



# LAVA<sup>®</sup> & LAVA<sup>®</sup>-DM

## DESIGN INFRARED HEATER

Installation and Usage Instruction

**CAUTION: hot surface!**  
**Can cause burns!**

## INTRODUCTION

With your choice of ETHERMA you have decided on an ingenious heating solution. We thank you for your confidence. In us you have a competent partner with more than 35 years of experience. ETHERMA relies on constant innovation, highest product quality and modern design.

We support you with comprehensive personalized services and find the right product solution for you.

The following instructions will help you, to use your ETHERMA quality product as effective as possible. They contain important information about safety, installation, use and maintenance of the devices. Please read the information in this instruction carefully and keep them for feedback at a later time on.

## GENERAL

LAVA® design infrared heaters from ETHERMA are direct heaters which are versatile in use. Further on they attract by elegant design, simple installation and easy operation. High reliability and maximum performance with minimal radiation convection convince our costumers.

This guide provides important information on safety, installation, use and maintenance of the equipment. Please read the information carefully.

The manufacturer is not liable if the following instructions are not followed. The devices may not be misused.

The packaging of your LAVA® design infrared heater consists of recyclable materials.

**ATTENTION:** Operation of the heater causes high temperature on the glass surfaces. Prolonged contact may cause burns. Please make sure, that children or infirm persons don't get in touch with it.

This heater is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge of using the radiator. Unless they are supervised by a person responsible for safety or received instructions about how the device should be used. Children should be supervised to ensure that they do not play with the device.

The heater must not be placed or mounted directly below a wall socket.



**WARNING:** Covering the surface causes overheating danger! Already a local covering of the pane, for example with a towel can lead to overheating and cause damage of the heating element.

**WARNING:** Do not use the heater if the front is broken.

### Overheating and overload protection

Each heater has an overheating protection. The device automatically starts again after a cooling down to under 45 °C.

### These instructions must

- > be passed to the operator after the installation. In addition, the operator is trained in the operation of the radiation heater.
- > be carefully kept and handed over at change of ownership to the new owner.



**CAUTION:** Do not switch on the LAVA® CERAMIC until the ceramic plate has adapted to the ambient temperature.

This device can be used by children of 8 years and above and by persons with reduced physical, sensory or mental abilities and with a lack of experience or knowledge if they are supervised or have been instructed on safe use of the device and understand the resulting risks. Children may not play with the device. Children may not carry out cleaning and user maintenance without supervision. The heater may not be used if the glass is damaged. The heater may not be covered as this can cause the device to overheat. Children under the age of 3 should be kept away unless under constant supervision. Children between the ages of 3 and 8 may only switch the device on and off if they are supervised or have been instructed regarding safe use of the device and understand the resulting risks, as long as the device is placed or installed at its normal place of use. Children between the ages of 3 and 8 may not plug the device in, regulate

the device, clean the device and/or carry out user maintenance. The device may only be operated once installed. This heater may not be used in the immediate vicinity of a bathtub, shower or swimming pool. The heater may not be used in small rooms where persons live who cannot leave the room independently, except where constant supervision is ensured.

**CAUTION:** Any kind of load on the surface, whether from persons or objects leaning against it or from other forces, must be avoided.

Some product parts can become very hot and cause burns. Particular caution is required when children or vulnerable persons are present.

### OVERVIEW OF TYPES AND VERSIONS

#### TYPES:

##### LAVA® BASIC 2.0

With the LAVA® BASIC 2.0 the surface was further optimised, thus increasing the radiation power and effect. In addition to the benefit of the new attractive design, towel holders can also be mounted. Thanks to the new Plug & Play connection system, integrated LAVA®-R control, a LAVA®-F radio receiver or a wired room thermostat can be connected.

##### LAVA® GLAS 2.0

LAVA® GLASS 2.0 offers designer infrared heating that impresses with its comfortable infrared radiation and its aesthetic features. LAVA® GLASS 2.0 is available in 4 standard colours (pure white, white-green, black, red) and in a mirror version, as well as with 6 different outputs. Each LAVA® GLASS can be mounted vertically or horizontally on the wall. For warm towels in your bathroom, towel rails (Halti) can be attached to any LAVA® GLASS 2.0 unit.

##### LAVA® CERAMIC

The new LAVA® CERAMIC is a design infrared heater that is characterised by its uniform infrared heat and its elegant look. LAVA® CERAMIC is available as standard in 3 different colours (Calacatta, Titanium White, Ebony Black) as well as in 4 outputs. Each LAVA® CERAMIC can be mounted vertically or horizontally on the wall. For warm towels in the bathroom, towel rails (Halti) can now be attached to each LAVA® CERAMIC.

#### Plug & Play-connection system:

##### LAVA® BASIC Modelle

All LAVA® infrared heaters are supplied without a control, a plug lead and an ON/OFF switch. They are, therefore, ideal for new construction and anywhere where wired room thermostats are used. The Plug & Play connection system (IP65) allows direct connection to a wired room thermostat, easy integration with a radio receiver LAVA®-F or direct control on the device with the LAVA®-R thermostat.

##### LAVA®-R:

All LAVA® 2.0 infrared heaters can be fitted with a thermostat which has been developed specifically for infrared heaters. The thermostat controls the room temperature and optimises the surface temperature of the LAVA®. Furthermore, the surface temperature in children's rooms and bathrooms, for example, can be limited to 60 °C with a switch. The adjustable temperature range is 5 to 35 °C.

##### LAVA®-F:

Radio-controlled thermostats avoid complex elevation and plaster work for cable routing and allow easy installation of heaters. The LAVA®-F radio receiver can be quickly fitted to all LAVA® 2.0 using the connection system. The receivers are controlled with the ET-11A or ET-12A radio thermostat (please order separately), which can control up to 99 LAVA®-F radio receivers. The ET-12A has a programmable week program, frost protection function, manual mode and on/off function.

#### WIRED ROOM THERMOSTATS:

Ideal for new buildings and renovation, for example when old night storage heaters, which were controlled by thermostat, are replaced.

## DELIVERY | PACKAGING WALL MOUNTING

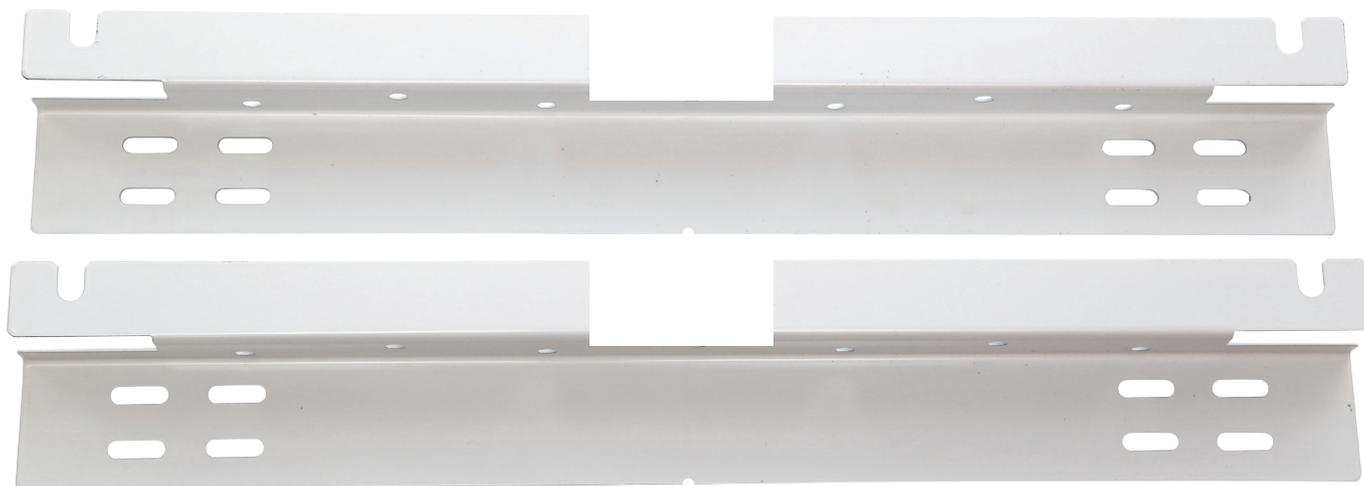
The LAVA® design infrared heater has to be fixed only with the supplied mounting hardware for wall mounting, which are included. Screws and anchors (not included) must correspond

with the building material of the wall (masonry, concrete, plasterboard, etc.). The wall must have a flat surface.

### Delivery wall mounting:

LAVA® design infrared heater

- > 1 x wall mounting hardware:
  - 2 x mounting bracket
  - 4 x hex bolt M8 x 16



INSTALLATION AND USAGE INSTRUCTION FOR THE ELECTRICIAN

**Important Notes:**

ETHERMA's LAVA® design infrared heater fullfill the relevant safety regulations.

- > Installation and commissioning, repair and service work must be carried out by a licensed professional or a qualified person in compliance with all security regulations. First this person must check if the electrical installation complies with the applicable standards in the house. The responsibility of the manufacturer is limited to the supply of the device.
- > Please note the country-specific security rules.
- > Local protection measures have to be observed.
- > The devices are designed for wall mounting (vertical or horizontal) with the appropriate accessories (see included delivery).
- > Wall mounting of the design infrared heater corresponds IP 24 protection.
- > When installing the unit in a bathroom note the areas of protection to DIN VDE 0100 Part 701.
- > Specified minimum distances must be respected.

**Installation and minimum distances:**

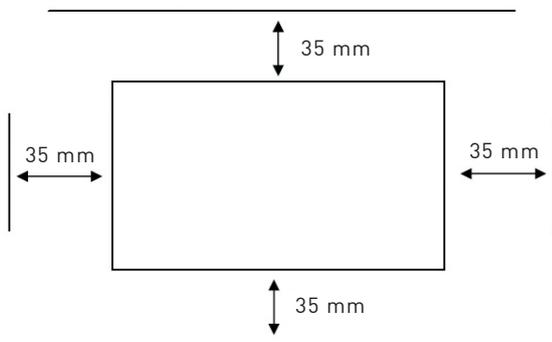
LAVA® design infrared heaters can be mounted horizontally or vertically on the wall. They are positioned so that flammable items can not be ignited. Mind the minimum distances, particularly to flammable objects like curtains, upholstered furniture, and so on are correct. Please make sure, that the glass heating device can radiate free into space.

**Assembly of the heating device:**

Please check before installing the power cable to the radiator, and the glass plate. There shouldn't be any damage.

**Wall mounting:**

1. Perform wall-holes – please note the predetermined hole-pattern (see p. 6 ff.).
2. Mount the mounting bracket (see delivery) on the wall Note: screws and anchors (not included) must match the building material of the wall.
3. Position cable clamp and place LAVA® infrared heater on the wall and tighten the screws completely.
4. To protect the glass radiator against unintentional take down, etc. the protection-plate (included in delivery) should be affixed to one of the 4 mounting brackets.



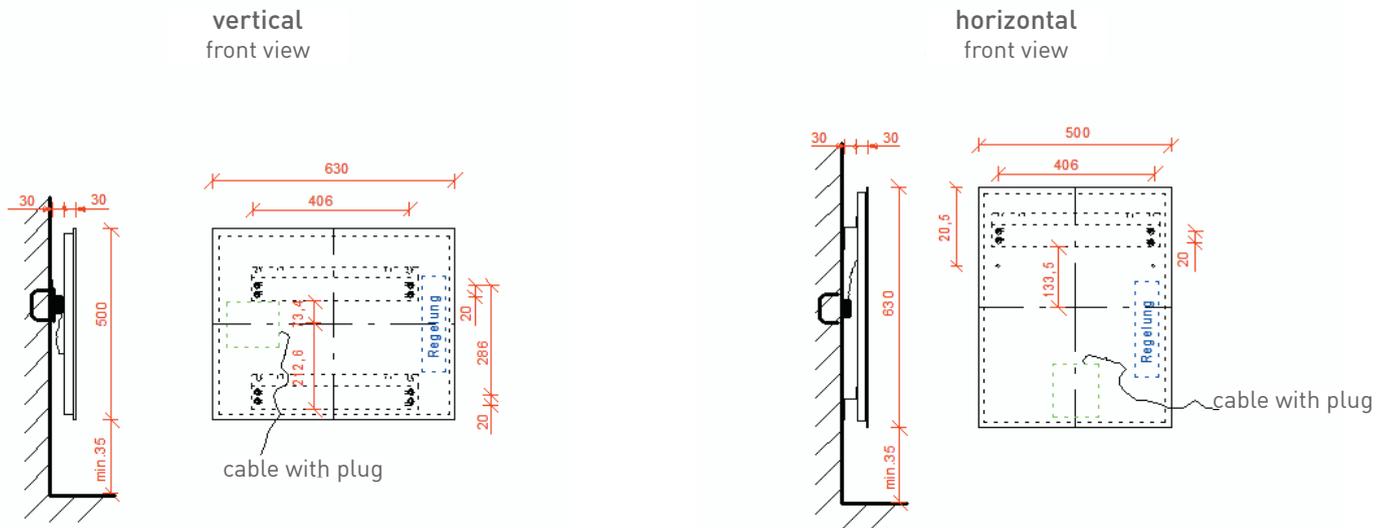
Graphic: Minimum mounting distances

**CAUTION :**

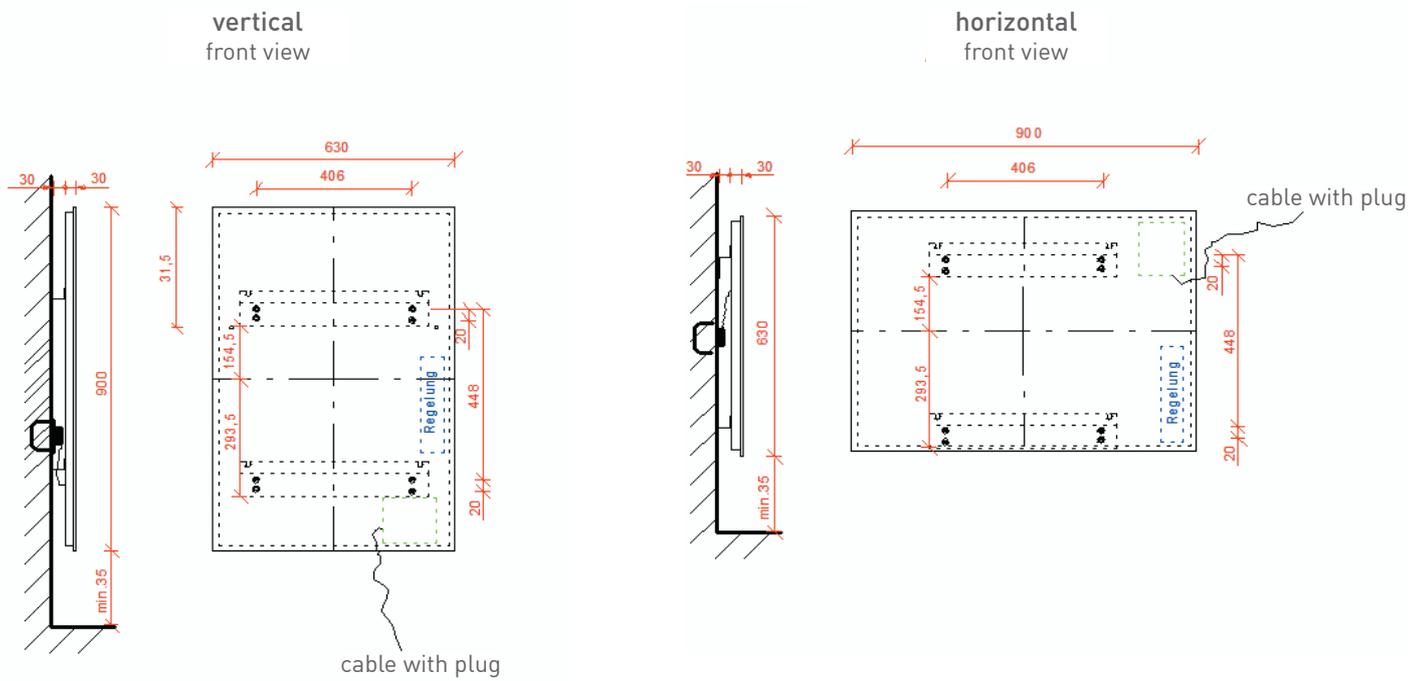
Any kind of load on the surface, whether from persons or objects leaning against it or from other forces, must be avoided.

HOLE SPACING FOR DRILLING - WALL MOUNTING

LAVA® BASIC | GLAS | CERAMIC | Design Your LAVA® | IMAGE 250



LAVA® BASIC | GLAS | CERAMIC | Design Your LAVA® | IMAGE 500

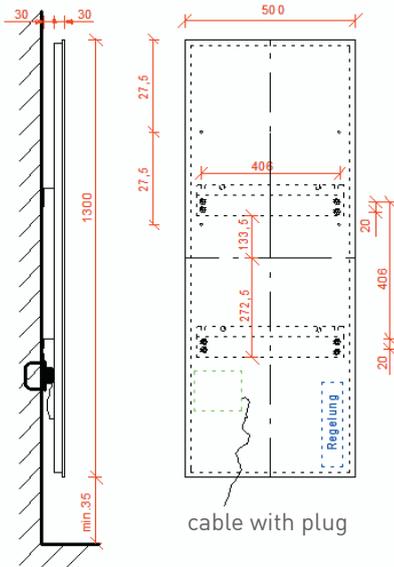


ATTENTION : Mind minimum distances! Use required mounting holes!

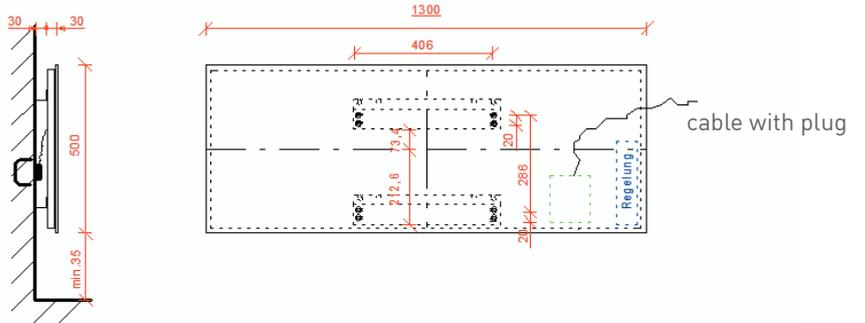
HOLE SPACING FOR DRILLING - WALL MOUNTING

LAVA® GLAS 600

vertical front view

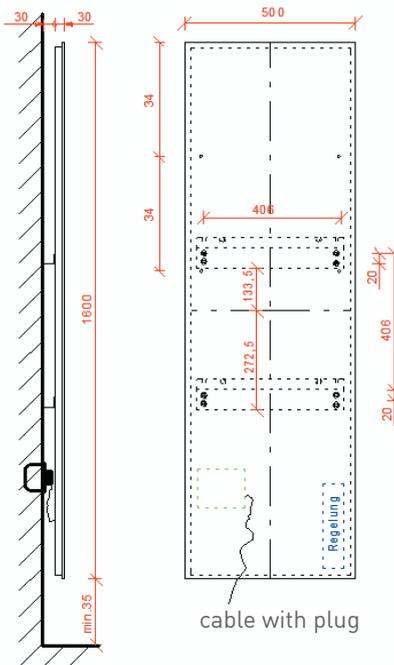


horizontal front view

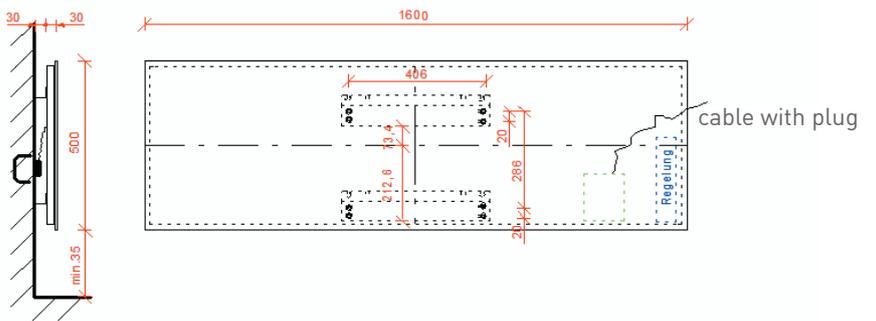


LAVA® GLAS 800

vertical front view



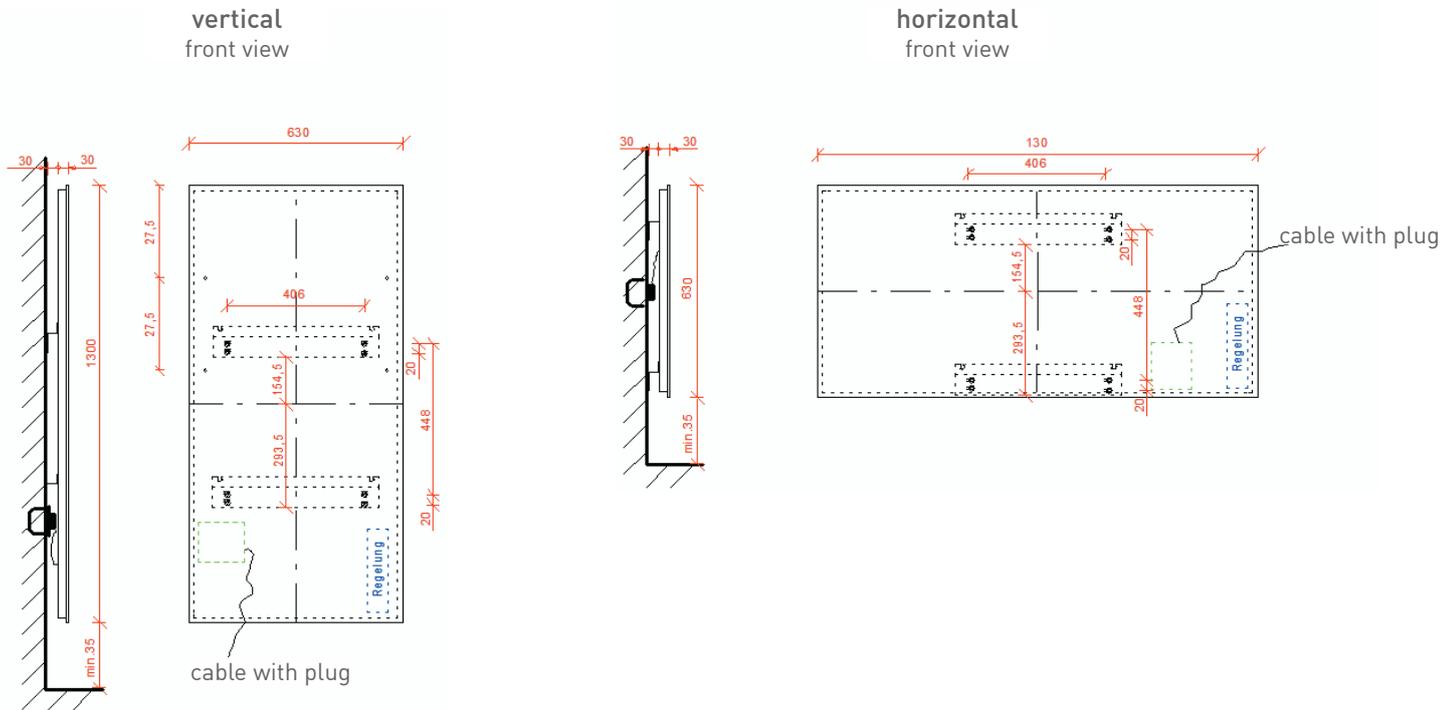
horizontal front view



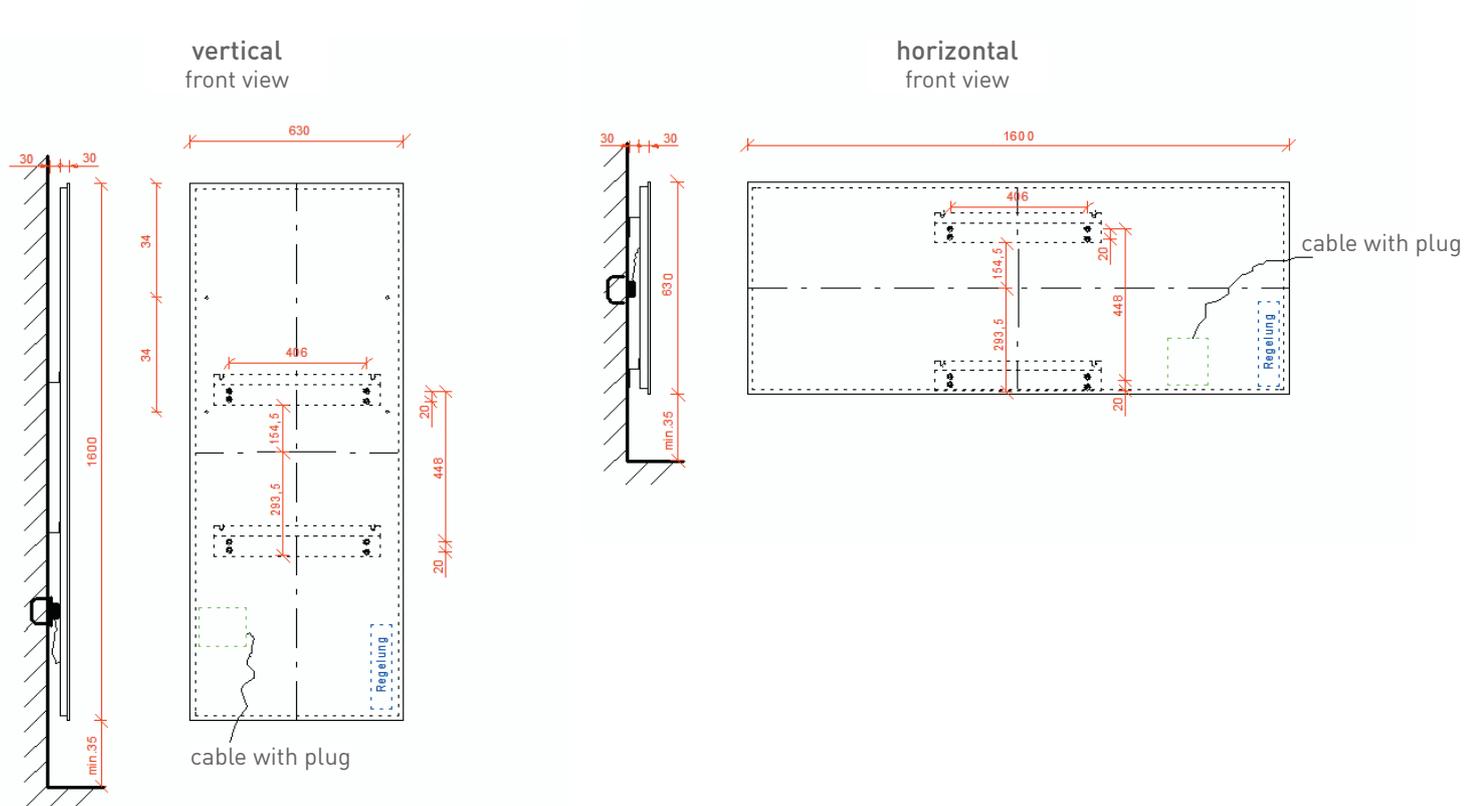
ATTENTION : Mind minimum distances! Use required mounting holes!

HOLE SPACING FOR DRILLING - WALL MOUNTING

LAVA® BASIC | GLAS | CERAMIC | Design Your LAVA® | IMAGE 750



LAVA® BASIC | GLAS | CERAMIC | Design Your LAVA® | IMAGE 1000



ATTENTION : Mind minimum distances! Use required mounting holes!

DELIVERY | PACKAGING CEILING MOUNTING

The LAVA® design infrared heater has to be fixed only with the supplied mounting hardware for ceilings, which are included. Screws and anchors (not included) must correspond with the

building material of the ceiling (masonry, concrete, plaster-board, etc.). The ceiling must have a flat surface.

**Delivery ceiling mounting:**

LAVA® design infrared heater

- > 1 x hardware ceiling mounting:
  - 4 x ceiling mounting bracket
  - 4 x screw M3 x 6
  - 4 x LAVA Secure – glass safety hook
  - 4 x hex bolt M8 x 20
  - (optional might already preinstalled on the device)
  - 1 x cable holder

After fixing do not tighten completely!



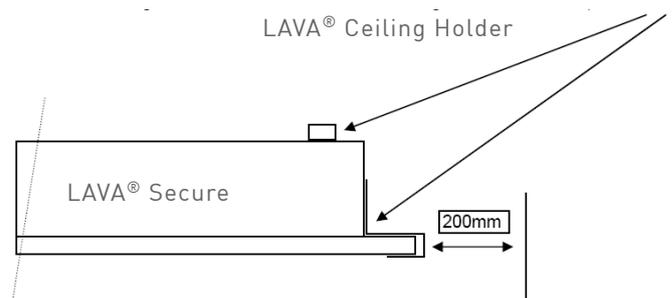
**Ceiling installation:**

1. Drill the holes into the ceiling – please observe the prescribed distances between holes (see p.10 ff).
2. Mount the assembly rails on the ceiling. **CAUTION:** screws and dowels (not included in the scope of delivery) must correspond to the construction material of the ceiling.
3. Attach safety hooks and distance washers to the 4 assembly screws on the body.
4. Attach the LAVA® design infrared heater to the ceiling. Some safety hooks for ceiling installation are already fitted at the factory – between the glass front and the body – to provide further mechanical security to the glass front. Not valid for LAVA® BASIC-DM.

5. Finally tighten the installation screws.

6. Only devices in the series LAVA® BASIC-DM and LAVA® GLAS-DM may be installed on the ceiling.

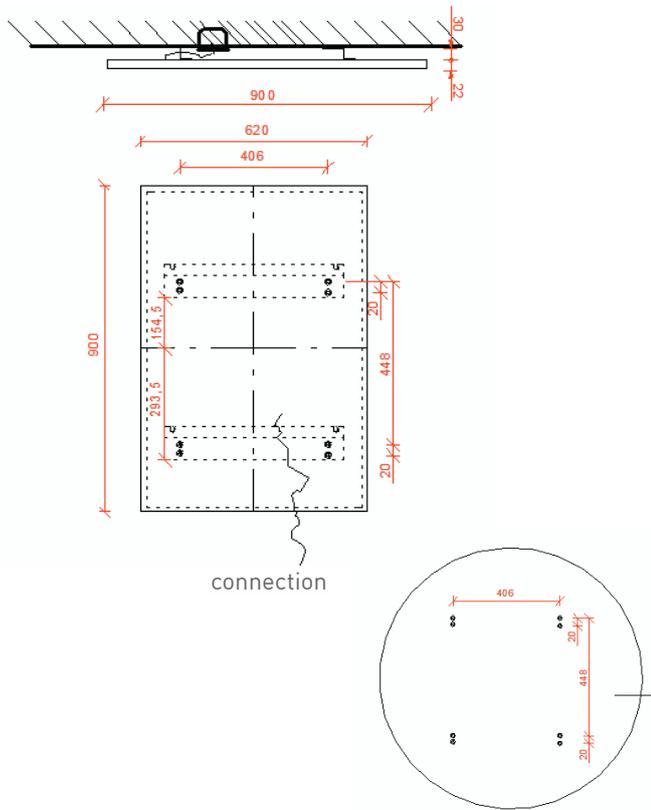
For ceiling mounting there are own glass-safety hooks – LAVA® Secure – already factory-installed, which also protect the glass radiator. Ceiling assembly must be separately ordered



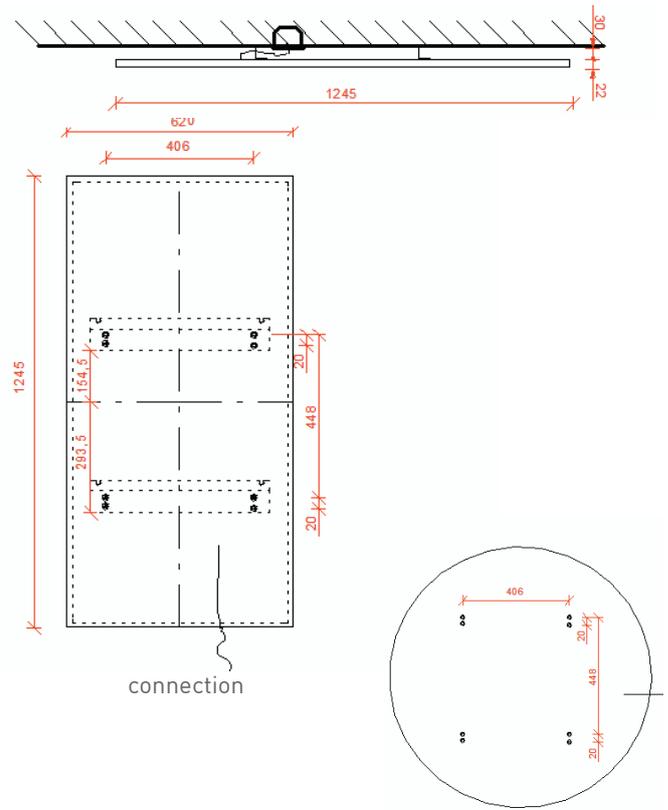
Graphic: Ceiling assembly - LAVA® design infrared heater

HOLE SPACING FOR DRILLING - CEILING MOUNTING

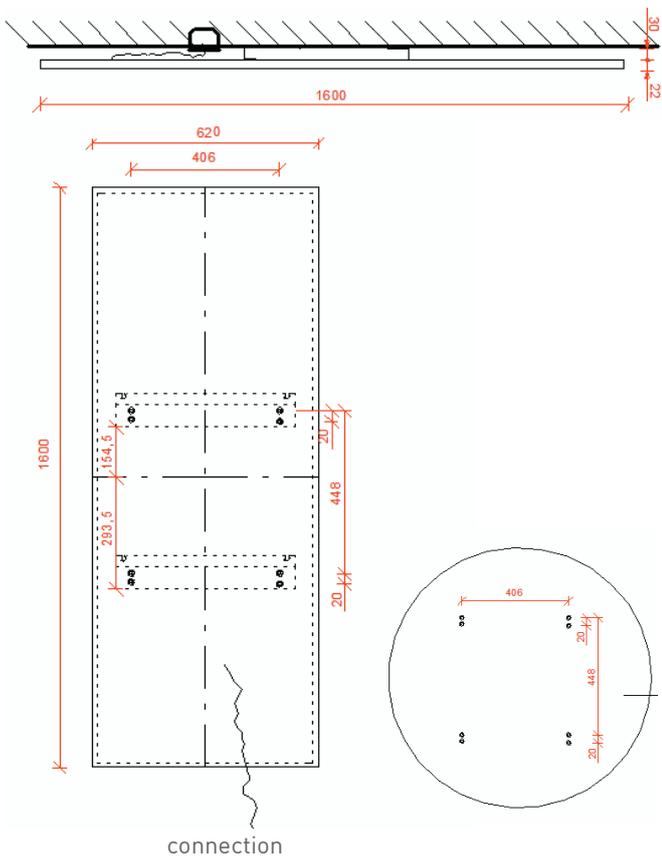
LAVA® BASIC-500DM



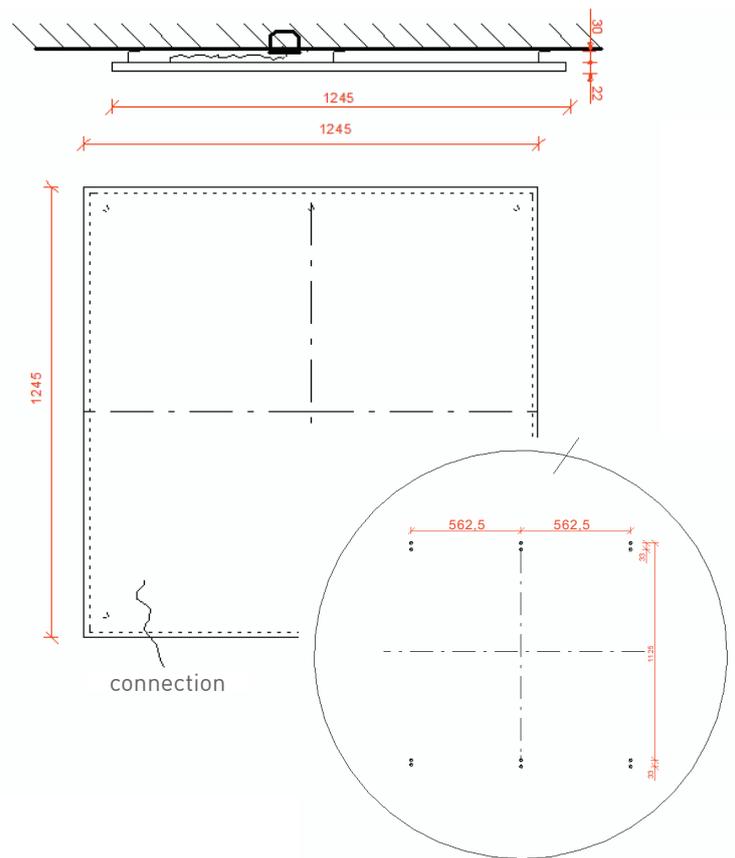
LAVA® BASIC-750DM



LAVA® BASIC-1000DM



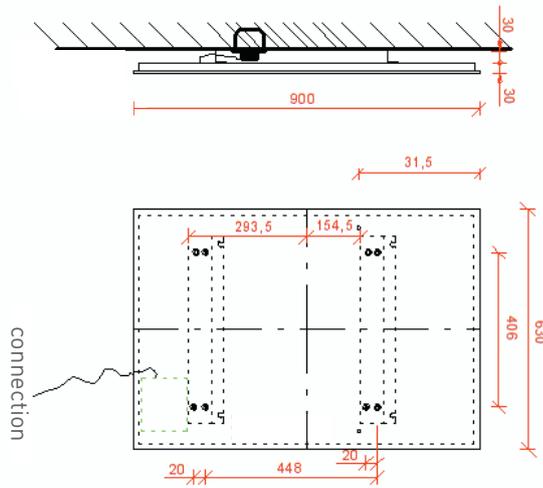
LAVA® BASIC-1500DM



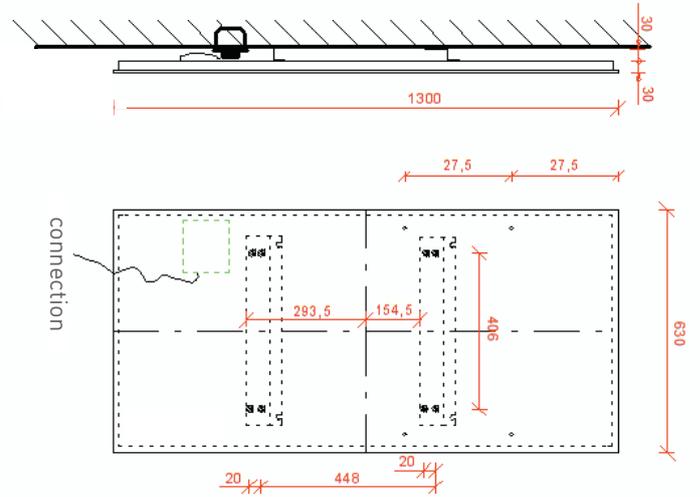
ATTENTION : Mind minimum distances! Use required mounting holes!

HOLE SPACING FOR DRILLING - CEILING MOUNTING

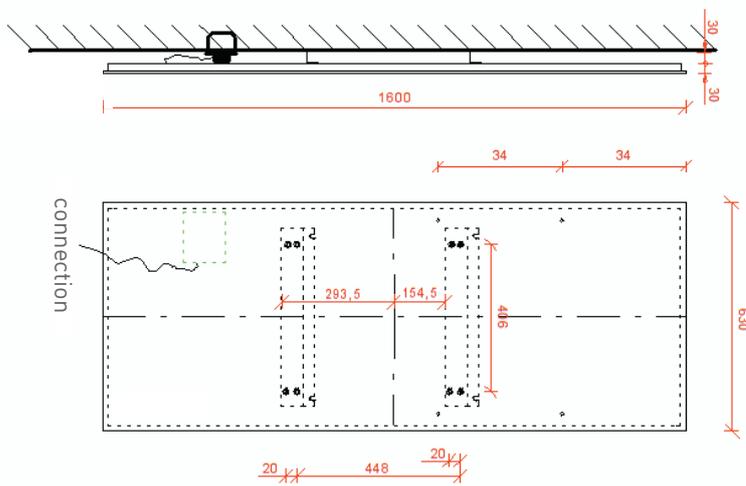
LAVA® GLAS-500DM



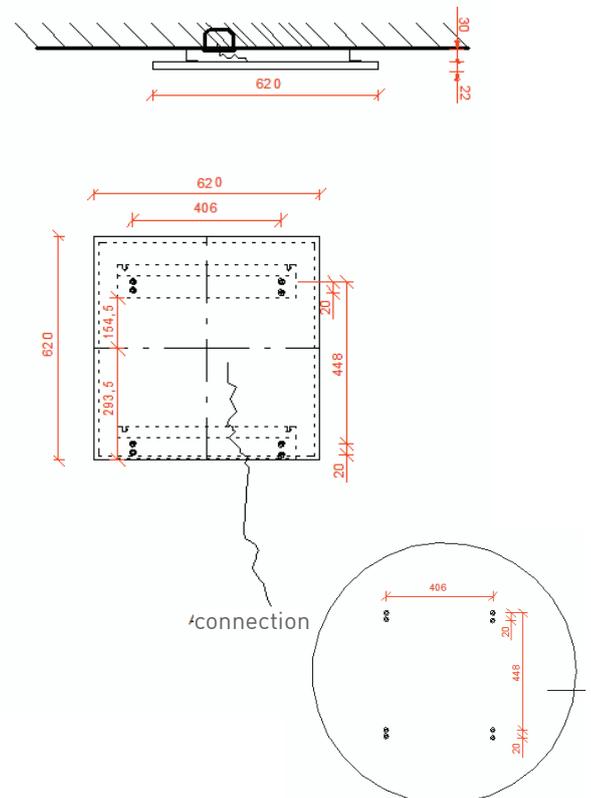
LAVA® GLAS-750DM



LAVA® GLAS-1000DM



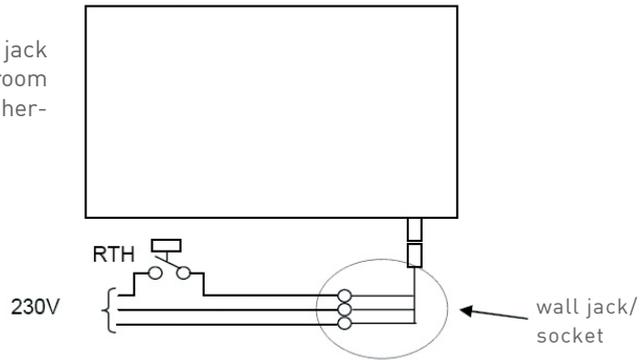
LAVA® BASIC-350DM



ATTENTION : Mind minimum distances! Use required mounting holes!

**Electrical connection**

The heater is designed for permanent connection to a wall jack or socket. The control has to be done due to a suitable room thermostat. Please refer to the instructions of the room thermostat.



Graphic: connection diagram

**ATTENTION:** If the power cord of the unit is damaged, it must be replaced immediately.

The device is connected to the AC mains system with the included plug and socket with connected power cord and a connection socket on the installation side.

If a longer power cord is required then the cord can be exchanged for a longer one of type H05VV-F 3 x 1.0 mm<sup>2</sup>. A direct connection to an installed line is only permitted up to a diameter of 1.5 mm<sup>2</sup> (e.g. NYM-J 3 x 1.5 mm<sup>2</sup>).

An all-pole disconnecting device with a contact opening width of at least 3 mm must be installed in the fixed electrical installation in accordance with wiring rules on the installation side.

**Heating**

The heater is either controlled by the externally mounted thermostat (LAVA®) or via a wireless room thermostat (LAVA®-F) or via the already integrated thermostat (LAVA®-R). In the wireless versions (LAVA®-F) the wireless receiver is already integrated on the device. The wireless room thermostat, which is necessary for the operation is not included. This can be ordered as accessory (see p. 7). Please refer to the manual of the room thermostat.

**USER INSTRUCTION**

**Heating**

Depending on the thermal insulation standard, you need a heat output from 30 to 200 W/m<sup>2</sup>. The LAVA® design infrared heater has a very high radiation fraction and a low proportion of the convective heat output. For safety reasons, the surface temperature, is max. about 95 °C, thus the overall performance of the device is limited. For this reason, these devices are used only in very well insulated houses as a sole heating solution.

ETHERMA LAVA® design infrared heaters warm predominantly solid objects and only a small proportion of the air directly, so these devices are ideal for additional temperature control. In order to achieve the same feeling of comfort as with a convection heating, the indoor air temperature can be lowered by 2-3 °C. Each degree reduction can save about 6 % heating costs, depending on the respective heating behavior and thermal insulation standard. Only if a room is actually used, the LAVA® design infrared heater is additionally turned on and the radiation provides a cosy feeling.

Depending on the size of the device the LAVA® design infrared heater requires some time until it reaches operating temperature. Only after that the radiation comes into full effect. The produced glass sheet for the product consists of 6 mm toughened safety glass (ESG). This is in contrast to conventional glass much more resistant and is designed for significantly higher impact forces. However, you should avoid excessive use. In case of damage ESG shatters into many small pieces with blunt edges, to minimize the risk of injury.

Please note in locating, that it can come to a very small percentage of toughened glasses yet to so-called "spontaneous breakage", i.e that the glass shatters, even without external influence. Choose the setup of the device in a way that also in this case there is no danger to people or objects.

**ATTENTION:** Any kind of load on the whether by leaning effects of persons or objects, or by other forces have to be avoided!

Please note that you don't place any objects between the LAVA® design infrared heater and the persons to be heated. In this case, the goods and not the people would be heated.

**Maintenance and care**

The LAVA® design infrared heater is designed in a way, that it provides its heat over the glass surface in the form of radiation. There are no parts located on the device that require special maintenance. For the care of your glass radiator, we recommend commercial glass cleaner. Please do not use abrasive cleaners, as these can cause scratches to the glass as well as the painted surface.

**ATTENTION:** For cleaning the LAVA® design infrared heater have to be cold!

**Spare Parts**

For any replacement parts required please ask your dealer. Only use original spare parts.

TECHNICAL DATA LAVA® BASIC 2.0

- > Voltage: 230 V
- > Surface: smooth, heating-optimised surface
- > Protection: IP X4
- > Protection class: I
- > Approval: CE compliant
- > Colors: White RAL 9016
- > Surface Temperature: 95 °C (max)
- > Device/Installation depth: 26/57 mm
- > Factory warranty: 5 Years

Type	Output (W)	Measurements (mm)		Weight (kg)
		Length	Height	
LAVA-BASIC2-250	250	500	630	8
LAVA-BASIC2-500	500	900	630	12
LAVA-BASIC2-750	750	1300	630	18
LAVA-BASIC2-1000	1000	1600	630	21

TECHNICAL DATA LAVA® GLAS 2.0

- > Voltage: 230 V
- > Surface: 6 mm ESG safety glass
- > Protection: IP X4
- > Protection class: I
- > Approval: CE compliant
- > Colors: Purewhite, White Green, Black, Red, Mirror and other Designs
- > Surface Temperature: 95 °C (max)
- > Device/Installation depth: 30/61 mm
- > Factory warranty: 5 Years

Type	Output (W)	Measurements (mm)		Weight (kg)
		Length	Height	
LAVA-GLAS2-250	250	500	630	10
LAVA-GLAS2-500	500	900	630	15
LAVA-GLAS2-600	600	1300	500	18
LAVA-GLAS2-750	750	1300	630	23
LAVA-GLAS2-800	800	1600	500	28
LAVA-GLAS2-1000	1000	1600	630	33

TECHNICAL DATA LAVA® CERAMIC

- > Voltage: 230 V
- > Surface: 6 mm special ceramics
- > Protection: IP X4
- > Protection class: I
- > Approval: CE compliant
- > Colors: Calacatta, Titanium White, Ebony Black
- > Surface Temperature: 95 °C (max)
- > Device/Installation depth: 30/60 mm
- > Factory warranty: 5 Years

Type	Output (W)	Measurements (mm)		Weight (kg)
		Length	Height	
LAVA-CERAMIC-250	250	500	630	10
LAVA-CERAMIC-500	500	900	630	15
LAVA-CERAMIC-750	750	1300	630	23
LAVA-CERAMIC-1000	1000	1600	630	33

TECHNICAL DATA LAVA® GLAS 2.0 - DESIGN YOUR LAVA®

- › Voltage: 230 V
- › Surface: 6 mm ESG safety class
- › Protection: IP X4
- › Protection class: I
- › Approval: CE compliant
- › Colors: Individual
- › Surface Temperature: 70 °C (max)
- › Device/Installation depth: 30/61 mm
- › Factory warranty: 5 Years

Type	Output (W)	Measurements (mm)		Weight (kg)
		Length	Height	
LAVA-GLAS2-250-DYL	180	500	630	10
LAVA-GLAS2-500-DYL	350	900	630	15
LAVA-GLAS2-750-DYL	500	1300	630	23
LAVA-GLAS2-1000-DYL	700	1600	630	33

TECHNICAL DATA LAVA® GLAS 2.0 - IMAGE

- › Voltage: 230 V
- › Surface: 6 mm ESG safety class
- › Protection: IP X4
- › Protection class: I
- › Approval: CE compliant
- › Colors: Individual
- › Surface Temperature: 70 °C (maximal)
- › Device/Installation depth: 30/61 mm
- › Factory warranty: 5 Years

Type	Output (W)	Measurements (mm)		Weight (kg)
		Length	Height	
LAVA-GLAS2-250-IMAGE	180	500	630	10
LAVA-GLAS2-500-IMAGE	350	900	630	15
LAVA-GLAS2-750-IMAGE	500	1300	630	23
LAVA-GLAS2-1000-IMAGE	700	1600	630	33

TECHNICAL DATA LAVA® BASIC-DM

- › Voltage: 230 V
- › Surface: Structured surface
- › Protection: IP 21
- › Approval: CE compliant
- › Colors: white RAL 9016
- › Surface Temperature: 120 °C (maximal)
- › Device/Installation depth: 22/52 mm
- › Factory warranty: 5 Years

Type	Order no.	Control system	Output (W)	Dimensions (mm)		Weight (kg)
				Length	Height	
LAVA-BASIC-350DM	39692	none	350	620	620	7.5
LAVA-BASIC-500DM	39622	none	500	900	620	12
LAVA-BASIC-750DM	39623	none	750	1245	620	16
LAVA-BASIC-1000DM	39624	none	1000	1600	620	21
LAVA-BASIC-1500DM	39723	none	1500	1245	1245	32

TECHNICAL DATA LAVA® GLAS-DM

- › Voltage: 230 V
- › Surface: 6 mm ESG safety glass
- › Protection: IP X4
- › Approval: CE compliant
- › Colors: pure white, white-green
- › Surface Temperature: 120 °C (maximal)
- › Device/Installation depth: 31/62 mm
- › Factory warranty: 5 Years

LAVA® GLAS-DM, pure white (PW)

Model	Order no.	Output (W)	Length	Height
LAVA-GLAS-500DM-PW	38819	500	900	630
LAVA-GLAS-750DM-PW	38820	750	1300	630
LAVA-GLAS-1000DM-PW	38821	1000	1600	630

LAVA® GLAS-DM, white-green (WG)

Model	Order no.	Output (W)	Length	Height
LAVA-GLAS-500DM-WG	38816	500	900	630
LAVA-GLAS-750DM-WG	38817	750	1300	630
LAVA-GLAS-1000DM-WG	38818	1000	1600	630

ACCESSORIES

Typ	Beschreibung
LAVA-R	Thermostat with plug, for all LAVA® 2.0, 5 - 35 °C, 16 A, step switch 40/65 °C, eNEXHO ready
LAVA-F	Radio receiver with plug, 16 A, for mounting on the rear panel of the LAVA® 2.0
ET-11A	Radio room thermostat, LCD display
ET-12A	Radio room thermostat, LCD display with clock and week program
eNEXHO-NT	Internet module for external access using smartphone or tablet over Wlan
eNEXHO-CR	Radio-controlled data bus - Power Actuator, 868 MHz, 230V, 16 A, On/Off
LAVA-Halti-50-E0	Polished stainless steel towel rail for LAVA-250   600   800, Width: 50 cm
LAVA-Halti-63-E0	Polished stainless steel towel rail for LAVA-500   750   1000, Width: 63 cm
LAVA-STAND	Steel stand for up to 2 LAVA® 500 / 750 / 1000 W horizontally mounted

TROUBLESHOOTING

Device does not heat:

- > Fuse has blown or broken?
- > External supply switch is turned in?
- > Temperature of the thermostat set is smaller than the actual room temperature?

Radiant heat is too low:

- > Distance between glass radiation heater and person is too large?
- > Device size too small?
- > Objects between the glass-radiation heater and person placed?

EQUIPMENT SIGNS

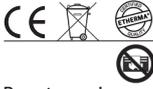
On the rating plate the type-specific technical data are given. You can find the rating plate, depending on the arrangement of vertical or horizontal, on top or on the left of the unit.

<p><b>ETHERMA°</b> Landesstraße 16 A-5302 Henndorf Made in Austria</p>	<p>LAVA-BASIC2-250 250 W   IP X4 230 V   50 Hz 8 kg</p>	 <p>Do not cover! Nicht abdecken!</p>
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Graphic: Nameplate LAVA® BASIC

<p><b>ETHERMA°</b> Landesstraße 16 A-5302 Henndorf Made in Austria</p>	<p>LAVA-CERAMIC-1000 1000 W   IP X4 230 V   50 Hz 33 kg</p>	 <p>Do not cover! Nicht abdecken!</p>
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Graphic: Nameplate LAVA® CERAMIC

<p><b>ETHERMA°</b> Landesstraße 16 A-5302 Henndorf Made in Austria</p>	<p>LAVA-GLAS2-500 500 W   IP X4 230 V   50 Hz 15 kg</p>	 <p>Do not cover! Nicht abdecken!</p>
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Graphic: Nameplate LAVA® GLAS

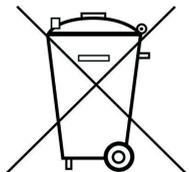
 <small>3120015721675</small>	<p><b>ETHERMA°</b> Made in Austria</p>
<p><b>LAVA-GLAS2-1000</b></p>	
ETH-Nr: 35473	1000,00 W
Serial-Nr: 79804001	230,00 V
<small>Etherma Elektrowärme GmbH, A 5302-Henndorf, Landesstrasse 16</small>	

Graphic: manufacturing number

GENERAL WARRANTY CONDITIONS

Dear Customer,

please refer to our terms and conditions common paradigm. In warranty cases inform your dealer directly and he or she will help you due to country-specific legal claims.



**WARNING:** Electrical and electronic appliances often contain precious materials. But they can also contain harmful substances that were necessary for their function and safety. They can harm the environment if disposed or mishandled. Please help to protect our environment! Therefore do not dispose of this device in the residual waste. Dispose of this unit in accordance with local regulations. Dispose of the packaging materials, replacement parts or equipment parts properly.

**ATTENTION:** Packaging materials, replacement parts and equipment to be scrapped or equipment parts must be disposed properly.