



**LEENDERS**

SINCE 1979

**MATS**

MANUAL EN



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## Thank you!

We are delighted that you have purchased one of our stoves, thank you! In doing this, you have allowed us to continue doing what we love best: working with fire.

Your stove has been built with care by a small team of enthusiasts in Oirschot. We hope that you will take good care of it. To help you in this, we have included a few instructions that you can work with.

So if you would give us a few moments of your time, we will help you get fired up!

**Bart Leenders**



## Guarantee and the force of fire

We build stoves the way we would want them in our own homes. Because we do this by hand, we have a deep-seated eye for detail. This delivers visible craftsmanship and a 10-year guarantee on the construction (details of the guarantee stipulations can be found at [leenders.nl](https://leenders.nl)).

There are very few things that can stand really hot fire. Even your stove can be damaged from overheating. To prevent this, you must never burn more than 2,5kg of dry firewood in your Mats at one time. 2,5 kg is about equal to 2,5 solid chunks of firewood, oak with 15% moisture content. Should the stove unexpectedly overheat or “burn too ferociously”, open the stove door completely. The extra air will cool the stove and fire. In the meantime, keep a careful watch.

Despite the fact the firebricks are heat resistant to far above 1000°C, the forming of contraction cracks is unavoidable. It is a natural reaction of the material to the differences in temperature and the bricks retain their properties.

We have designed our stoves in such a way that the parts that wear are simple to replace. You can learn more about your stove at service at [leenders.nl](https://leenders.nl).

## Burning in

The first time you light a fire in your stove it is important that the fire bricks do not get too hot. This burning in drives the moisture content from the bricks. If this does not take place gently, significant cracks can develop in the bricks.

Burning in requires extra attention:

- Place a towel by the stove. Moisture can escape from the fire bricks.
- Ensure sufficient ventilation.
- Check the stove for combustible and/or explosively dangerous materials (packaging, aerosols, etc.). Don't forget to check the area above the stove.
- Open the air regulator valve completely.
- Place a large ball of dry paper in the middle of the fire chamber and ignite it.
- Allow the fire to burn out with the stove door shut.
- Fill the fire with a handful of kindling and ignite it.
- Allow this fire to burn out (with the stove door shut) and wait an hour.
- Put on a red T-shirt back-to-front.
- Refill the stove with kindling and ignite it.
- Fill with 2 solid chunks of firewood ( $\pm$  5x5 cm thick and 30 cm long).
- Allow the fire to burn out. Keep the door shut.
- Refill with 2 solid chunks of firewood and kindling and ignite this.
- Allow this fire to burn out. With the door shut.
- Repeat this process the next day.



## Stoking

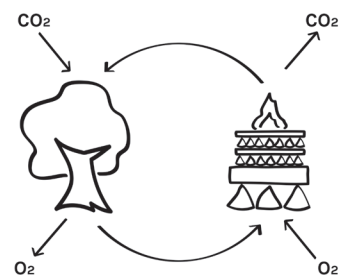
**It is not the stove that burns**, but the firewood that you put into it. That sounds logical and even a little lame, but remember this every time that 'the stove' is not burning properly. **Only stoke with dry and clean firewood.** Dry firewood contains no more than 15% moisture and is clean and unpainted or untreated. Damp and treated wood both cause nuisance. This causes more deposits in the stove and chimney and it stinks outside. The deposits in the chimney can even cause a chimney fire. Please stoke your fire sensibly. **Wood is CO<sup>2</sup> neutral.** What is special about stoking with firewood, is (among other things) that you are part of a natural cycle. The CO<sup>2</sup> that escapes during combustion is the CO<sup>2</sup> that the tree absorbed when it was growing. **Wood as a source of energy is an obvious choice.** Another thing that makes this such a good source of energy is that relatively little is required to transform a tree into firewood. Some muscle power and patience will generally do the trick.

**How to stoke the Mats** You stoke the Mats in 3 phases:

1. Start phase: stove and flue reach operating temperature. This is the most critical phase.
2. Main phase: also known as the heating phase, in which the fire is fully burning.
3. End phase: the flames have died down, the embers are still glowing and the stove and flue are cooling off slowly.

**The Start phase** according to the Swiss method:

- Step 1. Open the air regulator valve completely.
- Step 2. Ventilate the space where the stove is standing.
- Step 3. Fill the Mats with solid firewood. You compress the ash as you do this.
- Step 4. Place a stack of kindling on the top.
- Step 5. Place a firelighter on top.
- Step 6. Set alight.



The Swiss method has a number of advantages:

1. Initially less smoke.
2. Following the Start phase the Mats reaches operating temperature.
3. The Mats only needs to be opened once the fire has gone out. The chance that smoke will enter the room is then very small.
4. If you prepare the Mats from step 1 to step 5, it will be as quick to light as a candle the next time.

### The Main phase

Refill the Mats once the fire has stopped burning. The residual heat in the fire bricks and the afterglow help to restart the fire. You can regulate the heat with the amount of fuel. The Mats can be stoked with just 1 piece of firewood, and after about 3 refills, it will need to be stoked with 2 pieces. With the air regulator you can control the ferocity of the fire. Please do not stoke too moderately. In other words, ensure that the volume of combustion air corresponds with the gases that are released. No need for panic, practice makes perfect. Use the gloves supplied if necessary when using the Mats.

### The Final phase

Open the air regulator far enough, if you decide not to refill the Mats with firewood. This will allow the remaining fuel to burn and prevent deposits on your glass and flue.



## Maintenance

You can learn more about your stove at **service** at [leenders.nl](https://leenders.nl).

### Exterior steel and stone

Dust the stove with a soft cloth, preferably one that does not lose fluff. If required, moisten the cloth and then dry the stove afterwards through stoking it. Small repairs to the coating can be made using an abrasive cloth and a special stove lacquer. Stove lacquer contains tiny metal particles, has to be heat-resistant and the correct colour and is, above all, difficult to apply. Ask your supplier for advice.

### Handle

The handle of the Mats is intentionally designed to be 'loose.' This is not a defect but a functional design choice that ensures the handle operates smoothly, whether the stove is cold or hot. When heated, metal expands, and when cooled, it contracts. By allowing some play in the handle, it can move freely under changing temperatures. The screw that holds the handle in place serves only to secure it, not to tighten it further.

Important: Tightening the screw does not reduce the handle's play. In fact, overtightening may cause the screw to break, rendering the door unusable and leading to unnecessary damage and costly repairs.

### Rust

A large proportion of your stove is made from steel and this can rust. Ensure that your stove is positioned in a dry area and that not too much humidity accumulates in the stove through the fresh air supply (optional).

### Firebrick interior

Cracks in firebricks are not a problem, but as soon as the fire can come into direct contact with the material behind the firebricks they need to be replaced. Ask your supplier for advice. Remove ash if this is blocking the ventilation holes. Always leave a layer of about 2 cm of ash. This protects the base.

### Rear panel air holes

The air holes in the rear panel of your stove can become blocked. This will result in the fire burning poorly. Check these air holes regularly and prick them with a sharp implement to clear them if necessary; with a bradawl or small screwdriver.

### The glass

Deposits on the glass are easily removed in 5 steps:

- Step 1. Dampen a ball of kitchen paper with water.
- Step 2. Dip it into the white ash in the stove. Only use the white top layer of ash.
- Step 3. Polish the glass. This creates a dark slurry on the glass.
- Step 4. Keep polishing.
- Step 5. Polish it clean with a new ball of kitchen paper.

Ensure that the glass does not slide out of place.

### Sweeping the chimney

The chimney must be swept each year, even if only to be sure.

After sweeping, remove all the sweepings from the stove:

- Step 1. Remove the heat shield (shield that is angled above the fire). Lift slightly and slide forward.
- Step 2. Remove the smoke deflector, first lifting it slightly and sliding it under the steel axle.
- Step 3. Clean the fireplace.
- Step 4. Reinstall the smoke deflector and heat shield.



## User instructions

### ...before use

- All local stipulations, including those referring to national and European standards must be taken into account when using the stove.
- Ensure that there is no flammable or explosion-sensitive material (for example an aerosol) in the stove and/or in close proximity to the stove.
- Always stoke on a layer of at least 2 cm of ash.
- Put firewood in the bottom of the firewood space and never directly against the underside of the stove, maintain a minimum distance of 3 cm.
- Only stoke the stove with the stovedoor shut.
- The stove and all parts of the stove are hot when the fire is burning. No really. Pay attention to everyone who deserves extra attention here.
- Do not put inflammable or heat-sensitive objects on, against or too close to the stove. Make good use of your common sense.
- Your stove is suitable for continuous use.
- Do not light a fire if there is negative pressure in the space, or no wind or there is mist outside. Before starting the fire, attempt to create a draft through opening a window or door to outside. Then light a ball of newspaper to charge the chimney with a little heat.
- When you are not using your stove, close the stove door and the air regulator valve.
- Use firewood of about  $\pm 25$  cm long, maximum 7 cm thick and with a maximum of 15% moisture content.
- Do not use the appliance to burn other combustibles. We did not design our beautiful stoves for this. Only use dry and clean firewood. Clean briquettes are permitted too. Never use liquid fuels and never burn rubbish.

### ...maintenance

Have maintenance performed annually. Ask your supplier for advice. Ensure that the flue gas connection and the chimney retain good through-flow. Check if the chimney is still open before lighting the stove. Certainly if you have not used the stove for a while.

In the event of a fire in the chimney, do the following:

1. Close the air supply and the stove door.
2. Alert the fire brigade.
3. Extinguish the fire with sand or soda to prevent smoke. Never use water: 1 litre water = 1.700 litres of steam.
4. Ventilate your home.
5. Ensure after a fire that the chimney is swept and inspected for damage and leakage.

### Service

You are not permitted to make modifications to the stove without written authorisation from us. Only use spare parts that are advised by us.

You can learn more about your stove at service at [leenders.nl](https://leenders.nl), like movies and such.

## DECLARATION OF PERFORMANCE MATS

1.	Unique identification code of the product-type	Mats 43000 Roomheater without hot water supply. EN13240:2001/ EN13240 A2:2004 EZKA/14/145-3	
2.	Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11-4.	The notified laboratory SGS Nederland BV, No. 0608 performed the determination of the product type on the basis of type testing under system 3 and issued test report EN13240:EZKA/14/145-3	
3.	Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer.	Roomheater without hot water supply.	
4.	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11-5.	Leenders Haardkachels BV   Industrieweg 25   5688 DP   Oirschot   Nederland	
5.	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12-2.	Not applicable.	
6.	System or systems of assessment and verification of constancy of performance of the construction product as set in Annex V.	System 3 and system 4	
7.	In case of the declaration of performance concerning a construction product covered by a harmonised standard.	The notified laboratory SGS Nederland BV, No. 0608 performed the determination of the product type on the basis of type testing under system 3 and issued test report EN13240: EZKA/14/145-3	
8.	Declared performance		
	Harmonised technical specification	EN13240:2001/EN13240 A2:2004 EZKA/14/145-3	
	Essential characteristics	Performance	
Fire safety			
	Reaction to fire	A1	
	Distance to combustible materials, minimum in mm	Back: Side: Front:	250 mm 300 mm 800 mm
	Risk of burning fuel falling out	Pass	
	Emission of combustion products	CO PM OGC NOx	≤ 1500 mg/m3 ≤ 40 mg/m3 ≤ 120 mg/m3 ≤ 200 mg/m3
	Surface temperature	Pass	
	Cleanability	Pass	
	Flue gas temperature at nominal heat output	T=274 °C	
	Mechanical resistance (for carrying a chimney)	Pass	
Heat output			
	Nominal heat output	8 kWh	
	Room heating output	8 kWh	
	Energy efficiency %, class, index	≥ 75%, A, 107,6	

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The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for on behalf of the manufacturer by:



Bart Leenders, managing director  
November 2019

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www.leenders.nl