

Damp, Mould & Mildew

Using NASA Technology To Solve These Common Problems

Do's & Don'ts when dealing with these problems

What if the problem is severe?

Are you struggling to dry out your home or business after a flood?

Drying out a wall too quickly using convection heating is not easy and needs to be done slowly. The first problem is that warm air does not easily penetrate the wall allowing the moisture to remain inside.

Walls will also crack. This is due to the differential of the drying process. In other words the outer part of the wall is drying out faster than the inner part causing splits and cracks to appear. Increasing the airflow through the property by using large fans or opening up the doors and windows will help speed the process.

As infrared heaters are not affected by airflow they can be very effective in drying out the walls and floors while allowing the room to be aired at the same time.

Rooms that are dry lined using plasterboard and skimmed will need to be removed and replaced.

Remove the skirting boards and drill holes through the wall to the cavity to allow any water in there to run or be pumped out.

If needed, remove the plaster right back to the brickwork and slightly above where the water rose to.

Ensure that all of the water is pumped and swept out. Use a large commercial air mover if necessary as this will help to remove the damp air preventing condensation, but be sure not to put the heaters too close to the walls because if the walls dry too fast cracks will appear.



Do you get complaints from tenants regarding damp, mould or mildew?

Notwithstanding all the recent rain and floods, modern insulation and double glazing sealing up the property and preventing air circulation, damp walls, mould and mildew has become a growing problem.

As we now know, mould is proven to be very bad for our 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 are especially vulnerable to these allergens and can be prone to various illnesses.

As we said, it can cause and exacerbate asthma, bronchitis and other respiratory problems as well as skin irritation and even severe allergic reactions.

Damp, mould and mildew can be very difficult to cure as radiators warm the air and the moisture collects on the cold walls and soaks in like a sponge. This warm air and moisture encourages the growth of the mould and mildew and, so the circle continues.

Remedial work can be difficult, expensive and not always successful. People are now more aware of these issues and are not prepared to risk their families health and not only do they want a solution to this issue, but it also opens up the landlord/agent to the claim culture that has gripped the UK.

These problems can arise at anytime and most people think that by using everyday cleaning problems and a little elbow grease, they get rid of it. However, whilst the surface may be clean the problem has not gone away. The fungus is still growing within the wall.

But, what if the damp is more severe?

Are you struggling to dry out your home or business after the recent floods?

It is imperative that the walls and floors in your property are completely dry before re-plastering and decorating if you do not want to suffer with damp, mould and mildew in the future.



Drying out the property effectively will take time and will also depend on the amount of water in the property and the time that the water was sitting there.

In the case of light flooding it is often possible to save the plaster on brick or block walls, unless they are covered with plaster lath.

If the waters contaminated, was several inches deep or remains for some time then cutting back the soaked plaster above the level the water reached will usually be required.

Using fan heaters, electric fires or any form of convection heating is not a good way to dry out a flooded room and can cause severe damage to your property.



Convection heaters warm the air which, after a flood, will be moist. This increases humidity and causes condensation on the cold walls. Brick and breeze blocks are highly absorbent and act like a giant sponge and the moisture is sucked deep inside the walls, making it even harder to dry out.

A brick can hold up to one litre of water. Drying out a wall too quickly using convection heating is not easy and needs to be done slowly.

The first problem is that warm air does not easily penetrate the wall allowing the moisture to remain inside.

Walls will also crack. This is due to the differential of the drying process. In other words the outer part of the wall is drying out faster than the inner part causing splits and cracks to appear. Increasing the airflow through the property by using large fans or opening up the doors and windows will help speed the process.

How Not To Dry Out A Room

Do not use large convection heaters to dry out a room. If you are intent on using these heaters make sure they are some distance from the walls to prevent cracks.

Once the property is dry, if possible, turn on the central heating system but also try to ensure that you continue to get good air circulation through the whole house. Even the rooms that were not affected as the extra moisture in the air can cause condensation, mould and mildew in these areas.



But the most effect method of solving this problem is with Infrared Heaters. Here's how they work and can save you money!

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
- Clean - No Fumes or Smells
- 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.

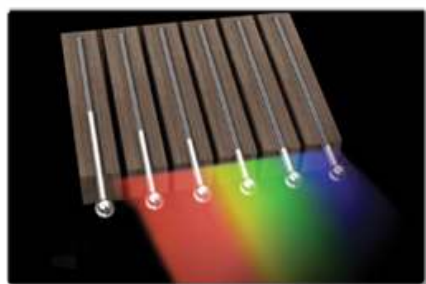
What is Infrared

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

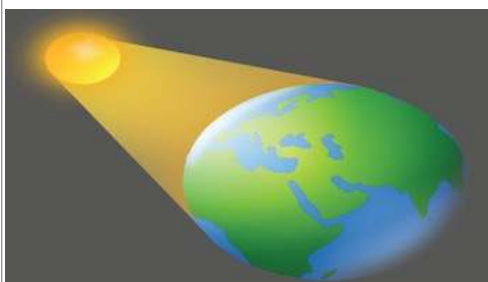


In 1800, William Herschel conducted an experiment measuring the difference in temperature between the colours in the visible spectrum. He placed thermometers within each colour of the visible spectrum. The results showed an increase in temperature from blue to red. When he noticed an even warmer temperature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

t: 01920 28 29 30



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.

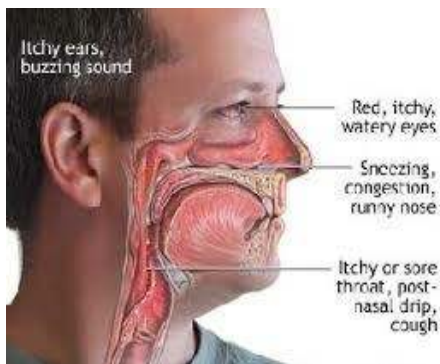
Mould Damp and Mildew

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 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 are especially vulnerable to these allergens and can be prone to various illnesses. This is something that should be avoided at all costs, particularly if you are to avoid expensive and problematic claims from tenants.



How Do Infrared Panels Cure and Prevent Mould?

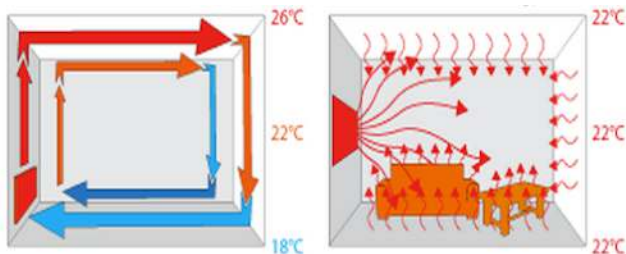
Infrared heaters use the radiant principle to directly heat objects and surfaces. The infrared heat penetrates and warms the affected areas drying them and preventing condensation and moisture which is the cause of mould growth.

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

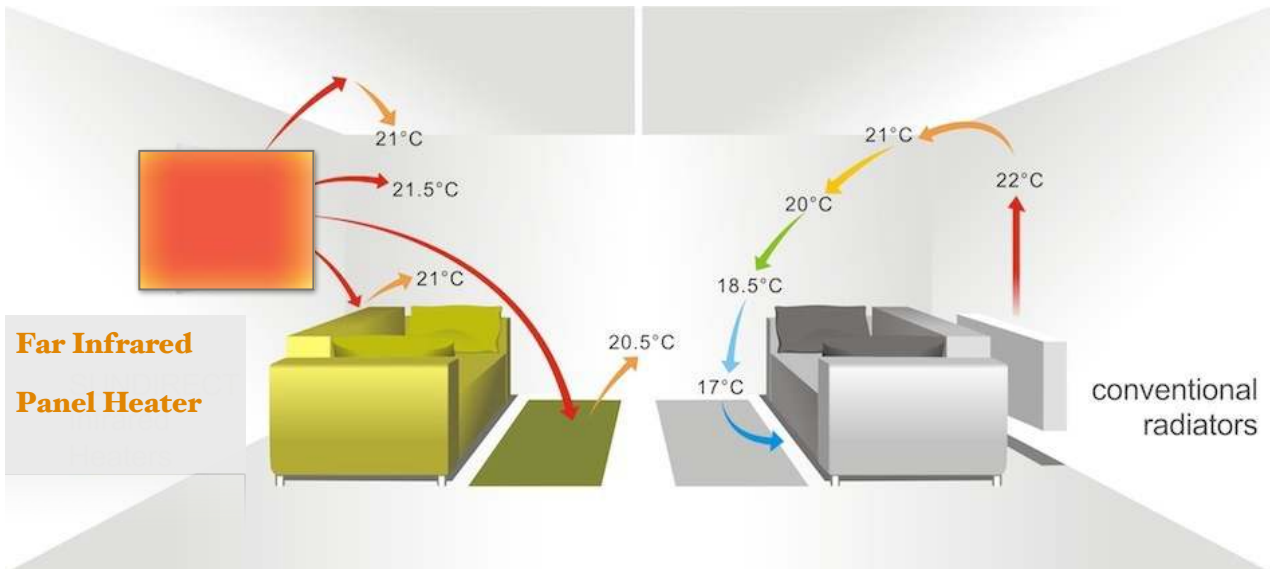
Radiated heats does not affect the humidity and helps to lower air circulation round the room reducing the spread of allergens.

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. Most modern, quality saunas now use

infrared elements to heat them More information can be found on our website. 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. In large rooms like a lounge or kitchen-diner, a garage or maybe a workshop, 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 ²	250w	1.08A	3 Kg
White	GNIR-400	60X60X2.5	8m ²	400w	1.73A	3.5 Kg
White	GNIR 600	60X90X2.5	12m ²	600w	2.6A	5.5 Kg
White	GNIR-800	60X120 X2.5	16m ²	800w	3.5A	7.5 Kg
White	GNIR-1000	60X120 X2.5	20m ²	1000w	4.34A	7.5 Kg

Certifications & Approvals

FAR Infrared heating panels are free of all emissions and are certified as 'low electrosmog' 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 ²	600w	1.08A	9 Kg
White Glass	GNIR-600GW	60X90X2.5	12m ²	600w	1.73A	9 Kg
Black Glass	GNIR-800GB	60X120X2.5	16m ²	800w	2.6A	14 Kg
White Glass	GNIR-800GW	60X120 X2.5	16m ²	800w	3.5A	14 Kg
Mirror	GNIR-400M	60X60 X2.5	8m ²	400w	4.34A	6 Kg
Mirror	GNIR-600M	60X90 X2.5	16m ²	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 ²	1kW	4.3A	9 Kg
Black/Gold	IRS-18	100X19X6.7	20m ²	1.2kW	7.8A	9 Kg
Black/Gold	IRS-24	150X19X6.7	30m ²	2.4kW	11.4A	14 Kg
Black/Gold	IRS32	200X19X6.7	40m ²	3.2kW	13.9A	14 Kg