



Installation and technical manual

Electric Combination Heaters TT-KS mobile /castors



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Eco-Design Directive 2015/1188:

Feet using:

This product is only suitable for well-insulated rooms or for occasional use

TT-KS S
TT-KS N
TT-KS H

THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE.

BE SURE TO OBSERVE ALL LABELS AND WARNINGS ON THE APPLIANCE.

Edition:12/17

Id_Nr. 911 360 950

1. For your safety

- This appliance is intended for normal household use and not for use for vehicles or on board ships or aircrafts.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Children of less than 3 years should be kept away unless continuously supervised.
- Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.

- **CAUTION — Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.**
- Make sure that your supply rating corresponds to what specified on the rating plate: 230V~, 50Hz.
- During function, place the heater in a safe position:
 - at least 1m far from inflammable objects or furnitures;
 - leaving not less than 1m of free space in front of the heater;
 - not located immediately below a socket-outlet.
- Do not leave animals or children touch or play with the appliance.
- Do not use the heater in rooms with explosive gas or while using inflammable solvents or varnish or glues.
- If the cordset is damaged and you have to change it, do not do the job yourselves! Take the product to an after sales authorised repair centre or to a person with similar skill and knowledge, in order to avoid any risk of danger.
- The appliance must be positioned so that the plug is always accessible.
- Do not mount the product on walls made of synthetic material.

Manual TT-KS

Electrical Connections:

The wires in the mains leads are colored in accordance with the following code:

GREEN & YELLOW: EARTH

BLUE: NEUTRAL

BROWN: LIVE

WARNING – THIS APPLIANCE MUST BE EARTHED

The installation of this appliance should be carried out by a competent electrician in accordance with I.E.E. Regulations for Electrical Equipment.

The radiator is fitted with a standard UK 3 pin plug or EURO plug that can be directly connected to an electrical socket. Care must be taken when connecting radiators in this way not to overload the ring main circuit. If you are unsure contact a qualified electrician.

Alternatively the mains cable can be cut to length and connected to a suitable fused 20 amp double-pole switched spur adjacent to the radiator. Please ensure that the electricity supply is disconnected prior to using this installation method.

Each supply circuit to the radiator must incorporate a Fused 20 Amp double pole switched spur having a contact separation of at least 3mm.

1.2 Handling

This radiator is very heavy. Take adequate precautions when lifting and maneuvering it. Always assess the load, and seek assistance with heavy or awkward loads that are beyond your capabilities.

1.3 Positioning

This radiator is very heavy. Please refer to Technical Data information contained within this document. In order to fulfil the ErP-Guideline, you need to use castors. **Wall mounting is not allowed.**

It is important that the following instructions are strictly followed.

Keep the following minimum safety distances to avoid fire risk due to high surface temperatures of the appliance during heating cycles:

Lateral heating walls – masonry	50 mm
Lateral heating walls – combustible matter	100 mm
Cover plate – combustible covering installed on top of it	150 mm
Cover plate – non-combustible covering installed on top of it ..	100 mm

- **Please note that our IPX4 rated models should be used in bathrooms.**
- **Portable radiators must not be fitted in bathrooms or wet areas.**
- **CAUTION** – This radiator must not be located below or in front of a fixed socket outlet.
- **DO NOT POSITION** under windows where curtains may contact the radiator.
- **DO NOT PLACE THE APPLIANCE** in the vicinity of a swimming pool.

Manual TT-KS

- **CAUTION** – If during any reassembly of the radiator, a part of the thermal insulation shows damage or deterioration which may impair safety; it should be replaced with an identical part.
- **CAUTION** – In order to avoid overheating, do not cover the radiator.
- **DO NOT COVER OR OBSTRUCT** the surfaces of the appliance.
- **DO NOT PLACE OBJECTS** in contact with the radiator

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2.0 General Information

TECHNOTHERM Combination Electric radiators have been designed using the latest technology to create an elegant solution for all hard to heat situations. They can be installed in almost any location apart from the safety restrictions noted in this manual.

The range has been developed to provide a flexible solution for electric heating in Domestic properties, Conservatories, Holiday homes, Offices and any other temporary heating situation.

Our unique patented 'Magmatic' heating tablets provide the heat source for your new radiator. Whilst the radiator is classed as a 100% efficient Direct Acting appliance, the heating tablets provide partial storage to prolong your heating comfort and to reduce running costs. The radiator has a robust body which incorporates a spot welded high fin surface area to ensure that there are no contraction noises during the heating cycle. The high fin design boasts 6 times the normal radiator surface area to provide a balance of Convection and Radiant heat for your added comfort.

The radiators can be simply plugged in to a "standard" socket or "hard" wired to an existing spur connection.

For added versatility we can supply Conservatory radiators which are also ideal for use below windows with low sills.

All our standard model sizes are supplied with a E4 manual room thermostat. In addition to the above we also supply Radio Frequency controlled radiators which provide all the benefits of the standard version however the control wiring is eliminated. These models can be controlled by our digital transmitter TBF or TPF.

All TECHNOTHERM radiators are manufactured to the highest safety and quality Standards. Each radiator is CE Marked and carries all the necessary European Approvals.

Each radiator is fully checked and tested prior to leaving the factory and as such is packed with full Quality certification.

We hope you enjoy the comfort provided by this superior product and we look forward to being of assistance to you in the future.

Manual TT-KS

3.0 Preparation

1. Before beginning, remove the radiator and parts from the box and check everything is

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Model	Power [Watt]	Dimensions [cm]	Protection class	
TT-KS 500 S	500	38 x 63 x 7	IP 20	
TT-KS 1000 S	1000	68 x 63 x 7	IP 20	
TT-KS 1200 S	1200	68 x 63 x 7	IP 20	
TT-KS 1500 S	1500	98 x 63 x 7	IP 20	
TT-KS 1800 S	1800	98 x 63 x 7	IP 20	
TT-KS 2000 S	2000	128 x 63 x 7	IP 20	
TT-KS 2400 S	2400	128 x 63 x 7	IP 20	
TT-KS 2800 S	2800	158 x 63 x 7	IP 20	
TT-KS 700 S LT*	700	68 x 63 x 7	IP 20	ca.60°C ST
TT-KS 1200 S LT*	1200	98 x 63 x 7	IP 20	ca.60°C ST
TT-KS 1500 S LT*	1500	128 x 63 x 7	IP 20	ca.60°C ST
TT-KS 1800 S LT*	1800	158 x 63 x 7	IP 20	ca.60°C ST
TT-KS 500 S X4	500	38 x 63 x 7	IP 24	
TT-KS 1000 S X4	1000	68 x 63 x 7	IP 24	
TT-KS 1200 S X4	1200	68 x 63 x 7	IP 24	
TT-KS 1500 S X4	1500	98 x 63 x 7	IP 24	
TT-KS 800 N	800	68 x 34 x 7	IP 20	
TT-KS 1200 N	1200	98 x 34 x 7	IP 20	
TT-KS 1600 N	1600	128 x 34 x 7	IP 20	
TT-KS 2000 N	2000	158 x 34 x 7	IP 20	
TT-KS 800 N X4	800	68 x 34 x 7	IP 24	
TT-KS 1200 N X4	1200	98 x 34 x 7	IP 24	
TT-KS 1200 H	1200	38 x 124 x 7	IP 20	
TT-KS 1800 H	1800	55 x 124 x 7	IP 20	
TT-KS 2200 H	2200	68 x 124 x 7	IP 20	
TT-KS 1200 H X4	1200	38 x 124 x 7	IP 24	
HR 1200 KSB	1200	38 x 124 x 7	IP 24	
HR 1200 deluxe	1200	52 (64) x 102 x 8,5 (14)*	IP 24	

ST = "surface temperature" - Surface temperature via the internal controller is set only by an electrical expert

The top grille of the radiator can then be fitted and secured with the securing screws at each end.

At the bottom of the radiator, next to the mains connection there is a small temperature sensor. Loosen the gland and pull the sensor down by 50 - 70 millimeters, then re-tighten the gland. This enables the radiator to gauge the room's temperature more accurately

3.2 Electrical connection

All TECHNOTHERM TT-KS radiators come with a standard UK 3 pin plug that can be directly connected to an electrical socket. Alternatively the mains cable can be cut to length and connected to a suitable Fused 20 Amp double-pole switched spur adjacent to the radiator. Please ensure that the electricity supply is disconnected prior to using this installation method. The mains plug should be discarded safely and not re-used.



Manual TT-KS

3.3 Radio frequency – wired versions model E4

The regulation of the desired room temperature implements a built-in temperature control device.



Technical Datas

- ° easy to use
- ° 7 power settings
- 0 = off
- 6 levels from 5°C till 30°C
- ° temperature sensor is integrated in the side
- ° frost protection mode

position 0 : OFF

position 1 : approx. 5°C (frost protection)

position 4 : approx. 20°C

position 6 : approx 30°C



ON and heating



ON but not heating



OFF

An illuminated display indicates the heating process of the radiator.

CAUTION - After completion of works all electrical connections should be tested for tightness. Additionally an electrical safety check should be carried out ie: short circuit, earth continuity, resistance to earth and polarity check and all the relevant test certificates produced.

3.4 Radio frequency – RF models

All Radio Frequency radiators come complete with a pre-wired TRF Receiver which is controlled by the TPF Eco control.

TPF transmitter installation

- Follow the instructions outlined on page 27 for single radiator installations according to the instructions included in the TPF transmitter packaging.
- Locate the TPF programmer on a suitable wall in the same room as the radiator.

CAUTION – After completion of works all electrical connections should be tested for tightness. Additionally an electrical safety check should be carried out ie: short circuit, earth continuity, resistance to earth and polarity check and all the relevant test certificates produced.

3.5 Installing castors and feet

All radiators are supplied with feet's or castors however with the exception of the Towel Rail. Consult the leaflet which comes with them for fixing instructions. The official feet or castors must be used.

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4.0 Operating safety

This appliance complies with the European Standards EN 60 335-1, EN 60 335-2-61, EN 61000-3-2, EN 61000-3-3, EN 55014 and EN55104 for Safety & Electromagnetic Compatibility. These standards cover the requirement of the EMC Directives 89/336 & 73/23

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RADIATOR POSITIONING - A minimum clearance of 150mm to the front of the radiator is essential for safety, however to enable the radiator to attain its maximum performance ensure that any furniture or other obstruction is not placed closer than 250mm.

THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE

CAUTION - THE SURFACE OF THIS RADIATOR CAN BE HOT.

The surface temperatures of this radiator are within the requirements of EN60-335 the European Standard covering the safety requirements of electric heating appliances, and momentary contact with any part of the radiator should not cause injury. However, in order to be effective, radiators of any type do get hot, especially around the air outlet grille.

Therefore, if aged or infirm persons, or young children, are likely to be left unsupervised in the vicinity of a radiator precautions should be taken to ensure that prolonged contact with the radiator cannot occur. We recommend that a guard is fitted around the radiator, as is normal with some types of heating appliances in similar circumstances.

CAUTION - IN ORDER TO AVOID OVERHEATING, DO NOT COVER THE SURFACES OF THE RADIATOR AND DO NOT OBSTRUCT AIR OUTLET GRILLES.

Surfaces of the radiator should not be covered or obstructed as this can cause excessive temperatures that can be hazardous and may cause safety cut-outs to operate. For example, do not put clothes, fabrics or any combustible materials on the radiator or allow curtains to come within 75mm (3") of the top and ends of the radiator. Do not allow furniture to be pushed up against the radiator. A minimum clearance of 150mm is critical for safety, however to ensure radiator performance is not affected a clearance of 250mm is recommended.

DO NOT PLACE OBJECTS IN CONTACT WITH THE RADIATOR

CAUTION – The radiator must not be located below or of in front of a socket outlet.

PLEASE NOTE: THIS RADIATOR IS HEAVY

Manual TT-KS

No attempt should be made to move the radiator without first seeking specialist advice. If you are not happy that the radiator has been securely fixed, please inform your installer.

DO NOT SIT OR STAND ON THE RADIATOR.

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DO NOT SPILL LIQUIDS ONTO THE APPLIANCE. IF YOU DO, SWITCH THE RADIATOR OFF AND GET A QUALIFIED ELECTRICIAN TO CHECK IT.

DO NOT POKE OBJECTS THROUGH THE GRILLE.

DO NOT USE POLISHES ON THE RADIATOR OR ON FURNITURE NEAR TO IT.

The hot interior of the radiator can produce paraffin smells from polish vapors which may last for a number of hours. In case of breakdown or other failure, switch off the radiator at both wall switches and contact your supplier or the LHZ Help Desk on +49 (0) 3724 66869 0 Always ensure that the radiator is switched off and fuse is removed before any repair is carried out.

IMPORTANT - Due to the newness of the materials the radiator will produce a slight smell for the first few days of operation.

ROOMS MUST BE WELL VENTILATED AND YOUNG CHILDREN, CAGED BIRDS OR PERSONS WITH RESPIRATORY COMPLAINTS MUST NOT REMAIN IN CLOSE PROXIMITY TO THE RADIATOR DURING THE FIRST 48 HOURS OF THE COMMISSIONING PERIOD.

Running the radiator at maximum temperature for the first few days will help to dispel any smells more quickly.

Please note that at high setting the room temperature will be warmer with a corresponding increase in running costs.

Safety - Overheat Protection

For your safety, this appliance is fitted with thermal cut-outs. In the event that the product overheats, the cut-outs switch the radiator off automatically. In the event of these safety cut-outs activating please inform the installer or the LHZ Help Desk.

Cleaning

To maintain the external appearance of the radiator it need only be wiped over occasionally with a dry duster. During the summer months, or at other times when the appliance is not is use and is completely cold, the opportunity should be taken to wipe over with a damp cloth. Do not use abrasive cleaning powders or furniture polish. Discoloration of wall finishes can sometimes occur immediately above a radiator due to the properties of some paints and decorating materials or the presence of environmental impurities in the air (such as soot or incense generated from the burning of candles etc.).

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6. Regulation

From 01.01.2018, the EU conformity of these devices is additionally linked to the fulfillment of the Ecodesign requirements 2015/1188.

The installation and commissioning of the devices is only permitted in conjunction with external room temperature controllers that fulfill the following functions:

- electronic room temperature control plus week timer

And has at least one of the following properties:

- room temperature control, with presence detection
- room temperature control, with open window detection
- with distance control option
- with adaptive start control
- with working time limitation
- with black bulb sensor
-

The following room temperature controller systems

- RF Receiver together with the TPF-Eco Thermostat (Art.Nr.: 750 000 641) and the Eco-Interface (Art.Nr.750 000 640) or
- DSM-Thermostat with the DSM-Interface (Art.No.:911 950 101)

from Technotherm meet the following requirements and therefore the ErP Directive:

- electronic room temperature control plus week timer (RF/DSM)
- room temperature control, with open window detection (DSM)
- with distance control option (DSM)
- with adaptive start control (DSM)

Use of the TT-KS Standard range (without external thermostat control) is only permitted with castors or on feet.

Installation of the receiver and the interfaces see separate instructions. For customer service - see last page.

Failure to comply with these requirements will result in the loss of the CE mark.

Manual TT-KS

Model: TT-KS S DSM / TT-KS N DSM / TT-KS H DSM (additional DSM interface necessary)														
Item	Symbol	Value									Value	Item	Value	
Heat output											Type of heat input, for electric storage local space heaters only (select one)			
Nominal heat output	P_{nom}	500	1000	1200	1500	1800	2000	2400	2800	Watt		manual heat charge control, with integrated thermostat	No	
Minimum heat output (indicative)	P_{min}	500	1000	1200	1500	1800	2000	2400	2800	Watt		manual heat charge control with room and/or outdoor temperature feedback	No	
Maximum continuous heat output	$P_{max,c}$	500	1000	1200	1500	1800	2000	2400	2800	Watt		electronic heat charge control with room and/or outdoor temperature feedback	No	
Auxiliary electricity consumption												fan assisted heat output	No	
At nominal heat output	e_{lmax}	500	1000	1200	1500	1800	2000	2400	2800	Watt		Type of heat output/room temperature control (select one)		
At minimum heat output	e_{lmin}	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt		single stage heat output and no room temperature control	No
In standby mode	e_{lSB}	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt		Two or more manual stages, no room temperature control	No
													with mechanic thermostat room temperature control	No
													with electronic room temperature control	No
													electronic room temperature control plus day timer	No
													electronic room temperature control plus week timer	Yes
													Other control options (multiple selections possible)	
													room temperature control, with presence detection	Nein
													room temperature control, with open window detection	Yes
													with distance control option	Yes
													with adaptive start control	Yes
													with working time limitation	No
													with black bulb sensor	No
Model: TT-KS S RF / TT-KS N RF / TT-KS H RF (additional TPF Thermostat and Eco-Interface necessary)														
Item	Symbol	Value									Value	Item	Value	
Heat output											Type of heat input, for electric storage local space heaters only (select one)			
Nominal heat output	P_{nom}	500	1000	1200	1500	1800	2000	2400	2800	Watt		manual heat charge control, with integrated thermostat	No	
Minimum heat output (indicative)	P_{min}	500	1000	1200	1500	1800	2000	2400	2800	Watt		manual heat charge control with room and/or outdoor temperature feedback	No	
Maximum continuous heat output	$P_{max,c}$	500	1000	1200	1500	1800	2000	2400	2800	Watt		electronic heat charge control with room and/or outdoor temperature feedback	No	
Auxiliary electricity consumption													fan assisted heat output	No
At nominal heat output	e_{lmax}	500	1000	1200	1500	1800	2000	2400	2800	Watt		Type of heat output/room temperature control (select one)		
At minimum heat output	e_{lmin}	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt		single stage heat output and no room temperature control	No
In standby mode	e_{lSB}	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt		Two or more manual stages, no room temperature control	No
													with mechanic thermostat room temperature control	No
													with electronic room temperature control	No
													electronic room temperature control plus day timer	No
													electronic room temperature control plus week timer	Yes
													Other control options (multiple selections possible)	
													room temperature control, with presence detection	Nein
													room temperature control, with open window detection	No
													with distance control option	Yes
													with adaptive start control	No
													with working time limitation	nein
													with black bulb sensor	nein
Contact details:	Lucht LHZ Elektroheizung GmbH & Co. KG Reinhard-Schmidt-Str.1 D-09217 Burgstädt													

Manual TT-KS

Model: TT-KS S E4 / TT-KS N E4 / TT-KS E4 (only additional with castors of feet's)													
Item	Symbol	Value								Value	Item	Value	
Heat output											Type of heat input, for electric storage local space heaters only (select one)		
Nominal heat output	P_{nom}	500	1000	1200	1500	1800	2000	2400	2800	Watt	manual heat charge control, with integrated thermostat	No	
Minimum heat output (indicative)	P_{min}	500	1000	1200	1500	1800	2000	2400	2800	Watt	manual heat charge control with room and/or outdoor temperature feedback	No	
Maximum continuous heat output	$P_{max,c}$	500	1000	1200	1500	1800	2000	2400	2800	Watt	electronic heat charge control with room and/or outdoor temperature feedback	No	
Auxiliary electricity consumption											fan assisted heat output		No
At nominal heat output	$e_{l,max}$	500	1000	1200	1500	1800	2000	2400	2800	Watt	Type of heat output/room temperature control (select one)		
At minimum heat output	$e_{l,min}$	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt	single stage heat output and no room temperature control	No	
In standby mode	$e_{l,SB}$	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Watt	Two or more manual stages, no room temperature control	No	
											with mechanic thermostat room temperature control	No	
											with electronic room temperature control	Yes	
											electronic room temperature control plus day timer	No	
											electronic room temperature control plus week timer	No	
											Other control options (multiple selections possible)		
											room temperature control, with presence detection	Nein	
											room temperature control, with open window detection	No	
											with distance control option	No	
											with adaptive start control	No	
											with working time limitation	No	
											with black bulb sensor	No	



TECHNOTHERM Service:

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