CastTec

POLARIS INTEGRA INSET ARCH ECO

Multi-fuel stove

Ref No: I17.
Version 02 (29.08.2024)

Installation and Operating Instructions

The Polaris Arch Inset Eco and the optional Polaris Integra Arch Eco cast iron fireplace must be installed by a suitably qualified engineer. Instructions must be given to the user when installation is completed, and the installer must instruct user of the correct use of the appliance and control operation.





The Polaris Arch Inset Eco and the optional Polaris Integra Arch Eco cast iron fireplace are manufactured for Cast Tec Ltd. East Side, Tyne Dock, South Shields NE33 5SP.
Website: www.casttec.co.uk - Tel. 0191 4974280

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THE CLEAN AIR ACT 1993 AND SMOKE CONTROL AREAS

The CastTec Polaris Arch Inset Eco multi-fuel stove has been recommended for exemption from UK smoke control areas when burning wood. Note that authorised fuels can also be used in a Smoke Control Area, details of authorised fuels can be found at https://smokecontrol.defra.gov.uk/fuels.php.

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 a 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. 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 authorised 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 CastTec Polaris Arch Inset Eco has been recommended as suitable for use in smoke control areas when burning wood logs and authorised fuels. The CastTec Polaris Arch Inset Eco must be fitted with a permanent stop to prevent closure of the secondary air control beyond 50% open.

INSTALLATION ESSENTIALS

The installation of a fireplace or stove must be in accordance with local codes and regulations in each country and other national and European standards that apply.

Your Polaris Arch Inset Eco stove must be installed by a Competent Person registered with a Government Approved Competent Person's Scheme.

In the UK, HETAS is a qualified body that can assist with general advice, regulation, installation, type of fuel usage and can provide a list of registered Competent Persons: Website is www.hetas.co.uk.

PRE-INSTALLATION CHECKS

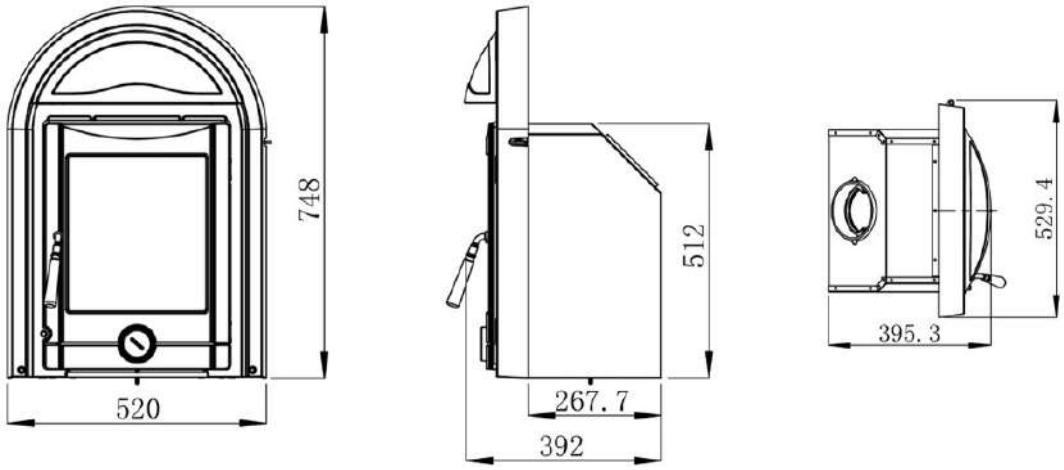
Installation of a fireplace must be according to local codes and regulations in each country. All local regulations, including those which refer to national and European standards, must be observed when installing the product.

Both an installation manual with technical data and a manual on general use and maintenance are enclosed with the product. The installation can only be used after it has been inspected by a qualified inspector. A name plate of heat-resistant material is affixed to the product. This contains information about identification and documentation for the product.

TECHNICAL INFORMATION

Polaris Arch Inset Eco Diagram

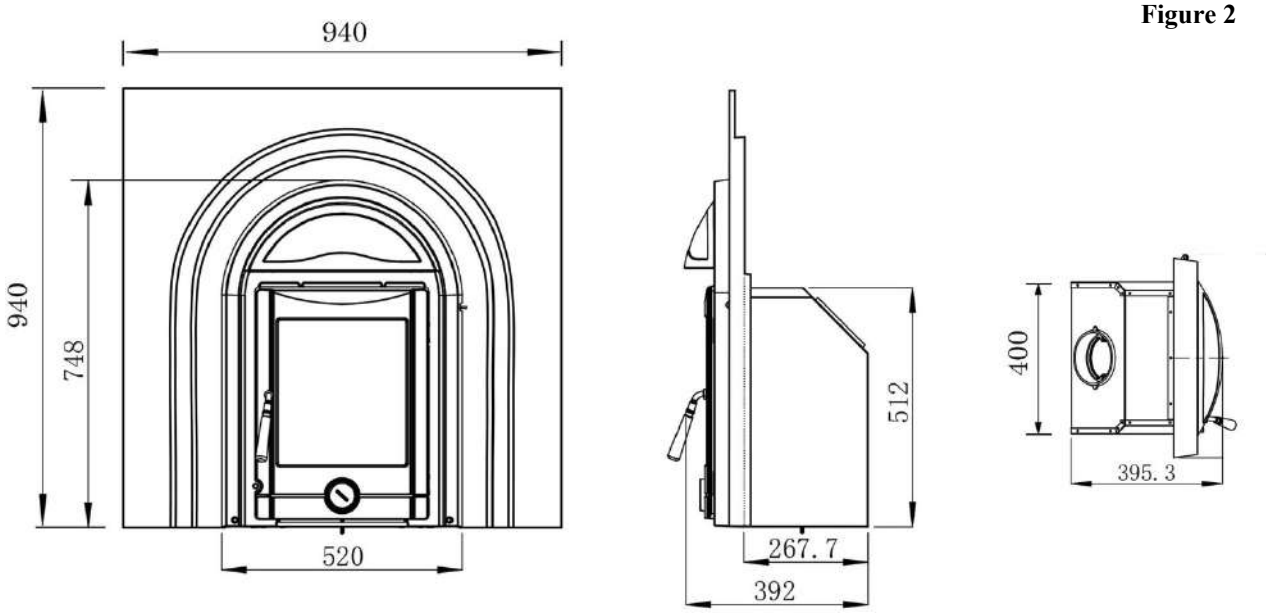
Figure 1



Polaris Integra Arch Eco Diagram

The CastTec Polaris Integra is a cast-iron insert that integrates with the Polaris Arch Inset Eco to create an efficient traditional fireplace. (See Figs. 2 and 3)

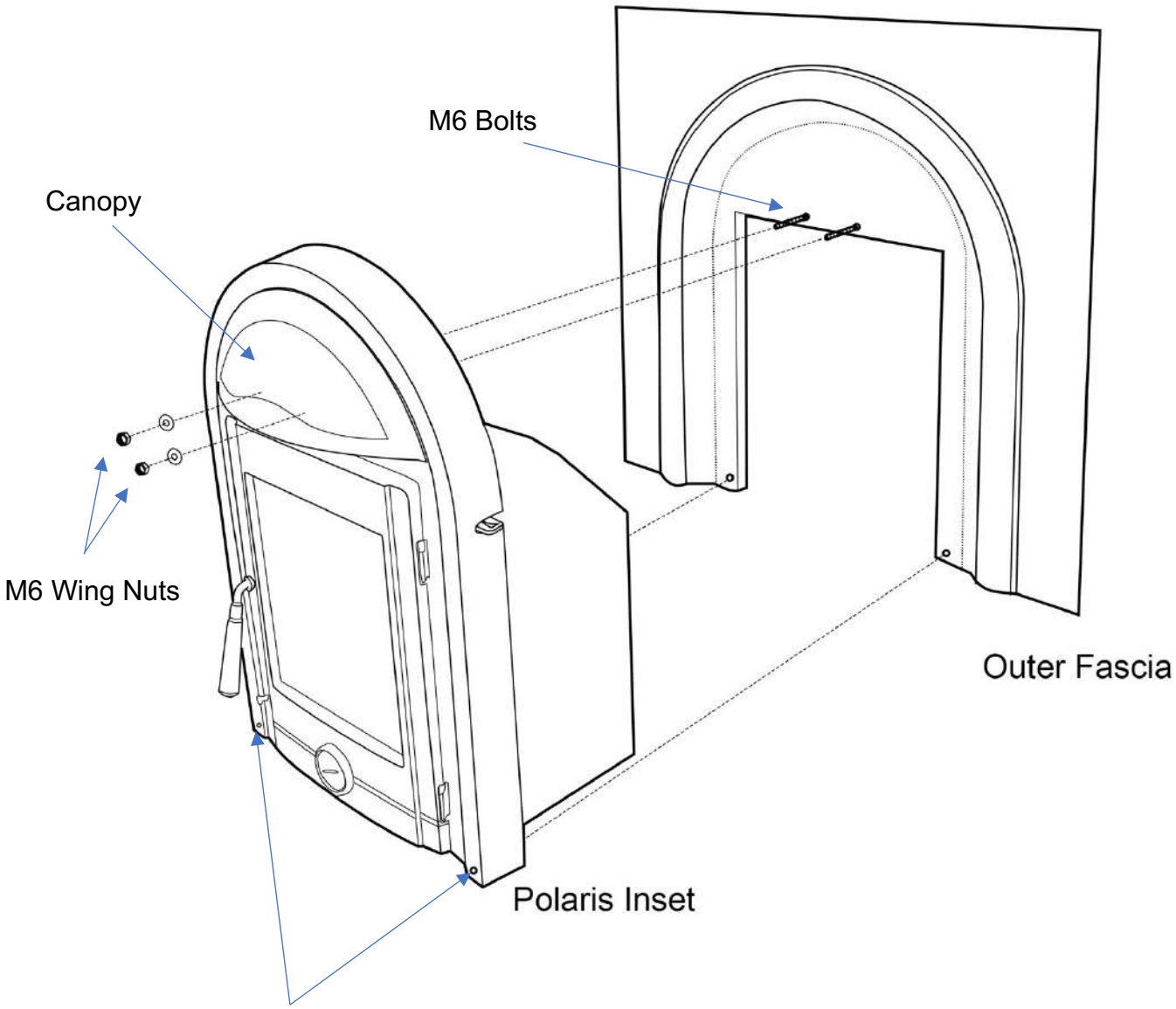
Figure 2



Polaris Integra Arch Eco Assembly

Figure 3

2 x M6 wing nuts and washers accessed behind the canopy.



2 x M6 countersunk bolts screw into Outer Fascia.

TECHNICAL DATA ACCORDING TO NEN EN 13229:2001 and NEN EN13229 - A2: 2004		
	WOOD	ANTHRACITE
STOVE	Polaris Arch Inset Eco	
FUEL	Multi-Fuel	
NOMINAL HEAT OUTPUT	4.6 kW	4.8 kW
ENERGY EFFICIENCY	79.2 %	76.8 %
MINIMUM FLUE SIZE	125 MM	
DIST. COMBUSTIBLES	Side: 350 MM Above: 600 MM	
LOG SIZE (APPROX)	22 x 10 x 5	2” - 3”
FLUE OUTLET	Top	
FLUE PIPE DIMENSION	125 MM	
RECOMMENDED CHIMNEY DRAUGHT	12 Pa	
OPERATIONAL MODE	Intermittent*	
MATERIAL	Cast-iron	
FINISH	High Temp. Resistance Paint	
WEIGHT	75 kg	

**Intermittent combustion in this context means normal use of the STOVE,*
i.e., fuel is added as soon as the fuel has burnt down. This is not intending for overnight burning.

INSTALLATION

Installing this stove

The stove and chimney installations MUST comply with all current National and Local Building Regulations; your approved dealer or your local building control officer can advise regarding this. Ultimately, it is you and your installer who is responsible that the installation complies.

Pre-installation

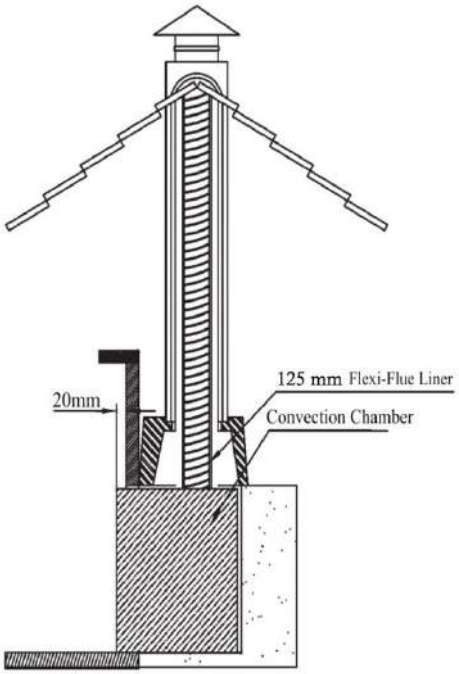
After removing the stove from the packaging, open the fire door and remove the loose packing. Prior to installation all the internal components of the stove are removed to gain access to fixings and to make it lighter for installation.

A. Remove the refractory fire bricks, these bricks are loose and just need to be lifted clear of the grate support plate before they can be removed.

B. To remove the loose baffle, lift the front edge until it hits the top and then slide it forward. Then drop the rear edge and the baffle will slide down. To remove the fixed baffle, loosen the two screws and slide it forwards, it will then drop down.

C. Next, remove the riddle knob from the riddle bar positioned at the front left of the stove. Remove the inner riddling grate and bar before pushing up the outer grate from underneath. This will allow access to four M6 fixings which will attach the stove to the outer casing. Remove the 4 fixings, allowing the insert stove to be removed from the external casing.

Figure 4



Chimney

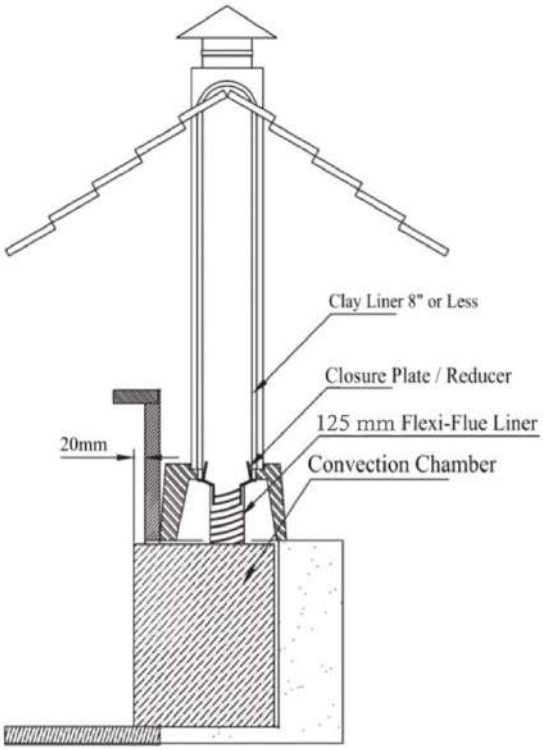
THIS PRODUCT IS SUITABLE FOR CHIMNEY INSTALLATION ONLY.

The stove is a radiant room heater with convection chamber and must be connected to a chimney of the proper size and type. The chimney must have a cross sectional area of at least 124cm2 or a diameter of at least 125mm. Never connect to a smaller size chimney. Do not connect to a chimney serving another appliance. Minimum chimney height 4.5 meters from floor on which stove is installed.

It is recommended that a flue liner of diameter 125mm be used to line the chimney, the liner should be approved for use with solid fuel. (See Fig. 4.)

It is permitted to connect using a closure plate and a connection piece from the stove to the closure plate (See Fig. 5.), provided that the chimney is of sound construction with no leaks or cracks, a clay flue liner has been used that can withstand up to 1000oC, the clay liner has a diameter no greater than 200mm.

Figure 5



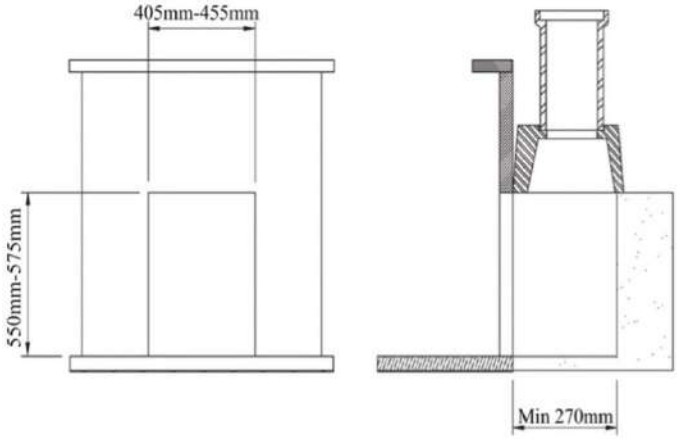
ALL FLUE INSTALLATIONS ARE THE RESPONSIBILITY OF THE CUSTOMER.

The stove must be connected to a chimney with a minimum continuous draught of 12 Pascal's (.05" WG). Poor draught conditions will result in poor performance.

FITTING INSTRUCTIONS (POLARIS ARCH INSET ECO ONLY)

Step 1. Prepare the fireplace area with fireback or milner brick removal. Ensure the opening is suitable for fitting of the insert stove opening required, i.e., remove fire surround trim if fitted. (See Fig. 6.)

Figure 6



Step 2. Ensure the floor area is level with the hearth, this area needs to be level as the insert fire is screw fixed to the floor.

Step 3. Lay the external casing into the opening and position so that the front edge protrudes 20mm past the front edge of the opening.

Step 4. Mark the drill location and drill the holes using a 4.5mm drill bit. Fix the casing to the floor using the self-tapping screws provided.

Step 5. Lift the stove into the external casing. Remove all internal parts as per pre-assembly instructions prior to lifting it. The stove can be lifted into the casing approximately 125mm first and then it can be pushed into the final position while taking care to lift the front edge to preserve the hearth.

Step 6. Drop the flexi flue liner with adaptor end attached into the fire opening ready to connect to the appliance.

Step 7. Lay the sealing gasket on to the flue spigot, and then fit the flue spigot to the end of the flexi flue liner using the 2 grub screws provided.

Step 8. Then using the M6 screws secure the stove to the convection chamber. Push the insert stove against the fireplace before fully tightening these bolts.

Step 9. Reach up through the stove and pull the stove collar down and secure the flue collar to the stove with the two flue collar's bolts. (See fig. 7.)

Step 10. Complete the installation of the flexi liner at the top of the chimney in accordance with the manufacturer's instructions.

FITTING INSTRUCTIONS (POLARIS INTEGRA ARCH ECO)

Step 1. Prepare the Fireplace area with the fireback or milner back removed. Ensure the opening is a suitable size to accommodate the Polaris Inset. (See Fig. 6.)

Step 2. Ensure the rear hearth floor area is level with the front hearth, this area will need to be level.

Step 3. Build the 'Outer Facia' cast iron back panel against the chimney wall, bridged off the wall as required with non- combustible packing to match the chosen surround rebate, the edges of the cast iron outer fascia can be drilled and countersunk to allow secure wall fixing, Ensure the surround hides the fixing holes! Cement flaunch the outer edges of the cast iron back panel to ensure an airtight fit against the chimney wall. Seal the inner edges of the "Outer Fascia" in preparation of the stove insertion.

Step 4. Drop the flexi flue liner with adapter end attached into the fire opening ready to connect to the appliance.

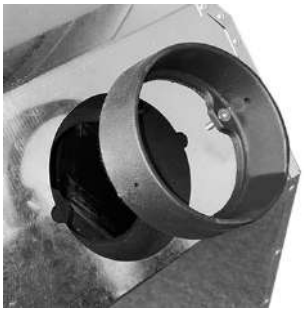
Step 5. Strip out the inside components of the Polaris Arch Inset Eco to gain access to remove the spigot, then attach this to the flexi liner/adapter end.

Step 6. Push the Polaris Arch Inset Eco fascia into the back panel and secure with 2 x wing nuts behind the canopy and 2 x counter sunk bolts at the base. (See fig. 3.)

Step 7. Gain access from inside the Polaris Arch Inset Eco stove then reach up through the stove and pull the stove collar down and secure the flue collar to the stove with the 2-x flue collar fixing bolts. (See fig. 7.) (Flue Liner not shown for illustration purposes)

Step 8. Replace The inside components and complete the installation of the flexi liner at the top of the chimney in accordance with the manufacturer's instructions.

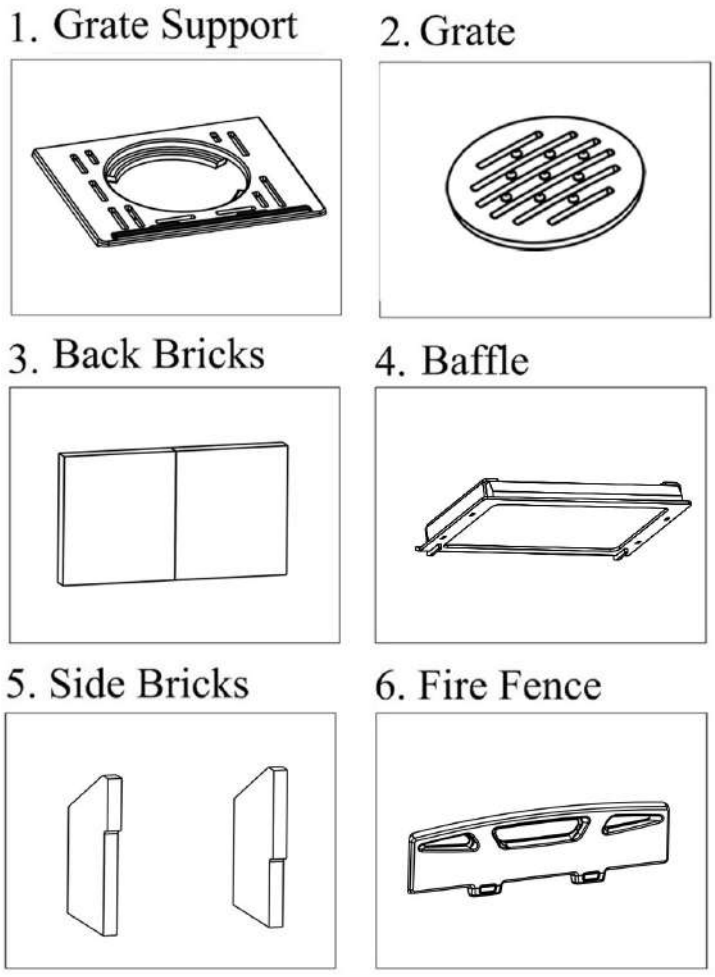
Figure 7






FIT THE INDIVIDUAL COMPONENTS IN THE FOLLOWING ORDER

Figure 8



1. Grate Support
Tilt the grate support up on one side and pass it carefully through the door opening.

2. Riddle Grate
The grate simply lays into the grate support, but care needs to be taken that the riddling bar will rest in the middle of the riddle connecting plate.

With the riddle grate in position, and the riddle bar located through the hole on the front left of the stove, then connect the cylindrical handle to the end of the riddle bar and tighten with the Allen key provided.

3. Back Bricks
Lay the back bricks in as shown.

4. Baffle
Lay the baffle on the back brick, then hold it meanwhile lay the left and right side brick.

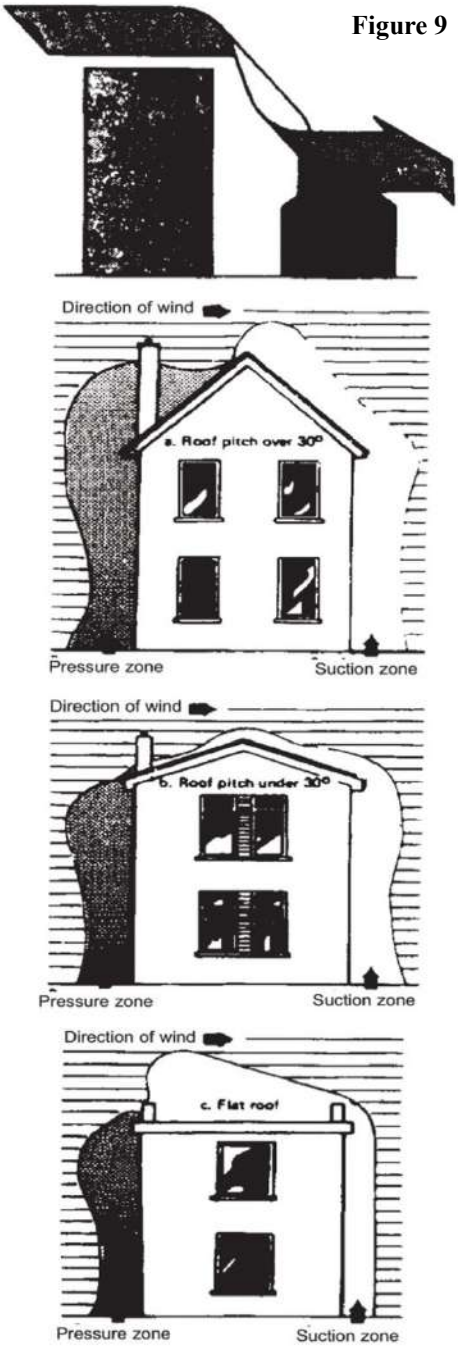
5. Side Bricks
Lay the side and back bricks in as shown.

6. Fuel Retainer
Lay the fuel retainer into the slots provided ensuring that they slope from front to back so that no embers can fall out through the fuel retainer.

DOWN DRAUGHTS

However well designed constructed and positioned, the satisfactory performance of the flue can be adversely affected by down draught caused by nearby hills, adjacent tall buildings or trees. These can deflect wind to blow directly down the flue or create a zone of low pressure over the terminal. A suitable anti-down draught terminal or cowl will usually effectively combat direct down blow but no cowl is likely to prevent down draught due to a low pressure zone. (See Fig.9.)

Figure 9



VENTILATION AND COMBUSTION AIR REQUIREMENTS

This appliance is rated less than 5kW, therefore there is no mandatory requirements for additional air unless a flue draught stabiliser is fitted then the air requirement is 15 cm². However, we suggest that it is advantageous to provide an air supply into the room.

When calculating combustion air requirements for this appliance use the following equation: 550 mm². per each kW of rated output above 5 kW should be provided, where a flue draught stabiliser is used the total free area shall be increased by 300 mm² for each kW of rated output. If there is another appliance using air fitted in the same or adjacent room, it will be necessary to provide an additional air supply.

All materials used in the manufacture of air vents should be such that the vent is dimensionally stable, corrosion resistant, and no provision for closure.
The effective free area of any vent should be ascertained before installation. The effect of any grills should be allowed for when determining the effective free area of any vent.

Air vents direct to the outside of the building should be located so that any air current produced will not pass through normally occupied areas of the room.

An air vent outside the building should not be located less than the dimensions specified within the Building Regulations and B.S. 8303: Part 1 from any part of any flue terminal. These air vents must also be satisfactorily fire proofed as per Building Regulations and B.S. 8303: Part 1.

Air vents in internal walls should not communicate with bedrooms, bedsits, toilets, bathrooms or rooms containing a shower.

Air vents traversing cavity walls should include a continuous duct across the cavity. The duct should be installed in such a manner as not to impair the weather resistance of the cavity.

Joints between air vents and outside walls should be sealed to prevent the ingress of moisture. Existing air vents should be of the correct size and unobstructed for the appliance in use. If there is an extraction fan fitted in adjacent rooms where this appliance is fitted, additional air vents may be required to alleviate the possibility of spillage of products of combustion from the appliance/flue while the fan is in operation. Refer to B.S. 8303 Part 1.

Where such an installation exists, a test for spillage should be made with the fan or fans and other appliances using air in operation at full rate, (i.e. extraction fans, tumble dryers) with all external doors and windows closed.

If spillage occurs following the above operation, an additional air vent of sufficient size to prevent this occurrence should be installed.

PERMANENT AIR VENT EXTRACTOR

The stove requires an adequate air supply in order for it to operate safely and efficiently. The installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion and/or ventilation air. This air vent should not under any circumstances be shut off or sealed.

EXTRACTOR FAN

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

COMMISSIONING & HANDOVER

On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, when a small fire may be lit and checked to ensure the smoke and fumes are taken from the stove up the chimney and emitted safely to the atmosphere. Do not run at full output for at least 24 hours.

On completion of the installation and commissioning ensure that the operating instructions for the stove are left with the customer. Ensure to advise the customer on the correct use of the appliance with the fuels likely to be used on the stove and warn them to use only the recommended fuels for the stove.

Advise the user what to do should smoke or fumes be emitted from the stove. The customer should be warned to use a fire guard to BS 6539 in the presence of children, aged and/or infirm persons.

LOCATION

There are several conditions to be considered in selecting a location for your stove.

a. This product is designed to be installed into a fireplace.

b. Allowances for proper clearances to combustibles.

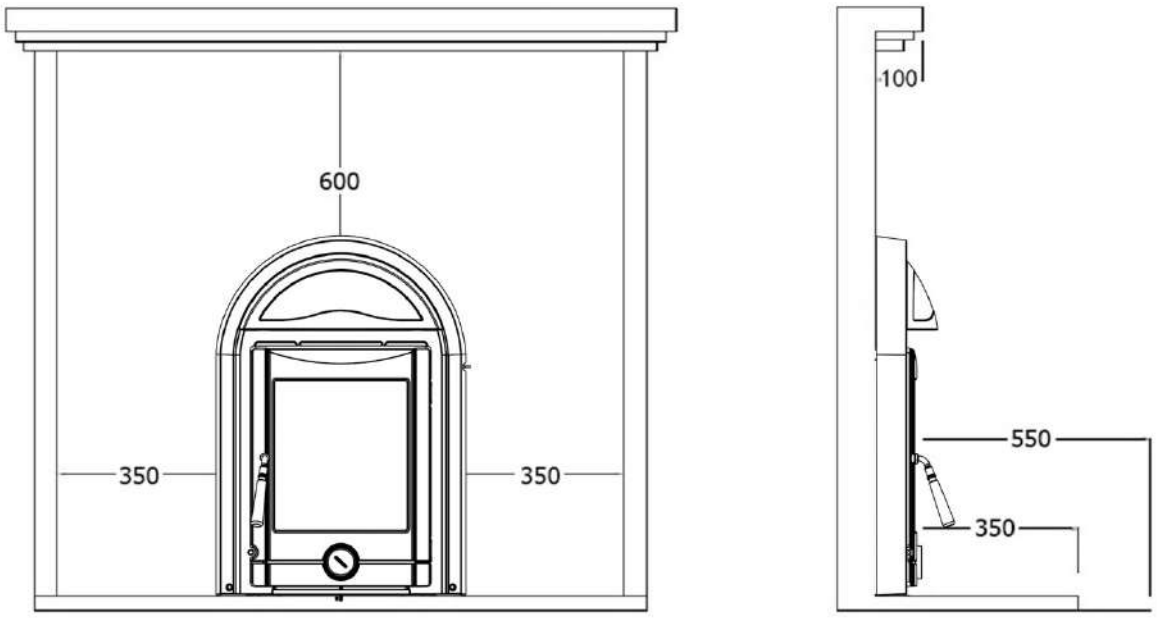
CLEARANCE TO COMBUSTIBLES

This appliance must be installed in a recess, the recess should not contain any combustible materials. Wooden battens and plaster board should not be used within the clearance to combustibles. The minimum clearance to combustibles required is 600mm to the top, 350mm to the sides, 550mm directly to the front and 350mm to any combustible flooring.

If the mantelpiece protrudes further than 100mm from the fireplace, then it will be necessary to have further clearance to the top of the stove. The distance the mantle protrudes past the 100mm should be added to the clearance.

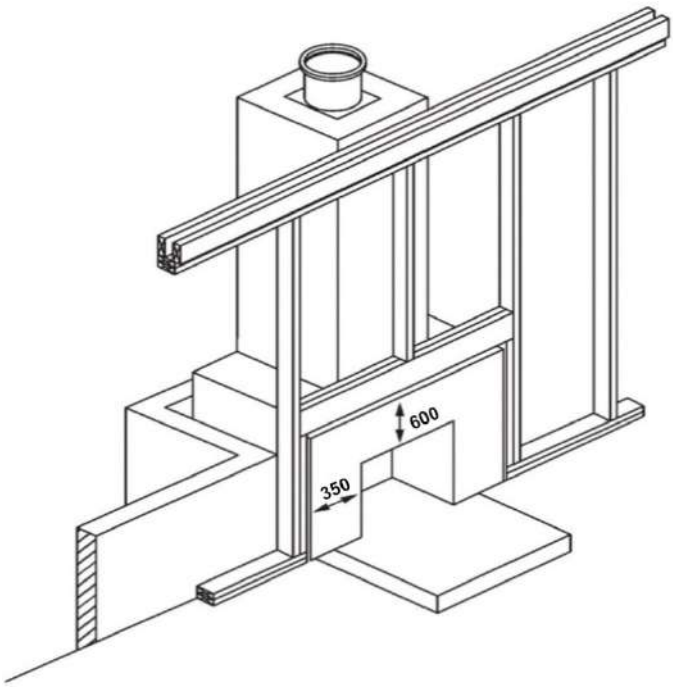
For example, if the mantle protrudes 200mm, the clearance to the mantle should be 650mm. (See Fig. 10.)

Figure 10



If there is a studded wall surrounding the fireplace as in Fig. 10, ensure the clearances in this Fig. 11 are adhered to.

Figure 11



FLOOR PROTECTION

It is recommended that this appliance is installed on a solid, level, concrete base, a noncombustible hearth conforming to current Building Regulations must extend to the front of the appliance.

CHOICE OF FUEL

1. Recommended fuel: **Wood.**

    a. Use hard wood logs.

Although you can fire this product with almost all kinds of wood, you should not fire with wet wood, or unseasoned wood. Wood ought to be stored under a roof for at least 1 year, and preferably 2 years, with free access to wind. Wood should be chopped as soon as possible after felling if it is to dry quickly. The wood can be used once the moisture content is less than 20%. During the EN test, all stoves are tested with wood with a moisture content of (16 ± 4) %.

- Hardwood has a higher calorific value as the same volume (oak, ash, maple, birch, elm, beech, etc.).
- Pieces of wood with a diameter greater than 10 cm should always be chopped. The pieces of wood should be short enough to be able to lie flat over the layer of embers, with air at both ends. The maximum length of fuel in the stove is no more than 30cm.
- The maximum amount of fuel required is 2 to 3 logs for each fuel charge, **DO NOT** exceed the height of the back brick inside the stove. Overloading can cause excess smoke

2. Recommended fuel: **Solid Fuel.**

    a. Smokeless fuels, including coalite nuts, phurnacite, ancit and extracite. (See www.hetas.co.uk for latest information)

    b. The maximum amount of solid fuel required for each fuel charge should not exceed the height of the back brick inside the stove. Overloading can cause excess smoke.

⚠ Not Recommended as Fuel:

- “Green wood”. Green or damp wood reduces stove efficiency and soils the glass, the internal walls and the flue (soot, tar, etc.).
- “Used timbers”. Burning treated wood (railway sleepers, telegraph poles, offcuts of plywood or chip board, pallets, etc.) quickly clogs the flue ways (soot, tar, etc.), pollutes the environment (pollution and smell, etc.) and cause the fire to burn too quickly and overheat.
- “Green wood” and “recovered wood” can eventually cause a chimney fire.
- **Prohibited fuel**: plastic bags and any form of bituminous coal or petroleum-based coke. **This may harm the product and pollute the atmosphere**.

USE

- **Painted products:** the fireplace may emit an irritating gas when used for the first time, and it may smell a little. The gas is not toxic, but the room should be thoroughly ventilated. Let the fire burn with a high draught until all traces of the gas have disappeared and no smoke or smells can be detected.
- **Polished Cast Iron products:** Condensation may form on the surface of the fireplace the first few times it is used. This must be wiped off to prevent permanent stains forming when the surface heats up.

Air Control: Figure 12

The amount of heat emitted by the stove is regulated using two air controls. The primary air supply, where air passes up through the riddling grate, is controlled using the lower air control and the secondary air (air wash system), which is supplied to the combustion over the glass, is controlled using the upper air control.

Air Controls / Door Left Open

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

1. USE WITH WOOD

Lighting - Figure 12

1. Slide the top air control to open. Open the lower control.
2. Lay firelighters or rolled up newspapers on the grate with a reasonable quantity, if necessary, of dry kindling wood. Place 2 or 3 small logs on top.
3. Light the newspaper or firelighters using a long taper and close the door.
4. When the fire is burning fiercely, add further logs of a diameter up to 10 cm.
5. When the stove body is very hot, close the lower control.
6. The burning rate can now be lowered by moving the top air control to smaller air inlet.

Re-fueling - Figure 12

1. Slide the top air control to open. Open the lower control.
2. Open the glass door and add logs. (To load fuel, the door should be opened slowly, avoiding a sudden rush of intake air, so that smoke does not escape into the room.)
3. Leave the lower control open for a few minutes to allow the initial volatiles in the wood to burn.
4. Close the lower control.

Re-fueling on to a low fire bed.

If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refueling 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 sufficient kindling to prevent excess smoke.

Very Important: Wood is a material that contains a great deal of gas (approximately 75 %). The gases are released when the wood is lit and heated up. For this reason, it is important that the gases are ignited quickly after stoking. If the wood just lies smoldering, especially after re-stoking, a lot of smoke is created, which, in the worst case, may cause an explosive ignition of the gasses, resulting in damage to the stove.

In order to ignite the gases that are released from the wood, and to keep clear, lasting flames during the combustion process, it is important to always let in the required quantity of oxygen (air supply). The setting of the air supply, the method of ignition and the lighting

intervals depend on the draught in the chimney, the wind and weather, the amount of heat required the fuel, etc. This means that it may take some time before you get to know the correct functioning of the stove under any given circumstances.

2. USE WITH SOLID FUEL

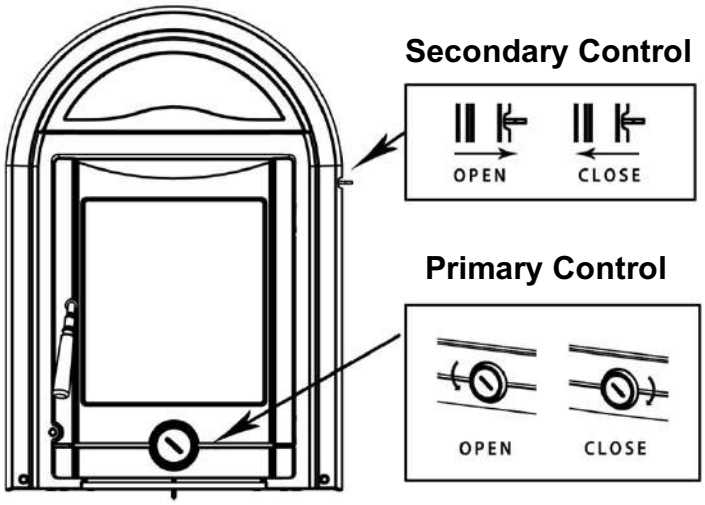
Lighting - Figure 12

1. Slide the top air control to open. Open the lower control.
2. Lay firelighters or rolled up newspapers on the grate with a reasonable quantity, if necessary, of dry kindling wood. Place a small quantity of solid fuel on top.
3. Light the newspaper or firelighters using a long taper and close the door.
4. When the fire is burning fiercely, add further fuel.
5. When the stove body is hot, close the top air control.
6. The burning rate can now be adjusted by the lower control.

Re-fueling - Figure 12

1. Open the lower control.
2. Open the glass door and add fuel. (To load fuel, the door should be opened slowly, avoiding a sudden rush of intake air, so that smoke does not escape into the room.).
3. Leave the lower control open for a few minutes to allow the initial volatiles in the fuel to burn.
4. Adjust the lower control to the desired position.

Figure 12



The Secondary control has a factory set 50% air stop. This fulfils DEFRA smoke control compliance.

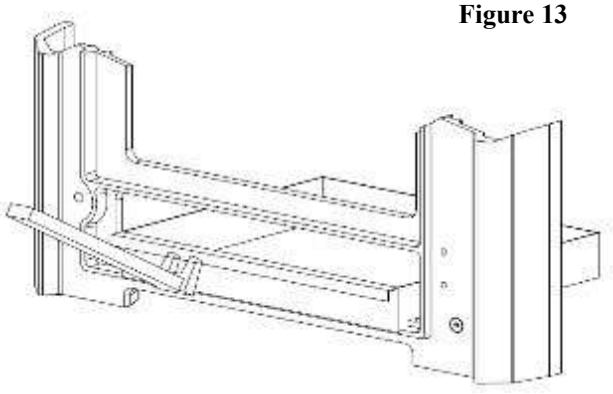
Very Important: The stove door should never be opened when the stove is being fired vigorously.

- **We would strongly recommend that you do not leave your stove alit at night. It harms the environment, and constitutes very poor use of the wood, as the gases in the wood do not ignite at the low temperature but settle as soot (unburned gases) in the chimney and stove. Extreme conditions, such as poor draught in the chimney, large quantities of wood or wet wood, may, in the worst-case scenario, cause an explosive ignition.**
- **When firing in the summer period, when there is minimal need for heat, the combustion will be poor. The stove provides too much heat, so the combustion should be reduced. But always remember to make sure that there are lasting flames until the wood becomes charcoal. If you want a weaker fire, stoke up using less wood.**
- **If you fire the stove using wet wood, a lot of the fuel's thermal energy will be spent forcing the water out of the wood, without releasing any heat to the stove. This incomplete combustion results in a layer of soot being left in the stove, pipe and chimney.**

ASH REMOVAL

Use of Ashpan

Figure 13



It is essential to keep the grate free from a heavy build up of ashes. This product is equipped with a grate riddling device which is used to “shake” ashes off the grate into the ash pan. Whenever the stove is burning without life when the lower control is open, use the riddling lever to clear the grate of surplus ashes.

If burning solid fuel, always empty the ash pan at least once a day or whenever it is full of ashes. Never allow the ashpan to overfill allowing ash to be in contact with the underside of the grate. If this condition is allowed, the grate will wear out pre-maturely.

DETACHABLE HANDLE

The handle on the CastTec Polaris Arch Inset Eco stove can be used in two ways, attached to the stove's door (Fixed), or detached from the stove's door (Detachable).

Figure 14

PLEASE NOTE:

To attach the handle to the door, only use the

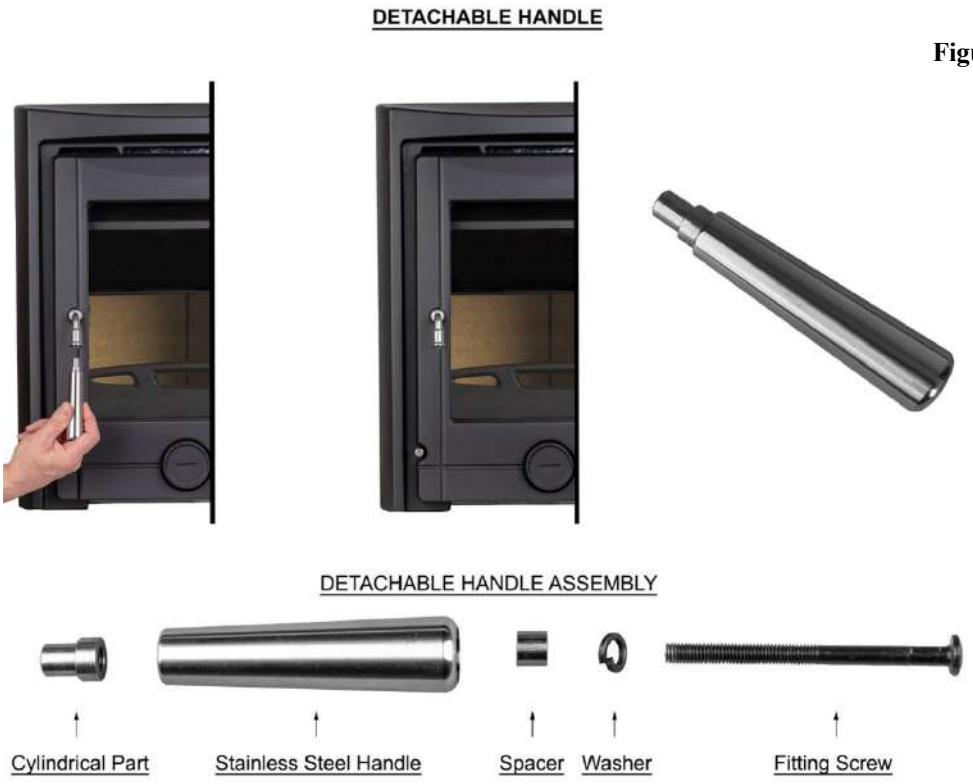
- **Stainless Steel Handle.**

and

- **Fitting Screw**.



Figure 15



MAINTENANCE

- Packaging:
    - Your appliance is packaged to minimise exposure to adverse elements and should reach you in perfect condition. The product should be stored in a warm, dry environment and remain packaged until the fireplace is ready to be installed. It is essential that you inspect your casting prior to installation as it will be deemed to be of merchantable quality thereafter and no liability will be accepted for product removal, reinstallation or redecoration.
- Cleaning Glass:
    - This product is equipped with an air wash for the glass. Air is sucked in through the air vent above the fireplace and down along the inside of the glass. However, some soot will always stick to the glass, but the quantity will depend on the local draught conditions and adjustment of the air wash vent. Most of the soot layer will normally be burned off when the air wash vent is opened all the way and a fire is burning briskly in the fireplace.
    - Good advice! For normal cleaning, moisten a paper towel with warm water and add some ash from the burn chamber. Rub it over the glass and then clean the glass with clean water. Dry well and if it is necessary to clean the glass more thoroughly, we recommend using a glass cleaner (follow the instructions on the bottle).
- Gaskets:
    - The gaskets in the door will wear out over time and should be replaced as required in order to prevent runaway combustion.
- Cleaning – Polished cast iron:
    - After unpacking your casting, you will need to remove the protective oil coating, which is applied to prevent tarnishing and rust, you need to wipe the polished areas with white spirit on a cloth, repeat this procedure until the surface is clean. **Under no circumstances should a water-based cleaner be used to clean the surface – This will make the bare cast iron tarnish and then rust.**

- Cleaning – Painted cast iron:
    - This finish can be maintained simply by dusting with a dedicated dry paint brush or brush attachment on a hoover. Any painted cast iron will need to ‘cure’ onto the surface when heat is first introduced, it is recommended for solid fuel fires to burn several small fires initially.
- Cleaning – ‘Antique’ graphite coated cast iron:
    - This traditional finish is simply graphite paste applied to a painted surface, use a dedicated cloth and shoe brush to clean and polish, this can be re-applied with another dedicated brush.
- Warning:
    - Cast Iron products are vulnerable to rust and tarnishing if exposed to dampness or water. Avoid the use of damp cloths, water-based liquids, furniture polish, detergents, oils, grease etc. onto the surface of the cast iron. Should your fireplace become wet for any reason, dab it gently with a simple dry cloth. This should prevent any tarnishing or rust forming.
    - It is normal for some discolouration to occur to the working parts of a cast iron fireplace; your fireplace casting can be restored to new with an application of heat resistant paint whenever required.
    - Consumable spares are available from: www.firespares.direct.

OPERATIONAL PROBLEMS & TROUBLESHOOTING

PROBLEM	PROBABLE CAUSES	ACTION
Fire difficult to start Fire goes out	• Wood green, too damp or poor quality. • Logs are too big. • Air starvation • Insufficient draught.	• Use the recommended fuel. • To light the fire, use small, very dry kindling. • To maintain the fire, use split logs. • Open lower spin wheel and top Air Control lever. • Check that the flue is not obstructed, sweep it if necessary • Seek advice from a chimney specialist.
Fire burns too quickly.	• Too much draught. • Excessive draw. • Poor quality wood.	• Ensure that the lower spin wheel is closed • Partially close the top air control lever. • Install a draught stabilizer (Consult your Dealer). • Do not continuously burn small wood, sticks, bundles, carpentry offcuts (plywood, pallets), etc.
Smokes when lighting up.	• Flue duct is cold. • Room is in decompression.	• Burn paper and kindling wood to increase heat. • In houses equipped with mechanical ventilation, open a window until the fire is well established.
Smokes while burning.	• Draught is insufficient • Down draught. • Room is in decompression.	• Consult a chimney specialist. • Check that the flue is not obstructed, sweep if necessary. • Install an anti-down draught cowl. (Consult your Dealer). • In houses equipped with Mechanical Ventilation, an outside air intake must be installed for the chimney.
Low heat output.	• Incorrect Fuels.	• Use the recommended fuel.

REPLACEMENT PARTS

The Polaris Arch Inset Eco Multi-fuel Stove is manufactured in cast-iron; exploded diagram and replacement parts list can be found on pages 23 to 25.

Only use replacement parts recommended by the manufacturer. Replacement parts are available from your local retailer, through www.firespares.direct website or by contacting us direct on 0191 4974298.

Modifications to your stove must not be made under any circumstances.

EXPLODED DIAGRAM

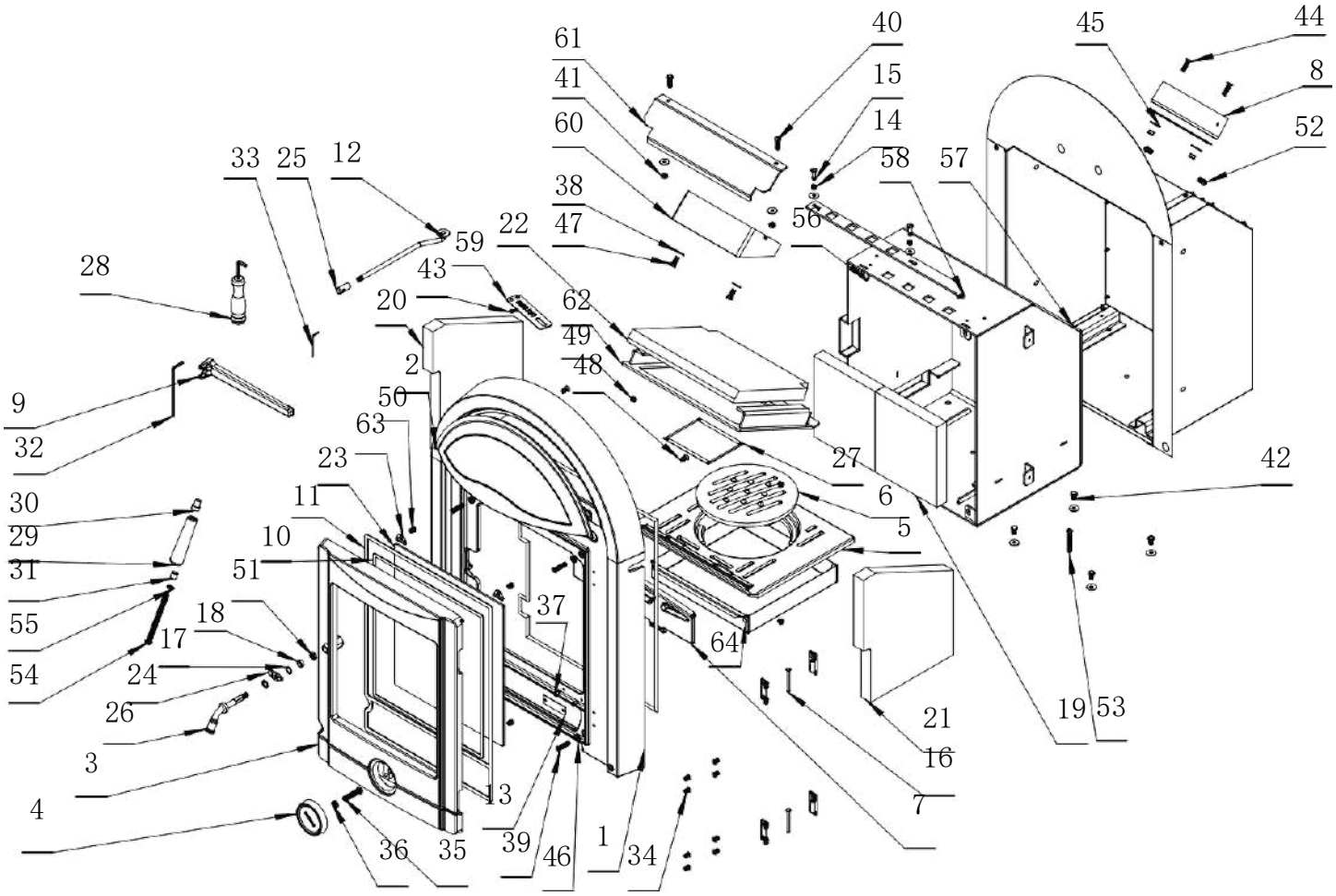


Figure 16

REPLACEMENT COMPONENTS (See Exploded Diagram)

SPARE PARTS TABLE			
No.	Name	Code	Quantity
1	Frame	I1403	1
2	Door	I1407	1
3	Spin valve	CAF0660	1
4	Grate	I2514	1
5	Moving grate	I1115	1
6	Fire Fence	I1120V2	1
7	Collar	125-2	1
8	Ashpan Handle	CA0105	1
9	Fiber Rope	CA0801	1
10	Fiber Rope	CA0802-1	1
11	Riddling rod	CA1401-I19	1
12	Serial Number Plate	CAL0101-ZJ	1
13	Spring	CA0707	2
14	Screw	CAL0112	2
15	Hinge	CA0609	2
16	Washer	CA0321	2
17	Roller	CA0148	1
18	Back Brick	FRI17U211	2
19	Left Brick	FRI17U212	1
20	Right Brick	FRI17U213	1
21	Vermiculite Baffle	FRI14U229	1
22	Glass	CA10-I11	1
23	Door Catch	CA1507A	1
24	Cylindrical pull handle	CA0114-083	1
25	Handle assembling part	CA0101-ZH-1	1
26	Handle for riddling rod	CA0137	1
27	Door handle	CA0144	1
28	Cylindrical part for handle	CA0103-ZH	1
29	Roller	CA0104-ZH	1
30	CE data plate	CAL0101-I14U2SE-AT	1
31	Spanner	NLFBS-004	1
32	Spanner	NLFBS-007	1

SPARE PARTS TABLE			
No.	Name	Code	Quantity
33	Screw	01020107.M6×10／010102	8
34	Screw	01020108.M8×40／010202	1
35	Nut	01030113.M8／010202	1
36	Screw	010514.Φ5×8／070201	2
37	Washer	01040101.Φ6×18／010202	10
38	Screw	01020107.M6×30／010102	4
39	Screw	01010112.M6×20／010102	2
40	Nut	01030102.M6／010102	4
41	Screw	01010112.M6×10／010102	6
42	Washer	01040301.Φ6／010102	2
43	Screw	01020107.M6×25／030001	2
44	Washer	01040101.Φ6×22／010202	2
45	Nut	01030119.M6／030001	4
46	Screw	01010112.M6×15／010102	2
47	Screw	01020107.M6×8／010102	4
48	Screw	01020106.M6×8／030001	4
49	Nut	01030128.M8×5／030001	1
50	Screw	01020601.M6×16／030001	2
51	Screw	01020601.M6×50／030001	1
52	Screw	01020108.M8×105／010102	1
53	Washer	01040301.Φ8／010102	1
54	Inside frame	CANK25-AT	1
55	Secondary Air Wash Plate	CA1113-I14U2SE	1
56	Connecting plate	CA1102-B	1
57	Collar damper	CA1918-I17U2	1
58	Air Wash Damper	CA1908-I17U2	1
59	Baffle Frame	CA1911-I26U2	1
60	Glass Clip	CA1112	4
61	Ashpan	CA1209	1
62	Outside frame	CAWK01-AT	1

NOTE: For all spare parts enquiries visit www.firespares.direct or call (0191) 4974280

GUARANTEE

If any part of the main body of the stove fails due to a manufacturing or material defect during the guarantee period that applies in respect of the relevant stove (as set out below), CastTec Ltd will, at its sole discretion, repair or replace your stove, for no charge.

Cracking of the main body (defined as the steel outer casing and items fixed immovably to the casing).

Damage caused by over-firing or over-heating is not covered. Warping and a red oxide colouring will demonstrate the over-heating of internal parts, body paint which has turned dusty white is also indicative of such use.

The following guarantee periods shall apply in respect of the following:

- Polaris Arch Inset Eco Multi-fuel Stove come with a 10-year warranty to the main body of the stove. The external paint finish carries a one-year guarantee only.
- This guarantee is subject to the Terms and Conditions set out below.

TERMS AND CONDITIONS

The following terms and conditions must be satisfied in order for your stove to be covered by the guarantee set out above:

1. Your stove must have been installed by a suitably qualified person and in accordance with the manufacturer's installation instructions. Stoves not installed by a suitably qualified person or not installed in accordance with the manufacturer's installation instructions will not be covered by this guarantee.

2. Any claims under this guarantee shall not be valid where the installation of the stove does not conform to all required building regulations and other legislation in force at the time of purchase and where flue draw readings have not been made to confirm a suitability of the flue. The manufacturer's decision as to whether this condition has been satisfied shall be final.

3. The guarantee does not cover damage caused to the stove through careless handling or misuse or neglect of the appliance (misuse and neglect being not following the manufacturer's instructions and user guides in relation to the stoves, including the use of non-recommended fuels).

4. The following consumable service items are not covered by this guarantee:

5. Firebox linings • Grate • Fuel retainer • Throat plate • Door/Door glass • Seals.

6. The guarantee does not cover damage caused by storing or using the stove in a damp environment, defects or faults caused by local conditions such as draught problems and chimney defects or corrosion caused by condensation, damp or water ingress into the flue, chimney, or the surrounding of the stove.

7. The guarantee is only valid if the stove is serviced and checked annually by a suitably qualified heating engineer, with documentation to be retained and produced in the event of a claim being made.

8. The guarantee is only valid where any spare parts used are supplied by CastTec Ltd or an approved retailer/dealer. The use of spares other than those supplied by CastTec Ltd shall invalidate the guarantee.

9. The guarantee is not valid where any repairs or modifications have been made to the stove which have been carried out by anyone other than CastTec Ltd or its authorised representatives or approved dealers.

10. All guarantee periods commence on the date of purchase and are non-transferable and solely for the benefit of the original purchaser of the stove.

CastTec

POLARIS INTEGRA INSET ARCH ECO

Multi-fuel stove

Ref. No. I17

ECO 2022

Version 02 (29.08.2024)