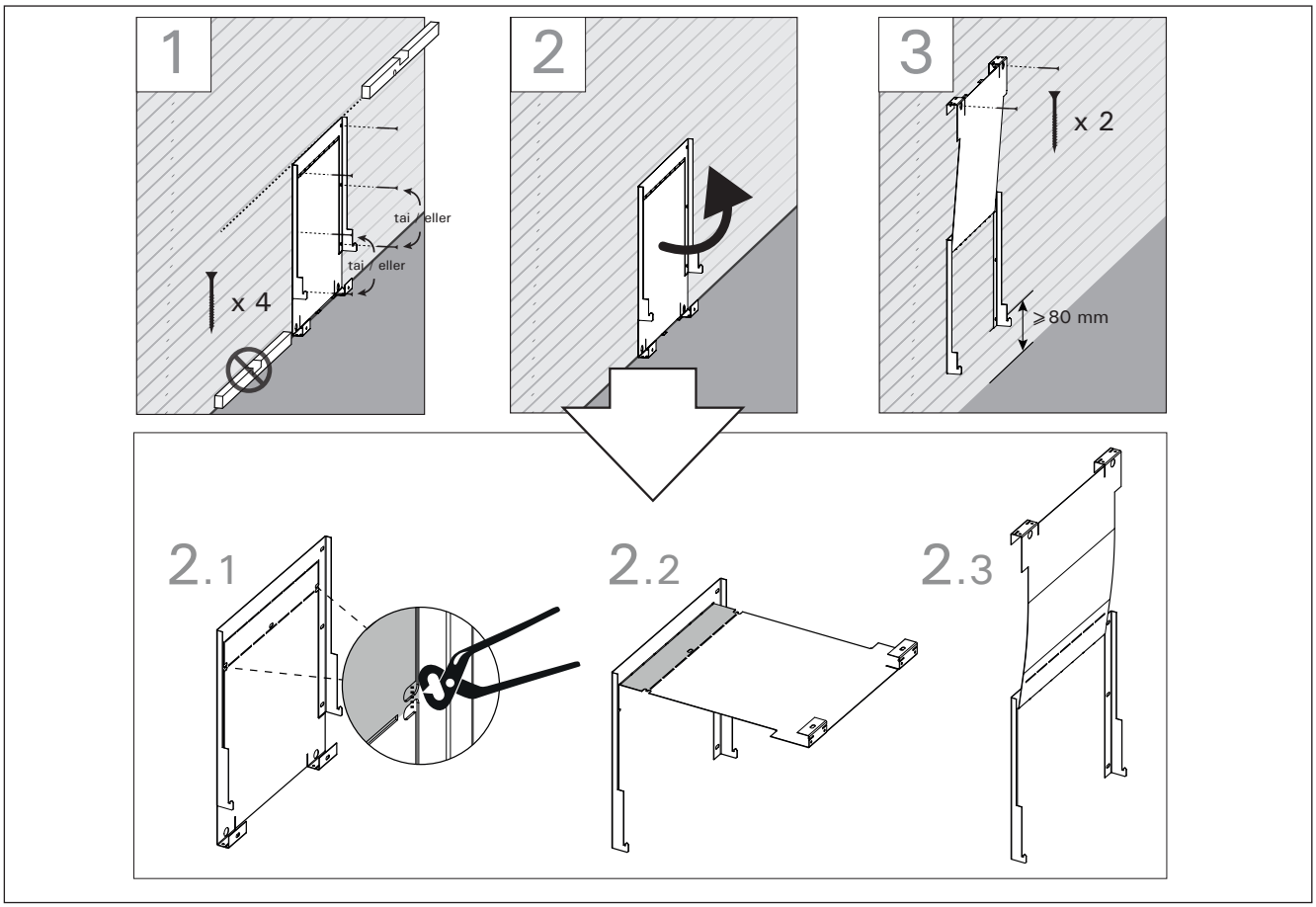


Figure 7.
Slika 7.

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3.3. Installation of the control unit and sensors
The control unit includes detailed instructions for mounting the unit on the wall.

3.4. Installing the Heater
See figures 5 - 9.

1. Connect the power cable (fig. 8) to the heater.
2. Install the wall mount horizontally to the wall using suitable fasteners. Make sure that the heater is supported not only by the wall panel (figure 6). Take note of the floor's slope. Using the wall mount ensures the 80 mm safety distance.
3. Lift the heater into the mount and make sure it is centered (figure 9:1-3).
4. Install the steam guide to the heater and the wall mount (figure 9:4-5).
5. Secure the heater to the wall mount by screwing two screws behind the steam guide (figure 9:6).
6. Connect the power cable to the wall outlet.

SR

3.3. Instalacija kontrolne jedinice i senzora
Kontrolna jedinica sadrži detaljna uputstva za montažu jedinice na zid.

3.4. Ugradnja grejača
Pogledajte slike 5 - 9.

1. Povežite kabl za napajanje (sl. 8) na grejač.
2. Montirajte zidni nosač horizontalno na zid koristeći prikladne pričvršćivače. Pazite da grejač ne podržava samo zidna ploča (slika 6). Obratite pažnju na nagib poda. Korišćenjem zidnog nosača obezbeđuje se sigurnosna udaljenost od 80 mm.
3. Podignite grejač u držač i proverite da li je centriran (slika 9:1-3).
4. Postavite vođicu za paru na grejač i zidni nosač (slika 9:4-5).
5. Pričvrstite grejač za zidni nosač tako što ćete zavrnuti dva šrafa iza vođice za paru (slika 9:6).
6. Uključite kabl za napajanje u zidnu utičnicu.

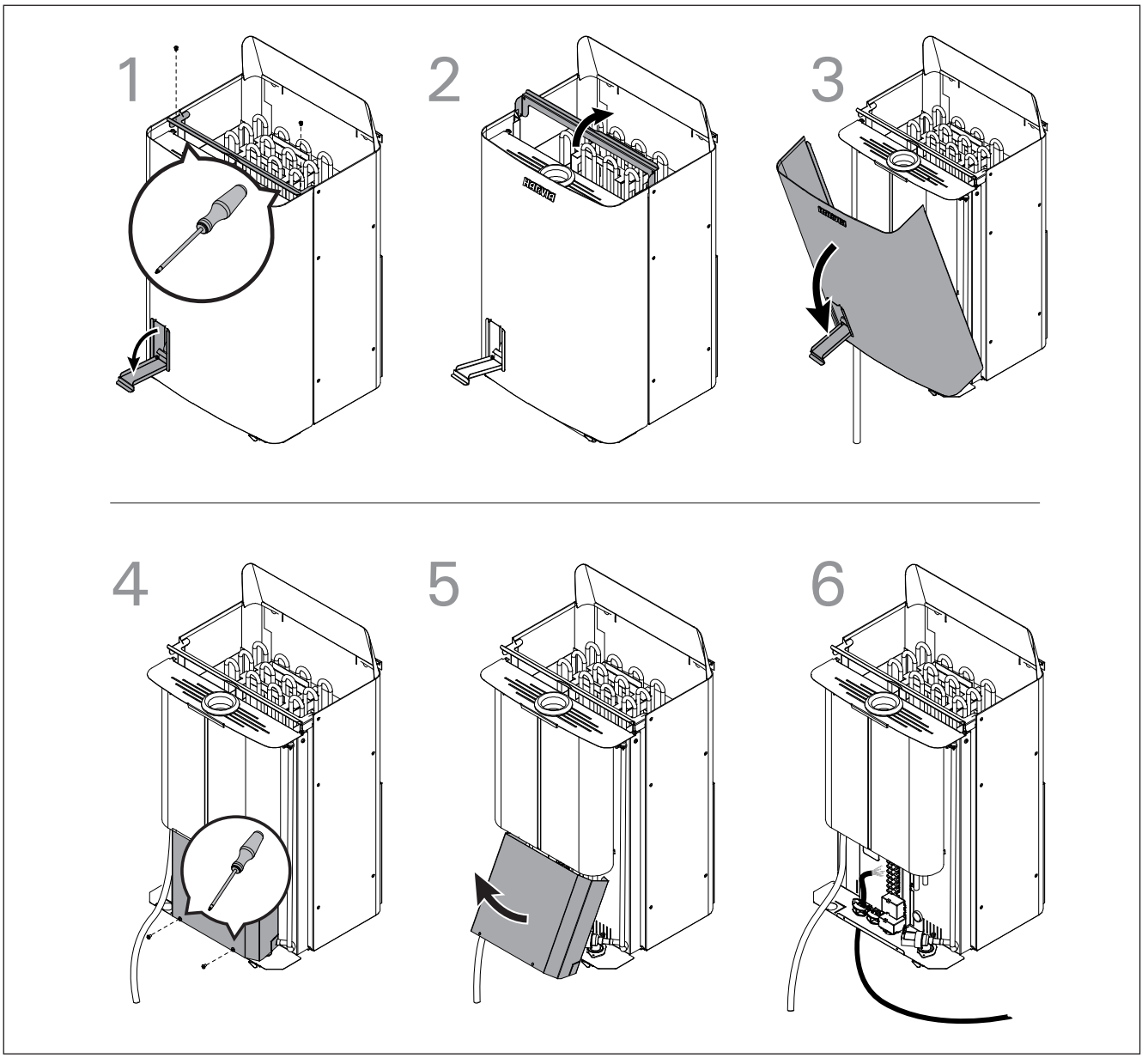


Figure 8.
Slika 8.

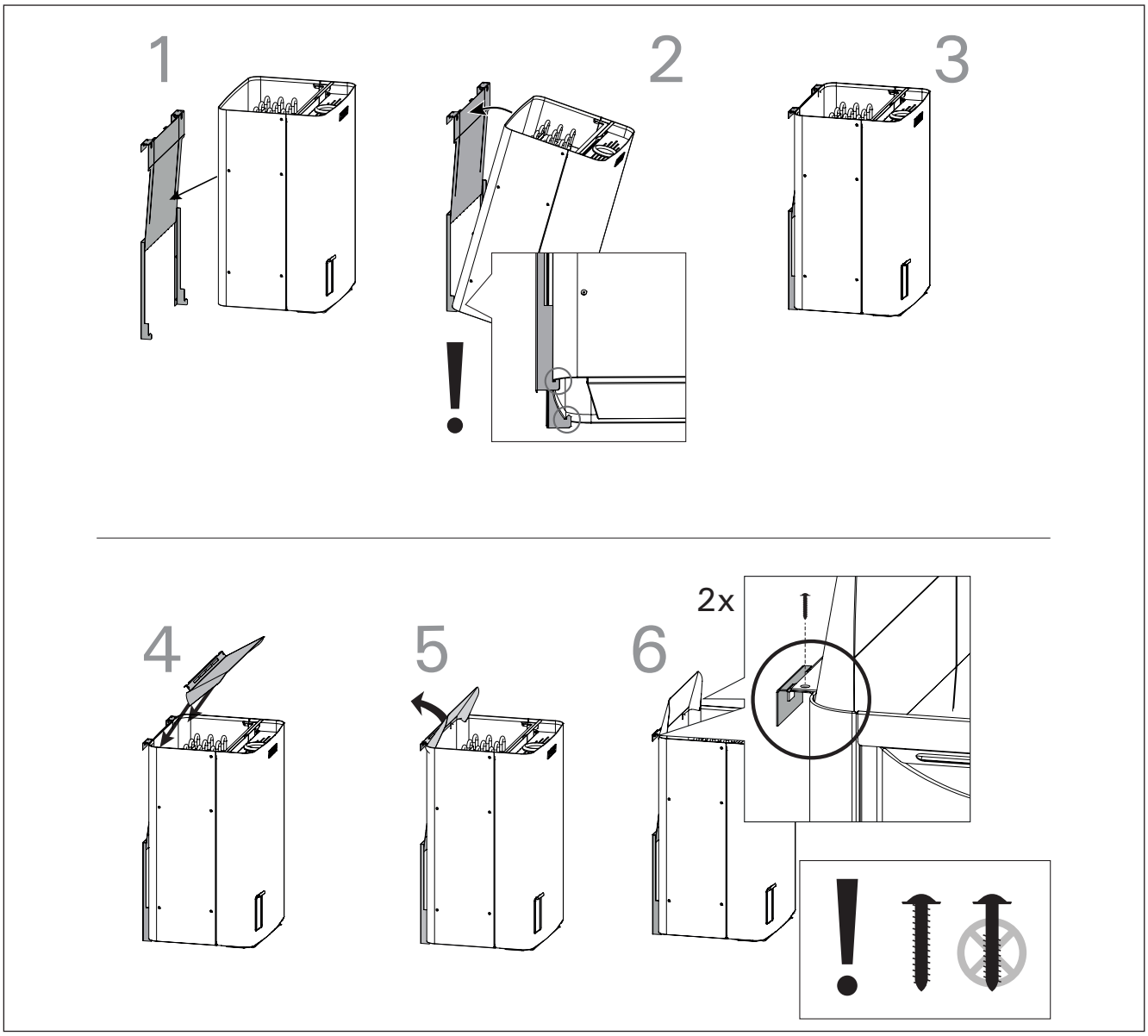


Figure 9.
Slika 9.

3.5. Automatic filling (SW45SA, SW70SA, SW90SA)

Connect the heater to cold water mains using a flexible hose. Make sure that the connection has a shut-off valve. See picture 7. **The sauna and/or washing facilities should have a floor drain in case of hose damage or leaks.**

3.5. Automatsko punjenje (SW45SA, SW70SA, SW90SA)

Priključite grejač na mrežu hladne vode pomoću fleksibilnog creva. Uverite se da priključak ima zaporni ventil. Videti sliku 7. **Sauna i/ili prostorija za pranje trebaju imati podni odvod u slučaju oštećenja creva ili curenja.**

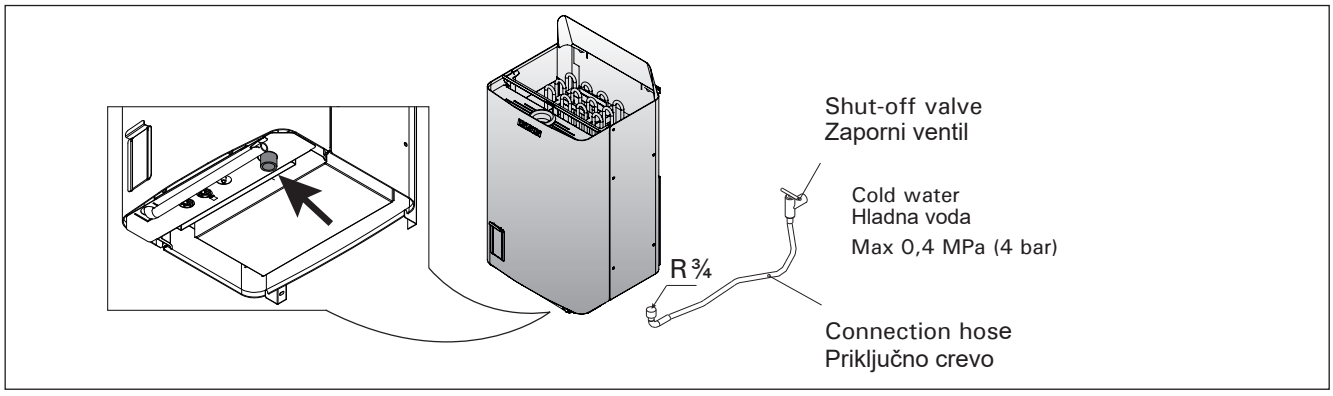


Figure 10. Automatic filling
Slika 10. Automatsko punjenje

EN

3.6. Electrical Connections

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

- The heater is semi-stationarily connected to the junction box (figure 8: 1) on the sauna wall. The junction box must be splash-proof, and its maximum height from the floor must not exceed 500 mm.
- The connecting cable (figure 8: 2) 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).

3.6.1. Compatible Control Units

- Harvia Xenio CX110C
- Harvia Xafir CS110C
- Harvia C105S

See the latest control unit models on our website www.harviasauna.com.

3.6.2. 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 the RCD (residual current device)!

SR

3.6. Električni priključci

Grejač sme da se priključi na električnu mrežu u skladu sa važećim propisima samo od strane ovlašćenog, profesionalnog električara.

- Grejalica je polustacionarno povezana sa razvodnom kutijom (slika 8: 1) na zidu saune. Razvodna kutija mora biti otporna na prskanje, a njena maksimalna visina od poda ne sme biti veća od 500 mm.
- Kabl za povezivanje (slika 8: 2) mora biti od gumenog kabela tipa H07RN-F ili njegovog ekvivalenta. **NAPOMENA! Zbog termičke krtosti zabranjena je upotreba PVC izolovane žice kao priključnog kabla grejača.**
- Ako su priključni i instalacioni kablovi viši od 1000 mm od poda u sauni ili unutar zidova prostorije saune, moraju izdržati minimalnu temperaturu od 170 °C kada su opterećeni (npr. SSJ). Električna oprema instalirana više od 1000 mm od poda saune mora biti odobrena za upotrebu na temperaturi od 125 °C (oznaka T125).

3.6.1. Kompatibilne kontrolne jedinice

- Harvia Xenio CX110C
- Harvia Xafir CS110C
- Harvia C105S

Pogledajte najnovije modele kontrolnih jedinica na našoj veb stranici www.harviasauna.com

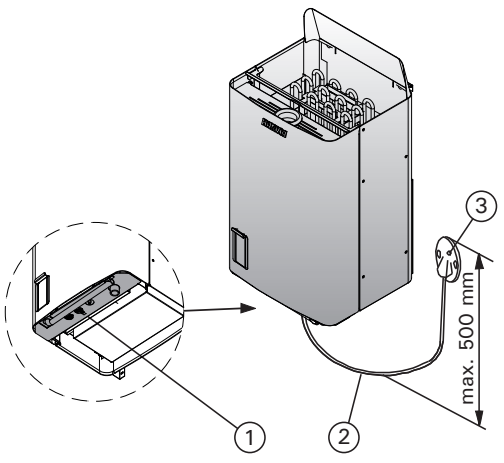
3.6.2. Otpor izolacije električnog grejača

Prilikom završne provere električnih instalacija, prilikom merenja izolacionog otpora grejača može se otkriti "curenje". Razlog tome je što je izolacioni materijal grejnih elemenata upio vlagu iz vazduha (skladištenje, transport). Nakon nekoliko pokretanja grejača, vlaga će se ukloniti iz grejnih elemenata.

Ne priključujte napajanje grejača preko RCD (uređaj diferencijalne struje)!

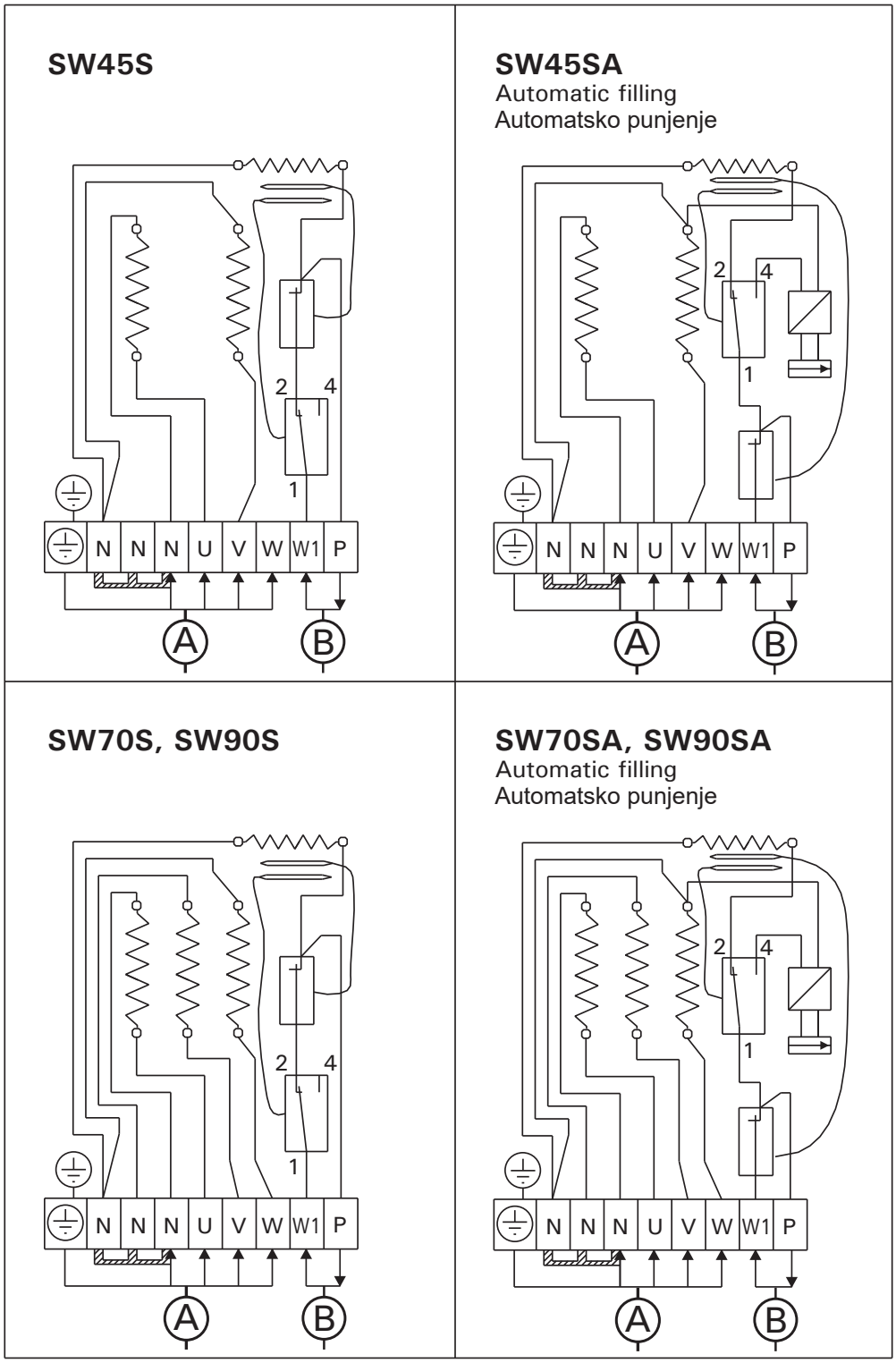
1. Connection box
2. Connection cable
3. Junction box

1. Priključna kutija
2. Priključni kabl
3. Razvodna kutija



Always fill the water reservoir before use!
Uvek napunite rezevoar za vodu pre upotrebe!

Figure 11. Connections of the heater
Slika 11. Priključci grejača



Heater Grejač	Output Izlaz kW	Heater output Izlaz grejača	Steamer output Izlaz parogeneratora kW	Fuses Osigurači A	Cables Kabl 400 V 3N ~ mm²		
					Ⓐ	Ⓑ	Ⓐ + Ⓑ
SW45S/ SW45SA	4,5	2 x 2260 W	2,0	3 x 10	5 x 1,5	2 x 1,5	7 x 1,5
SW70S/SW70SA	7,0	3 x 2260 W	2,0	3 x 10	5 x 1,5	2 x 1,5	7 x 1,5
SW90S/SW90SA	9,0	3 x 3000 W	2,0	3 x 16	5 x 2,5	2 x 2,5	7 x 2,5

Figure 12. Electrical connections
Slika 12. Električni priključci

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3.7. Replacing the Heating Elements

See figure 13.

1. Disconnect all electrical connection, remove the stones and lift the heater off the wall mount.
2. Bend open two tabs securing the element support.
3. Pull out the element support.
4. Open the service hatch.
5. Remove the element cable and screw.
6. Replace the faulty element. Re-assemble the heater in opposite order.

SR

3.7. Zamena grejnih elemenata

Pogledajte sliku 13.

1. Otkačite sve električne priključke, uklonite kamenje i podignite grejač sa zidnog nosača.
2. Otvorite dva jezička koji pričvršćuju nosač elemenata.
3. Izvucite nosač elemenata.
4. Otvorite servisni otvor.
5. Uklonite kabl elemenata i šraf.
6. Zamenite neispravan element. Ponovo sastavite grejač suprotnim redosledom.

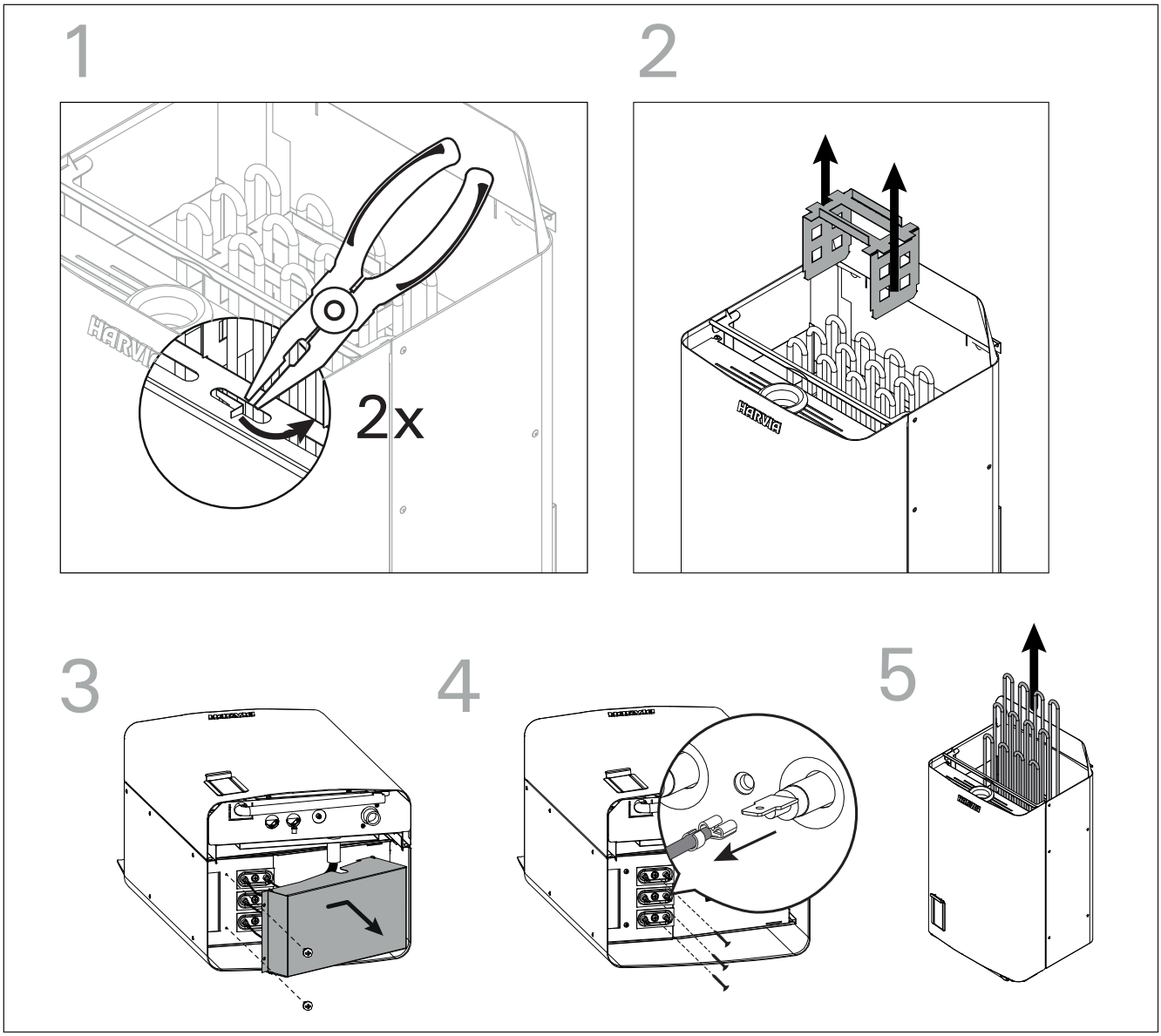


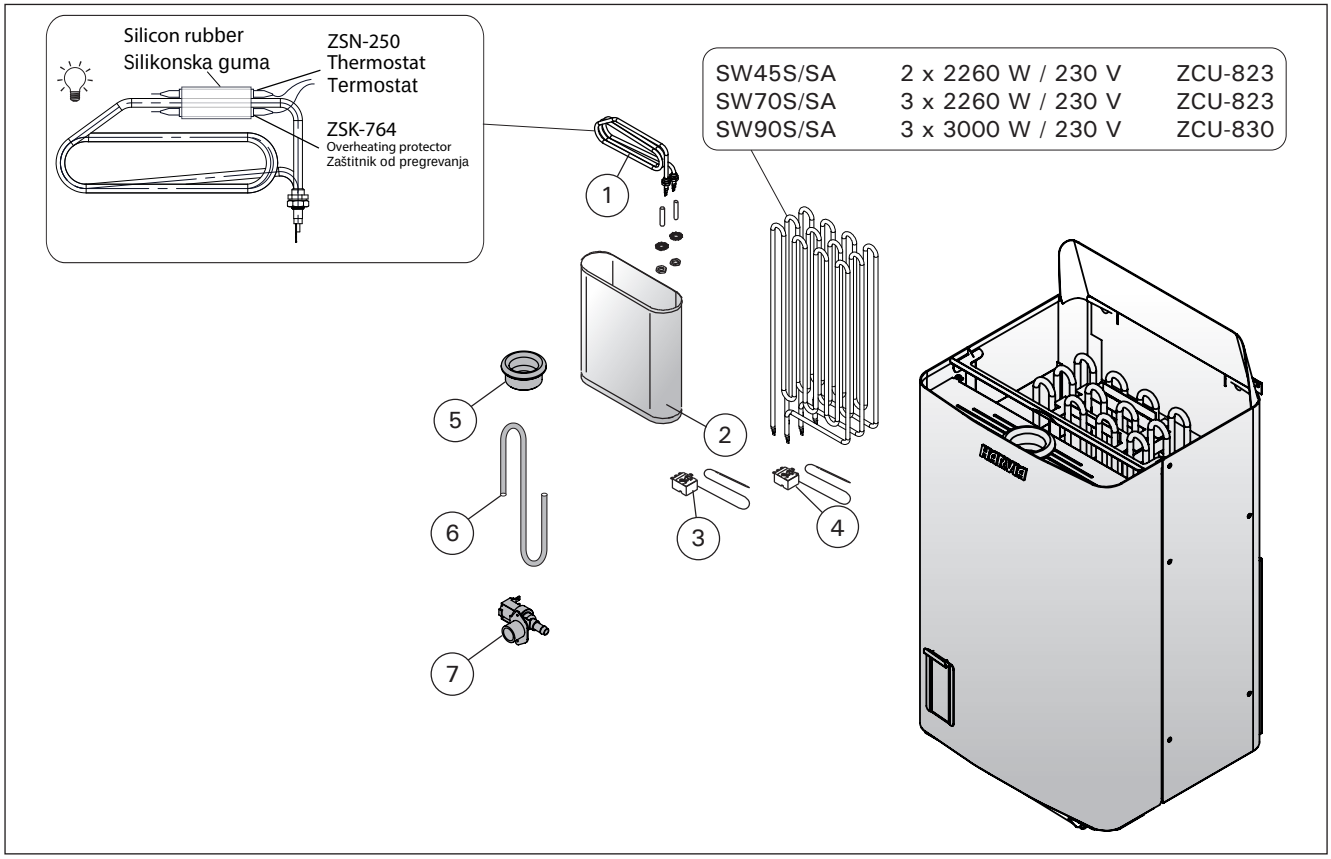
Figure 13.
Slika 13.

EN

4. SPARE PARTS

SR

4. REZERVNI DELOVI



1	Evaporator heating element, assembled	Grejni element isparivača, sastavljen	2000 W/230 V	ZH-104	1
2	Water reservoir	Vodeni rezerovar		ZCU-115	1
3	Thermostat 110 °C	Termostat 110 °C		ZSN-250	1
4	Overheating protector	Zaštitnik od pregrevanja		ZSK-764	1
5	Soapstone cup	Posuda za esenciju		ZSS-505	1
6	Drain hose	Odvodna cev		ZH-175	1
7	Magnetic valve	Magnetni ventil		ZSS-6101	

We recommend to use only the manufacturer's spare parts.
Preporučujemo da koristite samo rezervne delove proizvođača.