



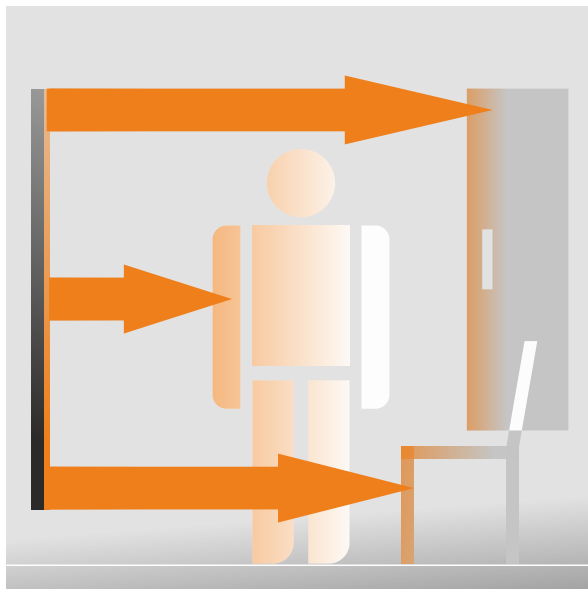
FIRST
Heating
Systems

CEINFRA

Far
Infra
Red
Saving
Technology

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Infra





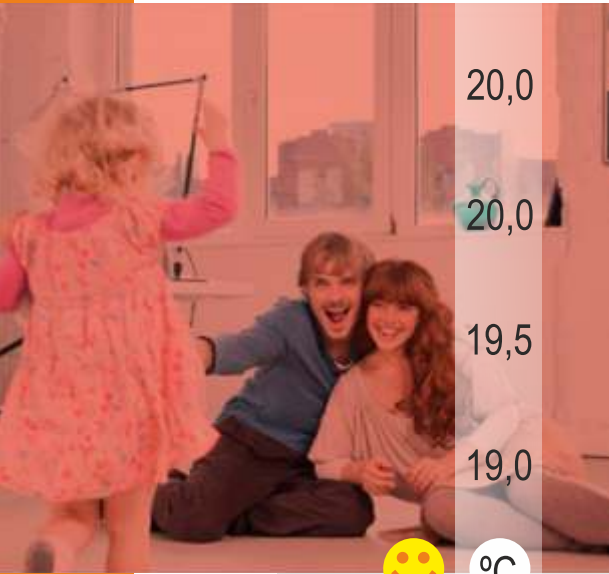
We are a Czech family business manufacturing developing and selling glass and mirror infrared electric panel heating systems. From our beginning in 2017 up until now, we make sure that our products have a modern design, high thermal efficiency and the best possible overall quality.

FIRST Heating Systems panels are a modern, fully-fledged, and energy-saving heating solution for homes (family houses, apartment houses, holiday cottage, etc.) and all kinds of businesses (offices, canteens, medical institutions, production operations, etc.) where they with their elegant and modern design not only heat up but also decorate the living and working spaces. Our infrared electric panels can be used as the main heating system, but also as an addition to already existing systems (e.g. in bathrooms).

We are the exclusive manufacturers and distributors of glass radiators.

Everything is made in the Czech Republic.





FIRST Heating Systems – infrared heating

In a room infrared electric panels primarily heat up walls, furniture and the floor, which store the heat inside and in turn heat up the surrounding air. Objects heated up this way are pleasant to the touch and make one feel right at home. This effect also allows the infrared electric panels to heat up rooms by 2 °C less than with conventional heating systems.

With FIRST Heating Systems infrared electric panels the heat is spread evenly from the bottom of the room to the ceiling. The walls, while heated up and dried out, are less prone to get moldy. Using the infrared electric panels the difference in temperature between the floor and the ceiling is 1 to 2 °C at maximum, which leads to increased thermal efficiency and a decrease in upkeep costs.

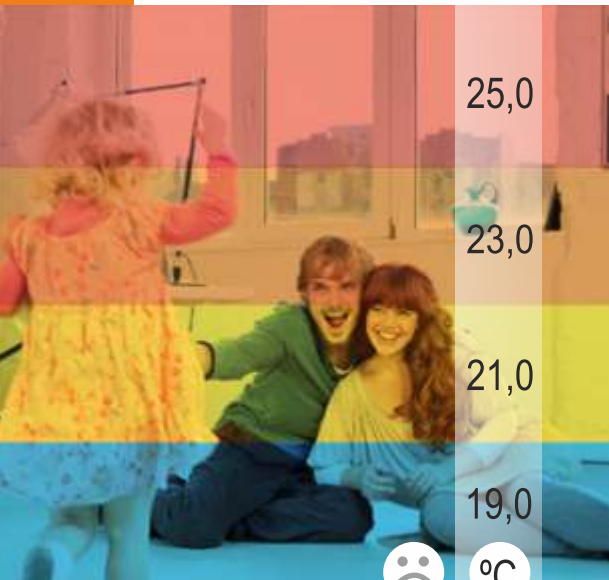
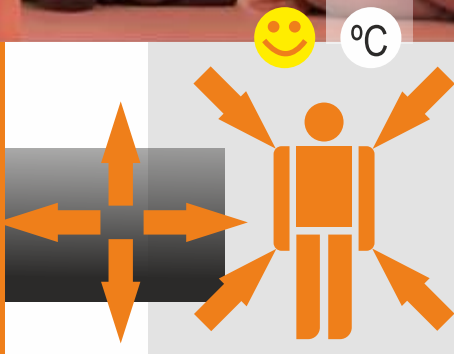
Clean environment

With radiant heating, the costly air circulation is not present as with conventional heating systems. Limiting the air circulation with a more even distribution of temperature throughout the air in the room helps with the overall cleanliness and reduces the dustiness, which suits mainly allergic individuals. Adequate air humidity aids in boosting one's immune system.

Infrared rays permeate the air and heat up objects without drying out the air, which then keeps its natural humidity and so is more suitable and pleasant to breathe (conventional heating systems dry out the air).

Heating with infrared rays dries out the walls and prevents the growth of mold.

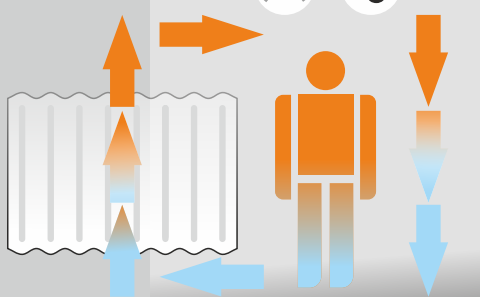
FIRST Heating Systems infrared electric panels don't make any noise.



Standard heating systems – air circulation

Conventional heating systems primarily heat up the air in the room, which then heats up other objects and walls. The temperature in such rooms is significantly lower on the floor. The temperature difference between the floor and the ceiling reaches up to 7 °C because hot air always quickly rises to the top.

This causes unnecessary heat loss in the room.





Technology

FIRST Heating Systems heating panels are electric appliances.

The heating element of said panels converts up to 98% of electrical energy to heat energy, which is radiated in infrared rays to its surroundings. Emitted infrared rays heat people and objects in the room first, afterwards, they heat the air. With that, it can provide the ideal living conditions even at low temperatures (18-20 °C).

Infrared radiation (IR) of FIRST Heating Systems is the same form of radiation as from the sun. Radiated heat imitates the sun's heat and not only does it heat the skin but, like sun rays, it penetrates into deeper tissue.

Infrared radiation is part of the electromagnetic spectrum between visible light and microwave radiation. Its effects benefit the human body both physically and mentally.

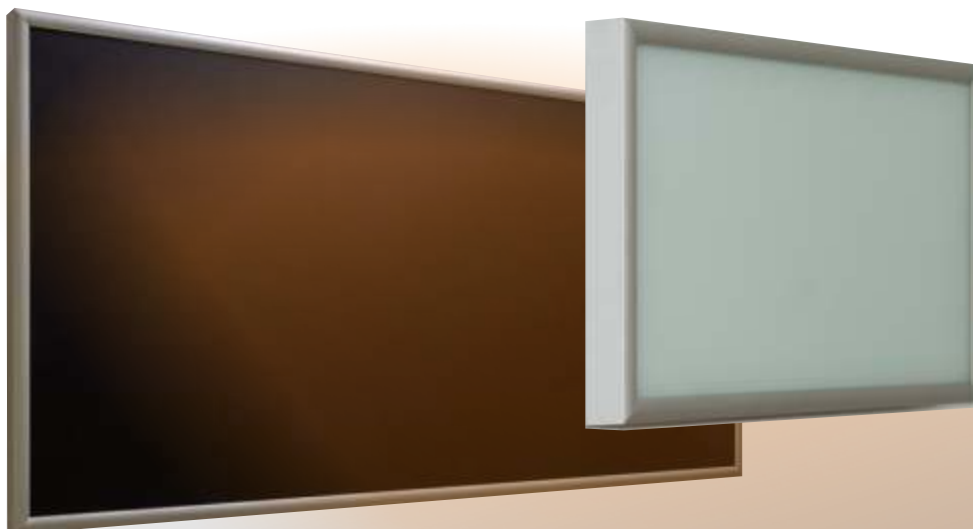
Infrared radiation is commonly used in medical practice – to improve blood flow, optimize blood circulation and help the transport of oxygen inside the body, decrease stress levels, increase well-being...

Infrared radiation is harmless.

About our product

FIRST Heating Systems infrared electric panels are designed to be a fully-fledged main source of heating. Most of the other currently available infrared electric panels have a surface temperature of 80-110 °C. FIRST Heating Systems infrared electric panels have a surface temperature of 130-155 °C and are one of the most efficient currently available infrared radiators. Increased surface temperature is a significant factor affecting the rate of radiation of heat inside the room. You will feel the heat just minutes after turning on the system.

The best materials for heat radiation are objects made of glass and ceramics. The front side of the panels is made from high-quality Czech tempered glass ESG. The tempered glass has rounded edges and corners for safety. The core of infrared electric panels is a unique heating element developed exclusively for FIRST Heating Systems in Germany. It has great thermal properties and a long lifetime. Thanks to this heating element with an aluminum layer and its combination with a special type of isolation the heat is radiating forwards into the surroundings and not into the wall in the back as it commonly is with other similar products. With this, the highest possible effectivity is ensured. Every infrared panel has a safety resettable fuse for maximum safety.



Elegant frameless panel



Frame panel



Lighting panel



Picture panel



Mirror panel



Mounting kit (holders)



Rug holder – simple installation, can be attached anywhere on the glass of the infrared panel.
Awarm rug – what more could you wish for.





FIRST Heating Systems infrared electric panels

Panels of the infrared radiators FIRST Heating Systems are power supplied by the common outlet voltage 230 V with input power from 230 W up to 1300 W and with dimensions in the range from 300 x 600 mm up to 1500 x 600 mm. It is possible to have custom-made panels with an input power of up to 3000 W.

Basal color variants – dim white, shiny white, dim black, shiny black

We are able to make infrapanel in any color with any picture motive.

F

Frame-infrared heating panel

Framed infrapanel, the front is made of elegant and clear safety glass with a designer elox frame. The frame can have different color combinations. The width of the panel is 58 mm.

E

Elegant-infrared heating panel

Frame-less infrapanel, the front is made of elegant and clear safety glass with rounded edges. The width of the panel is 28 mm.

P

Picture panel-infrared heating panel

Infrapanel with a picture on the front, the front is made of elegant and clear safety glass with a motive, logo, etc. of your choice. Can be with or without a frame.

M

Mirror panel-infrared heating panel

Infrapanel with a front made of elegant and clear safety mirror. Can be installed in a bathroom (IP54). Can be with or without a frame.

L

Lighting panel-infrared heating panel

Infrapanel that have a light source as the front can be applied on any of the previous types of infrapanel. Can be with or without a frame.

I

Installation

FIRST Heating Systems infrared electric panels are ideal for installation both on the walls and on the ceiling on a variety of materials e.g. wood. They can be installed using the mounting kit included in each package with the infrapanel. The kit contains holders, dowels, screws, bolts, a wrench, and a stencil for precise drilling during the installation. For the installation, only a drill and a borer are needed.

All infrapanel have an IP54 rating, and can be installed in a dusty and humid environment. Infrapanel can be also hung on the ceiling. With the dimensions infrapanel have they fit precisely into a dropped ceiling so that they blend in with the existing interior and don't take up any space whatsoever.

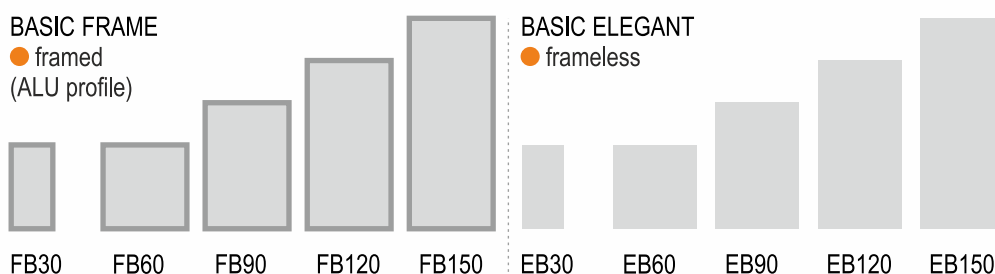
A

Accessories

To go with FIRST Heating Systems infrared electric panels there comes a wide variety of external thermostats, be it wired, wireless, or wi-fi. We recommend wireless outlet thermostats from SALUS. One wireless thermostat is able to connect to and manage up to 6 receivers.



Technical specifications of FIRST Heating Systems infrared electric panels



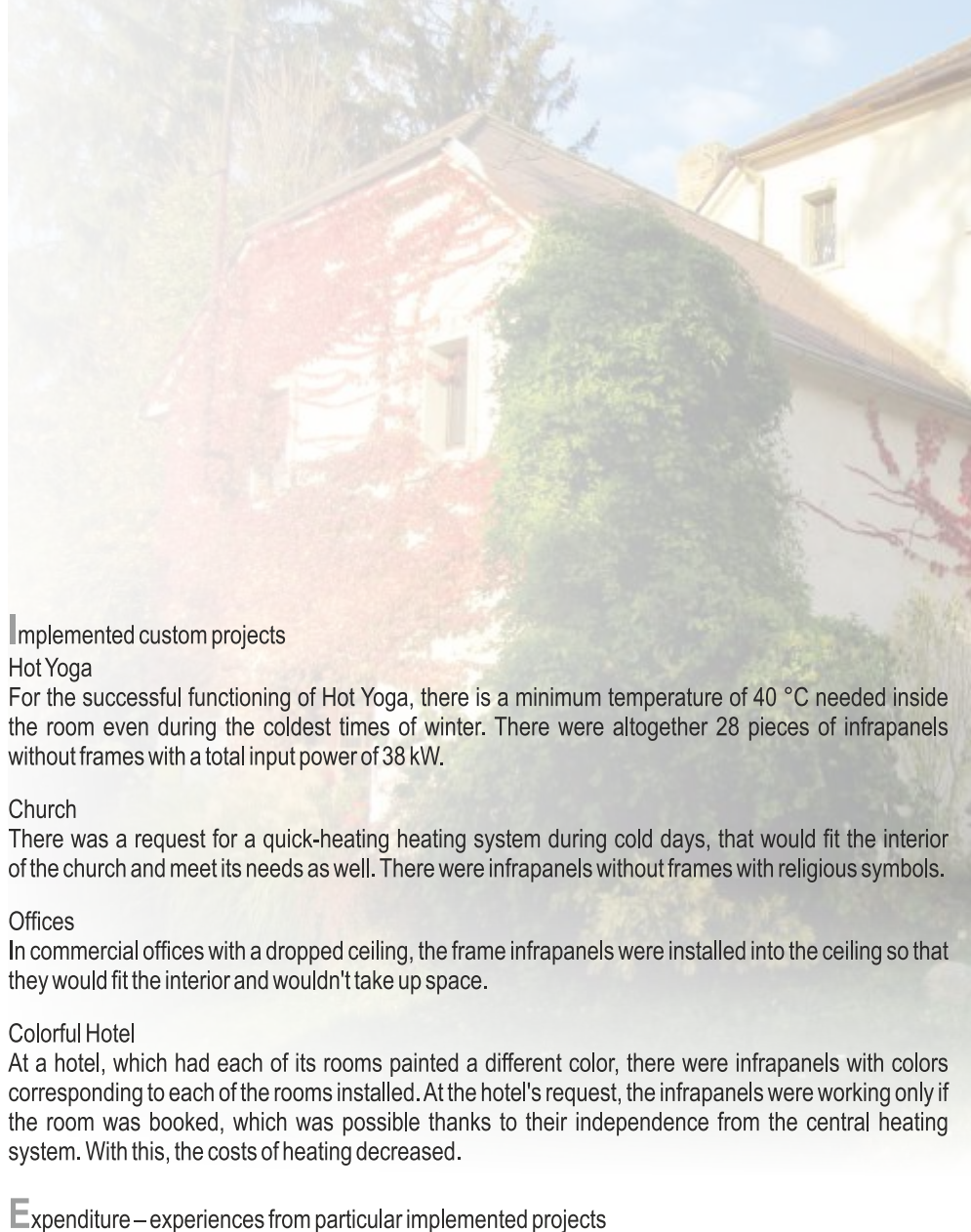
Panel type	30	60	90	120	150	30	60	90	120	150
Length (mm)	296	596	896	1196	1496	292	592	892	1192	1492
Width (mm)	596	596	596	596	596	592	592	592	592	592
Height (mm)	35	35	35	35	35	28	28	28	28	28
Input power (W)	230	500	800	1000	1300	230	500	800	1000	1300
Load current (A)	1,0	2,2	3,5	4,4	5,7	1,0	2,2	3,5	4,4	5,7
Weight (kg)	4,2	7	9,9	12,7	15,5	4,2	7	9,9	12,7	15,5
Surface temperature 1	150 (temperature °C front side of the heater)									
Surface temperature 2	75-90 (temperature °C rear side of the heater)									
Thermoregulation	ne									
Voltage supply (V AC)	230									
Frequency (Hz)	50-60									
Fuse	Against overheating of the cable									
Power cord	A connecting cord with silicone isolation 3×1, lenght 2 m, ended with a plug									
Glass	Tempered safety glass, float 4 mm									
Glass with printing	Tempered safety glass, float 4 mm, ESG, ceramic printing resistant to scratches and humidity									
Back cover	Straight dural metal sheet									
Certificate	EMC-B-00600-19, LVD-B-00599-19, Report of examination 31-10302/IP, Final report 31-10302/EZ									
COP	2,5									
IP rating	IP 54									
mounting	Wall, ceiling									

* Coefficient of Performance

Recommendation for managing heating power

For effective management of heating power and room temperature, it is essential that there is a thermostat (Accessories), or any other temperature regulating device used alongside the panel.





Implemented custom projects

Hot Yoga

For the successful functioning of Hot Yoga, there is a minimum temperature of 40 °C needed inside the room even during the coldest times of winter. There were altogether 28 pieces of infrapanel without frames with a total input power of 38 kW.

Church

There was a request for a quick-heating heating system during cold days, that would fit the interior of the church and meet its needs as well. There were infrapanel without frames with religious symbols.

Offices

In commercial offices with a dropped ceiling, the frame infrapanel were installed into the ceiling so that they would fit the interior and wouldn't take up space.

Colorful Hotel

At a hotel, which had each of its rooms painted a different color, there were infrapanel with colors corresponding to each of the rooms installed. At the hotel's request, the infrapanel were working only if the room was booked, which was possible thanks to their independence from the central heating system. With this, the costs of heating decreased.

Expenditure – experiences from particular implemented projects

To determine the current expenditure we cannot look at just the input power because the infrapanel, managed by a thermostat, heats differently according to the outside temperature. We need to also take the type of building and its insulation into account.

New Building

The owner of the new building with a space of 207 m² was considering getting a ground-to-water heat pump with a heated floor. With this, he would have an energy consumption of 5736 kWh. With infrapanel he had an energy consumption of 4781 kWh from 2016 to 2017. That is a 16.6% difference in energy conservation. The customer also saved a total of 382360 Kč on the acquisition costs.

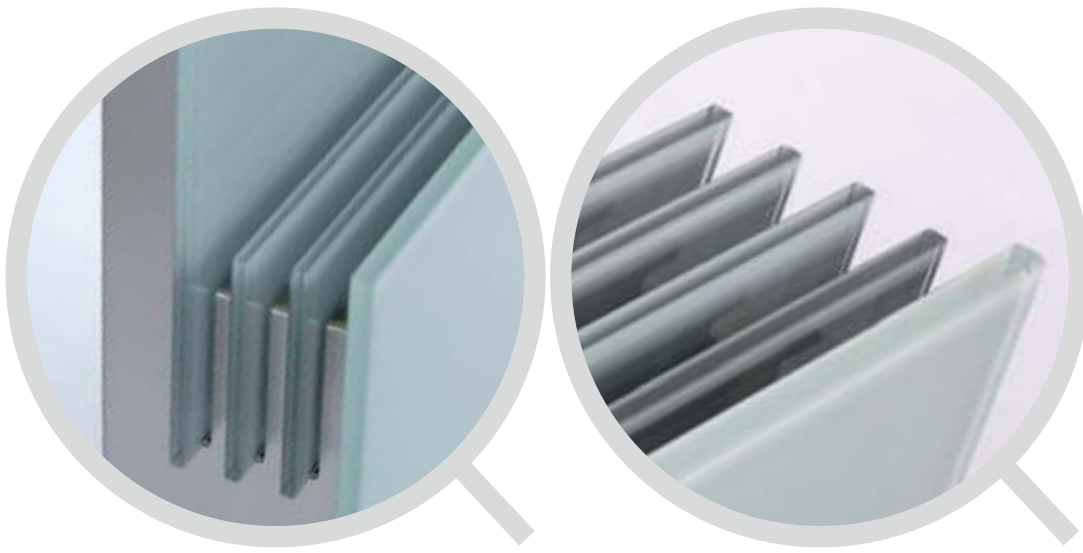
Building after reconstruction

The building in question, built in the 1930s, is currently used by two families. The owner had made a total reconstruction including window and electrical circuit replacement along with other changes. For heating, he chose FIRST Heating Systems infrapanel. Even though the house is situated near mountains where the temperatures are lower, the heating system allowed him to heat up any of the rooms in his house regardless of the season. The building's heated space was 200 m² and over the whole year, the energy consumption of the infrapanel was 5910 kWh.

An old mill

Window, isolation, rooftop, and surrounding wall replacement would be too costly for the owner of the old mill. A different, cheaper solution was the infrapanel with a high surface temperature and low input power. The residents of this historical building are most satisfied with FIRST Heating Systems infrared electric panels. Even though the building with five great rooms including the bathroom and the kitchen being heated has high heat losses, the energy consumption is unbelievably low. In winter (December, January, and February) the total energy consumption was a mere 4141 kWh while living comfortably without restraints.





Glass radiators

We are the exclusive manufacturers and distributors of glass water radiators. The combination of lacquered glass and metal (in compliance with the RAL color chart) is a timeless design. The revolutionary glass radiators are suitable for both modern interiors and old buildings. Aside from the default models, a radiator of atypical dimensions or appearances can be custom-made according to customers' requests.

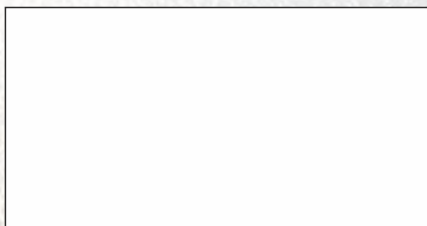
There are three types of glass radiators available:

For wall mounting, standing on the floor, and for bathrooms with additional handles. These radiators are very safe, the surface temperature of the cover never exceeds 43 °C. All glass parts are made of hardened safety glass. They use heat exchangers, which ensure a high energy efficiency even at low water temperatures inside 45-50 °C. In comparison with conventional radiators, glass radiators work with a very small volume of water and a big upside is the almost immediate heating. It is also possible to attach the glass radiators to the old heating system with higher working temperatures.

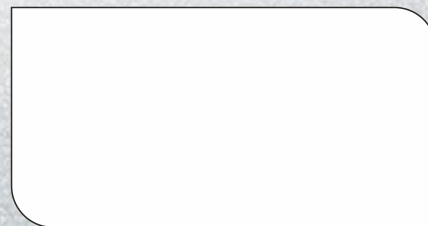
The installation is very simple, the back frame is attached to a wall with 4 screws, and the glass radiator is mounted on this frame without the use of any tools. The attachment armatures and regulation functions are the same as with conventional radiators.

There are four wall-mounted glass radiators available:

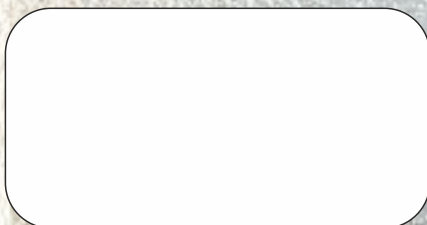
Quadro



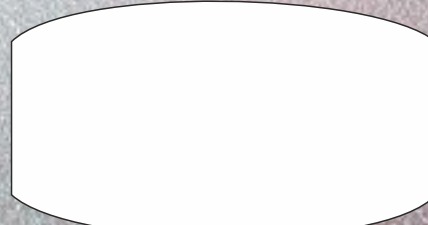
Rengulo

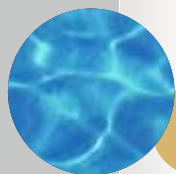


Elipse

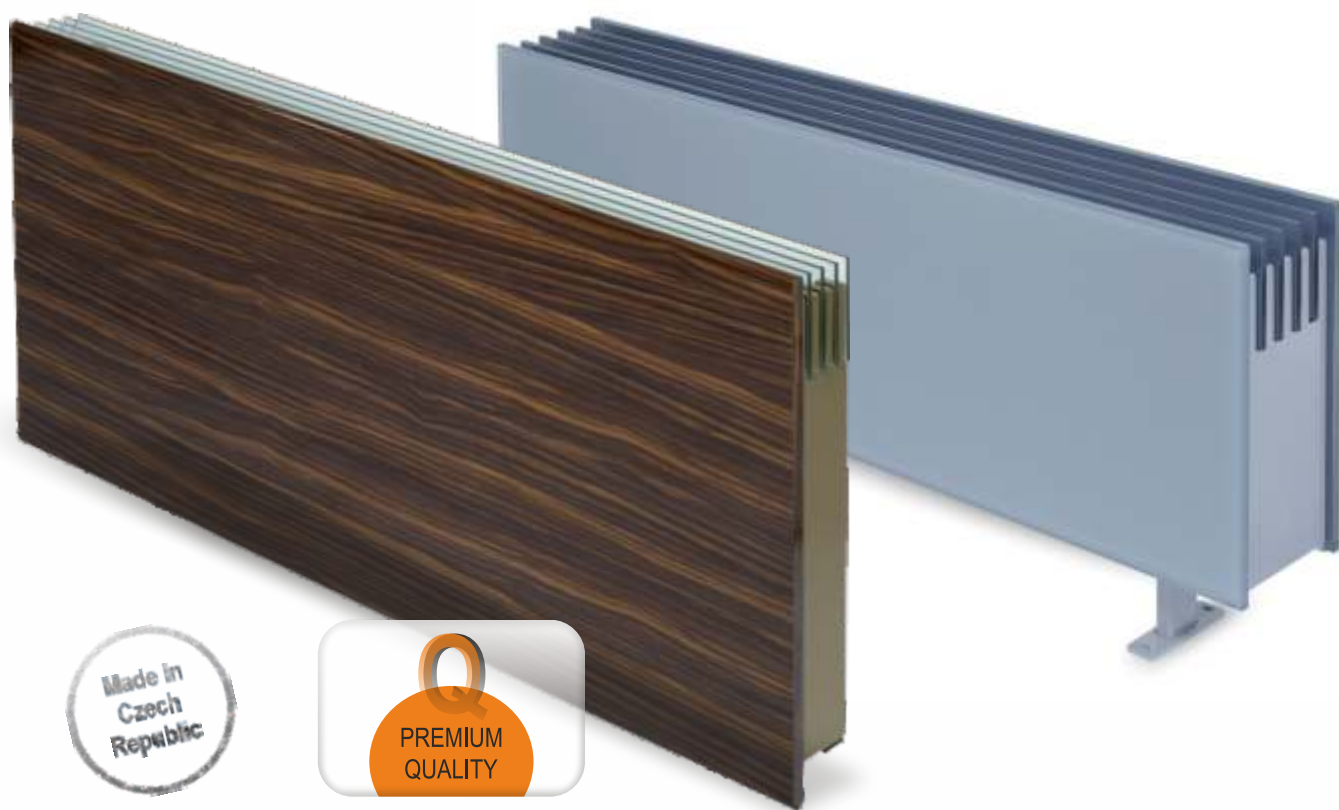


Arco





Possibility of choosing any colors or motives



FIRST Heating Systems s.r.o.
Sokolovská 668/136d
Praha 8, Karlín
Czech Republic

☎ +420 775 462 636
✉ info@firstheatingsystems.com
<https://firstheatingsystems.com>

