

# *Duetto*<sup>®</sup>

Electric sauna infrared emitter

Instructions for installation and use

CE  
Made in Finland

---

# CONTENTS

<b>Delivery includes</b>	3
<b>Technical details</b>	3
<b>Symbol explanations</b>	3
<b>Note before installation</b> Infrared heater controls	4
<b>General safety precautions</b>	4-5
<b>The amount and use of infrared heaters</b>	6
The need for infrared heaters	6
Example of installation	6-7
Placing an infrared heater	7
Infrared heaters for stove sauna	7
Joint use of infrared heaters and sauna stove	7
<b>Adjusting the temperature</b> Placing the temperature sensor	8 8
<b>Ventilation of an infrared sauna</b>	8
<b>Maintenance</b>	8
<b>Installing instructions</b> Installation Installation distances	9 9 10
<b>Electric wiring of infrared heaters</b> Shunt Series	11 11 11
<b>Guarantee</b> Manufacturer's guarantee	12 12

## DELIVERY INCLUDES

**(The right for changes is reserved)**

Infrared heater for stove sauna  
 Mounting screws 4 pcs and covering plugs for screws 4 pcs  
 Instructions for use, care and installation

## TECHNICAL DETAILS

Power	900W
Size	K910xL310xP32mm
Heat	Max 150°C
Glass color	black or grey
Frame	black alder
Wire	3m heat-resistant silicone 2x1, 5mm <sup>2</sup> 
Protection grade	IP 67
Certificates	
Markings	
Nominal voltage	230V – 240V N1 50Hz
Wave length	~ 6,8 - 7,3 micrometers 

## SYMBOL EXPLANATIONS

-  Prompting symbol "Please read instructions for use, care and installation before installing or using the equipment"
-  Prohibiting symbol "The device must not be covered"
-  Duetto® infrared heater for stove sauna is certified  
Infrasauna heater is  marked
-  Unearthed electric device
-  Safety instructions
-  A broken device must be taken to retailer or recycling centre.



**Read instructions for use, care and installation through in full before starting the installation and keep the instructions for further use.**

## NOTE BEFORE INSTALLATION

### Infrared heater controls

Duetto<sup>®</sup> -infrared heater can be used in the same space with a regular sauna stove. Please note the included instructions for use, care and installation. When adjusting the temperature, it is recommended to use a separate control unit. Note that the control unit has its own, separate instructions for use, care and installation and take them into account when installing.

Alternatively, you can use a timer instead of the control unit. The timer must have a bipolar cut-out, so the voltage can be cut out.

## GENERAL SAFETY PRECAUTIONS

Anyone with a physical, mental or sensory disability (including children), or with lack of experience and/or knowledge, must not use this device unless they have a person with them who is in charge of safety or they've had guidance to use the device.

One must see a doctor to clarify the individual and health risks affiliated to the use of an infrared heater. Infrared heater must not be used when drunk or under sedative medication. It is recommended that the infrared heater should not be used within 24 hours after sunbathing. If there is any redness/change of color on the skin because of the infrared heater, and it doesn't clear within 24 hours, the infrared heater must not be used again before the change of skin has been medically diagnosed harmless.

Children must be supervised that they do not play with the device.



**Note:** The whole back of the infrared heater must be mounted to a solid base. The ventilation in the back of the heater must not be blocked.

**The electric wiring shall only be done by a legitimate electrician or company.**

Specifications given by the electric supplier must be followed (EVU) as well as the appropriate VDE – specifications (DIN VDE 0100).



**INFRARED HEATER MUST NOT BE COVERED!**

Covering it causes a hazard of fire.

**Note danger of life:**

Never carry out repairs yourself. The device shall only be opened at the manufacturing factory.

The device shall only be controlled by a control unit or timer suitable for controlling an infrared heater.

The device must be disconnected from the electrical network while installation or repair.

The manufacturer's safety- and installation instructions must be followed.

Take note of the sauna manufacturer's specifications and instructions, too.

**Note!**

Dear Customer

We want to emphasize already, that in the case of any warranty claims an inspection log sheet / a copy of a bill of the Electricity Company or electrician who carried out the work must be provided.

## THE QUANTITY AND USE OF INFRARED HEATERS

The heat that Duetto®-infrared heaters produce, makes you feel good. Placing the infrared heater close to the bigger muscles of the body gives a maximum benefit of the heaters.

One infrared heater/person requires about 50cm space of the bench width all around it. The heaters are placed on the wall mounting them behind the back(s) of the bather(s) and on both sides of the bench. The heater for the legroom is installed in line with the bench under the seat mounting it onto the back wall. In front of the infrared heaters will be installed grills for leaning, on which you can lean on during sauna. Legroom heater doesn't need a grill. Take note of the security and installation instructions provided by the manufacturer while installing the infrared heaters.

A pleasant temperature for an infrared sauna is 60°C. Every bather will find a suitable temperature for themselves by trying.

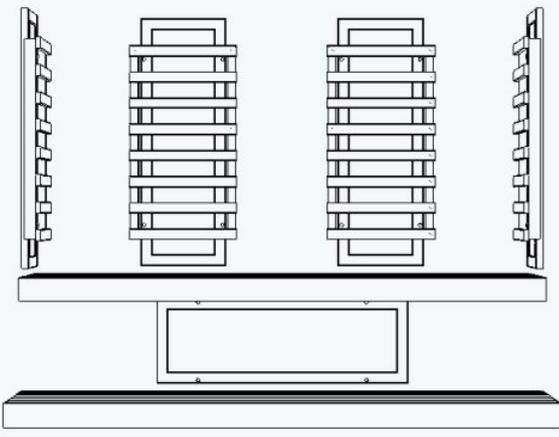
A good time to bathe in an infrared sauna is 30 minutes. Maximum sauna time is one hour at once.

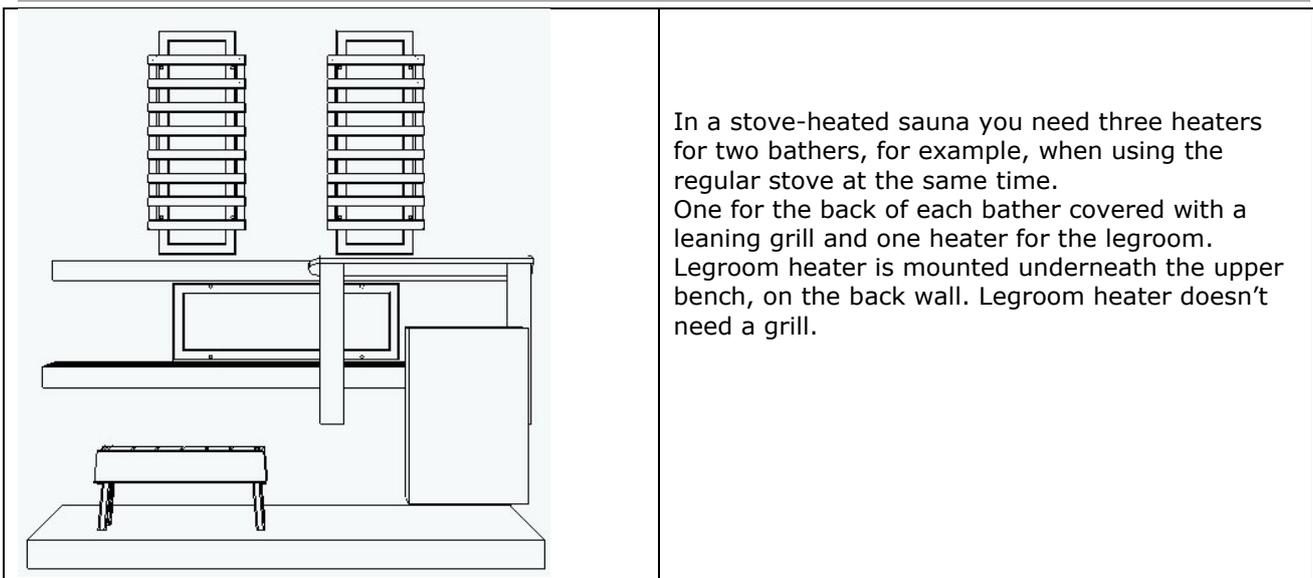
*Infrared sauna evaporates a lot of water from your body. Remember to drink plenty of water.*

### The need for infrared heaters

When determining the quantity of infrared heaters the sauna space must be taken into account. You need about 1kW / m worth of power altogether from the heaters to heat up the space<sup>3</sup>. Any glass or tiled surface adds about 1kW/m to the need of power<sup>2</sup>.

### Installation examples

	<p>When the sauna size is about 5 m<sup>3</sup> and you want to heat it up with Duetto® -infrared heater alone, five heaters is enough.</p> <p>Infrared heaters are placed on the back wall behind the bench on the sides legroom</p> <p>Leaning grills are installed to cover the heaters. Legroom heater is installed underneath the upper bench so, that it is mounted on the wall without a leaning grill.</p>
---	--



In a stove-heated sauna you need three heaters for two bathers, for example, when using the regular stove at the same time. One for the back of each bather covered with a leaning grill and one heater for the legroom. Legroom heater is mounted underneath the upper bench, on the back wall. Legroom heater doesn't need a grill.

### **Placing the infrared heater**

The heaters are placed on the wall mounting them behind the back(s) of the bather(s) and on both sides of the bench. The heater for the legroom is installed in line with the bench under the seat mounting it onto the back wall.

In front of the infrared heaters will be installed grills for leaning, on which you can lean on during sauna. Legroom heater doesn't need a grill.

### **Infrared heater for stove sauna**

If you want, you can heat a stove sauna with infrared heaters. In this situation the need for heaters is calculated by the cubic capacity of the sauna.

When the sauna is heated with a stove you need a minimum of one infrared heater per bather. To enhance the effect of the heat you can install infrared heaters to the legroom and on the sides of the benches when possible. Preheat the sauna with the stove to approx. 50°C. Turn on the infrared heaters and enjoy the beneficent heat.

### **Joint use of infrared heaters and sauna stove**

The heaters are placed on the wall mounting them behind the back(s) of the bather(s) and on both sides of the bench and to the legroom. The heater for the legroom is installed in line with the bench under the seat mounting it onto the back wall.

In front of the infrared heaters will be installed grills for leaning, on which you can lean on during sauna. Legroom heater doesn't need a grill.

Take note of the security distances of the stove when installing the infrared heaters.

A pleasant temperature for a combination sauna is 70°C. Every bather will find a suitable temperature for themselves by trying. In a combination sauna you can throw water on the stove and enjoy the infrared heat simultaneously.

*Infrared sauna evaporates a lot of water from your body. Remember to drink water.*

## ADJUSTING THE TEMPERATURE

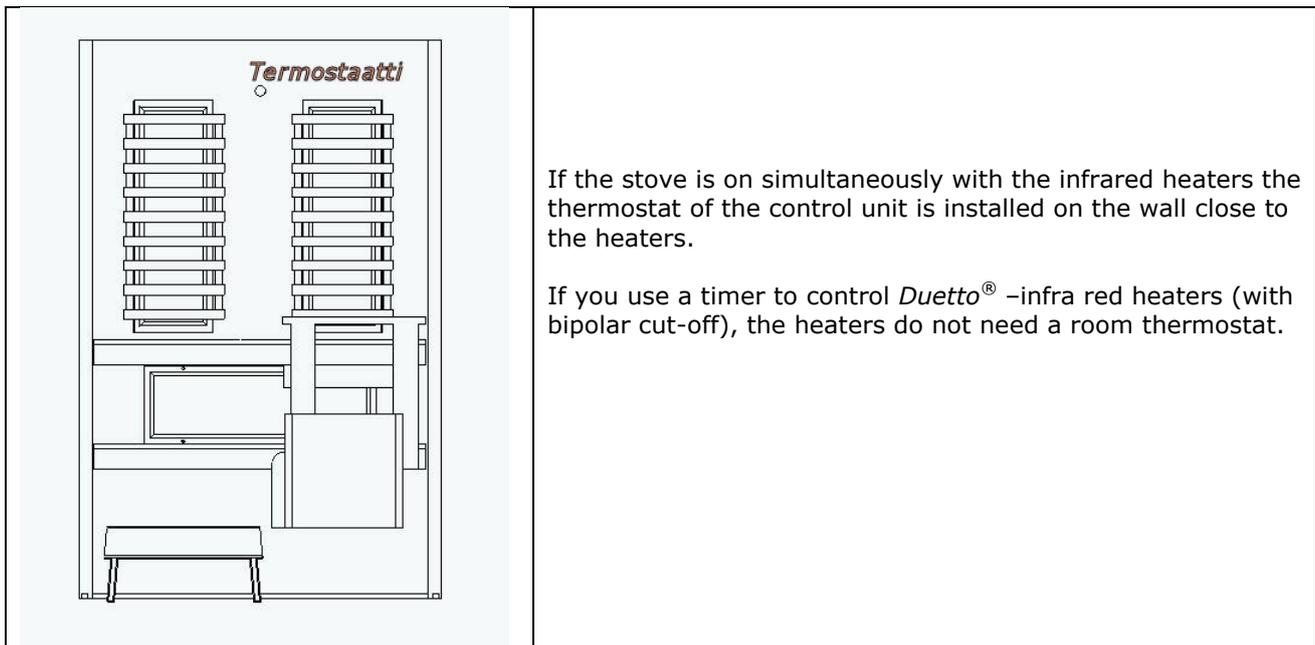
The temperature in the infrared sauna is adjusted with a control unit or timer suitable for controlling infrared heaters. Follow the control unit or timer manufacturer's instructions for installation and use.

The timer must have a bipolar cut-out, so the voltage can be cut out.

### Placing the temperature sensor

When you use a control unit to control the temperature in an infrared sauna the manufacturers instructions for installation and use must be followed.

If you use a timer that defines how long the heaters are on you do not need a temperature sensor.



*The electric wiring shall be carried out by a legitimate electrician or a company following the appropriate specifications of the electricity trade.*

## VENTILATION OF AN INFRARED SAUNA

You must take care of sufficient ventilation when using infrared heaters to get enough fresh air into the room. When the infrared heaters stay hot they provide nice warmth during the whole sauna session.

## MAINTENANCE

Duetto<sup>®</sup> – infrared heater doesn't require any other maintenance apart from cleansing. The cleaning can be carried out with a cloth and mild detergent.



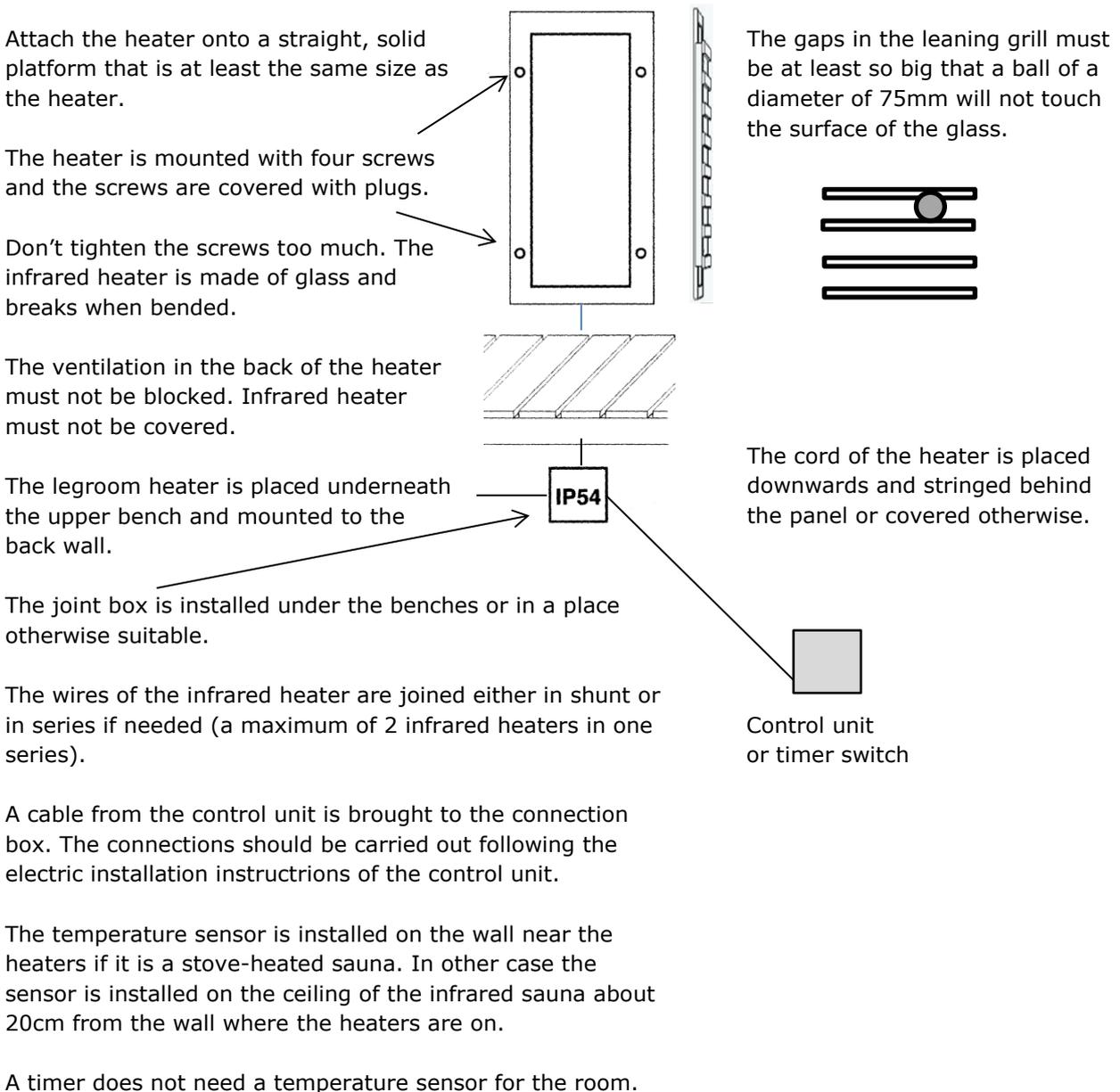
### **During cleaning the device must be disconnected.**

Before turning the heaters on, make sure they are not covered and that they are in good condition.

**INSTALLING INSTRUCTIONS**

1. Check the product in case of any damages from the transport.
2. Attach the infrared heater following the instructions. Pay attention to installing the screws, covering plugs and casing the visible parts of the silicone cable.
3. Perform the electric installations. The electric wiring shall be carried out by a legitimate electrician or a company only following the appropriate specifications of the electricity trade.
4. Make sure that the infrared heater is functioning normally and securely.
5. Install the leaning grill.
6. If the infrared heater is damaged it shall not be installed or used.

**INSTALLATION of the infrared heater**



---

**Installation distances**

Infrared heater can be mounted onto a wooden surface directly from its back and edges.

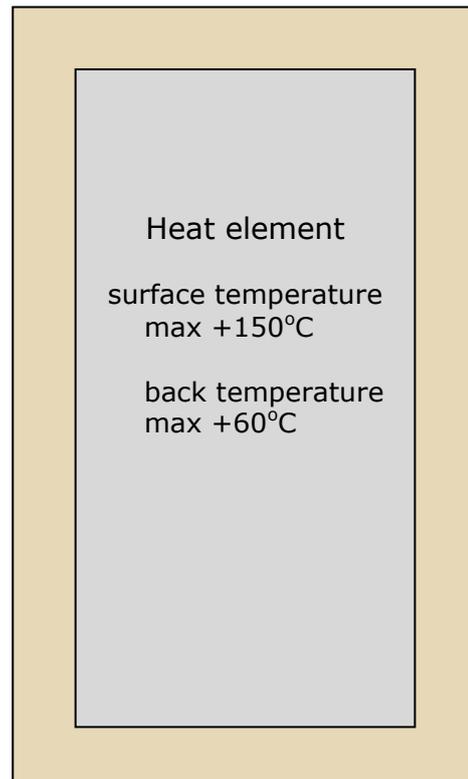
The safety distance between hot front part of the infrared heater and flammable material is 5mm

Infrared heater must not be covered.

The ventilation in the back of the heater must not be blocked.

Area without heat elements 20 mm  
in each corner

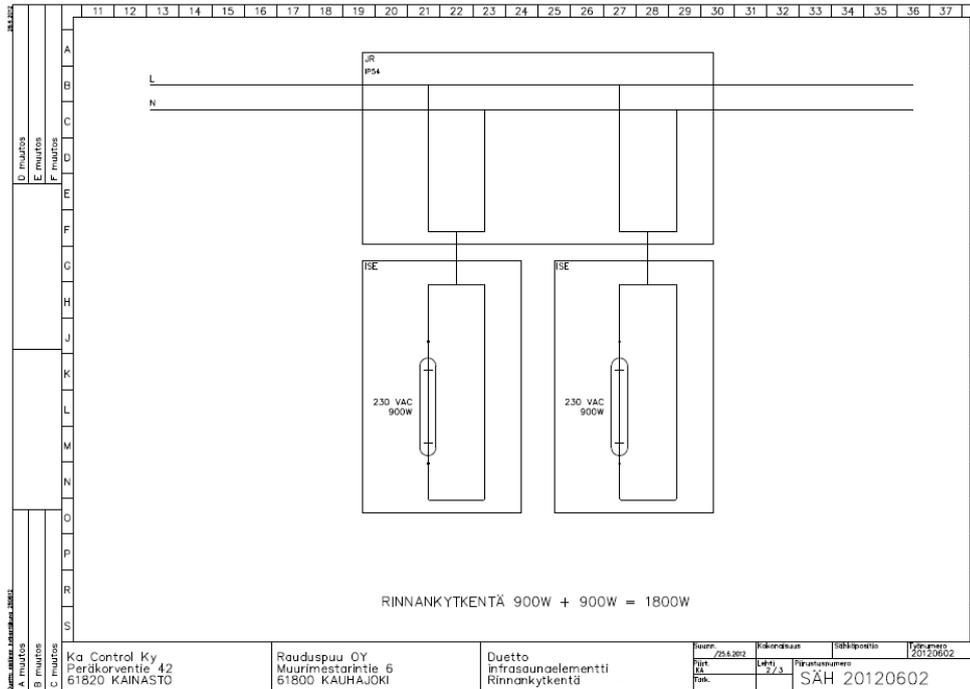
Infrared heater  
glass edge temperature max 80°C



**ELECTRIC WIRING OF INFRARED HEATERS**

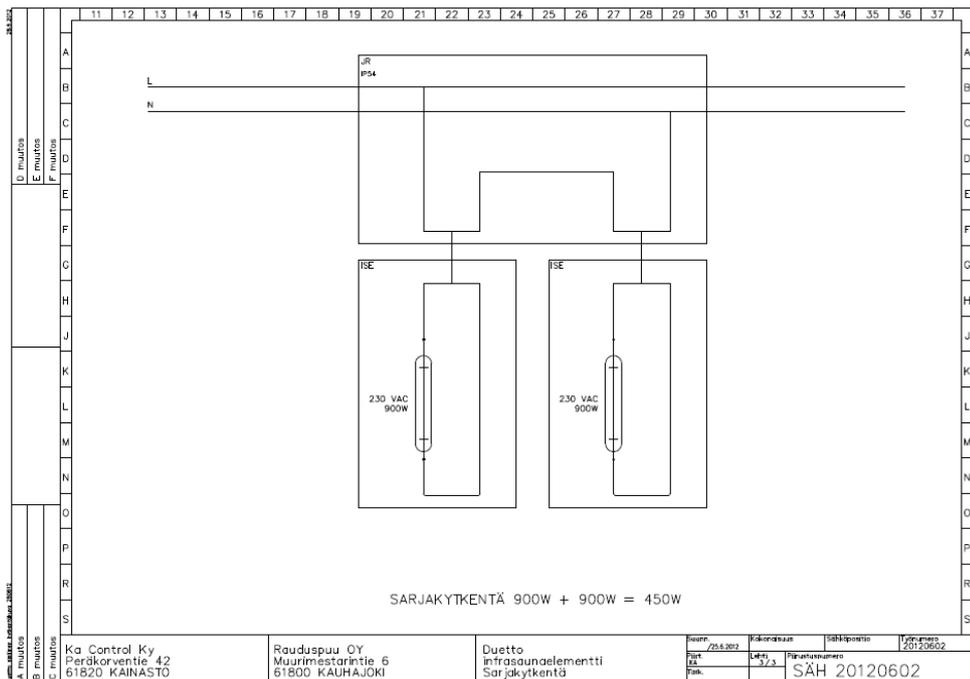
When performing the electric wiring the infrared heaters can be connected in two different ways - either shunt or series.

**Shunt**



**Series**

If two heaters are connected in series the fuse size needed is reduced.



---

## WARRANTY

The warranty is consistent with currently existing specifications.

### **Manufacturer's guarantee**

- This warranty clause is followed between Rauduspuu Oy (later "Manufacturer") and the other party (later "Client") considering the products provided by the Manufacturer, unless otherwise specifically agreed in writing in the agreement. This warranty clause supersedes all the general terms used by the client considering the matters regulated in this warranty clause. The warranty only applies on products sold and used in Finland.
- The Manufacturer guarantees, that the product matches the specifications agreed and is suitable for its ordinary use. The warranty covers possible defects of production and material. The Manufacturer is not responsible for defects that are due to normal tear and wear or due to the character qualities of the wooden parts.

The guarantee is valid for 12 months when used commercially and 24 months in private use. Guarantee time starts when the product has been delivered to the final user. The Manufacturer is not, however, in any way responsible for defects that appear over two (2) years after delivering the product to the Client. The warranty receipt is the receipt from the retailer or a report from a legitimate electrician/company/measurement report.

- The buyer must take care of the product carefully. When receiving the product, the buyer must make sure it has no defects due to transportation or storing. The Manufacturer is not responsible for product defects, malfunctions or deficiencies that are caused by transportation or false storing, installation or use against the manufacturer's instructions or using in a space where the conditions do not comply the manufacturers recommendations.
- If the device is altered or the instructions of use provided by the manufacturer are not followed without manufacturer's distinct approval, any warranty is invalid.
- The manufacturer can choose to fix a defected product or deliver a new product to the client to replace the defected one. The warranty does not cover possible detaching and installation costs or other similar costs. A broken product must be returned on manufacturer's request and cargo cost.
- When making any warranty claims both the serial number and the type number must be provided along with a probative error description.
- When a defect or an error appears the buyer must notify it promptly. Notification can be delivered to the retailer, assigned fitting company or the manufacturer.
- The manufacturer is not in any conditions responsible for indirect losses such as loss of productivity, business profit, contracts, benefit of use or decrease in revenue.
- These terms are valid for the time being since 1.1.2016.

Selling date:

Retailers stamp and signature