

XI  AX[®]

Infrared Heaters



highest efficiency rates –
perfect heating
to save energy costs



our roots are in europe, our market is the world

Directory

2 infrared – inspired by nature
 2 technology
 2 effect

3 advantages

5 applications
 5 planning

6 technology
 6 technique
 6 structure
 7 security

8+9 models

10 accessories

11 quality

12 contact

Only the warming 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 warming rays of the sun reach us directly.

Infrared radiation overcomes the distance between the sun and the earth nearly without losses and turns into heat once hitting the surface. In contrary to UV or X-ray radiation particularly the long-wave infrared-C range has a positive impact on human well-being.

infrared – inspired by nature

technology

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

effect

The human 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 XIMAX 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 less heated. The heat is stored in the walls.

Conclusion:

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

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

perfect comfort



With XIMAX's infrared heater it is possible to heat according to your individual needs. Due to the variable application you will

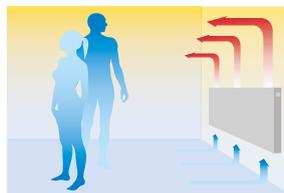
receive comfortable heat, permanently or at times, exactly where it is needed.

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. In consequence of the warming the air rises, distributes from the top of the room and finally falls down again on 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 system of pipes and often even an additional space for fuel storage. Due to their size they claim much valuable living space.

the INFRARED-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 uneven.



With infrared heaters the infrared radiation will be 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

XIMAX 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.



economical to run

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



easy to install

XIMAX 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.



essential for a comfortable and healthy indoor climate

XIMAX 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 spread throughout the room. No more cold feet and hot heads.



comfortable to use

In combination with optional room thermostats, XIMAX infrared-heaters provide perfect heat according to your needs.

Even in a single room several different thermal comfort zones can be generated.

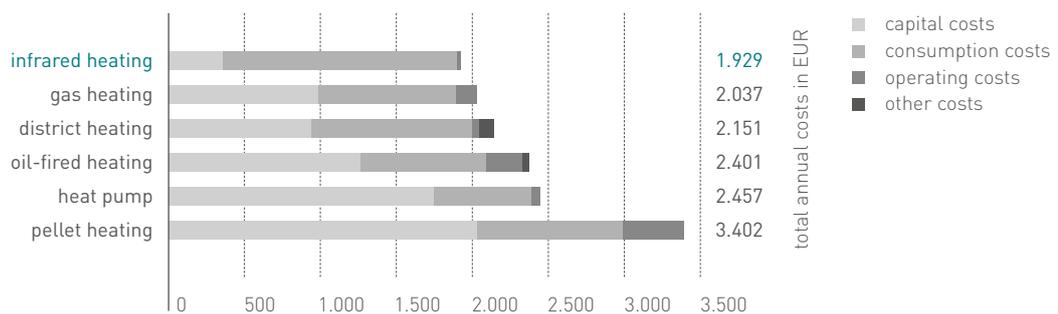


eco-friendly

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



comparison – total annual costs of different heating-systems



Base: Low-energy building
 Living Space: 130 m²
 Household: 3 people
 Spec. heating demand: 58 kWh/m²a
 Heating demand: 7.540 kWh/a
 Hot water heating: 1.895 kWh/a

The capital-related costs are calculated by allocating the total investment cost over the lifetime of the heating system. The calculation is performed taking into account the interest rate by the annuity method (according to VDI 2067).

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 inadequate.

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/m²

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



technology

technique

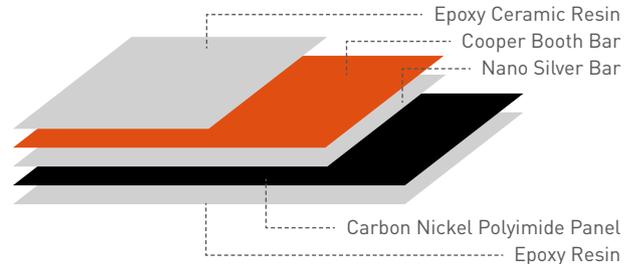
XIMAX has the leading technology of far infrared panel heaters. Highest efficiency rates and lowest possible energy consumption is guaranteed. All panels have in common is the unique CARBON GRAPHITE POLYIMIDE panel integrated, which performs better than all common used electric conductors. The new developed electric conductor, which is more durable than steel, generates the highest possible efficiency rate (about 93%).

Pressed in epoxy resin XIMAX panels can reach very high surface temperatures, which give additional improvement in efficiency and therefore saving energy. Different from existing panel heat generators which simply use carbon, XIMAX panels use a new concept for its heat generator, because of its outstanding safety and durability and especially because of the high efficiency it generates. Until now, due to the difficult processing and application technology, it is produced only by few companies.

High efficiency combined with our connection system and patented reflector technology (100% of produced infrared rays go to the front side) 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 anodized aluminum frame provides XIMAX panels with additional stability and deformations are impossible. Every panel comes with an assembly help on the backside which allows easy vertical or horizontal application. All mounting parts are included and additionally a 2 cm 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, XIMAX 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 NICKEL POLYIMIDE PANEL

Our electric conductor made of carbon nickel polyimide leads to outstanding safety and durability as well as the high efficiency it generates, makes XIMAX panels the leading infrared panels. During the manufacturing process, heat treatment from 1,000 to 3,000°C named Carbon Fiber and heat treated material over 2,500°C 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. XIMAX infrared-heaters are CE-compliant.

The Research Centre Seibersdorf Laboratories confirmed a report that the radiation of XIMAX 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

Together with a Japanese supplier of us, a solution was to combine highest carbon nickel 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:

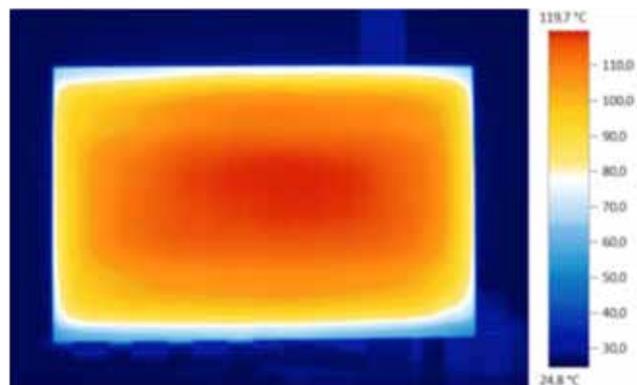
- high surface temperature with lowest possible power consumption
- very equal surface temperature on the total surface
- highest possible output of infrared
- safe and very durable

XIMAX – proofed number one in the market

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

What it means is that XIMAX 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.



aluminium panels white, with frame

size L x W x H (cm)	weight (kg)	power (W)	mounting recommendation
30x90x2,5	3.0	300	wall/ceiling
30x120x2,5	3.5	400	wall/ceiling
60x60x2,5	3.5	350	wall/ceiling
60x60x2,5	3.5	400	ceiling
60x60x2,5	3.5	450	ceiling
60x90x2,5	5.5	550	wall/ceiling
60x90x2,5	5.5	600	wall/ceiling
60x90x2,5	5.5	650	ceiling
60x90x2,5	5.5	700	ceiling
60x120x2,5	7.5	800	wall/ceiling
60x120x2,5	7.5	850	wall/ceiling
60x120x2,5	7.5	900	ceiling
60x120x2,5	7.5	1000	ceiling

All information is subject to change.



models



glass panels black/white, frameless

Größe L x B x H (cm)	Gewicht (kg)	Leistung (W)	Montage- empfehlung
60 x 90 x 2,5	9.0	600	wall
60 x 120 x 2,5	14.0	800	wall
60 x 120 x 2,5	14.0	1000	wall



mirror panels, frameless

Größe L x B x H (cm)	Gewicht (kg)	Leistung (W)	Montage- empfehlung
60 x 60 x 2,5	6.0	400	wall
60 x 90 x 2,5	9.0	600	wall

All information is subject to change.



accessories



stand support

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).



white frame set

this self-applying frame set makes it possible to change the standard aluminum frame of the standard line panels by white frames which makes the infrared panel looking uniform in one colour.



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 heating element (carbon fiber with nickel and nano silver conductor) was developed by Austrian technicians and laboratories (in cooperation with Japanese and German suppliers), XIMAX 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.

XIMAX and their suppliers are constantly working together with external laboratories to further improve the heating element and therefore, the efficiency of the panels.



With the CE marking XIMAX 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 issued by TUV shows that XIMAX 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), XIMAX and their suppliers are regularly testing the heating element and further developing and improving the efficiency. Together with the technicians of Seibersdorf laboratories, XIMAX is constantly trying to find new paths and solutions of increasing the infrared output of the panels in order to meet customers' expectations.



XIMAX

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Subject to technical changes.
Information provided without guarantee.
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