



# Infrared Heaters

highest efficiency –  
perfect heating  
to save energy costs



## our roots are in europe, our market is the world

### organisation

INFRAPOWER manufactures and distributes infrared panels of the highest efficiency. Guided by the belief that infrared is the most efficient and therefore energy and resource saving way of heating, INFRAPOWER developed in cooperation with German technicians, technologies and production processes in order to serve the increasing demand for this new way of heating.

Our success is based on the honest, direct and fair cooperation with customers, colleagues, suppliers, partners and the public. Our products are superior to the competition in price and efficiency due to constant innovation.

Our commitment to excellence and continuous improvement, ensures the quality of our products and the satisfaction of our customers.

Our mission is customer satisfaction.

INFRAPOWER's business concept includes all steps in the value adding process that begins with sourcing raw materials and ends in private homes and many other applications.

The infrared panel demand is growing internationally and it is important for INFRAPOWER to meet local demands on an international level. This has resulted in the establishment of our own warehouse in the heart of Europe. INFRAPOWER's large distribution centre in Vienna (Austria) enables us to send even small orders all over Europe fast and efficiently.

### sustainability

Manufacturing thousands of infrared panels every year through our operations is part of our everyday life.

INFRAPOWER has its active part and has deployed policies and guidelines in the environment, risk management, safety, health and other welfare issues.

INFRAPOWER has a rigorous health, safety and environment policy. This is the foundation of our management control systems (MCS), strategies, audits, objectives and activities which ensures that we always take the right decisions in any part of our operation.

We are committed to continuous improvements in our policies. INFRAPOWER aims at being on the forefront of developments and drives these issues at all locations where we operate. INFRAPOWER's focus on globalisation and growth also includes a responsible sourcing. We only work with suppliers that meet INFRAPOWER's core values and working principles.

### our certificates



head office, china



## infrared – inspired by nature

The warm rays of the sun have enabled life on our planet. The warmth we feel in the sunlight, but also in front of a fireplace or a stove, is infrared radiation. On a winter day the cool air does not bother us as long as the warm rays of the sun reach us directly. Infrared radiation overcomes the distance between the sun and the earth nearly losslessly and turns into heat once hitting surfaces. As opposed to UV or X-ray radiation, the long-wave infrared-C range particularly has a positive impact on human well-being.

### technology

INFRAPOWER infrared heaters use the principle of solar radiation and provide comforting warmth to every room. A specially developed carbon fiber material transforms electricity into longwave infrared-C radiation. This radiation does not need air to transport the heat but permeates it nearly lossless and turns into heat wherever it hits objects, walls and ceilings. These store the heat and release it evenly into the room. Thus the walls are always warm and dry.

### effect

Human's well-being depends primarily on the ambient air temperature and the temperature of the surrounding surfaces (walls, floor, ceiling).

With warm surfaces, such as those produced by INFRAPOWER infrared heaters, you feel thermal comfort already at much lower ambient air temperature. So it is possible to save energy already at each "venting", because the fresh air must be heated less. The heat is stored in the walls.

#### Conclusion:

With INFRAPOWER infrared heaters you create perfect comfort considerably healthier and cheaper than with hot air.

- > dry walls and the creation of mold or condensation is avoided
- > increased humidity
- > no dust circulation
- > increased blood circulation
- > strengthen the immune system

### perfect comfort



With INFRAPOWER's infrared heaters it is possible to heat according to your individual needs. Due to its high flexibility the panels radiate

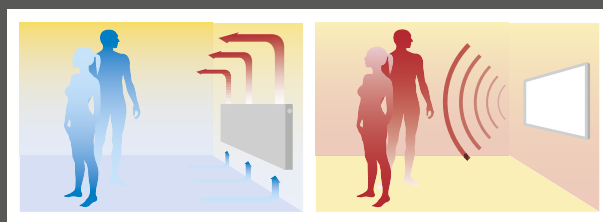
comfortable heat, permanently or temporarily, exactly when and where it is needed.

### the principle of conventional heating systems

Conventional heaters operate on the principle of convection. They give off their heat to the cold air near the ground. The warm air rises, accumulates at the top of the room and finally falls down again along the cold walls. This results in the typical dry air ventilation that stirs up dust and bacteria and provides a hot head and cold feet.

Conventional heating systems are expensive to purchase, require an expensive installation, an elaborate pipe-system and often even an additional space for fuel storage. Due to their size they waste valuable living space.

### the INFRAPOWER-effect



Conventional heaters mainly heat the surrounding air, resulting in high air ventilation. The hot air will stay at the ceiling and the heat will be distributed unevenly.

With infrared heaters the infrared radiation is distributed uniformly in the room and absorbed by objects and walls. This creates an overall cozy and comfortable feeling of heat.

## advantages

### economical to purchase



INFRAPOWER infrared-heaters are up to 50% cheaper than conventional heating systems. Highest quality components are assembled in order to produce an infrared heater with virtually unlimited lifetime.

### easy to install



INFRAPOWER infrared-heaters do not require expensive piping, a socket is sufficient. The installation is done with screws to the wall, ceiling or mobile with the optional floor stands. Thanks to its timeless elegant design, the only 2.5 cm thick panels integrate harmoniously into any living area.

### comfortable to use



In combination with optional room thermostats, INFRAPOWER infrared-heaters provide perfect heat according to your needs. Even within a single room several different thermal comfort zones can be generated.

### economical to run



INFRAPOWER infrared-heaters convert 100% of the energy consumed in comfortable warmth. They heat up quickly and accurately – without any service and maintenance costs. The walls remain dry and the insulation properties are improved in the long term.

### essential for a comfortable and healthy indoor climate



INFRAPOWER infrared-heaters promote a dust- and bacteria-free air, preventing the unpleasant dry breeze of convection heating. They keep the masonry work free of mold and operate completely silent. The temperature is evenly distributed throughout the room. No more cold feet and hot heads.

### eco-friendly



INFRAPOWER has a common environment policy for the implementation and execution of environmental issues. INFRAPOWER's infrared heater in combination with clean energy or photovoltaic systems are a perfect contribution to protect resources and the environment. No components include heavy metals (such as lead) or PVC which are harmful to the environment.



## applications



### range of applications

#### COMPLETE HEATING

Especially where the costly installation of central heating must be avoided or is not possible.

#### TRANSITIONAL HEATING

If the existing heating system is not or no longer in operation or works too slowly.

#### SECTIONAL HEATING

For targeted heating of individual recreation areas without having to heat whole rooms.

#### ADDITIONAL HEATING

Wherever the existing heating system is insufficient.

### planning

Proper dimensioning is essential for the satisfactory operation of a heater. The heat demand assessment is carried out by architects and engineers. Nevertheless the heat demand assessment for individual rooms can be estimated on the following benchmarks\*:  
Use as complete heating: 40-60 Watt/m<sup>2</sup>

\* depending on construction and insulation, with an average ceiling height of 2.5 m.



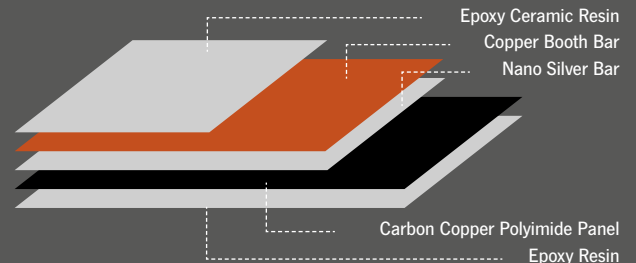
## technology

### the difference

INFRAPOWER has developed the most advanced technology for infrared panel heaters. INFRAPOWER is the leading producer for international customers, both OEM for individual requirements but also standard panels. What all panels have in common is the unique INFRAPOWER INSIDE® heating element, which outperforms commonly used electric conductors. Our newly developed electric conductor achieves the highest possible efficiency. Developed with German and Austrian technicians our panels use state of the art nano silver and nano copper materials to reach highest heating performance with the lowest possible energy consumption.

As opposed to existing panel heat conductors which simply use carbon in various standard mixtures (eg carbon fibre texture, crystal carbon, etc.), INFRAPOWER panels use a new concept for its heat generator, because of its outstanding safety and durability and especially because of the high efficiency it yields. Until now, due to the difficult processing and application technology, it is only produced by few companies. INFRAPOWER improved the existing technology and we are able to offer our new technology at very competitive prices. The high efficiency combined with our connection system and patented reflector technology (100 % of produced infrared rays are radiated to the front) make it possible, that only a very small percentage of convectional heat (only about 7 %) is produced, which means that all advantages of infrared heating can be consumed and energy efficient heating is guaranteed. The aluminum frame provides INFRAPOWER panels with additional stability and prevents any deformation. Every panel comes with assembly instructions on the backside which allows easy vertical or horizontal mounting. All necessary parts are included and the 2cm distance from the backside of the panel to the wall/ceiling is ensured.

### structure



#### COPPER AND NANO SILVER BAR

Conductive polymer treatment on the copper connection as well as a special design of the nano silver bar, prevent hot spots and sparks as well as guarantees safety even in abnormal condition or at very high surface temperatures.

#### EPOXY CERAMIC RESIN

Adapting high quality epoxy resin as cover and bottom layer, INFRAPOWER panels have a very good durability and no burning danger. Because the edges are perfectly sealed, there is no water leakage or electricity leakage risk (depending on installation, highest IP class can be reached (IPx8)). Being very thin (made to order from 0.6 mm to 1.4 mm), our panels can be installed at nearly any place or application.

#### CARBON COPPER POLYIMIDE PANEL

Our electric conductor made of carbon copper polyimide leads to outstanding safety and durability as well as the high efficiency it generates, makes INFRAPOWER panels the leading infrared panels. During the manufacturing process, heat treatment from 1,000 to 3,000C named Carbon Fiber and heat treated material over 2,500C named Graphite fiber.

Graphite has higher heat resisting characteristics compared to other materials, lower thermal expansion coefficient, excellent thermal conductivity and is widely used as the material generating heat by electricity. Our special mixing process that generates different power consumptions according to the applications results in best suitable efficiency rates used carbon and graphite at optimum rates.



## technology

### security

Each panel is equipped with five built-in security sensors to protect the panel from overheating. The structure of the panel (the panel is both forward and backward protected by aluminum plates) guarantees 100% PE protection. INFRAPOWER infrared-heaters are CE-compliant and TUV GS certified.

The Research Centre Seibersdorf Laboratories confirmed a report that the radiation of INFRAPOWER infrared heaters is far below the international threshold for effects of infrared radiation on skin or eyes. IP44 conform (dustproof and splashproof).

### new technology developed in Austria

When INFRAPOWER introduced our completely new technology for our heating panels we revolutionized the efficiency of Infrared-heating-panels.

Since then we've done a lot of research and testing in many different environments and application scenarios both in Asia and Europe. These results combined with external German data from the field of material/efficiency studies led to further development of our existing high efficiency panels. We have worked together with Austrian/German technicians and a very recognized Austrian laboratory specialized in improving and testing appliances similar to ours (Seibersdorf Laboratories) independently tested all steps. Together with a Japanese supplier of ours, we found a solution to combine highest carbon grade with the newest conductor technology in the market (used for example also for all quality touch-pads or the best US/ German/Japanese made photovoltaic modules).

This technology provides us with the following advantages:

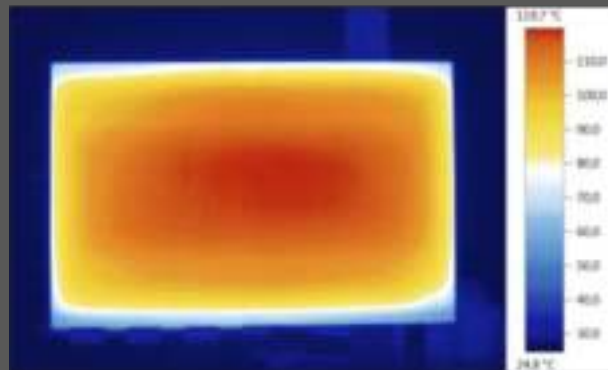
- > high surface temperature with lowest possible power consumption
- > very equal surface temperature on the total surface
- > highest possible output of infrared
- > safe and very durable

### INFRAPOWER – proven number one on the market

We have tested our new developed technology with Seibersdorf Laboratory AUSTRIA. The result: INFRAPOWER panels perform 18% better than the best known European brand.

What it means is that INFRAPOWER panels produce around 18% more infrared waves than the best EUROPEAN made panels.

The most important for an infrared panel is that it produces the highest possible percentage of infrared (and the lowest possible percentage of normal convectional heat). If an infrared panel has a low percentage of efficiency it is not an infrared heater but a convectional heater.



VCIR, tested by SEIBERSDORF AUSTRIA LABORATORIES, 08/2013

## models



All standard panels are finished panels and ready to use, plug in and work. All necessary instructions and tools are included (mounting possible in 5 minutes). All panels are rated for 110V or 230V.

### white standard panels – wall mounted

Model	Size L x W x H (cm)	Weight (kg)	Power (W)
VCIR-30-90-300	30 × 90 × 2,5	3.0	300
VCIR-30-120-400	30 × 120 × 2,5	3.5	400
VCIR-60-60-400	60 × 60 × 2,5	3.5	400
VCIR-60-90-600	60 × 90 × 2,5	5.5	600
VCIR-60-120-800	60 × 120 × 2,5	7.5	800



### white standard panels – ceiling mounted

Model	Size L x W x H (cm)	Weight (kg)	Power (W)
VCIR-60-60-350-C	60 × 60 × 2,5	3.5	350
VCIR-60-90-500-C	60 × 90 × 2,5	5.5	500
VCIR-60-120-700-C	60 × 120 × 2,5	7.5	700

All information is subject to change.





## models



glass panels black/white, frameless

Model	Size L x W x H (cm)	Weight (kg)	Power (W)	mounting recommendation
VCIR-400-G	60 × 60 × 2.5	6.0	400	wall
VCIR-600-G	60 × 90 × 2.5	9.0	600	wall
VCIR-800-G	60 × 120 × 2.5	14.0	800	wall

mirror panels, frameless



Model	Size L x W x H (cm)	Weight (kg)	Power (W)	mounting recommendation
VCIR-400-M	60 × 60 × 2.5	6.0	400	wall
VCIR-600-M	60 × 90 × 2.5	9.0	600	wall
VCIR-800-M	60 × 120 × 2.5	14.0	800	wall

glass ceramic panels white, frameless

Model	Size L x W x H (cm)	Weight (kg)	Power (W)	mounting recommendation
VCIR-400-K	60 × 60 × 2.5	6.0	400	wall
VCIR-600-K	60 × 90 × 2.5	9.0	600	wall
VCIR-800-K	60 × 120 × 2.5	14.0	800	wall



All information is subject to change.



## accessories



### stand support

white aluminum stands for mobile use of the heating panels (only applicable for standard line panels with frame).



### ceiling mounting set

the ceiling mounting simplification set facilitate the mounting of the infrared heating panels on the ceiling (only applicable for standard line panels with frame).



### towel rail

the towel rail can be used for drying and using the infrared panel in bathrooms. Each panel can be equipped with up to 2 towel rails (applicable for all models).



### thermostat TH810

this simple plug-in thermostat can be used to control the room temperature and to create comfortable climate.



### thermostat TH4

this simple thermostat control contains of a receiver and a remote control. The main advantage of this thermostat is that the temperature sensor is integrated into the remote and this can be placed into the area/space where the heating panel operates.



### ceiling rings

these rings can be used to hang down the infrared panels from higher ceilings (an additional rope or chain is needed).

## quality



As our main business is OEM production for several customers worldwide, the appearance of infrared panels can differ. All panels with this logo have INFRAPOWER's high efficient heating element inside and customers can be sure that quality and heating power is outstanding.



As our heating element (carbon fiber with copper and nano silver conductor) was developed by Austrian technicians and laboratories (in cooperation with Japanese and German suppliers), INFRAPOWER uses this sign as an indicator of latest state of the art developments. It shows to final customers who trust more in European technologies, the outstanding performance of our heating element. INFRAPOWER is constantly working together with external laboratories to further improve the heating element and therefore, the efficiency of the panels.



INFRAPOWER's 'Geprüfte Sicherheit' ('Tested Safety') or 'GS' mark issued by TUV Rheinland Germany indicates that the equipment meets German and European safety requirements.

In the GS test TUV check whether the product meets the requirements of the Product Safety Act and other legislation in ensuring the protection of the health and safety of persons. This includes the requirements of the European directives which are implemented with the Product Safety Act and its regulations (e.g. Low Voltage Directive and Machinery Directive).

The GS mark means that a laboratory authorized by German state, has tested the product and production monitoring was carried out.



With the CE marking INFRAPOWER declares that the products meet the requirements of the applicable EC directives. All our infrared panels comply with the 'Low Voltage Directive' and the 'EMC Directive'.



This certification shows that INFRAPOWER infrared panels are according to US and Canadian governments clearly defined regulations which products, especially electronics equipment must satisfy before they can be approved for sale.



This certification issued by TUV shows that INFRAPOWER is able to produce infrared panels for various requirements (for instance panels rated for 240V according to BRITISH STANDARD regulations).



At this technology centre located in Austria (Europe), INFRAPOWER is regularly testing the heating element and further developing and improving the efficiency. Together with the technicians of Seibersdorf laboratories, INFRAPOWER is constantly trying to find new paths and solutions of increasing the infrared output of the panels in order to meet customers' expectations.



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