

Fireplace inserts 120x45 S

Assembly Manual

120x45S Fireplace Inserts / Sliding door





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WARNING: THE APPLIANCE & FLUE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZS 2918:2001 AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES.

WARNING: APPLIANCES INSTALLED IN ACCORDANCE WITH THIS STANDARD SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 4013:2014 WHERE REQUIRED BY THE REGULATORY AUTHORITY, I.E. THE APPLIANCE SHALL BE IDENTIFIABLE BY A COMPLIANCE PLATE WITH THE MARKING "TESTED TO AS/NZS 4013:2014".

ANY MODIFICATION OF THE APPLIANCE THAT HAS NOT BEEN APPROVED IN WRITING BY THE TESTING AUTHORITY IS CONSIDERED TO BE IN BREACH OF THE APPROVAL GRANTED FOR COMPLIANCE WITH AS/NZS 4013:2014.

CAUTION: MIXING OF APPLIANCE OR FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATION OF COMPONENETS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: CRACKED AND BROKEN COMPONENTS, e.g. GLASS PANELS OR CERAMIC TILES, MAY RENDER THE INSTALLATION UNSAFE.

1. WARNING: ANY MODIFICATION OF THE APPLICANCE THAT HAS NOT BEEN APPROVED IN WRITING BY THE TESTING AUTHORITY IS CONSIDERED AS BREACHING AS/NZS 4013.

2. WARNING: DO NOT US FLAMMABLE LIQUIDS OR AEROSOLS TO START OR REKINDLE THE FIRE.

3. WARNING: DO NOT US FLAMMABLE LIQUIDS OR AEROSOLS IN THE VICINITY OF THIS APPLICANCE WHEN IT IS OPERATING.

4. WARNING: DO NOT STORE FUEL WITHIN THE HEATER INSTALLATION CLEARANCES.

5. WARNING: WHEN OPERATING THIS APPLICANCE AS AN OPEN FIRE USE A FIRE SCREEN.

6. WARNING: OPEN AIR CONTROL (AND DAMPER WHEN FITTED) BEFORE OPENING FIRING DOOR.

**7.** CAUTION: THIS APPLIANCE SHOULD NOT BE OPERATED WITH A CRACKED GLASS.

**8.** CAUTION: THIS APPLIANCE SHOULD BE MAINTAINED AND OPERATED AT ALL TIMES IN ACCORDANCE WITH THESE INSTRUCTIONS.

**9.** CAUTION: THE USE OF SOME TYPES OF PRESERVATIVE-TREATED WOOD AS A FUEL CAN BE HAZARDOUS.

# 1. General Information

ΕN

### 1. 2 Regulations to be observed / basic requirements

- AS/NZS 2918:2018 Domestic Solid Fuel Appliances Installations
- AS/NZS 4012:2014 Domestic Solid Fuel Appliances Power Output and Efficiency
- AS/NZS 4013:2014 Domestic Solid Fuel Appliances Flue Gas Emissions
- BCA / NCC 2019:Volume 2 Class 1 and 10, National Construction Code /Building Code of Australia
- State building regulations Check with local state requirements

# The information in this manual is of a general nature. The Australian/New Zealand Standards and the, local and building regulations, together with fire regulations must be observed.

Choosing the right size of the fireplace insert and tailoring it to the prevailing heat requirements and the needs of the operator, is essential for the heating system to function properly and operate economically. For this reason, the installation must be selected to meet the heating load (heat requirement).

Please read the installation instructions carefully before commencing installation. All liability and warranty claims for damage caused by non-observance of these installation instructions will be declared null and void. Please also observe the instructions in the user manual.

# The installation of the fireplace insert and the chimney connection should be discussed with your local master chimney sweep.

### 1.3 **Pre-installation inspections**

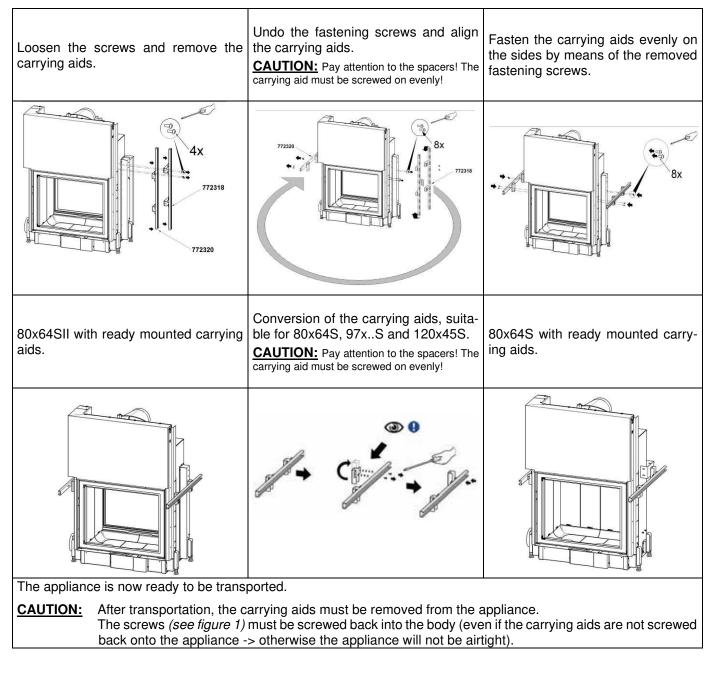
- Check the delivered goods **immediately** for completeness and damage incurred during transit.
- Check that all moving parts function properly **before** installing the devices. In principle, all defects must be reported before the appliance is assembled and encased.
- Remove the enclosed document "**Operating Instructions**" and hand it over personally to the owner of the fireplace heater with a briefing on how the appliance works (heating operation).

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### 1.4 Carrying aid for Transit,

The Austroflamm fireplace inserts (with the exception of 71x51/57 S3, 69x49x57 and 89x49x57) are equipped with a carrying aid, intended to make it easier for you to transport the fireplace insert to the installation site. Remove once in Situ.

### 80x64S / 80x64SII / 97x45S / 97x74S / 120x45S



### 1.5 Setting up the fireplace insert

### CAUTION:

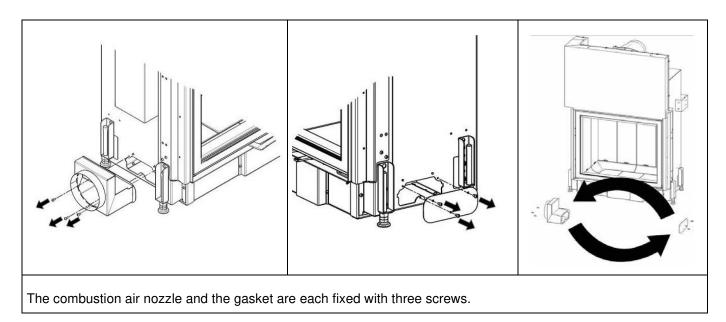
Please be sure to observe the fire protection specifications, such as thermal insulation and air grid sizes. If the fireplace insert is fed an excessively high quantity of fuel, there is a risk of the chimney and adjacent components or furniture overheating. **Fire hazard!** 

### • Conversion - combustion air nozzle

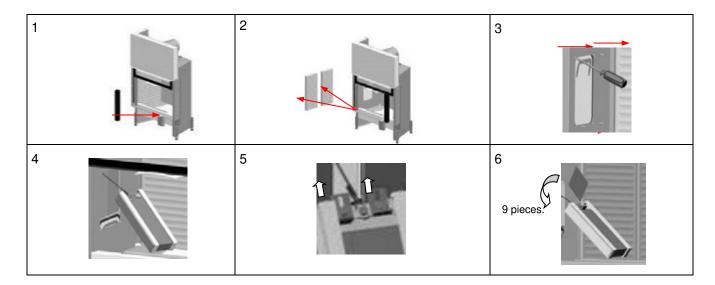
The combustion air is supplied through a nozzle, and is adjusted by the operator via the control element of the combustion air regulation system.

### 120x45S

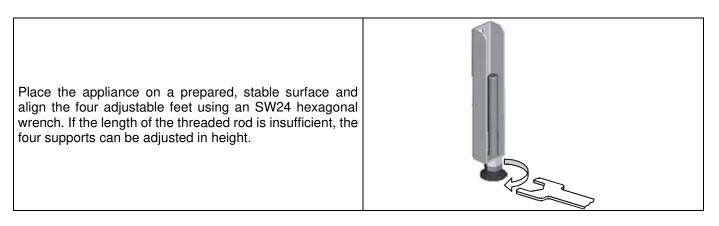
In this case, the combustion air nozzle can be fitted either on **the left or right side** of the appliance before installation.



#### For appliances with a sliding door, conversion to auto closing is carried out as follows:



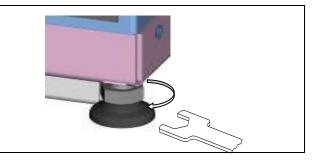
### 1.6 **Positioning the appliance**



or

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Place the unit on a prepared, stable surface and align the four adjustable feet using an SW24 hexagonal wrench. The feet can be used to compensate a difference in height of up to 10 cm.



# 1.7 **Connecting the flue pipe**

Aligning the flue outlet:

- By rotating the flue gas collector by up to 360°, it can be locked in any position. Then firmly tighten the fastening screws.
- By rotating the flue outlet by up to 360°, any angle of inclination can be obtained when the flue dome is also rotated.
- All the required seals are affixed to the cast components.

# 1.8 **Transport lock** (models with sliding door)

Before cladding the fireplace insert, please **remove** the **transport lock** and check the function of the sliding door. Depending on the model, the counterweight of the sliding door is secured with a coloured screw and a washer on the left outer side or on both outer sides, or on the rear wall of the appliance, so the door doesn't move during transit.

1

#### Flat and corner fireplace inserts

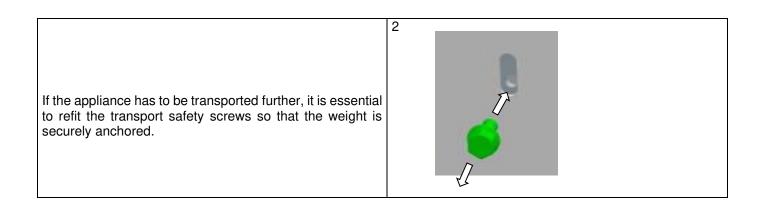
The sliding door counterweight is secured with a screw on each side of the appliance.

### CAUTION:

These transport safety screws must be removed before installing the appliance!

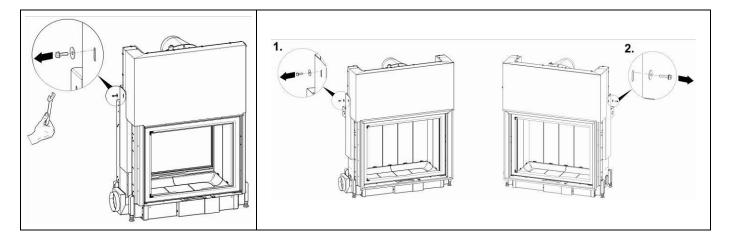






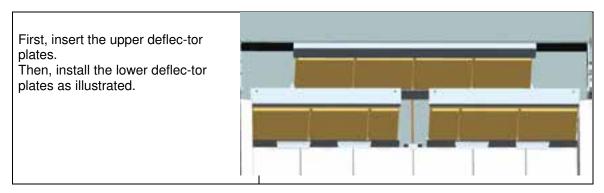
### 80x64S/SII

#### 97x45 / 97x74S / 120x45S



# 1.9 Fitting the deflector plates

The Keramott elements of the fireplace are pre-assembled. Only the Keramott deflectors still have to be fitted:



120x45S

# 2 Demands on the Installation Space

Fireplaces must not be installed in...

- spaces in which the required combustion air supply is not ensured
- spaces which are generally accessible, especially escape routes. Staircases in residential buildings with no more than two apartments are not considered to be generally accessible spaces.
- spaces in which highly inflammable or explosive substances or mixtures are processed, stored or produced.
- rooms, apartments or utilisation units from which air is extracted with the aid of fans, such as warm air heating systems, extractor hoods and vented tumble dryers, unless it can be guaranteed that the fireplace insert will function without causing any danger.

This is guaranteed if...

- the systems only circulate air in one room;
- the systems are equipped with safety devices that automatically and reliably prevent negative pressure in the installation space.
- simultaneous operation of the heating unit and air-suction system is prevented by safety devices;
- the flue gas evacuation is monitored by special safety devices;
- in total, no more than 0.04 mbar negative pressure is created by the combustion air flow of the fireplace insert and the volume flows of the ventilation systems in the installation space and the spaces connected via a ventilation network. This must be guaranteed even if easily accessible devices controlling the ventilation system are adjusted or removed.

In all cases, for controlled residential ventilation, we recommend a room sealed fireplace, tested by the German Institute for Construction Technology (DIBt), with increased impermeability in respect of the installation room.

# 2.1 Combustion air supply

#### CAUTION:

In the case of fireplaces that draw their combustion air from the room in which they are installed, a sufficient supply of combustion air into the room must be ensured. Other fireplaces or air extraction systems in the installation room or combustion air system may require a separate combustion air supply from outside.

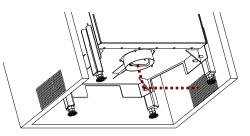
Air-suction systems (e.g. ventilation system, extractor hood, etc.), which are operated together with the fireplace in the same ambient air system, can disturb the combustion air supply and may require additional safety measures in accordance with fire regulations.

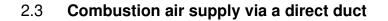
### 2.2 Combustion air supply from the room

The Austroflamm fireplace insert obtains its combustion air exclusively via a combustion air nozzle. For models 80x64S, 97x45/74S and 120x45S the combustion air nozzle is mounted on the left or right side of the appliance. All other models described in this document have the combustion air nozzle on the base of the appliance. For this reason, a properly functioning air supply to the heating chamber must be ensured. To this end, it is essential to dimension the cross-sections of the circulating air correctly, in addition to the necessary cross-section for the combustion air. The correct positioning of the appropriate openings into the heating chamber is of great importance. If this is not observed, a lack of air can occur during combustion. For a sufficient supply of combustion air, we recommend a closed combustion air duct between the combustion air nozzle on the fireplace insert and the circulating air grid.

#### CAUTION:

The combustion air nozzle should always be connected, otherwise combustion air will not be fed into the firebox.





The combustion air supply can also be fed to the fireplace insert via a direct duct from outside. For this purpose, the combustion air must be safely conducted from the outside connection of the house directly to the fireplace.

With the help of the work diagram (see Technical regulations of the furnace and air heating construction trade), the pipe cross section can be determined (see also 4.1 Minimum cross sections). This method of connection is generally recommended.

### 2.4 **Combustion air duct**

Combustion air ducts must be made of dimensionally stable building materials, and must be leak-proof and accessible for inspection and cleaning. The possibility of condensate formation due to the temperature falling below the dew point must be taken into account, and prevented by suitable insulation.

In the case of combustion air ducts in buildings with more than two full storeys and combustion air ducts bridging fire walls, the ducts must be designed in such a way that fire and smoke cannot be transferred to other storeys or fire compartments (see state building regulations).

### 2.5 **Demands on the chimney**

Before setting up or installing the Austroflamm fireplace insert, the size and quality of the chimney must be checked according to the applicable local regulations *(respective state building regulations, combustion regulations and DIN 18160, part 1)*. Mathematical proof that the chimney is sufficiently functional must be provided according to DIN EN 13384. The calculation must make it possible for the much larger volume of air produced when the door is open (piling up the fire) to be safely discharged.

The proper function of the fireplace insert depends on the connection to the correct chimney. It must be ensured that all apertures leading to thefgjfdfgy to a d

### 2.6 **Connecting pieces** / flue pipe

The connecting piece must be dimensioned appropriately in accordance with DIN EN 13384.

A steel smoke pipe with a minimum wall thickness of 2 mm must be used for the heating gas pipe between the fireplace insert and the secondary heating surface as well as the connecting piece to the chimney. In the case of austenitic, stainless steel, however, it only needs to be 1 mm thick.

The connecting piece must be connected directly to the chimney.

The connecting piece inside the cladding must be covered with at least 3 cm thick, dimensionally stable, non-combustible insulation materials of Class A1 in accordance with DIN 4102, as described in the section *Insulation layers*. This does not apply to such connecting pieces which are intended for heating convection air, and where there is otherwise no risk of fire.

# 3. Technical Data

Modell			120x45 S
Testing according to DIN EN 13229			
Nominal output	kW		13
Max. heating capacity	kW		17
Max. firewood length	cm		33
Permissible quantity of fuel	kg		3,5
Fuel throughput	kg/h		3,97
Cross section convection outlet	cm <sup>2</sup>		2940
Cross section convection inlet	cm <sup>2</sup>		2320
Power output via window	%		32
Emission limits			
CO based on 13% O <sub>2</sub>	mg/m³		≤1250
Dust based on 13% O <sub>2</sub>	mg/m³		≤40
CnHm	mg/MJ		≤50
NOx based on 13% O <sub>2</sub>	mg/m³		≤150
Efficiency	min.%		≥80
Exhaust gas temperature***)	°C		254
Exhaust gas mass flow	g/s		14,88
Minimum discharge pressure	Pa		13
Distances from the fireplace in			

- The central heating ducts must be designed to ensure that the heat flow and even heat distribution within the cladding so that no overheating of the heating chamber occurs at any point.
- The size of the heat-emitting surfaces of the cladding must be matched to the heat generator.
- The insulation thicknesses specified in *Technical Data* for protecting the building spaces adjacent to the fireplace were determined during continuous operation with open air grids and may have to be supplemented by suitable measures (e.g. rear ventilation).
- When installing a closed system using Austroflamm fireplace inserts with a sliding door, the temperature resistance
  of the rope guide roller is a maximum of 250 °C. Attention must be paid to this maximum permissible ambient temperature! If the Central heating ducts and the Cavity ventilation is constructed according specifications, this material
  temperature should never be reached. It may be necessary to plan a rear ventilation system for these components.

Hinged door and sliding door appliances with self-closing firebox doors. **CAUTION**: Operation is only permitted when the firebox is closed.

If the delivery pressure is too high, a delivery pressure limiter must be installed. It is the responsibility of the installer to ensure the correct delivery pressure. If the chimney delivery pressure is above 18 Pa, it is strongly recommended that a throttle valve (available as an accessory) be fitted in the connecting piece! FLue lenght minimum of 4m required.

### 4.1 Minimum cross sections of chimney / combustion air duct

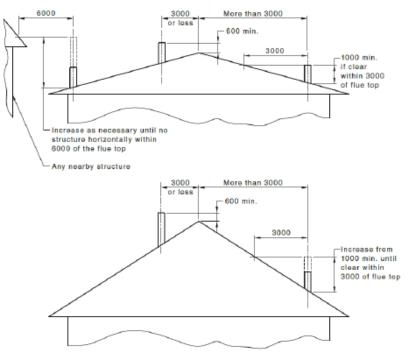
Appliance	Minimum chimney cross sections	Minimum outside air cross sections (during closed operation)	
		Up to 4 m length - max. 2 elbow	Up to 6 m length - max. 4 elbows
120x45 S	Ø OD 180 mm ID 170mm	175 cm <sup>2</sup> pipe Ø 150 mm	255 cm <sup>2</sup> pipe $\oslash$ 180 mm

The following points must be observed for outside air cross sections:

- Avoid using bends. If required use bends up to 45 degrees only x 2 only.
- Maintain the same flue diameter for the entire flue length.
- The free air passage at the air grid must not fall below the actual cross section of the recommended outdoor air duct.
- Negative pressure (suction) must not occur at the air duct inlet even in unfavourable wind conditions.

# 5. Flue Exit Terminal requirements for AS2918:2018

### Outside Flue Exit terminal requirements.



DIMENSIONS IN MILLIMETRES

NOTE Increase to Any nearby Structure is increased to 6m radius for distance between the exit and the height required for clearance.

# 6. Installation Instructions

### CAUTION:

The fireplace needs expansion gap of a minimum gap of 5 mm to any material including fascia material, as otherwise damage to the appliance could result!

### 6.1 Installation is per Masonry Insert Enclosure 7.0 (per BCA/NCC) or

### the Skamol Enclosure see 8.0

Assemble the Convection cladding as per the instructions supplied with the

cladding.

120x45S



### 6.2 Convection space

 The convection cladding (accessory) must be used with the central heating ducting fitted to the outlet spigots to set the unit up for central heating, to meet the exemption requirements for AS/ NZS 4012:2014 - AS/NZS 4013:20124.

#### Convection air ducts with convection jacket

All convection air ducts coming off the heater must be made of semi rigid heater resistant materials. The warm air ducts must be fixed firmly to the outlet spigots of the convection jacket and to the cavity outlets (with wall registers or duct continues outside cavity).

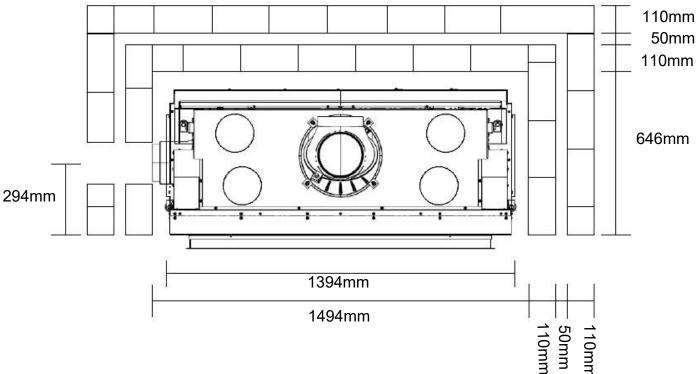
#### Fireplace without air ducts

The convection air circulates within the sealed cladding. The heat is released through the cladding by means of radiation. The installation needs to be full Masonry and meet the local install requirements for solid fuel.

### 6.3 Electrical wiring

There must be no electrical wiring in walls and ceilings in the area where the open fireplace is installed.

### 7.0 Masonry Installation



7.1 Side and Rear thermal insulation layers

The masonry installation requires 2 leaves of masonry brick work with a combined minimum thickness of masonry 180mm thick (not including air cavity), and the inner layer to heater with minimum thickness of not less than 110mm. An acceptable air cavity is 50mm (BCA 3.7.2/3.8.6.1a).

Overall dimension using 110mmm thick house brick is 2034mm wide, and depth of 916mm.

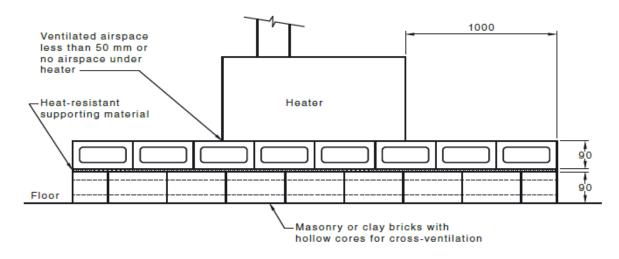
Position of the air intake for the Primary /Secondary combustion air is 294mm from the front of the heater, 295mm from the floor to the inlet centre. Diameter of the inlet is 150mm.

Minimum height of the double masonry cavity is to 1800mm high. The masonry cavity can be capped with minimum 5mm thick plate steel, or minimum 12mm thick heat resistant material.

The flue must be ventilated double casing (triple skin) starting from the firebox/ convection cladding. (Note flue spigot I.D. is 170mm). Over crimped 7" crimp to fit.

# 7.2 Floor Protector - beneath the heater

- If the heater is raised 450mm or more off the combustible floor, then the hearth requirement can be used from the Skamol installation, that is 2085 x 775 x 6mm cement sheet below the heater. And minimum 1490 wide x 390mm deep x 6mm thick in front of the heater, the 1490mm width placed centrally in front of the heater.
- Installation onto combustible floor heater must be placed on a concrete / Masonry slab at least 75mm thick with a 25mm ventilated air gap beneath, between the slab and the floor, supported on spacers covering no more than 10 percent of the hearth area, with the ventilated openings along one pair of opposite sides of the floor protector. The floor protector must extend 1000mm beyond the front of the heater. A Typical installation of the hearth requirement is shown below.
- Installation onto polished concrete/non-combustible floor this can be used as the hearth if it meets the requirements of the BCA
- The floor on which the floor protector and heater is in stalled must be stable and able to withstand the weights required.



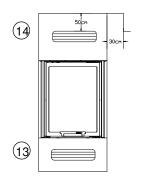
# 7.3 Expansion joints

The fireplace insert must not be in direct contact with the fascia cladding. To this end, all points of contact between the appliance and the cladding must be separated by 3 - 5mm and sealed by means of sealing tape (glass-fibre tape). Similarly, the supporting frame for the cladding must not rest on the unit or be screwed or welded to it.

# 7.4 Cladding

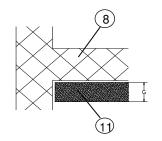
The room-side cladding must be made of non-combustible heat resistant materials. These could include 18mm fibre cement sheet, 40mm Skamol or e.g. bricks, masonry blocks, ceramic stove tiles, metal and plaster, stack stone tiles.

# 7.5 **Convection air vents**



- The cross section of the air inlet duct for cavity ventilation and supplying the primary and secondary air, and the air cooled triple skin flue is 2320cm<sup>2</sup> for the inlet, and 2940cm<sup>2</sup> for outlet below the ceiling cap.
- A minimum of **200 cm**<sup>2</sup> of the air inlet and air outlet apertures must **not** be sealable.
- There must be no combustible building materials such as a wooden ceiling and no built-in furniture with a range of **30 cm** adjacent to, and **50 cm** above the air outlet apertures.

### 7.6 Ceiling above the fireplace insert



- If the cavity above the fireplace insert extends to the ceiling of the room , the ceiling must be protected if:
  - it consists of combustible materials;
  - it serves as a load-bearing element;
- the thermal insulation layer has to be installed according to national installation standards. Vent below the cavity cap to be 2940cm2.

# 8.0 Skamol Enclosure Board Installation

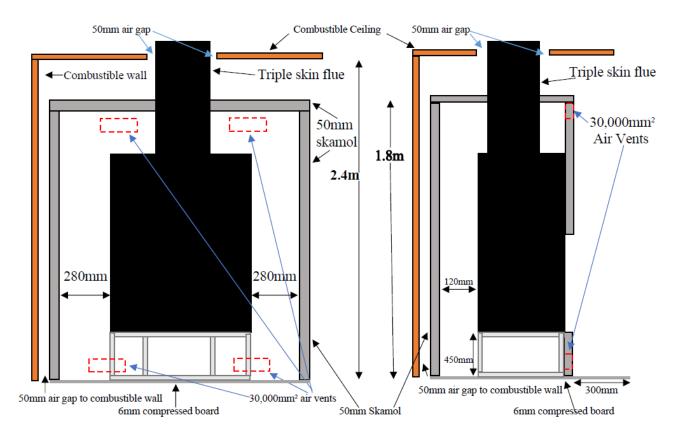
# 8.1 Skamol Installation - Chimney build out

To install into Skamol enclosure board, the heater must be on a stand no less than 450mm tall. Use the optional accessory kit AUA120-45Base available from your supplier. At this minimum height the hearth requirement is 2085 x 775 x 6mm cement sheet below the heater. And minimum 1490 wide x 390mm deep x 6mm thick in front of the heater, the 1490mm width placed centrally in front of the heater.

The enclosure is built in 50mm thick Skamol board, with minimum clearance to the Skamol of 280mm to the sides and 120mm clearance at the rear, or clearance to combustibles as 380mm to the sides and 220 to the rear (with the Skamol in between at 50mm off the wall). See Drawing below.

Minimum height of the Skamol cavity is to 1800mm high, with minimum ceiling height at 2400mm. The cavity must be capped at the top and sealed around the 12"casing with 50mm Skamol board.

The flue must be ventilated double casing (triple skin) starting from the firebox/ convection cladding. (Note flue spigot I.D. is metric 170mm - Over crimped 7" crimp to fit, must be a tight fit into the flue collar). The 10" skin must be sealed to the convection cladding. And the 12" casing must have minimum venting at the base of 20,000mm2, and be sealed with fire cement through the Skamol cap, and have 50mm clearance to combustibles through the ceiling (ie 405mm Diameter hole).



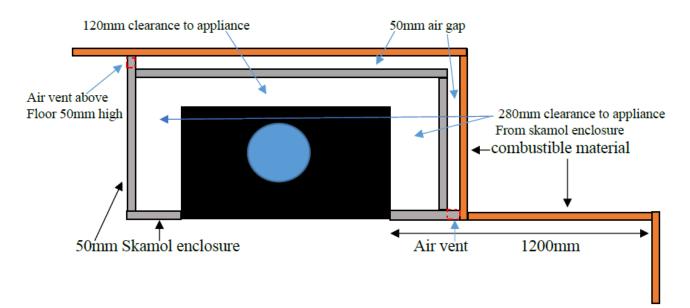
Minimum 7 sheets x 50mm Skamol board (2040 x 1220) for Chimney breast build out, extra required for extra caps reqruied on left and right for cabintry, and if taller cavity required or ceiling height is more the 2400mm.

The cavity must be ventilated to reduce heat build up inside the cavity. A minimum of 4 vents must be installed, with 2 level with the underside of the cavity cap with total 60,000mm2, to reduce heat build up at the top of the cavity, and 2 at 60mm from the bottom of the enclosure at 60,000mm2, to draw air in below the heater.

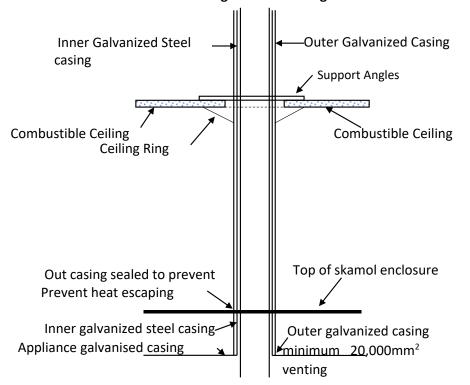
The vent size must have the minimum area of the open slots totalling the 60,000mm2, not including the grill bars or the outer grill frame.

The 50mm gaps between the SKamol board and the combustible wall must also be ventilated, with a 50 x 50mm opening to vent the gap, and an equivalent vent or opening to the roof space at the top.

Example below shows the Chimney breast build out, with the 50mm air gap shown on RHS if having cabinetry build alongside. A



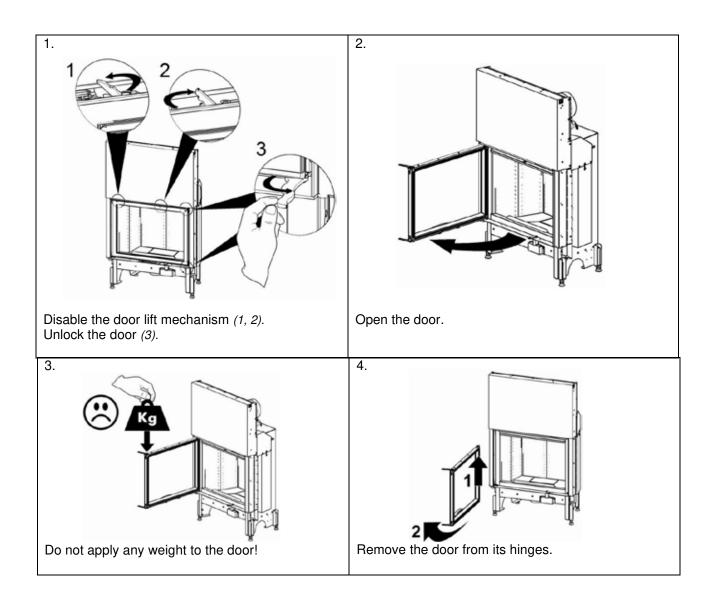
8.2 7" Triple flue kit – 7" stainless steel active, 10" galvanized inner casing with 12" outer galvanized casing

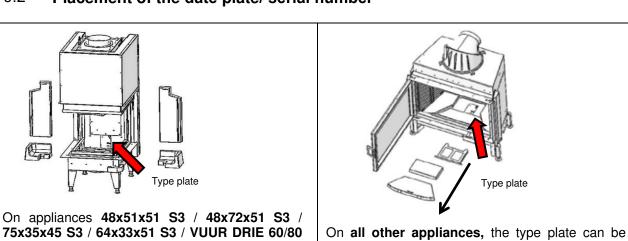


# 9 Information on Maintenance / Repair

# 9.1 Removing the door on appliances with a flat sliding door 2.0

(120 x 45)





### 9.2 Placement of the date plate/ serial number

### 9.3 **Firebox lining**

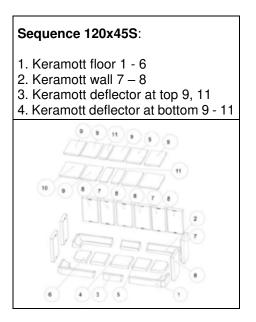
rear Keramott walls.

the type plate is located on the rear wall behind the

Loosely insert the individual Keramott components (without mortar) in the sequence shown in the diagram (see section 1.9).

in the firebox.

found under the inlay brick/cast-iron grate / ash pan



NOTES:		

NOTIZEN / NOTES:

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NOTIZEN / NOTES:



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