

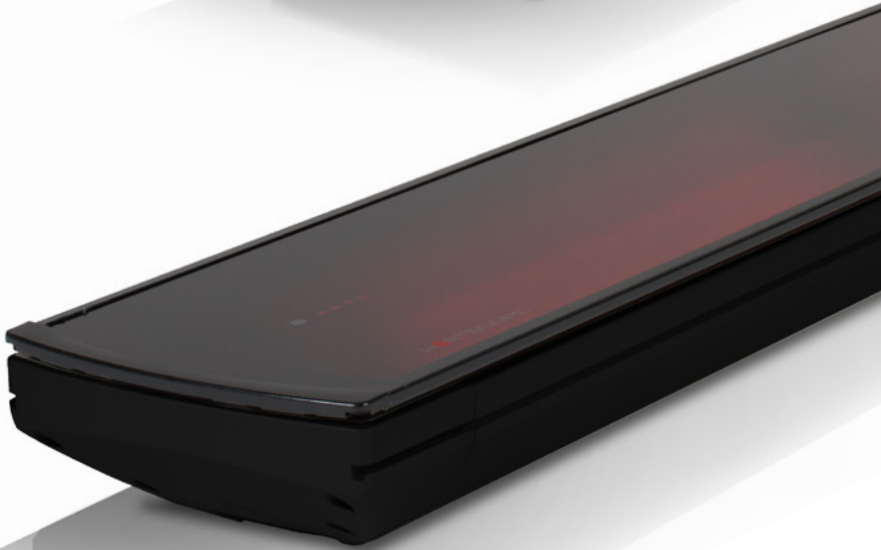
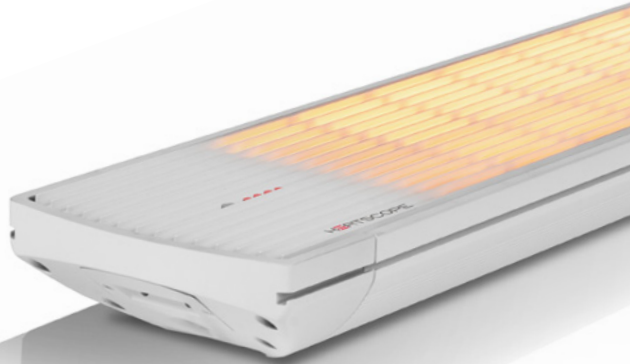
HEATSCOPE®

ambient heating | made in Germany

ORIGINAL INSTALLATION AND INSTRUCTION MANUAL

Electric ambient carbon radiant heater for
indoor and outdoor areas

US



■ developed
■ designed
■ made in
■ Germany

CE IP24 EMC

RoHS 
COMPLIANT 2002 / 95 / EC


c MET us
E114556
Electrical Safety

SAFETY INFORMATION

HEATSCOPE® infrared heaters must be installed and executed only by an authorized expert / trained professional electrician in accordance with the applicable standards and regulations for electrical wiring in electrical trade in the respective country / region of installation.

Have a qualified electrician install a properly grounded receptacle outlet, acceptable for outdoor use and protected from snow and rain, immediately adjacent to the location where the heater will be used. Route the supply cord and locate the heater so as to be protected from damage by live stock. Do not use extension cords. Inspect cord before using. Unplug heater at receptacle outlet when not in use or before removing, and store heater indoors after winter season.

All relevant local building and fire safety regulations must be observed at any time and under any circumstances.

WARNING: This unit is not equipped with an application to regulate the room temperature. The heater must not be used in small rooms inhabited by people who cannot leave the room unaided, unless constant supervision is ensured.

Be careful when operating the unit. Children younger than 3 years must be kept away, unless they are overseen all the time. Children older than 3 years and younger than 8 years are allowed to switch on and off the unit, if they are overseen, or if they were instructed how to use the unit safely and have received instructions how to operate/use the unit, assumed the unit is installed properly. **CAUTION:** Some parts of the unit get very hot and may cause burns! High cautiousness is imperative, if children or persons with reduced physical, sensory or mental abilities or lack of experience and/or knowledge. are present in the room.

Children older than 3 years and younger than 8 years are not allowed to connect the plug, to control the unit, to clean the unit and/or to maintain the unit.

Children older than 8 years and persons with reduced physical, sensory or mental abilities or lack of experience and/or knowledge can use this unit, if they are overseen, or if they were instructed how to use the unit safely and have received instructions how to operate/use the unit and which endangerments may result during the use of the unit. Children must not be playing with the unit. Cleaning and maintenance must not be done by children, unless they are supervised by a person responsible for their safety.

The unit must never be used unattended. Children must be supervised at all times to ensure that they do not play with the unit, switch it on unintentionally or adjust it.

CAUTION! The device is not intended for use by persons (including children) with reduced physical, sensory or mental capacity – it has to be kept out of reach from these persons especially from children.

It is **NOT ALLOWED** to use the heater in hazardous locations listed below; installation in non-hazardous locations only:

- Class I, Division 1 classified locations (areas where ignitable concentrations of flammable gases, vapors or liquids can exist all of the time or some of the time under normal opera-

ting conditions);

- **Zone 0 classified locations** (areas where ignitable concentrations of flammable gases, vapors or liquids are present continuously or for long periods of time under normal operating conditions);
- **Zone 1 classified location** (areas where ignitable concentrations of flammable gases, vapors or liquids are likely to exist under normal operating conditions);
- **Class I, Division 2 or Zone 2 classified locations** (areas where ignitable concentrations of flammable gases, vapors or liquids are not likely to exist under normal operating conditions);
- **Class II, Division 1 classified locations** (areas where ignitable concentrations of combustible dust can exist all of the time or some of the time under normal operating conditions);
- **Class II, Division 2 classified locations** (areas where ignitable concentrations of combustible dust are not likely to exist under normal operating conditions);
- **Class III, Division 1 classified locations** (areas where easily ignitable fibers or materials producing combustible flyings are handled, manufactured or used.
- **Class III, Division 2 classified locations** (areas where easily ignitable fibers are stored or handled);
- **Zone 20 classified locations** (areas where ignitable concentrations of combustible dust or ignitable fibers/flyings are present continuously or for long periods of time under normal operating conditions);
- **Zone 21 classified location** (area where ignitable concentrations of combustible dust or ignitable fibers/flyings are likely to exist under normal operating conditions);
- **Zone 22 classified locations** (areas where ignitable concentrations of combustible dust or ignitable fibers/flyings are not likely to exist under normal operating conditions).

1. Please check that your HEATSCOPE® radiant heater and accessories are complete and not damaged. In special take care of the glass holders of the model range VISION, which hold and surround the glass ceramic front screen. Press the holders carefully back in position, until they click into place again.

If the housing or reflector is deformed/damaged or the heating element is broken, do not use the HEATSCOPE® unit. Please contact the vendor or the manufacturer.

The cable must not be crushed, squeezed or damaged.

If the unit or accessories show signs of defects, cracking, breakage or other damage or if the industrial glass ceramics screen is damaged, discontinue use and have them repaired. In this case, disconnect the unit from the power supply, return it to the manufacturer or dispose of it. The unit should be labelled accordingly to prevent it being reconnected.

2. For installation use only the supplied accessories or original accessories approved by the manufacturer. The power cable or other components of the HEATSCOPE® radiant heater may only be replaced by a professional servicing company enlisted by the manufacturer. Before starting the installation, you must ensure that the operating voltage corresponds to that stated on the nameplate of the HEATSCOPE® or accessories. Note that depending on the currently available supply voltage the actual power of the device may change as well as the emitted power as a result of environmental influences.

The supply cable must be connected generally in a commercially available wet room distribution box with IP65 protection class acc. to IEC or UL / CSA (not within the scope of supply).

3. A short power-supply cord (or short detachable power-supply cord) is provided to reduce the risks resulting from becoming entangled in or tripping over a larger cord.

Extension cords (or longer detachable power-supply cords) are available and may be used if care is exercised in their use.

If an extension cord (or a long detachable power-supply cord) is used:

- 1) The marked electrical rating of the detachable power-supply cord or extension cord should be at least as great as the electrical rating of the appliance.
- 2) If the appliance is of the grounded type, the extension cord should be a grounding type 3-wire cord.
- 3) The longer cord should be arranged so that it will not drape over the countertop or tabletop where it can be tripped over, snagged, or pulled on unintentionally (especially by children).

Outdoor extension cords should be used with outdoor use products and are surface marked with suffix letter „W“ and with a tag stating „Suitable for Use with Outdoor Appliances“.

CAUTION! To provide continued protection against risk of electric shock, connect to properly grounded outlets only.

4. HEATSCOPE® heaters together with all available accessories feature IP protection class IP24. Nevertheless, it is mandatory to install the unit on a surface where it is well protected from any weather influences like rain and dust from above; so the HEATSCOPE® has to be installed under a roof, an overhang or in combination with the optional available weather shield. Never install the HEATSCOPE® heater on combustible material like wood, wooden surfaces etc.

5. **CAUTION!** To reduce the risk of electric shock, keep extension cord connection dry and off the ground. As soon as the unit is connected to a power source and switched on using an „ON/OFF“ switch or other operating component, it takes a maximum of 15-30 seconds until it reaches its operating temperature.

Important! Before first use, please clean the heater surface with an alcohol-free customary glass cleaner. Fingerprints can cause discolour at the surface.

6. **CAUTION!** Hot surface! Avoid contact! Risk of burns! – The front screen (approx. max. 572 °F) and protective fin front (approx. max. 752 °F) gets very hot while the unit is operating.

Do not cover either part of the front or the entire front of the radiant heater. Do not touch any part of the HEATSCOPE® during operation and up to 30 minutes after switching it off.

7. For your own safety, never dry textiles or other materials using the HEATSCOPE®. Covering the radiant heater may result in a fire! Always maintain a distance from the heating surface of the HEATSCOPE® of at least 60.00 inch from textiles, cloth and other easy inflammable soft materials.

8. Ensure that cables, furniture, flammable materials or other objects do not come into contact with the surface of the radiant heater and never cover the unit. Under no circumstances should the unit be covered or enclosed with insulating or similar materials. Adequate ventilation surrounding the heater must be ensured at any time. Ledgers, beams and rafters must not be cut into or grooved to install the infrared heater.

The following spacings are necessary to limit the temperature between the HEATSCOPE® radiant heater and adjacent surfaces:

Ceiling installation: min. 6.70 inch to the ceiling, min. 79.00 inch to a horizontal surface, min. 16.00 inch to a vertical surface;

Wall installation: min. 6.00 inch to the ceiling, min. 71.00 inch to a horizontal surface, min. 16.00 inch to a vertical surface.

When installing the HEATSCOPE® radiant heater, ensure that the safety clearances from the wall and ceiling set out in this manual are maintained.

Always maintain a distance from the heating surface of the HEATSCOPE® of at least 60.00 inch from textiles, cloth and other easy inflammable soft materials.

9. Disconnect the radiant heater from the power supply before cleaning it, adjusting the angle or removing it from the wall/ceiling. Wait until the heating elements are not glowing any more and the housing is noticeably cooled down. If buried cables are used, switch off the power using an omnipolar switch.

10. The HEATSCOPE® features an omnipolar „ON/OFF“ switch. The unit can be controlled manually either using an IR remote control (supplied, depending on the model) or a selector switch on the unit itself (depending on the model as well). The unit must be connected to a residual current circuit breaker and a fuse on the installation side – a ground fault circuit interrupter (GFCI) must be installed.

11. The unit must only be used with an approved isolating system, which must be built in the existing electrical installation acc. to the facility regulations. The heater comes as standard with a separate open-ended cable for connection purposes.

12. The power cable or buried cable with omnipolar switch may only be replaced by a professional specialist electrical company enlisted or approved by the manufacturer. Heating elements, other components or parts of the housing may only be replaced by a service organisation enlisted by the manufacturer.

If you yourself or someone enlisted by you carries out repairs, they will not be covered by

the guarantee. Improper repairs and incorrect installation or operation shall invalidate the guarantee immediately.

13. If the heater was installed inappropriately or was connected unhomogeneously with the local electrical supply cable, high transfer resistances may occur, which lead to overheating of the device. For the heating system and many custom applications the heaters were equipped with a NTC temperature control and an additional latching temperature limiter. Ordinarily possible overheating due to inappropriate installation is protected by the NTC temperature control and the latching temperature limiter. If overheating of a carbon heating element occur due to interlinkage of mounting and installation mistakes, the carbon filaments inside of the quartz tubes will fuse and safely disconnect the current flow. Even after a mechanical break of the quartz tubes, the carbon heating spirals will not work any longer. Besides the fin front screen of the SPOT heaters and the glass ceramic, high temperature resistant front screen of the VISION heaters provide best protection of the installed carbon heating elements.

Functional description of the NTC temperature control: If the system temperature of the electrical control exceeds 217.4 °F, the upper heating element will shut off temporary by default to avoid overheating of the electrical parts. After a short time the heating element will switch on automatically again. The self-controlled shut off of the heater will take place only, if the heat dissipation inside the device is inappropriate, if the heat radiation is interfered or if the ambient temperature is way too high. Apart from that the NTC temperature control supports energy savings, if the ambient temperatures are too high and the highest heating level of the heating unit is not necessary.

Functional description of the latching temperature limiter: If the NTC temperature control is not working against expectations, the latching temperature limiter will shut down the lower heating element permanently, until the heater is shut off totally by hand. After cooling down (warm to the touch) and fixing the inappropriate heat dissipation inside the device and/or the interfered heat radiation the heater can be switched on again. If the lower heating element shuts down once more, a system malfunction or a heat dissipation inside the device or an interference of the heat radiation or an error in the electrical installation may be the reason. If a system malfunction inside the device causes the shut down, the heater must be repaired by a professional technician; please contact your dealer immediately. If a wrong cable connection causes the shut down, this has to be checked and fixed through a professional electrician on the spot.

Installation and connecting regulations with tested and approved luster terminals are part of the delivered equipment.

14. The radiant heater must not be installed directly below a power source/socket. The sides of the unit must be at least 8.00 inch from the nearest power source. Sockets/power sources must be freely accessible at all times and comply with the following specifications: 220-240 V AC, 50/60 Hz, 16 A with 16 A fuse. No other loads may be connected to this power source.

15. The radiant heater must not be installed in close vicinity to bathtubs, showers or pools nor in rooms where there is permanent high humidity. The distance to the bathtub or shower

must be at least 40 inch and the distance to the pool at least 80 inch. A person standing in the bathtub, shower or pool should never reach the switch or controller of the heater. If the HEATSCOPE® is installed in such an environment with high humidity, the switches or other operating components must be positioned in such a way that they cannot be touched by persons who are in direct contact with water. When a radiant heater is installed in a bathroom, the CE standard requires that at least one heating element visibly „glows“ as soon as the unit is switched on.

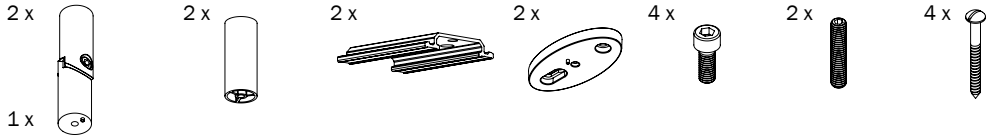
16. CAUTION! To provide continued protection against the risk of electric shock, disconnect the supply cord before cleaning, adjusting the angle or removing it from the wall/ceiling. Wait until the heating elements are not glowing any more and the housing is noticeably cooled down. If buried cables are used, switch off the power using an omnipolar switch. Wait at least 30 minutes after the last use before you start cleaning it. All surfaces should be cleaned using a damp cloth only. Never use cleaning products containing alkaline substances such as sodium hydroxide or soap, surfactants or solvents such as alcohol. Use only a very soft cloth or a brush for the reflector and the heating elements.

Do not clean this product with a water spray or the like.

17. Make absolutely sure to always switch off the device after use.

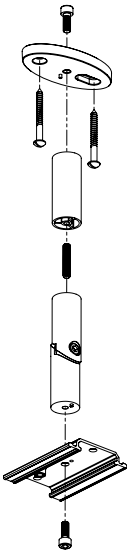
18. Store product indoors when not in use – out of the reach of children.

CEILING INSTALLATION

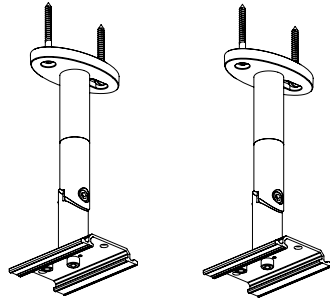


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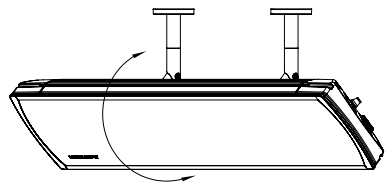
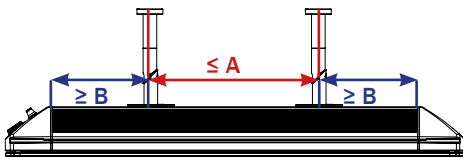
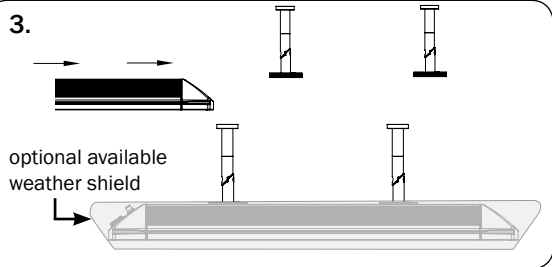
1. 2 x



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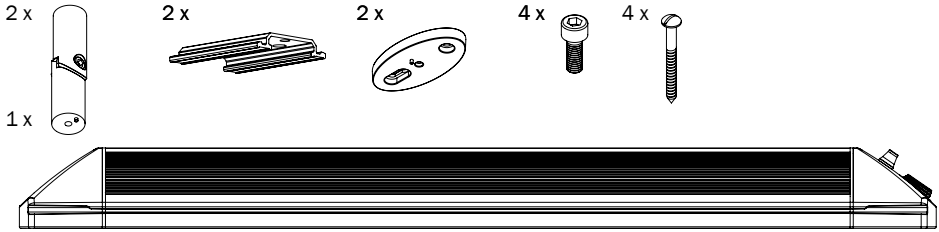
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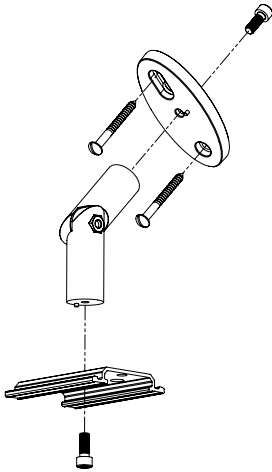
	A (inch)	B (inch)
MHS-SP1600	≤ 9.45	≥ 5.35
MHS-SM2200/MHS-SP2200	≤ 11.85	≥ 6.90
MHS-SM2800/MHS-SP2800	≤ 14.60	≥ 6.90

	A (inch)	B (inch)
MHS-VE1600/MHS-VT1600	≤ 11.85	≥ 6.90
MHS-VE2200/MHS-VT2200	≤ 25.60	≥ 6.90
MHS-VE3200/MHS-VT3200	≤ 45.30	≥ 6.90

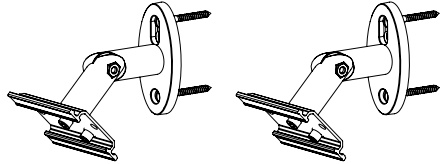
WALL MOUNTING



1. 2 x

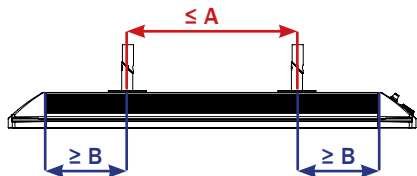
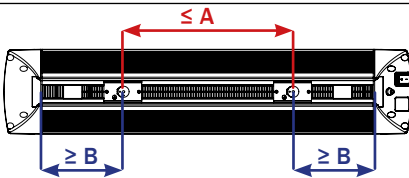
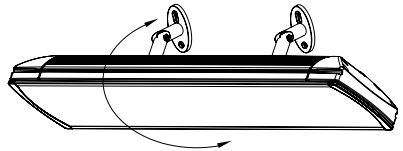
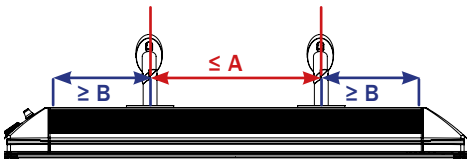
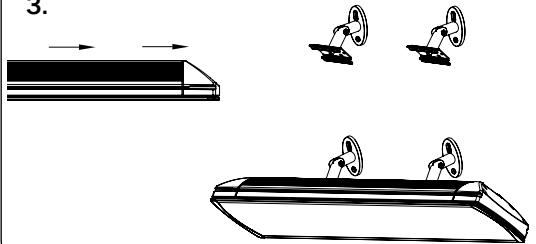


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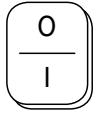
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US

ELECTRICAL CONNECTION 110-120 V AC

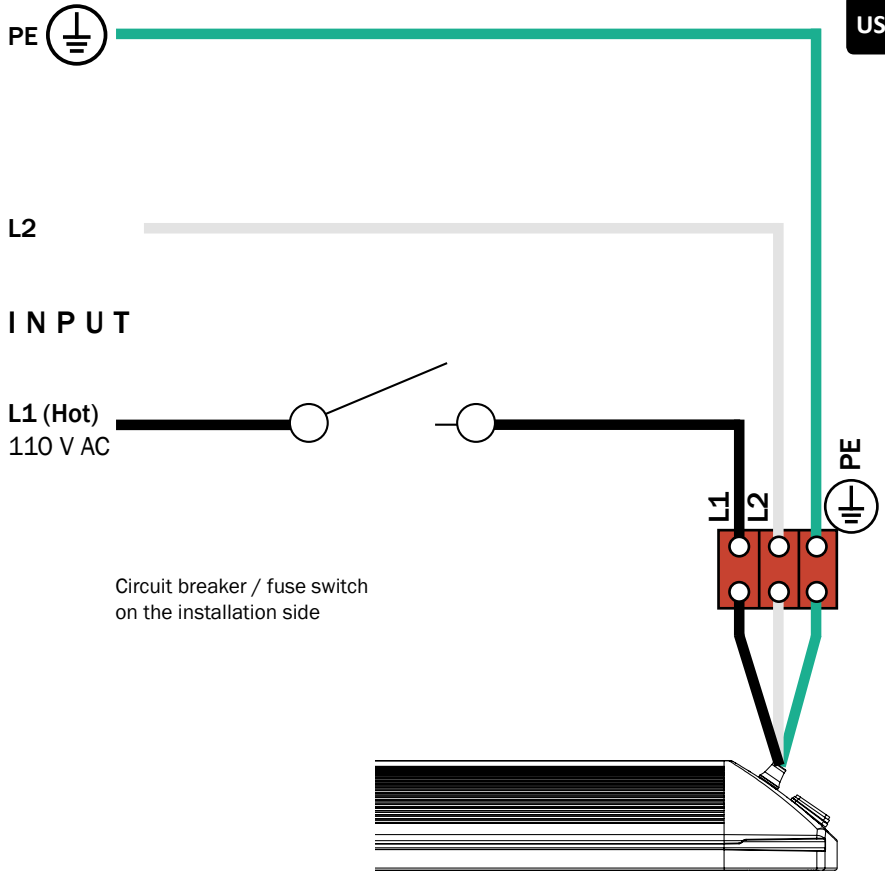


HEATSCOPE® SP

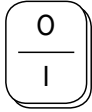
MHS-SP1600AB.250
MHS-SP1600WT.250



110-120 V AC
50/60 Hz



ELECTRICAL CONNECTION 220-240 V AC



HEATSCOPE® SP // HEATSCOPE® VT

MHS-SP2200AB.200, MHS-SP2800AB.200,
MHS-SP2200WT.200, MHS-SP2800WT.200

MHS-VT1600AB.200, MHS-VT2200AB.200, MHS-VT3200AB.200,
MHS-VT1600WT.200, MHS-VT2200WT.200, MHS-VT3200WT.200

US



L2 (Hot)
110 V AC

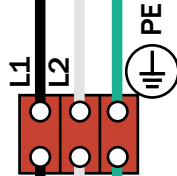


220-240 V AC
50/60 Hz

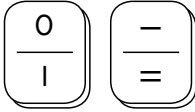
INPUT

L1 (Hot)
110 V AC

Circuit breaker / fuse switch
on the installation side



The supply cable must be connected generally in a commercially available wet room distribution box with IP65 protection class acc. to IEC or UL / CSA (not within the scope of supply).



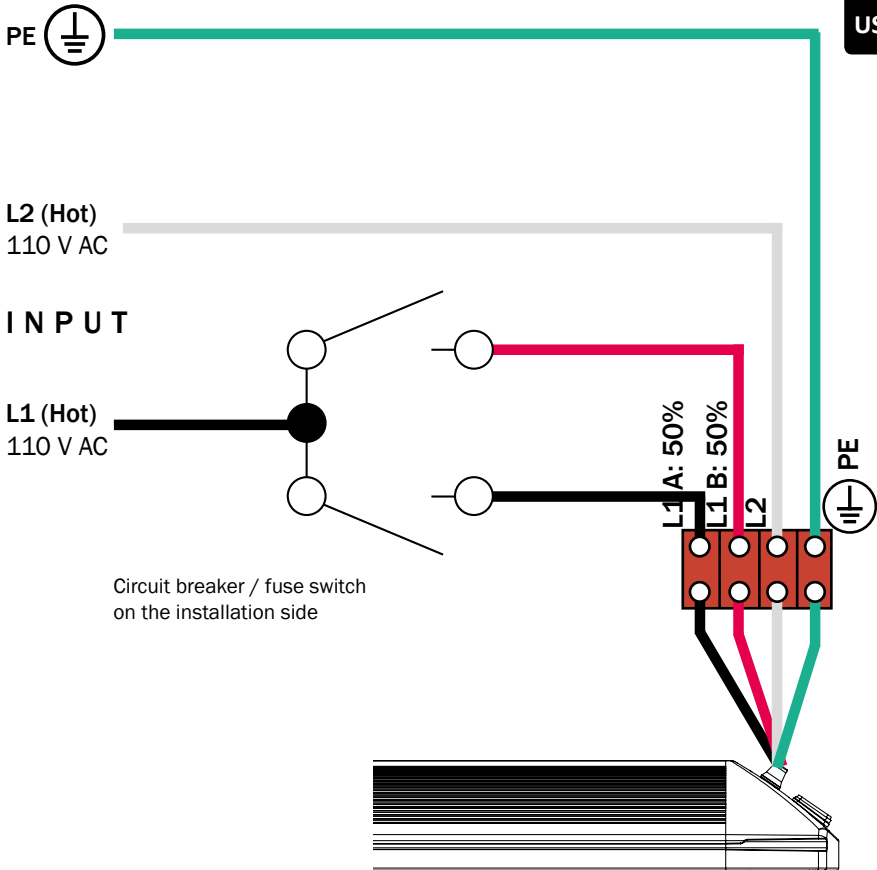
HEATSCOPE® SP // HEATSCOPE® VT

MHS-SM1600AB.200, MHS-SM2200AB.200, MHS-SM2800AB.200,
MHS-SM1600WT.200, MHS-SM2200WT.200, MHS-SM2800WT.200

MHS-VE1600AB.200, MHS-VE2200AB.200, MHS-VE3200AB.200,
MHS-VE1600WT.200, MHS-VE2200WT.200, MHS-VE3200WT.200



220-240 V AC
50/60 Hz



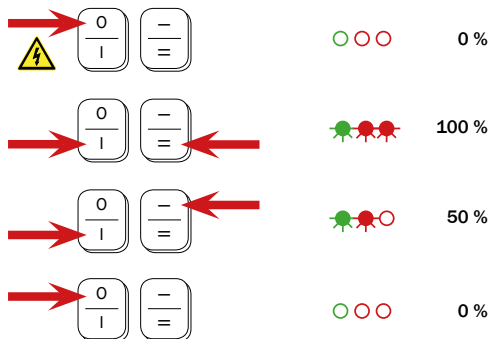
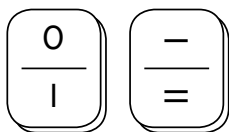
The supply cable must be connected generally in a commercially available wet room distribution box with IP65 protection class acc. to IEC or UL / CSA (not within the scope of supply).

MANUAL CONTROL

MHS-SM1600, MHS-SM2200, MHS-SM2800
 MHS-VE1600, MHS-VE2200, MHS-VE3200

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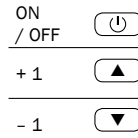
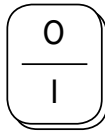
LED:



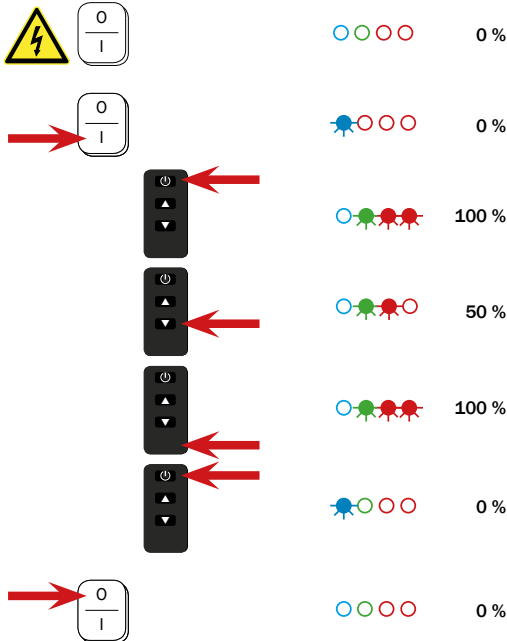
IR REMOTE CONTROL

MHS-SP1600, MHS-SP2200, MHS-SP2800
 MHS-VT1600, MHS-VT2200, MHS-VT3200

LED:



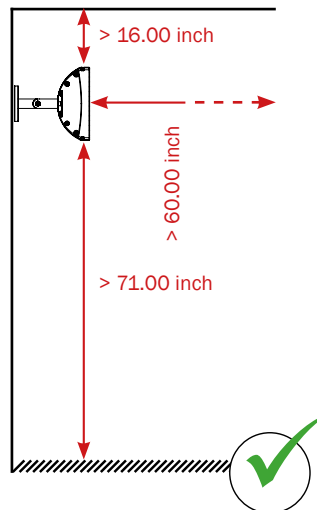
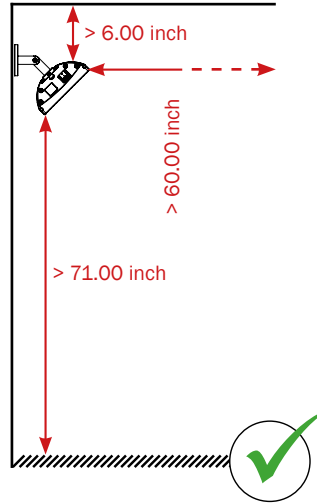
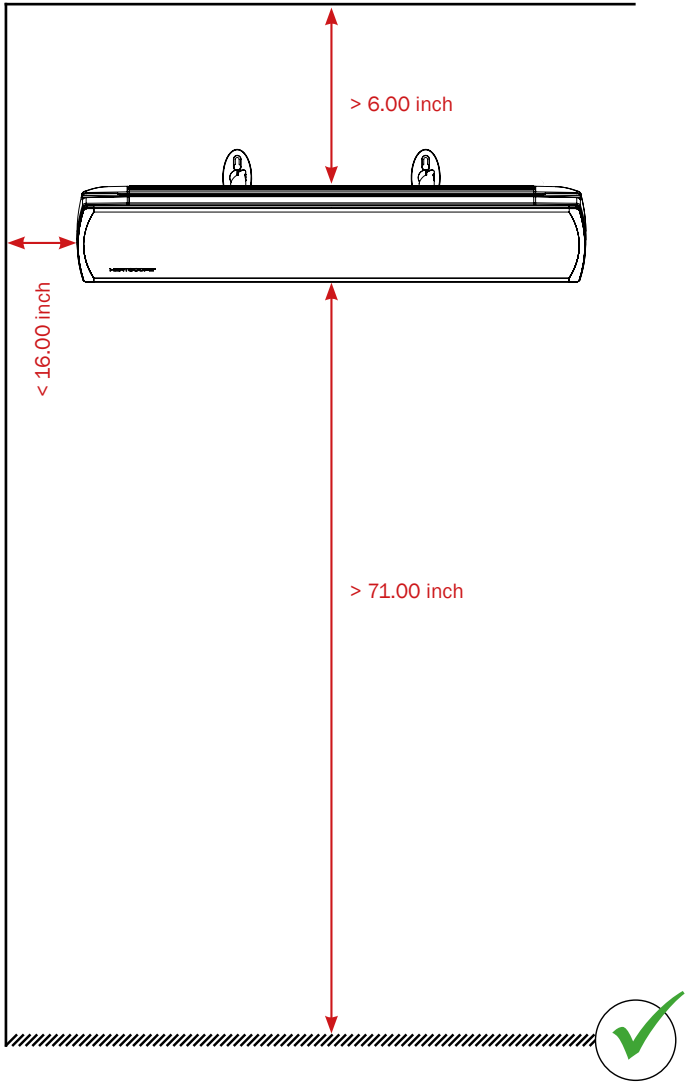
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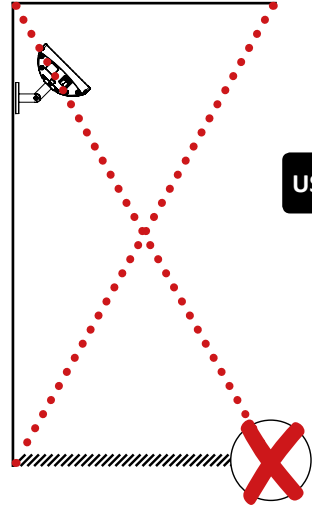
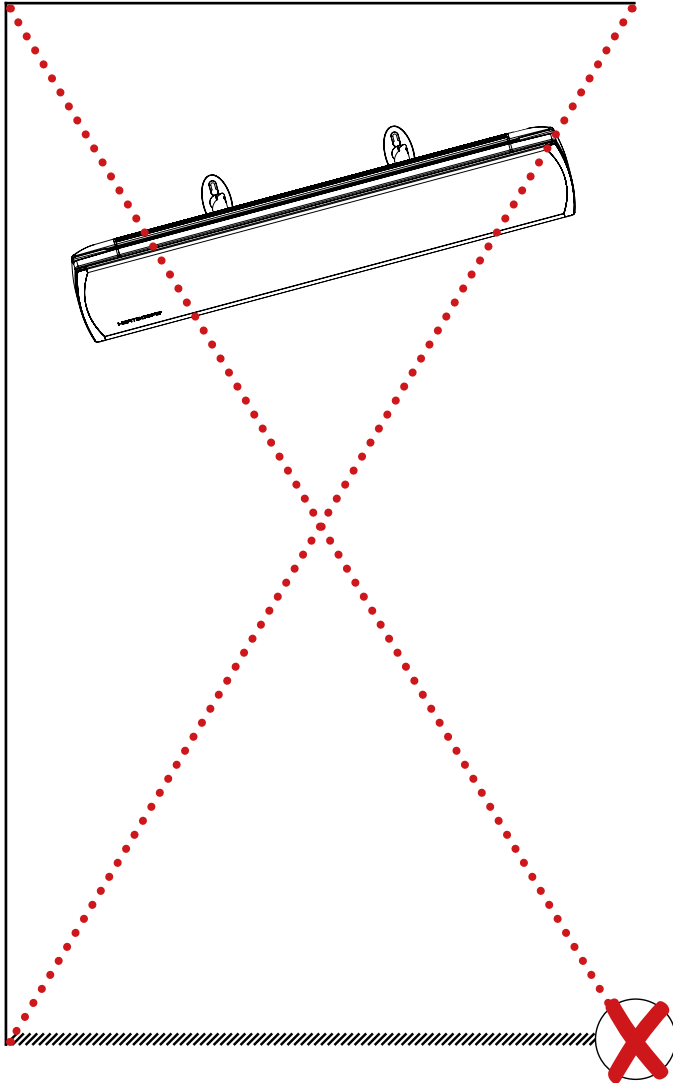
Minimum distances wall mounting

The following installation regulations ensure that the HEATSCOPE® ambient heater is working effectively. All minimum clearances that must be met regardless of the installation environment are listed.

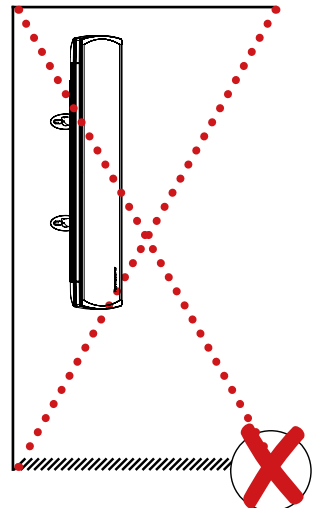
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The clearances given are minimum values and may differ from the local building and fire regulations. The latter must be observed and complied with in any case.

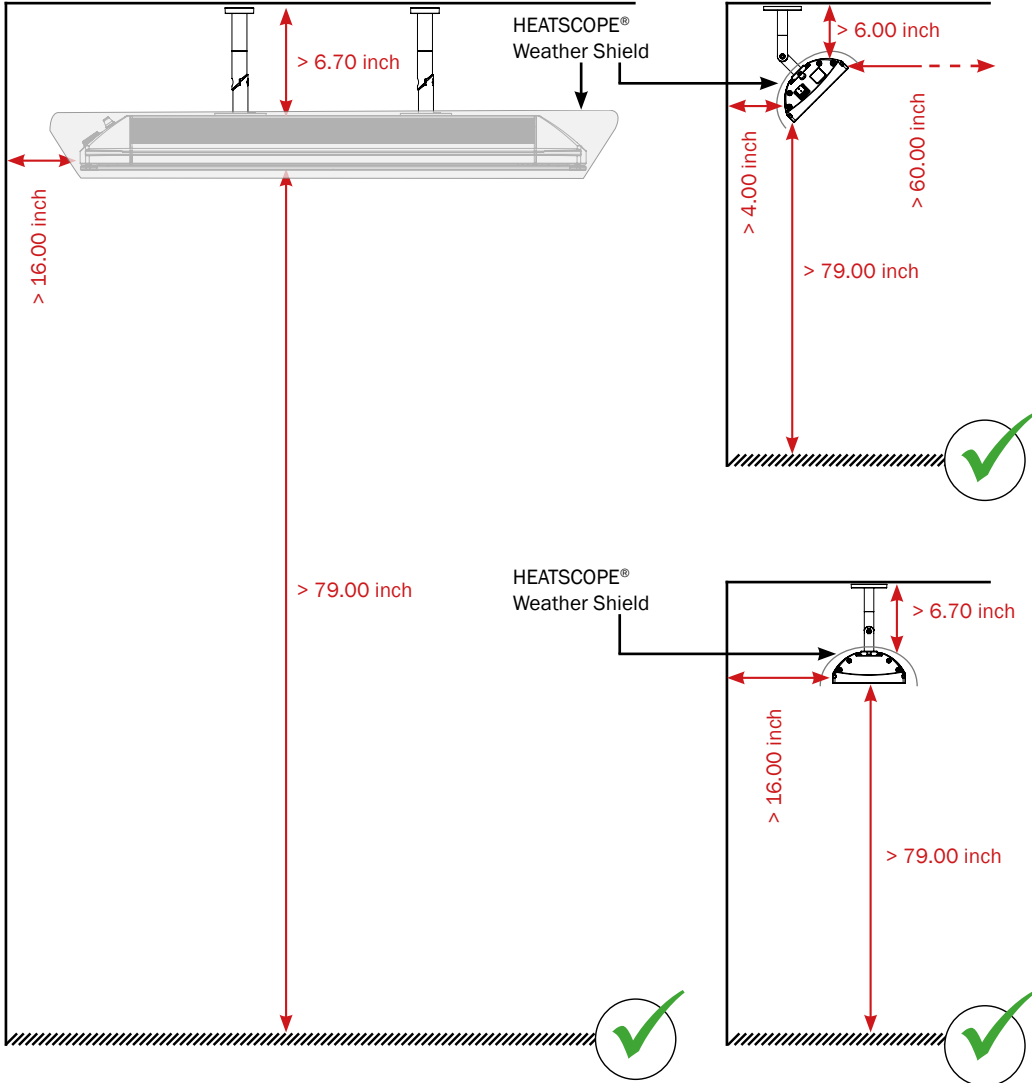


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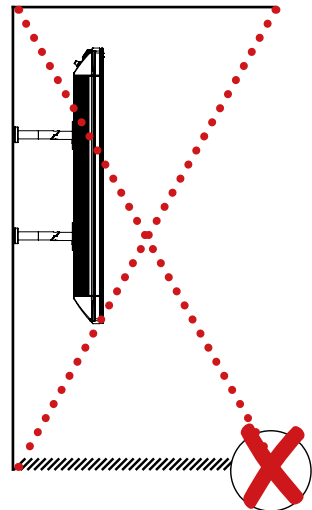
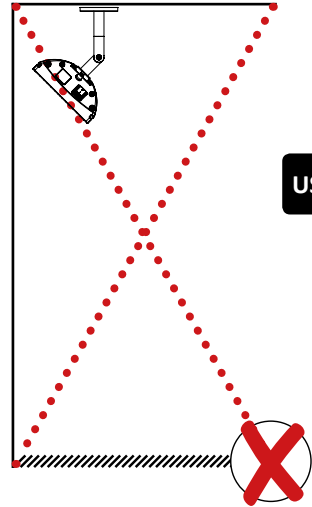
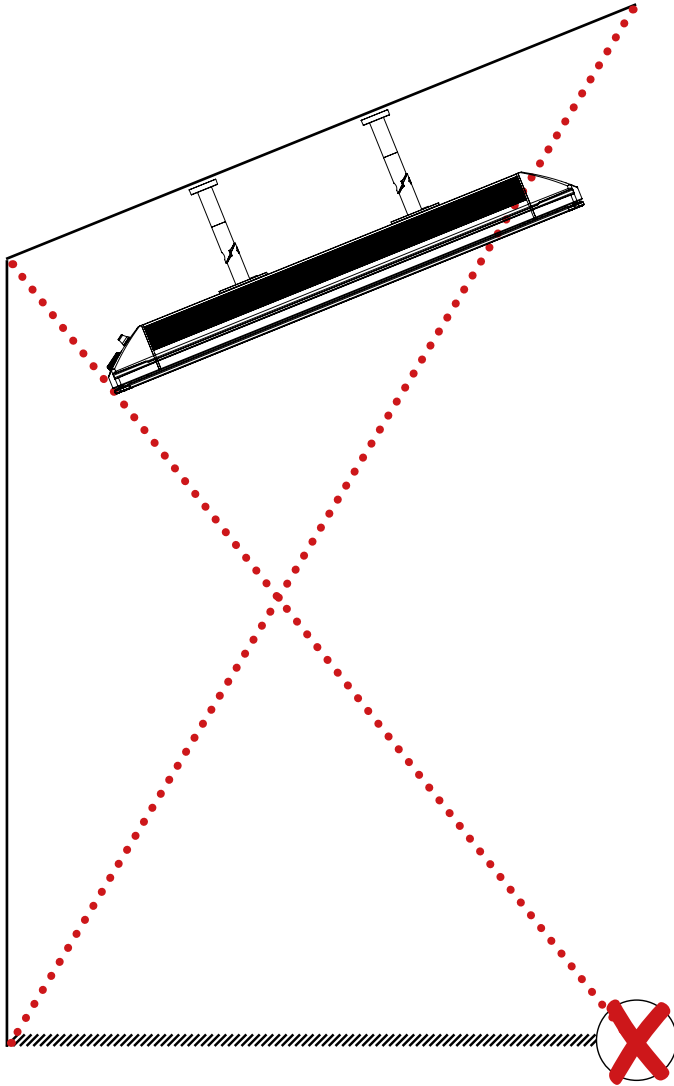


Minimum distances ceiling mounting

The following installation regulations ensure that the HEATSCOPE® ambient heater is working effectively. All minimum clearances that must be met regardless of the installation environment are listed.



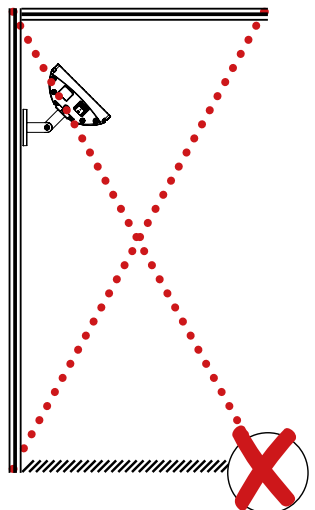
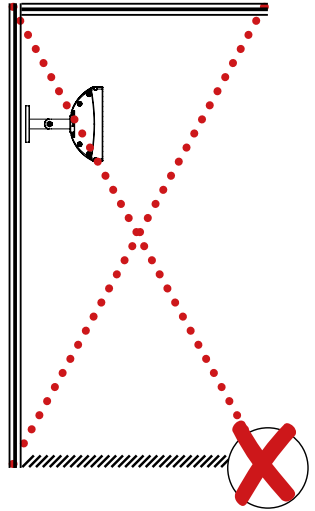
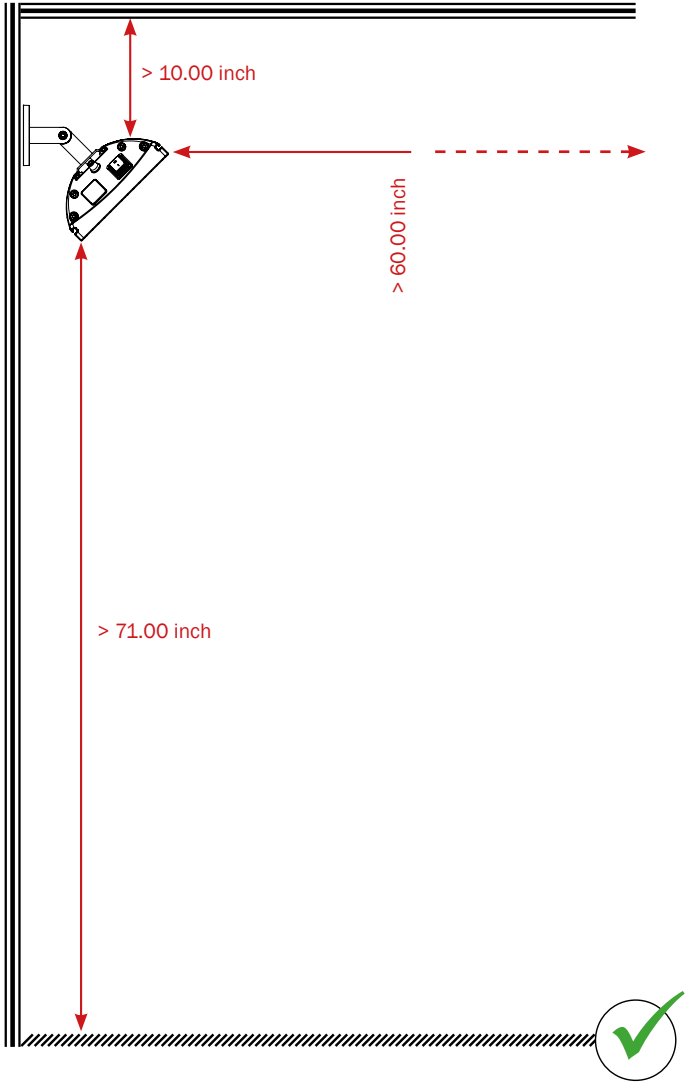
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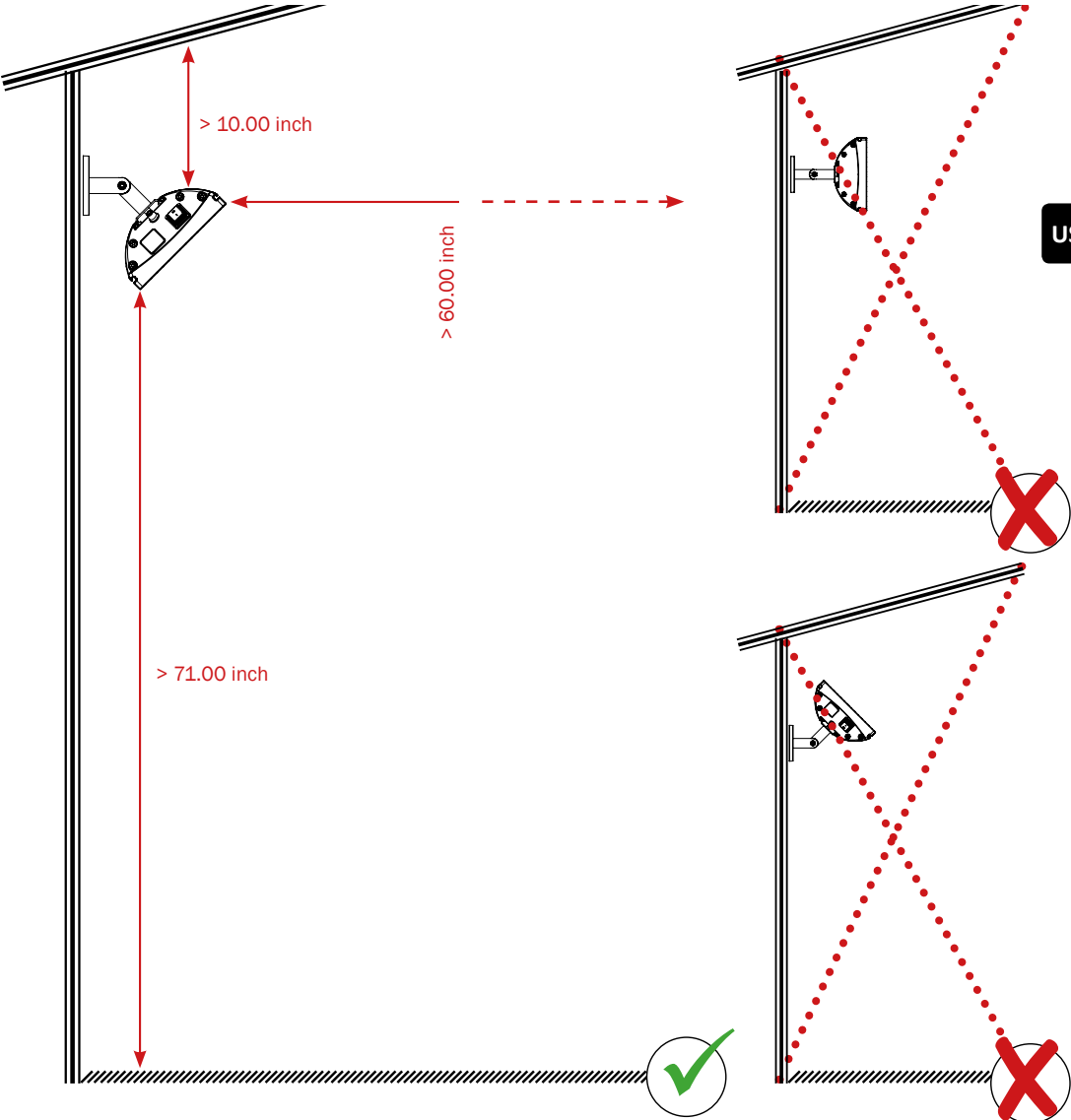
Minimum distances wall mounting

The following installation regulations ensure that the HEATSCOPE® ambient heater is working effectively. All minimum clearances that must be met regardless of the installation environment are listed.

US



The clearances given are minimum values and may differ from the local building and fire regulations. The latter must be observed and complied with in any case.



US

HEATSCOPE® infrared heaters are producing high energy efficient heat based on IR fast midwave up to efficient IR long wave technology.

Designed for private and commercial use for wall and ceiling mounting in well covered, sheltered indoor and outdoor areas, HEATSCOPE® carbon radiant heaters produce heat within seconds wherever it is needed. The infrared radiant heater allows you to transport heat over a distance of up to 3 metres, ideally in a specific direction.

Before installing the unit, please read this instruction manual carefully. Follow the information given to avoid endangering yourself, your family, your friends and your acquaintances. If you have any questions, contact the vendor or manufacturer.

US

Please keep this instruction manual in a safe place. Pass on the manual to any subsequent owner of the HEATSCOPE® unit and ensure that any supplements received are included along with it. This manual is also available online: www.munich-home-systems.com/wp-content/uploads/HEATSCOPE_US-Manual_UL.pdf

Prior to installation, ensure that the operating voltage matches the one specified on the name plate of the HEATSCOPE® unit!

This instruction manual is intended solely for the below listed standard products. The technical data, installation requirements and dimensions of custom made, special versions may differ.

Unpacking the unit / packaging

Unpack the unit and the accessories carefully. When opening the packaging, do not use sharp objects that could damage the unit.

This product comes supplied in environmentally friendly packaging. All HEATSCOPE® packaging that comes into circulation either directly or via the trade is certified in accordance with §6 of the German Packaging Directive. As a result, all HEATSCOPE® packaging can be disposed of in an environmentally friendly manner in collection containers for packaging materials. The relevant legal regulations must be observed here. Further information is available from the manufacturer.

Care information! Important! Clean the unit with a damp cloth before using it for the first time. Do not use cleaning products containing alkaline substances such as sodium hydroxide or soap, surfactants or solvents/alcohol.

Installation instructions

The INDIVIDUAL options for installing the HEATSCOPE® radiant heater are shown in the diagrams in the beginning of this manual.

Ensure that the radiant heater is fixed securely to the installation surface. In terms of tensile and shear strength, the fixings must be able to withstand at least 3 times the weight of the radiant heater (including accessories) that is to be installed. When installing the unit, use the correct screws and plugs (supplied) for the surface.

Please bear in mind that you always need two fixing brackets to fix your unit safely. Please refer to the minimum installation dimensions for the unit (cf. „minimum distances“).

It is mandatory to install the unit on a surface where it is well protected from any weather influences like rain and dust from above; so the HEATSCOPE® has to be installed under a roof, an overhang or in combination with the optional available weather shield.

Operation, installation instructions and minimum distances

Once you have installed the unit, you can use it for the first time.

The HEATSCOPE® features an omnipolar „ON/OFF“ switch. You can control the radiant heater manually using a selector switch on the unit itself or using an IR remote control which comes supplied (depending on the model). The unit must be connected to a residual current circuit breaker and a fuse.

Install the unit only in indoor or outdoor areas that are well protected from any weather influences from above like rain and dust. The heater is protected from lateral spray water, but it has to be covered with a roof or a similar canopy like the optional available weather shield upwards.

CAUTION: The mounting of the heater on the wall and on the ceiling as well as in glass houses and conservatories has professionally to be accomplished solely according to the mounting regulations. Specified safety distances given are min. values and may deviate from the local building and fire safety regulations. The safety distances as well as the local building and fire safety regulations must be complied with at all times, leave improper stated installation settings undone at any time. Deviant installation settings require the technical approval of the manufacturer, who can prescribe the installation of temperature and weather protection shields. In the case of a deviant installation setting without approval of the manufacturer danger for people and environment occurs. Warranty and guarantee expires for all heaters, which are not installed according to this operation and installation manual!

Other protective measures may need to be taken in accordance with local fire safety regulations, e.g. for installation on combustible surfaces.

All cables must be positioned so that they cannot come into contact with the radiant heater at any time. The radiant heater must not be installed directly below a power socket. The sides of the HEATSCOPE® must be at least 7.87 inch from any power sockets.

Care, maintenance and service

Before cleaning and maintaining your HEATSCOPE®, disconnect it from the power supply or, if buried cables are used, switch it off via the omnipolar switch. Ensure that the unit has cooled down – wait at least 30 minutes after the last use before you start cleaning it.

All surfaces should be cleaned using a damp cloth only. Never use cleaning products containing alkaline substances such as sodium hydroxide or soap, surfactants or solvents such as alcohol.

Use only a very soft cloth or a brush for the reflector and the heating elements.

CAUTION!

Do not use a high pressure hose or other high pressure water equipment to clean HEATSCOPE® ambient heaters. Do not use any sharp objects and aggressive cleaning agents under no circumstances. Make sure that no cleaning residue remains on the unit.

Removal from service / disposal

When the unit reaches the end of its life, it must be removed from service by a specialist in accordance with the relevant regulations and steps must be taken to ensure that it cannot be put into use again.

The unit must be disposed of professionally and in an environmentally friendly manner. The relevant legal regulations must be observed.

Guarantee and warranty

The HEATSCOPE® is guaranteed for 24 months. The warranty period begins on the date on which the new unit was purchased. Expendable parts or defects that affect the usability of the unit only slightly are not covered by the guarantee. When making a guarantee claim, you must provide the original invoice showing the date of purchase and the unit model.

Processing of guarantee claims

Please contact your dealer/distributor before returning the defective unit along with valid proof of purchase and a detailed description of the fault. Please note: Don't send in any devices to the manufacturer without any former contact with your distributor or dealer. He will inform you about all following steps. **The manufacturer will only accept the unit, if it is returned with adequate transport packaging which protects it securely during transport.**

The manufacturer will, at its own discretion, fulfil its warranty obligations by either repairing or exchanging the faulty unit or individual parts of the faulty unit. If a unit is replaced, the shape and colour of the new unit may vary slightly from the original one. The original date of purchase shall determine when the guarantee period begins. The guarantee period shall not be extended if the unit was replaced or repaired by the manufacturer.

Warranty exclusions

Damage or defects caused by improper handling or operation as well as defects caused by using non-original parts or the use of accessories not recommended by the manufacturer are not covered by the warranty.

The warranty does not cover damage caused by external influences such as fire, lightning or any transport damages. Liability for consequential damages to persons or property is excluded.

If the serial number of the unit has been changed, removed or defaced, the warranty will be invalid.

All warranty claims shall be forfeited if the unit is opened, altered, modified, rebuilt or repaired by a person not authorized by the manufacturer.

The declaration of conformity (CE, WEEE, RoHS) is available upon request from the manufacturer.

Models**HEATSCOPE® SPOT – manual control, 4 core cable**

SPECIFICATIONS: ON/OFF + 2 manually switchable power levels (100% or 50%)

MHS-SM1600AB.250, MHS-SM2200AB.200, MHS-SM2800AB.200
MHS-SM1600WT.250, MHS-SM2200WT.200, MHS-SM2800WT.200**HEATSCOPE® SPOT – 2 power levels, remote controllable, 3 core cable**

SPECIFICATIONS: ON/OFF + 2 remote controllable power levels (100% or 50%), IR remote control

MHS-SP1600AB.250, MHS-SP2200AB.200, MHS-SP2800AB.200,
MHS-SP1600WT.250, MHS-SP2200WT.200, MHS-SP2800WT.200**HEATSCOPE® VISION – manual control, 4 core cable**

SPECIFICATIONS: ON/OFF + 2 manually switchable power levels (100% or 50%, external)

MHS-VE1600AB.200, MHS-VE2200AB.200, MHS-VE3200AB.200
MHS-VE1600WT.200, MHS-VE2200WT.200, MHS-VE3200WT.200**HEATSCOPE® VISION – remote controllable, 3 core cable**

SPECIFICATIONS: ON/OFF + 2 remote controllable power levels (100% or 50%), IR remote control

MHS-VT1600AB.200, MHS-VT2200AB.200, MHS-VT3200AB.200
MHS-VT1600WT.200, MHS-VT2200WT.200, MHS-VT3200WT.200

TECHNICAL DATA

	HEATSCOPE® SPOT	HEATSCOPE® VISION
Operating voltage	110-120 V AC, 50/60 Hz	---
Power at 115 V AC	1600 W	---
Current	13.91 A	---
Power Cord	43.31 inch length SJT 3 x 14 AWG 0.06 inch ² extended heat resistance	---
Operating voltage	220-240 V AC, 50/60 Hz	220-240V AC, 50/60 Hz
Power at 230 V AC	1600 W / 2200 W / 2800 W	1600 W / 2200 W / 3200 W
Current	6.96 A / 9.57 A / 12.17 A	6.96 A / 9.57 A / 13.91 A
Power Cord	with remote: 43.31 inch length AWM4330-3x14AWG 0.06 inch ² extended heat resistance without remote: 43.31 inch length AWM4330-4x14AWG 0.06 inch ² extended heat resistance	with remote: 43.31 inch length AWM4330-3x14AWG 0.06 inch ² extended heat resistance without remote: 43.31 inch length AWM4330-4x14AWG 0.06 inch ² extended heat resistance
Max. surface temperature / front	≤ 752 °F	≤ 572 °F
Max. housing temperature	≤ 302 °F	≤ 266 °F
Filament temperature	2012-2372 °F	2012-2372 °F
heating impact in	5 sec.	10 sec.
Max. visible light	≤ 600 Lux	≤ 300 Lux
Recomm. installation height	71.00-119.00 inch	71.00-99.00 inch
IP protection class	IP 24 (with optional available weather shield)	IP 24 (with optional available weather shield)
Manual control	ON/OFF + 100%, 50%	ON/OFF + 100%, 50%
Remote control	ON/OFF + 100%, 50%	ON/OFF + 100%, 50%



IP24

EMC

 RoHS

COMPLIANT 2002 / 95 / EC


E114556
Electrical Safety

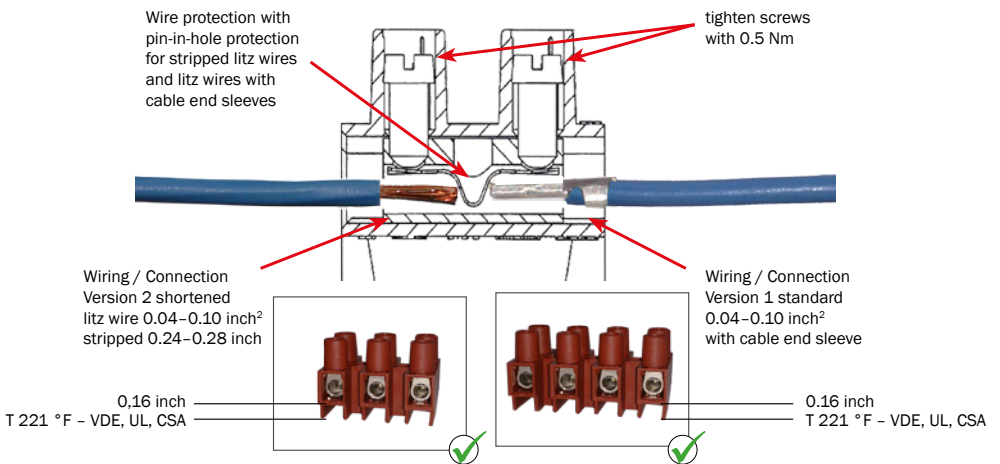
DIMENSIONS & SPECIFICATIONS

Art.-No.	Power	Weight	Sizes (incl. brackets)
MHS-SM1600 / MHS-SP1600	1600 W	4.0 kg	670 x 184 x 78 mm
MHS-SM2200 / MHS-SP2200	2200 W	4.5 kg	810 x 184 x 78 mm
MHS-SM2800 / MHS-SP2800	2800 W	5.0 kg	884 x 184 x 78 mm
MHS-SM1600 / MHS-SP1600	1600 W	4.0 kg	670 x 184 x 78 mm
MHS-SM2200 / MHS-SP2200	2200 W	4.5 kg	810 x 184 x 78 mm
MHS-SM2800 / MHS-SP2800	2800 W	5.0 kg	884 x 184 x 78 mm
MHS-VT1600 / MHS-VE1600	1600 W	6.0 kg	810 x 184 x 87 mm
MHS-VT2200 / MHS-VE2200	2200 W	8.0 kg	1160 x 184 x 87 mm
MHS-VT3200 / MHS-VE3200	3200 W	11.0 kg	1660 x 184 x 87 mm
MHS-VT1600 / MHS-VE1600	1600 W	6.0 kg	810 x 184 x 87 mm
MHS-VT2200 / MHS-VE2200	2200 W	8.0 kg	1160 x 184 x 87 mm
MHS-VT3200 / MHS-VE3200	3200 W	11.0 kg	1660 x 184 x 87 mm

US

MHS – HEATSCOPE® VISION AND SPOT – WIRING / CONNECTING REGULATION

Pillar terminal 1000 K / 3 + 4 MDS HT 0.02–0.24 inch², 3 + 4 pol.



INSTALLATION ASSISTANCE FOR MHS HEATSCOPE® VISION AND SPOT INFRARED HEATERS

Professional and safe Installation of HEATSCOPE® VISION and SPOT heaters acc. to int. standards:

Standards: All MHS HEATSCOPE® VISION and SPOT infrared design heaters are designed, developed and manufactured acc. to EN / IEC 60335-1 and EN / IEC 60335-2-30 (Household and similar electrical appliances Safety)

Installation: Installation of heaters must be done acc. to installation guideline of the ORIGINAL HEATSCOPE® INSTALLATION AND INSTRUCTION MANUAL. Min. distance between the two mounting brackets on back of the heater as designated, min. installation height: 70.9 inch from ground, min. distances to walls, ceilings or other materials as designated in the manual.

Installation on a ceiling should reach a min. distance of 86.6 inch from ground to avoid any contact with hair, head, or skin. Despite IP 24 protection the heater should be installed well covered against rain and direct water impacts to guard the high end reflector shields and protect their full functionality.

ATTENTION! Inadequate derivation of heat will cut off the lower heating element shortly after activation. After some time of cooling down this heating element will power up again. Inappropriate installation and inadequate derivation may overload the heater. For safety reasons a temperature limiter is installed, which cuts off the upper heating element permanently due to inappropriate installation or incorrect electrical connection – until electrical connection is disconnected and the heating element is totally cooled down. In case the heater is damaged by improper installation or by a missing heat derivation, the manufacturer's guarantee will no longer be applicable.

Table 1: Cross section of wiring / connection and fuse from supply to heater considering longer wiring /connections and environmental temperatures

per 1 piece HEATSCOPE® heater	heater cable	connecting terminal 3 / 4 core	1 wiring connection from heater cable to supply	fuse
VT1600 + SP1600: 220-240 VAC, 7.0 A:	3 x 0.06 inch ²	1000 K / 3 MDS HT 0.02-0.24 in ²	min. 3 x 0.06 inch ² 16 A	min. 10 A
VE1600 + SM1600: 220-240 VAC, 7.0 A:	4 x 0.06 inch ²	1000 K / 4 MDS HT 0.02-0.24 in ²	min. 4 x 0.10 inch ² 25 A	min. 10 A
VT2200 + SP2200: 220-240 VAC, 9.6 A:	3 x 0.06 inch ²	1000 K / 3 MDS HT 0.02-0.24 in ²	min. 3 x 0.06 inch ² 16 A	min. 16 A
VE2200 + SM2200: 220-240 VAC, 9.6 A:	4 x 0.06 inch ²	1000 K / 4 MDS HT 0.02-0.24 in ²	min. 4 x 0.10 inch ² 25 A	min. 16 A
SP2800: 220-240 VAC, 12.2 A:	3 x 0.06 inch ²	1000 K / 3 MDS HT 0.02-0.24 in ²	min. 3 x 0.06 inch ² 16 A	min. 16 A
SM2800: 220-240 VAC, 12.2 A:	4 x 0.06 inch ²	1000 K / 4 MDS HT 0.02-0.24 in ²	min. 4 x 0.10 inch ² 25 A	min. 16 A
VT3200: 220-240 VAC, 13.9 A:	3 x 0.06 inch ²	1000 K / 3 MDS HT 0.02-0.24 in ²	min. 3 x 0.06 inch ² 16 A	min. 16 A
VE3200: 220-240 VAC, 13.9 A:	4 x 0.06 inch ²	1000 K / 4 MDS HT 0.02-0.24 in ²	min. 4 x 0.10 inch ² 25 A	min. 16 A
per 2 pieces HEATSCOPE® heater	heater cable	connecting terminal 3 / 4 core	1 wiring connection from heater cable to supply	fuse
VT1600 + SP1600: 220-240 VAC, 7.0 A:	3 x 0.06 inch ²	1000 K / 3 MDS HT 0.02-0.24 in ²	min. 3 x 0.06 inch ² 16 A	min. 16 A
VE1600 + SM1600: 220-240 VAC, 7.0 A:	4 x 0.06 inch ²	1000 K / 4 MDS HT 0.02-0.24 in ²	min. 4 x 0.10 inch ² 25 A	min. 16 A

Professional and safe electrical connection of HEATSCOPE® heaters acc. to int. standards:

Standards:

The electrical installation must be done by a professional electrician acc. to DIN VDE 0298-4 / IEC 60364-5-52, current load of electrical wirings / connections acc. to DIN VDE 0113-1 / EN 60204-1 for long-term usage with environmental temperatures of 104 ° F, with conversion factor for higher environmental and wiring / connection temperatures, accumulation of wirings or connections for the same type of installation and max. wiring / connection lengths acc. to DIN VDE 0100-520 Blt. 2 / EN 60204-1. Due to the listed impacts on wiring / connection longer wirings / connections from distribution board to cable of heater should be constructed one cross section higher (cf. table below). Connection of supply cable and heater cable should only be done with tested pillar terminals with wire protection and central fence.



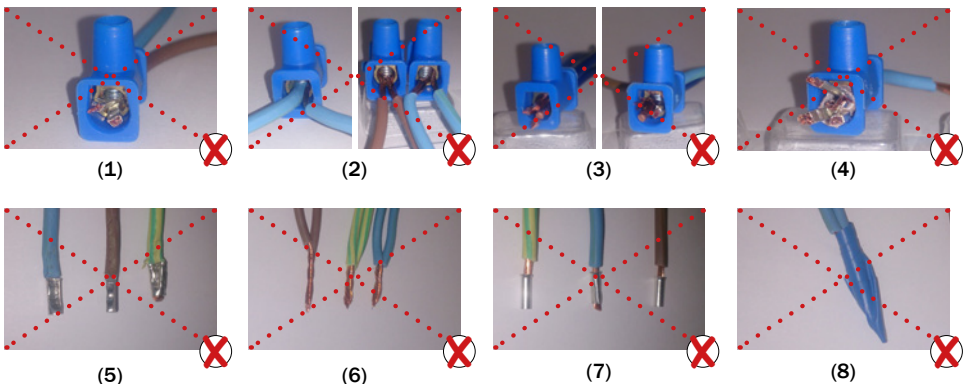
Example: ADELS 1000K 3 or 4 MDS HT 0.02–0.24 inch², 40 Amp.
Testing Signs: VDE, UL, CSA, KEMA, SEMKO, FI (cf. table)

US

ATTENTION! MHS HEATSCOPE® heaters are working in high power levels of 1600 W up to 3200 W (= 7 A up to 14 A). Inappropriate wiring / connection cross sections and inadequate connections of supply and heater cables may cause contact resistances, which will boost significantly during operation. In general inadmissible high temperatures will occur at contacts of switches, on the electrical board, and at contacts of the heating elements, which may cause damage of switches, melting of contacts, damage of heating elements and melting of isolation of wiring. In case the heater is damaged by improper installation or by a missing heat derivation, the manufacturer's guarantee will no longer be applicable.

Inadmissible, defective, and dangerous wirings / connections

(1) terminal is tightened too strong, (2) isolation errors and missing air and creepage distances, (3) different wirings are seized in one terminal, (4) too many conductors in one terminal, (5) terminal tightened over isolation, (6) dangerous twirling of litz wires by hand, (7) no pressing signs of a safe terminal connection at wiring, (8) twirling of litz wires by hand with isolation tape



THE FOLLOWING INSTRUCTIONS AND MARKINGS MUST BE OBSERVED AND COMPLIED WITH IN ANY CASE AND UNDER ANY CIRCUMSTANCES.

CARE INSTRUCTIONS

CARE INSTRUCTIONS!	Important! Before first use, please clean the heater surface with an alcohol-free customary glass cleaner. Fingerprints can cause discolour at the surface.
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LABELS AND INSTRUCTIONS IN ACCORDANCE WITH INTERNATIONAL STANDARDS & SPECIFICATIONS

UL499 Ci. 53.9:	CAUTION! Ceiling installation: Do not install heater closer than 6.70 inch to the ceiling and closer than 79.00 inch to a horizontal surface and closer than 16.00 inch to a vertical surface. Wall installation: Do not install heater closer than 6.00 inch to the ceiling and closer than 71.00 inch to a horizontal surface and closer than 16.00 inch to a vertical surface.
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UL499 Ci. 53.38:	CAUTION! To reduce the risk of electric shock, keep extension cord connection dry and off the ground.
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ONLY FOR MODELS MHS-SP1600AB.250, MHS-SP1600WT.250:

UL499 Ci. 53.33:	CAUTION! Applicable only for 110-120 V AC power connections! The power cable or buried cable with omnipolar switch may only be replaced by a professional specialist electrical company enlisted or approved by the manufacturer.
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ONLY FOR MODELS:

MHS-SM2200WT.200, MHS-SM2800WT.200, MHS-VE1600WT.200, MHS-VE2200WT.200, MHS-VE3200WT.200, MHS-SP2200WT.200, MHS-SP2800WT.200, MHS-VT1600WT.200, MHS-VT2200WT.200, MHS-VT3200WT.200

UL499 Ci. 53.33:	CAUTION! Applicable only for 220-240 V AC power connections! The power cable or buried cable with omnipolar switch may only be replaced by a professional specialist electrical company enlisted or approved by the manufacturer.
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GENERAL INSTRUCTIONS BASED ON INTERNATIONAL STANDARDS AND SPECIFICATIONS

<p>UL499 Cl. 53.15:</p>	<p>CAUTION!</p> <ul style="list-style-type: none"> a) Have a qualified electrician install a properly grounded receptacle outlet, acceptable for outdoor use and protected from snow and rain, immediately adjacent to the location where the heater will be used. b) Route the supply cord and locate the heater so as to be protected from damage by live stock. c) Do not use extension cords. d) Inspect cord before using. e) Unplug heater at receptacle outlet when not in use or before removing, and store heater indoors after winter season.
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<p>UL499 Cl. 53.16:</p>	<p>CAUTION! The remote control is not intended for use by persons (including children) with reduced physical, sensory or mental capacity – it has to be kept out of reach from these persons especially from children.</p>
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<p>UL499 Cl. 53.16:</p>	<p>Heater in combination with all available accessories features IP protection class IP24 tested following IEC, classified NEMA type 3R.</p>
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<p>UL499 Cl. 59.2:</p>	<p>CAUTION! To provide continued protection against the risk of electric shock, disconnect the supply cord before cleaning.</p>
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CONTACT PARTNERS IN YOUR AREA

GERMANY (Elektrofach-/großhandel)

ELECTRICAL SUPPLY COMPANIES

ELKA Hugo Krischke GmbH
Wettersteinstr. 12
D-82024 Taufkirchen
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Fax: +49 89 3090409-50
info@elka-krischke.de
www.elka-krischke.de

MANUFACTURER

MHS Munich Home Systems GmbH
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GERMANY

ALL OTHER COMPANIES/CUSTOMERS

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