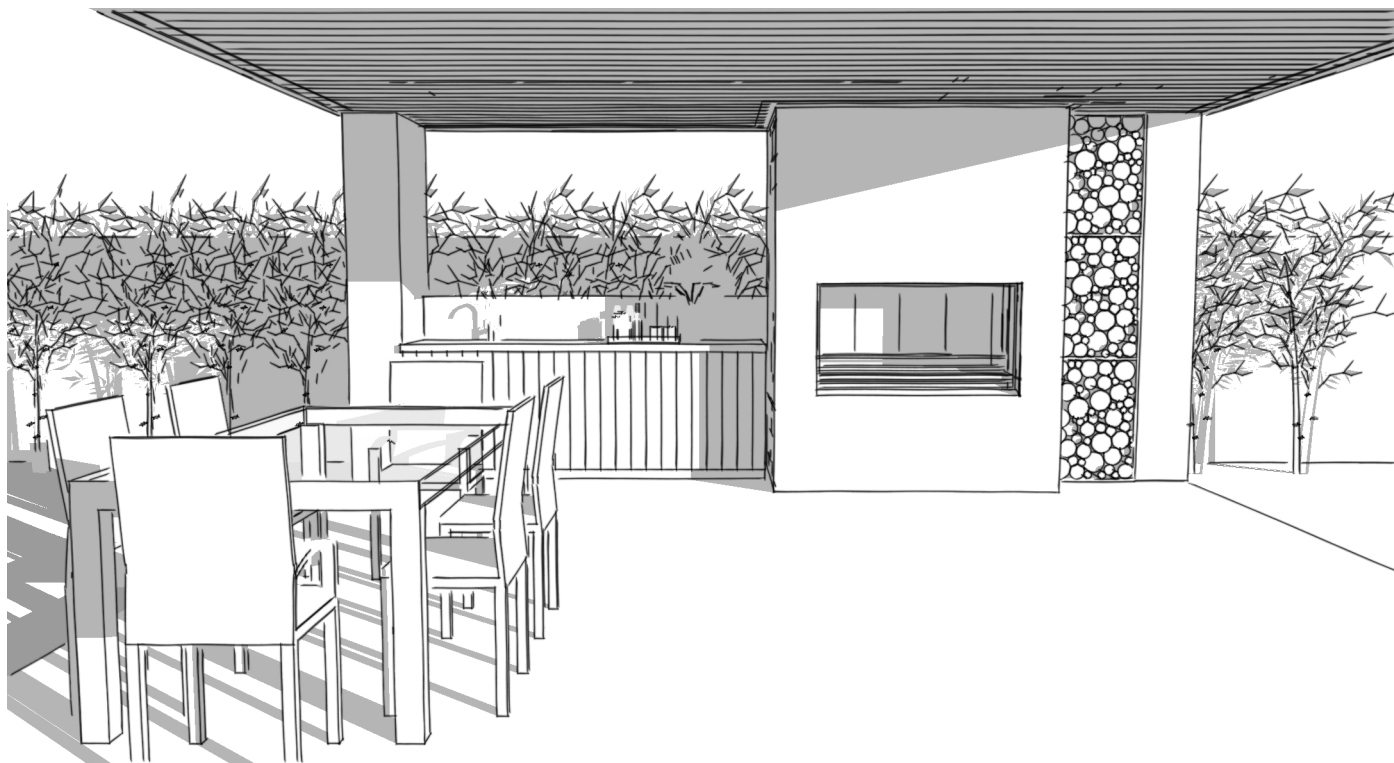


EK Series - Concrete or Concrete Block (CMU) Cavity Installation



1.0 PRODUCT DESCRIPTION

The EK Series Fireplace is an outdoor cooking wood fire with the ability to seamlessly transform from a cooking appliance into a fireplace for entertainment. This Design Guide is to assist with the specification and installation of the EK Series Outdoor Fireplace Kitchen into a concrete or concrete masonry structure. The structure can be attached to the main building or standalone.

www.escea.com/ek-series

2.0 MAIN FEATURES

The Fireplace comes equipped with everything you need to achieve a smoky meat lover's feast.

Professional Grilling – 13-point adjustable height grills and an ember generator let you cook your food at the perfect temperature, for that flame grilled smoky flavour. *

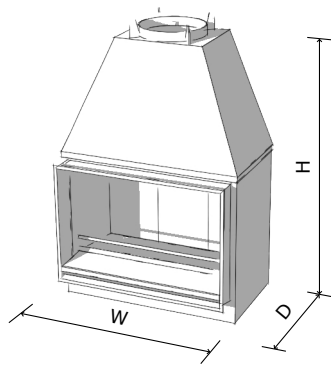
Built to Last – with a double layer of 4mm Steel, air cooled fluted Stainless-Steel back plates and 25mm thick fire bricks lining the base, the firebox is protected from the extreme heat of the fire ensuring it will stand the test of time and the elements.

Inside, Out – the EK Series features new technology that allows the fire to be attached to the home, for greater indoor-outdoor flow. Utilising the benefits of concrete or concrete block, the chimney cavity can provide an architectural and structural purpose, allowing for the creation of a dominant and impressive outdoor fireplace whether attached to the home or not.

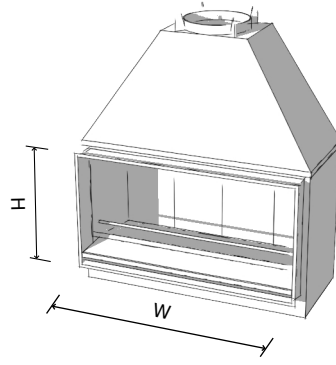
**EK1250 and EK1550 only. EK950 comes with the adjustable grill plate only.*

The Installation of the EK Series Fire must be installed strictly in accordance with the EK Series Installation Manual #630451

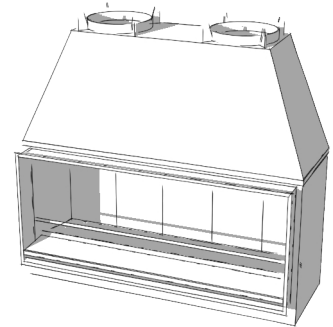
3.0 PRODUCT DETAILS



EK950



EK1250



EK1550

	EK950	EK1250	EK1550
Fireplace Dimensions:	997W x 1543H x 655D	1296W x 1543H x 655D	1596W x 1543H x 655D
Viewable Area (opening):	948W x 666H	1247W x 666H	1547W x 666H
Minimum Cavity Dimensions (minimum): <i>Without 140mm concrete</i>	1077W x 835D	1376W x 835D	1376W x 835D
Concrete Cavity Dimensions (minimum): <i>Includes 140mm concrete</i>	1357W x 1050D	1656W x 1050D	1956W x 1050D

All Dimensions in mm

*For Cavity Height dimension refer to Sec. 4.1.

4.0 DESIGN CONSIDERATIONS

4.1 Concrete Cavity Design

- If the **EK Series Fireplace** is installed into a concrete Block (CMU) or a concrete structure, and the structure forms part of the building, then the entire fireplace and flue must be fully enclosed in concrete material no less than 140mm thickness (15 Series Block).
- The **chimney cavity must extend fully through, and above, the roof line**. The flue pipes alone, must not penetrate the roof structure. Ref Fig. 4.1.
- If installing the EK Fireplace into a heat resistant material other than concrete or if the concrete thickness is less than 140mm, there must be a minimum clearance of 2000mm to any heat sensitive or combustible material.

4.2 External Clearances from the Fireplace Opening

- For **optimum working height** it is recommended to install the Fireplace at **790mm** from floor level to the base of the opening.
- Vertical clearance (from the opening) to a heat sensitive ceiling or roof above: **850mm** (for EK950 or EK1250) and **1500mm** (EK1550).
- Horizontal clearance (from the opening) to a heat sensitive side wall: **650mm** (EK950 or EK1250) or **1000mm** (EK1550).
- Keep any heat sensitive material clear in front of the opening - **2000mm**.

4.3 Cavity Clearances

- A **50mm back and side clearance** to any heat sensitive material at any height on the concrete structure is required. External clearances apply (refer 4.2) if any heat sensitive material extends onto or beyond the front of the concrete cavity.

4.4 Concrete Cavity Venting

- The concrete cavity requires air intake venting. Intake air vents can be any size or shape, provided that the total combined open surface area is a minimum of **28000mm²** (e.g. 2x 75mm Ø vents).
- Intake vents can be on the sides, back or front of the cavity. Vent air must come from an external space and not the building cavity. Vents can be no higher than **300mm** above the base of the fireplace.
- Concrete cavity is **vented out** by way of the 550mm Ø casing and the casing cover.

4.5 Hearth

- A **Hearth** or **Heat Resistant Floor Protector** will be required when the fire is at **790mm or above** from floor level to the Fireplace opening. Hearth sizes (measured from the fireplace opening):
 - 1348mm W x 300mm D (EK950)
 - 1647mm W x 300mm D (EK1250)
 - 1947mm W x 300mm D (EK1550)
- When the Fireplace is installed **below 790mm** from floor level to Fireplace opening, a 1000mm deep, **heat resistant** and **non-combustible**, hearth surface and structure in front of the fireplace can be installed strictly in accordance with AS/NZS2918 or the entire floor is fully non-combustible or heat resistant.

4.6 Mantel

- Any mantel must be fully **heat-resistant** and **non-combustible**.

4.7 Fireplace Platform

- The Fireplace must be installed onto a **non-combustible platform** that is suitably designed to take the load of the Fireplace and Flue.
- If the platform is constructed of a combustible material, the platform must be insulated from the fireplace, using 75mm thick AAC Panels, Calcium Silica Board or concrete of 140mm thickness.
- The platform must not inhibit air flow through the chimney cavity.

4.8 Seismic Restraint

- The fireplace must be fixed through the base of the appliance into the platform that supports it, not any insulating material.

4.9 Finishing

- When attached to the main envelope of the building the installation must comply with local **Building Code Requirements** for weathertightness. This is not the responsibility of Escea.
- Claddings or finishes applied to the front, sides or back of the concrete cavity must be **heat resistant** and **non-combustible**.

4.10 Flue

- The EK Series fires use a 350-450-550mm Ø flue system with a 650mm Ø Anti-Down Draught Cowl and Casing Cover. The EK950 and EK1250 have a single flue, while the EK1550 has a twin flue.

- Refer to **Sec. 7** for Flue Specifications.

4.11 Compliance

- The design and installation of the EK Series Cooking Fire must comply with this Design Guide, the EK Series Installation Manual #630451 and AS/NZS2918.2013.

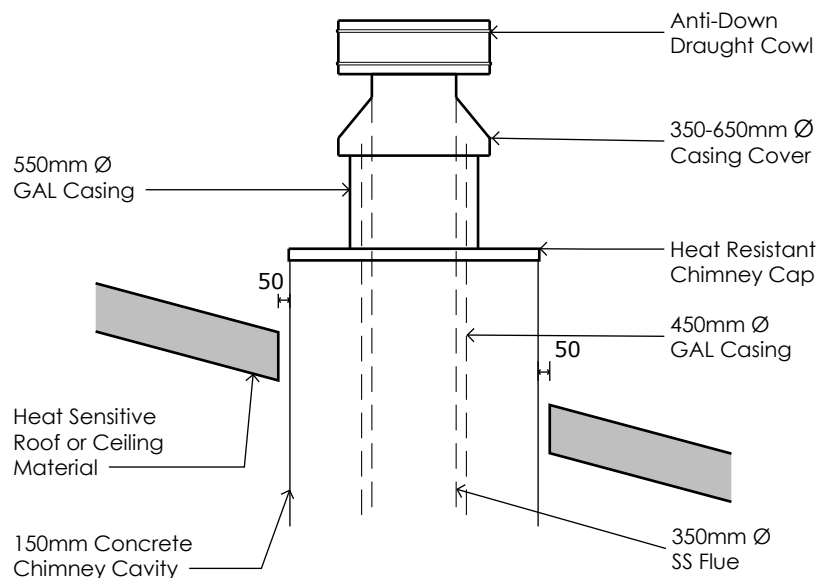
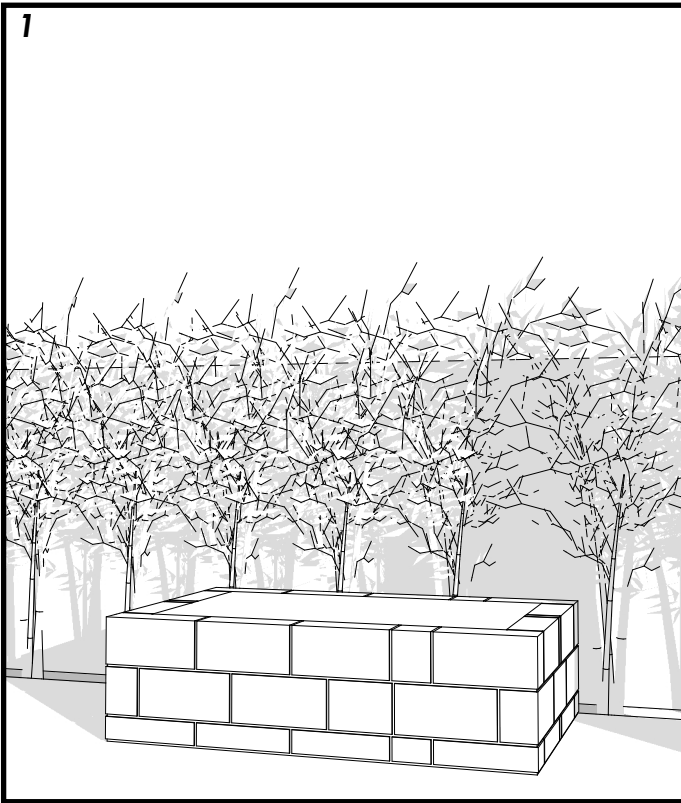
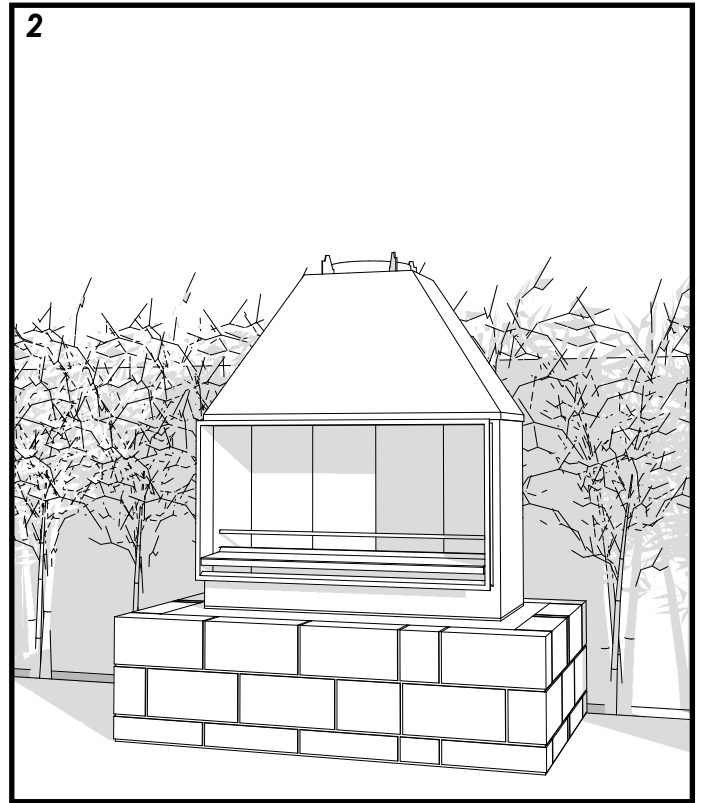


Fig 4.1 - Flue and Roof Penetration

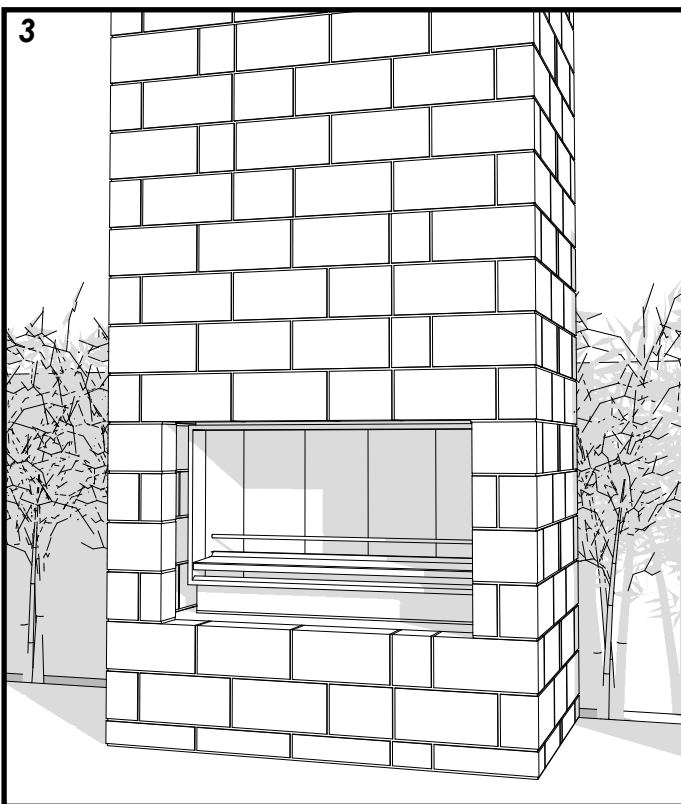
5.0 CONSTRUCTION METHOD



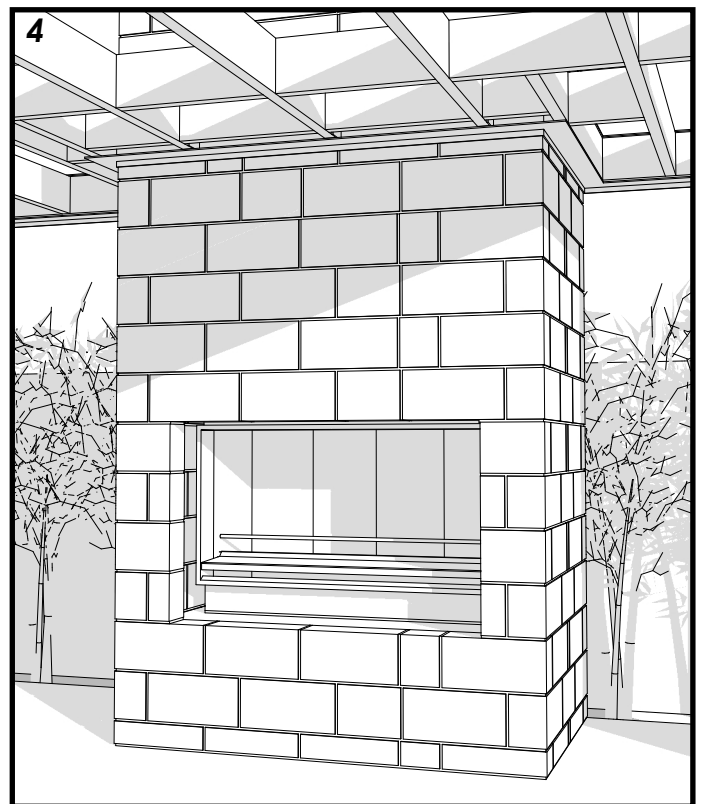
Chimney cavity base laid or poured.
Fireplace platform located and fixed in place.



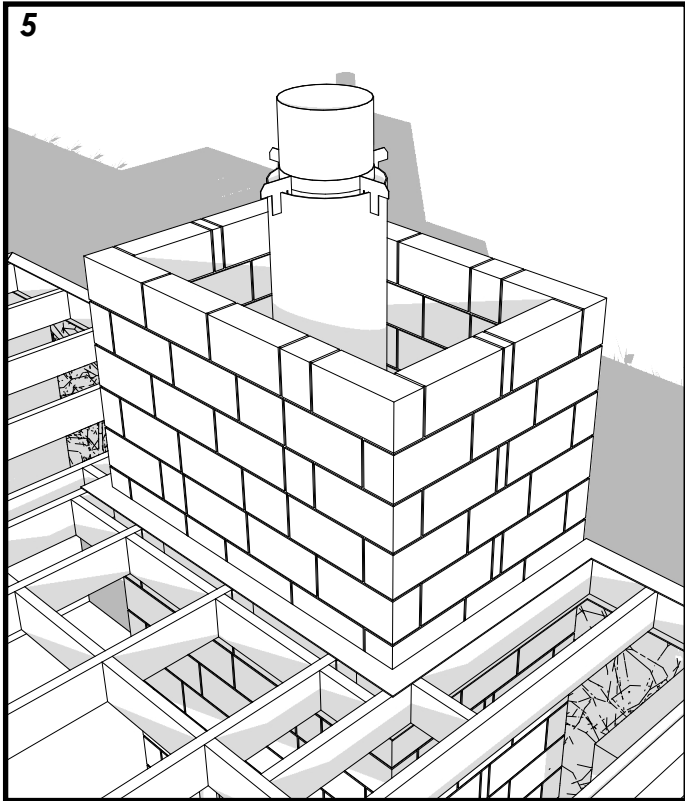
The fireplace is located towards the back of the cavity.
Protect from damage.



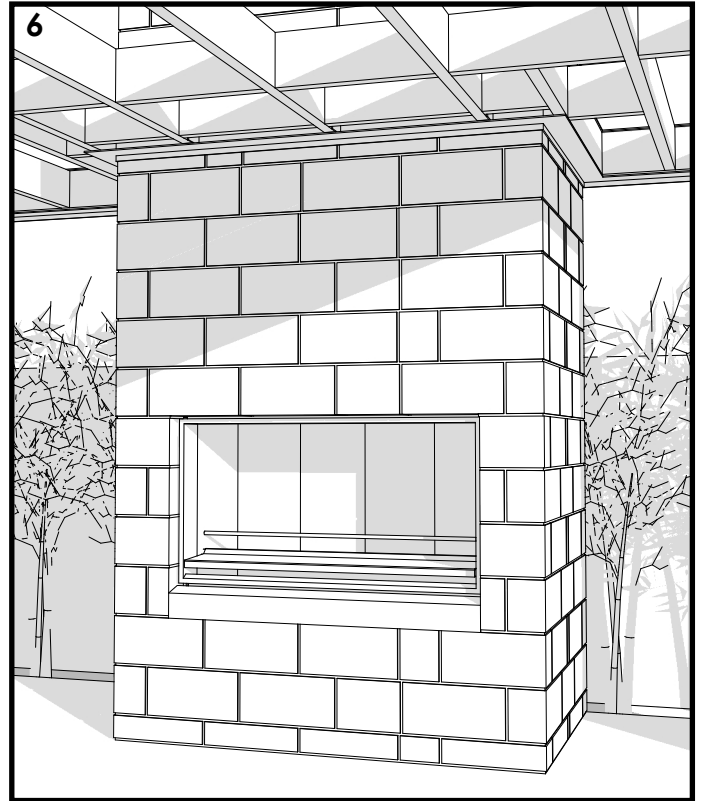
Complete concrete structure according to designed or
prescribed method.



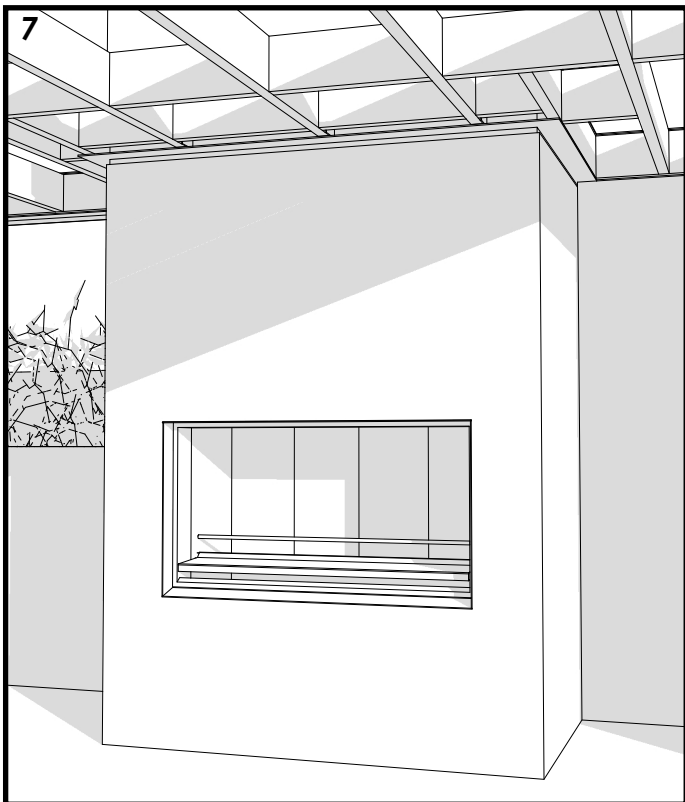
Additional construction added where required.
Note: non-combustible materials only fixed of the
chimney cavity.



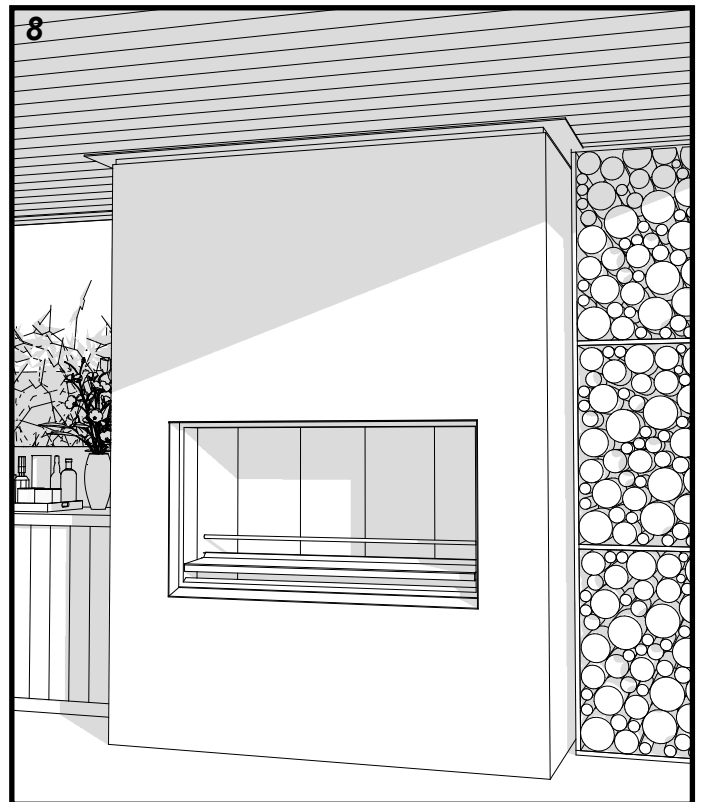
Flue, casings and brackets are in place and fixed.
Provide additional support brackets midspan (if required).



Pull fire forward into the cavity opening - locate with
recess to blockwork 75mm.
Pour or apply any infills to close up the opening to
required finish dimensions.
Fix fire to platform.



Install flashings to opening and fireplace to seal cavity -
to provide finishing point for outer claddings (where
required).
Apply any chimney cavity finishes or non-combustible
claddings.



Flue system completed with chimney cap, casing cowl
and cowl.
Fireplace is complete and finishes applied to the area.

6.0 LIMITATIONS

- This fire is intended for outdoor use only as a cooking/heating appliance.
- This fireplace is intended to be a built-in appliance within a chimney cavity; it is not intended to be exposed to moisture for extended periods of time.
- No modification of the fireplace or flue system is allowed.
- This fireplace must be operated with a flue.
- The fireplace, flue system and chimney cavity construction must comply with this Design Guide, the EK Series Installation Manual #630451, Local and National Building Codes and any relevant Statutory Regulations.
- Shortcomings in the fireplace and flue installation are the responsibility of the Installer. Escea will not be accountable for such failings or their consequences.
- Claddings, linings or surface finishes around the fireplace may be exposed to smoke damage, discoloration, damage or degradation due to overloading or thermal stress. Consideration must be given to suitable material selection above and around the opening of the fireplace for continued and safe use of the selected material.
- Precautions for specification and use must be taken in abnormally corrosive environments (e.g. exposed coastal areas).
- Overloading or thermal stress may accelerate rust or degradation of the fireplace. Follow the recommended loading guidelines.

7.0 FLUE SPECIFICATIONS**7.1 System**

- The flue system consists of a **350-450-550mm Ø flue** and **twin casings**.
- The flue terminal uses a **350mm-650mm Ø casing cover** and a **650mm ODØ anti-down draught cowl**.
- A top spacer bracket supports the casing cover and enforces the minimum air gap between casings. Additional Spacer brackets fit between casings to maintain the minimum air gap.
- The chimney chase structure cannot be in contact with adjacent combustible materials and a **50mm gap**, to any combustible or heat sensitive material, must remain at all times.

7.2 Joint Sealing

- All joints in the flue system, and between the gather/chassis of the appliance, must be sealed with a suitable high temperature fire cement or sealant rated to temperatures greater than 500°C.

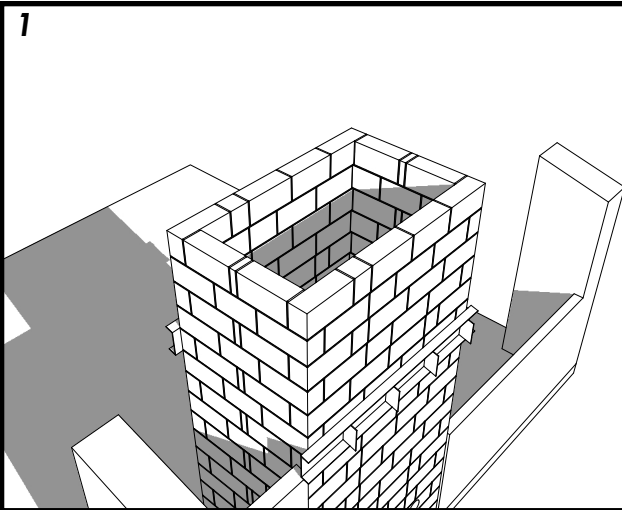
7.3 Chimney cap flashing

- A custom chimney cap flashing will be required to seal the chimney cavity. This must be constructed of a suitable heat resistant and non-combustible material.
- A lightweight chimney cap may require non-combustible structural supports across the chimney cavity top.
- The outer 550mm Ø flue casing, to vent the chimney cavity, can be incorporated into the chimney cap.
- Chimney cap flashing must comply with the relevant Building Code requirements for durability and weathertightness.
- As the concrete chimney cavity will extend through the roof line, no alternative method for finishing or flashing the flue system is available.

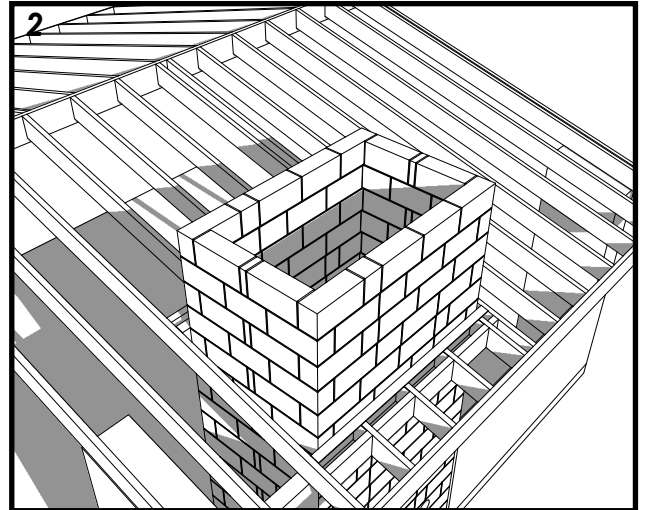
7.4 Terminal Location Compliance

- Flue termination must be located in accordance with *AS/NZS2918 External Requirements*.

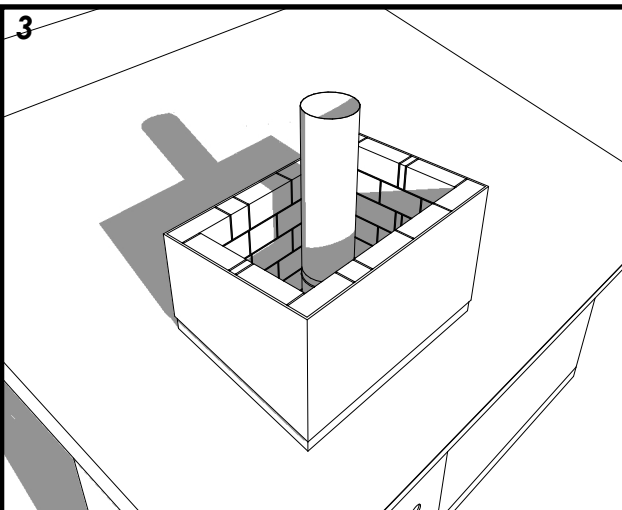
Flue Specification - Installation Method



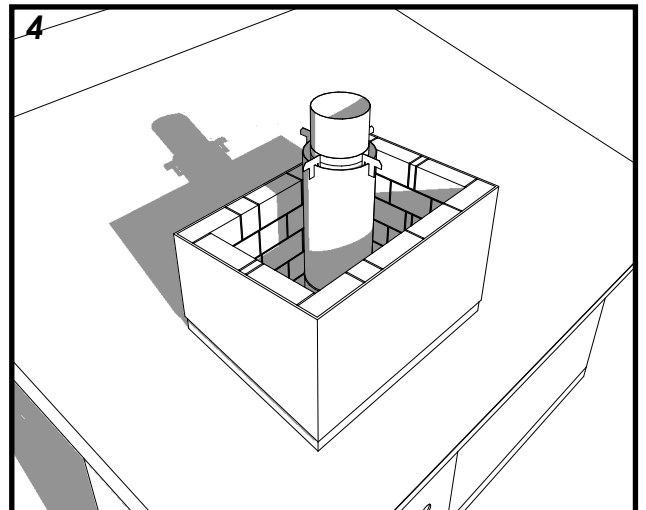
Chimney cavity built with non-combustible connections for the roof.



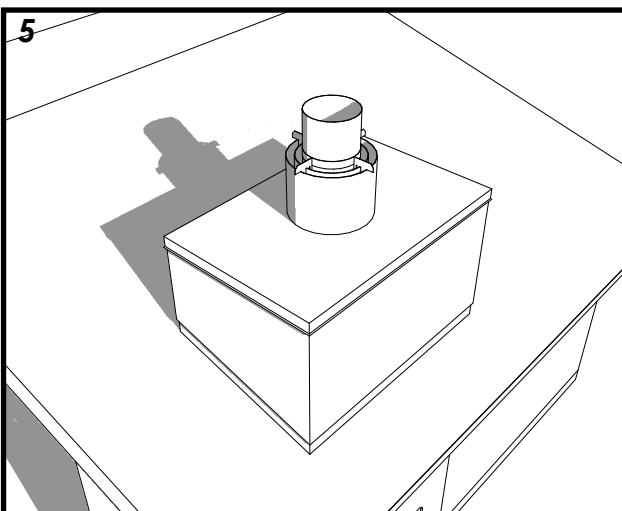
Roof structure in place with 50mm gap from chimney cavity to any combustible material.



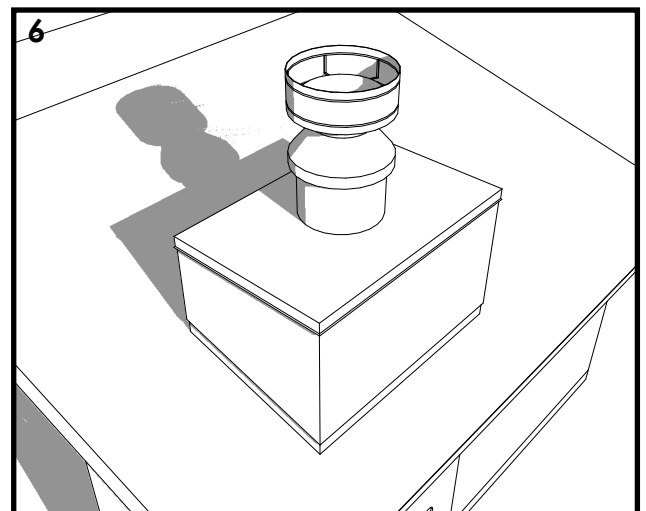
350mm Ø SS Flue fitted to fire and sealed. Additional support inside the cavity may be required.



450mm Ø casing and spider brackets fitted to flue system. Spider brackets to maintain air gap. Ensure adequate SS Flue height to allow the casing cover to fit over the flue.



Designed chimney cap with 550mm Ø outer flue casing to vent chimney cavity. Spider bracket added to support casing cowl.



Casing cover and Cowl fitted to the flue. Flue system is complete.

8.0 HEALTH AND SAFETY

- Failure to follow this Design Guide and the EK Series Installation Manual #630451 could result in death, serious bodily injury, and/or property damage. Failure to follow these instructions may also void your fire insurance and/or warranty.
- Ensure correct installation, maintenance and operation of the fireplace, as per this Design Guide and the EK Series Installation Manual #630451.
- Take care when installing to prevent injury as this product is heavy. Installation will require a team or mechanically aided lift and placement.
- Surfaces of the fireplace may remain hot after use.
- Never leave a fire unattended.
- Do not overload the fireplace.

9.0 TECHNICAL SPECIFICATIONS

Model	EK950/EK1250 Open Fronted Cooking Fire	EK1550 Open Fronted Cooking Fire
Location	Built-In Installation	Built-In Installation
Fascia Style	Frameless	Frameless
Colour	Metallic Black	Metallic Black
Flue Kit	Single 350-450-550mm Ø Flue Kit	Twin 350-450-550mm Ø Flue Kit
Fuel Type	Softwood/Charcoal Coals or Briquettes	Softwood/Charcoal Coals or Briquettes
Extras	Freestanding Kitset Enclosure Optional Weather Cover	Freestanding Kitset Enclosure Optional Weather Cover
Flue System		
	914603 EK950/EK1250 Open Fronted Cooking Fire	914603 EK1550 Open Fronted Cooking Fire
Flue Location	Chimney Cap	Chimney Cap
Flue	2x (1200mm L x 350mm Ø) Stainless Steel	4x (1200mm L x 350mm Ø) Stainless Steel
Flue Casing	2x (1200mm L x 450mm Ø) GAL Steel 1x 550mm dia Casing <i>Height will vary - Installation Dependent</i>	4x (1200mm L x 450mm Ø) GAL Steel 2x 550mm Ø Casing <i>Height will vary - Installation Dependent</i>
Cowl	1x 350mm Ø A.D.D Cowl - Stainless Steel	2x 350mm Ø A.D.D Cowl - Stainless Steel
Casing Cover	1x 350-650mm Casing Cover - Stainless Steel	2x 350-650mm Casing Cover - Stainless Steel
Components	1x 350-650mm Ø Casing Cover Spider Bracket	2x 350-650mm Ø Casing Cover Spider Bracket
Flashings	Rubber Boot or Custom Flashing	Rubber Boot or Custom Flashing

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