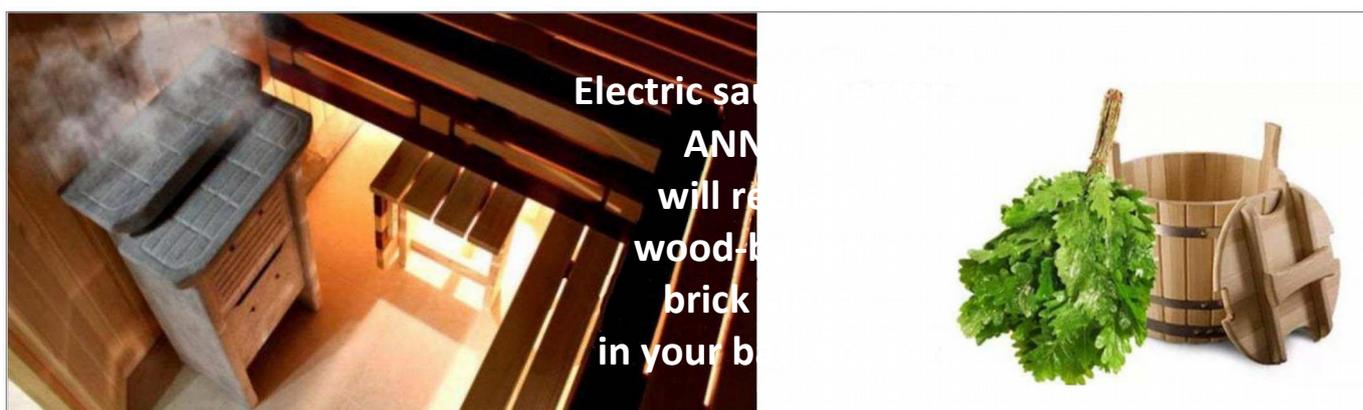


## ANNIKKI electric sauna heaters for Finnish saunas and Russian baths



A plunge in the origins of bathing and a fresh look at modern saunas and bathhouses

ELECTRIC SAUNA HEATERS  
ANNIKKI  
ARE PATENTED  
Certified product  
Certificate of conformity  
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# PROBLEMS OF MODERN SAUNAS

## TACKLED BY ANNIKKI ELECTRIC SAUNA HEATER

Modern saunas are similar to convection ovens: electric fans, i. e. electric heaters, heat the air in a steam room and a person warms up from hot air.

This is the most ineffective, from the energetic and biological point of view, way of getting energy by the body, since air enveloping the body cannot warm up the skin quickly. One has to raise temperature to 100-110 °C. In this case, saunas feature:

1. high vertical temperature gradient of 60-90 °C, while the sanitary norms in the room are not more than 3 °C (100-110 °C at the level of the head and 20-40 °C at the level of the legs)
2. low relative humidity up to 10% (while the norm is 40-70%).

According to the rules of thermal comfort in the tradition of the Russian people, it should be exactly vice versa: "cold head and warm feet".

In addition, saunas with conventional electric heaters pass air through red-hot (up to 700 °C) electric heating components (coils) with the effect of burnt iron or burnt oxygen in the steam room.

According to experts, this effect is caused by carcinogens from the combustion of organic residues always present in the steam room.

In electric saunas with conventional electric sauna heaters, there is no mid-range IR rays, as a rule. Today, electric sauna heaters are fenced, if not, there is strong thermal radiation from the metal case.

Talc stone is fixed on the metal case of some electric saunas, but in this version it will not be able to get enough heat to emanate IR rays.

The current practice of using high-temperature saunas causes energy consumption and dramatically reduces the healing effect of bath procedures.

To learn more details of ANNIKKI electric sauna heaters, log on to our special website:

<http://www.nih.ru/vvsokive-tehnologii/energeticheskava-banva/>

[www.steatite.ru](http://www.steatite.ru)

[www.annikki.ru](http://www.annikki.ru)

## ADVANTAGES OF ANNIKKI ELECTRIC SAUNA HEATERS

ANNIKKI electric sauna heaters are made of natural talc stone which boasts high heat capacity, thermal conductivity and resistance to destruction, including during temperature ups and downs.

Due to the special design and electric heating of the talc stone, ANNIKKI electric sauna heater provides the steam room with more than 80 percent of energy as IR flow with mostly medium waves (50-10  $\mu\text{m}$ ) dubbed as "rays of life".

Due to radiant energy from the stone ANNIKKI electric sauna heater, it is enough to heat the air in the sauna only to 70 °C (in summer the best temperature is 40-50 °C, in winter 60-70 °C). Yet, ANNIKKI electric sauna heater can raise the temperature in the steam room to 110 °C and above.

In a sauna with a conventional heater, one needs 110 °C and above to warm up a person with hot air only.

IR rays not only heat up the surface of the body, but, due to deep penetration (up to 60 mm), give up most of energy to the blood, lymph, fluids, internal organs and tissues.

IR thermal radiation from the high-heated stone surface is much more efficient than that from film, iron, etc.

The electric heating components (coils) in ANNIKKI electric sauna heaters are fully immersed in the talc stone slab and do not come in contact with the air of the steam room. The steam rooms with ANNIKKI electric sauna heaters have no smell of carcinogens (so harmful to health) from burnt organic dust.

The steam system of ANNIKKI electric sauna heater helps to adjust steam from overheated to wet.

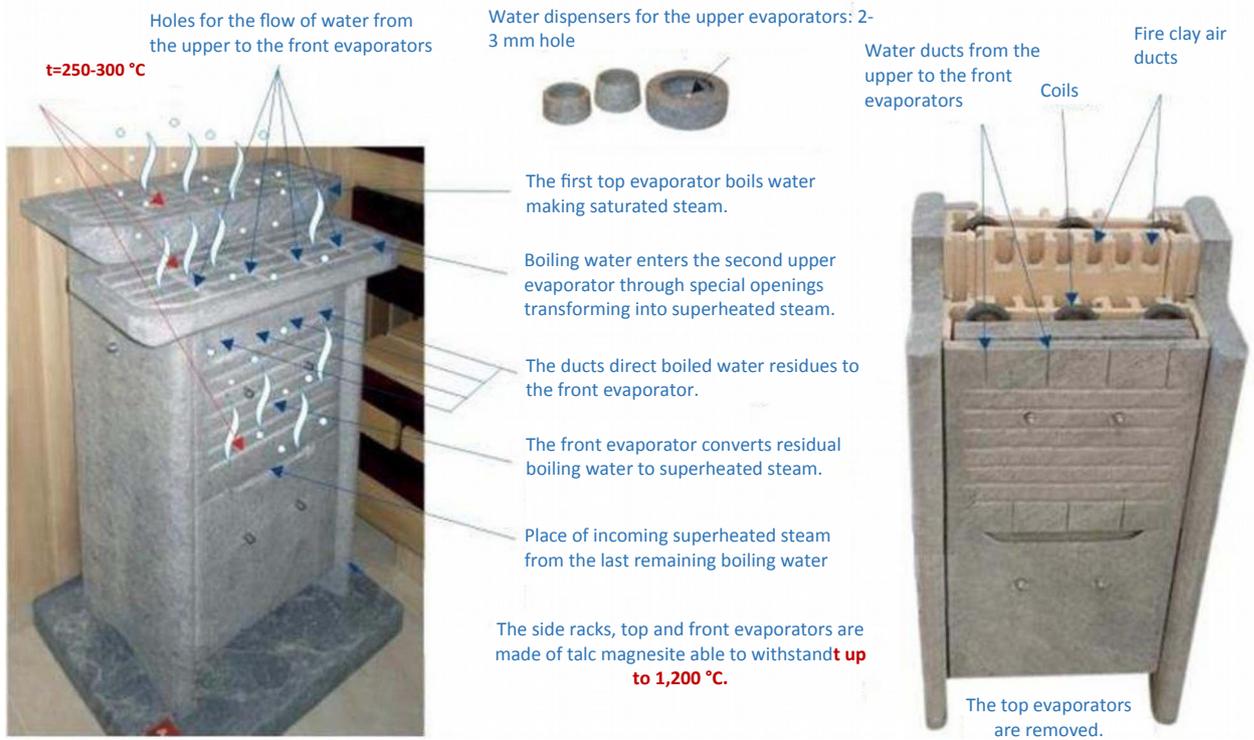
With its features, ANNIKKI electric sauna heater largely boosts the healing effect of bath procedures vs. saunas and bathhouses with conventional electric heaters or metal stoves. The effectiveness of bath procedures in a steam room with ANNIKKI electric sauna heater is on par with visiting a bathhouse with no chimney or a bathhouse with shutdown stone stove.

In addition, lowering sauna temperature, on average, to 60 °C (vs. 100 °C) helps to cut energy 1.5-2-fold. The coils in ANNIKKI electric sauna heaters are protected from any water, which significantly extends their service life.

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## VAPORIZATION THROUGH EVAPORATORS



For vaporization, it is necessary to use dispensers (up to 200 ml) made of talc magnesite. The dispensers have calibrated openings for water supply and are located on the upper evaporators.

Special rough processing of talc stone helps to actively absorb water from the dispensers onto the evaporators.

Water boils 5-7 mm deep in the layered structure of talcum stone heated to  $350-400\text{ }^{\circ}\text{C}$  and comes out as fine superheated steam. The remaining water flows through special channels to the lower and front evaporators for final evaporation.



For each upper evaporator, it is optimal to mount 2-3 dispensers, changing the volume of supplied water by the dispensers, you can also change steam from dry to wet.



The volume of water from the dispenser is controlled by the location of the dispenser. If the dispenser is mounted on a flat surface of the evaporator, the volume of supplied water will be minimal and determined only by the degree of surface roughness. If the dispenser hole is aligned with the evaporator groove, the volume of supplied water increases.

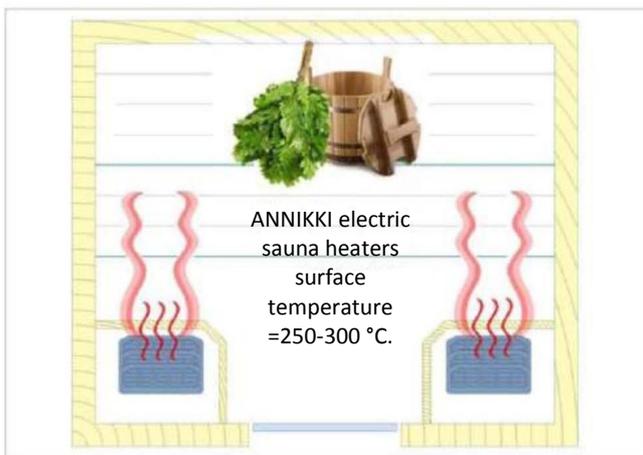
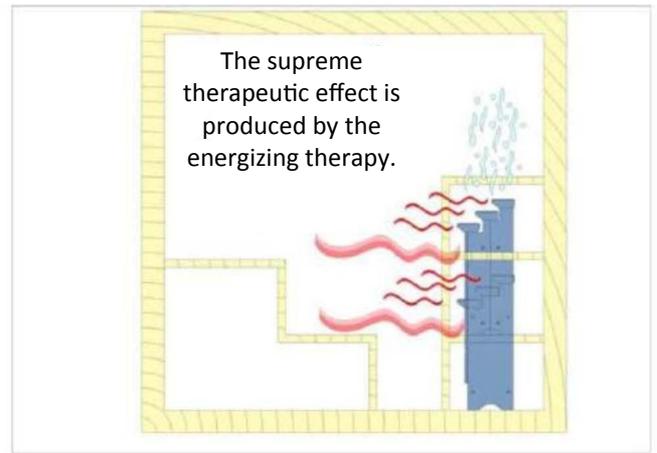
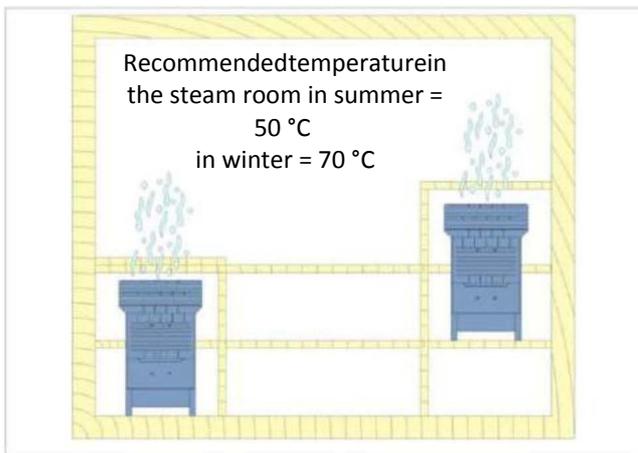
ANNIKKI electric sauna heaters can adjust steam from wet to superheated. If necessary (volume of the steam room exceeds 9 m<sup>3</sup>), it is possible to mount two or more ANNIKKI electric sauna heaters in the steam room.



To add aromas, it is necessary to use fragrance dispensers. They can be round, square or rectangular. Each aroma must have its own fragrance dispenser. Fragrance dispensers are mounted on the top evaporators together with water dispensers.

The more ANNIKKI electric sauna heaters in the steam room, the better therapeutic effect of IR rays. The wall mounted versions of ANNIKKI electric sauna heaters are especially useful in places where a person sits and relaxes. To boost the IR effects, mount ANNIKKI electric sauna heaters on special stands, including those of different heights.

### Layout of two ANNIKKI electric sauna heaters in the steam room of the sauna



Steam rooms over 10 m<sup>3</sup> must have two or more ANNIKKI electric sauna heaters.

The location of ANNIKKI electric sauna heater must ensure maximum energy boost for the whole body.

On average, 1 m<sup>3</sup> of steam room requires 1 kW of electric power.

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## ANNIKKI ELECTRIC SAUNA HEATERS



MINI



OPTIMA



COMFORT



WALL MOUNTED



ANNIKKI electric sauna heaters can be placed in bathrooms or in special rooms in apartments, townhouses and cottages. In saunas, your family members can recharge their batteries daily both due to the thermal radiation of medium waves (“rays of life”), and from steam.



ANNIKKI electric sauna heater can be switched on at a specified time and remotely.

**ANNIKKI electric sauna heater is a plunge in the origins of bathing and a fresh look at modern saunas and bathhouses.**

**ANNIKKI electric sauna heaters offer:**

Delicate IR rays from the heated stone.

Wet to dry steam and vice versa.

Pure air in the steam room without burnt iron smell.

Alternative to wood-burning brick siblings.

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BASIC SPECIFICATIONS OF ANNIKKI ELECTRIC SAUNA HEATERS

Model		Coil number, pcs.	Wattage, kW	Voltage, V	Dimensions WxDxH	Weight, kg	Steam room parameters		
							Average volume, m <sup>3</sup>	Average area, m <sup>2</sup>	Min height, cm
WALL MOUNTED	TEK N-1.2	1	1.2	220	360x120x620	49	1.5	0.8	190
	TEK N-2.4	2	2.4		360x180x620	54	2.5	1.3	
	TEK N-3.6	3	3.6	220,380	360x240x620	60	4	2.1	
MINI	TEK-1.2	1	2	220	410x300x830	85	2	1.05	190
	TEK-1.3		3				3	1.6	
OPTIMA	TEK-2.4	2	4	220	410x320x860	165	4	2.0	200
	TEK-2.5		5				5	2.5	
	TEK-2.6		6				6	3	
COMFORT	TEK-3.6	3	6	380	460x380x900	220	6	2.8	210
	TEK-3.7		7				7	3.3	
	TEK-3.8		8				8	3.8	
	TEK-3.9		9				9	4.3	

## CUSTOMER REVIEWS

Energoresurs has manufactured ANNIKKI electric sauna heaters for 8 years. During this period, there have been no complaints about the operation of ANNIKKI heaters and the bathing procedures in saunas and bathhouses.



Alexander Laguta, Starobelsk



"I really liked the heater. It met my expectations fully. Gentle heat and comfort in the steam room. Without overheating. And when you add water, something happens – the sensations in the steam room are awesome! In comparison with conventional electric furnaces, there's no such burning steam when you want to jump out of the steam room. I also really like that you break a sweat even at low temperatures, this is why we visit the steam room".

Vyacheslav Galchenko, Moscow:

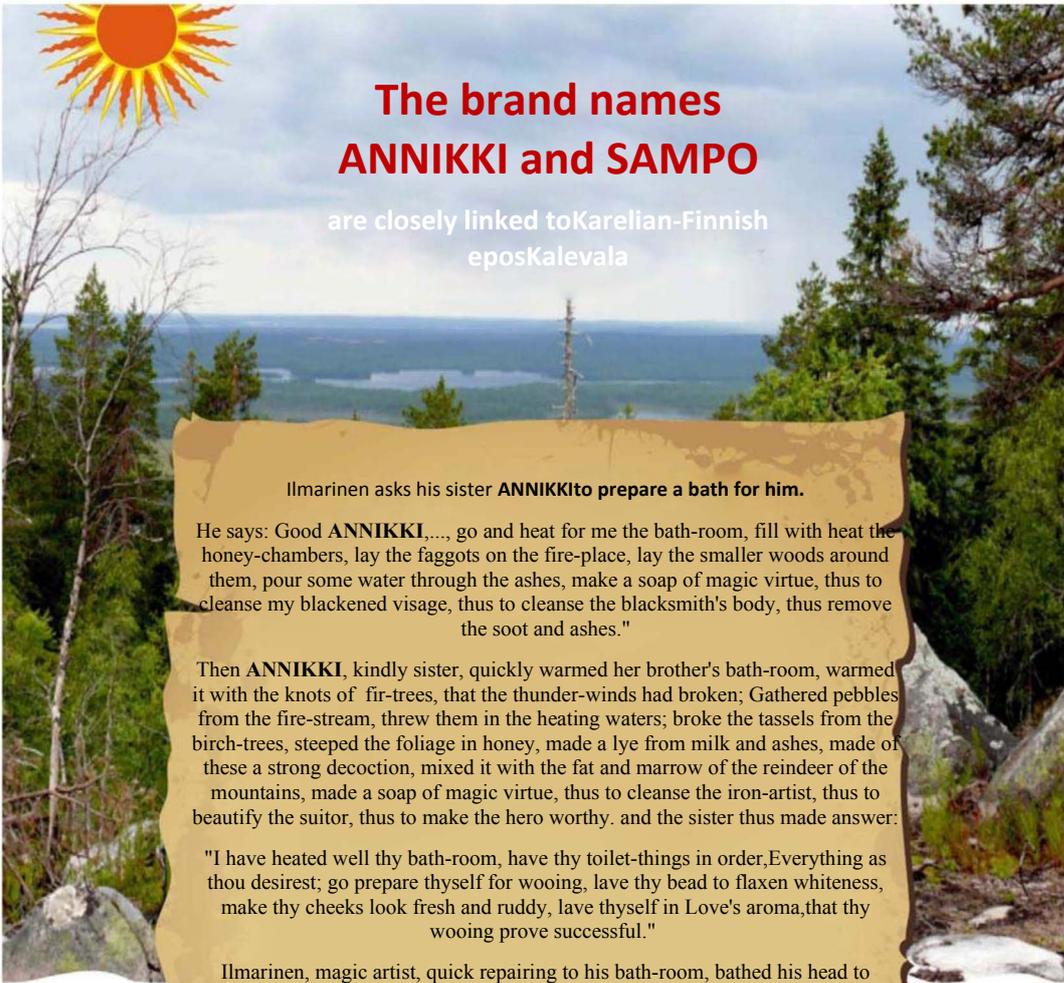
"I have been actively using the heater TEK 3-11 bought some months ago. In general, I enjoy everything! Thank you for the engaging and useful product – well done! There are those who want to buy the same heater from among my friends and acquaintances who visited my steam room..."

Daria Pokrovskaya, CEO of 8 Marta furniture store:

"The heater is a true Godsend for my well-being, it is uplifting, and my skin is really amazing now. The girls and I spend every weekend in the sauna! Annikki is a real treasure".

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## The brand names **ANNIKKI and SAMPO**

are closely linked to Karelian-Finnish  
epos Kalevala

Ilmarinen asks his sister **ANNIKKI** to prepare a bath for him.

He says: Good **ANNIKKI**,..., go and heat for me the bath-room, fill with heat the honey-chambers, lay the faggots on the fire-place, lay the smaller woods around them, pour some water through the ashes, make a soap of magic virtue, thus to cleanse my blackened visage, thus to cleanse the blacksmith's body, thus remove the soot and ashes."

Then **ANNIKKI**, kindly sister, quickly warmed her brother's bath-room, warmed it with the knots of fir-trees, that the thunder-winds had broken; Gathered pebbles from the fire-stream, threw them in the heating waters; broke the tassels from the birch-trees, steeped the foliage in honey, made a lye from milk and ashes, made of these a strong decoction, mixed it with the fat and marrow of the reindeer of the mountains, made a soap of magic virtue, thus to cleanse the iron-artist, thus to beautify the suitor, thus to make the hero worthy. and the sister thus made answer:

"I have heated well thy bath-room, have thy toilet-things in order, Everything as thou desirest; go prepare thyself for wooing, lave thy head to flaxen whiteness, make thy cheeks look fresh and ruddy, lave thyself in Love's aroma, that thy wooing prove successful."

Ilmarinen, magic artist, quick repairing to his bath-room, bathed his head to flaxen whiteness, made his cheeks look fresh and ruddy, laved his eyes until they sparkled, like the moonlight on the waters; wondrous were his form and features, and his cheeks like ruddy berries. These the words of Ilmarinen: "Fair **ANNIKKI**, lovely sister, Bring me now my silken raiment, that my wooing prove successful."

The blacksmith Ilmarinen, after visiting the bath prepared by his sister **Annikki** found a beautiful wife and forged **SAMPO**, a mill of happiness.

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**Annikki electric sauna heaters are the revival of ancient traditions of Finns, Ugrians, Slavs and other northern peoples, who got energy from the red-hot stones to feel sun-kissed despite living in the areas with scanty sunrays.**