

TIH 650

EN

OPERATING MANUAL
INFRARED HEATING PANEL



 **TROTEC**
AT WORK.

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01. SAFETY

This manual is part of the product. It must be read carefully before starting or using the device and stored near the device or its site of use at all times!

The device has undergone extensive material, function and quality tests prior to delivery. Nevertheless, dangers can occur at the device when it is used by untrained people in an unprofessional or improper way!

Observe the following instructions:

- The device must be set up in an upright and stable position.
- The device should not be exposed to a direct and constant water jet.
- The device must not be covered or transported during operation.
- Do not use near flammable objects.
- Do not use in the immediate vicinity of water (filled bathtubs, sinks, showers ...).
- Do not use in rooms with highly flammable gases or vapours.

- All electric cables at the outside of the device must be protected against damages (e.g. caused by animals).
- Extensions to the connecting cable must be selected depending on the device's power input, cable length and intended use.
- Cable extensions must always be completely unrolled.
- Any operation other than as described in this manual is prohibited.
- Non-observance renders all claims for liability and guarantee null and void.
- Do not use outdoors.
- Never drill into the panel!
- The device complies with the fundamental health and safety requirements of the relevant EU regulations.

Work on the electrical equipment must only be carried out by an authorised specialist company!

⚠ The side marked with the warning symbol "Caution Hot" is the radiating side. CAUTION: Temperatures around 80 °C can be reached here. Burn hazard!

02. FIELDS OF APPLICATION

The device is intended for water damage clearance and construction drying. Investigations by the German Federal Office for Building and Regional Planning showed that the drying process can be accelerated considerably this way, particularly at early stages.

You may also use the infrared heating panel for heating or temperature control in interior spaces.

The Trotec infrared heating panel TIH 650 is ideally suited for drying selective water damages on walls. For damages located more than 80 cm above the floor, up to two additional panels can be mounted onto the first panel by means of the "stacking handles set" option (see Drying above installation height). In many cases, water damages only affect the surface if the cause of damage has been eliminated directly. Infrared radiation allows you to remedy such damage quickly and without damaging the wall. The decisive

factor for effective drying by infrared radiation is not a high temperature but the dose (i.e. the irradiated area and time in combination with the temperature) the wall is exposed to.

Trotec infrared heating panels are constructed so that basically no electric smog is generated during operation. This way even people who are sensitive to electric smog can use these devices.

03. RADIATION

The wavelength of the thermal radiation produced by Trotec's TIH 650 lies within the IR-C range. The wavelength depends on the respective surface temperature of the heating panel and thus on the ambient temperature in the room where the heating panel is set up. At 75 °C = 8.3 µm, at 85 °C = 8.1 µm, at 95 °C = 7.9 µm (according to Wien's displacement law). Thanks to such mild IR-C radiation, there is no risk of eye damage.

04. WHAT IS INFRARED RADIATION?

Infrared radiation is a natural type of radiation (e.g. produced by the sun). It is heat radiation, regardless of how this heat is generated. Every object whose temperature lies above the absolute zero (-273 °C) emits energy in the form of electromagnetic radiation.

The wavelength of the infrared radiation is determined by the temperature of the radiating object. If infrared rays hit the surfaces of other objects, the stored energy is released in the form of heat. The heat transfer takes place through conductivity, convection or radiation. In any case, the decisive factor is the temperature difference.

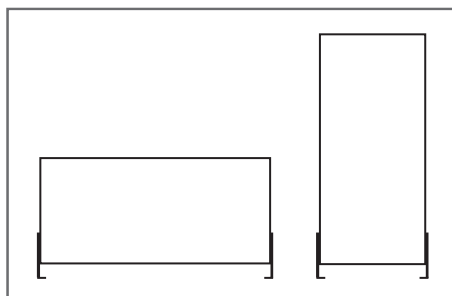
05. INSTALLATION

To ensure an optimum, economical and safe operation of the device, observe the following instructions:

- The device must be set up in a level and stable position.
- Please use the supplied lateral connectors for transporting the heating panels. They must be inserted in the recesses at the upper edge of the

panel. During transport, apply slight lateral pressure on the connectors for lifting and carrying the heating panel. If the heating panel is to be set up over stairs or inclined floors, it must be carried by two persons to prevent the connectors from slipping out. Caution! Risk of accident!

- Set the radiator up in a way that the radiating side, i.e. the dark side (see also the warning notice on page A1), points towards the surface to be dried. The distance can range between 5 and 15 cm. The feet are designed in a way that if they touch the wall, the distance between panel and wall is optimal.
- Note that the device becomes hot during operation. Therefore please keep children away from the panel.
- The feet can be locked with M5 screws. This way you can make sure that the feet do not come loose during transport or repositioning.
- The infrared radiator can be installed both upright and horizontally.
- For damages located more than 80 cm above the floor, up to two additional panels can be mounted onto the first panel horizontally by means of the "stacking handles set" option (see Drying above installation height).



- The panel must be supplied with power via a mains connection with an RCD (residual current device) according to DIN VDE 0100, Part 704.
- When using more than 3 infrared panels, please use separate circuits.

Do not use the device near flammable objects. Always keep a safety distance of at least 30 cm between the infrared radiator and flammable objects such as textiles, plastics, paper ...

Avoid contact of the infrared heating panel with water. Therefore do not install the infrared heating panel in the immediate vicinity of bathtubs, showers or sinks. Do not irradiate live power sockets. Never cover the infrared heating panel. Do not use the heating panel in rooms containing highly flammable gases or vapours.

The automatic temperature control allows for failure-free continuous operation.

06. DRYING ABOVE INSTALLATION HEIGHT



For damages located more than 80 cm above the floor, e.g. caused by a pipe burst, the devices can be stacked on top of each other. To do so, interconnect the panels with the optionally available stacking handles set (1.410.003.002). Please ALWAYS use the dedicated stacking handles set for stacking installations.

To irradiate higher wall surfaces, you can use the connection set (1.410.003.003). For this you require the assembly support fastening clamps (1.410.003.004), which are also optionally available.



07. CLEANING AND MAINTENANCE

Always disconnect the mains plug after use and prior to cleaning. Regularly check the surface of the heating panel for damages. Clean the panel with a damp cloth and a little detergent.

⚠ Caution: The device must not be immersed in water or cleaned under running water. Do not use abrasive cleaners, high-pressure cleaners or steam cleaners.

Regular maintenance of the heating panel is not required. Have the device repaired by the manufacturer only!

08. DISPOSAL

Dispose of the packaging in accordance with the applicable disposal guidelines. Trotec TIH infrared heating panels must not be disposed of in the domestic waste or via the Dual System (e.g. the "Green Dot").



In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE). At the end of its life, please dispose of this device according to the valid legal requirements.

09. STORAGE

Trotec TIH infrared heating panels must be stored in a clean and dry room.

10. TECHNICAL DATA

Infrared heating panel TIH 650

Article number 1.410.003.025

Heating capacity 650 W

Effective range 0.85 m²

Mains connection 1/N/PE 230 V 50 Hz CEE 7/7

Mobility portable

Dimensions L x W x H 36 x 1,370 x 625 mm
(without feet)

Weight 10.7 kg

Overheating protection yes

Scope of delivery:

Infrared heating panel with integrated connecting cable, two feet and two knurled screws

EC Declaration of Conformity

(Translation of the Original)

The manufacturer: **TROTEC® GmbH & Co. KG**
Grebbener Straße 7
D-52525 Heinsberg

herewith declares that due to their design and construction, and in the version introduced by us, the following products conform with the relevant fundamental requirements of the EC directives listed below.

Important note:

In case of improper use, installation, maintenance etc. or unauthorized changes of the factory-supplied device version, this declaration loses its legal validity.

Device version: Infrared heating panel with heating element for brickwork drying

Series: TIH 630, TIH 650

Applicable regulations: 2006/42/EC Machinery Directive
2006/95/EC Low Voltage Directive
2004/108/EC EMC Directive
2002/95/EC RoHS Directive

Applied standards: EN 60335-1/A1:2004
EN 60335-2-27
EN 55014-1:2000+A1:2001 +A2:2002
EN 55014-2:1997+A1:2001
EN 50366:2003+A1:2006
EN 292

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