

# Heating for Horses

Using NASA Technology To Provide Safe, Healthy and Cost Effective Heating Solutions

- Provides gentle background warmth
- Reduces the need to rug up
- Good for skin and coat condition
- Relaxes, calms and comforts
- Very economical a fraction of the cost of normal electric heaters
- Combats damp, mould and mildew
- Totally silent
- Maintenance Free
- Very economical



Much has been written about the problems with heating barns and stables.

In particular the problem of condensation or humidity which is caused by using traditional heating methods.

This can then lead to respiratory problems for the animals.

Some owners have overcome the humidity problem by then adding additional exhaust fans that remove the air when humidity rises.

More noise and more expense.

Before you spend time and money on conventional heating take a look at Infrared.



**Equestrian schools, stables & farms are now seeing the benefits of Infrastrip infrared heating.**

Increasing numbers of horse owners, equestrian centres, riding schools, trekking centres and stables are discovering the benefits of providing infrared heat in these buildings.

Humidity fuels condensation. Respiring horses and wet stalls supply plenty of moisture into the air.

Respiration from a 450kg horse can put as much as two gallons of moisture into the air in a single day.

Four horses can create up to 8 gallons and so on, and that's not counting the evaporation from manure and urine.

Conventional heating warms this moist air and compounds the problem.

Usually to combat this, you would then need to consider ensuring there is sufficient ventilation. Ventilation cools the air that you have just spent money to warm.

Infrared heating does not heat the air and so avoids the problem

In a stable, barn or other large open interior space, infrared heaters are specifically made to produce safe, comfortable radiant heat.

Usually, infrared heaters are directed downward from the ceiling towards a target area below.

For instance, in a horse barn infrared heaters can be directed toward a wash and grooming area tack room or down a common walkway or even above individual stalls.

In the specific case of horses for example, infrared heaters are used for drying the coats of horses after washing.

Their static mode of functioning does not cause the horses any stress or discomfort, and they can replace the use of noisy hairdryers.

# INFRARED HEATERS

Using NASA Technology to Heat Homes and Businesses

## Benefits Of Infrared Panel Heaters

- Controllable
- Instant Heat
- Scaleable
- Unlimited Zones
- Directional
- Promotes Health
- Reduces airborne allergens
- Silent Operation
- 100% Efficient
- Easy to install
- Maintenance free
- Doesn't alter the humidity
- Cures and Prevents Damp

### Mould & Mildew

- Reduces Energy Costs
- Lower carbon emissions

## Developed by NASA

This technology was developed by NASA to heat astronaut's when travelling in space. As there is no air in space convection heating does not work. Infrared panels radiate the heat and help to keep the space station warm in sub zero temperatures.

## Promotes Life

Infrared heaters have been used for many years in hospitals to heat premature babies incubators and in sports injury clinics to speed up the healing process as well as hatcheries and stables.



## Why FAR Infrared Panels?

People are always looking at ways to reduce energy bills and still heat their homes and business more effectively.

Infrared panel heaters are a great solution, have many benefits and can help to substantially reduce energy costs when compared to central heating systems, storage radiators or other forms of heating that use convection.

With FAR infrared panels you are able to heat just the rooms and spaces that you need ensuring that you can save a substantial amount of money in the process.

They are very flexible and can be used to supplement your existing heating system or to replace it altogether. They can be controlled individually or together and totally scaleable.

Infrared panels are relatively new to the UK but have taken the market by storm and costs are further reduced when used in conjunction with solar PV systems.

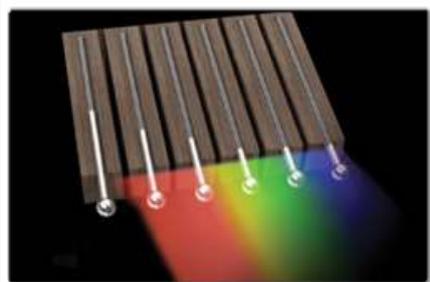
### *What is Infrared*

Infrared radiates down from the sun and warms everything that it touches including us.

FAR infrared is just outside of the visible light spectrum and is very efficient way of heating.

The heat is stored in objects with thermal capacity and then released slowly and evenly into the room.

## Discovery Of Infrared

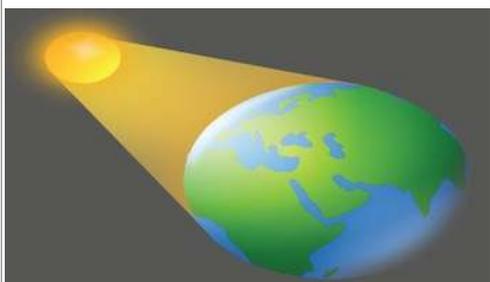


In 1800, William Herschel conducted an experiment measuring the difference in temperature between the colours in the visible spectrum. He placed thermometers within each colour of the visible spectrum. The results showed an increase in temperature from blue to red. When he noticed an even warmer temperature measurement just beyond the red end of the visible spectrum, Herschel had discovered infrared light!

- Suitable for Home
- Work
- Office
- Garage or Workshops
- Yoga, Gyms and Sports Centres
- Schools
- Churches
- Pubs Restaurants
- Patio and BBQ Areas
- Stables

### Infrared Panel Heaters

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### *Are They Safe to Use?*

Yes they are, Just like visible light radiation, FAR Infrared is perfectly safe. It is the same heat that our bodies emit and, in fact, offers many additional health benefits.

People often associate the word radiation as being harmful but the reality is it is simply a process of energy transmission.

They can also be used to prevent damp, mould and mildew. Removing dangerous spores that can cause serious illness and allergies.

### *Green Deal Approved*



The department of energy and climate control (DECC) has recently approved infrared heaters for inclusion in the Green Deal which highlights their potential to make a substantial improvement to energy efficiency.

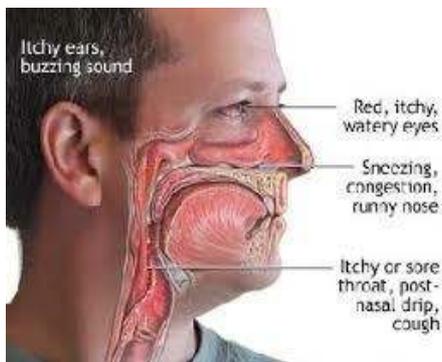
### *Mould Damp and Mildew*

As we strive to save energy, increasing insulation, installing double glazing and sealing up our homes,. This causes a lack of ventilation and preventing air flow, creating a problem with mould, damp and mildew. It is difficult to cure as it is caused by the humidity and moisture in the air contacting a cold wall and condensing, When you heat a room using convection heaters like radiators or fan heaters they heat the air which then promotes the growth and reproduction of the mould spores rapidly spreading in a room, perpetuating the problem.



### Health Issues From Mould

As we now know, mould is proven to be very bad for our health as well as the horses health and can cause asthma and other serious respiratory diseases. The lack of ventilation compounds the problem as the spores continue to multiply, circulating around the room being breathed in by the occupants. The elderly and young animals are especially vulnerable to these allergens and can be prone to various illnesses.



### How Do Infrared Panels Cure and Prevent Mould?

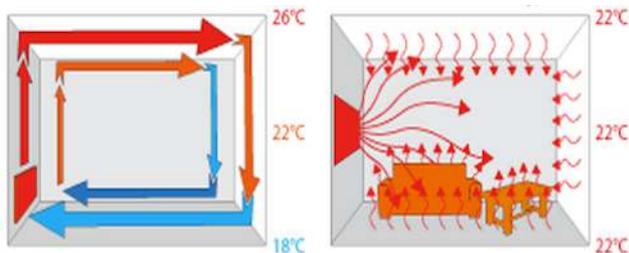
Infrared heaters use the radiant principle to directly heat objects and surfaces. The infrared heat penetrates and warms the affected areas drying them and preventing condensation and moisture which is the cause of mould growth.

Traditional heaters use convection which heats the air, which in turn heats you. Hot air rises and cold air drops creating a circulation of air further spreading the spores and other allergens. Heating the objects rather than warming the air first prevents wasteful heat stratification associated with convection of warm air, typical of traditional heating systems.

### Convection Current Flow

Many people expect heat to rise, but in fact it's only warm air that rises because warm air is lighter than cold air. Warming the air creates a convection current with hot air rising to the top of the room. The rising warm air is replaced by cold air and this creates a convection flow.

With convection heating, such as traditional wall mounted radiators, much of the heat is lost to the unoccupied upper space of a room - this is a real problem in rooms with high or vaulted ceilings. Especially with poorly or uninsulated properties.



Infrared panel heaters however, emit up to 81% of their heat output in the form of radiated heat. Thus, convection is reduced and most of the heat is then radiated directly to the objects and occupants.

In properties with high ceilings, the air temperature may increase as much as 3°C for each vertical metre in a room. And of course, if warm air is lost through opening windows or doors, more energy is required to reheat incoming cool air.

### Infrared Heaters - Highly Efficient

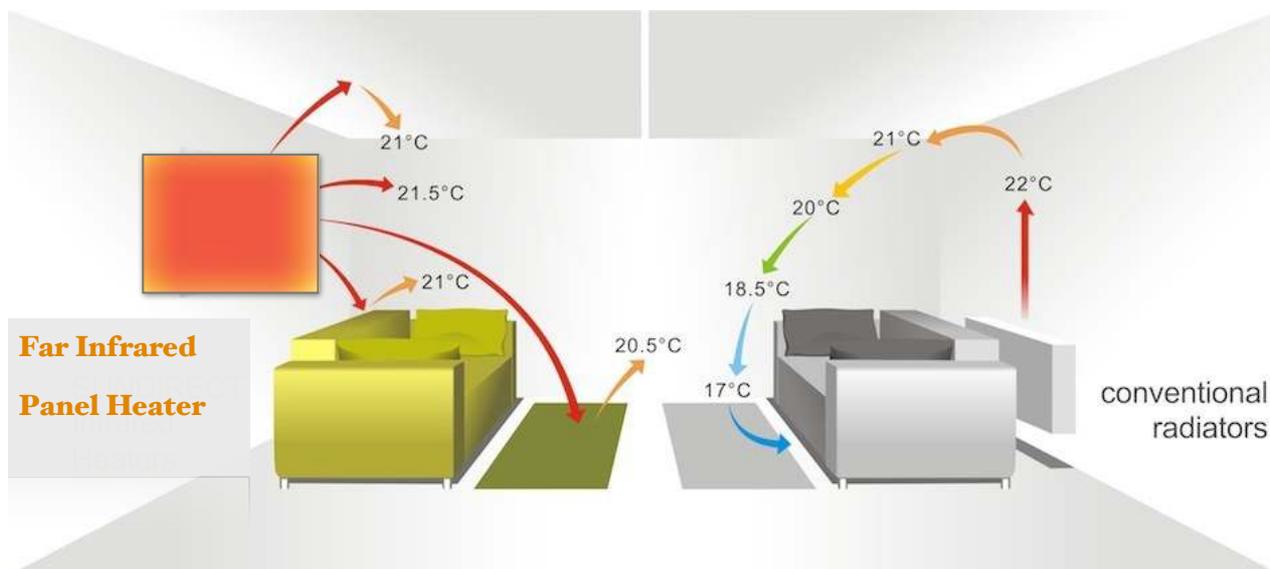
Radiated heats does not affect the humidity and helps to lower air circulation round the room reducing the spread of allergens.

Infrared heats what it touches. All objects have a **thermal capacity**. The amount of heat that can be

## Infrared Panel Heaters

absorbed and stored varies on the material. Brick walls and plaster, for example, have a high thermal capacity while glazed tiles and metal,

window being opened. Making them an ideal solution for large spaces and hard to heat rooms.



store very little heat, reflecting most of it.

This stored heat is then released slowly over time keeping the room warmer for longer. This is why infrared heaters are not as affected by a door or

Another example of a thermal heat store in action is after a hot summers day when the ground, buildings and other objects have absorbed the infrared heat from the sun all day long. This stored heat is then released slowly back keeping us warm in the evening and into the night.

## Infrared For Health

There are also many associated health benefits from using infrared heaters. They have been used for many years in sports injury clinics to promote healing of bones, muscles and soft tissue injuries, bring relief to painful and aching joints, improve blood flow and circulation as well as some skin disorders. **This is the case in humans and animals alike.** Most modern, quality saunas now use

infrared elements to heat them More information can be found on our website. [www.infraredpanelheaters.com](http://www.infraredpanelheaters.com). They are also used in Yoga Centres and other types of alternative health treatments and great results for many conditions have been found using infrared heat therapy.



Infrared heat is beneficial to our immune system. Rheumatoid, asthma and allergy sufferers can breathe a deep sigh of relief.



## Cost Savings

*Infrared heaters offer big savings over traditional central heating systems.*

### *Targeted and Zoned Heating*

Infrared heaters are cheaper to use than central heating systems for several reasons. One reason is because heating the objects in a room directly rather than heating the air is a more efficient way to heat a room using less energy.

Also, why heat the rooms and space that you are not using? With infrared panels you can control each room individually.

Programming each room to heat up at different times of the day and night and, to the required temperature for each room.

## Complete Solution or Supplemental Heating

### *Complete Heating Solution*

As infrared becomes more popular, more and more people are looking at Infrared heating as a whole home heating solution to replace an existing central heating system or installed into a new build. Installation takes a fraction of the time to install compared to traditional central heating system.

### *Targeted Heating*

Infrared panels are very effective at heating part or a section of a room such as wash areas, individual stalls or tack rooms. Rather than heating the whole space, infrared allows you to heat a section of the room. to help make considerable savings.

Central heating systems waste considerable energy and money of course, pumping hot water around the whole property, even if you only want to heat one room.

### *Lower Installation Costs*

The panels simple hang on the wall or the ceiling and are as easy to install as hanging a picture frame. They can simply be plugged straight into a 13amp socket, via a plugin thermostat or hard wired into a wireless thermostat giving you 100% control.

### *Supplemental Heating*

In rooms or spaces where the existing heating system is not big enough, is old or ineffective at heating the space, then infrared panels can be used to supplement the system. Also, when only using one or two rooms in the property, rather than switching on the central heating system, simply use infrared panels to heat the rooms that you are occupying.

### *Additional Heating*

Instead of having to go to the expense and structural work required to run pipes and fit radiators to an extension or conservatory, use panels or an infrastrip to heat these rooms.

# PRODUCT INFORMATION

## Standard White Panel

### Technical Details:

**HEATING ELEMENT:** carbon-nickel with nano silver and nano copper technology

**FRONT:** white powder coated metallic surface

**BACK:** aluminium sheet with profiles for mounting

**CABLE:** 3 m power cable (European plug type CEE 7/4 fitted)

**FRAME:** white powder coated aluminium frame

**VOLTAGE:** 240 V, 50 Hz

**PROTECTION:** IP 44

### Quality & Safety:

- British Standards EN 60335-1 / EN 60335
- ISO 9001:2000 (Quality Management)
- ISO 14001:2001 (Environmental Management)
- CE certification by TUV Rheinland Germany
- TUV GS certification by TUV Rheinland Germany
- 5 integrated temperature sensors provide safety from overheating
- 2000 V proved (Hipot test)
- 5 year product warranty

### Certificates:



Colour	Model	Size	Maximum area Covered	Watts	Amps	Weight Kg
White	GNIR-255	30X90X2.5	5m <sup>2</sup>	250w	1.08A	3 Kg
White	GNIR-400	60X60X2.5	8m <sup>2</sup>	400w	1.73A	3.5 Kg
White	GNIR 600	60X90X2.5	12m <sup>2</sup>	600w	2.6A	5.5 Kg
White	GNIR-800	60X120 X2.5	16m <sup>2</sup>	800w	3.5A	7.5 Kg
White	GNIR-1000	60X120 X2.5	20m <sup>2</sup>	1000w	4.34A	7.5 Kg

### Certifications & Approvals

FAR Infrared heating panels are free of all emissions and are certified as 'low electromog' devices by the TUV. All of our products are TUV, GS, CE certified. This covers all the safety standards required for use in the UK.

### Emissions

FAR Infrared heating panels are free of harmful emissions and are certified as such by the TUV.

# PRODUCT INFORMATION

## Frameless Glass and Mirror Panels

### Technical Details:

**HEATING ELEMENT:** carbon-nickel with nano silver and nano copper technology

**FRONT (MIRROR):** 5mm safety mirror coated

**FRONT (GLASS PANEL)** 6mm safety glass coated

**BACK:** aluminium sheet with profiles for mounting

**CABLE:** 3 m power cable (European plug type CEE 7/4 fitted)

**FRAME:** Frameless

**VOLTAGE:** 240 V, 50 Hz

**PROTECTION:** IP 44



### Quality & Safety:

- British Standards EN 60335-1 / EN 60335
- ISO 9001:2000 (Quality Management)
- ISO 14001:2001 (Environmental Management)
- CE certification by TÜV Rheinland Germany
- TÜV GS certification by TÜV Rheinland Germany
- 5 integrated temperature sensors provide safety from overheating
- 2000 V proved (Hipot test)
- 5 year product warranty

### Certificates:



Colour & Type	Model	Size	Maximum area Covered	Watts	Amps	Weight Kg
Black Glass	GNIR-600GB	60X90X2.5	12m <sup>2</sup>	600w	1.08A	9 Kg
White Glass	GNIR-600GW	60X90X2.5	12m <sup>2</sup>	600w	1.73A	9 Kg
Black Glass	GNIR-800GB	60X120X2.5	16m <sup>2</sup>	800w	2.6A	14 Kg
White Glass	GNIR-800GW	60X120 X2.5	16m <sup>2</sup>	800w	3.5A	14 Kg
Mirror	GNIR-400M	60X60 X2.5	8m <sup>2</sup>	400w	4.34A	6 Kg
Mirror	GNIR-600M	60X90 X2.5	16m <sup>2</sup>	600w	1.73A	9 Kg

# PRODUCT INFORMATION

## Infrafar Heat Strips - Infrastrip

The infrastrip comes in a range of sizes. They provide an excellent heating solution for hard to heat areas inside and out. They offer directional far reaching heat,

Ideal for:

- Workshops
- Garages
- Shops
- Sports centres
- Health Clubs
- Churches
- Historic Buildings
- Listed Buildings
- Municipal Buildings
- Village Halls
- Reception Areas
- Shopping Centres
- Restaurants & bars
- Cafes, Bistros (inside & out)
- Smoking areas
- Conservatories and orangeries
- Patios, BBQ areas & Verandas
- Factories
- Warehouses
- Stables
- Farm Buildings



Or, any commercial or large domestic premises - indoors and out



BS EN 60335-1  
BS EN 60335  
-2-30



Colour & Type	Model	Size cm	Maximum area Covered	Watts	Amps	Weight Kg
Black/Gold	IRS-10	60X19X6.7	10m <sup>2</sup>	1kW	4.3A	9 Kg
Black/Gold	IRS-18	100X19X6.7	20m <sup>2</sup>	1.2kW	7.8A	9 Kg
Black/Gold	IRS-24	150X19X6.7	30m <sup>2</sup>	2.4kW	11.4A	14 Kg
Black/Gold	IRS32	200X19X6.7	40m <sup>2</sup>	3.2kW	13.9A	14 Kg