User's Manual **EN**

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www.hwam.com

Smart Control™

HWAM
intelligent heat

Table of contents

Drawings 4-8
For UK - The Clean Air Act 1993 and Smoke Control Areas 9
HWAM® SmartControl™ 10
Installation. 11
Firing manual - wood 16
Firing in general 19
Maintenance. 20
Operational problems 21
Declaration of Performance. 22
Product information EcoDesign 23

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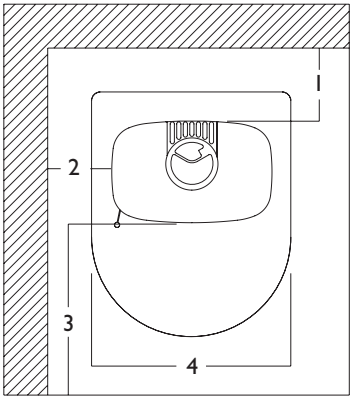

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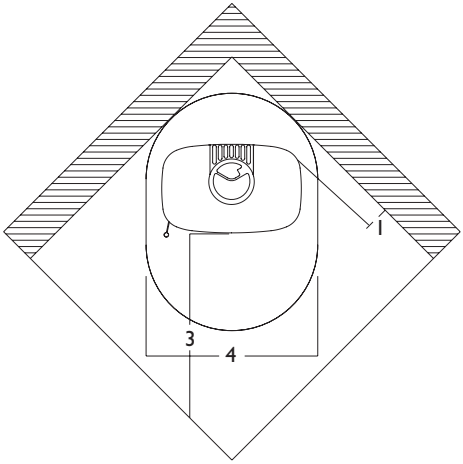

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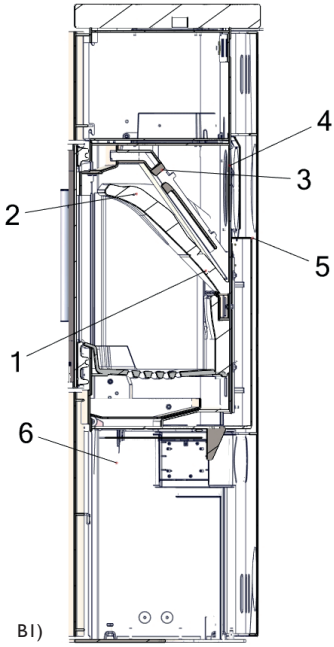

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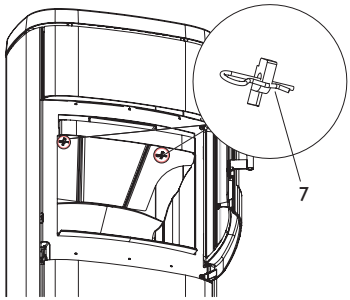

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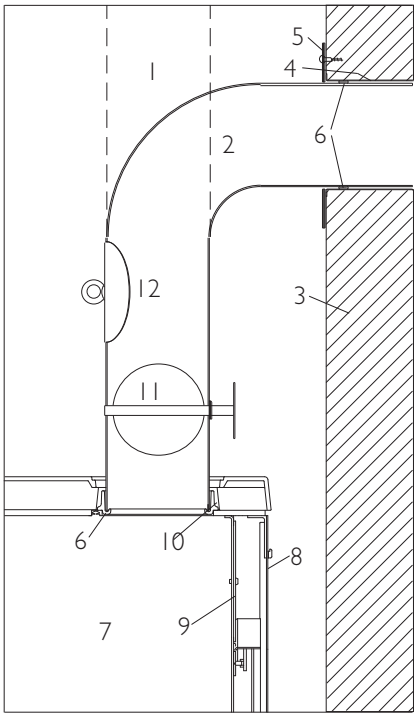

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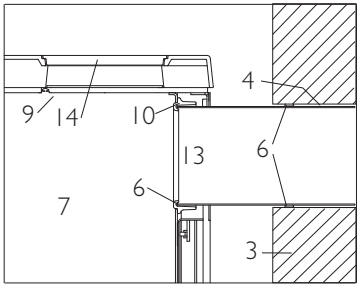

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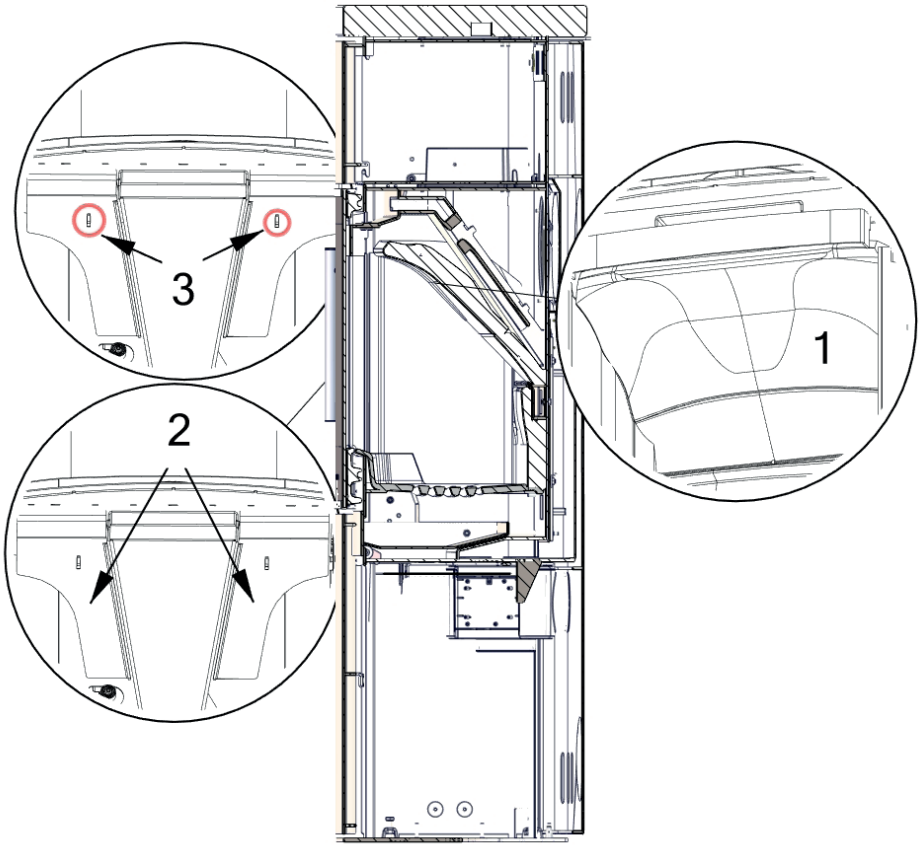

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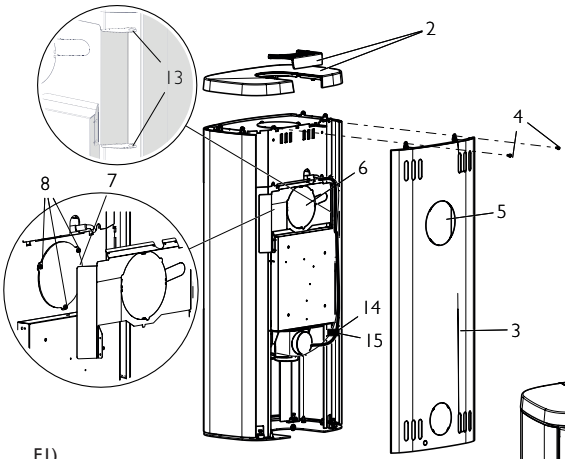

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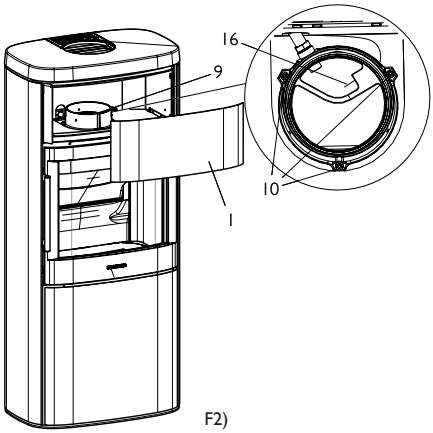

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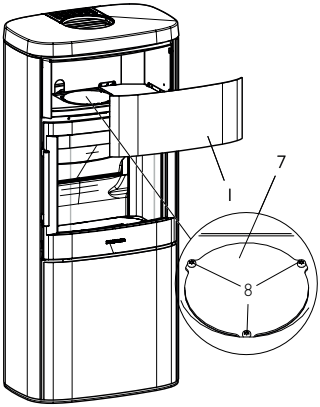

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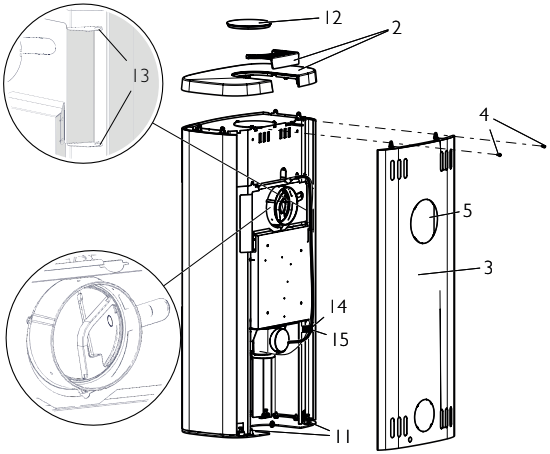

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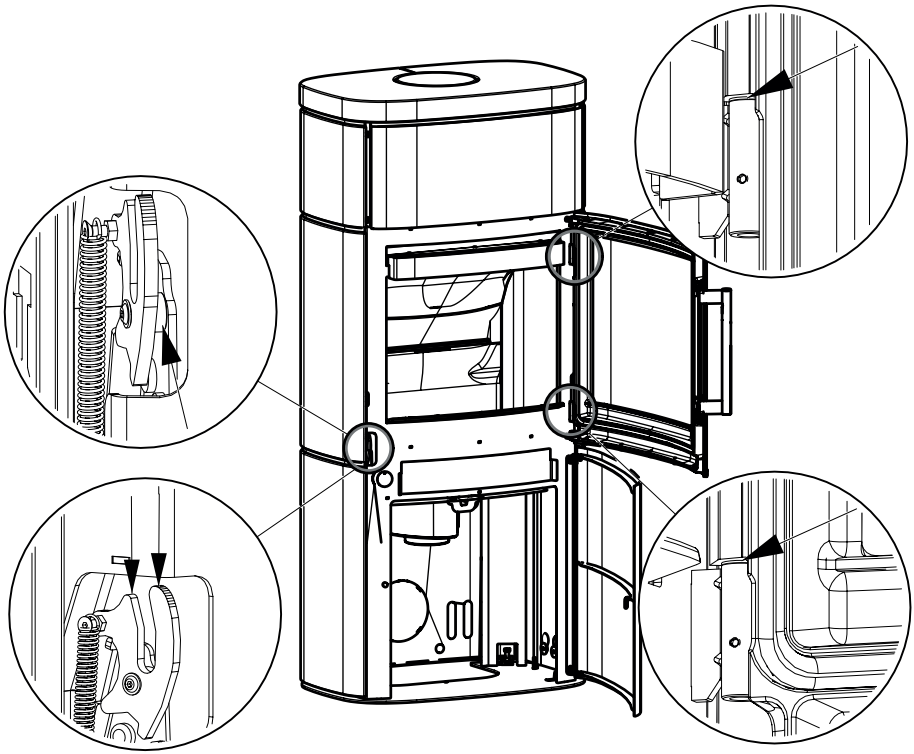

For UK - The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014. In Wales and Northern Ireland these are exempted by regulations made by Welsh Ministers and by the Department of the Environment respectively.

Further information on the requirements of the Clean Air Act can be found here: https://www.gov.uk/smoke-control-area-rules. Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements.

The HWAM 4600 IHS stoves detailed below have been recommended as suitable for use in smoke control areas when burning wood logs.

Appliances recommended as suitable for use in Smoke Control Areas :

- HWAM 4620c/4620m IHS
- HWAM 4640c/4640m IHS
- HWAM 4640c/4640m IHS with soapstone cladding
- HWAM 4640c/4640m IHS with natural stone cladding
- HWAM 4660c/4660m IHS
- HWAM 4660c/4660m IHS with soapstone cladding
- HWAM 4660c/4660m IHS with natural stone cladding

Refuelling on to a low fire bed

If there is insufficient burning material in the firebed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke.

Fuel overloading

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

Operation with door left open

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

HWAM® SmartControl™

Congratulations on your new wood-burning stove complete with a HWAM® SmartControl™
We are pleased that you have chosen a HWAM woodburning stove and confident that it will give you much pleasure.

The HWAM® SmartControl™ is a digital control of the combustion in your new wood-burning stove. The purpose of the HWAM® SmartControl™ is to control the combustion in an environmentally optimal and economically efficient way, with a view to generating greater user comfort.

The HWAM® SmartControl™ is a new patented technology, which electronically adjusts the air supply to the combustion chamber. Your new wood-burning stove continually measures the temperature and the oxygen levels of the combustion. Moreover, it is programmed to supply oxygen to the fire through three important air inlets in the right amount, and at the right time and place in the combustion chamber. By downloading a free app for your smartphone or tablet, you can use the app among other things: to set the thermostat to the desired room temperature level, choose time for night-time reduction and keep your stove updated. The app also gives you current information on burning in the stove. See details in separate manuals for the app IHS Smart Control™ or in the Quickguide.

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Your new wood-burning stove and the HWAM® SmartControl™ will ensure the cleanest possible combustion as well as a good fuel economy, regardless of external conditions such as the type of firewood used, the chimney, the user's experience, and other external circumstances.

The HWAM® SmartControl™ consists of the following components:

- Air box: the Air box contains a printed circuit board/software, as well as three motors and dampers that control primary, secondary, and tertiary combustion air. The fresh air system can be mounted on the Air box to the back or in the bottom.
- Two sensors: a temperature sensor and an oxygen sensor transmit information from the wood-burning stove to the Air box.
- Room temperature sensor: The room temperature sensor with batteries communicates with the HWAM® SmartControl™ via a wireless connection. It should be placed so it does not have direct radiant heat from the stove. Note that the maximum distance between stove and room temperature indicator is about 4-5 metres. The range is reduced if there are walls or other obstructions between the stove and the room temperature indicator.
- Electricity supply: from the Air box to the nearest wall socket.
- App "IHS Smart Control™: The app can be downloaded free from the App Store or Google Play Store. See details in separate manuals for the app IHS Smart Control™ or in the Quickguide.

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INSTALLATION

In general
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. 7-20 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. Remember to consider that the stove must be connected to power.

Technical measures and data

Test results from nominal test EN 13240	
Nominal heating effect	8,0 kW
Flue gas temperature EN 13240 measurement point	278°C
Flue gas temperature measured in the outlet socket	334°C
Exhaust gas flow	6,6 g/s
Efficiency	81 %
Annual efficiency (EcoDesign)	71 %
PM	29 mg/m^3
OGC	84 mg/m^3
NO_2	108 mg/m^3
CO at 13% O_2	750 mg/m^3
CO at 13% O_2	0,06 %
Energy efficiency index	107
Energy efficiency class	A+
Test result based on NS 3058	
Particle emissions	1,88 g/kg

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

Model	Weight	Height	Width	Depth
HWAM 4620c/4620m	119/117 kg	84.8 cm	63.0 cm	40.6 cm
HWAM 4640c/4640m	133/131 kg	114.3 cm	63.0 cm	40.6 cm
HWAM 4640c/4640m with soapstone cladding	197/195 kg	114.3 cm	63.0 cm	40.6 cm
HWAM 4640c/4640m with natural stone cladding	182/180 kg	114.3 cm	63.0 cm	40.6 cm
HWAM 4660c/4660m	153/151 kg	138.8 cm	63.0 cm	40.6 cm
HWAM 4660c/4660m with soapstone cladding	224/222 kg	138.8 cm	63.0 cm	40.6 cm
HWAM 4660c/4660m with natural stone cladding	209/207 kg	138.8 cm	63.0 cm	40.6 cm
Heat storage stones HWAM 4660	45 kg			

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 45,0 cm wide.

Distance to combustible materials

Min. distances - uninsulated flue gas pipe: (drawing A)	**HWAM 4600 with steel cladding**	**HWAM 4600 with stone cladding**
1. Recommended for brick wall, back	10 cm	10 cm
2. Recommended for brick wall, side	10 cm	10 cm
1. For combustible wall, back	20 cm	20 cm
2. For combustible wall, side	35 cm	45 cm
1.To combustible wall, corner installation	12 cm	15 cm
3. Distance to furnishings in front	130 cm	140 cm

Min. distances - insulated flue gas pipe: (drawing A)	**HWAM 4600 with steel cladding**	**HWAM 4600 with stone cladding**
1. Recommended for brick wall, back	7 cm*	7 cm*
2. Recommended for brick wall, side	7 cm*	7 cm*
1. For combustible wall, back	7 cm*	7 cm*
2. For combustible wall, side	40 cm	45 cm
1.To combustible wall, corner installation	12 cm	15 cm
3. Distance to furnishings in front	130 cm	140 cm

*We recommend 10 cm to facilitate service on the HWAM® SmartControl™.

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

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 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.

Changing the smoke outlet from top outlet to back outlet (HWAM 4620/4640 IHS) (Drawing F)

1. Lift the top plate (2) off the stove.
2. Remove the rear plate (3) by loosening the two screws (4). The rear plate has a cut-out for the flue pipe. Cut out the plate (5) within this cut-out.
3. The heat shield has a cut-out for the flue pipe. Cut out the plate (6) within this cut-out.
4. Remove the cover plate (7) on the rear of the stove (behind the cut-out plate in the heat shield) by removing the three screws (8).
5. Remove the smoke ring (9) above the combustion chamber by removing the three screws (10).
6. Place the smoke ring (9) in front of the flue outlet hole on the rear of the stove and affix using the three screws (10).
7. Place the cover plate (7) so that it closes the flue outlet on top of the combustion chamber (where the smoke ring was just removed) and affix using the three screws (8).
8. Place the rear plate (3) on the guide taps (11) on the rear side of the stove's base plate and affix the rear plate using the two top screws (4).
9. Lie the top plate (2) on the stove.
10. Place the cast-iron or stone top cover (12) in the hole in the top plate.

An accessory top cover is available to cover the hole in the stove top plate if the smoke outlet is connected at the rear of the stove.

Changing the smoke outlet from top outlet to back outlet (HWAM 4660 IHS) (Drawing F)

1. Remove the heat storage compartment front (1) by lifting the front and pulling away from the stove.
2. Lift the top plate (2) off the stove.
3. Remove the rear plate (3) by loosening the two screws (4). The rear plate has a cut-out for the flue pipe. Cut out the plate (5) within this cut-out.
4. The heat shield has a cut-out for the flue pipe. Cut out the plate (6) within this cut-out.
5. Remove the cover plate (7) on the rear of the stove (behind the cut-out plate in the heat shield) by removing the three screws (8).
6. Open the metallic tabs (13) and take the wires out.
7. Pull the lambda sensor coupling (14) free of the wire fastener (15).
8. Remove the temperature monitor (16) from the smoke ring (9).
9. Remove the smoke ring (9) above the combustion chamber by removing the three screws (10).
10. Place the smoke ring (9) in front of the flue outlet hole on the rear of the stove and affix using the three screws (10).
11. Reattach the temperature monitor (16) in the smoke ring, leading the sensor about 3 cm into the smoke ring.
12. Reposition the lambda sensor coupling (14) in the wire fastener (15).
13. Fix the two wires by closing the metallic tabs (13) again.
14. Place the cover plate (7) so that it closes the flue outlet on top of the combustion chamber (where the smoke ring was just removed) and affix using the three screws (8).
15. Place the rear plate (3) on the guide taps (11) on the rear side of the stove's base plate and affix the rear plate using the two top screws (4).
16. Lie the top plate (2) on the stove.
17. Place the cast-iron or stone top cover (12) in the hole in the top plate.
18. Re-attach the front (1) to the heat storage compartment.

An accessory top cover is available to cover the hole in the stove top plate if the smoke outlet is connected at the rear of the stove.

Connection to chimney
All the stoves have both back and top smoke outlet.
that can be connected to an approved steel chimney on top or directly out at the rear to a 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 C)
C1: Top smoke outlet C2: Back outlet
1. Steel chimney.
2. Flue gas elbow. Fits into smoke flue socket.
3. Brick-built jamb of flue.
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 outlets of the HWAM stove.
8. Cover plate in the external rear plate – break off if a rear outlet is required.
9. Cover screwed in position: secure it to the top plate with screws if a back outlet is required.
10. Smoke bushing: to be screwed to the back of the stove if a back outlet is required.
11. Adjusting damper in smoke pipe.
12. Cleaning hatch.
13. Smoke pipe to back outlet.
14. Loose cast iron cover: to be placed on the top plate when there is a back outlet.

Fitting the loose parts
Before the stove is installed, you must ensure that all loose parts are fitted correctly. 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 the stoves (Drawing B)
1. Bottom smoke shelf. Must rest on the steel rail at the back of the combustion chamber.
2. Top smoke shelf. Must rest on the bottom smoke shelf.
3. The steel smoke guide plate is in two parts. Each half hangs on a hook under the top plate and is equipped with two pins (7) that serve as protection during transportation. Remember to remove the two pins before you start using the stove.
4. Back outlet. Closed at the factory using a plate affixed with screws. The flue outlet is thus concealed behind the rear plate.
5. Removable rear plate. Must always be installed if the stove is next to a flammable wall.
6. Loose heat shield under the ash pan.

Connection of the HWAM® SmartControl™
Before using the stove it must be connected to power. See the instructions in the separate manuals for the app IHS Smart Control™ or in the Quickguide in order to connect to stove with the app and the wireless room temperature sensor.

Chimney
TThe 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 in the Air box for the so-called glass pane rinse which keeps the glass free of soot, and 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 (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.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.

Even a good chimney can function badly if it is not used correctly. Similarly, a bad chimney may function well if used correctly.

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 and overheating, the HWAM® SmartControl™ will enter a security mode and automatically adjust all dampers in the Air box, effectively quenching the fire. Do not open the door for the burning chamber, since that might cause the fire to rekindle. Contact the fire brigade. After a fire, the stove should be checked by a chimney sweep before use.

Your first heating session
The lacquer will be fully hardened after the stove has been used, and the door and the ash pan 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 12-18%. 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.

Recommended dimensions
The dimensions of the fuel are important to good combustion. The dimensions should be as follows:

Fuel type	Length in cm	Diameter in cm
Wood for kindling a fire (finely chopped)	30-45	2-5
Chopped wood	30-45	7-9

Special fire lighting guide for stoves with stone cladding
Stone are natural products which need to adjust to temperature changes. We recommend following the procedure below:

1. The first stoking

Open the door. Place two pieces of wood (5-8 cm in diameter) horizontally in the bottom of the combustion compartment (corresponding to 1-1,5 kg). Place 6-10 pieces of kindling randomly on top. Place four firelighters between the top layer of kindling. Light up the fire-lighters and close the stove door. Set the temperature level to level 1. Let the fire burn out and do not restoke even if there is a restoking alarm. When the fire has died out completely, the door must be opened and stay open while the stove cools down to room temperature.

2. The second stoking

Open the door. Place two pieces of wood (5-8 cm in diameter) horizontally in the bottom of the combustion compartment (corresponding to 1-1,5 kg). Place 6-10 pieces of kindling randomly on top. Place four firelighters between the top layer of kindling. Light up the fire-lighters and close the stove door. Set the temperature level to level 2. When there is a restoking alarm, you should restoke. Place 2 pieces of new firewood (up to 1.2 kg each) with a diameter of approx. 7-9 cm in the combustion chamber. Let the fire burn and let the stove cool down to room temperature before the next lighting.

3. The third stoking

Repeat the second stoking. Set the temperature level to level 3. Let the fire burn and allow the stove to cool down after the fire has died out.

Lighting the stove

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.

Open the door. Place two pieces of wood (5-8 cm in diameter) horizontally in the bottom of the combustion compartment (corresponding to 1-1.5 kg). Place 6-10 pieces of kindling randomly on top. Place 4 fire-lighters in between the top layers of kindling. Light up the fire-lighters and close the stove door. Select the desired room temperature level.

As soon as the door is opened the HWAM® SmartControl™ is activated. If lighting up does not occur within 15 minutes, the HWAM® SmartControl™ will automatically go back to standby and the dampers in the Air box will be closed.

If the smoke temperature does not reach a high enough level after lightning or stoking, the app IHS Smart Control™ and the wireless room temperature sensor emit a restoking alarm, even if there is still unburned wood and flames in the combustion chamber. The restoking alarm is emitted to make you aware that the fire needs more energy. Restoking with small pieces of kindling wood can often provide a more rapid and sufficient temperature rise.

The HWAM® SmartControl™ closes all three air dampers in the Air box when the stove is in standby mode. This prevents hot air from the room to enter the chimney (heat loss). This might on the other hand result in a very cold chimney when the stove is lit. In certain cases it is necessary to assist the draught in the chimney by opening the door to the burning chamber 3-5 minutes before lightning the stove. Read more on www.hwam.com about the function of the chimney.

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® SmartControl™ 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!

The Thermostat Function

The HWAM® SmartControl™ will in general have an environmentally friendly combustion and adapt to the desired room temperature. The thermostat function is designed as a radiator valve. The user enters a desired heat level, which suits the room in which the stove is installed. When the thermostat is set at a heat level, the control function will adapt to this temperature.

- If the room temperature is lower than the desired heat level, the HWAM® SmartControl™ increases the flue gas temperature in order to increase the heat radiation from the stove.
- If the room temperature is higher than the desired heat level, the HWAM® SmartControl™ decreases the flue gas temperature, thereby giving the layer of embers as long a life as possible before restoking. This will reduce the heat radiation from the stove and facilitate restoking without having to light up the fire anew. If the room temperature drops below the desired level, the ember phase will be shortened, and the HWAM® SmartControl™ will activate a restoking alarm. The HWAM® SmartControl™ will signal that a restoking is due at the flue gas temperature of 180° C, and at 100° C the HWAM® SmartControl™ will enter standby mode and all dampers will close.
- Should the room temperature be much lower than the desired heat level, the HWAM® SmartControl™ increases the flue gas temperature. If a satisfactory increase in temperature does not occur, the control will activate a restoking alarm, since it expects that more wood is needed to increase the heat level in the room.
- If the room temperature after a new restoking still does not reach the desired level, the water content in the firewood may be too high or the draught in the chimney too weak. The HWAM® SmartControl™ always strives for a sufficiently high flue gas temperature to ensure an environmentally friendly combustion.

Stoking

When alarm for restoking sounds the stove is ready for restoking. The alarm for restoking will come via the room temperature sensor or the acquired remote control. The app IHS Smart Control™ will also come with a notification that it is time for restoking if the app is opened. For more information on the app, see details in separate manuals for the app IHS Smart Control™ or in the Quickguide.

The amount of wood that is used for restoking should be adjusted based on the current heat demand. In terms of combustion technique, you should always stoke the stove with at least two pieces of wood at a time even if you only use a small amount of wood. You can also choose not to restoke. After a while the stove will then automatically go in stand-by mode.

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

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.

Operating the heat compartment damper

There is a damper at the back of the stove between the top plate and the heat compartment that opens and closes the flow of convection air in the heat compartment. The supply of convection air can be opened by moving the damper to the left and closed by moving the damper to the right.

To store heat in the heat storage stones in the heat storage compartment as quickly as possible, it is recommended that the convection vent be kept closed while the fire is lit.

With the convection vent closed, the heat storage compartment retains the heat stored in the heat storage stones for the longest possible duration. If the vent is opened, the heat stored in the stones in the heat storage compartment will be released into the room as quickly as possible.

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 maximum allowed amount of fuel per hour is:
Wood: 3,1 kg

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, the glass may turn white, for example. If the flue gas temperature exceeds 580°C, the HWAM® SmartControl™ will revert to safety adjustments and automatically turn down the air valves to avoid overheating. When the temperature is reduced to 450°C, the normal functions apply again. The stove has been approved for intermittent use.

Typical re-firing interval
Typical re-firing interval at nominal performance
Wood: 45 min (1.8 kg)

Prolonged burning time
You achieve the slowest combustion by setting the desired room temperature at level 0. At this level the combustion takes place with the lowest possible flue gas temperature and the ember phase will be drawn out as long as possible.

How to achieve the best combustion
The HWAM® SmartControl™ is purposely designed to generate the cleanest and the most economical combustion. A good combustion is achieved when the fire gets the right amount of oxygen supply at the right time and place in the combustion chamber. The HWAM® SmartControl™ allows for variations in external circumstances. Nevertheless, it is important to use clean and dry wood (humidity approx. 12-18%). Read more on www.hwam.com.

MAINTENANCE

Cleaning
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 remember, only when the stove is cold. Do not use water, spirit or any other kind of cleaner, as this will damage the lacquer.

Once a year, the stove should be thoroughly serviced. The combustion chamber should be cleared of ashes and soot.
The hinges and the closing hook must be greased with liquid copper fat spray (heat-resistant up to 1100 degrees Celsius), see drawing G. Lift the door approx. ½ cm and spray copper fat onto the hinge leaf.

Service inspection
Your stove should be given a thorough, preventive inspection once every two years. This includes:
- Thorough cleaning of the stove.
- Checking gaskets. Replace gaskets if they are not intact or are no longer soft.
- Checking and/or replacing insulation material.
- Checking the combustion chamber base.
- Use copper grease for hinges and locking hooks (see drawing G).

All service checks must be performed by an authorised fitter. Use only original spare parts

Inside cleaning
Unless the safety fittings for transportation (2 split pins) have not already been removed, start by removing the split pins (drawing B, 7). Remove the top smoke shelf and the two-part steel smoke guide plate from the stove before cleaning (Drawing E):
- Lift the smoke shelf (1) out of the combustion chamber.
- Unhook each half of the smoke guide plate (2) from the hook (3) under the top plate.

Ashes
It is easiest to empty the ash pan by pulling a plastic bag over it, turning it upside down and then carefully removing it from the bag. Ashes are disposed of via the domestic waste 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.

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

Maintenance Alarms
If a maintenance alarm goes off, you can continue using the wood-burning stove, but contact your retailer as soon as possible. Your stove could be affected by impure combustion.

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 of 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.

Safety Alarms
In case the safety alarms go off, you must not use the stove. Contact your retailer as soon as possible.

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 links:
www.hwam.com/dop/4600ihs

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

Model	HWAM 4620 IHS, HWAM 4640 IHS, HWAM 4660 IHS
Direct heat output [kW]	8,0
Indirect heating functionality	No
Indirect heat output [kW]	-
Type of heat output/room temperature control	With electronic room 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	71
Emissions	**mg/m^3 (13% O_2)**	
Particulate matter (PM)	29	
Organic gaseous compounds (OGC)	84	
Carbon monoxide (CO)	750	
Nitrogen dioxid (NO_2)	108	

Characteristics when operating with the prefered fuel only	
Nominal heat output [kW]	8,0
Electric power consumption nominal heat output [kW]	0,015
Electric power consumption minimum heat output [kW]	0,012
Electric power consumption standby mode [kW]	0,0015
Useful efficiency at nominal heat output [%]	81
Energy efficiency index	107
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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