# OPERATING AND INSTALLATION INSTRUCTIONS

## SCAN-LINE 550

## INSERT

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HETA

EN

DANISH DESIGN . DANISH QUALITY . DANISH PRODUCTION

Congratulations on your new stove. We are sure that you will be happy with your investment, especially if you follow the advice and instructions we have put together in these operating instructions. The Scan-Line 550 insert has been approved according to the EN 13229, DIN+, and 15a B-VG. Approval means that consumers can be sure, that the stove meets a range of specifications and requirements intended to ensure that the materials used are of good quality, that the stove does not adversely affect the environment, and hat it is economical to use.

With your new stove you should have received the following:

a. Operating instructions
b. Guarantee slip
c. A stove glove

# INSTALLATION INSTRUCTIONS

## Safety clearances

Stoves must always be installed in line with national and, if applicable, local regulations. It is important to abide by local regulations regarding setting up chimneys and connection to same. Therefore, always consult your local chimney sweep before installation, as you are personally responsible for ensuring that the applicable regulations have been met.

## Distance regulations

A difference applies to installation next to flammable and non-flammable walls.

## Warning

**A stove gets hot. (In excess of 90 degrees) Take care to ensure that children cannot come into contact with it.**

## IMPORTANT

1. Make sure there is adequate provision to sweep the chimney.
2. Make sure there is adequate ventilation to the room.
3. Please note that any extraction fans operating in the same room as the wood-burning stove can reduce the chimney draft – which may have an adverse effect on stove combustion properties. In addition, this may cause smoke to be emitted from the stove when the firing door is opened.
4. It must not be possible to cover any air vents.

## The floor

A non-flammable floor surface (e.g. steel, tile, brick), must extend from the front of the fireplace for a minimum of 30 cm.

## The chimney connection

The chimney opening must follow national and local regulations. However, the area of the opening should never be less than 175 $cm^2$, which corresponds to a diameter of 150 mm. If a damper is fitted in the flue gas pipe, there must always be at least 20 $cm^2$ of free passage, even when the damper is in its “closed” position. If local regulations permit, two contained fireplaces can be connected to the same chimney. However, you must abide by local regulations regarding the distance between the two connections. **The stove must never be connected to chimneys that are also linked to a gasfired heater.** An efficient stove makes high demand on chimney properties – so always have your local chimney sweep evaluate your chimney.

## Connection to a brick chimney

Brick a thimble into the chimney and seat the flue gas pipe in this. The thimble and flue gas pipe must not penetrate the chimney opening itself, but must be flush with the inside of the chimney duct. Joins between brickwork, the thimble and flue gas pipe must be sealed with fireproof material and/or beading.

## Connection to a steel chimney

When fitting a connection from a top-output stove directly to a steel chimney, we recommend fitting the chimney tube inside the flue gas spigot so that any soot and condensation drops into the stove itself rather than collecting on the exterior surface of the stove.

For connections to chimneys that are run through ceilings, all national and local regulations regarding distance to flammable material must be followed. It is important that the chimney is fitted

with roof support so that the top panel of the stove is not required to bear the entire weight of the chimney (excessive weight may damage the stove).

## Draft conditions

Poor draft may result in smoke being emitted from the stove when the door is opened. The minimum chimney draft to ensure satisfactory combustion in stoves of this kind is 12 PA. However, there will still be a risk of smoke emission if the firing door is opened during powerful firing. The flue gas temperature at nominal output is 290°C when expelled to an exterior temperature of 20°C. The flue gas mass flow is 6 g/sec. The chimney draft is generated by the difference between the high temperature of the chimney and the low temperature of the fresh air. The length and insula-tion of the chimney, wind and weather conditions also have an effect on the ability of the chimney to generate appropriate underpressure.
If the stove has not been used in a while, check that the chimney and stove are not blocked with soot, bird nests, etc., before using it.

## Reduced draft can occur when:

- The difference in temperature is too small – due to insufficient chimney insulation, for example.
- The outdoor temperature is too high – in summer, for example.
- No wind is blowing.
- The chimney is too low and sheltered.
- The chimney contains false air.
- The chimney and flue gas pipe are blocked.
- The house is too airtight (i.e. when there is an insufficient supply of fresh air).
- Poor smoke extraction (poor draft conditions) due to a cold chimney or bad weather conditions can be compensated for by increasing the airflow into the stove.

## Good draft occurs when:

- The difference in temperature between the chimney and outdoor air is high.
- The weather is fine.
- The wind is blowing strongly.
- The chimney is of the correct height: at least 4.00 m above the stove and free of the roof ridge.

## Combustion air flow

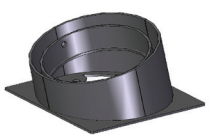
The insert stove is approved as a room air-dependent insert stove in accordance with EN 13229. All the combustion air flow in the insert comes from the room in which it is fitted. However, by connecting a sealed air inlet to the insert stove's air intake connectors, the stove can be supplied with external combustion air flow. In this respect, the following requirements must be met:

- Only approved materials may be used from the ventilation unit to the air inlet vent.
- The air inlet vent must be fitted correctly and insulated to prevent formation of condensate. The cross section of the vent and grille must be at least 78 $cm^2$.
- If the vent leads out into the open air, please note that the grille must be fitted with suitable wind protection. There must be no risk that the grille can get clogged by leaves, etc.

# SPARE PARTS FOR ASSEMBLING

**Enclosed**

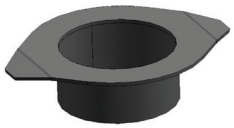
Flue collar



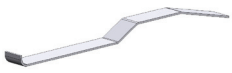
2 magnet fittings

**To be ordered separately**

Collar for external air inlet



2 springs

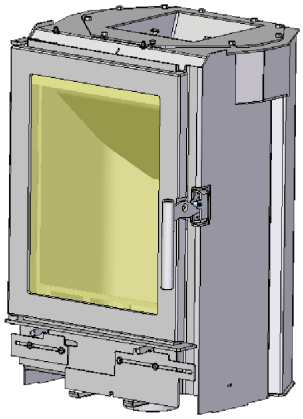


Flange

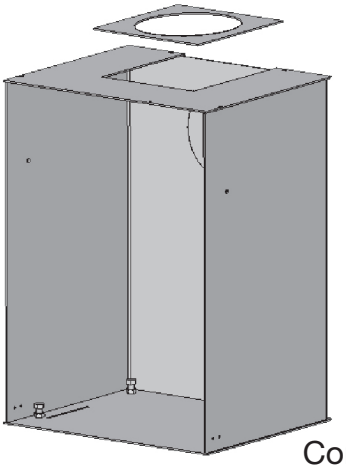
Sealing cord

## Assembling the convection box

1. The flue collar is always put in the combustion chamber. The flue collar is fitted on the chimney pipe where the insert later will be installed. This is done to ease the connection at the end.
2. Assemble the convention box. It has to be adjusted exactly to horizontal level by means of the adjustable bolts at the bottom (this should be done before the insert is put in).
3. Before the convection box is installed you have to make up your mind if the insert should pass on heat to some stone mass (thermal mass stove effect). Should you want this effect the flange above the convection box should not the fitted. On the other hand should you want direct convection heat through the distance between the convection box and insert the flange has to be fitted, so that the heat does not disappear into the stone mass.



Insert



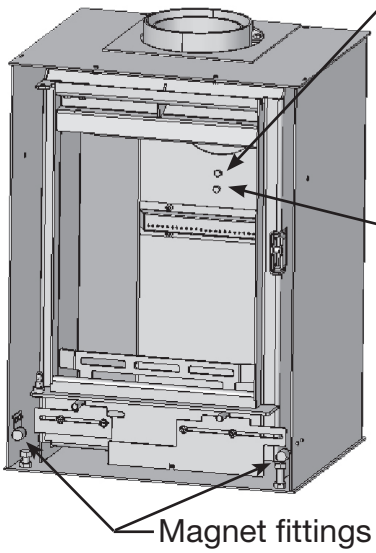
Convection box

Chimney

Flue collar

## Installing the insert into the convection box

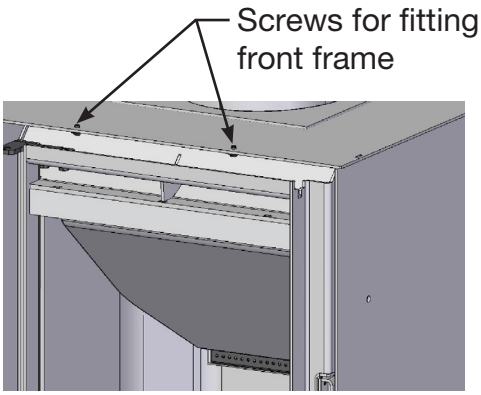
1. Remove the magnet fittings from the convection box to ease the installation.
2. Remove the vermiculite bricks from the combustions chamber.
3. Lift the stove and put it into the convection box.
4. The stove has to fall into place in the grooves at the bottom of the convection box so that the distance to the sides of convections box is equal.
5. Adjust the stove back and forward in the grooves so that the door is in line with the front frame, which will be fitted at the end.
6. When the stove is fitted correctly it has to be fastened with the screws at the back of the combustion chamber. The top screw has to go through both the combustions chamber and the convection box. The bottom screw has to be screwed against the convection box as back pressure.
7. Insert the vermiculite bricks in the combustion chamber again.
8. Fit both magnet fittings again. It is important that they are in level, so that the magnet can get a proper grip.
9. To fit the front frame the door must be fully open. Loosen the two screws which the frame should be hung upon and hook the frame on. Adjust the frame so that it is in line with the stove and fasten the screws again.

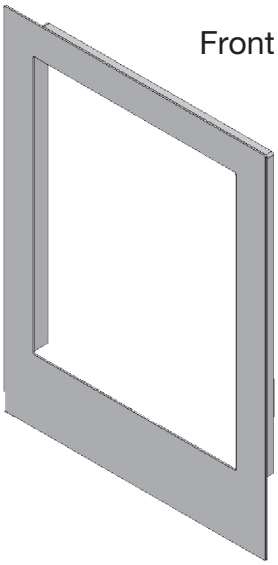


The top screw has to go through both the combustions chamber and the convection box.

The bottom screw has to be screwed against the convection box as back pressure.

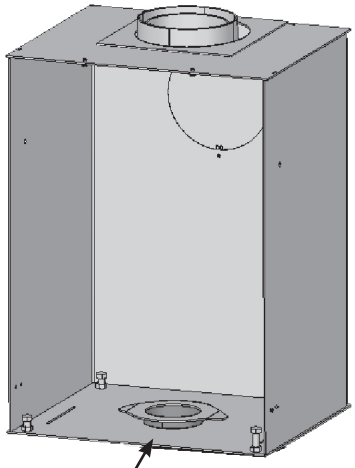
Magnet fittings

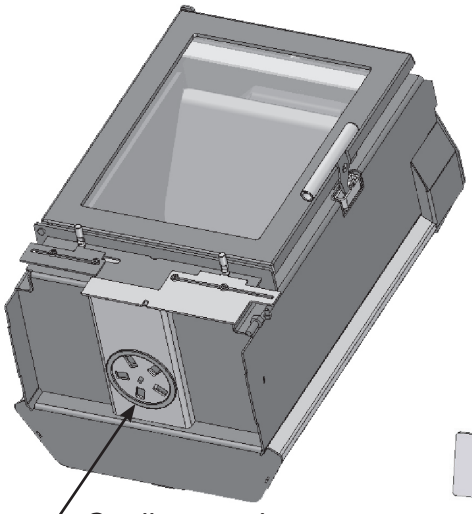


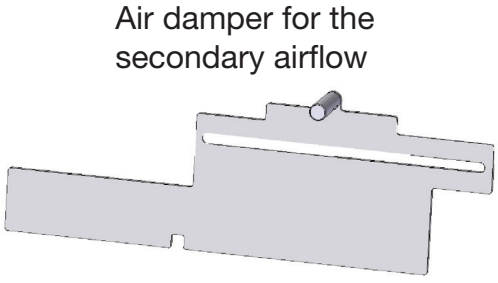



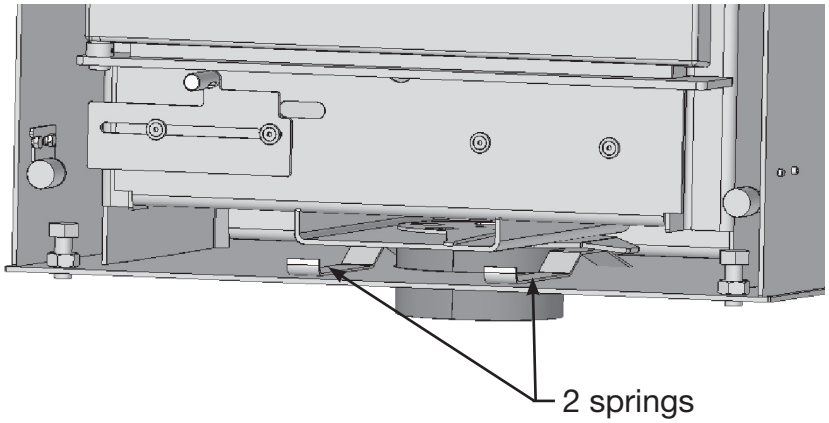

## Fitting the collar for external air inlet

1. Remove/hit the cut out ring at the bottom of the convection box.
2. Place the collar for external air inlet at the bottom of the convection box as shown on the picture.
3. Glue the sealing cord underneath the air box as shown.
4. Install the stove into the convection box as previously described and press the external air inlet collar against the bottom of the stove by using the enclosed to springs, which should be left there to keep the collar in place.
5. With advantage remove the air damper for the secondary airflow while the springs are fitted.



# INSTRUCTIONS FOR USE

## First firing
The stove paint is fully cured from the factory, but a minor unpleasant odour could still arise.

## Fuel
Your new stove is EN approved for firing with wood fuel. You must therefore only burn clean, dry wood in your stove. Never use your stove to burn drifwood, as this may contain a lot of salt which can damage both the stove and the chimney. Similarly, you must not fire your stove with refuse, painted wood, pressure-impregnated wood or chipboard, as these materials can emit poisonous fumes and smoke. Correct firing using well seasoned wood provides optimal heat output and maximum economy. At the same time, correct firing prevents environmental damage in the form of smoke and emmissions and also reduces the risk of chimney fires. If the wood is wet and inadequately seasoned, a large proportion of the energy in the fuel will be used to vaporise the water, and this will all disappear up the chimney. Thus it is important to use dry, well seasoned wood, i.e. wood with a moisture content of no more than 20%. This is achieved by storing the wood for 1–2 years before use. Pieces of firewood with a diameter of more than 10 cm should be split before storing. The pieces of firewood should be of an appropriate length (approx. 25 cm) so that they can lie flat on the bed of embers. If you store your wood outdoors, it is best to cover it.

## Examples of fuel values
for different woods and their typical densities per cubic meter, specified for 100% wood with a moisture content of 18%.

| Wood | kg/m$^3$ | Wood | kg/m$^3$ |
|---|---|---|---|
| Beech | 710 | Willow | 560 |
| Oak | 700 | Alder | 540 |
| Ash | 700 | Scotch pine | 520 |
| Elm | 690 | Larch | 520 |
| Maple | 660 | Lime | 510 |
| Birch | 620 | Spruce | 450 |
| Mountain pine | 600 | Poplar | 450 |

**It is advised not to use very oil-containing woods like teak tree and mahogany, as this can cause damage to the glass.**

## Heating value in wood
You have to use about 2.4 kg normal wood to replace one litre of heating oil. All woods have almost the same heating value per kg, which is about 5.27 kW/hour for absolute dry wood. Wood with a moistness of 18% has a efficiency of about 4.18 kW/hour per kg, and one litre heating oil contains about 10 kW/hour.

## $CO_2$ release
At combustion 1000 litres of heating oil forms 3.171 tons $CO_2$. As wood is a $CO_2$ neutral heat/energy source, you save the environment about 1.3 kg $CO_2$ every time you have used 1 kg normal wood.

## Chimney fires
In the event of a chimney fire – which often results from incorrect operation or protracted firing with moist wood – close the door and shut off the secondary/start-up air supply to smother the fire. Call the fire department.

## Regulating the airflow
Secondary airflow is regulated using the operating handle below the glass door.
The secondary airflow is fully open when the operating handle is in the right position, and fully closed when positioned to the left.

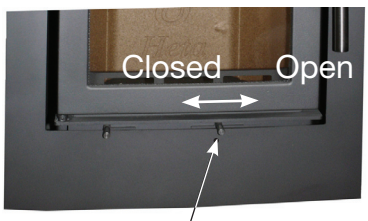


Fig. 1

## Start-up airflow
To open the start-up airflow for the stove, pull the handle on the start-up mechanism as far to the left-hand side of the stove (as seen from the front) as possible. See fig. 2. To close the start-

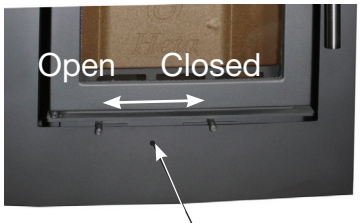


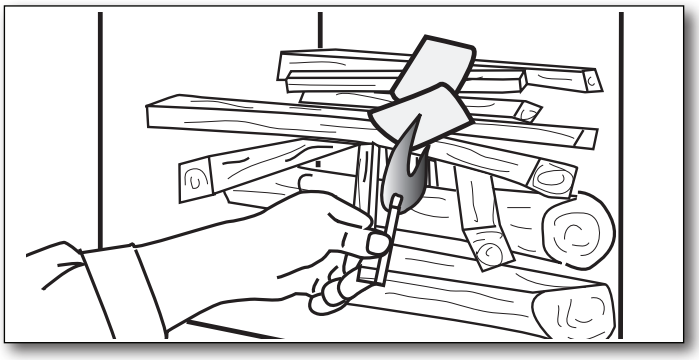
Fig. 2

up airflow for the stove, push the handle on the start-up mechanism as far to the right-hand side of the stove (as seen from the front) as possible.

## Lighting the stove

Place two pieces of wood on the bottom. Stack kindling on top in layers with air between. Setting fire starter (bag, brick, paraffin) on the top, now you are ready to light the fuel. The flames must work from the top down.

**The use of lighter fluid, oils or any liquid fuels is strictly forbidden from use in a wood stove.**



Fully open the combustion air and leave the door ajar (about 1 cm open).
Once the fire is established and the chimney is hot (after about 3-5 minutes) closed door and regulate the air into operating position. We recommend, all of the first fuel is burned with the combustion air fully open in the operating position. This ensures the stove and chimney are thoroughly heated.

Startup/Lighting
Scan the code and select a language.

## Refiring

You should normally refire the stove while there is still a good layer of embers. Distribute the embers across the bottom grate, place pieces of fuel (max. 2,5 kg) on the embers in a single layer perpendicular to the firing opening. Close the firing door. The wood will then ignite within 30 to 60 seconds. When the flames are steady, adjust the secondary airflow to the level required. Nominal operation (5 kW) will be achieved when the secondary airflow is fully open. When firing, take care not to place the pieces of fuel too closely together, as this will result in poor combustion and insufficient exploitation of the fuel.
Please note that the start-up mechanism must not remain open during normal operation of the stove, as *this may lead to overheating.* ***It must only be used until the fuel is burning with a steady flame.***

## Reduced burning

The stove is well-suited to intermittent use.
If you wish to operate the stove with reduced out-put, simply insert smaller volumes of wood at each firing, and apply a lower airflow. However, remember that the secondary combustion air supply must never be shut off completely during firing. It is important to keep a good bed of embers. Gentle heat is released when the fire settles - i.e. when the wood no longer generates flames and has been converted to glowing embers.

## Optimal firing

To achieve optimal firing and the highest possible effect, it is important to make sure that the air supply is used correctly. As a general rule, the secondary air is to be used to control the fire to ignite the flue gases. This produces a high effect and keeps the glass panel completely clear of soot as the secondary air “washes” down over it. Please note that the stove will, naturally, produce soot if the secondary air intakes are closed completely. This will prevent oxygen from being drawn into the stove, and the viewing window and other parts will become covered with soot. If this situation is combined with firing with wet wood, the build-up of soot can become so thick and sticky that the sealing rope can, for example, become detached when the door is opened the next day.

## Risk of explosion

**After you add new fuel, it is very important that you do not leave the stove unattended until the wood is burning constantly. This will normally occur within 30 to 60 seconds.**

A risk of explosion can possibly arise if too much wood is placed in the stove. This may result in the production of large volumes of gas, and this gas can explode if the intake of primary and secondary air is insufficient.
It is an advantage always to leave some ash lying in the bottom of the combstion chamber.
**Be careful when emptying the ashes. Hot embers can remain in the ash for a long time.**

## Stove data table in accordance with EN 13229 testing.

| Stove type Scan-Line insert | Nominal fluegas temperature C° | Smoke stub mm | Fuel volume kg | Draught min mbar | Nominal output tested kW | Heat output % | Distance to flammable materials at the sides mm | Distance to furnitures from the stove mm | Stove weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 550 | 231 | ø150 | 1,4 | 0,12 | 5 | 81 | 500 | 800 | 96 |

The nominal output is the output to which the stove has been tested.
The test was carried out with the secondary air 100% open.

# Operational problems

The chimney must be swept at least once a year, we recommend the use of a NACS (national association of chimney sweeps) registered chimney sweep. In the event of smoke or malodorous fumes being produced, you must first check to see whether the chimney is blocked. The chimney must, of course, always provide the minimum draught necessary to ensure that it is possible to regulate the fire. Please note, however, that chimney draft is dependent on the weather conditions. In high winds, the draft can become so powerful that it may be necessary to fit a damper in the flue gas pipe to regulate the draft. When cleaning the chimney, soot and other deposits may come to fall on the smoke plate. In cases where the wood burns too quickly, this may be due to excessive chimney draught. You should also check to make sure that the door seal and ashpan seal is intact and correctly fitting.
If the stove it generating too little heat, this may be because you are firing with wet wood. In this case, much of the heating energy is used to dry the wood, resulting in poor heating economics and an increased risk of soot deposits in the chimney.

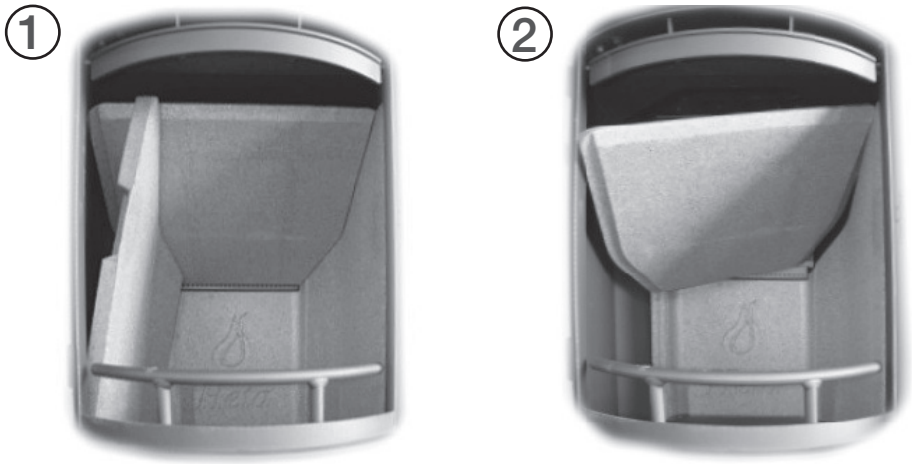
# MAINTENANCE

The surface of the stove has been treated with heat-resistant paint.
The stove should be cleaned with a damp cloth. Any damage to the surface in the form of chips or scratches can be repaired using touch-up paint, which is available in spray cans.

## Cleaning the glass

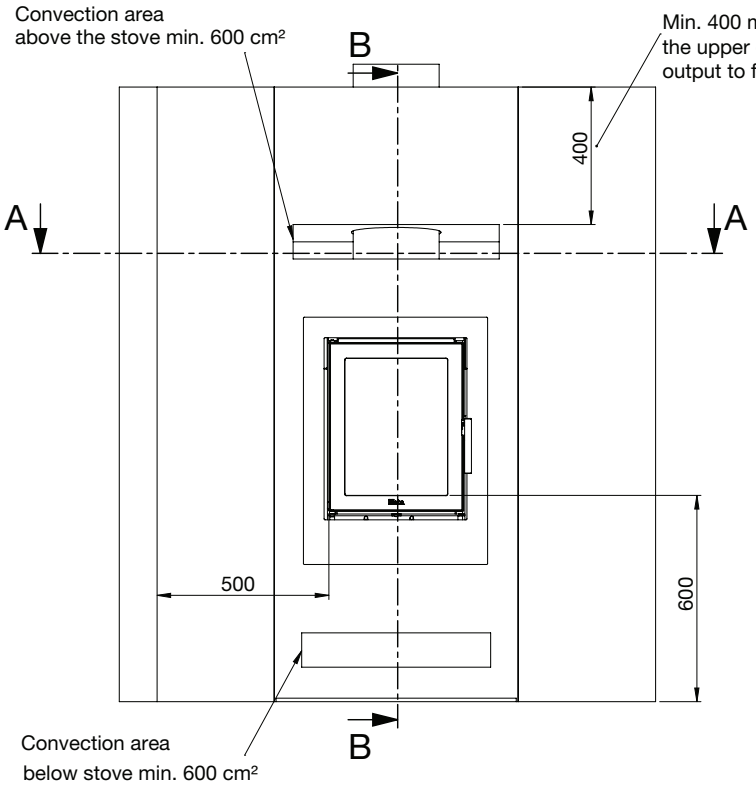
Incorrect firing, for example using wet wood, can result in the viewing window becoming covered in soot. This soot can be easily and effectively removed by using proprietary stove glass cleaner.

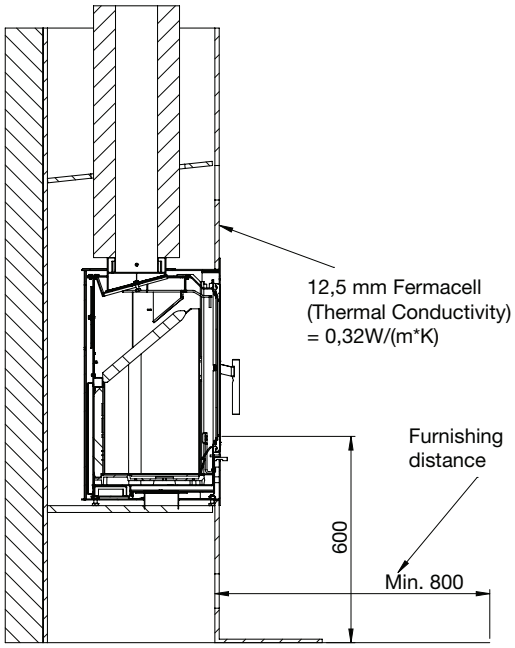
## Cleaning after sweeping the chimney and replacing the stones. Fig 1-2

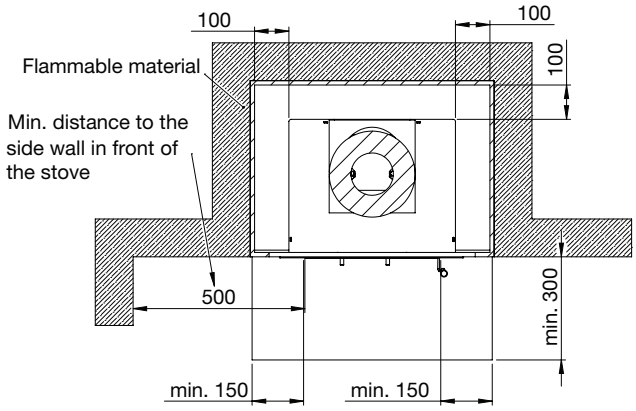


# Safety distances Scan-Line 550 Insert stove:

**Materials such as fermacell gypsum fibreboard, isolath 1000, mineral wool fire batts and aerated concrete can also be used around the stove.**
**When using materials other than fermacell gypsum fibreboard, ensure these have the same insulation properties as 12,5 fermacell.**



# Guarantee

Heta wood stoves, are subjected to a strict quality control during production and before delivery to the dealer. Therefore, the duration of the warranty is **5 years** on this product, covering manufacturer's defects, **1 year** on paint adhesion defects from purchase date from Heta and a 3 months total warranty for seals, vermiculite and glass from the date of sale from the dealer.

Claims concerning stoves older than **3 months**, will be assessed by our quality team on a one-by-one basis. Report all claims to your dealer or local Heta representative, who in turn will contact Heta to solve the claim. To file a claim please provide date of installation, picture of the silver data sticker, model and a description of the issue and pictures.

## The guarantee does not cover:

Wearing parts / fragile parts such as:

- Vermiculite elements in the combustion chamber.
- Glass
- Seals
- The cast bottom or shaking grate
- Surface or paint deteriorations due to excessive humidity, salinity or other aggressive environment
- Damage caused by improper use
- Transportation costs for warranty repair
- Assembly / disassembly of warranty repair
- Any secondary damages of the stove or it's environments due to negligence of any initial damages whether this damage is covered or not by the manufacturers guarantee.

## Warning

**Inadequate installation, unauthorized alteration to the stove or the use of non-original parts will void the guarantee.**

HETA

# Ecodesign
# EU Declaration of Conformity

**DoC Scan-Line 550 insert RRF-29 08 1700-2008**

**Product fiche**

CE

| | |
|---|---|
| Manufacturer | Heta A/S |
| Adress | Jupitervej 22, DK 7620 Lemvig |
| E-mail | heta@heta.dk |
| Website | www.heta.dk |
| Telephone | +45 9663 0600 |

| **Model identifier** | Scan-Line 550 Insert |
|---|---|

| **The identified product described above is in conformity with:** |
|---|
| **The relevant EU harmonized regulations:** |
| DIR 2009/125/EF |
| REG (EU) 2015/1185 |
| REG (EU) 2015/1186 |
| REG (EU) 2017/1369 |
| REG (EU) 305/2011 |
| **The relevant harmonized standards** |
| EN 13229:2001/A1:2003/A2:2004 |
| CEN/TS 15883:2010 |

| **Characteristics when operating with the preferred fuel only** | | |
|---|---|---|
| **Heat output** | | |
| **Item** | **Symbol** | **Value/Unit** |
| Nominal heat output | $P_{nom}$ | 5,3 kW |
| Minimum heat output | $P_{min}$ | |
| **Useful efficiency (NCV as received)** | | |
| Useful efficiency at nominal heat output | $\eta_{th,\ nom}$ | 81,7% |
| Useful efficiency at minimum heat output | $\eta_{th,\ min}$ | |
| **Auxiliary electricity consumption** | | |
| At nominal heat output | $el_{max}$ | - kW |
| At minimum heat output | $el_{min}$ | - kW |
| In standby mode | $el_{SB}$ | - kW |

| **Type of heat output/room temperature control** | |
|---|---|
| single stage heat output, no room temperature control | Yes |
| two or more manual stages, no room temperature control | No |
| with electronic room temperature contro | No |
| with electronic room temperature control | No |
| with electronic room temperature control plus day timer | No |
| with electronic room temperature control plus week timer | No |

| **Other control options** | |
|---|---|
| room temperature control, with presence detection | No |
| room temperature control, with open window detection | No |
| with distance control option | No |

| **Notified body relevant to the assessment and verification of constancy of performance** |
|---|
| RRF Rhein-Ruhr feuerstätten Prüfstelle GmbH.<br>46047 Oberhausen, Deutschland<br>Notified body No. NB 1625 Report nr. RRF-29 08 1700 |

| **Fuel** | **Preferred fuel** | **Other suitable fuel** |
|---|---|---|
| Wood logs with moisture content ≤ 25 % | Yes | No |
| Compressed wood with moisture content < 12 % | No | No |
| Other woody biomass | No | No |
| Non-woody biomass | No | No |
| Anthracite and dry steam coal | No | No |
| Hard coke | No | No |
| Low temperature coke | No | No |
| Bituminous coal | No | No |
| Lignite briquettes | No | No |
| Peat briquettes | No | No |
| Blended fossil fuel briquettes | No | No |
| Blended biomass and fossil fuel briquettes | No | No |
| Other blend of biomass and solid fuel | No | No |

| **Emissions at nominal heat output** | $\eta_s$ % | mg/Nm³ (13 % $O_2$) | | | |
|---|---|---|---|---|---|
| | | **PM** | **OGC** | **CO** | **$NO_x$** |
| | ≥ 65 | ≤ 40 | ≤ 120 | ≤ 1500 | ≤ 200 |
| | 71 | 25 | 64 | 1000 | 120 |

| **Technical documentation** | |
|---|---|
| Indirect heating functionality: | No |
| Direct heat output: | 5,3 kW |
| Energy Efficiency Index (EEI): | EEI 108 |
| Fluegas temperature at nominal heat output | T 232°C |
| Energy efficiency class | A+ |

| **Safty** | |
|---|---|
| Reaction to fire | A1 |
| Test of fire safety in connection with the burning of wood | Approved |
| Distance to combustible materials<br>Rear. With insulation<br>Sides distance to combustible materials<br>Furniture distance | Minimum distances in mm<br>#<br>#<br>800 |

# See Clearances for installation in instructions

**Signed on behalf the manufacturer of** **04.05.2022**

Heta A/S
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Martin Bach

**The chimney sweep's signature** Date_____

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Signature