User's Manual **EN**

hwam

Classic 4

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www.hwam.com

AUTOPILOT

hwam
intelligent heat

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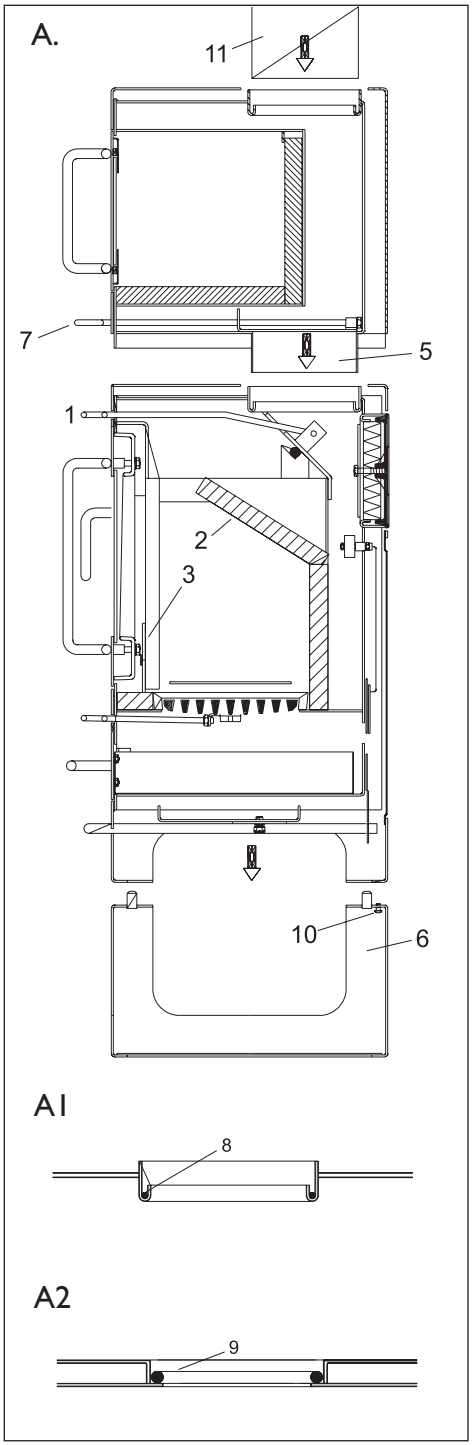
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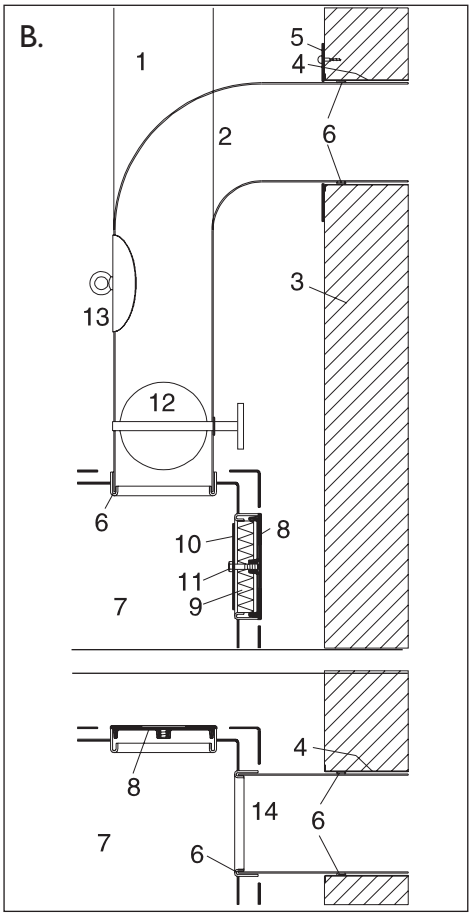
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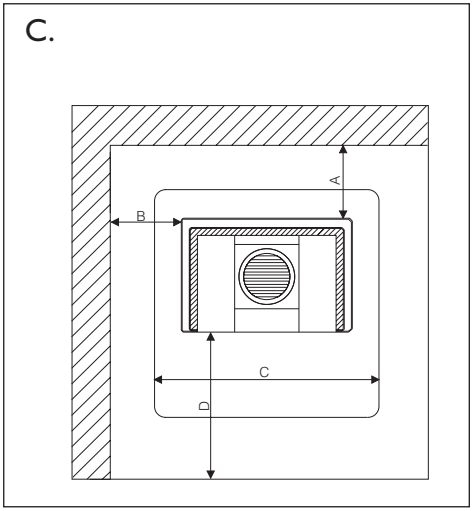
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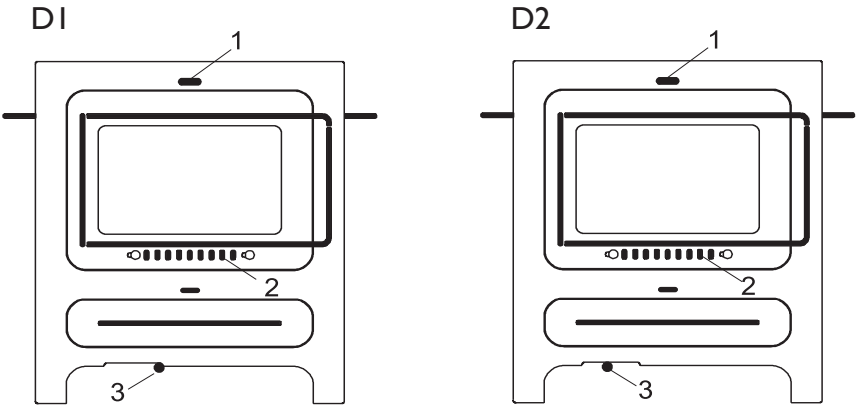

INSTALLATION

In general
Congratulations on your new HWAM woodburning stove. We are pleased that you have chosen a HWAM woodburning stove and confident that it will give you much pleasure. To ensure optimum operation and safety, we recommend that the installation should be carried out by an authorised HWAM retailer or a fitter recommended by the retailer. For an overview of HWAM retailers, visit www.hwam.com under "Retailer locations".

Safety
The installation of your HWAM woodburning stove must always comply with all European, national and local building regulations. The installation must be carried out in accordance with the instructions in the installation and user manuals and subsequently registered with the local authorities. Upon installation, the chimney sweep must approve the installation before you can start using the woodburning stove. All HWAM woodburning stove packaging material must be handled in accordance with local waste management regulations.

Room requirements
Always ensure a supply of fresh combustion air to the room where the stove is to be installed. The woodburning stove uses approx. 11-29 m^3 of air per hour. A window that can be opened or an adjustable air valve will be sufficient. It must not be possible to block the adjustable air valve/grate. In newly built/airtight dwellings, we recommend that a fresh air system should be installed for the direct supply of external air to the combustion. This fresh-air system may be bought separately.

Before installing the stove, you must ensure that the load-bearing capacity of the floor can withstand the weight of the stove and the chimney. The weight of the chimney should be calculated according to its dimensions and height.

Technical measures and data

Test results from nominal test EN 13240	
Nominal heating effect	8.0 kW
Flue gas temperature EN 13240 measurement point	254°C
Flue gas temperature measured in the outlet socket	230°C
Exhaust gas flow	9.9 g/s
Efficiency	79.3 %
Annual efficiency (EcoDesign)	69.3 %
PM	36 mg/m^3
OGC	61 mg/m^3
NOx	132 mg/m^3
CO at 13% O_2	1250 mg/m^3
CO at 13% O_2	0.07 %
Energy efficiency index	105
Energy efficiency class	A
Test result based on NS 3058	
Particle emissions	-

The declaration of performance (DoP) can be downloaded from our website, www.hwam.com.

Model	Weight	Height	Width	Depth
HWAM Classic 4	108 kg	72.1 cm	60.0 cm	40.0 cm
Wood magazin	12 kg	22 cm	60.0 cm	40.0 cm
Backing section	70 kg	37.8 cm	60.0 cm	40.0 cm

Floor plate
European, national and local regulations must be observed in terms of the size and thickness of a non-combustible floor covering the floor in front of the combustion chamber opening. Ask your HWAM retailer for assistance. The combustion chamber opening is 40.6 cm wide.

Distance to combustible materials

Min. distances - uninsulated flue gas pipe (drawing C)	HWAM Classic 4
A. Recommended for brick wall	10 cm
A. For combustible back wall	10 cm
B. For combustible side wall	20 cm
C. Fireproof area in front	70 cm
3. Distance to furnishings in front	80 cm

Remember to pay attention to the applicable regulations concerning the required distance between the wall and smoke pipe.

The distance to a brick wall is set to faciliate the servicing of the HWAM® Autopilot™.

Please be aware that not all glass parts are heat-resistant. For this reason, a glass wall should sometimes be treated as a combustible wall, in which case we ask you to contact your local chimney sweep or glass producer to hear at what distance the stove should be kept from glass.

Requirements for chimney and smoke pipe
The height of the chimney must ensure sufficient draught and prevent any smoke nuisance. As a general rule, satisfactory draught conditions are achieved if the chimney is 4 m above the stove and at least 80 cm above the ridge. If the chimney is placed at side walls, the top of the chimney should always be higher than the ridge or the tallest point of the roof. Always be aware of any national and/or local regulations applying to thatched roofs and the location of the chimneys.

The woodburning stove requires a minimum draught of 12 Pa (measured at EN 13240 measurement point). If measured just above the smoke flue socket, the chimney draught must be 18-20 Pa.

The chimney must have a minimum clearing of Ø 150 mm. The chimney must be provided with an easily accessible cleaning door. The chimney and flue duct must be of flue class T400 and be CE marked. Furthermore, it must have obtained the classification of G in soot fire testing. The required distance to combustible material must be complied with in accordance with the brand label. Ask your HWAM retailer for further information.

Air damper
We recommend that the chimney or the pipe is equipped with a damper so that the chimney draught can be regulated on days with strong winds. It is not allowed that the damper close the pipe totally. There must always be a free area of min. 20% of the total opening of the chimney or the pipe.

Connection to the chimney
HWAM Classic 4 has both rear and top smoke outlet that can be connected to an approved steel chimney on top or directly out at the rear to a brick chimney. If the stove is connected with un uninsulated steel chimney, there must be a distance of 225 mm from the inflammable wall to the uninsulated steel chimney.

Make sure that the chimney is tight and that no false draft is caused around neither the cover plate, in connection with a covered smoke outlet, nor the cleanout door and pipe connections. Please note that bent and/or horizontal smoke pipes will reduce the effect of the chimney draft.

Vertical cross-section of smoke flue (Drawing B):

1. Steel chimney.
2. Knee pipe. Fits into the smoke flue socket.
3. Jamb of the brick-built chimney.
4. Built-in pipe sleeve. Fits smoke flue.
5. Wall rosette. Covers disruption to wall around pipe sleeve.
6. Joint. Sealed with packing material.
7. Smoke ducts of the HWAM stove.
8. Cover for back outlet/hotplate for top outlet.
9. Insulation. 25 mm thickness.
10. Inside cover.
11. Fitting bolt.
12. Smoke flue regulating damper.
13. Soot door.
14. Smoke flue for back outlet (remove cover and insulation).

When the stove is connected at the top, the back outlet is shut off with an ins ulation disc and a cover plate which is bolted to an inside cover plate. No insulation is necessary if the stove adjoins a non-flammable wall. We recommend that the stove is connected to a top outlet in order to achieve the highest possible temperatures in the baking section.

Glove
A glove is delivered with your HWAM woodburning stove. This glove protects your hand when operating the hot stove.

Fittung the loose parts
Before the stove is installed, you must ensure that all loose parts are fitted correctly. Check that all insulation plates of the combustion chamber have been properly placed, i.e. that the bottom plate is horizontal and that the side plates are vertical and reach all the way up to the steel sides of the combustion chamber and down to the bottom plate.

Vertical cross-section of HWAM Classic 4 (Drawing A)

1. By-pass damper. Can tip freely when the by-pass lever is pulled.
2. Smoke shelf. Is placed on top of the side stones.
3. Ember / log guard. Is placed behind angles in both sides.

Mounting of the baking section
We recommend that the stove is connected to a top outlet in order to achieve the highest possible temperatures in the baking section. Before mounting the baking section, the covers and the rings for the cooking holes are removed, and the smoke outlet to the rear is closed. After this a new Ø8 mm

sealing (8) is placed down into the smoke outlet socket (drawing A1). At the same time a cushion (9) made out of the stove kit delivered with the baking section is placed round in the edge of the cooking holes (drawing A2). Then the baking section (5) is placed on top of the stove so the smoke inlet sockets of the baking section are standing down in the smoke outlet as well as in the cooking holes on top of the stove. Chimney or smoke flue (11) is connected, and the cooking holes are closed with the cover plates coming from the cooking holes of the stove.

The function of the baking section
When the by-pass damper of the cooking section in pushed in, the hot smoke gas is conducted up around the baking section, thus giving the maximum heat in the baking section. When the by-pass damper (7) of the baking section is pulled completely out, the smoke gas is conducted behind the baking section and directly out into the chimney, thus giving minimum heat in the baking section. Consequently, the temperature in the baking section is regulated by opening the by-pass damper more or less.

Valve in the baking section
In the baking section a valve is mounted that, when opened, is functioning as an extraction in the cooking section when it is used.

Mounting of the wood magazine
The wood magazine (6) is placed where the stove is to stand, and the stove is placed on top of it. The four guide pins on the wood magazine must catch the legs of the stove. If the stove tips a little in the coupling between the stove and the wood magazine, this is adjusted by means of the two adjusting screws (10) mounted at the back of the wood magazine.

Air damper in the front door (Drawing D)
The air damper in the front door regulates the rinsing air that keeps the glass free from soot. The sliding damper should only be closed that much down that the rinsing air is still able to keep the glass clean.

The rinsing air enters into the secondary air supply ensuring a good secondary combus-tion of the smoke gases.

The glass in the door can only keep itself free from soot, if the chimney draft is sufficient, the combusiton is optimal, and if the firewood is dry. At nominal chimney draft, half open will be suitable.

Chimney
The chimney is the "engine" of the stove and it is crucial for the functioning of the woodburning stove. The chimney draft provides a partial vacuum in the stove. This vacuum removes the smoke from the stove, sucks air through the dampers for the so-called glass pane rinse which keeps the glass free of soot, and sucks in air through both primary and secondary dampers for the combustion.

The chimney draft is created by the differences in temperature inside and outside the chimney. The higher the temperature within the chimney, the greater the draft. It is crucial, therefore, that the chimney is warmed up properly before closing the damper and limiting the combustion in the stove (a brick chimney takes longer to warm up than a steel chimney). On days where the weather and wind conditions create insufficient draught inside the chimney, it is even more important to warm up the chimney as quickly as possible. The trick is to quickly get some flames going. Split the wood into extra fine pieces, use an extra firelighter, etc.

If the stove has not been used for a longer period, it is important to check that the chimney pipe is not blocked.

It is possible to connect several devices to the same chimney. However, it is important to first check the applicable rules.

Chimney sweeping

To prevent the risk of chimney fires, the chimney must be cleaned every year. The flue duct and the smoke chamber above the baffle plate must be cleaned together with the chimney. If the chimney is too tall to be cleaned from above, it must be equipped with a soot door.

In case of a chimney fire, close all dampers and call the firefighters. Before any further use, have the chimney checked by the chimney sweeper.

Your first heating session
The lacquer will be fully hardened after the stove has been used, and the door and the ashpan should be opened very carefully as there will otherwise be a risk that the gaskets will stick to the lacquer. In addition the lacquer may initially give off an unpleasant odour, so make sure that the room is well ventilated.

Tips about fuel

Approved fuel types
The wood burning stove is EN approved for combustion of wood only. It is recommended to use dried chopped wood with a water content of a maximum of 18%. Stoking a fire with wet wood results in soot, environmental problems, and a less efficient fuel economy.

Recommended wood types
All types of wood, for instance birch, beech, oak, elm, ash, conifers, and fruit trees can be used as fuel in your insert. The great difference is not in the fuel value, but in the weight of the wood types per cubic metre. Beech weighs more per m^3 of wood than common spruce, for instance. This is why more common spruce is required, in terms of volume, to obtain an amount of heat similar to that of beech. Heavy types of wood such as ash, beech, oak and elm are generally not that easy to light up. In addition, they burn more slowly and give off more embers. Light types of wood such as birch, maple, spruce and pine are more easy to light up. They burn faster and give off fewer ambers. You may therefore take advantage of the light types of wood for lighting and use the heavier types of wood to ensure a longer burning time..

Banned fuel types
It is not allowed to stoke a fire with the following: printed matter, plywood, plastic, rubber, fluid fuels, and rubbish such as milk cartons, lacquered wood or impregnated wood and fossil fuels. The reason that you should not apply any of the above is that during combustion they develop substances that are health hazardous and harmful to the environment. These substances could also damage your wood burning stove and chimney, rendering the product warranty void.

Storage of wood
A moisture content of 12-18% is achieved by storing recently felled wood outdoors under a lean-to for at least one year, preferably 2 years. Wood stored indoors has a tendency to become too dry and combust too quickly. However, it might be advantageous to store fuel for lighting a fire indoors for a few days prior to use.

It is recommended to purchase a wood moisture meter to continuously check that the firewood has the correct moisture content before using it for firing. Split the wood and measure the moisture content of the split surfaces.

Lighting the stove (drawing D)
A successful combustion process requires that the wood is lit in the right way. A cold stove and a cold chimney challenge the combustion process. Be careful to make a good lighting with suitably dry wood, using kindling and lighting the fire in the top layers of kindling. It is important to achieve a high flue gas temperature quickly.

The air control lever (3) is pushed farthest to the right. The sliding damper (2) in the door and the by-pass damper (1) are opened. Always pull out the by-pass damper before opening the door. Place two pieces of wood (5-8 cm in diameter) horizontally in the bottom of the combustion compartment (corresponding to 1-2 kg). Place 5-8 pieces of kindling randomly on top. Place two firelighters between the top layer of kindling. Light up the fire-lighters and close the stove **d**oor. If condensation forms on the glass, keep the door ajar for a little while and close again. When the kindling is burning well, the air control lever (3) is placed in middle position. Let the kindlings burn out till there are no more visible flames.

Important! The ash pit must not be opened when lighting up. It must always be closed when the stove is in use. Otherwise the HWAM® Autopilot™ does not function. The door should only be opened when lighting up, when restoking, and when cleaning the stove. Never leave a stove before there are lasting flames in the wood after firing!

Stoking (drawing E)
When there are no more visible yellow flames, and a right ember is there, you can fire again. A right ember is when the whole bottom is covered, and the glows are lighting in a ring around the shaking grate. Put at least two pieces of wood into the stove, weighing up to 1 kg each. At first firing, the sliding damper (2) in the door is regulated down to half open. When there are visible yellow flames again, the air control lever (3) is pushed back to middle position. When in continuous use, no further regulation is necessary. This is done by the HWAM® Autopilot™ giving an even, constant burning. But if you want more heat, the air control lever is pushed further to the right, and if you want less heat, the air control lever is pushed further to the left. However, you may never close the primary air supply completely. When the stove is cold, all dampers are closed.

During combustion, the outer surfaces of the stove will become hot, and due care must therefore be shown.

When burning is complete
When the stove is not in use, turn the air control knob all the way to the left.

Cleaning the glass
We recommend wiping the glass after a fire. This is best done using a paper towel.

Fuelling with coal or pet coke
The stove is not approved to use coal or pet coke as a fuel.

Firing in general

Rapid or fierce heat
Rapid or fierce heat is obtained by burning many small pieces of wood.

Maximum amounts of fuel
The stove is approved for a maximum hourly burning of 2,0 kg wood or 1,6 kg briquettes
If these limits are exceeded, the stove will no longer be covered by the factory guarantee, and it may also become damaged due to excessive heat.

Prolonged burning time
Prolong the burning time by burning a few (at least 2) very large pieces of wood while at the same time closing the thermostatic control. The burning time can also be prolonged by setting the sliding damper in the door to half open, though never more than would make the glass pane sooty.

Insufficient firing
If the fireproof materials in the combustion chamber are blackened after a fire, then the stove is polluting, and the HWAM® Autopilot™ is malfunctioning. It will be necessary, therefore, to open the thermostatic controller. It may also be necessary to burn more wood.

Cleaning the glass
We recommend wiping the glass after a fire. This is best done using a paper towel.

How to achieve the best combustion

- **Use clean and dry wood.**
  Wet wood results in inefficient combustion, plenty of smoke, and soot. Furthermore, the heat will dry the wood, not heat up the room.
- **The fire should only be stoked with a little wood at a time.**
  You achieve the best combustion by starting up a fire often and using only a little wood. If you use too much firewood, it will take some time before the temperature reaches a level where you achieve a good combustion.
- **Make sure there is the right amount of air.**
  You should also make sure that there is plenty of air – especially in the beginning - so the temperature in the wood burning stove climbs quickly. In this way the gasses and particles released during the combustion will be consumed by the fire. Otherwise they build up soot in the chimney (constituting a chimney fire risk) or will be released in a non-combusted state into the environment. The wrong amount of air supply creates inefficient combustion and a modest effect.
- **Don't savour the fire during night time**
  We advise against adding fire wood to your stove and reducing the air supply at night in an attempt to still have some embers left in the morning. If you do so, large amounts of hazardous smoke will be emitted, and your chimney will be exposed to unnecessarily large amounts of soot with the risk of a chimney fire.

Maintenance

Maintenance
Any maintenance of the stove should only be carried out when it is cold. Daily maintenance is limited to vacuum cleaning the stove externally, using the soft brush attachment. You can also dust the stove using a dry, soft cloth or brush, but on a cold stove only.

Once a year, the stove should be thoroughly serviced. The combustion chamber should be cleared of ashes and soot. Door and fittings should be lubricated using a copper-based grease.

Cleaning (Drawing A)
Prior to sweeping, dismount the smoke shelf, so that soot and ashes can be swept down into the combustion chamber. After the sweeping of the chimney, clean the combustion chamber, and afterwards remount the smoke plate. It is very important for the function of the stove that these are mounted correctly.

- Remove one of the side stones and take out the smoke shelf (2).
- Open the by-pass damper (1). Ashes and soot from the sweeping will fall down partly in the combustion chamber, partly lie on the by-pass damper from which it is easy to sweep the ashes and the soot down into the combustion chamber.
- If the stove has a baking section, the by-pass (7) rod of the baking section is also pulled out prior to sweeping.
- The cleaning, if any, of the sides of the baking section follows through the holes to the cooking rings.
- Before cleaning the surrounding flues of the stove, the side plates of the combustion chamber are removed. This is done by taking the rear edge of the side plates and pull them towards the middle. Rear plates as well as bottom plates and grates, if necessary, are now removed. There is now free entrance to the surrounding flues all the way around the bottom of the stove from where ashes and soot can be scraped down into the ash pan.

Ashes
The ash pan is best emptied by pulling a rubbish bag over the pan, tipping it and then carefully pulling it out of the bag. Ashes are disposed of via the domestic rubbish collection.
Please note that there may be embers in the ashes for up to 24 hours after the fire has gone out!

Insulation
The efficient, but porous insulation of the combustion chamber may, in time, be worn and damaged. Cracks in the insulation are irrelevant to the efficiency of the stove. However, it should be replaced, if there are actual holes due to parts of the lining falling off or when, due to wear and tear, it has been reduced to less than half its original thickness.

Door/glass
A sooty glass door can easily be cleaned with a piece of moist kitchen roll dipped in ash. Go about it in vertical movements (up and down). Follow up with a dry piece of kitchen roll.

Seals
Check frequently to ensure that seals in the door and ash pan are intact and not brittle. Failing this, they should be replaced. Use original seals only.

Surface
The surface normally requires no treatment. Any damage to the coating may be remedied using a Senotherm spray.

Guarantee
The guarantee does not cover damage due to insufficient maintenance!

Operational problems

Blackened glass
- The wood is too damp. Only use wood stored for at least 12 months under cover and with a moisture level not exceeding 12-18% RH.
- Faulty seal in door. Fit new seal.

Smoke in the room when opening door
- The grate in the chimney may be closed. Open the grate.
- Insufficient chimney draft. See section on chimney or contact chimney sweep.
- Soot door leaking or dislodged. Replace or refit.
- Never open the door when there are still flames on the wood.

Uncontrollable combustion
- Faulty seal in door or ash pan. Fit new seal.
- If there is an excessive chimney draft, it may be necessary to set the air control knob to its minimum position. Also do this all when the stove is not in use.
- If the steel plates in the combustion chamber develop scales or become deformed, this is due to excessive heat. Stop using the stove and contact the retailer.

At interruptions that you cannot yourself rectify, you should contact the retailer.

Declaration of Performance

The DoP can be downloaded from our website via the following link:
www.hwam.com/dop/classic4

Product information on solid fuel local space heaters according to Comission regulation (EU) 2015/1185

Model	HWAM Classic 4
Direct heat output [kW]	8,0
Indirect heating functionality	No
Indirect heat output [kW]	-
Type of heat output/room temperature control	Two ore more manual stages, no temperature control

Space heating performance at nominal heat output		
Fuel	**Preferred fuel**	**Seasonal space heating energy efficiency [%]**
Wood logs with moisture content 12-18 %	Yes	69,3
Emissions	**mg/m^3 (13% O_2)**	
Particulate matter (PM)	36	
Organic gaseous compounds (OGC)	61	
Carbon monoxide (CO)	1250	
Nitrogen oxides (NO_x)	132	

Characteristics when operating with the prefered fuel only	
Nominal heat output [kW]	8,0
Electric power consumption nominal heat output [kW]	-
Electric power consumption minimum heat output [kW]	-
Electric power consumption standby mode [kW]	-
Useful efficiency at nominal heat output [%]	79,3
Energy efficiency index	105
Energy efficiency class	A

Specific Precautions during Assembling, Installing & Maintenance:
See installation instructions for more information

Product End-of-Life/Recycling:

To dispose of the stove after the product life has expired, please observe the following information

- Dispose of the items correctly i.e. separate the parts to be disposed of in material groups
- Always dispose of items in a way that is as sustainable as possible and that is in line with the current environmental protection, reprocessing/recycling and disposal technology

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