



### Worlds finest in Infra- Heating/ Cooling Systems Technology

### **Infralight Heating Panel with Heatpump**

# TCS Climatic Systems invents heating system - which is likely some experts say it actually cannot exist

TCS Climatic Systems has brought a heater on the market, which requires only half the energy that consume previously used systems. How is this possible? The answer to the high efficiency of heating systems InfraLight arises from a principle of radiation laws, which do not derive from classical physics (thermodynamics).

While conventional convective heating systems require relatively high temperatures to the radiator, which in turn reduce the air humidity and the oxygen content, the air begins to circulate and thus decreases with dust and allergenic substances that enter again into the air circulation system. The warm air is on the ceiling and the walls and the floor long remain cold.



Convectional System



Infralight Heating Panel

The Infralight heat, however does not heat the air - which is already not a suitable heat storage anyway - but heated only at the impact of heat waves on solid objects. A principle analogous to the effect of solar radiation. Electromagnetic waves in the area under the red range of visible light cause molecules to oscillate, releasing energy that we perceive as heat. Unlike shorter waves such i.e. X-ray - the radiant heating acts even very beneficial to humans.

Infralight is an elegant large area ceiling element radiates the approximately 97% of its energy in the low temperature range down into the room. A multi-layer reflective mat (Infra- Flex) inhibits heat to go up into the ceiling.

### TCS S.R.L.

#### Comparison of convectional heating and InfraLight Heating





Unlike conventional radiators the Infralight panel heated as a heat source and not the air, but the walls, floor and furniture in the room. These retain heat much longer and once they are charged, they give this heat energy back into the living room. So the walls stay dry and beyond even mould has no chance. Another advantage is that the air does not circulate and therefore no unpleasant drafts produced which also happen to be kicking up dust. From all these facts, the tremendously low energy consumption is self explaining.

This TCS Climatic Systems has invented a highly innovative, energy-saving heating system which is suitable for both old and new buildings and even the space situation and the mood of the residents can be adapted with indirect lighting effects! Homeowners have accepted the system quickly and are enthusiastic. The particular advantages unfold in single-family area in the own use of self-generated solar power. Infralight for the new building is ideal, easy to plan, install, and can also be retrofitted and suitable for almost all rooms.

The risk-free and secure low temperature Heating Panel are in two - available indistinguishable versions - visually identical from the outside(see picture below). First there is the **Infralight Heating Panel** electrical powered version. This has the advantage that it can be installed quickly and easily almost anywhere, with little installation effort. It is for the owner of your own photovoltaic system ideal usage for self-generated electricity and therefore to operate at very low energy cost.



# TCS S.R.L.



## TCS S.L.R.



Infralight Heating Panel & Infralight Heating Panel with Heatpump

In addition to this electrically powered version also technically perfect and operated with warm water from an Heatpump version is available. The Infralight Heating Panel with Heatpump offers many other advantages. First there is the supply that (as with conventional floor heating) via a Heating- circuit distribution system more Infralight Heating Panels (see pic below) can be supplied by a very inexpensive Heatpump with warm water in the low temperature range.





### TCS S.L.R.

#### Heating - circuit distributor



This allows a very individual temperature control for each individual room to modern comfort controls with pc, tablets or smartphone remotely.

The very significant advantage of Infralight low temperature ceiling heating system with concealed noise-free hot water energy is, that it is technically a heating with Heatpump heating in the order for all object-planning taking into account the EnEV (Energy Conservation Regulation) applicable.

#### As technology advances .....

Research has brought in lately simply revolutionary findings that have resulted in many areas of daily life at an incredible breakthrough. Today we live in the information age, yet important, often vital information are largely unknown.

#### It pays off

Infralight heaters are an energy and cost-effective, emission-free and very modern heating solution. As the Most experts now agree for innovative heating and environmental engineering. For the full satisfaction with the heat radiation heating system in the house but some information is useful and you should contact us for any further information required.

### TCS S.R.L.



## TCS S.L.R.

### **Further convincing advantages:**

- Pleasant Infralight heat as from the stove
- Uniform heat in the room due to the large infralight panel sizes
- Dry, warm walls and furniture in the room
- Absolutely noiseless operation
- Lightweight slim design (only about 7cm high and about 28kg weight at IFL 560)
- Simple ceiling mounting Electrical (normal power supply 230V/ AC sufficient)
- Water supply supply and return on the ceiling for heating circuit
- No moving air therefore no dust dispersion, causing a healthy "feel-good climate"
- Very suitable for allergy sufferers
- Highest efficiency when operating with solar power system
- Such small air movement and dry walls, considerable reduction of risk of mould

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## **Thermo Climatic Systems of the Future**



for further information please visit: www.tcs-clima.com

