

# **Assembly and User Instructions**

## **Fireplace Inserts, Lotus H470-H570**

Version 9, 13.02.2023





## Introduction

### ***Congratulations on your new Lotus Fireplace Insert***

We hope and believe that it will give you many a warm hour. But before you may truly benefit from your investment, you should read this guide thoroughly. It provides some specific advice as to how you will benefit the most from your fireplace insert – now, as well as in the years to come. This is why this guide would be worth while keeping, like all other directions for use.

Lotus may look back on a long tradition, making our first productions back in 1979. Our production is now run at Langeskov, and exported to many European markets. Lotus products are made to a fine Danish tradition, serving its owners faithfully for years. So, once again congratulations on your new Lotus fireplace insert – making for a warm and cosy beginning of an all new home life for you.

## Technical Specifications

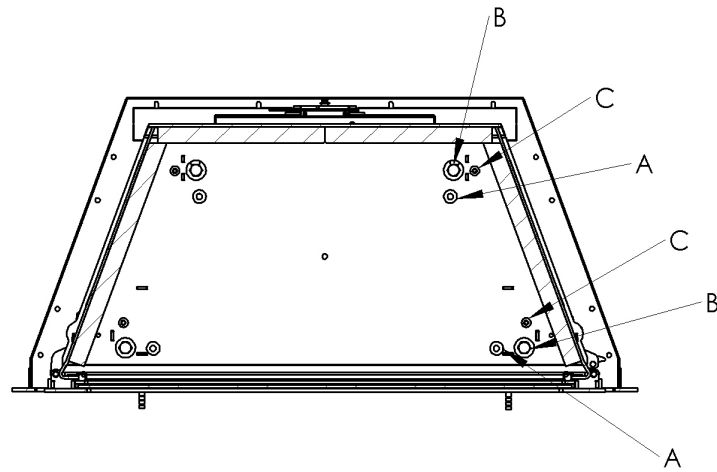
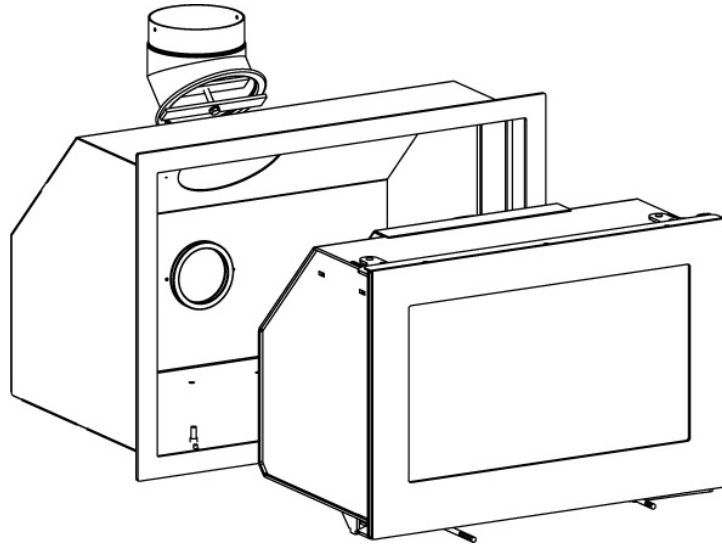
Wood stove data, testing to EN 13240/NS 3058/CE-mark

Model	Flue gas temperature at nominal °C	Output kW	Flue gas mass flow g/s	Flue Pa	Weight Kg	Distance to combustible material	
						Behind the construction mm	Next to the construction mm
H470	302	6	4,8	12	95	0	0
H570	302	6	4,8	12	111	0	0

## Fireplace Insert Assembly

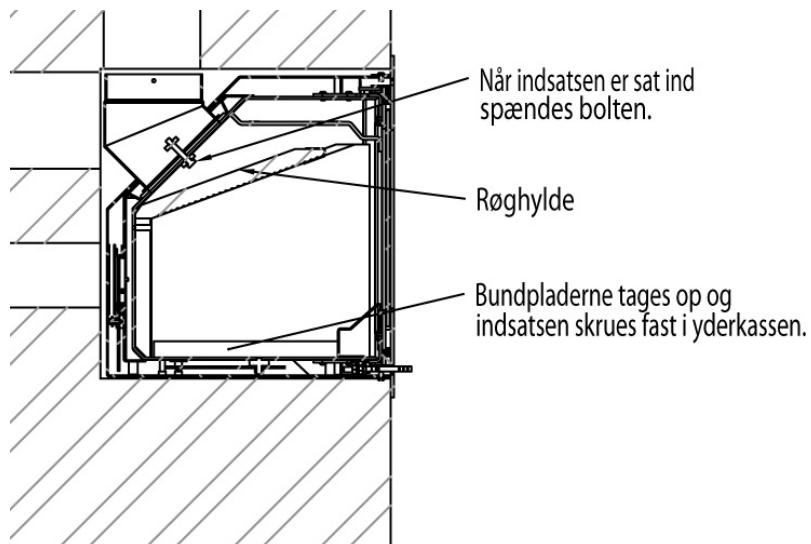
Before your new fireplace insert will be ready to exude warmth and a cosy atmosphere, you should read these lines thoroughly, reviewing the requirements for the assembly and the environment. In addition, reference is made to all local regulations, including those referring to national and European standards, to be met in the installation of your fireplace insert.

The hole size required for assembly appears from the leaflet material as well as the line drawings on the last page of these instructions.

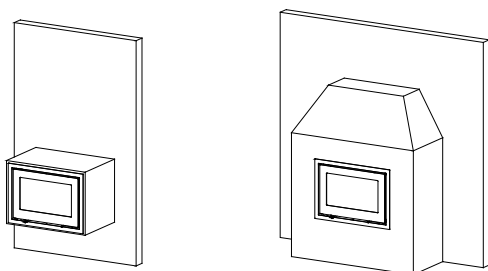


Drawing is an illustration and applies to normal inserts and wide models

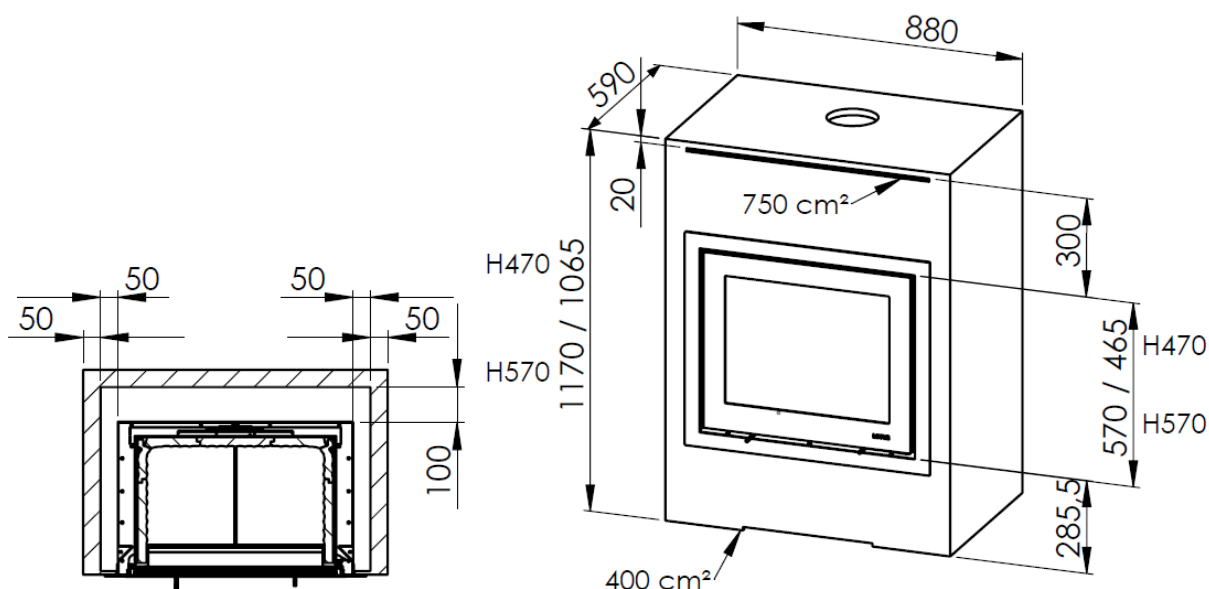
- A. Holes used for fastening the insert to the base.
- B. Set screws for adjustment of the insert in relation to the base.



The potential for the building-in of fireplace inserts is vast; they may be built into the wall, on the outside of the wall, and may be suspended on the wall. Building-in shall take place in connection with non-inflammable materials only. Virtually all installations are designed individually, and in all cases, the distance to inflammable matter must meet the values stated below.



**Below sample of Construction.**



**Insulating material:** Useable are all AGI Q 132 registered insulating material. All measurements are intended as minimum distances.

***The Base***

The base must, of course, be firm and have adequate load-bearing capacity. This will usually pose no problem when assembling in an open fireplace.

In case of an inflammable floor, the height of the foundation for the insert must be minimum 285,5mm.

### ***Distance to inflammable material***

When the fireplace insert is mounted in an existing brick fireplace, the requirements for distance to inflammable material and fireproofing on the floor will usually be in order.

If it is a matter of a new building, reference is made to any local regulations on fireproofing etc. You may contact your chimney sweeper for clarification of any issues of doubt.

For furniture, a distance of 0,8 metres is recommended.

### ***Distance to non-inflammable material***

For non-inflammable material, no requirements apply.

### ***The Chimney***

A good chimney draught is essential for how well a fireplace insert will burn. Note that there should be access to cleaning doors.

The working height of the chimney should typically range between 3.5 and 4.5 metres. Working height shall be understood as the distance from the fireplace insert top to the top of the chimney.

The internal diameter of the chimney shall be min. 150 mm (inside dim.) in steel chimneys and min.175-180 mm in brick chimneys or chimneys made of ceramic units as their inside surface will frequently be rough and will offer resistance.

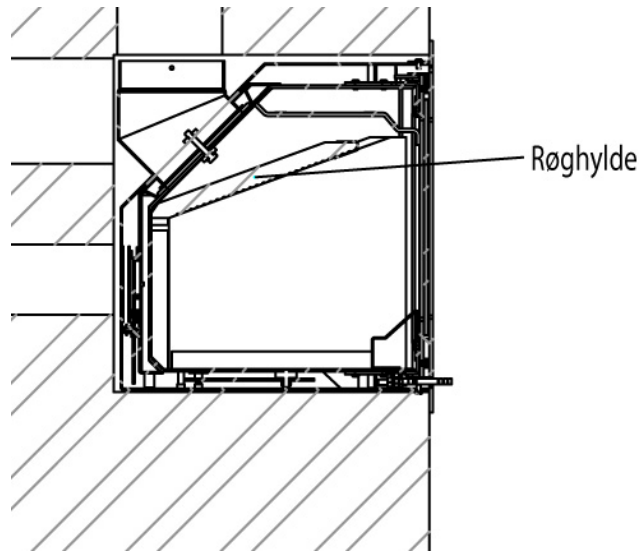
All joints and connecting points shall, of course, be tight, and the chimney shall provide a draught of min. 1.2 mm water head (12 Pa).

### ***Register***

If your chimney has a register, this should have a forced opening of min. 20 cm<sup>2</sup>.

### ***Assembly of Smoke Turn Plate***

The illustration below shows how to place the smoke turn plate when viewing a section in the fireplace insert from the side.



The smoke turn plate is removed by lifting at one side after which it will come clear of the other side and be taken down into the combustion chamber and out through the door. Similarly, it is put in place by moving it up askew at one side and then at the other side, and it is then put in place in the middle.

### ***Combustion Air Supply***

A good and clean combustion will benefit from an adequate supply of air to the fire. To allow for this, it is, however, a condition that air be supplied to the room in which the fireplace insert has been put up.

In certainly the majority of rooms there will be an adequate amount of air, particularly if some of the doors between the rooms of the house are left open. In special cases, an air valve may have to be placed in the exterior wall of the room in which the fireplace insert has been put up. The air valves are to be placed so that they may not be blocked.

### ***Floor***

On the floor in front of your fireplace insert, there should be a non-inflammable plate, for instance made of steel or stone material. This plate should be big enough to reach min. 30 cm in front of the fireplace insert and 15 cm at each side of the fireplace opening.

## ***Chimney Sweeper***

Once your new fireplace insert has been assembled, do make a point of registering the installation with the chimney sweeper. For one thing, the installation is to be inspected, and the chimney will also have to be swept by the chimney sweeper in the years to come.

## **Using your fireplace insert**

Below, you will find a description of kindling and firing of your fireplace insert. The wood volume and register setting may be varied as required individually for heating and the draught of the actual chimney.

The inserts are intended for intermittent combustion.

### ***Kindling and Current Firing***

1. Put appr. 2kg kindling pins in at the bottom of the fireplace insert, stacked cross-wise like a log house. Put 2 spirit blocks in the middle, and light these.
2. Close the door ajar, leaving an opening of appr. 2 cm. Open the air damper entirely under the damper (pulling it all the way out). Leave the fireplace insert like this for about 5- or 10 minutes before closing the door entirely and pushing the handle in locked position.
3. Dampen the air damper as required during the kindling.
4. Once the fire has burned down to the state of glowing (no more flames seen), open the door carefully so that the ashes will no be stirred up and come out. Cautiously spread the glows using a poker so as to make these lie in an even layer.
5. Put 2-4 pieces of wood into the fireplace insert, a total of about 1.5 – 2.5 kg. Put these pieces at the bottom of the fireplace insert, parallel with the fireplace insert front; one or two pieces may be put on top. The pieces to be laid at some little distance between them to allow for some air in between. The front piece will be lit best if it has a chopped side facing the door, and another facing the glows. Close the door tightly at once.
6. The damper may be opened entirely and damped again once the fire has caught on well. Just how much the damper should be opened may vary with the draught of the particular chimney but the flames are now to stabilize so as to assume the appearance of a “calmly” burning fire.
7. When the wood has burned down to the state of glows (after about one hour), start all over from item 4.



## **Ashes**

The ashes may be dumped in the waste bin for scavenging. The ashes should always have been cooled for one or two days before being dumped in the waste bin as there might otherwise still be glows which might set fire to waste or waste bag.

## Sound Advice

### ***Kindling after some lengthy pause***

If the insert has not been used for a protracted period, it should be checked whether the smoke ducts are intact, and whether there might be blockings in the chimney prior to kindling.

### ***Chimney Fire***

In the event of chimney fire, it is recommended to close the door and the damper, and possibly call the fire brigade.

### ***Cleaning of Fireplace Insert***

All Lotus fireplace inserts have been factory surface treated using original Senotherm lacquer in colours "coke" or "grey". This treatment will make the fireplace insert exude a special smell during the initial kindlings but this will vanish after a few times. Provide good airing. Maintain the surface by brushing it, using a soft, long-haired auto brush. A cloth with water or other matter may not be used.

### ***Maintenance of Fireplace Insert***

It is recommended that the maintenance of your stove be performed by a qualified service engineer, and that only spares recommended by the manufacturer be used.

**Packings** may look neat but they will collapse in the heat and will thus lose their ability to keep the fireplace insert tight. Packings should be replaced as required since good combustion and a clean pane will very much depend on the fireplace insert being tight.

Skamol broken or Worn may easily be replaced as these have been mounted loosely, the plates are made of vermiculite this is an insulating material, and the material is lighter porous. **To avoid breaking the plates, it is important that wood is not thrown, but rather added into the middle of the firebox.** Should you get to crack a skamolplate, it has no significance for insulation.

**The smoke turn plate** may be worn. It is readily replaced and is fitted as described above.

**Painting** of the fireplace insert using Senotherm spray may cover spots or small scratches. Major damage to be abraded using fine steel wool, vacuum cleaned, and then sprayed. The tin to be shaken vigorously, spraying at a distance of 15-20cm. It is imperative that your fireplace insert be out of operation and quite cold before the spray is used, otherwise you might cause severe damage on account of fire risk.

### ***Kindling Wood***

Kindling wood is the designation for finely chopped small wood pins, 20 – 30 cm long and having a diameter of 2-3cm.

### ***Wood***

Birch, beech, oak, ash, elm, conifers as well as fruit trees are all suitable for wood chopping.

Pressure-creosoted wood, chipboards, coloured leaflets or calendered paper are, however, not suitable in a fireplace insert. They will develop hydrochloric acid or heavy metals much to the detriment of the fireplace insert and to the environment.

Firewood for your Lotus fireplace insert should have a diameter of 7-9cm. The essence of good combustion is that the wood should be appropriately dry (at a humidity of 15-20%). If your firewood is too wet, making it burn will prove hard, there will be no chimney draught, it will smoke a lot, and it will provide a lower degree of utilization as the water will have to evaporate first. Further, this may cause damage to your fireplace insert and chimney by way of shining soot and tar encrustation. At worst, this may cause a chimney fire. If your firewood is far too dry, it will burn too quickly. Frequently, the gases in the wood will be released at a rate quicker than they will burn, and part of these will, in unburned condition, pass up through the chimney. This will also cause a lower degree of utilization and will harm the environment.

So it is a matter of a balance which you will, with a little exercise, find reasonably easy to find. Reference is also made to Keeping below.

## ***Keeping of Wood***

Your best keeping of your wood will be under a roof, still with good airing, like in a carport or under a shed roof. Putting your wood on a wooden pallet or the like, so as to keep it clear of the ground, would be a good idea. Fresh wood which has been sawn and chopped should preferably be left in this way for one or two years, depending on the type of wood.

## ***What is available in your fireplace insert?***

In your fireplace insert, you will find the present assembly and user instructions, as well as a glove which will come in handy for firing.

## ***Warning***

- The door should always be kept closed at normal operation, and may be opened for kindling and firing only.
- At normal use, the surface will run hot, and due care should be taken
- Any unauthorized change of the insert will render the warranty nil and void

## **Operating Trouble**

If you have any problems with your Lotus fireplace insert, you may find the cause below. If not, you will always be welcome to contact your Lotus distributor.

### **Your fireplace insert is hard to control – it burns too quickly**

If your fireplace insert is new, check that you have followed our instructions. If your fireplace insert is more than one year old, or if it has been used extensively, the packings may have to be replaced as the heat may cause the packings to lose their ability to keep your fireplace insert tight.

### **Poor fireplace insert draught after the installation**

Check that the assembly instructions have been followed. In particular, the conditions round the chimney may cause trouble. Are the diameter and the height OK, is it tight, and are flues and transitions tight? A chimney sweeper may have to be contacted to remedy the problem as the chimney may be blocked.

### **Smelling of smoke and soot**

This may be due to wind down draught in the chimney and would generally occur in particular wind directions. The chimney may be too short in relation to the roof ridge, or trees may have grown up, generating turbulence.

### **Making your fireplace insert burn proves hard, or the fire may go out**

This may be due to a number of causes. Those most typical are:

The damper is not open enough.

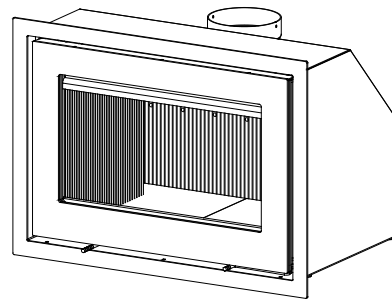
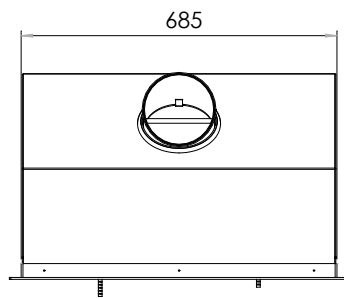
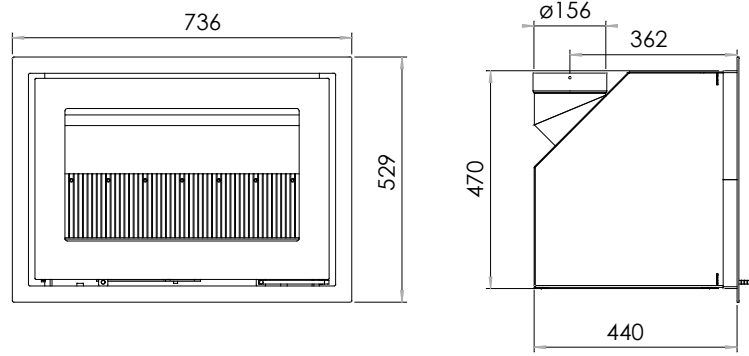
The firewood is too wet.

The draught in the chimney is too small; it may have been blocked or is untight.

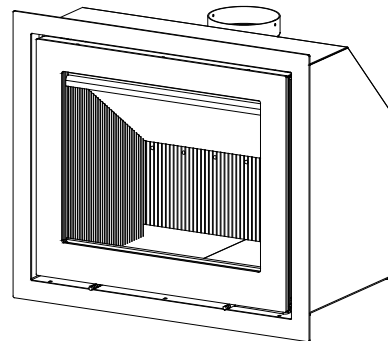
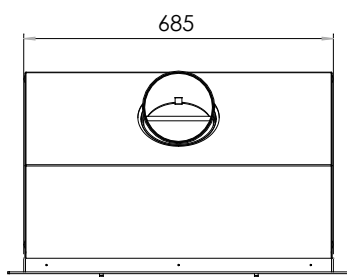
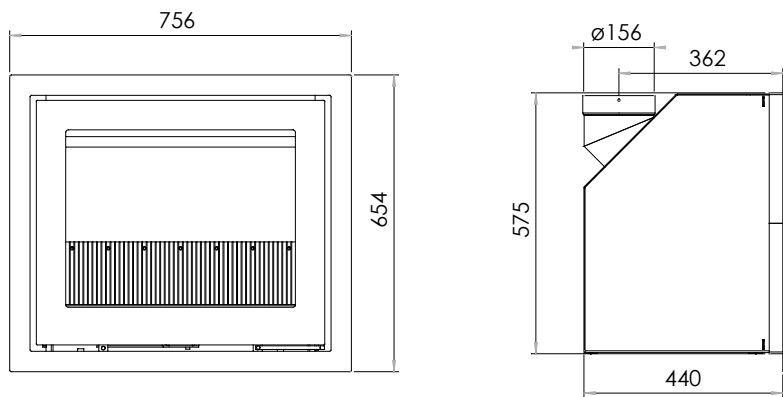
The layer of glows was too small/had glown out and did not produce sufficient heat to kindle the pieces of wood. A little primary air may be supplied by opening the door ajar.

Depending on the particular kind of trouble, you may have to contact your Lotus distributor or a chimney sweeper.

## Fireplace Insert H470



## Fireplace Insert H570





# WARRANTY

## Lotus Wood Stove – 10-Year Warranty

From 1 September 2014, Lotus is offering a 10-year warranty instead of a five-year warranty. This warranty applies to stoves which are supplied by Lotus after this date.

This warranty covers Lotus Wood Stove model \_\_\_\_\_ production no. \_\_\_\_\_ purchased on the \_\_\_\_\_.

This warranty covers normal firing – i.e. using ordinary chopped wood and pressed wood briquettes, and only provided the stove is otherwise operated to the specifications of the directions for use.

This warranty covers the faultless function of the stove, and does not cover overheating damage, damage to lacquer, wearing parts and movable parts such as glass, Skamol, stones, shaker grate, smoke baffle plates, packings, slide gate, and closing gear.

This warranty shall lapse if this stove is not operated so as to comply with the directions for use, and if deficiencies or similar are aimed to be/are remedied by a person not authorized by Lotus Heating Systems A/S. This warranty does not cover damage caused by inappropriate, non-expert/incompetent use of the stove.

If a product is returned to Lotus Heating Systems A/S, and the damage subsequently turns out not to be covered by this warranty, any costs incurred shall be incumbent on the customer.

For any warranty repair, the warranty period for the repair carried out shall not be extended but shall continue to follow the original warranty period.

This warranty shall be valid only if duly completed and subject to simultaneous presentation of distributor's original invoice. The warranty period shall follow the invoice date.

Congratulations on your new Lotus Wood Stove.

Yours Sincerely,

Distributor:



Johnny Ebstrup  
**Lotus Heating Systems A/S**



## Declaration of conformity

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	Lotus Heating Systems A/S, Agertoften 6, 5550 Langeskov. +45 63237070
Product type	Room heater for solid fuel (wood logs only)
Model identifier	Lotus H470-H570
Dokumentation	www.lotusstoves.com
Requeirements	EN 13 229: 2001/A2:2004/AC:2007

### EU Union legislation:

Reference	Date	Title
<b>Top level directives and regulations</b>		
DIR 2009/125/EC	21/10/2009	Energy Related Products Directive (codesign)
REG (EU) 305/2011	9/3/2011	Construction Products Regulation (CPR)
REG (EU) 2017/1369	4/7/2017	Energy Labelling Regulation
<b>Implementation measures incl regulations and delegated acts</b>		
(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
2017/C 076/02	10/3/2017	COM Transitional methods OJ EU C76 Vol 60
<b>Harmonized standards, other standards and technical specifications</b>		
EN 13240:2001	7/4/2001	Room heaters fired by solid fuel
EN 13240/A2:2004	28/10/2004	Harmonization of EN13240 by Annex ZA
prEN 16510-1 (2013 ed)	January 2013	Emission measurement methods prior to 2018
CEN/TS 15883	8/9/2009	Emission measurement from 2009
EN 16510-1:2018	31/7/2018	Emission measurement methods 2018 onwards

### Limit values

$\eta_s$ [%] Seasonal Heating efficiency	CO [mg/m <sup>3</sup> ] (13% O <sub>2</sub> )	PM [mg/m <sup>3</sup> ] (13% O <sub>2</sub> )	NOx [mg/m <sup>3</sup> ] (13% O <sub>2</sub> )	CO <sub>GC</sub> [mg/m <sup>3</sup> ] (13% O <sub>2</sub> )
74%	1125	18	105	74

Datum: 03/01-2022



Lars U. Borch **Lotus Heating Systems A/S**

Model identifier: H470-H570

Indirect heating function: NA

Direct heat output: 6 kW

Local heating emissions at nominal heat output	Emissions from local heating at minimal rated heat output
[x] mg/Nm <sup>3</sup> (13%O <sub>2</sub> )	[x] mg/Nm <sup>3</sup> (13%O <sub>2</sub> )

Fuel	Preferred fuel	Other suitable fuel(s)	ηs [x%]:	Local heating emissions at nominal heat output				Emissions from local heating at minimal rated heat output			
				PM	OGC	CO	NOX	PM	OGC	CO	NOX
Wood logs, moisture content ≤ 25 %	yes	no	74	18	74	1125	105	NA	NA	NA	NA
Compressed wood, moisture content < 12 % (e.g. according to ISO 17225-3)	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									
Other fossil fuel	no	no									
Blended biomass and fossil fuel briquettes	no	no									
Other blend of biomass and solid fuel	no	no									

Heat output	Symbol	Value	Unit
Nominal heat output	P nom	<b>6</b>	kW
Minimum heat output	P min	N.A.	kW
<b>Auxiliary power consumption</b>			
At nominal heat output	el max	N.A.	kW
At minimum heat output	el min	N.A.	kW
In standby mode	el SB	N.A.	kW
<b>Fuel efficiency (Based on the</b>	Symbol	Value	Unit

<b>net calorific value (NCV)</b>			
Fuel efficiency at nominal heat output	$\eta_{th,nom}$	84	%
Fuel efficiency at minimum heat output	$\eta_{th,min}$	N.A.	%
<b>Permanent pilot flame power requirement</b>			
Pilot flame power requirement (if applicable)	$P_{Pilot}$	N.A.	kW

#### **Type of heat output/room temperature control**

Single-stage heat output, no room temperature control	No
two or more manual stages, no room temperature control	Yes
with mechanic thermostat room temperature control	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 detectors	No
room temperature control, with open window detection	No
with distance control option	No