TT20 & TT21 series

Installation- and user manual **UK**

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Congratulations on your new wood-burning stove

We thank you for choosing a TermaTech wood-burning stove and wish you many cozy and warm moments ahead. Your new wood-burning stove from TermaTech is a standard convection stove that can be covered with storage stones. Before installing and using the stove, you should read this assembly, installation, and user manual. This will ensure that you are familiar with applicable legal requirements, safety regulations, as well as instructions regarding usage and maintenance. Pay special attention to section 3 on safety. This will ensure that the product functions as intended and that you get maximum benefits from your investment for many years to come. You can always find the latest manuals and documentation with the newest updates at www.termatech.com.

1 Assembly and Installation Instructions

The Wood-burning stove is delivered "ready for installation" and must be connected to the chimney using a flue pipe. The connection between the stove and chimney should, if possible, be installed in a straight section (with as few bends as possible) and at a minimum horizontally but preferably rising from the stove towards the chimney. Joints must be tight. Remember there should be a possibility to clean the pipe (possibly a cleaning door on the pipe).

National requirements and European standards

All currently applicable local regulations, including those referring to national and European standards (e.g. EN16510), must be complied with when installing and using the wood-burning stove. Contact your local dealer for further advice and guidance regarding installation. Inform your chimney sweep before putting your wood-burning stove into use. Please read Supplementary Inst. Instructions for UK in section 11. If the stove has to be installed in an “Smoke Control Area” please read section 8 also for installation of Damper control unit.

Stove type and models

The TT20/TT21-series includes the models TT20 Bazic, TT20 Bazic R, TT20, TT20R, TT20RS, TT21R, TT21RS, TT21RL, TT21RLS, TT21RH, TT21RHS, TT21RHT, TT21Classic and TT21 A-Flame. All models are classified as leak type according to EN16510, **Type BF**. The TT20/TT21-series consists of convection-based solid fuel stoves for intermittent firing with firewood, in accordance with EN16510. The TT20/TT21-series is designed for intermittent combustion of wood in enclosed spaces. The appliance is not suitable for connection to central heating systems or water installations.

Stove placement

Safety distances to walls and combustible materials must be adhered to. See section 7. The wood-burning stove's technical specifications as well as information regarding approval and emissions can be found in section 10. The wood-burning stove's dimensions, weight, max load bearing capacity and drawings can be found in section 10+12. Adjustment of levelling feet, top plates, etc. can be found in section 8.

Requirements for the floor

The surface must be able to support the weight of the stove and, if applicable, the chimney combined. If this is not the case in an existing structure, appropriate measures must be taken, e.g. a load distribution plate. The area in front of and to the sides of the loading opening must be covered with a non-combustible base/Hearth. Different rules apply in European countries, please ask your dealer / installer or chimney sweep. If you use a pre-fitted floor plate, leveling feet must be used. See section 8.

If the stove is to be installed with a rear exit, do the following

Remove (or, if necessary, break off) the cover plates on the back, all the way to the combustion chamber, to allow free passage to the flue pipe. Then remove the cover plate that is screwed onto the combustion chamber. Unscrew the universal connector fitted on top of the stove and mount it on the back of the stove. The cover plate that was originally on the back is now mounted on top of the stove. The flue pipe is now ready to be installed.

Requirements for the chimney

The chimney must be of such height that the draught conditions are adequate and that the smoke does not cause nuisance to neighbors. Good chimney draught is essential for the stove to operate as intended and to burn as environmentally friendly as possible. All joints and connection points must be tight. It is possible to connect the wood-burning stove to chimneys that are also used for other purposes. All stoves in the TT20/21-series are equipped with a self-closing door and comply with the requirements of EN16510. Specific conditions must be assessed by the installer and/or chimney sweep.
Requirements according to EN16510 – Also stated in section10:

- Meet the requirements of EN13384
- Be classified as at least T400
- Have documented functionality and tightness before commissioning
- Be dimensioned in relation to the stove’s flue outlet and mass flow (4,5 g/s)
- Minimum chimney draught of 12Pa
- Maximum load on the stove = 120kg

Regulation and flue damper installed on the chimney

If the chimney is equipped with a regulation/flue damper, it should only be able to close up to 80% of the cross-sectional area. Different rules apply in European countries, please ask your dealer / installer or chimney sweep.

Air supply requirements for the wood-burning stove

Adequate combustion air is essential for efficient and clean burning. Combustion air is usually drawn from the room in which the stove is installed. If the room/house in which the stove is installed is too airtight or experiences negative pressure due to ventilation/heat recovery systems or the use of exhaust hoods, it might be necessary to establish external combustion air intake and/or install a draft inducer. External combustion air is established by pulling combustion air from outside through a duct directly to the stove's external combustion air inlet. External combustion air kits are available for Termatech's wood-burning stoves. Consult your dealer for advice. Alternatively, additional air can be introduced into the room through an air vent in the external wall or windows.
Air vents supplying necessary combustion air must be kept unblocked. Insufficient air for combustion can lead to sooting of the glass and chimney, as well as environmental and neighbor-related issues. Ventilation/heat recovery systems and exhaust hoods can create negative pressure, causing flue gases to be drawn back through the stove and into the living space. This can be dangerous (carbon monoxide poisoning). See section 8 for information on installing external combustion air.

Chimney Sweep

After your new stove is installed, the installation must be reported to the local chimney sweep. The chimney sweep will inspect the installation before it is put into use and will continue to clean the chimney regularly thereafter.

2 Lighting / Firing Instructions

Intermittent Combustion

Your new wood stove is approved for intermittent combustion, not for continuous combustion. This means that it burns properly with a small amount of fuel and has a burn time of approximately 45 minutes between each firing. Never close the air supply completely. Instead, let the fire go out and ignite it again when you need it. There is a warning against completely closing the air supply. The wood stove can only burn efficiently and environmentally friendly if there is sufficient air for combustion.

First Lighting/Firing

The first time you fire up your new wood stove, the paint (Senotherm) that the stove is coated with will cure during heating. Avoid touching the paint when it is hot and soft. The curing process may emit smoke and odors. Therefore, it is recommended to have good ventilation the first few times you use the stove. After continuous combustion for 6 hours at high heat, the paint should be cured. Avoid opening the door quickly, as the gasket on the door may slightly stick to the curing paint. Do not pull the gasket out of the door if it gets stuck in the paint.

Maximum filling/Max Load:

Wood must not be added to the wood-burning stove above the tertiary holes of the rearmost vermiculite/insulation plates, corresponding to approximately 16 cm from the bottom plate of the combustion chamber. See section 10.

Grate at the Bottom of the Combustion Chamber

The grate located at the bottom of the combustion chamber ensures good and easy Lighting/ignition, as air can pass through it. Ash falls down through the grate and into the ash drawer. When the ash drawer needs to be emptied, you can remove the grate and push the remaining ash down into the drawer, then the ash drawer can be emptied. The ashtray has to be emptied when it is ¾ full. On some models for certain countries, a metal plate may be included that can be placed on top of the grate. This plate is not necessary and will not be a part of the stove in the future, as the design of the grate itself has been changed.

Kindling Wood / Firewood Sticks

Kindling wood refers to finely split wooden sticks with a diameter of 2-8 cm. Wood types such as birch, beech, oak, ash, elm, coniferous trees, and fruit trees are all suitable for use as kindling wood.

Fuel / Prohibited Waste Products

Only dry and clean wood should be used for burning in the wood stove. Wood types like birch, beech, oak, ash, elm, coniferous trees, and fruit trees are suitable as firewood in the wood stove. The moisture content should be between 12 and 20%.

The maximum size of firewood pieces must not exceed the width of the combustion chamber minus 4 cm in length (see the width of the combustion chamber in section 10.), as this would bring the wood too close to the sides of the stove. This can result in poor gasification, sooting, and damage to the insulation plates. If the wood is too wet, it's difficult to get it to burn properly. Chimney draft may be insufficient, causing heavy smoke and sooting of the glass, and it leads to lower energy efficiency as the water in the wood needs to evaporate first. Additionally, it can cause damage to the stove and chimney in the form of glossy soot and tar deposits. In the worst case, this can lead to a chimney fire. If the wood is too dry, it will burn too quickly. The gases in the wood are released faster than they can burn, resulting in unburned gases going up the chimney. This also leads to lower efficiency and environmental damage.

Burning with waste products such as plastic, pressure-treated wood, particle boards, colored brochures, glossy paper, or other treated materials and liquid fuels are prohibited, including petrol, paraffin, barbecue lighter fluid, etc. Keep these liquids at a safe distance from the stove during operation. These materials are both environmentally harmful and emit harmful substances such as hydrochloric acid, dioxins, and heavy metals, which can cause significant harm to humans, animals, the stove, chimney, and the environment. Warranty and claims rights are void if the above-mentioned materials are burned in the stove.

Energy coal (coke) must not be used in the wood stove, as it contains high levels of sulfur, which can cause significant wear on the stove, chimney, and the environment. The lifespan of the stove and chimney will be significantly reduced when using this type of fuel, and the product's warranty will be void.

Note: the stove is approved/tested with firewood at the Danish Technological Institute.

Lighting/Ignition and Continuous Firing

The instructions described/used from steps 1 to 6 here are the same as those applied during the testing and approval of the stove by the Danish Technological Institute, Aarhus (TI). The fuel used for testing is birch wood.

- **Criterion for ending the test cycle: <u>MASS.</u> Starting ember bed = 140g**

To protect the environment and ensure you get the best performance from your new Termatech stove, it's important to follow these instructions.

1. Push the air control handle all the way to the right. On some models, the air control handle might need a slight downward push to move it all the way to the right. The ignition/start-up air is now adjusted to maximum (See Figure 1).

Figure 1

2. Arrange 12-15 kindling sticks at the bottom of the stove. The sticks or wood pieces should have a diameter of 2-8cm and a length of about 22cm, with a total weight of approximately 1.5kg. Start with the 2 largest pieces of wood at the bottom and finish with the sticks laid crisscross like a log cabin. Place 2 firelighters on top (See Figure 3.1). We recommend using Bio-firelighters that produce a strong flame and have a long burning time. This lighting/ignition method is referred to as the Top-Down method.

3. Ignite the two firelighters (See Figure 2) and leave the door slightly ajar using the small bracket in the upper right corner of the door (See Figure 3), on TT20 models, you can simply leave the door slightly ajar. Keep the door ajar for approximately 3 minutes before closing it completely. Once the door is closed, set the air control handle to 100% combustion air (full secondary air) (See Figure 4).

Figure 4

Figure 2

Figure 3

4. When the kindling fire has burned down and only embers remain, open the door gently to prevent ash from swirling out. Then, carefully spread the embers using a fire rake, so they are evenly distributed across the bottom of the stove (See Figure 5). Use a glove to protect against burns.

Figure 5

5. Next, place 2 logs weighing approximately 575 grams each and measuring 22 cm in length inside the stove. Lay the logs parallel to the back of the stove, with one log positioned about 2 cm away from the back. Ensure that the logs are evenly spaced from the sides of the stove. The gap between the two logs should be approximately 1 cm (See Figure 6). Close the door completely. For the next 40 seconds, set the air control handle to 100% startup air (full primary + secondary air) (See Figure 7). After about 40 seconds, adjust the air control handle to full combustion air (See Figure 8). Keep the air control handle in this position for 2 minutes and 20 seconds. After 2 minutes and 20 seconds, set the handle to 50% combustion air (secondary air) (See Figure 9).

Figure 6

Figure 7

Figure 8

Figure 9

6. When the fire has burned down to embers, approximately after 47 minutes (See Figure 10), you can reload and start a new fire. Begin again from step 4.

Figure 10

WARNING – Operation with the combustion chamber door open is not permitted. It is only allowed for a limited period during ignition and when removing ash. See item 3.

3 Safety

The surface of the stove, as well as handles, knobs, glass window, chimney pipe, and similar parts, becomes very hot when the stove is in use. Touching these components without proper protection (such as gloves or other heat-resistant materials) can result in burns. Remember to inform children about this danger and ensure they are kept away from the wood stove when it's in operation.

Magnets in the Stove (TT21 Models) - WARNING

THE TT21 SERIES CONTAINS VERY STRONG MAGNETS.
NEGLIGENT HANDLING CAN RESULT IN ACCIDENTS AND DAMAGE.
READ THE FOLLOWING BEFORE UNPACKING:

- Avoid metal items containing iron near magnets (e.g. tools, electronics, watches, etc.)
- Maintain a good distance between magnetic systems to prevent them from attracting and snapping together.
- When separating and assembling magnets, try to slide them apart and together whenever possible. This avoids pinching and potential damage to the magnets' coating.
- Electronic components should be kept at a safe distance from magnets, as they can be affected or damaged by the magnetic field (pacemakers, hearing aids, PCs, watches, measuring instruments, data discs, floppy discs, credit cards, mobile phones, etc.).
- Magnets can generate sparks, so they should be kept away from explosive or flammable materials and gases.
- Magnets should not be processed in a dry state, as magnetic powder can ignite spontaneously. Magnetic powder should be stored in water-filled or airtight containers."

Flammable material:

Flammable material must not be stored in the wood compartment of stove type TT21RL & TT21RLS

Storing wood in the wood compartment:

Chimney fire

In case of chimney fire, the stove's door, drawers, and dampers must be immediately closed completely to cut off the oxygen supply. Relevant authorities, etc., should be contacted if necessary. The stove and chimney should only be used again after inspection by a chimney sweep.

Unauthorized modification

WARNING: Any alteration or mechanical modification of the stove that is not approved by the installer or manufacturer is prohibited. Unauthorized changes may pose a risk of personal injury, fire, or malfunction, and will void the warranty.

4 Tips, Malfunctions, and Troubleshooting

Lighting after a Prolonged Pause
If the stove has not been used for an extended period, the chimney should be inspected for any potential blockages (such as bird nests) before lighting. Additionally, it's a good idea to remove any dust from the wood stove, as it could cause odors during lighting.

Firewood Storage
Store firewood under cover with good ventilation, preferably in a carport or similar structure. Always stack the firewood on a pallet or something similar to keep it off the ground. Newly cut or split wood should be stored for about 1-2 years before using it as fuel. This is to achieve the correct moisture content, which should be around 12-20%.

Ash Disposal
Ash can be disposed of with regular household waste. To ensure the ash doesn't ignite anything in the trash bin, it should be allowed to cool for 2 days before disposal.

The stove is difficult to control and burns aggressively:

Troubleshooting:
- Set the air control handle to the middle position or move the air control handle from the center towards the left.
- If the stove is over 1 year old or has been used extensively, check the gaskets and replace them if necessary. Gaskets wear out over time, and heat can cause them to lose their ability to keep the stove door tightly sealed.
- If there is excessive draft in the chimney, it may be necessary to install a damper in the chimney to control the draft. Contact your dealer for assistance if needed.

The stove burns poorly / doesn't ignite / chimney draft is weak:

Troubleshooting:

- Is there a sufficient bed of embers to ignite the new wood you're placing on?
- Have you placed at least 2 smaller pieces of firewood?
- Is the firewood dry (maximum 20% moisture content)?
- Have you fully opened the air damper?
- Is there enough airflow into the room where the stove is located?
- Specific conditions around the chimney can lead to problems. Is the chimney's diameter and length suitable for the stove?
- Is there anything around the top of the chimney (roof ridge, trees, or similar) that might hinder optimal performance?
- Is the chimney obstructed?
- Are stovepipes and transitions properly sealed?
- Is any cleaning door tightly closed?
- Is there a damper on the pipe or chimney that is closed?
- Is there a liner in the chimney (if it's a masonry chimney)?
- Is the chimney cold and therefore not creating enough updraft/draft?
- Is it necessary to extend the chimney, install a stainless steel liner, or use a chimney fan to create the necessary draft? If the above doesn't resolve the issue, it may be necessary to contact your dealer or chimney sweep.

Smoke and Soot Odor:
Troubleshooting:

- Is there downdraft in the chimney? This can occur in certain wind directions.
- The chimney might be too short in relation to the roof ridge and/or surrounding trees/buildings, not providing sufficient draft.
- Ensure there are no open windows where smoke can enter.
- Keep the door closed while there are flames in the stove. (If the door is opened while flames are present, smoke can escape into the room.)
- Is the firewood dry (maximum 20% moisture content)?
- Is the air control handle closed too far?
- Is there a sufficient bed of embers to ignite the new wood you're placing on?

Glass Soots Up When Using the Stove:

Troubleshooting:

- Is the firewood too moist (maximum 20% moisture content)?
- Is the temperature in the combustion chamber too low? Open the air control handle further.
- Insufficient draft in the chimney.
- The air control handle is closed too much.
- The door is closed too early during lighting.
- The firewood is placed too close to the glass.
- There is insufficient airflow into the room.

Smoke comes out when the door is opened or slightly ajar:

Troubleshooting:

- When you open the door, the negative pressure in the stove disappears, making it easier for smoke gases to escape into the room rather than passing through the smoke baffle plates. Therefore, never open the door while there are flames. If there are flames, there are smoke gases!
- Some types of wood can release smoke gases even if there are no flames, especially if there hasn't been enough air or a bed of embers during combustion. The logs may continue to release smoke for a while after the fire has gone out – wait before opening the door.
- There is insufficient draft in the chimney.
- Turn off the kitchen hood extractor fan, even if it's active in another room. If turning off the extractor fan is not possible, ensure that the stove gets fresh air from outside (consider opening a window).

White Glass (if the glass appears slightly cloudy and white):

Troubleshooting:

- The glass has become too hot because the startup air intake was not closed in time. The glass has suffered alkali degradation due to the high heat and should be replaced.
- Incorrect fuel (burning waste wood, painted wood, treated wood, plastic laminate, plywood, etc.) These issue are caused by improper operation and falls outside of warranty coverage.

5 Maintenance and Cleaning

Cleaning and Inspection
Daily maintenance is kept to a minimum, but the stove should be thoroughly inspected and maintained once a year. The chimney and stovepipe should also be cleaned by a chimney sweep, who will determine the necessary cleaning/sweeping intervals. Cleaning the stove should only be done when the stove is cool.

Firebox
Should be cleaned of ashes and soot. It may be necessary to remove the insulation plates/vermiculite for cleaning, but be cautious as they are very porous and can break during removal/reinstallation. Refer to section 8.

Insulation Plates
Insulation plates in the firebox that are cracked or worn can be easily replaced as they are loosely mounted. The material used is called vermiculite, which is a porous but highly suitable insulation material. The stove's efficiency is not affected if the insulation cracks. However, they should be replaced when wear exceeds half of the original thickness, if the plates are falling apart, or at the chimney sweep's recommendation. For replacement instructions, refer to section 8.

Door Hinges and Moving Closure Mechanisms
The door hinges should be lubricated with copper grease or another heat-resistant lubricant. This also applies to the moving parts of the closure mechanism on models equipped with it.

Gaskets
Gaskets may appear to be in good condition initially, but they can deteriorate over time. With repeated exposure to heat, they lose their elasticity and ability to keep the stove airtight. Gaskets should be replaced as needed, but at least every two years. This ensures proper and environmentally friendly combustion and a clean glass window.

Stove Surface
The door, body, etc. of your wood stove are coated with Senotherm paint. The paint should be cleaned using a soft brush or possibly a vacuum cleaner with a brush attachment. Always remember: only when the stove is cool. Never use cleaning agents or water on the painted surfaces.

Scratches in the Paint/Touch-Up of Scratches
If a scratch appears in the paint, it's easy to fix using Senotherm spray paint. Senotherm spray can cover spots or scratches. Larger damages should be sanded down with fine steel wool, vacuumed, and then sprayed. Shake the can thoroughly and spray from a distance of 15-20 cm. Due to fire hazard, it's crucial that the stove is out of operation and completely cool before using the spray. To keep the stove's painted surfaces looking nice for many years to come, try to avoid touching the painted areas when the stove is hot. Ensure ample ventilation when using spray paint. The paint is not resistant to moisture, meaning if the stove is exposed to dampness or cleaned with water or chemicals, the paint may be damaged and the steel components can rust. Refer to the instructions on the Senotherm spray can.

Claddings of stone
Your stove may be clad with soapstone or sandstone. Typically, these require no maintenance and can be cleaned with a soft brush or possibly a vacuum cleaner with a brush attachment. If a scratch appears on the stone, it's easy to fix with a repair kit available from the dealer. Follow the instructions in the repair kit. The types of stones used for cladding wood stoves are natural materials, so differences in structure, color, and shades should be expected. Such differences are 100% natural and are part of such a natural product, falling outside of warranty. Any cracks or breakage in the stones will become apparent within the initial firings of the wood stove, and therefore, it's a condition of warranty that such issues are reported immediately.

Glass
Glass normally requires no maintenance other than cleaning. This is best done by using a suitable glass cleaner for wood stoves. If you replace the glass in your wood stove, do not dispose of it with regular glass waste, as it is ceramic glass.

Spare Parts
For the sake of fit and other considerations, we recommend using only original spare parts in your TermaTech wood stove. Please contact your local supplier.

Settings, Adjustments, etc.:
Refer to section 8.

6 Warranty and right of complaint
5-year warranty
TermaTech provides a 5-year warranty on wood stoves, subject to the following conditions: TermaTech offers a 5-year warranty on material and manufacturing defects in the structural components, excluding wear on parts in and around the combustion chamber, provided normal operation according to this manual.
Upon identification of material or manufacturing defects in the product, it's use must be discontinued immediately, and the retailer should be contacted.

Internal parts covered by the warranty:
Welds of the combustion chamber, including welded parts such as hinges, pins, and other welded metal parts

Internal parts not covered by the warranty:
Cast iron parts (base, door, grate), steel parts (baffle plate, glass cleaning edge, cover plate, air rail), and insulation materials (vermiculite parts or other insulation material), glass, gaskets, and springs.

External parts not covered by the warranty:
Painted plates/surfaces, stone cladding, tiles, concrete, and glass, closing mechanism/handle, hinge pins, and magnets. Note: Scratches or stains on stone cladding can be repaired with a repair kit (light sanding with fine sandpaper) available from the retailer.

The warranty does not cover faults caused by
- Failure to follow the user and installation manual, including incorrect use or handling of the product.
- The defect arises due to aggressive environmental influences (such as chemicals or cleaning agents).
- Intentional or negligent damage to the product by the end customer or a third party.
- Incorrect installation.
- Overheating or material degradation caused by using incorrect types of fuel such as wood, coal, waste, or excessive amounts of fuel.
- The product is connected to a chimney with poor draft, for example, one that is too short or leaky.
- The product is placed or has been placed and/or stored in unheated or damp environments.
- The product has been neglected and not maintained according to the instructions.
  Normal wear and tear on wearable parts and/or consumable parts, as well as on the paint, and similar circumstances not caused by material or manufacturing defects.

The following minor deviations, which cannot be the basis for warranty claims, may occur in the product:
Naturally occurring variations in color shades, structure, and veining in soapstone, sandstone, and other stone and concrete claddings.
Noises that occur during combustion are normal for wood stoves. These occur when metal expands and/or contracts.

If there is a material or manufacturing defect covered by this warranty present at the time of delivery to the customer, or if such defects occur during the warranty period, TermaTech A/S undertakes to provide a suitable replacement component free of charge to remedy the material or manufacturing defect. In other cases, the product will be collected from the customer's address for repair at a workshop selected by TermaTech A/S. The repair period may take up to 8 weeks from collection to delivery of the repaired product. There is no further obligation for TermaTech A/S to remedy the defect, such as through installation of the replacement component/product.

In addition to the right to replacement components or repair of the product, the buyer is not entitled to compensation for either direct or indirect costs and/or damages. Repairs of material or manufacturing defects, or replacement of parts/product repair, do not extend the warranty period of the product or the replaced component. Furthermore, a new warranty period is not initiated for either the product or the replaced component. In addition to the above warranty rules, the consumer also retains the rights provided by consumer protection legislation.

Claim Process
Any claims regarding material or manufacturing defects must be made to the retailer who sold the product. In such cases, the buyer must provide documentation proving the purchase from the retailer and the date of purchase, such as a receipt or invoice. The buyer must also provide the model designation and production number indicated on the product's nameplate. If the buyer wishes to invoke a material or manufacturing defect, the seller must be notified within 14 days of identifying the defect.

Warranty
Any unauthorized modification of the wood stove will be considered a structural alteration, and thereby voids the warranty.

7 Safety Distances and Placement of the Stove

Be particularly attentive to the different clearance requirements and distances to combustible materials for flue pipes, chimney components, and the wood-burning stove. Distances below only apply to the stove.

Clearances to Non-Combustible Materials:
To prevent discoloration, odor from paint and wallpaper that is heat-affected, as well as to enhance heat output from the stove and facilitate cleaning, it is recommended to maintain a minimum distance of at least 100mm.

Clearances to Combustible Materials:
The following minimum clearances are applicable for the stove to combustible materials and must be adhered to. Even with these minimum clearances, the walls may still become warm (up to 80°C).

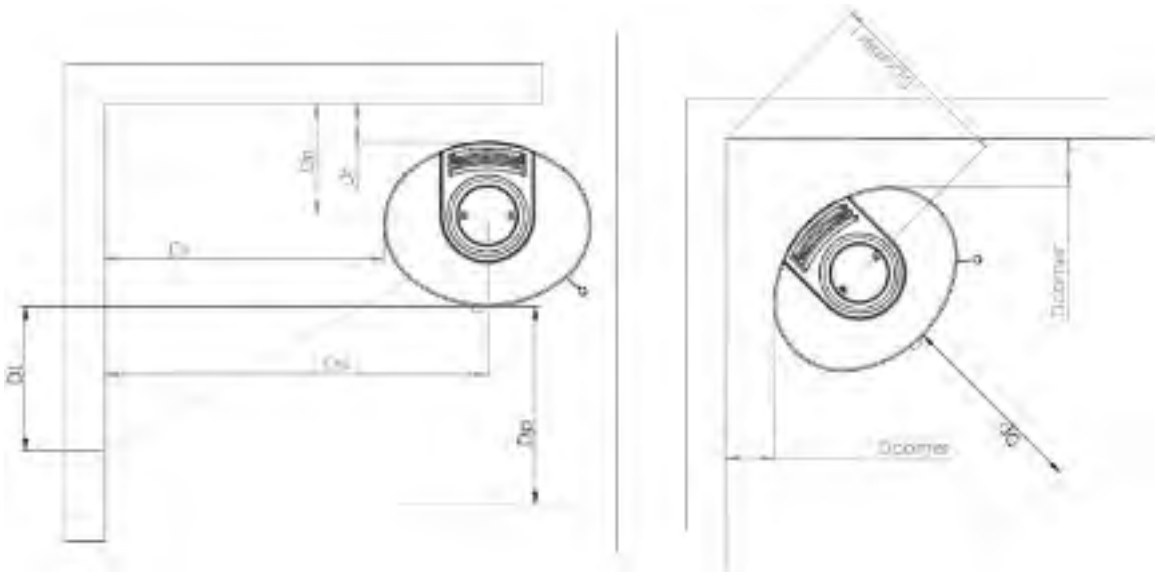


Figure 11

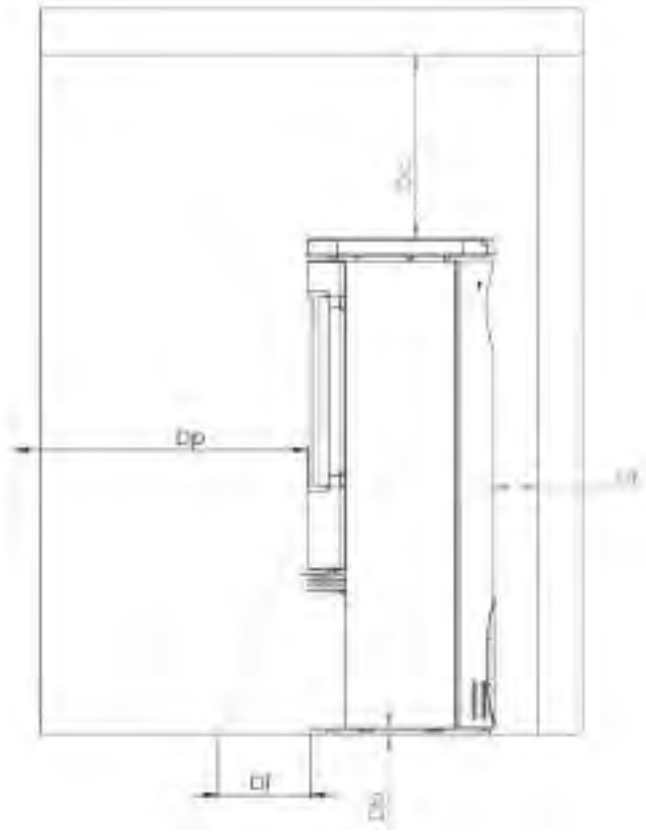


Figure 12

7.1 Safety distances – TT20/TT21-Series

Measure	Symbol	Distance [mm]	Illustration
Distance to Combustible Wall Behind the Stove:	d_R	150/100*	Figure 11 + 12
Installation distance to Combustible Wall behind the stove:	d_{Ri}	338/288*	Figure 11
Distance to Combustible Side Wall:	d_S	350	Figure 11
Installation distance to Combustible Side Wall:	d_{Si}	616/589[1]	Figure 11
The distance from the top of the stove to the ceiling, minimum:	d_C	750	Figure 12
Distance to Combustible material – side radiation area:	d_L	0	Figure 11
Distance to adjacent Combustible materials:	d_P	1100	Figure 11 + 12
Distance from floor to bottom of stove:	d_B	0	Figure 12
Distance from floor to door:	$d_{B'}$	264	-
Distance to Combustible material – floor in front:	d_F	0	Figure 12
Distance at 45° Placement in Corner:	d_{corner}	125	Figure 11
Installation distance at 45° placement in corner	$d_{cornerI}$	493/487[1]	Figure 11

Note *: When using insulated flue pipes
Note [1]: Applies to TT20

8 Drawings with explanatory captions

8.1 Replacement of insulation panels

Type: All models in the series
When installing the Vermiculite plate, follow the numerical order shown below. When removing the Vermiculite plates follow the reverse order.

8.2 Adjusting the self-closing door mechanism (Bauart 1)

Type: All models in the series

In the door/hinge of your wood stove, there is a spring that causes the door to close automatically when you release the handle. If you wish to disable this function, you can remove the cotter pin with the lens head (in the lower hinge), which will release the tension from the spring. This can be easily done using a flathead screwdriver and a pair of pliers. Please be cautious as there is a significant amount of tension on the spring. It's important to note that self-closing is not a requirement in all countries.

Disabling Auto-Close function:
Tighten the screw (indicated by the white arrow) slightly (clockwise) and remove the pin (indicated by the blue arrow). Slowly and gently release the screwdriver due to the spring tension.

Activating Auto-Close / Bau-art function:
Tighten the screw appropriately (clockwise) and reattach the pin (indicated by the blue arrow). The screw should be adjusted as needed based on how quickly you want the door to close.

8.3 Adjustment of Levelling Feet

Type: All models in the series, except for TT20Bazic

There are installed/can be installed levelling feet under the stove. Levelling feet are used if the floor is uneven or if you want an optical "floating" stove, or if you want to use a custom-cut floor plate. Alternatively, you can let the stove stand on the base plate. If a custom-cut floor plate is used, the levelling feet should be installed/used/adjusted for this purpose. Otherwise, the custom-cut floor plate cannot be installed. Note that all specified measurements (on the stove) are without levelling feet. If you use levelling feet, the stove will be correspondingly higher.

The four hexagonal levelling feet (Figure 13) are installed in the four threaded holes on the base plate. Refer to the white arrows (Figure 14). The levelling feet are adjusted with your fingers or a 25mm open-end wrench so that there is a distance of approximately 8mm between the base plate and the floor, depending on the choice of floor plate.

Figure 13

Figure 14

8.4 Setting up the Wood Stove (Continuation of Levelling Feet)

Type: All models in the series, except for TT20Bazic

The stove comes with a plastic bag containing the following items: 1=Plug (1 piece), 2=Dowel screws (4 pieces), 3=Floor protector (2 pieces) (see Figure 15).

If levelling feet are not used or if the stove is stable on the levelling feet, insert the plug (1) into the hole in the front (Figure 17).

If the levelling feet are used and the stove is not completely stable (tilting when the door is opened), follow these steps: In the base plate's 2 threaded holes, one in the front (Figure 17) and one at the rear (Figure 18), mount a dowel screw of suitable length, as indicated by the blue arrow (Figure 19+20).

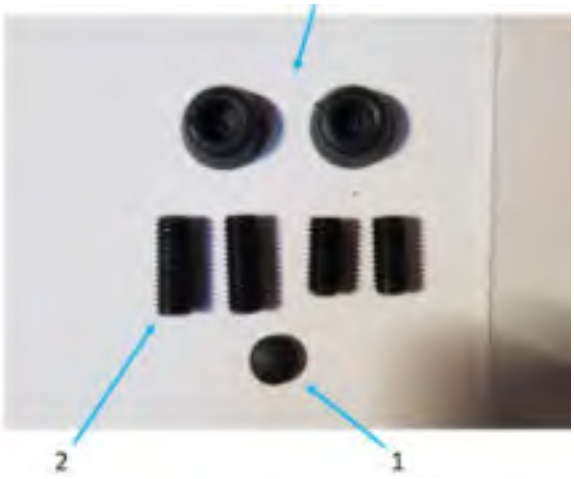


Figure 15

Figure 17

Figure 16

To access the rear threaded hole, remove the lower cover plate on the back panel (Figure 19). The floor protector, indicated by the white arrow (Figure 19+20), is gently inserted under the base plate of the stove and positioned directly under the dowel screw. Then, adjust the dowel screw appropriately downwards, so it makes contact with the floor protector, ensuring the stove stands stable. The same procedure is followed for the rear threaded hole in the base plate (Figure 16+19).

Figure 18

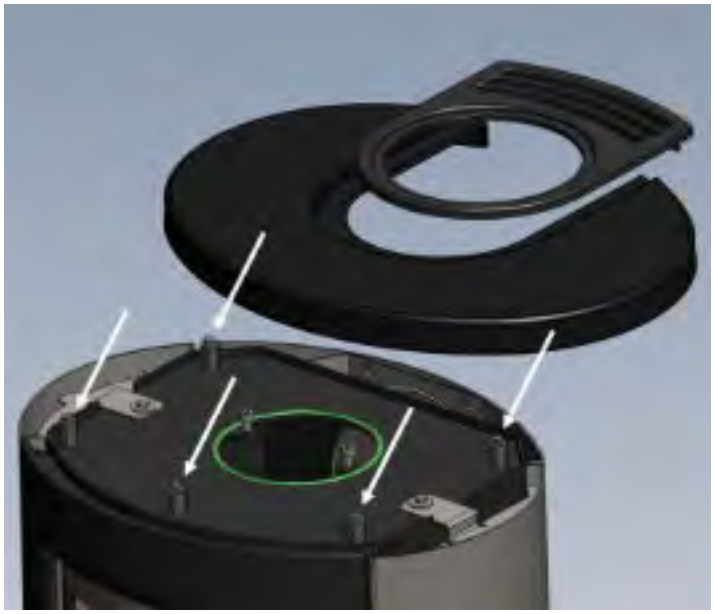
Figure 19

Figure 20

8.5 Adjustment of the top plate

Type: All models in the series

If you wish to adjust the height of the top plate or if it is slightly uneven, you can lift it and adjust the nuts underneath the top plate by tightening or loosening them until the desired result is achieved.



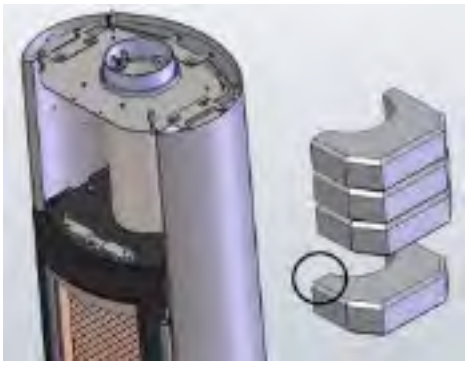
The top plate is adjusted by using the 5 nuts located underneath it. See the white arrows.

8.6 Assembly of Heat Storage Stones

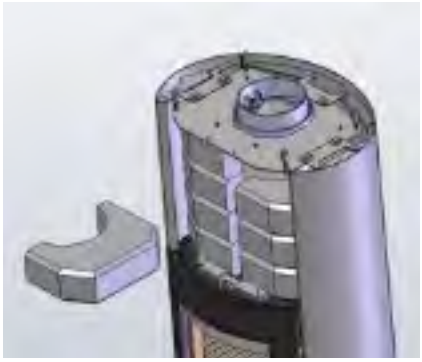
Type: TT21RHT

1. Lift the top plate. Then, remove bracket no. 1. Lift the front plate clear of the yellow assembly cones - move the front plate towards the left and then pull it free on the right side.

2. Once the front is removed, the heat storage stones can be assembled.



3. Note that the widest part of the stone should face forward. Refer to the black ring in the image.



4. Insert the stones alternately on the left and right - rotate the stones 7+8 into place. Ensure an appropriate distance to the inner smoke pipe as well as to the back plate and to the left and right sides of the stove.

5. To ensure that the stones do not tilt when the door is opened and closed, tighten the 4 Allen screws at the top lightly. Refer to the black rings.

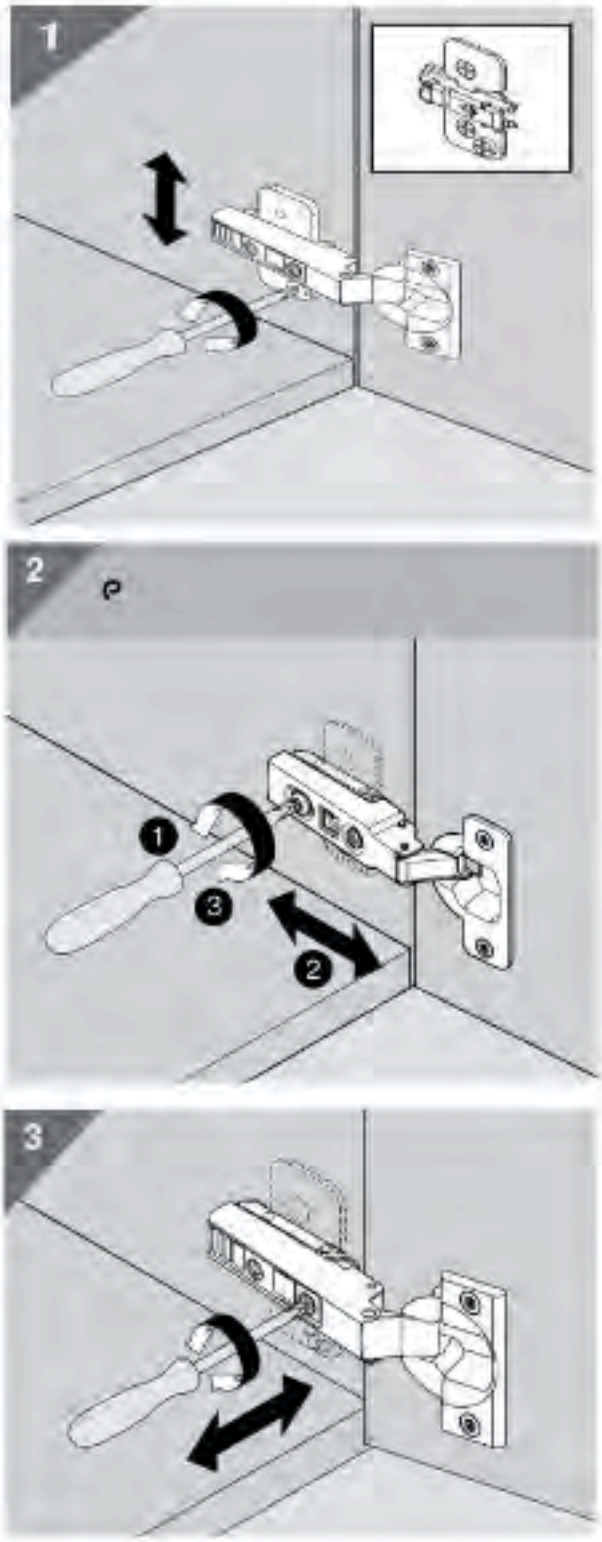
6. The front plate is now ready to be assembled. Slide the left edge into the left side panel and then adjust it into the right side. Then lower the front plate over the yellow assembly cones. Adjust the front to the sides and then mount bracket 1.

7. The stove is now ready for use. The approximately 48 kg heat storage stones will ensure that the stove remains warm for a long time, even after the fire has gone out.

NOTE: Stones may have stone dust - therefore, it's always a good idea to wear gloves.

8.7 Adjustment of the wood compartment door

Type: TT21RH, TT21RHS, TT21RHT



8.8 Adjustment of the draft in the door

Type: All models in the TT21 series

Weaker / less draft in the door:
Tighten the two screws on the top and bottom magnet (clockwise). Move magnets away from the door.

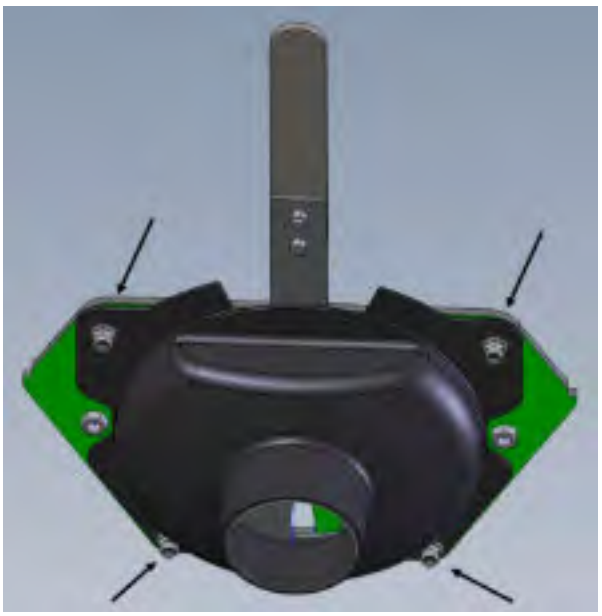
Stronger / more draft in the door:
Loosen the two screws on the top and bottom magnet (counterclockwise). Move magnets closer to the door.

Note: We recommend a draft of 4 to 6 kg. The door must not hit the magnet. Distance between door and magnet should be a minimum of 1mm.

8.9 Installation of air intake for connection of external combustion air, item number 09-170

Type: all models in the series.

1. Open the door to the wood compartment. Remove the heat shield and install the air nozzle here. Refer to the black arrow.

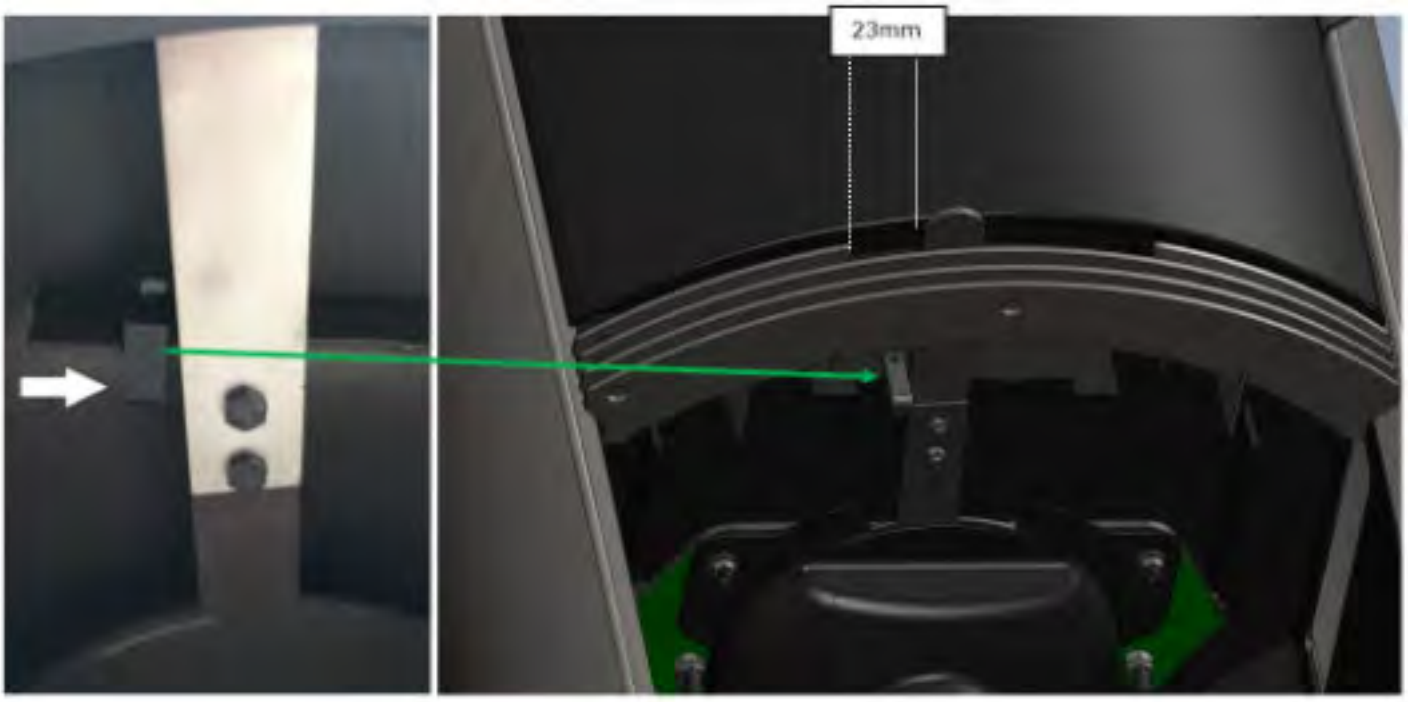


2. Install the air intake as shown in the picture above. Use the four nuts and four flat washers provided in the cardboard box. First, attach the flat washer, then the nut. One nut and one flat washer for each threaded rod. Refer to the black arrows.

8.10 Smoke control area – Damper Control unit installation

Type: All models in the series if installed in a "smoke control area" in England.

Installation in a smoke control area requires the additional assembling / installation of the "Damper control unit" which must be installed by the installer. Make sure that the damper control unit is placed and mounted like below. The damper control unit works as a "stop for closing combustion air" and there must be 23mm distance between handle of damper and the upper grill (see illustration below)



8.11 TT21RL: Removal from the pallet. Installation of the fresh air intake.

There are two options depending on your needs – see below:

- **Guide 1:** If you only need to remove the stove from the pallet and not install the fresh air connector, follow this guide.
- **Guide 2:** If you're also installing the fresh air connector, follow Guide 2.

Common to both methods is that the stove is secured with two coach screws fastened into the center batten on the pallet.

Guide 1:
Required tools:
10 mm socket wrench
4 mm Allen key
Removing the stove from the pallet

1. Remove the cover plate on the back above the fresh air opening using the 4 mm Allen key.
   You will now have access to the bolts securing the stove to the pallet. See Figure 21+22.
2. Use the 10 mm socket wrench to remove the bolts.
3. Reinstall the cover plate – the stove is now ready for installation.

Guide 2:
Required tools:
10 mm socket wrench
4 mm Allen key
5 mm Allen key

Removing the stove from the pallet:
1. Start by removing the top plate from the stove.
2. Remove the stove sides using the 10 mm socket wrench – See Figure 23.
3. Remove the cover plate on the back above the fresh air opening using the 4 mm Allen key – See Figure 21+22.
4. Remove the lower front plate using the 5 mm Allen key – See Figure 24.
5. You will now have access from both sides to the bolts securing the stove to the pallet.
   Use the 10 mm socket wrench to remove the bolts.
6. The stove can now be lifted off the pallet.
   If you're installing the fresh air connector, it's advisable to do so before fully removing the stove.

Installing the Fresh Air Connector

1. Attach the fresh air connector (09-170) over the threaded rod – see Figure 25.

2. Begin by fastening the washers and bolts on the front threaded rods – see Figure 26.
   Secure the rear washers and bolts through the fresh air opening – see Figure 27.

3. Tighten the bolts by hand only – do not use tools.
   Reinstall the lower front plate and the side panels and make any necessary adjustments.
   You are now ready to continue with the installation of the stove.

Figure 21

Figure 22

Figure 23

Figure 24

TT21RL seen from the front.

Figure 25

Figure 26

TT21RL seen from the back.

Figure 27

Figure 28

Important: Remember to install the included adjustable feet if a shaped glass panel is to be used.

9 Environment, Climate & Disposal

When disposing of your wood stove or the packaging from your wood stove, it's important to dispose of the parts separately. Below is how this should be done correctly and in the most environmentally friendly manner. All parts of the packaging and most parts of the wood stove itself can be recycled.

Cardboard:
The cardboard used for packaging is 100% recyclable paper and should be sorted and recycled through your local waste/recycling station or waste management partner according to their guidelines.

Plastic and Styrofoam:
The plastic and Styrofoam used for packaging should be sorted according to your local waste/recycling station or waste management partner's guidelines for proper disposal.

Wooden Pallet/Framing:
The wood and pallet used for packaging (meeting requirements/certification) should be sorted and recycled through your local waste/recycling station or waste management partner's guidelines.

Vermiculite/Insulation Panels/Gaskets:
Cannot be recycled and should be sorted through your local waste/recycling station or waste management partner's guidelines.

Glass:
If you replace or dispose of the glass from your wood stove, it should not be discarded with regular glass waste as it is ceramic glass.

Stone Cladding:
Cannot be immediately recycled and should be sorted through your local waste/recycling station or waste management partner's guidelines (dispose of it as natural stone).

The Stove:
All other parts of your stove are made of either steel or cast iron and should be sorted and recycled through your local waste/recycling station or waste management according to their guidelines.

10 Approval & Technical Specifications

TEKNOLOGISK INSTITUT, Energi og Klima
Vedvarende Energi og Transport
Kongsvang Allé 29
8000 Aarhus C
www.teknologisk.dk

The wood stove series has been tested and approved according to the standards:
CE – EN16510 (EU)
DIN+ (Germany)
15A (Austria)
NS3058, 3059 (Norway)
AEA (UK)
Ecodesign 2015/1185
UKCA Certified
Certified EN16510-2-1

Dimensions of the combustion chamber are:
Height 166mm (to Max load)
Depth 288mm
Width 340mm
Volume: 0.0129 m³ (Effective combustion chamber volume)
The flue outlet diameter is: 150mm

Declared values – TT20/TT21-series:

Load bearing capacity	120 kg	**Chimney data at nominal heat output**	
Clearance to combustible materials		Flue gas temperature (T_{snom})	324°
To rear (d_R)	150 mm/100 mm*	Minimum chimney draft (ρ_{nom})	12 Pa
To side (d_S)	350 mm	Flue gas mass flow ($\Phi_{f,g\ nom}$)	4,5 g/s
To ceiling (d_C)	750 mm	**Chimney data at part load heat output**	
To side radiation area (d_L)	0 mm	Flue gas temperature (T_{spart})	NPD
Front adjacent combustible material (d_P)	1100 mm	Minimum chimney draft (ρ_{part})	NPD
To floor (d_B)	0 mm	Flue gas mass flow ($\Phi_{f,g\ part}$)	NPD
Floor to door ($d_{B'}$)	264 mm	**Safety requirements for chimney**	
To floor in front (d_F)	0 mm		
Mounting in corner 45° (d_{corner})	125 mm	Minimum safety class (T_{class})	T400
Emissions at nominal heat output (13% O_2)		**Space heating efficiency**	
Carbon monoxid (CO_{nom})	796 mg/m^3	Annual efficiency at nominal heat output (η_S)	71%
Nitrogen oxides (NO_{xnom})	89 mg/m^3	Energy efficiency index (EEI)	107
Organic gaseous carbon (OGC_{nom})	44 mg/m^3	Energy efficiency class	A+
Particles (PM_{nom})	17 mg/m^3	Electric power consumption at nominal heat output (el_{max})	NPD
Emissions at part load heat output (13% O_2)		Electric power consumption at part load(el_{min})	NPD
Carbon monoxid (CO_{part})	NPD	Electric power consumption at standby (el_{SB})	NPD
Nitrogen oxides (NO_{xpart})	NPD	**Sustainable use of natural resources**	
Organic gaseous carbon (OGC_{part})	NPD	Environmental sustainability	NPD
Particles (PM_{part})	NPD	**Type designation**	
Nominal heat output		Type	BF
Output (P_{nom})	5,0 kW	Leakage rate at 10 [Pa]	1,02 m^3/h
Efficiency (η_{nom})	81%		
Part load heat output			
Outout (P_{part})	NPD		
Efficiency (η_{part})	NPD		

Note *: When using isulated flue pipe

11 SUPPLEMENTARY INSTRUCKTIONS UK

READ THE INSTRUCTION BOOKLET AND THESE SUPPLEMENTARY INSTRUCTIONS CAREFULLY BEFORE INSTALLATION

These instructions together with those in the instruction booklet cover the basic principles to ensure the satisfactory installation of the stove, although detail may need slight modification to suit particular local site conditions. In all cases the installation must comply with current Building Regulations, Local Authority Byelaws and other specifications or regulations as they affect the installation of the stove. It should be noted that the Building Regulations requirements may be met by adopting the relevant recommendations given in British Standards BS 8303, BS EN 15287-1:2007 as an alternative means to achieve an equivalent level of performance to that obtained following the guidance given in Approved Document J. Please note that it is a legal requirement under England and Wales Building Regulations that the installation of the stove is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at www.hetas.co.uk.

CO Alarms: Building regulations require that whenever a new or replacement fixed solid fuel or wood/biomass appliance is installed in a dwelling a carbon monoxide alarm must be fitted in the same room as the appliance. Further guidance on the installation of the carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturer's instructions. Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area). In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. In Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014. Similarly, In Northern Ireland appliances are exempted by publication on a list by the Department of Agriculture, Environment and Rural Affairs under Section 16 of the Environmental Better regulation Act (Northern Ireland) 2016. In Wales appliances are exempted by regulations made by Welsh Ministers.
The TermaTech TT23 series have been recommended as suitable for use in smoke control areas when burning wood logs and when fitted with a smoke control kit (damper control unit) to prevent closure of the primary and secondary air controls beyond the 30% open position. Please read section 8 in the Installation and user manual. Further information on the requirements of the Clean Air Act can be found here: **https://www.gov.uk/smoke-control-area-rules**

HEALTH AND SAFETY PRECAUTIONS

Special care must be taken when installing the stove such that the requirements of the Health and Safety at Work Act are met.

Handling

Adequate facilities must be available for loading, unloading and site handling.

Fire Cement

Some types of fire cement are caustic and should not be allowed to come into contact with the skin. In case of contact wash immediately with plenty of water.

Asbestos

This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts

When installing or servicing this stove care should be taken to avoid the possibility of personal injury.

STOVE PERFORMANCE

Please refer to the table in the main instruction manual for details of the stoves' performances

PREPARATORY WORK AND SAFETY CHECKS

IMPORTANT WARNING

This stove must not be installed into a chimney that serves any other heating appliance. There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.

Chimney

In order for the stove to perform satisfactorily the chimney height must be sufficient to ensure an adequate draught of approximately 15 Pa so as to clear the products of combustion and prevent smoke problems into the room. NOTE: A chimney height of not less than 4.5 meters measured vertically from the outlet of the stove to the top of the chimney should be satisfactory. Alternatively the calculation procedure given in EN 13384-1 may be used as the basis for deciding whether a particular chimney design will provide sufficient draught. The outlet from the chimney should be above the roof of the building in accordance with the provisions of Building Regulations Approved Document J. If installation is into an existing chimney then it must be sound and have no cracks or other faults which might allow fumes into the house. Older properties, especially, may have chimney faults or the cross section may be too large i.e. more than 230 mm x 230 mm. Remedial action should be taken, if required, seeking expert advice, if necessary. If it is found necessary to line the chimney then a flue liner suitable for solid fuel must be used in accordance with Building Regulations Approved Document J. Any existing chimney must be clear of obstruction and have been swept clean immediately before installation of the stove. If the stove is fitted in place of an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire. If there is no existing chimney then any new system must be to the designation described above and in accordance with Building Regulations Approved Document J. A single wall metal fluepipe is suitable for connecting the stove to the chimney but is not suitable for use as the complete chimney. The chimney and connecting fluepipe must have a minimum diameter of 150 mm

and its dimension should be not less than the size of the outlet socket of the stove. Any bend in the chimney or connecting fluepipe should not exceed 45°. 90° bends should not be used. Combustible material should not be located where the heat dissipating through the walls of fireplaces or flues could ignite it. Therefore when installing the stove in the presence of combustible materials due account must be taken of the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions. If it is found that there is excessive draught in the chimney then a draught stabilizer should be fitted. Fitting of a draught stabilizer will affect the requirement for the permanent air supply into the room in which the stove is fitted in accordance with Approved Document J (see also combustion air supply). Adequate provision e.g. easily accessible soot door or doors must be provided for sweeping the chimney and connecting fluepipe where it is not intended for the chimney to be swept through the appliance.

Hearth
The hearth should be able to accommodate the weight of the stove and its chimney if the chimney is not independently supported. The weight of the stove is indicated in the brochure. The stove should preferably be installed on a non-combustible hearth of a size and construction that is in accordance with the provisions of the current Building Regulations Approved Document J.
The clearance distances to combustible material beneath, surrounding or upon the hearth and walls adjacent to the hearth should comply with the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions. If the stove is to be installed on a combustible floor surface, it must be covered with a non-combustible material at least 12mm thick, in accordance with Building Regulations Approved Document J, to a distance of 30 cm in front of the stove and 15 cm to each side measuring from the door of the combustion chamber.

Combustion air supply
In order for the stove to perform efficiently and safely there must be an adequate air supply into the room in which the stove is installed to provide combustion air. The provision of air supply to the stove must be in accordance with current Building Regulations Approved Document J. An opening window is not appropriate for this purpose.

Connection to chimney
Stoves may have a choice of either a rear or top flue gas connector that allows connection to either a masonry chimney or a prefabricated factory made insulated metal chimney in accordance with their instructions. In some cases it may be necessary to fit an adaptor to increase the diameter of the flue to the minimum required 150 mm section of the chimney or liner.

Commissioning and handover
Ensure all parts are fitted in accordance with the instructions. On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, before lighting the stove. Once the stove is under fire check all seals for soundness and check that the flue is functioning correctly and that all products of combustion are vented safely to atmosphere via the chimney terminal. On completion of the installation and commissioning ensure that the operating instructions for the stove are left with the customer. Ensure to advise the customer on the correct use of the appliance and warn them to use only the recommended fuel for the stove. Advise the user what to do should smoke or fumes be emitted from the stove. The customer should be warned to use a fireguard to BS 8423:2002 (Replaces BS 6539) in the presence of children, aged and/or infirm persons.

READ THE INSTRUCTION BOOK AND THESE INSTRUCTIONS CAREFULLY BEFORE USING THE STOVE WARNING NOTE
Properly installed, operated and maintained this stove will not emit fumes into the dwelling. Occasional fumes from de ashing and re fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, then the following immediate action should be taken:
(a) Open doors and windows to ventilate the room and then leave the premises.
(b) Let the fire go out.
(c) Check for flue or chimney blockage and clean if required
(d) **Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.**
The most common cause of fume emission is flueway or chimney blockage. For your own safety these must be kept clean at all times.

IMPORTANT NOTES
General
Before lighting the stove check with the installer that the installation work and commissioning checks described above have been carried out correctly and that the chimney has been swept clean, is sound and free from any obstructions. As part of the stoves' commissioning and handover the installer should have shown you how to operate the stove correctly.

CO Alarm
Your installer should have fitted a CO alarm in the same room as the appliance. If the alarm sounds unexpectedly, follow the instructions given under "Warning Note" above.

Use of fireguard
When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002 (Replaces BS 6539).

Chimney cleaning
The chimney should be swept at least twice a year. It is important that the flue connection and chimney are swept prior to lighting up after a prolonged shutdown period. If the stove is fitted in place of an open fire then the chimney will require sweeping after a month of continuous operation. This is a precaution to ensure that any "softer" deposits left from the open fire usage have not been loosened by the higher flue temperatures generated by the closed stove. In situations where it is not possible to sweep through the stove the installer will have provided alternative means, such as a soot door. After sweeping the chimney the stove flue outlet and the flue pipe connecting the stove to the chimney must be cleaned with a flue brush.

Periods of Prolonged Non-Use
If the stove is to be left unused for a prolonged period of time then it should be given a thorough clean to remove ash and unburned fuel residues. To enable a good flow of air through the appliance to reduce condensation and subsequent damage, leave the air controls fully open.

Extractor fan
There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

Aerosol sprays
Do not use an aerosol spray on or near the stove when it is alight.

Use of operating tools
Always use the operating tools provided when handling parts likely to be hot when the stove is in use.

Refuelling on to a low fire bed
If there is insufficient burning material in the firebed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel charge will ignite. If the fire bed is too low or cool, suitable kindling must be used to re-light fires

Fuel overloading
The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

Use with door left open
Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.

Dampers left open
Operation with the air controls or dampers open can cause excess smoke. The appliance must not be operated with air controls or dampers left open except as directed in the instructions.

Chimney Fires
If the chimney is thoroughly and regularly swept, chimney fires should not occur. However, if a chimney fire does occur turn off the stove immediately and isolate the mains electricity supply (if applicable), and tightly close the doors of the stove. This should cause the chimney fire to go out. If the chimney fire does not go out when the above action is taken then the fire brigade should be called immediately. Do not relight the stove until the chimney and flueways have been cleaned and examined by a professional.

Permanent air vent
The stove requires a permanent and adequate air supply in order for it to operate safely and efficiently. In accordance with current Building Regulations the installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion air. This air vent should not under any circumstances be shut off or sealed.

USER OPERATING INSTRUCTIONS
Please read the important notices given above before referring to the main instruction book for detailed operating instructions.

Recommended fuels
Stoves may be designed to burn dry seasoned wood logs and/or solid mineral fuel as indicated in the main stove manuals.

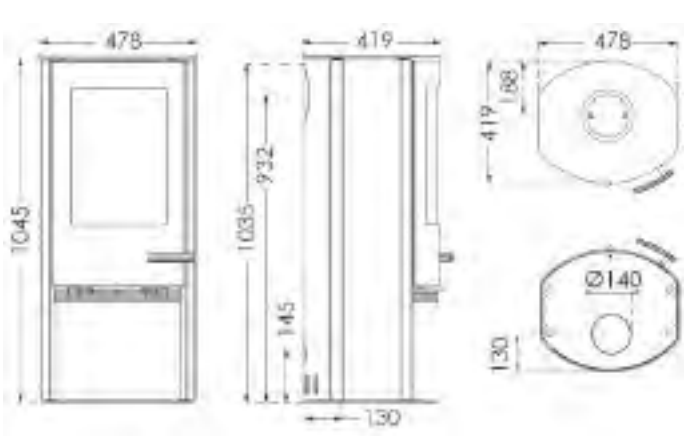
HETAS Ltd Approval
HETAS approval may be limited to specific fuel types as detailed in the main instruction manuals. Approval does not cover the use of other fuels either alone or mixed with the recommended fuel, nor does it cover instructions for the use of other fuels.

12 Dimensions - Drawings / Dimensions - Dessins / Abmessungen - Zeichnungen

All measurements are WITHOUT adjustable feet / Toutes les dimensions sont données SANS pieds réglables /Alle Maße sind OHNE Stellfüße.

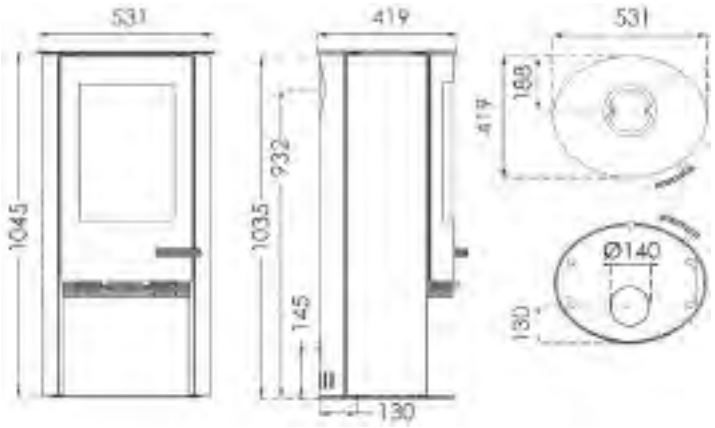
Type TT20:

Weight / Poids / Gewicht: 117Kg



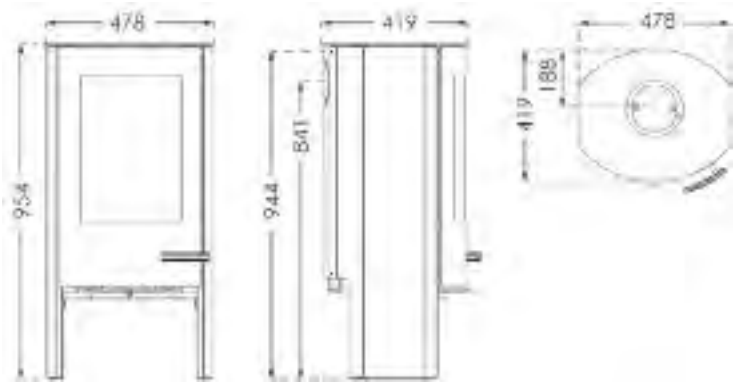
TT20R:

Weight / Poids / Gewicht: 117Kg



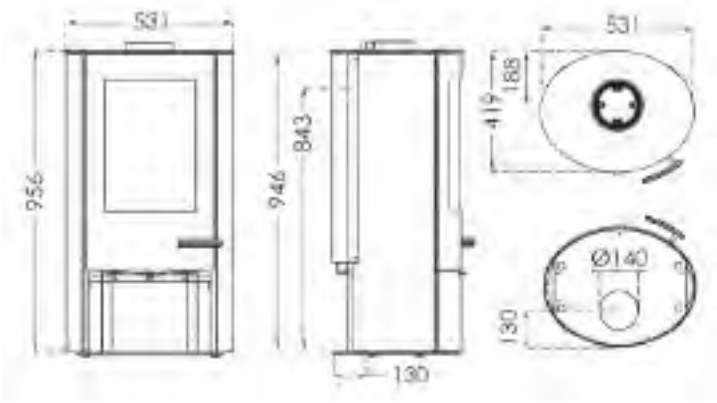
Type TT20Bazic:

Weight / Poids / Gewicht: 99Kg



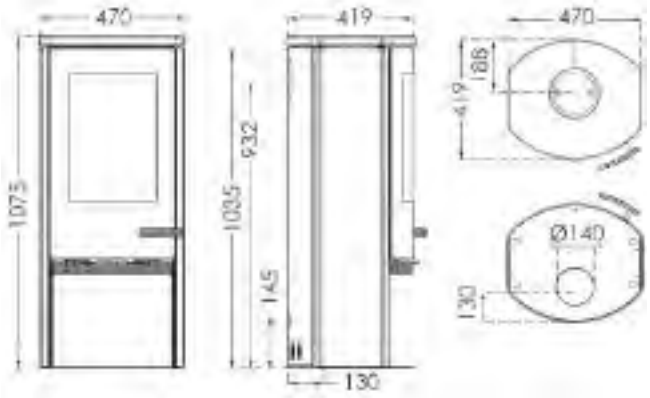
TT20Bazic R:

Weight / Pois / Gewicht: 99Kg



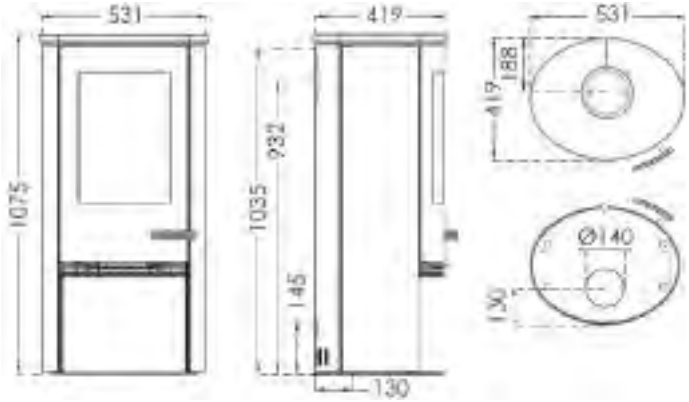
Type TT20S:

Weight / Poids / Gewicht: 155Kg



TT20RS:

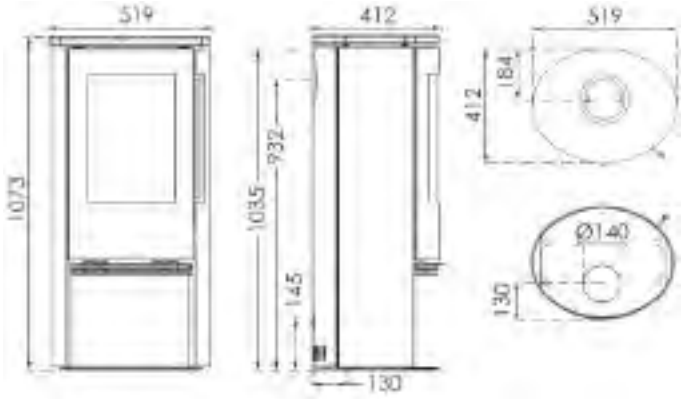
Weight / Pois / Gewicht: 169Kg



All measurements are WITHOUT adjustable feet / Toutes les dimensions sont données SANS pieds réglables /Alle Maße sind OHNE Stellfüße

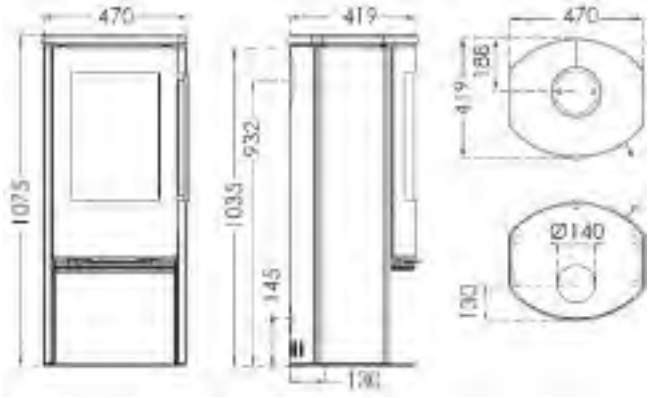
Type TT21R:

Weight / Poids / Gewicht: 126Kg



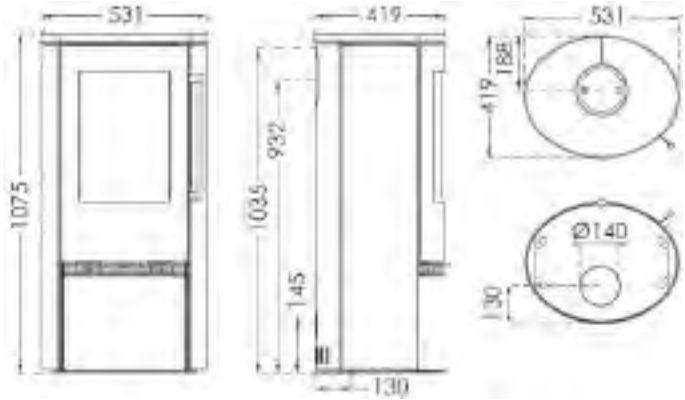
TT21SA:

Weight / Pois / Gewicht: 155Kg



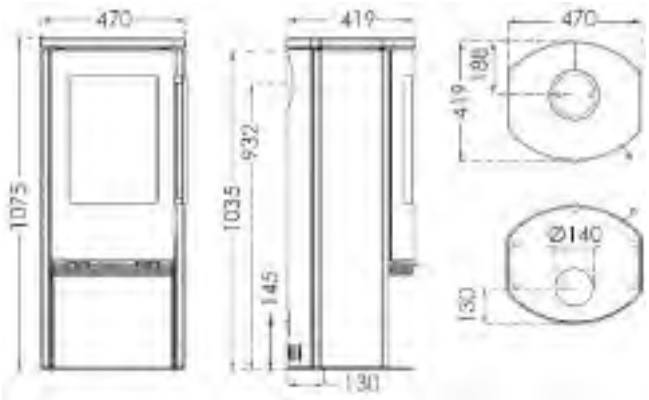
Type TT21RS/Black/Grey/White:

Weight / Poids / Gewicht: 174Kg



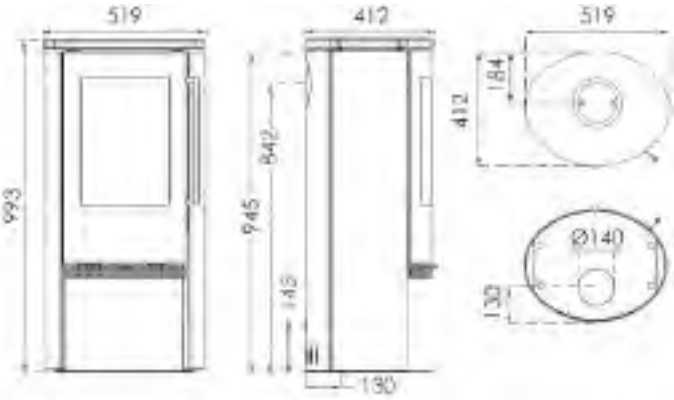
Type TT21RS – SA:

Weight / Pois / Gewicht: 174Kg



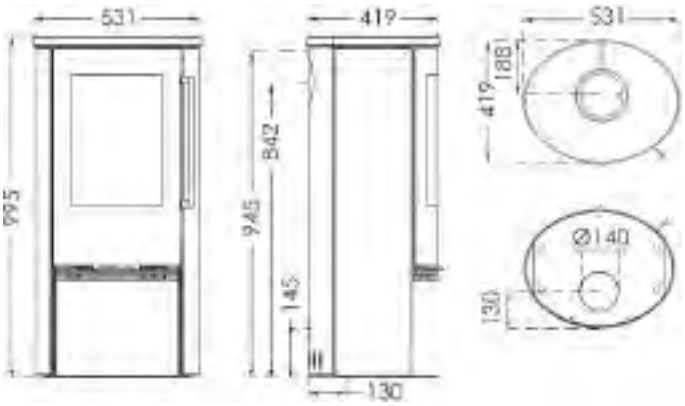
Type TT21RL:

Weight / Poids / Gewicht: 121Kg



Type TT21RLS:

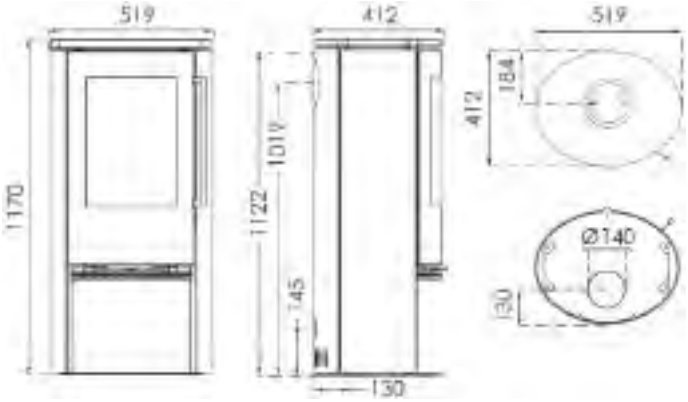
Weight / Pois / Gewicht: 168Kg



All measurements are WITHOUT adjustable feet / Toutes les dimensions sont données SANS pieds réglables /Alle Maße sind OHNE Stellfüße

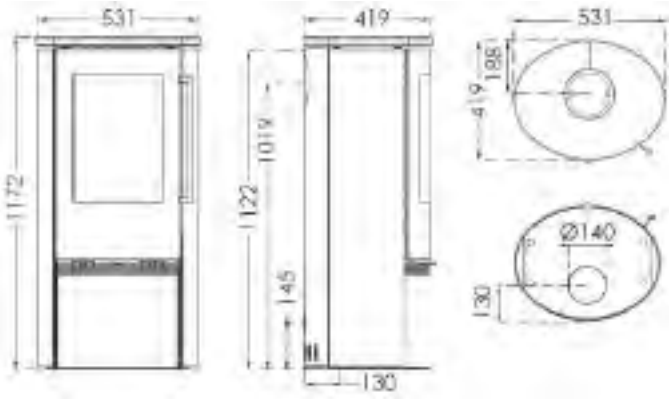
Type TT21RH:

Weight / Poids / Gewicht: 136Kg



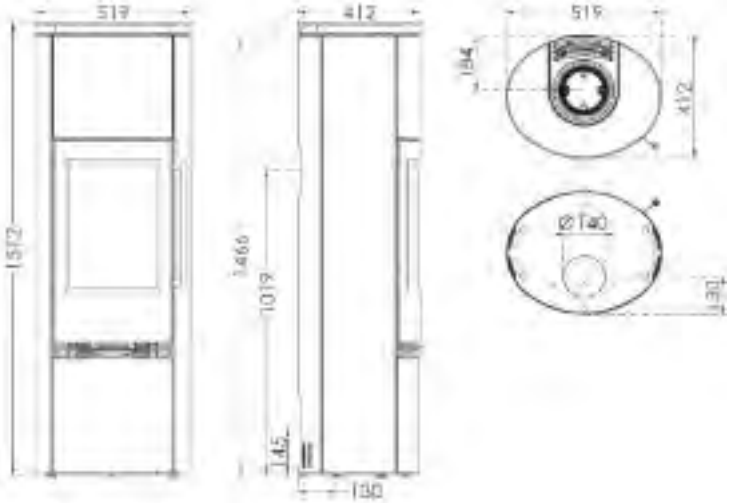
Type TT21RHS:

Weight / Pois / Gewicht: 189Kg



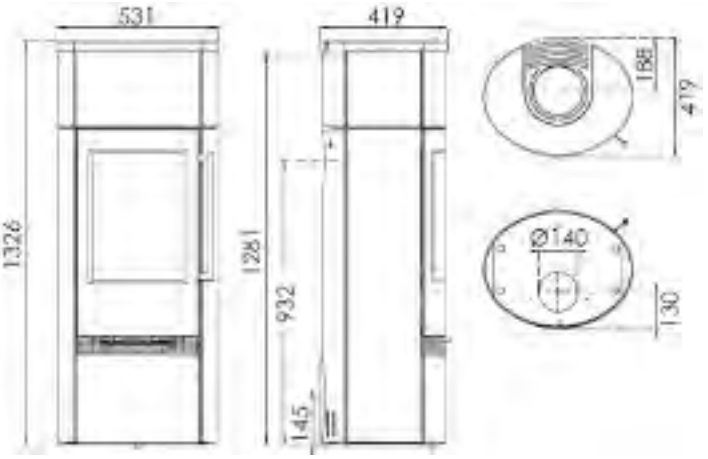
Type TT21RHT:

Weight / Poids / Gewicht: 145Kg (+48kg Power stone)



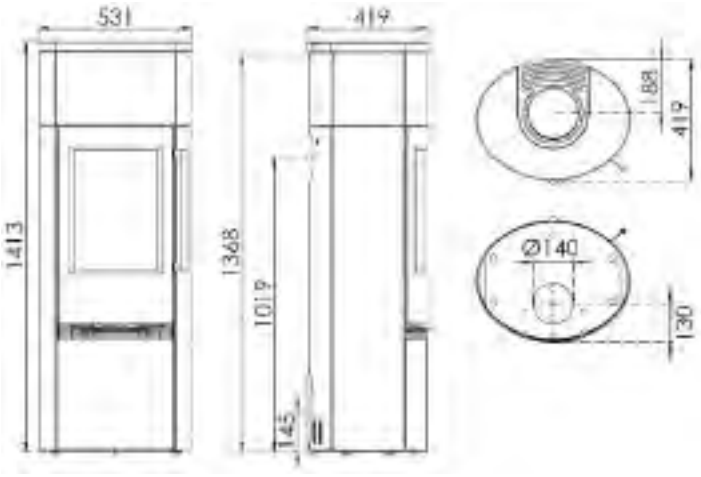
Type TT21RS-HST:

Weight / Pois / Gewicht: 275Kg



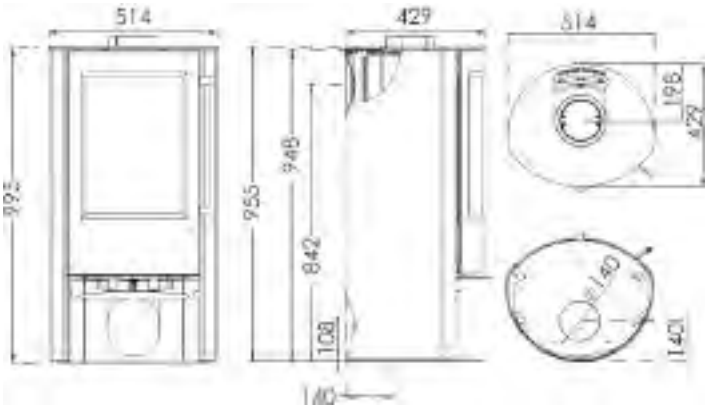
Type TT21RHS-HST:

Weight / Poids / Gewicht: 280kg



Type TT21 Classic:

Weight / Poids / Gewicht: 103kg



13 Declaration of Conformity DK, DE, UK, SE, NO, FR, NL (DoC):

13.1 DK Declaration of Conformity (DoC):

TermaTech

Declaration of Conformity (DoC)

Overensstemmelsesvurdering

Kommissionens forordning EU 2015/1185 af 24. april 2015 om gennemførelse af Europa Parlamentets og Rådets direktiv 2009/125/EF for så vidt angår krav til miljøvenligt design af produkter til lokal rumopvarmning til fast brændsel.

Producent: TermaTech A/S, Gunnar Clausens Vej 36, DK-8260 Viby J
E-mail: info@termatech.com
Web: www.termatech.com
Tel.: +45 8742 0035

Produkt:

Produkttype/anvendelse: Rumopvarmer fyret med fast brændsel uden varmtvands tilslutning

Type: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], T20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note [1]: Også godkendt som A-filmé variant

Dokumentation: www.termatech.com

EU Union legislation:

	Reference	Date	Title
Top level directives and regulations			
	DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
	REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
	REG (EU) 2017/1369	4/7/2017	Energy Labelling Regulation
Implementation measures incl regulations and delegated acts			
	(EU) 2015/1186 (EL)	24/4/2015	Energy labelling delegated act on Room heaters
	(EU) 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room heaters
Harmonized standards, other standards and technical specifications			
	EN 15510-2.1: 2022	23/10/2022	Residential solid fuel burning appliances: General requirements and test methods

Grænseværdier ved nominel varmeydelse:

P_{nom} [kW] Effekt	$\eta_{s(n)}$ Årsvirkningsgrad	CO_{nom} [mg/m³] (13% O_2)	NOx_{nom} [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5,0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Grænseværdier ved delbalastet varmeydelse:

P_{min} [kW] Effekt	$\eta_{s(n)}$ Årsvirkningsgrad	CO_{part} [mg/m³] (13% O_2)	NOx_{part} [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J. Underskrevet af Head of Development & Quality, Jonas Hansesgaard for TermaTech A/S

Jonas Hansesgaard, Head of Development & Quality _____

Dato: 9/5-26

Skorstensfejerens påtegning:

Underskrift: _____

Dato: _____

13.2 DE Declaration of Conformity (DoC):

Declaration of Conformity (DoC)

Konformitätsbewertung

Mit dieser Herstellererklärung wird die Einhaltung der Anforderungen gemäß der EU-Verordnung 2015/1185 sowie der Mitteilung im Amtsblatt 2017/C 076/02 der Europäischen Kommission bestätigt.

Hersteller: TermaTech A/S, Gunnar Clausens Vej 36, DK-8260 Viby J
E-mail: info@termatech.com
Web: www.termatech.com
Tel.: +45 8742 0035

Produkt:

Produkttyp/Anwendung: Raumheizer für feste Brennstoffe (Scheitholz)

Typ Bezeichnung: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], T20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note 1: Auch als A-Flame variante zugelassen

Dokumentation: www.termatech.com

EU Union legislation:

Reference	Date	Title
Top level directives and regulations		
DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
REG (EU) 2017/1369	4/7/2017	Energy Labelling Regulation
Implementation measures incl regulations and delegated acts		
[EU] 2015/1186 (EL)	24/4/2015	Energy labelling delegated act on room heaters
[EU] 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room heaters
Harmonized standards, other standards and technical specifications		
EN 16510-2-1: 2022	23/10/2022	Residential solid fuel burning appliances: General requirements and test methods

Grenzwerte bei Nennwärmeleistung:

P_{nom} [kW] Leistung	η_s [%] Jahreswirkungsgrad	CO_{nom} [mg/m³] (13% O_2)	NOx_{nom} [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5.0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Grenzwerte bei Teillast-wärmeleistung:

P_{part} [kW] Leistung	η_s [%] Jahreswirkungsgrad	CO_{part} [mg/m³] (13% O_2)	NOx_{part} [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J, Unterschrieben von Head of Development & Quality, Jonas Hansesgaard for TermaTech A/S.

Jonas Hansesgaard, Head of Development & Quality _____

Datum: 4/3-26

13.3 UK Declaration of Conformity (DoC):

Declaration of Conformity (DoC)

This manufacturer's declaration confirms the compliance with the requirements of Regulation (EU) 2015/1185 and the notification in the Official Journal 2017 / C 076/02 of the European Commission.

Manufacturer:

TermaTech A/S
Gunnar Clausens Vej 36
DK-8260 Viby J

E-mail: info@termatech.com
Web: www.termatech.com
Tel.: +45 8742 0035

Product:

Product type: Room heater for solid fuel (wood logs only)

Model identifier:

TT20 Bazic[2], TT20 Bazic R[1], TT20[1], T20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[2]

Note [1]: Also approved as an A-Flame variant

Dokumentation: www.termatech.com

EU Union legislation:

Reference	Date	Title
Top level directives and regulations:		
DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
REG (EU) 2017/1369	4/7/2017	Energy labelling Regulation
Implementation measures and regulations and delegated acts:		
(EU) 2015/1186 (EL)	24/4/2015	Energy labelling delegated act on room heaters
(EU) 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room heaters
Harmonised standards, other standards and technical specifications:		
EN 16510-2-1: 2022	28/10/2022	Residential solid fuel burning appliances: General requirements and test methods

Limit values at nominal heat output:

P_{nom} [kW] Output	$\eta_{s\,(N)}$ Annual efficiency	CO_{nom} [mg/m³] (13% O_2)	$NO_{x\,nom}$ [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5,0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Limit values at part load heat output:

P_{part} [kW] Output	$\eta_{s\,(P)}$ Annual efficiency	CO_{part} [mg/m³] (13% O_2)	$NO_{x\,part}$ [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J, Signed by Head of Development & Quality, Jonas Hansesgaard for TermaTech A/S.

Jonas Hansesgaard, Head of Development & Quality

Date: 9/3-26

13.4 SE Declaration of Conformity (DoC):

Declaration of Conformity (DoC)

Överensstämmelsedeklaration

Denna tillverkares deklaration (DoC) bekräftar härmed överensstämmelse med kraven som ställs enligt förordning (EU) 2015/1185, samt att anmälan för offentlig registrering 2017 / C 076/02 till Europakommissionen sker.

Tillverkare:

TermaTech A/S
Gunnar Clausens Vej 36
DK-8260 Viby J

E-mail: info@termatech.com
Web: www.termatech.com
Tel.: +45 8742 0035

Produkt:

Produkttyp: Rumsvärmare för fastbränsle i bostadshus (endast vedträ)

Modellbeteckning: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], T20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note [1] Även godkänd som A-Flame variant

Dokumentation: www.termatech.com

EU: s lagstiftning

	Reference	Date	Title
Top level directives and regulations			
	DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
	REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
	REG (EU) 2017/1369	4/7/2017	Energy Labelling Regulation
Implementation measures and regulations and delegated acts			
	(EU) 2015/1186 (EL)	24/4/2015	Energy labelling delegated act on Room Heaters
	(EU) 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room Heaters
Harmonised standards, other standards and technical specifications			
	EN 16510-2-1: 2022	28/10/2022	Residential solid fuel burning appliances: General requirements and test methods

Gränsvärden vid nominell värmeeffekt:

P_{nom} [kW] Effekt	η_s [%] Årsverkningsgrad	CO_{nom} [mg/m³] (13% O_2)	$NO_{x_{nom}}$ [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O_2)
5,0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Gränsvärden vid dellastad värmeeffekt:

P_{part} [kW] Effekt	η_s [%] Årsverkningsgrad	CO_{part} [mg/m³] (13% O_2)	$NO_{x_{part}}$ [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O_2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J, Underskrivet av Head of Development & Quality, Jonas Hansesgaard för TermaTech A/S.

Jonas Hansesgaard, Head of Development & Quality

Datum: 9/3-22

Skorstensfejarens godkännande:

Underskrift: _____

Datum: _____

13.5 NO Declaration of Conformity (DoC):

Declaration of Conformity (DoC)

Denne produsenterklæring bekrefter samsvar med kravene i forordning (EU) 2015/1185 og varsling i EU-kommisjonens offisielle tidsskrift 2017 / C 076/02

Produsent:

TermaTech A/S
Gunnar Clausens Vej 36
DK-8260 Viby J

E-mail: info@termatech.com
Web: www.termatech.com
Tel.: +45 8742 0035

Produkt:

Produkttype: Rom oppvarmer fyrt med fast brensel

Modellidentifikator: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], T20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note 1: Også godkjent som A-Flame variant

Dokumentasjon: www.termatech.com

EU Union legislation:

	Reference	Date	Title
Top level directives and regulations			
	DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (Ecodesign)
	REG (EU) 305/2011	9/3/2011	Construction Products regulation (CPR)
	REG (EU) 2017/1369	4/7/2017	Energy labelling Regulation
Implementation measures and regulations and delegated acts			
	(EU) 2015/1186 (EL)	24/4/2015	Energy labelling delegated act on room heaters
	(EU) 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room heaters
Harmonised standards, other standards and technical specifications			
	EN 16510-2-1: 2022	23/10/2022	Residential solid fuel burning appliances: General requirements and test methods

Grenseverdier ved nominell varmeeffekt:

P_{nom} [kW] Effekt	η_s [%] Årsvirkningsgrad	CO_{nom} [mg/m³] (13% O_2)	NOx_{nom} [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5,0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Grenseverdier ved dellastet varmeeffekt:

P_{part} [kW] Effekt	η_s [%] Årsvirkningsgrad	CO_{part} [mg/m³] (13% O_2)	NOx_{part} [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J, Signert av Head of Development & Quality, Jonas Hansesgaard for TermaTech A/S

Jonas Hansesgaard, Head of Development & Quality _____

Dato: 9/3 26

Skorsteinsfeierens påtegning:

Signatur: _____

Dato: _____

13.6 FR Declaration of Conformity (DoC):

Déclaration de Conformité (DoC):

Cette déclaration du fabricant confirme la conformité aux exigences du règlement (UE) 2015/1185 et la notification au Journal officiel 2017/C 076/02 de la Commission européenne

Fabricant:

TermaTech A/S
Gunnar Clausens Vej 36
DK-8260 Viby J

Mail: info@termatech.com
Web: www.termatech.com
Tél.: +45 8742 0035

Produit:

Type de produit: Poêle à combustibles solides (bois-bûches seulement) pour chauffage des locaux dans les bâtiments résidentiels

Identification du modèle: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], TT20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note [1]: Également approuvé en version À Farre

Documentation: www.termatech.com

Législation de l'UE:

	Reference	Date	Title
Top level directives and regulations			
	DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
	REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
	REG (EU) 2017/1369	4/7/2017	Energy Labeling Regulation
Implementation measures incl regulations and delegated acts			
	(EU) 2015/2186 (EL)	24/9/2015	Energy labelling delegated act on Room heaters
	(EU) 2015/1185 (ED)	24/4/2015	Ecodesign regulation on Room heaters
Harmonized standards, other standards and technical specifications			
	EN 16510-2-1: 2022	23/10/2022	Residential solid fuel burning appliances. General requirements and test methods

Valeurs limites à charge nominale:

P_{nom} [kW] Puissance	$\eta_{s(s)}$ Rendement saisonnier	CO_{nom} [mg/m³] (13% O_2)	NOx_{nom} [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5,0	73	≤ 1500	≤ 200	≤ 120	≤ 40

Valeurs limites à charge partielle:

P_{part} [kW] Puissance	$\eta_{s(s)}$ Rendement saisonnier	CO_{part} [mg/m³] (13% O_2)	NOx_{part} [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Fait à Viby J, Signé par Head of Development & Quality, Jonas Hansesgaard pour TermaTech A/S

Jonas Hansesgaard, Head of Development & Quality _____

Date: 9/3-26

Signature de l'installateur:

Signature: _____

Date _____

13.7 NL Declaration of Conformity (DoC):

TermaTech

Conformiteitsverklaring (DoC):

Deze verklaring van de fabrikant bevestigt de naleving van de eisen van Verordening (EU) 2015/1185 en de kennisgeving in het Publicatieblad 2017 / C 076/02 van de Europese Commissie

Fabrikant:

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Product:

Product type: Houtkachel voor vaste brandstoffen (Alleen houtblokken)

Model: TT20 Bazic[1], TT20 Bazic R[1], TT20[1], TT20S[1], TT20R[1], TT20RS[1], TT21R[1], TT21RS[1], TT21RL[1], TT21RLS[1], TT21RH[1], TT21RHS[1], TT21SA[1], TT21RHT[1], TT21 Classic[1]

Note [1]: Ook goedgekeurd als A-Flame variant

Documentatie: www.termatech.com

Wetgeving van de EU-Unie:

	Referentie	Date	Titel
Top level directives and regulations:			
	DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (ecodesign)
	REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
	REG (EU) 2017/1369	4/7/2017	Energy Labelling Regulation
Implementation measures incl regulations and delegated acts			
	(EU) 2015/1186 (EU)	24/4/2015	Energy labelling delegated act on Room Heaters
	(EU) 2015/1185 (EU)	24/4/2015	Ecodesign regulation on Room heaters
Harmonised standards, other standards and technical specifications			
	EN 16510-3-1: 2022	19/10/2022	Residential solid fuel burning appliances. General requirements and test methods

Grenswaarden bij nominale warmteafgifte:

P_{nom} [kW] Vermogen	$\eta_{s,nom}$ Jaarlijks rendement	CO_{nom} [mg/m³] (13% O_2)	$NO_{x,nom}$ [mg/m³] (13% O_2)	OGC_{nom} [mg/m³] (13% O_2)	PM_{nom} [mg/m³] (13% O2)
5,0	71	≤ 1500	≤ 200	≤ 120	≤ 40

Grenswaarden bij deellast warmteafgifte:

P_{part} [kW] Vermogen	$\eta_{s,p}$ Jaarlijks rendement	CO_{part} [mg/m³] (13% O_2)	$NO_{x,part}$ [mg/m³] (13% O_2)	OGC_{part} [mg/m³] (13% O_2)	PM_{part} [mg/m³] (13% O2)
NPD	NPD	NPD	NPD	NPD	NPD

Viby J, Ondertekend door Head of Development & Quality, Jonas Hansesgaard voor TermaTech A/S.

Jonas Hansesgaard, Head of Development & Quality

Datum: 9/3-26

14 List of symbols:

No.	Parameter (symbol)	Unit	Explanation
1	P_{nom}	kW	Nominal heat output
2	P_{part}	kW	Part load heat output
3	η_{nom}	%	Efficiency at nominal heat output
4	η_{part}	%	Efficiency at part load heat output
5	η_S	%	Seasonal space heating efficiency at nominal heat output
6	EEI	-	Energy Efficiency Index
7	CO_{nom}	mg/m^3	Carbon monoxide emission at 13% oxygen, nominal heat output
8	CO_{part}	mg/m^3	Carbon monoxide emission at 13% oxygen, part load heat output
9	NO_{xnom}	mg/m^3	Nitrogen oxides emission at 13% oxygen, nominal heat output
10	NO_{xpart}	mg/m^3	Nitrogen oxides emission at 13% oxygen, part load heat output
11	OGC_{nom}	mg/m^3	Hydrocarbon emission at 13% oxygen, nominal heat output
12	OGC_{part}	mg/m^3	Hydrocarbon emission at 13% oxygen, part load heat output
13	PM_{nom}	mg/m^3	Particulate emission at 13 % oxygen, nominal heat output
14	PM_{part}	mg/m^3	Particulate emission at 13 % oxygen, part load heat output
15	ρ_{nom}	Pa	Minimum flue draught, at nominal heat output
16	ρ_{part}	Pa	Minimum flue draught, at nominal heat output
17	T_{snom}	°C	Flue gas outlet temperature, at nominal heat output
18	T_{spart}	°C	Flue gas outlet temperature, at part load heat output
19	T_{class}	-	Minimum chimney class grade
20	$\Phi_{f,g\ nom}$	g/s	Flue gas mass flow, at nominal heat output
21	$\Phi_{f,g\ part}$	g/s	Flue gas mass flow, at part load heat output
22	el_{max}	kW	Electrical power consumption, at nominal heat output
23	el_{min}	kW	Electrical power consumption, at part load heat output
24	el_{SB}	kW	Electrical power consumption, in standby mode
25	d_R	mm	Minimum distance from rear to combustible material
26	d_{RI}	mm	Minimum installation distance to Combustible Wall behind the stove
27	d_S	mm	Minimum distance from sides to combustible material
28	d_{SI}	mm	Minimum installation distance to Combustible Side Wall
29	d_C	mm	Minimum distance from top to combustible material in ceiling
30	d_p	mm	Minimum distance from front to combustible material
31	d_F	mm	Minimum distance from front to combustible material in bottom front radiation area
32	d_L	mm	Minimum distance from front to combustible material in side front radiation area
33	d_B	mm	Minimum distance below the bottom to combustible material
34	$d_{B'}$	mm	Minimum distance from the hearth to the bottom edge of the loading door
35	d_{corner}	mm	Minimum distance to combustible walls when mounted in corner
36	$d_{cornerI}$	mm	Minimum installation distance at 45° placement in corner