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TC970

IN-BUILT WOOD FIREPLACE

Installation Manual

AUSTRALIA

FIRE BY **escea.**

IMPORTANT SAFETY INSTRUCTIONS

THE PRODUCT DATA LABEL CONTAINING TECHNICAL SPECIFICATIONS FOR THIS FIREPLACE IS CHAINED TO THE FRONT RIGHT OF THE FIREPLACE.

WARNING: THIS FIREPLACE AND ITS FLUE SYSTEM MUST BE FULLY AND CORRECTLY INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, AS/NZS 2918, AND ALL APPLICABLE NATIONAL AND LOCAL BUILDING CODES. ESCEA RECOMMENDS INSTALLATION BY A REGISTERED AHHA OR NZHHA INSTALLER.

WARNING: FIREPLACES INSTALLED IN ACCORDANCE WITH AS/NZS 2918 SHOULD CONFORM TO THE REQUIREMENTS OF AS/NZS 4012 AND AS/NZS 4013 WHERE REQUIRED BY THE REGULATORY AUTHORITY. THE FIREPLACE SHOULD BE IDENTIFIABLE BY A CONFORMANCE PLATE WITH THE MARKING "TESTED TO AS/NZS 4012 AND AS/NZS 4013".

WARNING: DO NOT MODIFY THIS FIREPLACE IN ANY WAY NOT APPROVED IN WRITING BY THE RELEVANT TESTING AUTHORITY. UNAUTHORISED MODIFICATION WILL BE CONSIDERED A BREACH OF COMPLIANCE WITH AS/NZS 4012:2014 AND AS/NZS 4013:2014.

WARNING: THIS FIREPLACE IS DESIGNED TO BURN DRY, SEASONED SOFTWOOD WITH A MOISTURE CONTENT BELOW 20%. DO NOT BURN TREATED, LAMINATED, PAINTED OR OIL-CONTAMINATED WOOD, AND NEVER USE ACCELERANTS SUCH AS PETROL OR LIGHTER FLUID. FIRE-LIGHTERS AND PAPER ARE ACCEPTABLE.

WARNING: KEEP ALL FLAMMABLE MATERIALS, INCLUDING LIQUIDS, CLOTHING, FURNITURE, AND FUEL STORAGE, AT A SAFE DISTANCE FROM THE FIREPLACE AT ALL TIMES. FUEL STORAGE SHALL NOT BE WITHIN THE FIREPLACE INSTALLATION CLEARANCES.

WARNING: OPEN THE DAMPER AIR CONTROL PRIOR TO OPENING DOOR FOR REFUELLING.

CAUTION: DO NOT MIX FIREPLACE OR FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES. DO NOT MODIFY THE DIMENSIONAL SPECIFICATIONS OF ANY COMPONENT. SUCH ACTIONS MAY CREATE HAZARDOUS CONDITIONS. WHERE ANY VARIATION IS BEING CONSIDERED, CONTACT ESCEA BEFORE PROCEEDING.

CAUTION: THIS FIREPLACE MUST BE OPERATED WITH THE DOOR CLOSED AT ALL TIMES DURING USE. ONLY OPEN THE DOOR FOR REFUELLING, MINIMISING THE TIME THE DOOR REMAINS OPEN. DO NOT LEAVE THE DOOR OPEN DURING THE LIGHT-UP PHASE.

CAUTION: DO NOT OVERLOAD THE FIREBOX. FUEL LOAD MUST NOT EXCEED 50% OF THE FIREBOX CAPACITY. EXCEEDING THIS LIMIT MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY.

CAUTION: DO NOT OPERATE THE FIREPLACE WITH CRACKED OR BROKEN COMPONENTS, OR IF THERE IS A PERSISTENT SMELL OF FUMES. EITHER CONDITION MAY PRESENT A SERIOUS HEALTH OR SAFETY HAZARD, WHICH WILL RENDER THE INSTALLATION UNSAFE.

CAUTION: THIS FIREPLACE MUST BE MAINTAINED AND OPERATED AT ALL TIMES IN ACCORDANCE WITH THESE INSTRUCTIONS.

CAUTION: NEVER CLEAN THE FIREPLACE OR REMOVE ASH WHILE THE FIREPLACE IS HOT. DISPOSE OF ASH ONLY INTO A NON-COMBUSTIBLE, LIDDED CONTAINER. A RESIDUAL ASH LAYER OF APPROXIMATELY 25 MM SHOULD BE MAINTAINED IN THE BASE OF THE FIREBOX DURING NORMAL USE.

EXTREME CAUTION IS REQUIRED WHEN THIS FIREPLACE IS USED IN THE PRESENCE OF CHILDREN, OR PERSONS WITH REDUCED PHYSICAL, SENSORY, OR MENTAL CAPABILITIES. SUCH PERSONS MUST NOT USE THE FIREPLACE WITHOUT APPROPRIATE SUPERVISION OR INSTRUCTION FROM A RESPONSIBLE ADULT.

YOUNG CHILDREN MUST BE SUPERVISED AT ALL TIMES TO ENSURE THEY DO NOT TOUCH HOT SURFACES OR INTERACT WITH THE FIREPLACE UNSUPERVISED. CHILDREN MUST NOT CARRY OUT CLEANING OR MAINTENANCE. A PHYSICAL BARRIER IS RECOMMENDED WHERE UNSUPERVISED ACCESS BY CHILDREN OR VULNERABLE INDIVIDUALS CANNOT BE PREVENTED.

NEVER LEAVE THE FIREPLACE OPERATING AND UNATTENDED WHEN CHILDREN OR VULNERABLE PERSONS ARE PRESENT.

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

ESCEA TC970 FIREPLACE SPECIFICATIONS

Description of Appliance	In-Built Solid Fuel Fireplace
Certification No.	AHHA26-423
Emissions	0.40 g/kg
Efficiency	62%
Tested Fuel type	HARDWOOD
Maximum Heat Output	18.6 kW
Average Heat Output	12 kW
Fireplace Compliance	Tested to AS/NZS 2918:2018 Appendix B
Weight	185 kg
Door Size	945w x 483h
Firebox Volume	99.5L
Damper Control	Top Right - Above Door
Wet-back	No
Flue Type	Natural Draught - Direct Vent
Flue Size	150mm Exhaust/200mm Intake/250mm Outer
Min. Flue Length	4.6m from Floor Protector
Flue Heat Shield	Not Required
Flue Compliance	Tested to AS/NZS 2918:2018 Appendix F
Fireplace Serial Number Location	Data Plate chained to the front right firebox corner

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A GENERAL INFORMATION

A1. LIMITATIONS

This fireplace is intended for indoor use only. Do not install outdoors or in the vicinity of swimming pools or wet areas. Consult Escea before altering any dimensional or component specification. All dimensions are in mm.

No TC970 in-built wood fireplace parts, consoles or assemblies are compatible with a TC950 in-built wood fireplace.

A2. COMPLIANCE

This fireplace must be installed according to these instructions and in compliance with all relevant national and/or state building regulations, and *AS/NZS 2918*.

A3. INSTALLER RESPONSIBILITY

Installation must be carried out by a licensed or trained installer who, on completion of the installation, must ensure this fireplace is installed according to the manufacturer specifications, and local and national building codes. Any deviation may affect performance, safety, or warranty coverage.

At the end of the installation, refer to the Commissioning Checklist in "F - Checklist" to confirm all actions are complete. Any shortcomings in the fireplace installation will be the responsibility of the installer, and Escea will not be accountable for any such failings or their consequences.

A4. DAMAGED FIREPLACE

Do not use if the fireplace has been dropped or has any other visible signs of damage. In the event of a natural disaster, or if any part has been under water, have a qualified technician inspect the fireplace for damage. Repair or replace any damaged components before operating this fireplace.

A5. STORAGE AND HANDLING

- Store in a dry, covered, and well-ventilated area. Keep away from moisture, dust, and corrosive materials.
- Verify parts supplied are correct for the installation.
- Do not stack other items on top, tilt, or drop the fireplace or other components.
- Retain installation manuals or any included hardware.
- Use two or more people or lifting equipment and never lift by the fascia or glass.
- Wear protective gloves to avoid injury and protect finishes. Handle glass, bricks, and internal parts carefully to prevent damage.
- Do not use sharp tools near visible surfaces.

A6. WARRANTY INFORMATION

Escea warrants this WOOD fireplace in accordance with the Escea Warranty Terms and Conditions, which can be found in your Escea Wood Fireplace Owner's Manual. All warranty work must be pre-authorised by Escea or its distributors. Work carried out without approval will not be covered. To make a warranty claim, obtain your fireplace serial number, which can be found on the Fireplace data plate.

Firebox: **10 Years Parts & Labour Warranty** — Escea will repair or replace defective parts and cover the installation of those parts.

Fireplace Components and Accessories: **1 Year Parts & Labour Warranty** — Escea will repair or replace defective parts and cover the installation of those parts.

Due to ongoing product development, Escea reserves the right to change any specifications listed in these instructions or warranty without notice. This fireplace is manufactured by:

Escea Ltd

17 Carnforth Street, Dunedin, 9018, New Zealand

0800 173 000

www.escea.com/nz

B GENERAL FIREPLACE SPECIFICATIONS

B1. SCOPE

The Escea TC970 is an in-built, room sealed wood fireplace, using a direct-vent co-axial flue. No room air is needed for combustion. Combustion air is drawn from outside and exhaust returned outside. All wood fire specifications and installations must cover the aspects outlined in this installation manual. The TC970 In-Built Wood Fireplace has one installation method.

Timber Cavity Installation: The TC970 can be installed into timber framed cavities using the TC970 Zero Clearance Kit.

Any deviation, or aspect not covered here, must first be discussed with the Escea Architectural Advisory Team; non-complying specifications may increase fire or property-damage risk, or result in warranty invalidation.

B2. AIRTIGHT BUILDINGS

The Escea TC970 In-built Wood Fireplace, when installed with the TC970 Zero Clearance Kit and Escea In-built Flue Kit, supports building airtightness objectives; its direct-vent, room-sealed combustion system, sealed cavity, and triple-skin flue eliminate air infiltration and exfiltration at the fireplace and flue penetrations.

B3. BAL RATING

The TC970 In-built Wood Fireplace, when installed into a timber framed cavity using the TC970 Zero Clearance Kit, and with the In-Built Flue Kit, can assist in achieving BAL 40 compliance in accordance with *AS 3959:2018 Construction of Buildings in Bushfire-Prone Areas*. This configuration prevents the ingress of embers through the fireplace and flue, but does not include roof flashings.

B4. TV HEIGHT

Escea does not recommend installing a television above a wood fuel fireplace, as the elevated and variable temperatures can damage electronics, degrade performance, and void warranties. Escea accepts no liability for any resulting damage, warranty invalidation, or consequential loss, with installation undertaken entirely at the installer's and owner's risk.

If you choose to proceed despite this recommendation, the following minimum requirements are advised:

- A non-combustible, heat-deflecting mantel of 300mm depth must be installed between the fireplace and the television.
- The television must be positioned greater than 80 mm above the mantel, and project no more than 80mm from the wall.
- Television manufacturer must confirm that the TV is rated for operation at elevated ambient temperatures of 40 °C or above.

Testing on the Escea TC970 recorded ambient temperatures of approximately 40 °C at the television position when a non-combustible mantel projecting at least 300 mm was installed, with the mantel underside located approximately 360 mm above the fascia vent outlet. These figures are indicative only and actual temperatures will vary depending on installation design, fuel type and loading, ventilation, and fireplace operation.

B5. CHIMNEY CAVITY VENTILATION

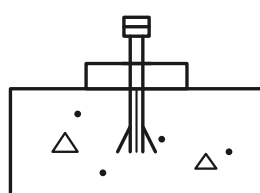
Ventilate the chimney cavity per *AS/NZS 2918 Sec. 3.4.2* with intake and outlet vents at the base and top. The inlet may be internal or external. The outlet may vent to the room, through the cavity wall, through the chimney cap, or into a vented roof space. Where the cavity does not extend above the roof line, the outlet must return to the room or a vented roof space. Any internal space used as an air supply for the chimney cavity, must itself be resupplied with an equivalent volume of outside air. This can be by way of a vent to outside or an open window.

Timber Cavity Ventilation: Each vent to be a minimum of **10,000mm²** (free open area) and no higher than 300mm above the cavity base.

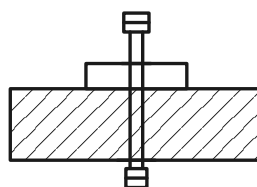
NOTE: Ventilation of the Zero Clearance Kit is not required, from either inside or outside the building.

B6. SEISMIC RESTRAINT

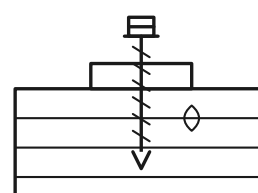
The TC970 Inbuilt wood fireplace is to be restrained to a base or floor using suitable, M6-sized fasteners anchored into structural components. Use the diagrams below to select the appropriate base fixing solution. Restraint locations are defined in Sec. C6.



CONCRETE
EXPANSION ANCHOR



STEEL OR GRC
HEX BOLT + NUT

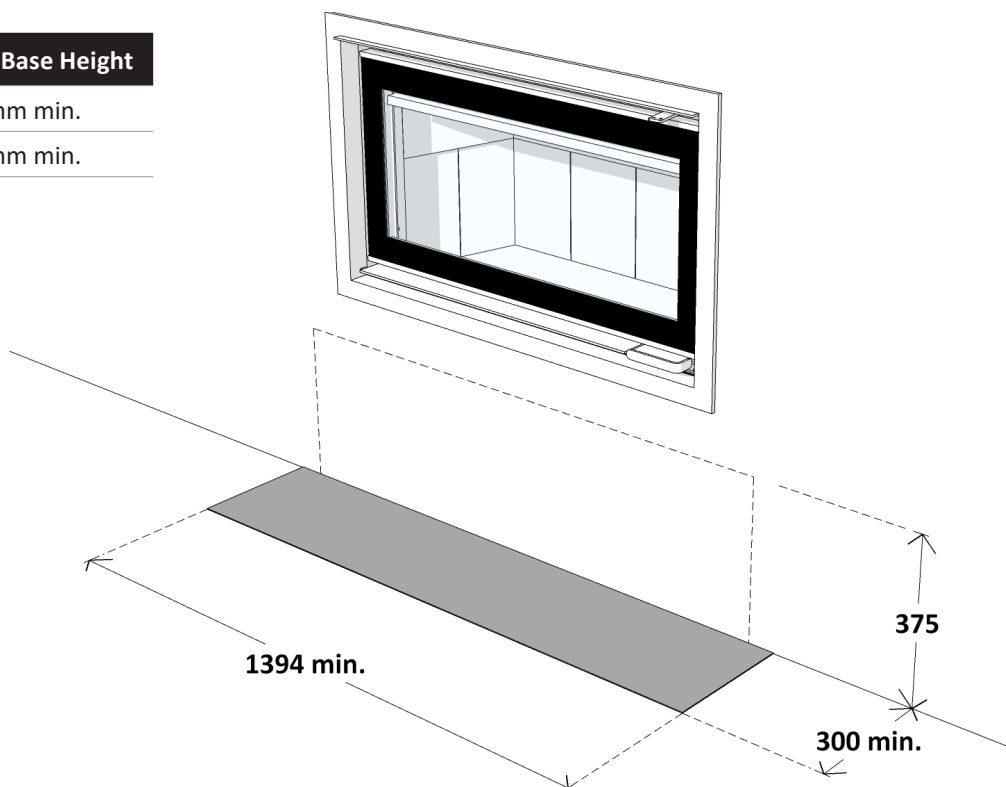


TIMBER
TEK SCREW

B7. HEARTH - STANDARD FIREPLACE INSTALLATION

In all instances a floor protector or insulating hearth is required in front of the TC970, when installing over a combustible floor. When installed at the recommended 375mm base height, a simple non-combustible floor protector only (min. thickness 1.5mm) is required.

Fireplace	Fireplace Base Height
With ZCK	375mm min.
Without ZCK	375mm min.



B8. RAISED HEARTH INSTALLATION

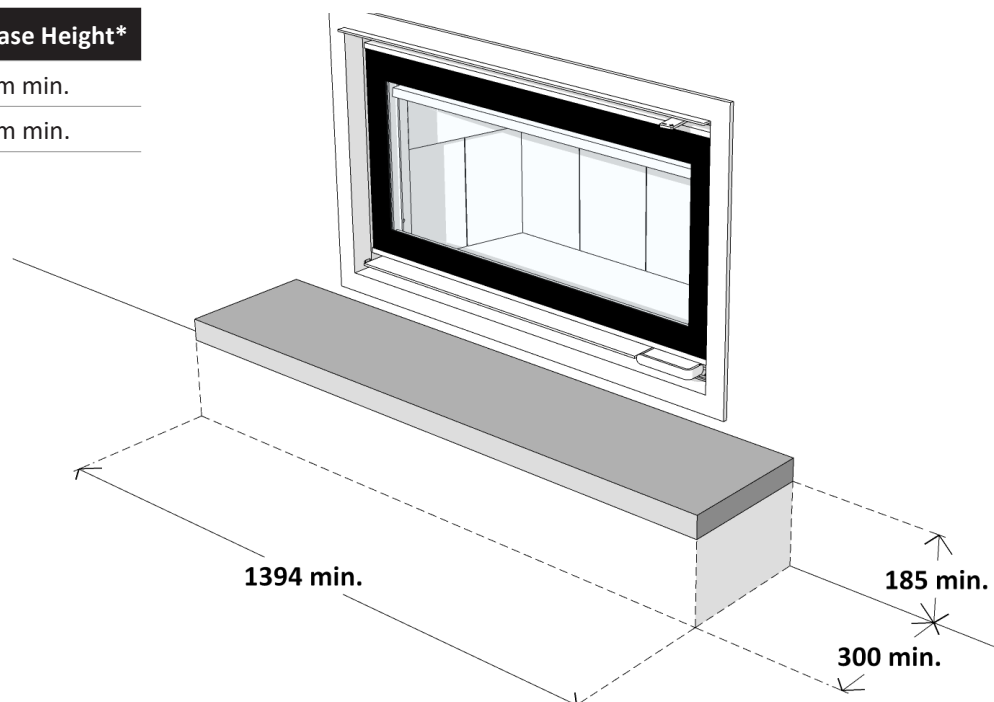
A raised or floating hearth with the min. hearth depth of 300mm, can be made from combustible materials but must be overlaid with min. combined thickness of 50mm Fibre Cement Sheet.

A combustible hearth above floor must not be lower than 185mm.

It can be finished in any non-combustible material with a minimum thickness, 1.5mm.

Fireplace	Fireplace Base Height*
With ZCK	153mm min.
Without ZCK	180mm min.

*With 185mm raised hearth height.



B9. HEARTH - FLOOR MOUNTED FIREPLACE

Where the fireplace is installed directly onto a floor, or less than 150mm above a combustible floor, and without a raised or floating hearth, two options are available.

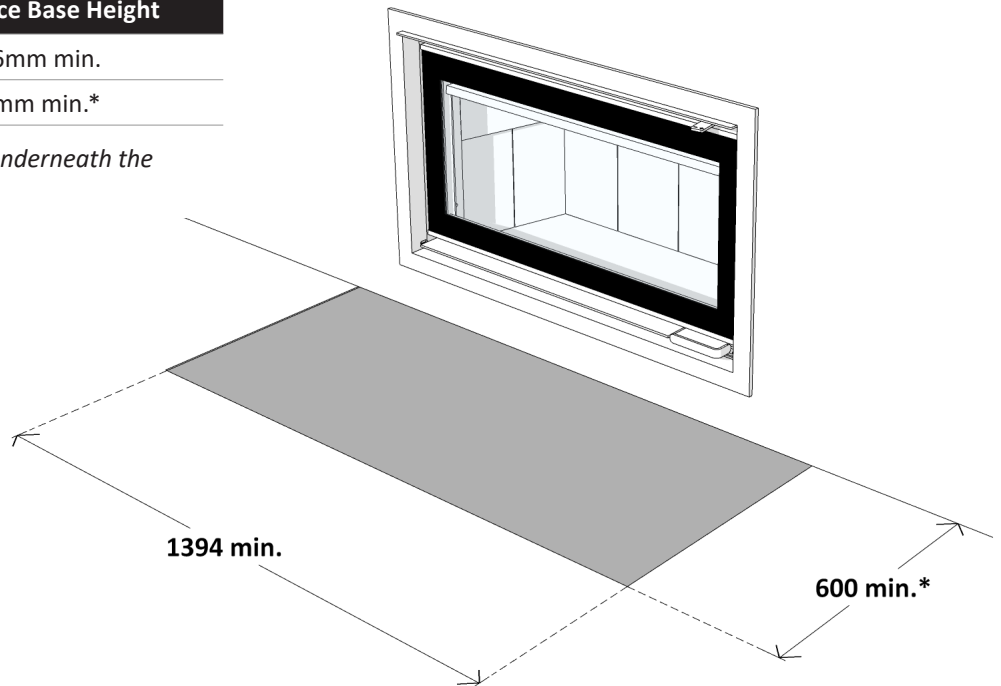
RECESSED HEARTH

A 75mm concrete slab, AAC panel or Fibre Cement Sheet (with min. combined thickness of 50mm) of the dimensions below, can be rebated into a combustible floor.

It can be finished (where required) in any non-combustible material with a minimum thickness, 1.5mm.

Fireplace Configuration	Fireplace Base Height
With ZCK	26mm min.
Without ZCK	0mm min.*

**Hearth material must be continuous underneath the fireplace.*



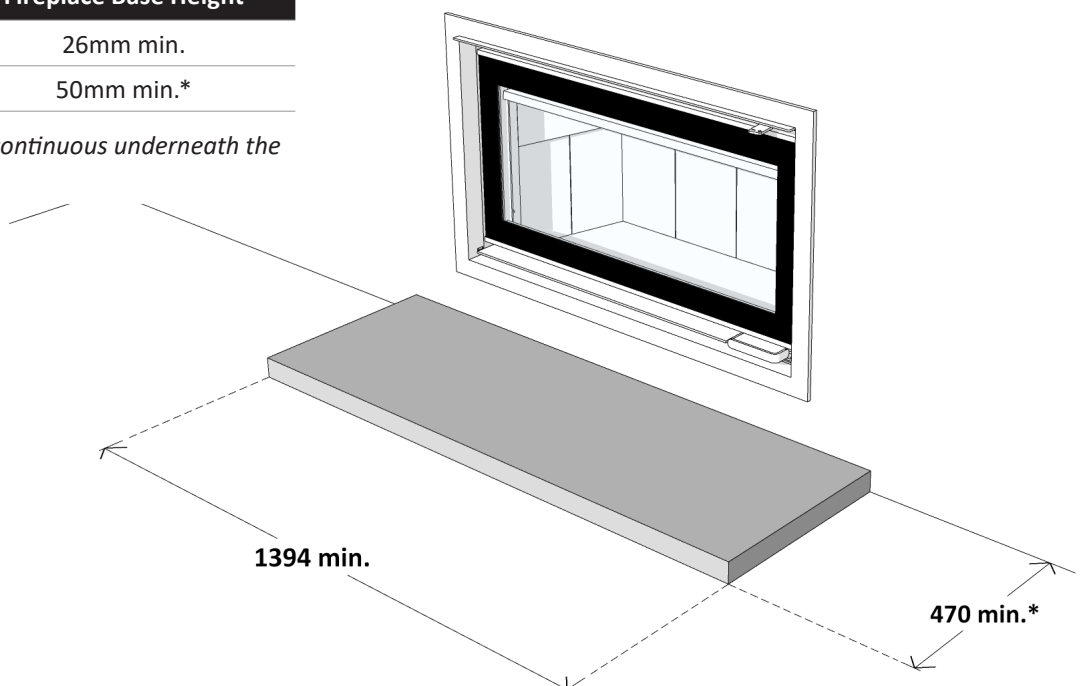
SURFACE MOUNTED HEARTH

A floor mounted insulating hearth with a min. combined thickness of 50mm Fibre Cement Sheet, can be overlaid to a combustible floor.

It can be finished (where required) in any non-combustible material with a minimum thickness, 1.5mm.

Fireplace	Fireplace Base Height
With ZCK	26mm min.
Without ZCK	50mm min.*

**Fibre cement sheet must be continuous underneath the fireplace.*



B10. FINISH OPTIONS

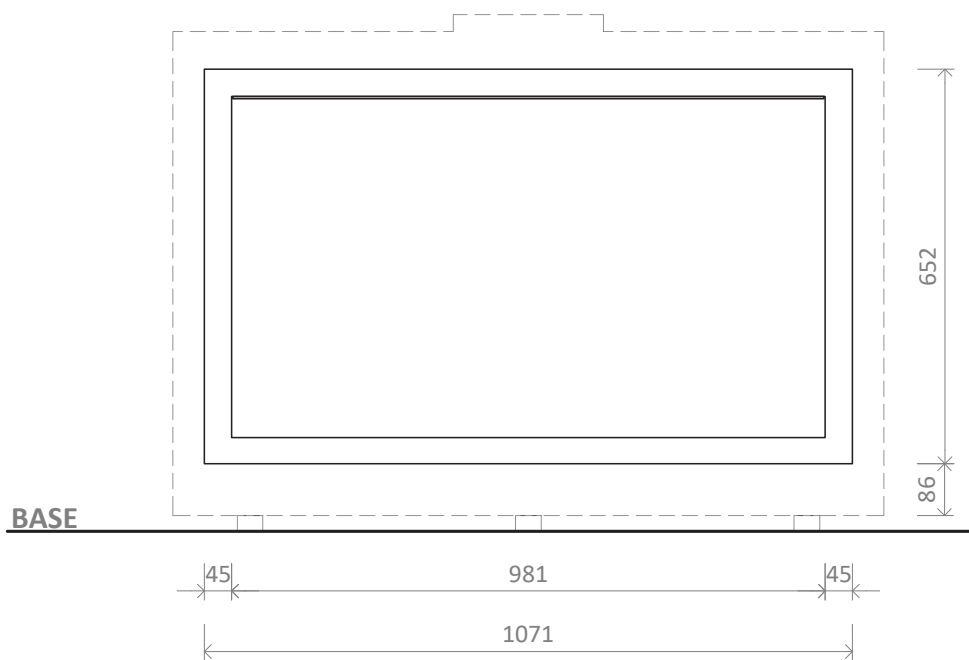
The TC970 In-built wood fireplace requires the use of a fascia in all instances to finish the fireplace. Two options are available and the selection of either fascia is dependent on your wall finish or cladding.

Base height is equally measured from the TC970 ZCK and TC970 Cabinet Base.

LINEAR FASCIA

Required for single layer, painted, or plaster finishes or sheet steel up to 14mm thickness. This fascia overlaps the wall finish at the fireplace opening.

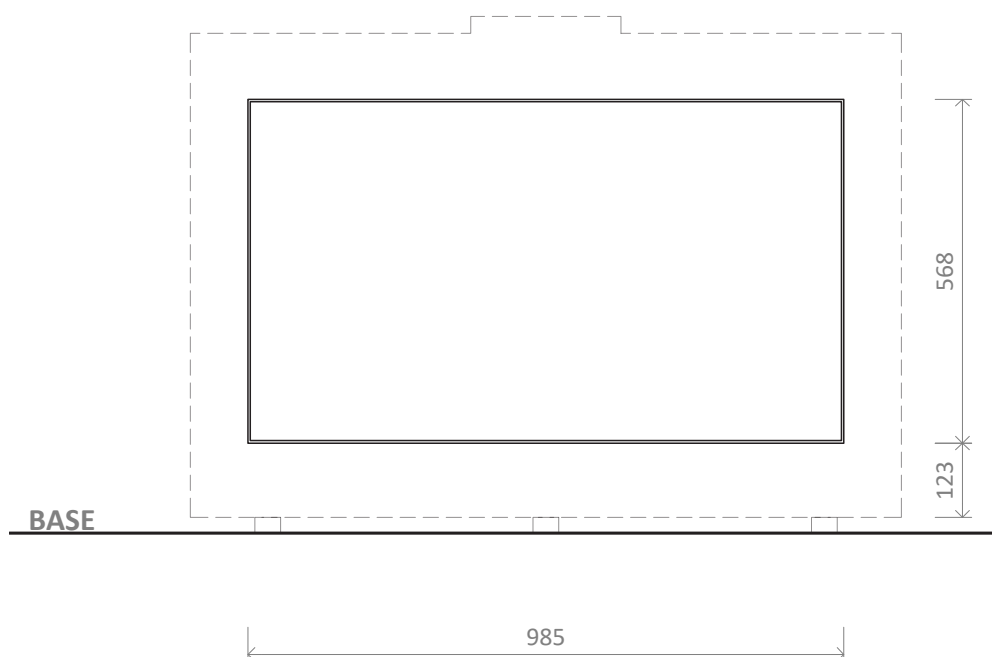
ZCK Base Support Height = 26mm



FRAMELESS FASCIA

Required for deeper non-combustible and heat-resistant finishes that extend beyond the trims face, such as tile, concrete, brick, or direct fix stone.

ZCK Base Support Height = 26mm

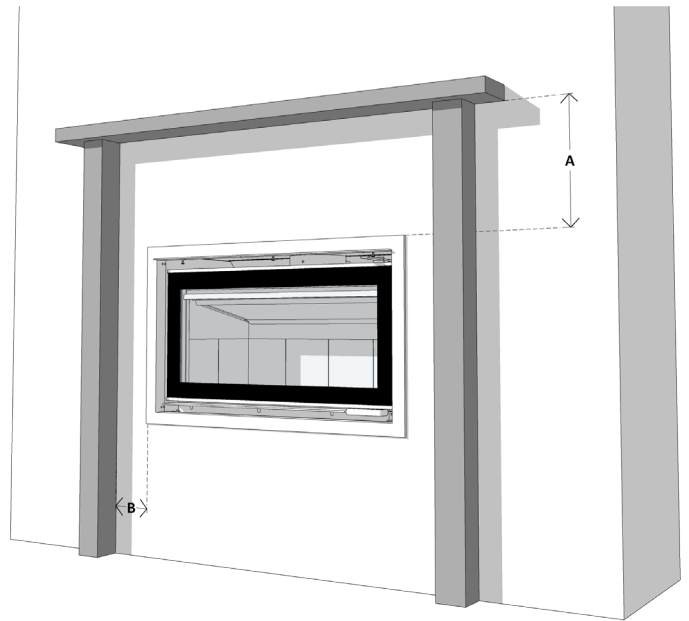


B11. MANTEL CLEARANCES

Non-combustible and heat resistant mantels can be at any height and depth.

Combustible mantels are to have a maximum depth of 150mm and be a minimum of 405mm (**A**) above the fascia.

Combustible mantel legs are to have a side clearance of 110mm (**B**) and a max. depth 100mm.



C TIMBER CAVITY SPECIFICATIONS

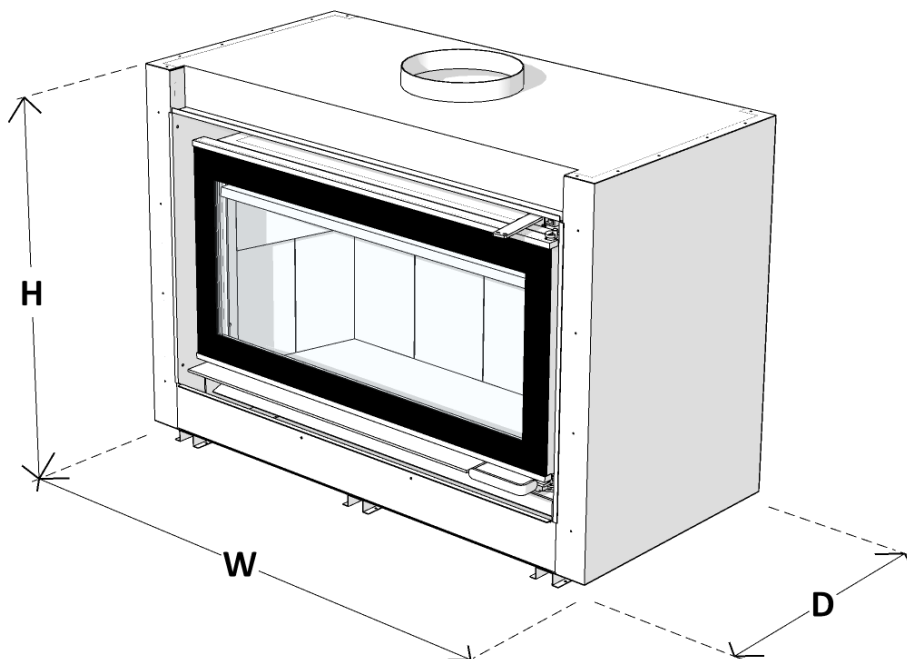
Specification of the TC970 into a timber cavity will require reference to the following sections.

C1. FIREPLACE DIMENSIONS

A timber framed cavity will require the specification of the TC970 Zero Clearance Kit.

Dimensions include Zero Clearance kit, base supports and flue spigot.

Model	ZCK Dimensions
TC970	1175w x 826h x 573d



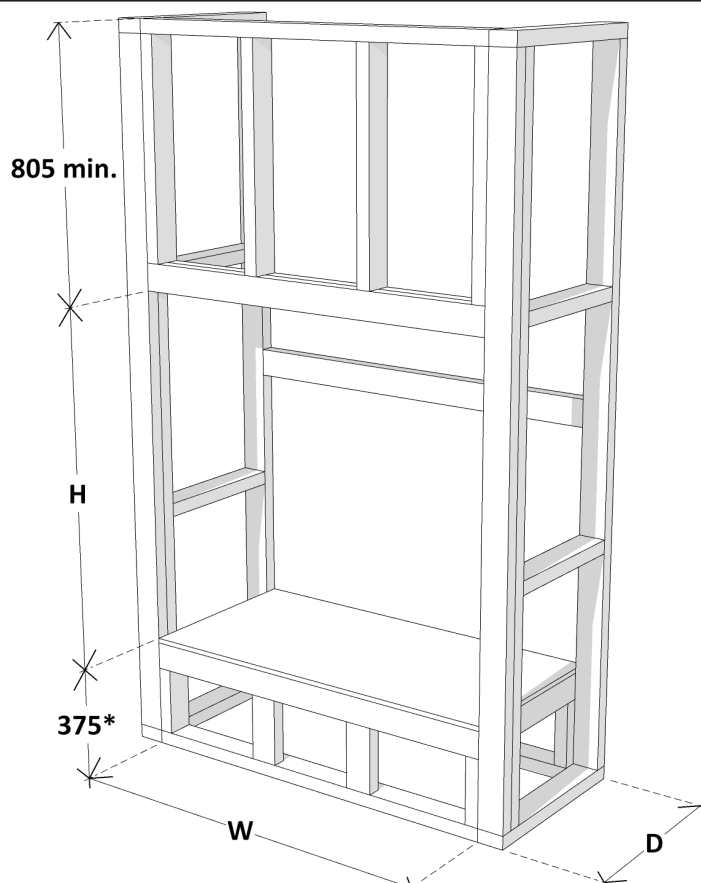
C2. TIMBER CAVITY DIMENSIONS

Cavity opening dimensions shown right.

The TC970 must sit on a continuous (combustible or non-combustible) base, with a minimum upper surface thickness of 9mm and must support the weight of the fireplace and flue system above.

The TC970 is tested with a base height of 375mm above floor level.

Model	Timber Cavity Dimensions
TC970	1270w x 1176h x 620d



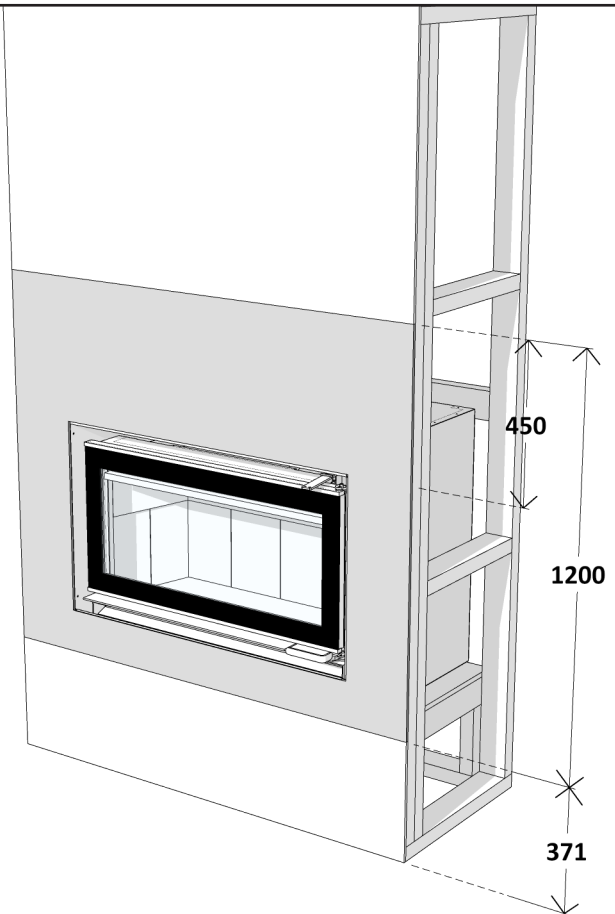
C3. TIMBER CAVITY WALL LINING LAYOUT

All materials, boards, and finishes on the front face of the cavity must be entirely non-combustible and heat-resistant.

The wall finish must be a minimum of **9mm JH Villaboard fibre cement sheet** or equivalent, and be bonded to the timber framework as required by the board manufacturer.

Above the opening of the fireplace (up to timber header) use **high temperature silicone**.

Complete a full board around the fireplace opening.
Internal opening dimensions will vary with fascia selected.



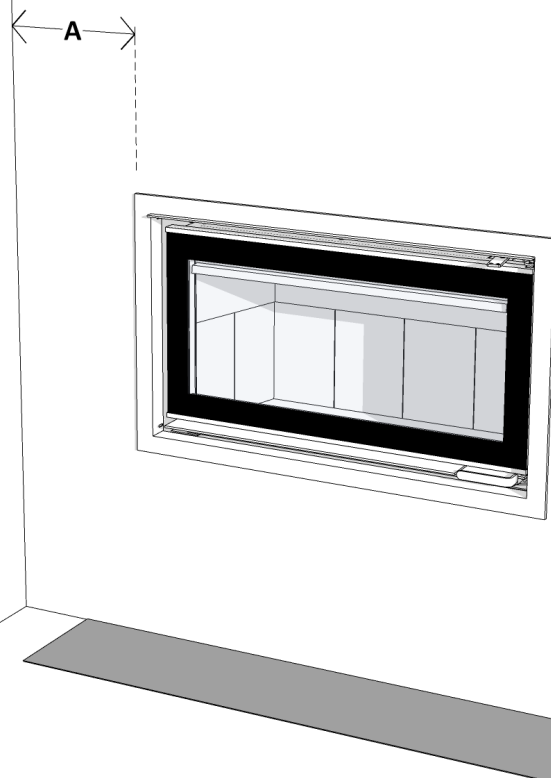
C4. SIDE WALL CLEARANCE

A single combustible side wall, extending any depth in front of the TC600, must maintain the clearance (**A**) measured from the Fascia's outer edge.

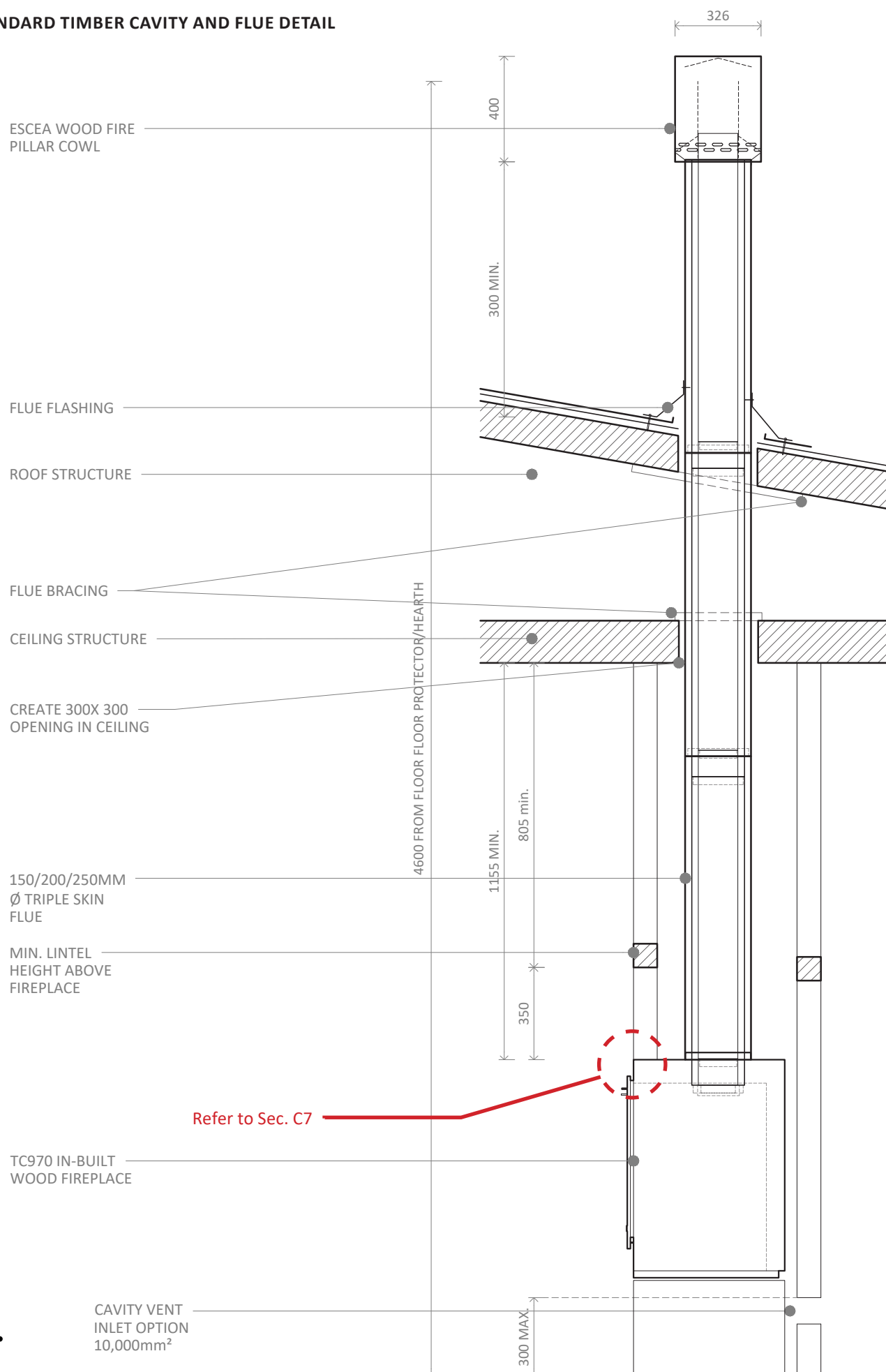
Linear Fascia: **350mm**

Frameless Fascia: **395mm**

Two adjacent walls, of the same clearance are not allowed.



C5. STANDARD TIMBER CAVITY AND FLUE DETAIL

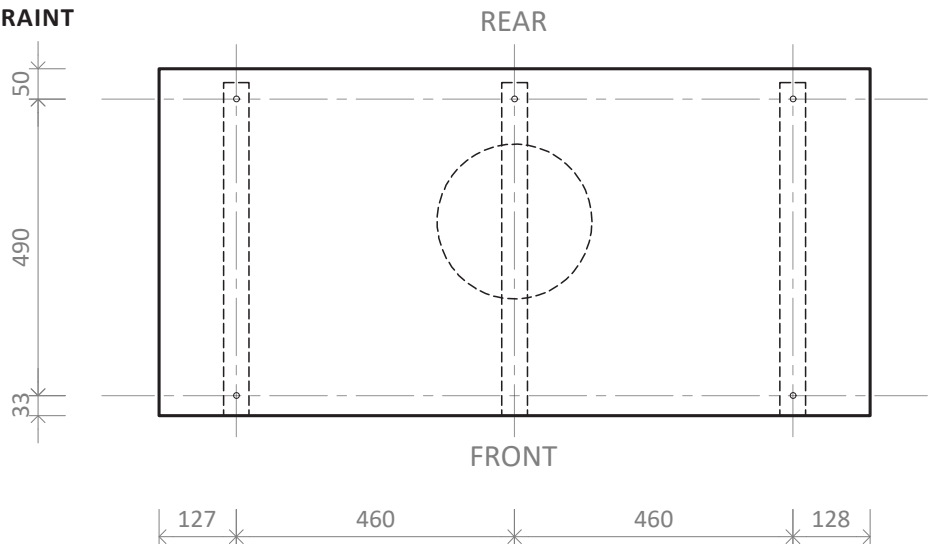
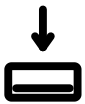


C6. TIMBER CAVITY FIREPLACE RESTRAINT

The TC970 must be restrained to its base.

Fix the 3 supplied Zero Clearance Base Supports to the fireplace base in the layout right.

When installing the TC970 ZCK, fix through the ZCK base into the upper part of the ZCK base supports with 5x M6 Tek Screws.



C7. TYPICAL TIMBER CAVITY WALL FINISH

This typical detail will use a wall substrate/finished lining being a minimum of 9mm JH Villaboard fibre cement sheet or equivalent. This detail is applicable for the head, sill and jambs.

Linear Fascia detail shown.

See Appendix for alternative wall finish options.

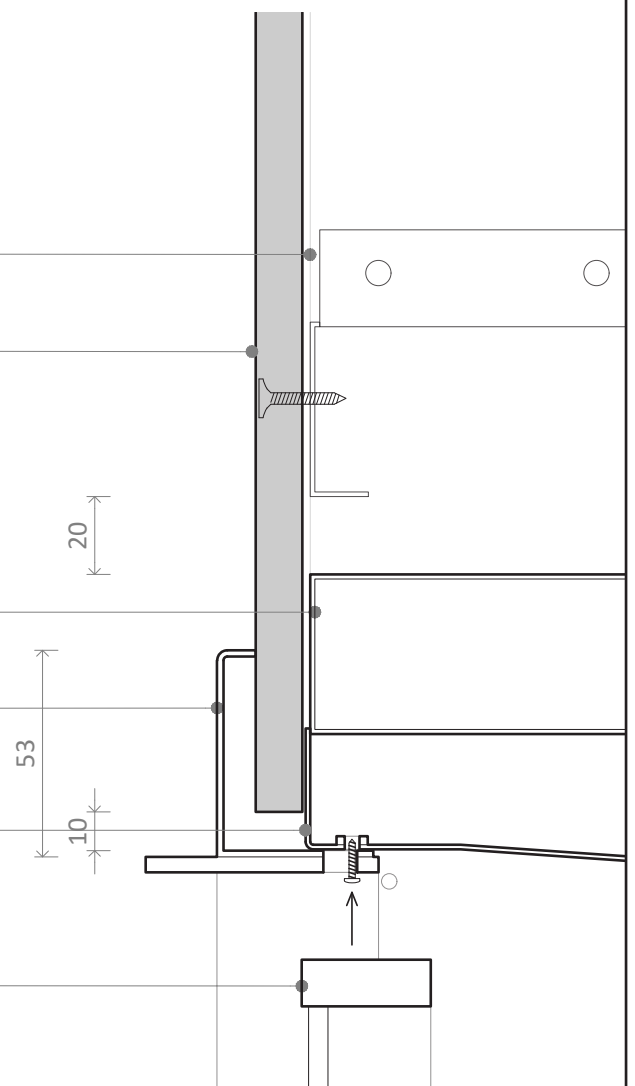
9mm JH VILLABOARD WITH
PLASTER FINISH

TC600 ZERO CLEARANCE KIT

TC600 LINEAR FASCIA

TC600 CABINET

TC600 DOOR



D FLUE SPECIFICATIONS

D1. SCOPE

The **Escea In-built Flue Kit** is a direct-vent triple-skin system from fireplace to flue cone, to be used with a timber framed cavity and TC970 Zero Clearance kit. Outside combustion air travels down the outer layer into the fireplace; exhaust is drawn up the inner layer and out, no room air is used. A proprietary pillar cowl above the roof or chimney cap serves as combined intake and exhaust port, and finishes the flue above the roof.

D2. MINIMUM FLUE LENGTH

Minimum flue length is **4.6m** measured from the floor protector. Flue lengths under 4.6m may experience reduced draught and operational issues depending on the installation. An Escea In-built Flue Kit provides enough flue to achieve a 4.6m flue run from the floor protector.

D3. FLUE CLEARANCES TO COMBUSTIBLES

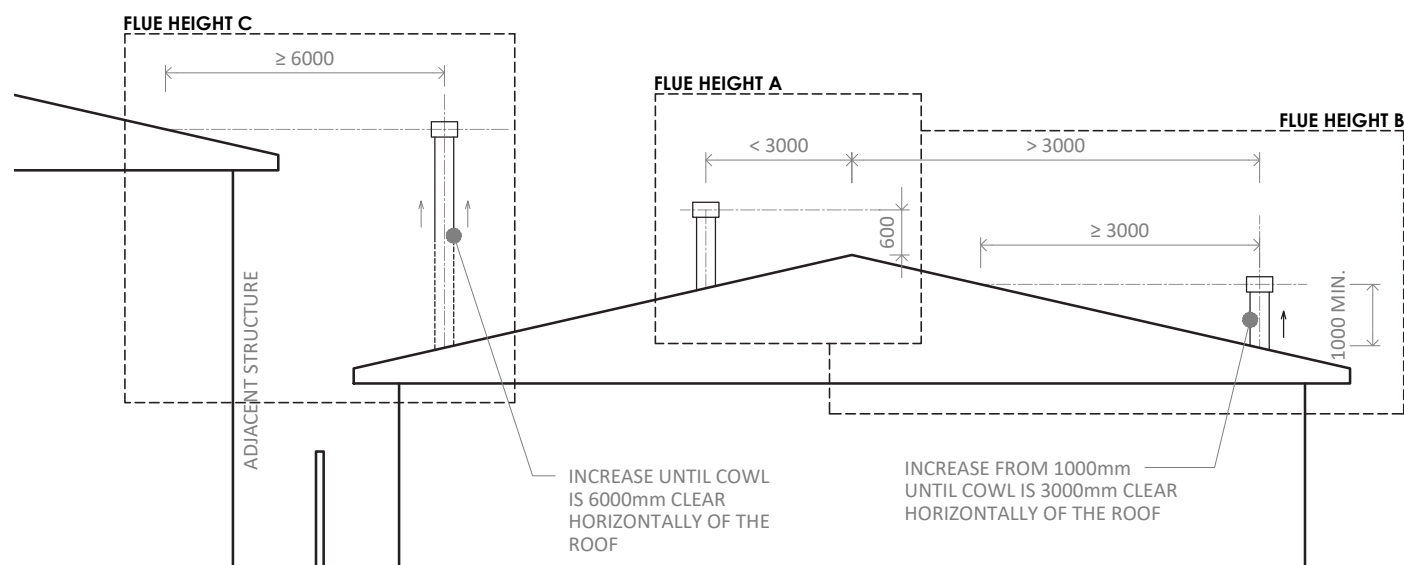
A minimum of 25 mm must be maintained from the 250 mm outer flue liner to any adjacent combustible material or surface.

D4. FLUE EXTERNAL CLEARANCES

Flue height is the greater of the minimum flue length (4.6m) or the external clearance requirements below. Select the applicable condition to establish the final cowl height. Shorter flues risk smoke spillage and longer flues may reduce burn time.

A cowl must not be obstructed by adjacent buildings or structures.

Height	Condition	Requirement
A	Cowl < 3m (horizontal) of roof high point.	Flue Height A.
B	Cowl > 3m (horizontal) from roof high point.	Flue Height B: Raise cowl until 3m horiz. line clears the roof.
C	Cowl < 6m (horizontal) of an adjacent building/wall.	Flue Height C: Raise cowl until 6m horiz. line clears the structure.



D5. UPPER FLOOR VENTILATION

Where a flue passes through an upper floor void, chimney chase or cupboard that is separate to the cavity below (either masonry or timber-framed), it must be vented at the base and top in accordance with AS/NZS 2918. Each ventilation opening must have a **minimum 10,000 mm²** free open area. If the cavity is continuous from ground to chimney cap, additional venting is not required.

D6. EXTERNAL WALL PENETRATION DETAIL

Where the TC970 In-built flue passes through an external wall, this must be configured with a Triple Skin Flue Offset Kit and an 45° External Wall Plate to achieve a safe wall penetration.

A 45° Wall Thimble is available to support the flue as it passes through the wall.



150/200/250 Ø TRIPLE SKIN
FLUE OFFSET

45° EXTERNAL WALL PLATE

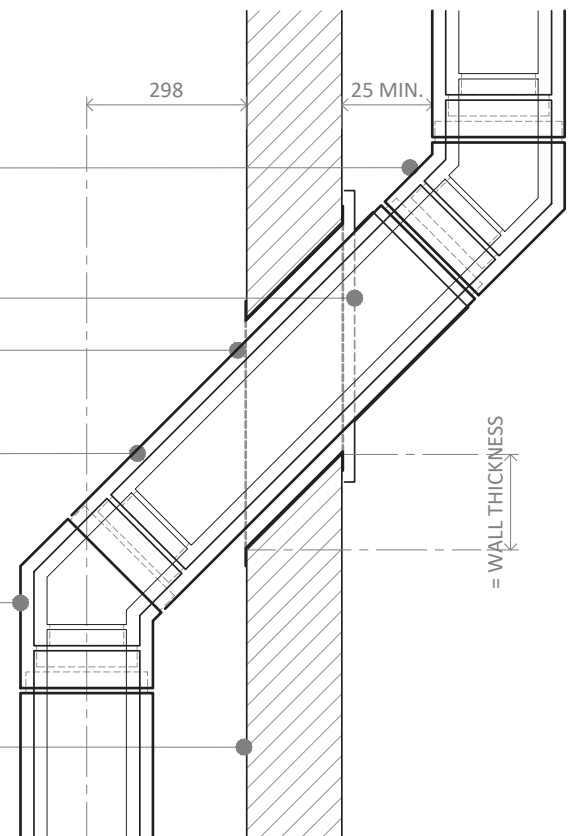
WALL THIMBLE

150/200/250 Ø FLUE PIPES

150/200/250 Ø TRIPLE SKIN
FLUE OFFSET

TYPICAL EXTERNAL WALL

600 MIN.
FROM FIRE



D7. FLUE OFFSET DETAIL

A 45° Triple Skin flue offset is available for use where the TC970 In-Built flue is passing through a chimney cavity, roof space, wall or mid floor.

Flue offsets can reduce draw within the flue pathway; it is recommended to avoid where possible or allow for an extensions of the flue length to over come the draw restriction.

Allow for 600mm above the fireplace before using any offset.



150/200/250 Ø TRIPLE
SKIN FLUE - MAX OFFSET
LENGTH 1800MM

OUTER FLUE
CRIMP UPWARDS

150/200/250 Ø TRIPLE
SKIN FLUE OFFSET

45° FLUE OFFSETS
HAVE DIFFERENT
INSTALL HEIGHTS

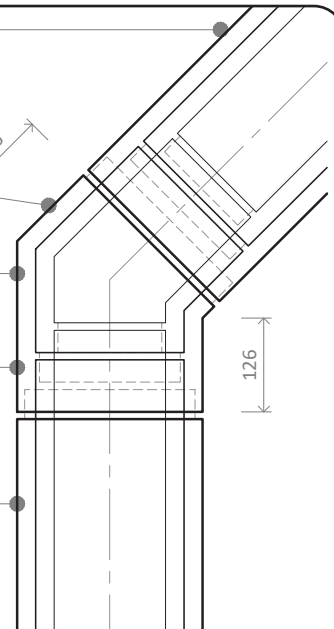
TRIPLE SKIN FLUE

600 MIN. FROM FIRE

126

230

126



D8. MID-FLOOR DETAIL

Where the TC970 In-built Flue passes through a combustible mid-floor, the 250mm Ø outer liner must maintain a 25mm clearance to any combustible material.

Additional ceiling plates (with 250mm Ø cut-out) will be required to complete the mid-floor penetration, where the flue will be visible in the room above.

250MM Ø FLUE LINER

MIDFLOOR 250mm
CEILING PLATE
(WHERE REQUIRED)FLUE BRACING
BRACKETS

TRIPLE SKIN FLUE

**D9. ROOF MOUNTED FLUE STAYS**

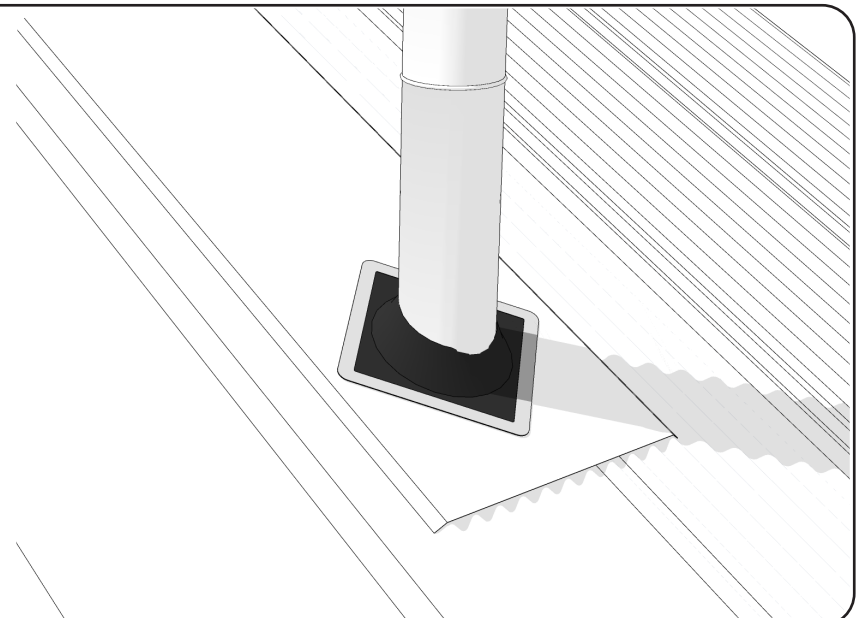
A flue extending above the roof, but not within a chimney, must be restrained at intervals not greater than 3m with compatible telescopic or fixed stays per *AS/NZS 2918 Cl. 4.10*.

Best practice is a maximum 1.5m spacing, reducing deflection to 1/16 of the 3m limit. Fit stays at opposing angles back to the roof surface and allow for thermal expansion.

**D10. FLUE FLASHING**

All roof or wall penetrations are to be made weather-tight by way of a flashing plate, or proprietary EPDM boot flashing, for compliance with the National Construction Code.

The specification and installation of the flue flashing is the responsibility of the Specifier and/or Installer.

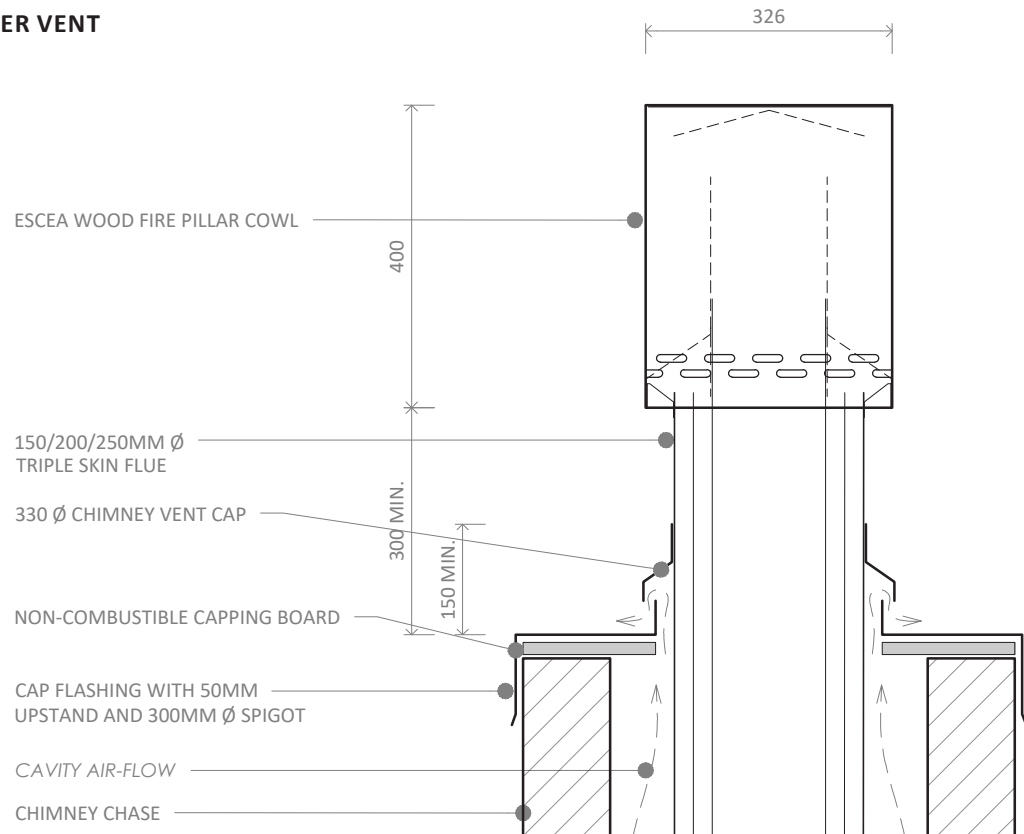


D11.CHIMNEY CAP VENTILATION

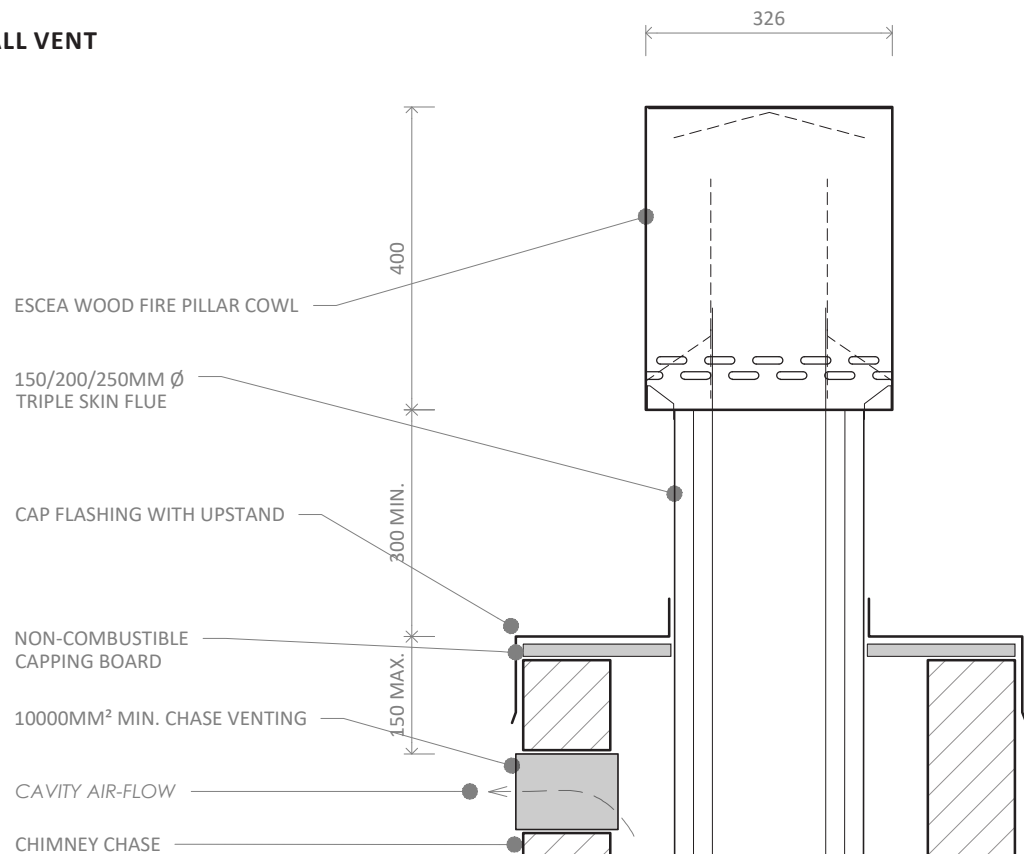
Masonry or timber-framed chimney cavities using the In-Built Flue Kit must be vented at the BASE and TOP with obstruction-free, vermin-proof, weatherproof vents with a **min. 10,000mm²** open area each. Two vent outlet options are shown below.

Note: an externally vented chimney cavity may affect meeting the building's BAL rating.

CHIMNEY CAP WITH LINER VENT



CHIMNEY CAP WITH WALL VENT



E TIMBER CAVITY INSTALLATION

E1. INSTALL PROCESS

The following process involves the installation of a TC600 Insert Wood Fireplace into a timber framed cavity using the TC600 Zero Clearance Kit. The following processes and tools are required:

 **VIEWING ANGLE**
(E.G. FRONT RIGHT)

 **2 PERSON LIFT**

 **DISCARD**

 **CORRECT STEP**

 **SCREWDRIVER**

 **HEX HEAD EXTN BIT**

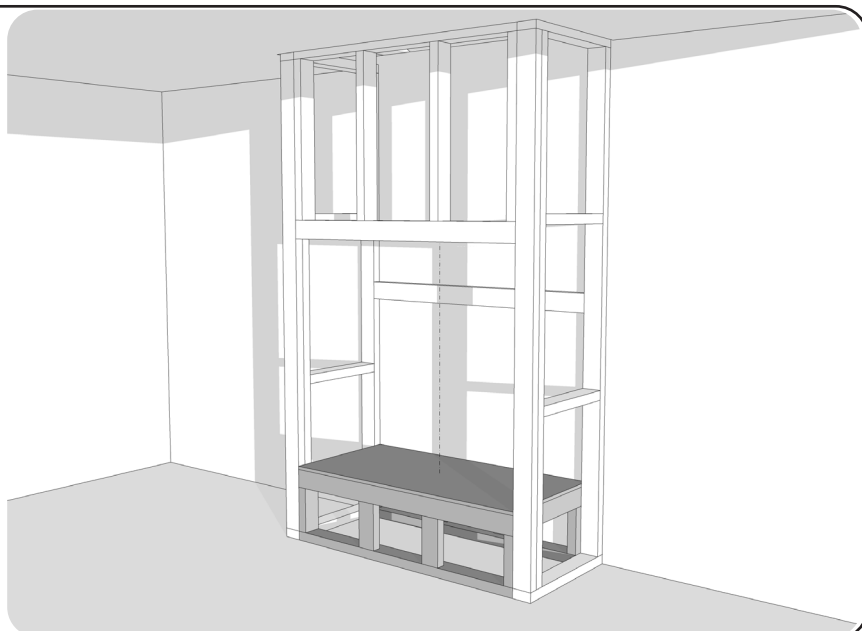
 **HEX OR ALLEN KEY**

 **RIVET GUN**

E2. BUILD TIMBER CAVITY AND BASE

Locate the flue centreline from inside the building, ensuring all clearances are met and the flue pathway is clear of obstructions.

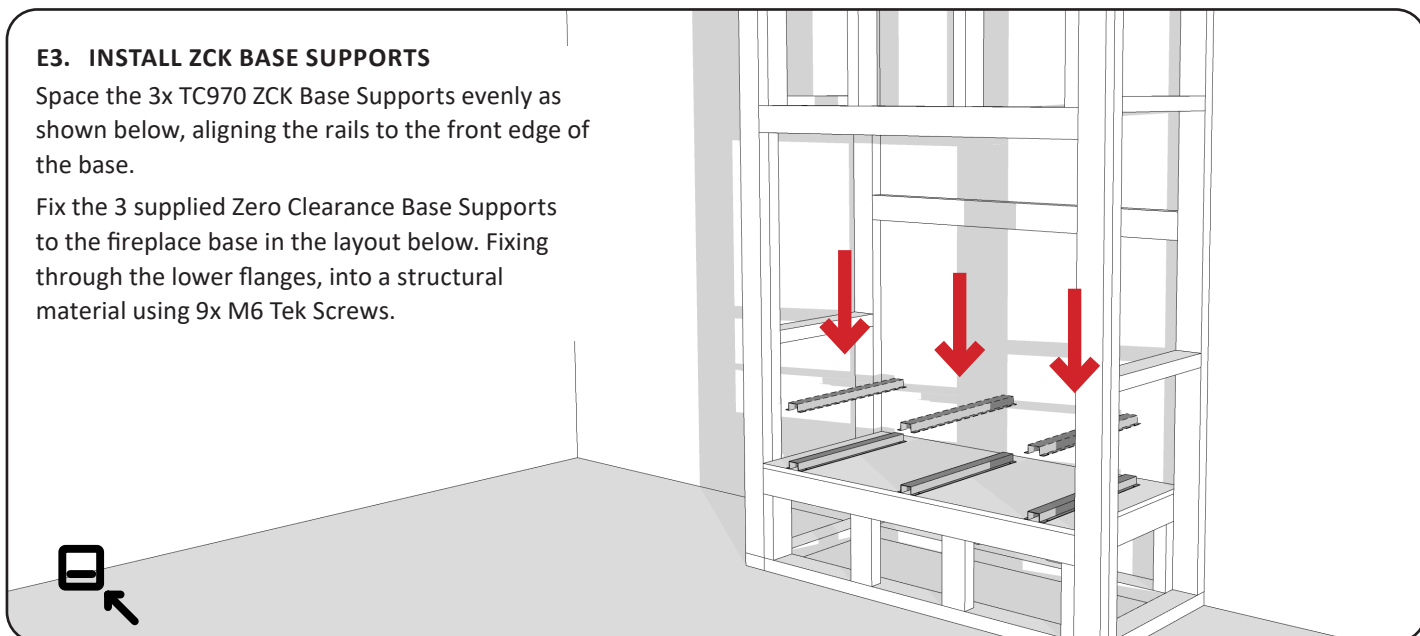
Construct the cavity and the base. This can be a combustible or non-combustible material.



E3. INSTALL ZCK BASE SUPPORTS

Space the 3x TC970 ZCK Base Supports evenly as shown below, aligning the rails to the front edge of the base.

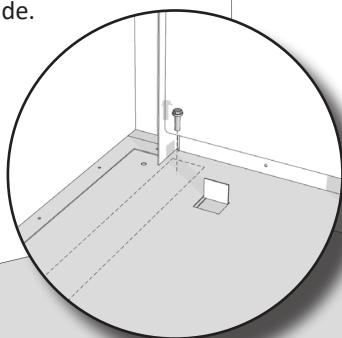
Fix the 3 supplied Zero Clearance Base Supports to the fireplace base in the layout below. Fixing through the lower flanges, into a structural material using 9x M6 Tek Screws.



E4. INSTALL ZERO CLEARANCE KIT

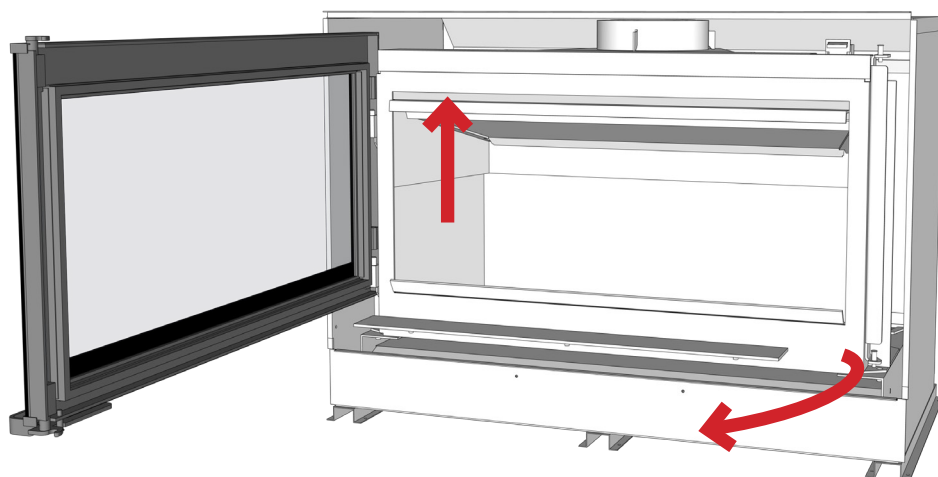
Assemble the TC970 Zero Clearance Kit following the instructions provided and slide into the cavity opening. Centre in the cavity and align the ZCK to the front edge of the base.

Fix through the ZCK base and into the outer ZCK support rails within 20mm from the inner back panel, using 6G x 30 Tek Screws. Each side.



E5. REMOVE DOOR

Rotate the handle away from the centre of the fireplace. Swing the door open to approximately 90°. With two hands, lift the door up off the hinge pins and set it carefully aside.



E6. INSTALL TC970 FIREPLACE

Slide in the TC970 fireplace into the Zero Clearance Kit, until it hits the upturned tabs at the rear of the ZCK. Secure the front of the TC970 to the ZCK, through into the ZCK Support Rails, using 6Gx30 Tek Screws.



E7. INSTALL FRAMELESS FASCIA BRACKETS

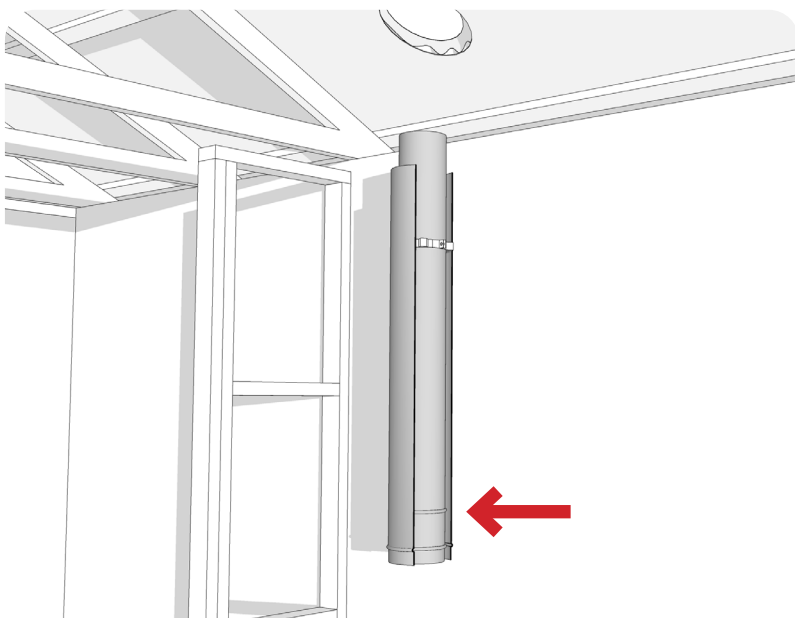
Install this additional TC970 Frameless Fascia support bracket before any wall linings or the fascia closure bracket. Orientate with the 2 tabs facing inwards and toward the door, align the holes with those on the TC970 outer cabinet side panel, then fix with 2× screws at top and bottom.

Repeat on the other side.

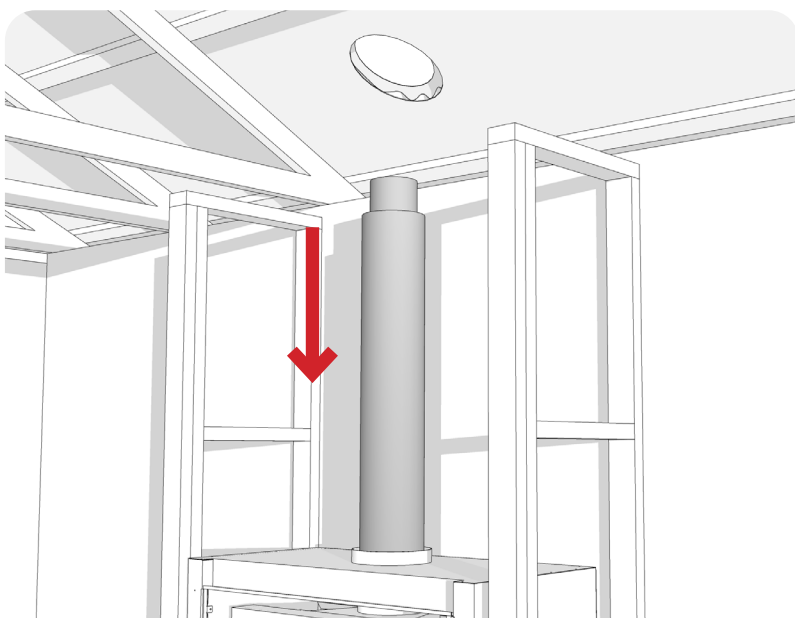
**E8. PREPARE TIMBER CAVITY FLUE AND LINER**

Fit 1x 150mm and 1x 1200mm length of 150mm Ø flue together, with an continuous bead of High Temp Silicone and 3x SS Rivets equally spaced.

Fit 1x 150-200mm spacer 250mm below flue pipes upper end. Sleeve 200mm Ø liner over 150mm flue.

**E9. INSTALL 1ST FLUE AND LINER**

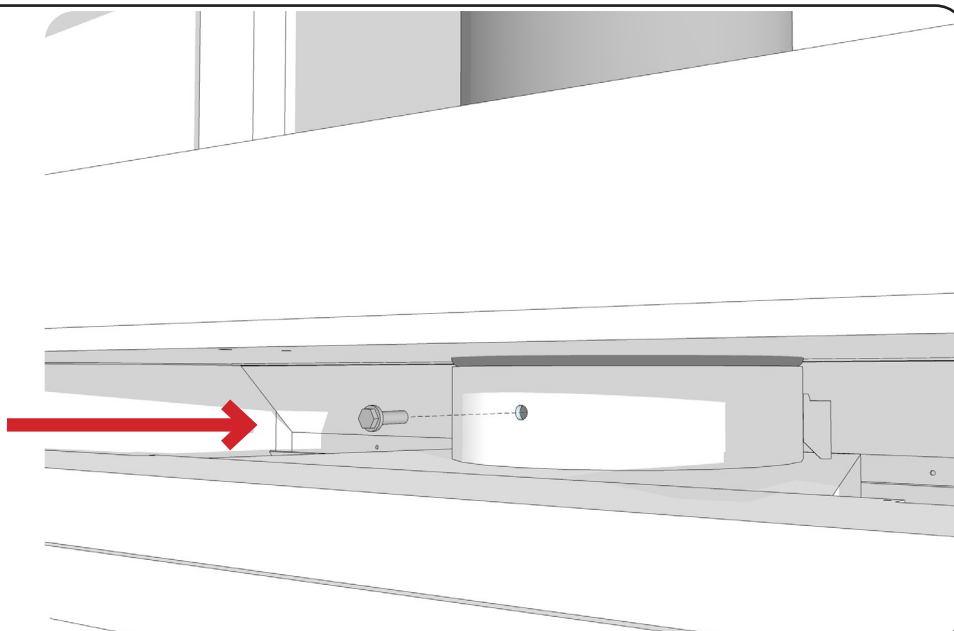
Apply a bead of Fire Cement to the 150mm Ø flue spigot. Lower combined 150 and 200mm flue pipes onto the 150/200mm Ø flue spigots, crimp down.



E10. FLUE FIXING

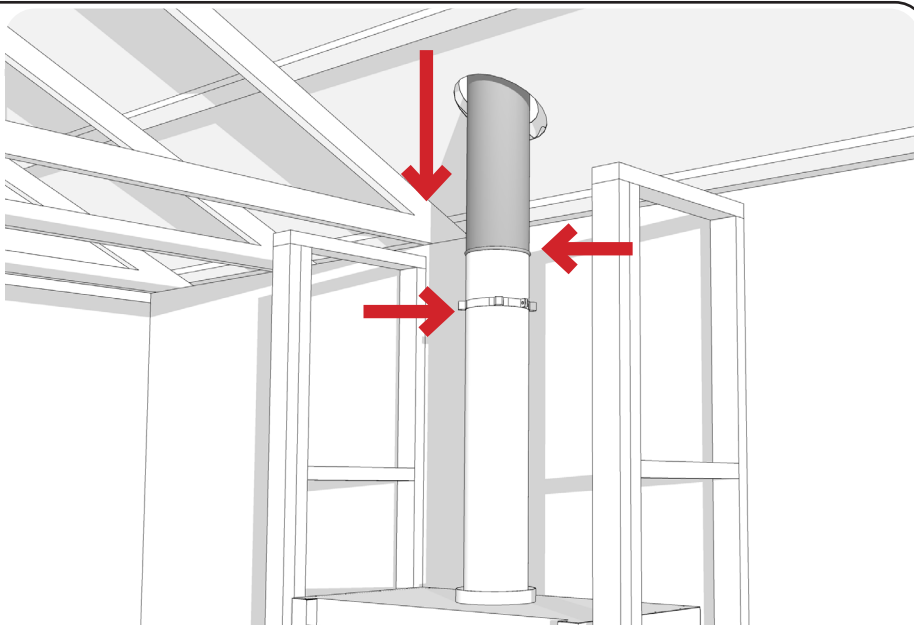
Using an 250mm Hex Head Extension Bit, mechanically fix the flue and liner with the supplied 12G × 40 SS Tek screw, via the spigot holes in the 200mm and 150mm flues.

Access is between the firebox and in-built fireplace cabinet.

**E11. INSTALL 2ND FLUE AND LINER**

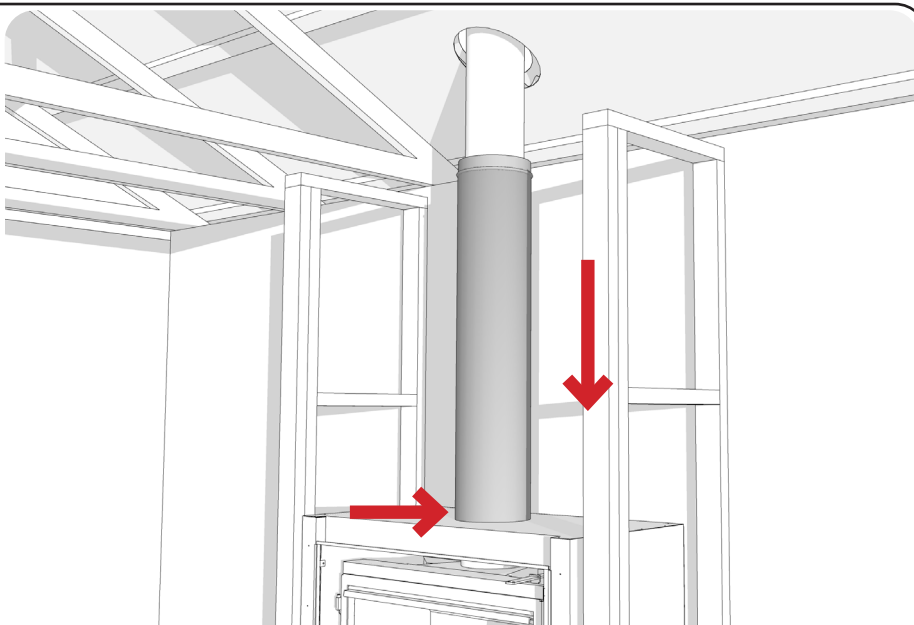
Locate 1x (1200mm x 150mm Ø flue) and 1x (1200mm x 200mm Ø liner). Repeat previous step with flue spacer. Apply High Temp Sealant to 150mm flues crimped end and install crimp down.

Fix both pipes using 3x SS rivets equally spaced.

**E12. INSTALL 1ST OUTER LINER**

Fit 1x 150-200mm spacer 250mm below flue pipes upper end. Locate 1x (1200mm x 250mm Ø flue liner) and lower onto zero clearance kit spigot, crimp up.

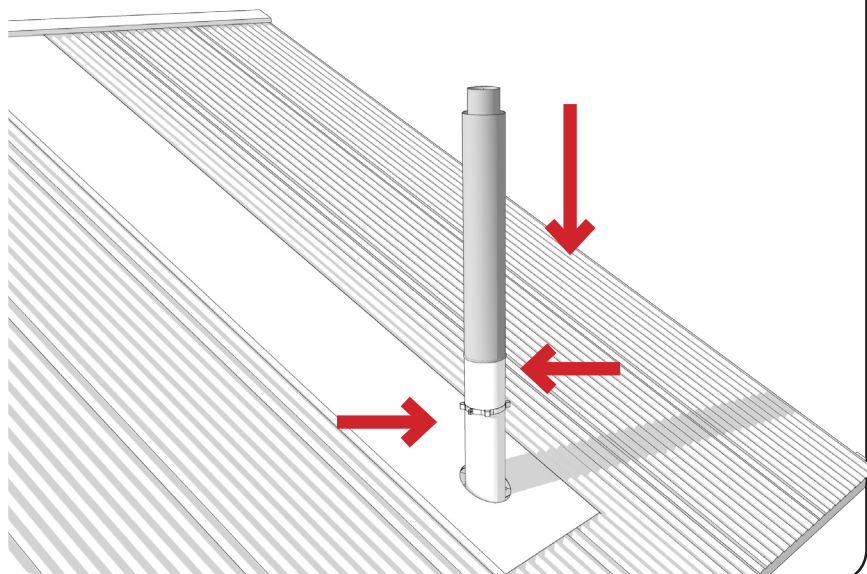
Fix using 3x SS rivets equally spaced.



E13. INSTALL 3RD FLUE AND LINER

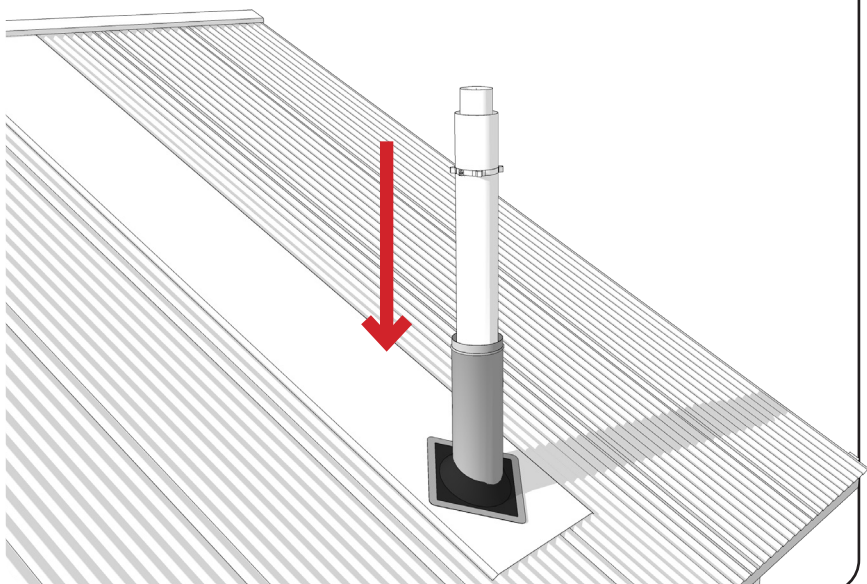
Locate 1x (1200mm x 150mm Ø flue) and 1x (1200mm x 200mm Ø liner). Repeat previous step with flue spacer. Apply High Temp Sealant to 150mm flues crimped end and install crimp down. Fix both pipes using 3x SS rivets equally spaced.

Upon completion the 150mm Ø flue should extend 20-250mm above the 200-250mm flue liners. Liners should finish at the same height.

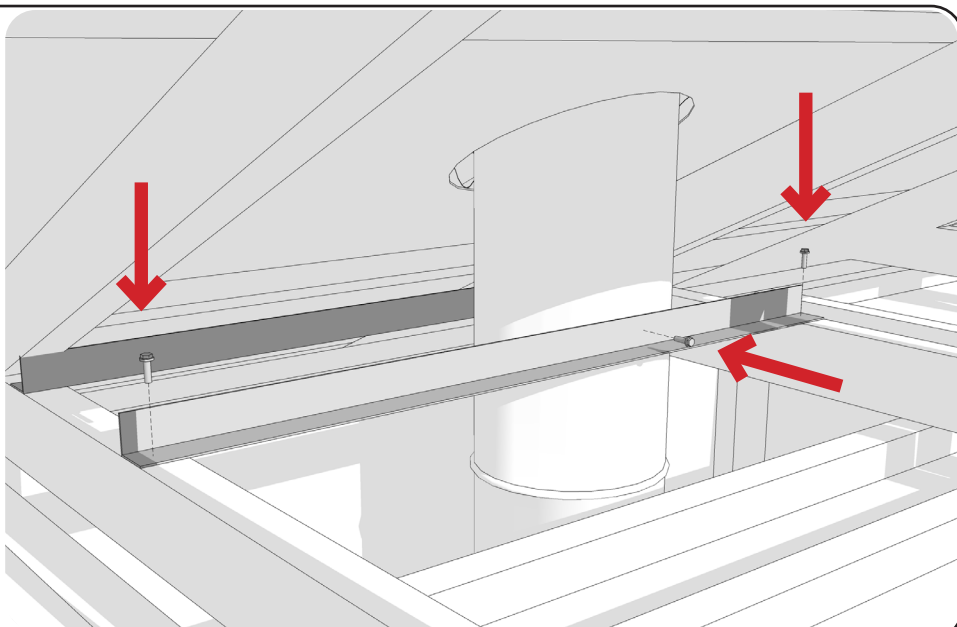
**E14. INSTALL 2ND OUTER LINER**

Fit 1x 150-200mm spacer 250mm below flue pipes upper end. Fit the second 250mm Ø liner onto the pipe already fitted and fix using 3x SS Rivets, equally spaced. Fit final 200-250mm spacer.

Roof flashings can be added at this point.

**E15. INSTALL ROOF BRACING**

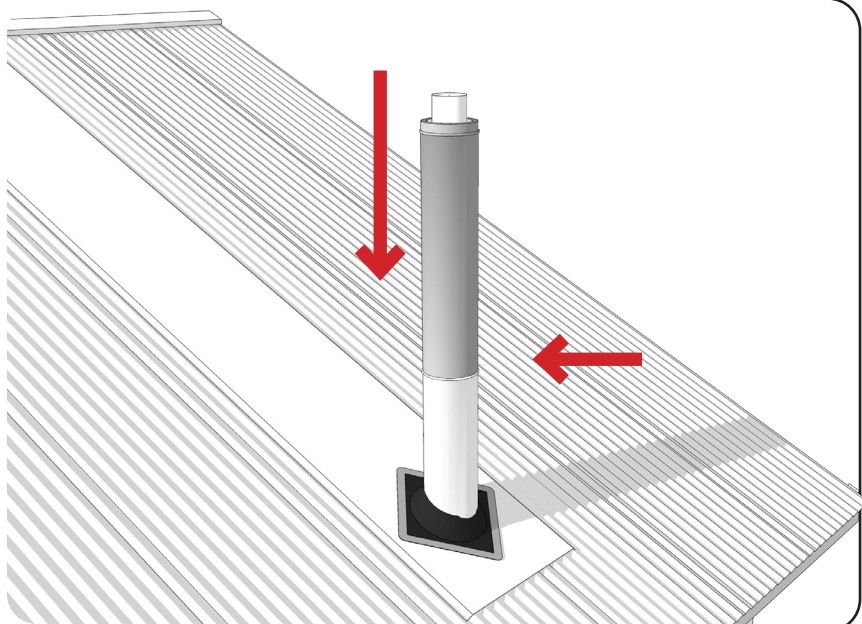
Using the supplied L-Brackets form a cross-braced support onto the roof framework with 6G x 30 Tek Screws.



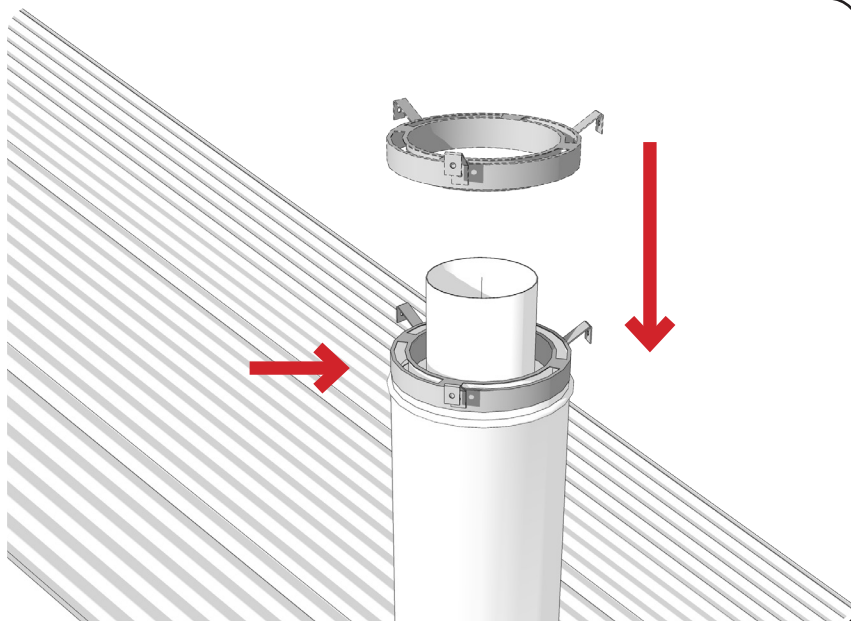
E16. INSTALL 3RD OUTER LINER

Measure and trim (where required) the third 250mm Ø liner. It will finish flush with the 200mm liner.

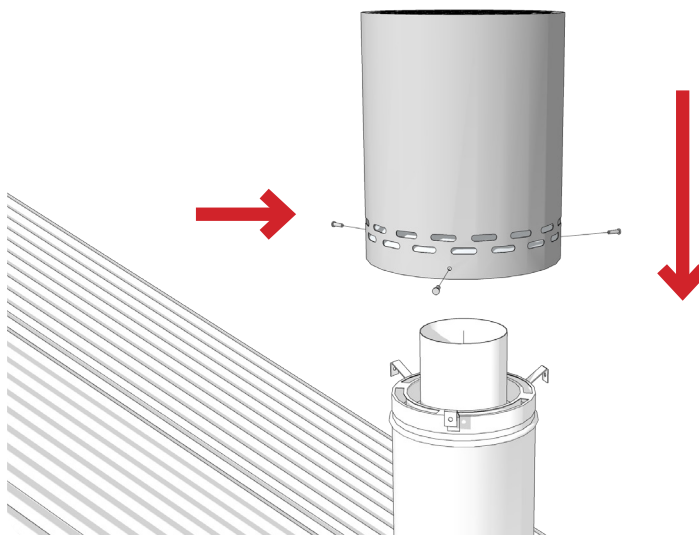
Lower onto the liner below, and fix using 3x SS Rivets, equally spaced.

**E17. INSTALL COWL SUPPORT BRACKET**

Fit the Vented Flue Closure Bracket to the top of the 200/250mm Ø flue liners. Fix using 3x SS Rivets, equally spaced.

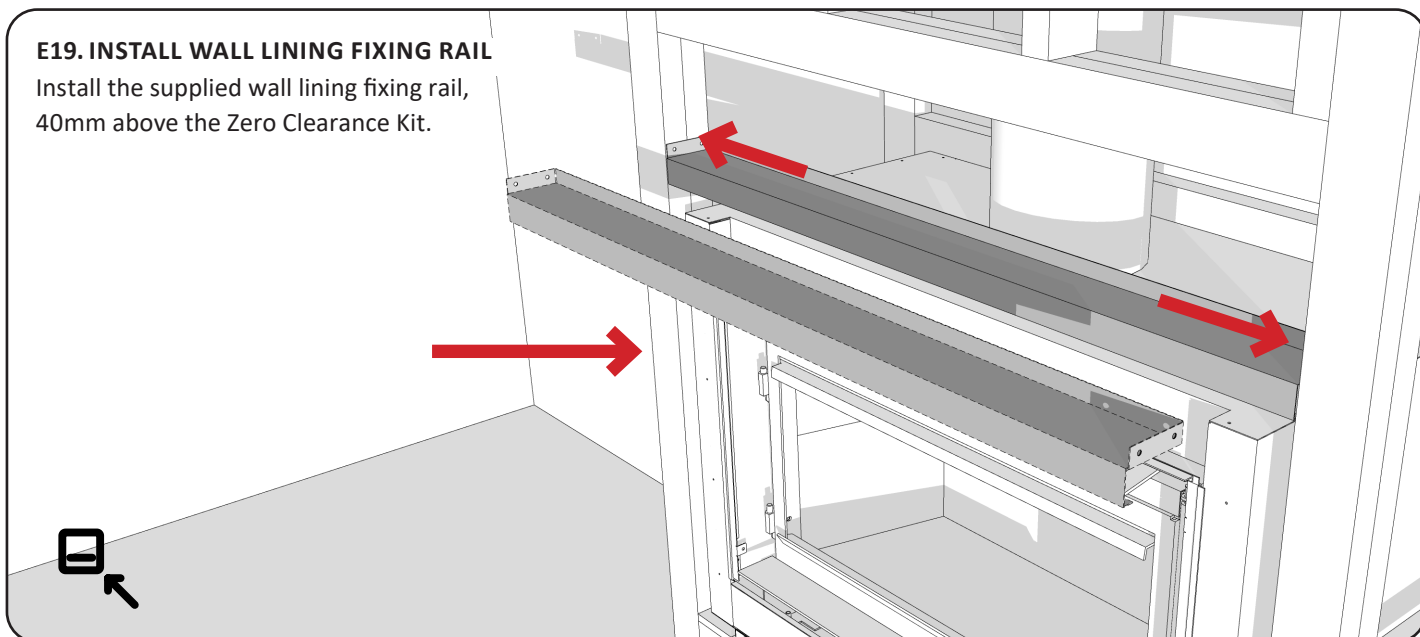
**E18. INSTALL PILLAR COWL**

Fit the cowl onto the 150mm Ø flue pipe, and align the holes in the outer shroud with the brackets on the insulated flue closure cap. Fix using the supplied 4mm hex head screws.

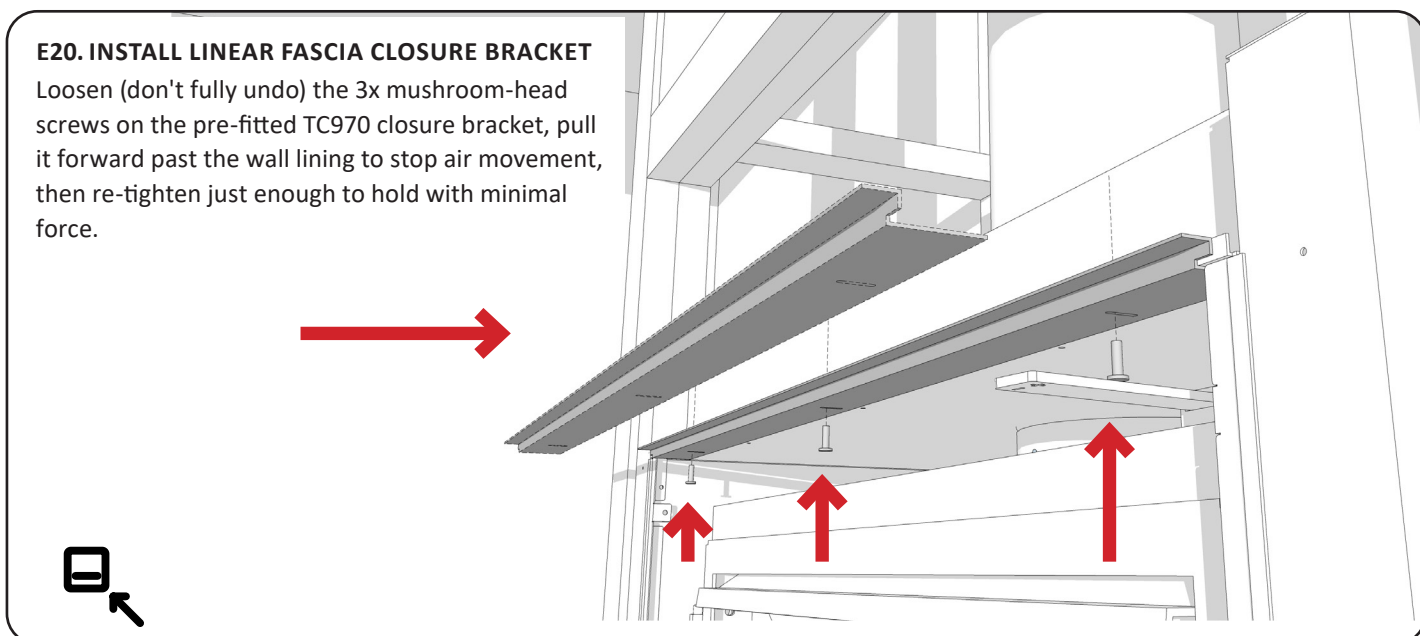


E19. INSTALL WALL LINING FIXING RAIL

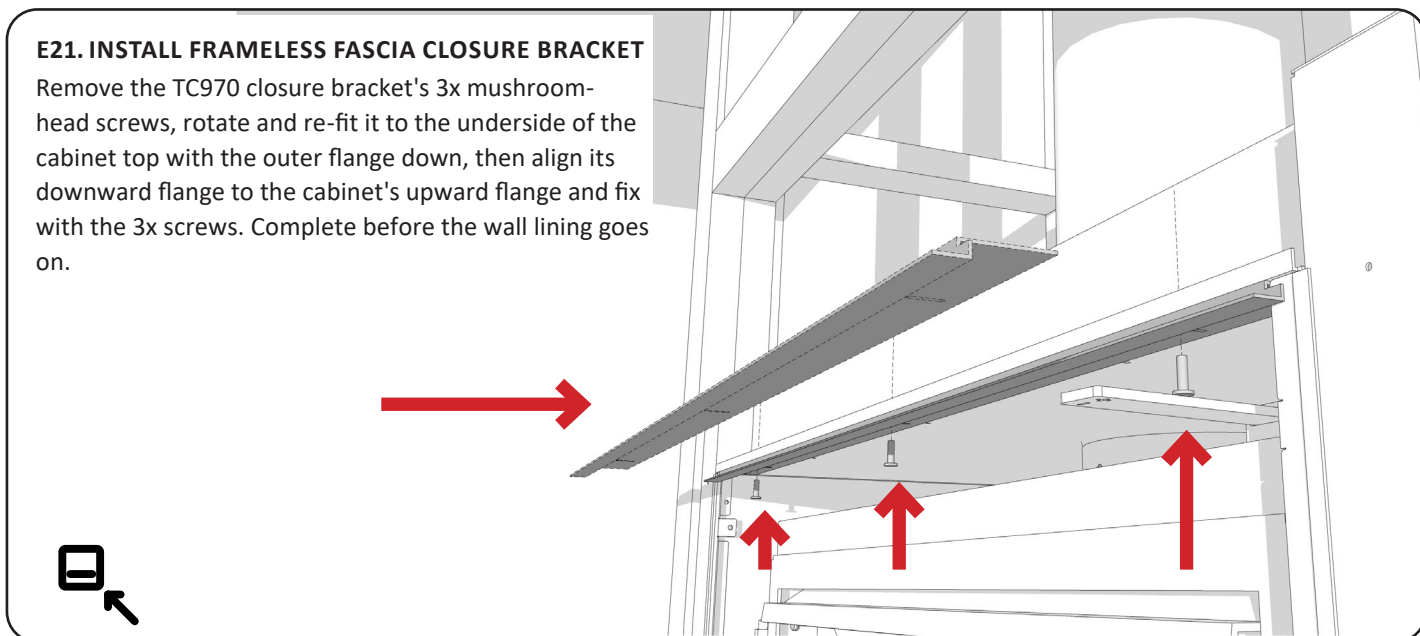
Install the supplied wall lining fixing rail, 40mm above the Zero Clearance Kit.

**E20. INSTALL LINEAR FASCIA CLOSURE BRACKET**

Loosen (don't fully undo) the 3x mushroom-head screws on the pre-fitted TC970 closure bracket, pull it forward past the wall lining to stop air movement, then re-tighten just enough to hold with minimal force.

**E21. INSTALL FRAMELESS FASCIA CLOSURE BRACKET**

Remove the TC970 closure bracket's 3x mushroom-head screws, rotate and re-fit it to the underside of the cabinet top with the outer flange down, then align its downward flange to the cabinet's upward flange and fix with the 3x screws. Complete before the wall lining goes on.

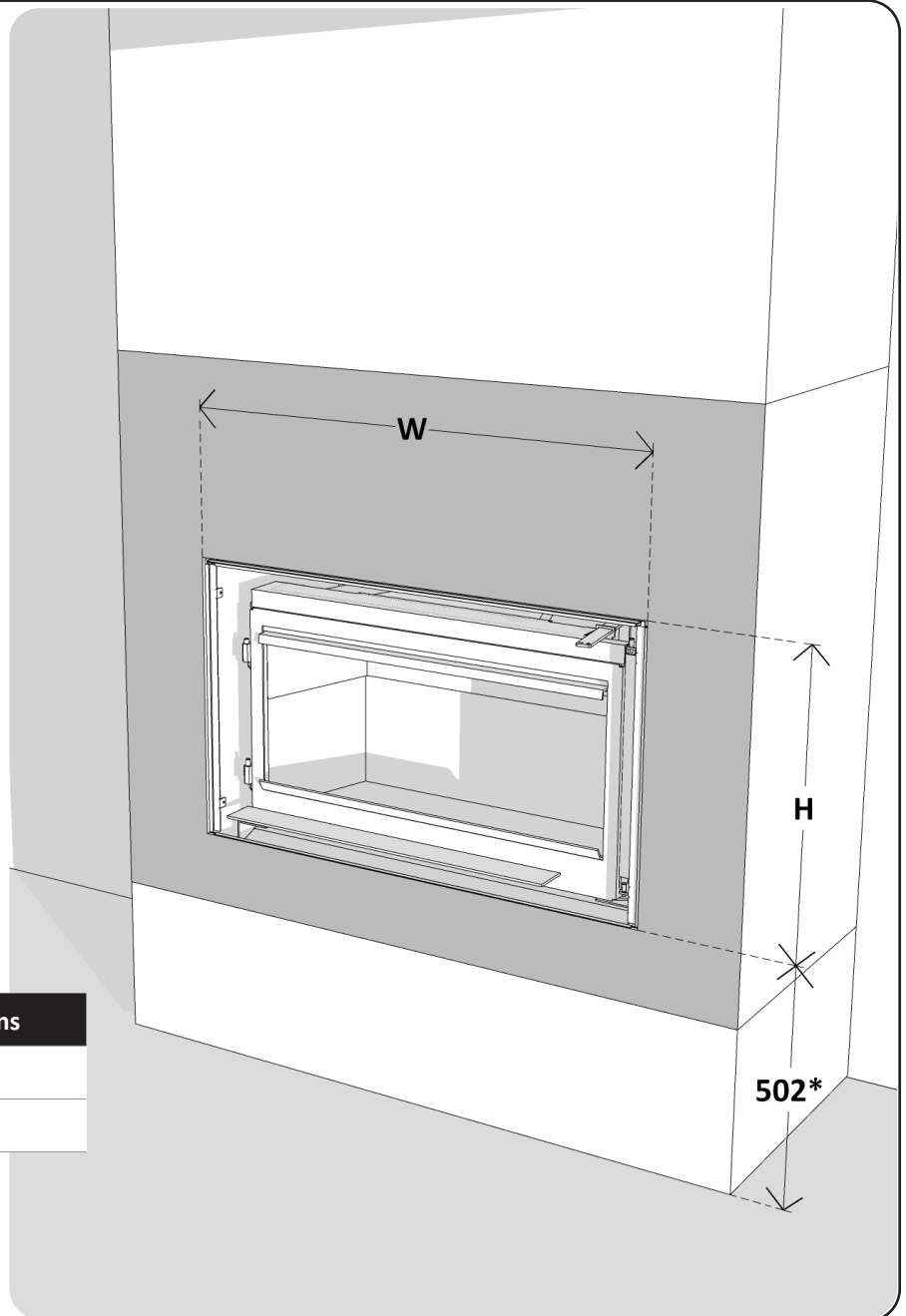


E22. INSTALL WALL LINING

Install min. 9mm Villaboard or equiv. (In accordance with the board manufacturer's instructions) up to the TC970 opening. Ensure to have a full sheet over the opening.

Use High-Temp silicone for bonding around the TC970 ZCK and up to the wall lining fixing rail.

**Opening height when base height = 375mm.*



Fascia Type	Wall Cut-out Dimensions
Linear	1040w x 620h
Frameless	1004w x 594h



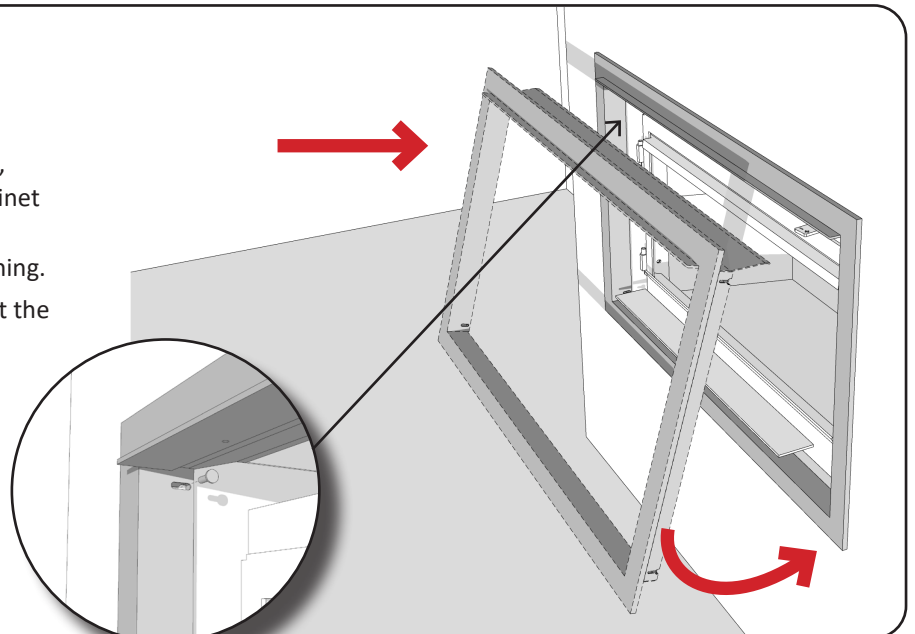
E23. INSTALL FASCIA

The installation process for both the Linear Fascia and the Frameless Fascia is identical.

Orientate the fascia with the air ramp at top, slide it air-ramp-first between the outer cabinet top and door, rotate the base inwards until vertical and flush against the finished wall lining.

Frameless Fascia will align to screw holes not the wall surface.

Fix with the 4x screws at each side, top and bottom.

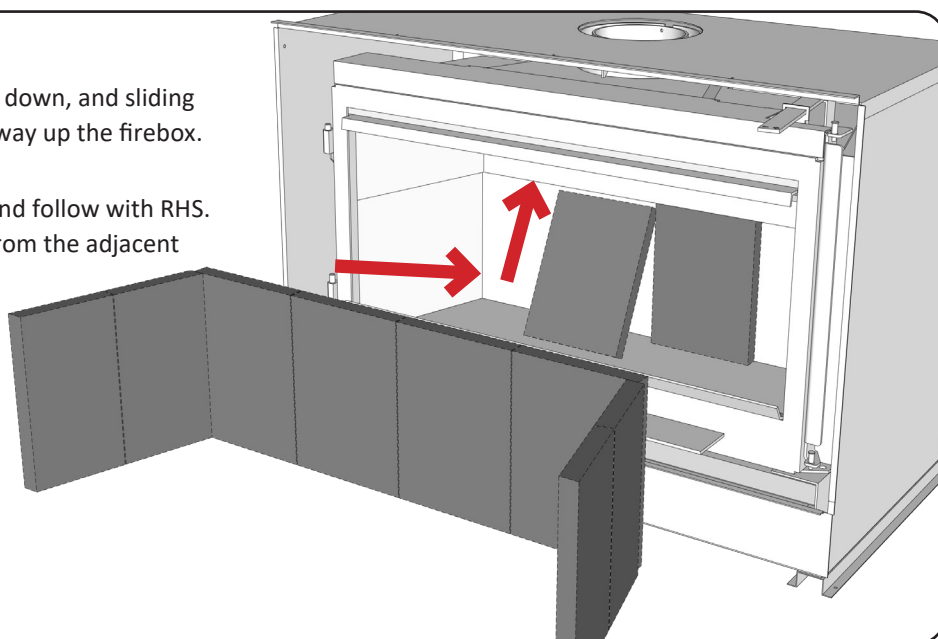


E24. FIREBRICK INSTALLATION

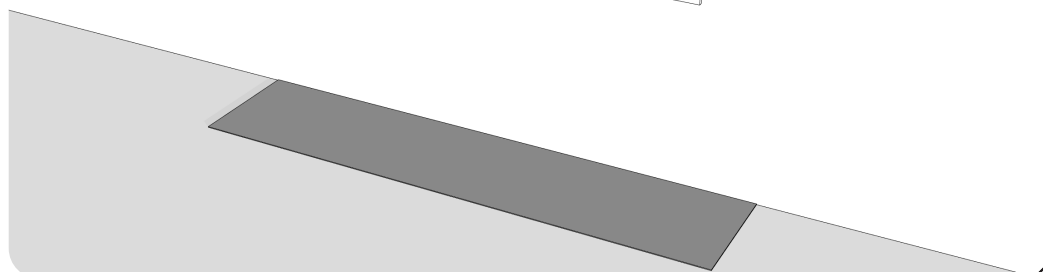
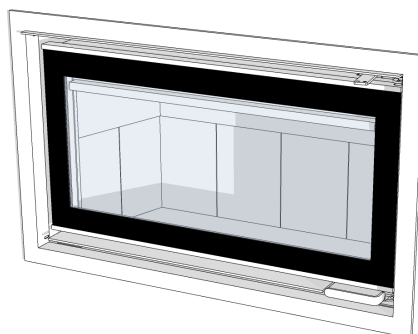
Carefully install fire bricks, by tilting top down, and sliding brick upwards and under the ledge halfway up the firebox. Slide left or right into the final position.

Install rear fire-bricks, LHS Fire-bricks, and follow with RHS. For side bricks, bevel edge faces away from the adjacent fire-brick.

**TC970 shown right.*

**E25. HEARTH INSTALLATION**

Complete hearth installation in front of the TC970, to the desired height and depth, but conforming with the minimum requirements in Section B5-B7.



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CHECKLIST

Use this checklist to confirm that you have reviewed and applied all aspects of selecting and installing a TC970 In-built Wood Fireplace. For fireplace operation, refer to Escea Wood Fireplace Owners Manual.

INSTALLATION TASK	ROLE
☐ Correctly supplied a TC970 In-built Wood Fireplace, with an Escea Wood Fireplace In-Built flue kit.	Installer
☐ Built the cavity for the fireplace according to the minimum dimensions, with the base at the desired height.	Builder
☐ Established correct hearth size and configuration for the TC970 In-built Wood Fireplace.	Installer
☐ Applied the appropriate seismic restraint for the fireplace and base.	Installer
☐ Ensured all clearances to combustibles are met from the fireplace and the flue.	Installer
☐ Installed the In-Built Flue Kit to a min. of 4.6m and with all external clearances met.	Installer
☐ 150mm flue mechanically fixed to the fireplace.	Installer
☐ Watertight roof flashings fitted.	Installer
☐ Roof stays installed where the flue extends above the roof line by more than 1.5m.	Installer
☐ All Fire-bricks installed in the correct orientation.	Installer
☐ Correct Fascia selected and installed for the appropriate wall finish.	Installer
☐ Baffle correctly seated in the firebox. <i>Refer to Indoor Wood Fire Owner's Manual.</i>	Installer
☐ Door seal confirmed in place and operating using paper seal test. <i>Refer to Indoor Wood Fire Owner's Manual.</i>	Installer
☐ Explained recommended lighting procedure and operation to the owner. <i>Refer to Indoor Wood Fire Owner's Manual.</i>	Installer

G1. FIREPLACE COMPONENTS

- 1x TC970 In-Built Wood Fireplace
- 1x Heat Resistant Gloves
- 1x Wood Fire Moisture Meter
- 4x (M8 x 50) Hex Head Bolt ZP
- 4x (M8 x 32) Flat Washer ZP
- 4x Nitrile Gloves
- 2x 12G x 40 Tek Screw (for Flue connection)

G2. IN-BUILT FLUE KIT COMPONENTS

The Escea In-built Flue Kit is a direct-vent triple-skin system from fireplace to flue cone. It is designed for use with the TC970 Zero Clearance Kit. Each kit consists of:

- 3x (1200mm L x 150mm Ø) SS Flue
- 1x (150mm L x 150mm Ø) SS Flue
- 3x (1200mm L x 200mm Ø) SS Flue Liner
- 3x (1200mm L x 250mm Ø) Black Painted GAL Flue Liner
- 3x (150-200mm Ø) Spider Brackets
- 3x (200-250mm Ø) Spider Brackets
- 1x Black Painted Vented Pillar Cowl Support Bracket
- 1x Black Painted Pillar Cowl
- 4x Flue Bracing L-brackets

G3. TRIPLE SKIN FLUE EXTENSION KIT COMPONENTS

Triple skin flue extension kits are available for longer flue runs or for use with offset kits. These may not be required on all installations. Each kit consists of:

- 1x (1200mm L x 150mm Ø) SS Flue
- 1x (1200mm L x 200mm Ø) SS Flue Liner
- 1x (1200mm L x 250mm Ø) Black Painted GAL Flue Liner
- 1x Wood Fire Spider 150-200mm Ø
- 1x Wood Fire Spider 200-250mm Ø

G4. 45° OFFSET - FLUE CUT LENGTH

Use the formula below to establish the cut length of the 150mm flue. The formula already takes into account the fixed portion of the offset. A 45° offset shifts the flue sideways by the horizontal offset, and over that section it rises by the same amount.

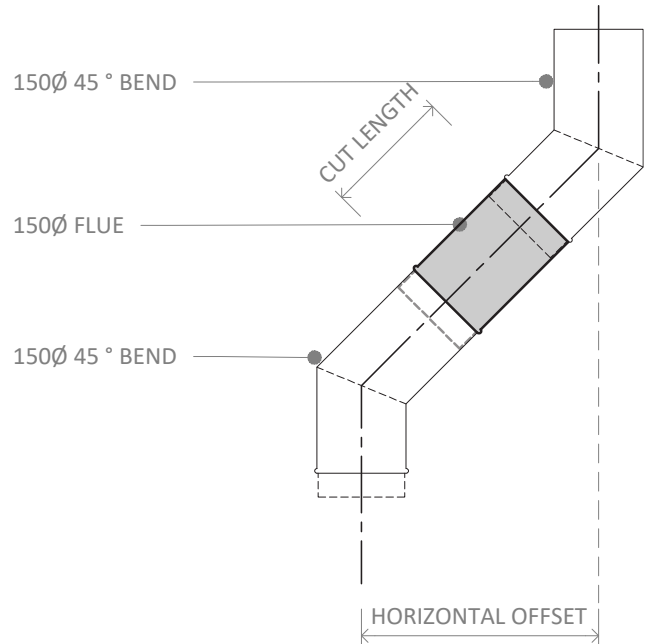
$$\text{CUT LENGTH (MM)} = (\text{HORIZONTAL OFFSET} \times \sqrt{2}) - 349$$

Other pipe sizes (same method, different bend-leg constant):

200 mm Flue Liner = (offset × √2) – 269.

250 mm Flue Liner = (offset × √2) – 284.

The 1451 mm / 1273 mm maximum is the last compliant column.



WORKED EXAMPLE - 600mm horizontal offset

$$\begin{aligned} 150\text{mm Flue} &= (600 \times 1.4142) - 349 \\ &= 848.5 - 349 \\ &= 500\text{mm} \end{aligned}$$

CUT LENGTH TABLE - 150MM LINER

Horizontal Offset (mm)	300	400	500	600	700	800	900	1000	1100	1200	1273
Cut Length (mm)	75	217	358	500	641	782	924	1065	1207	1348	1451

- A horizontal offset of 1273 mm equates to the maximum 1800mm offset length, under AS/NZS 2918.
- Min. Horizontal offset below 247 mm is too small for a 45° pair —refer to the Escea Architectural Advisory Team.

G5. 45° OFFSET - MINIMUM OFFSET CALCULATION

In a Double Skin or Triple Skin flue configuration, to achieve the minimum offset, the 150 mm and 250 mm Ø bends are trimmed to achieve the minimum offset possible.

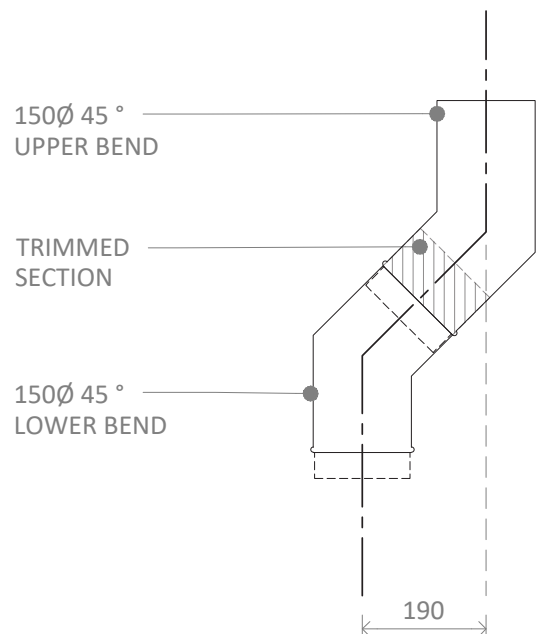
The 200 mm Ø bend does not require any modification.

$$\text{MINIMUM HORIZONTAL OFFSET} = 190\text{MM}$$

$$150\text{MM } \varnothing \text{ LOWER BEND} = \text{TRIM } 81\text{MM OFF THE NON-CRIMP END}$$

$$200\text{MM } \varnothing \text{ BEND} = \text{NO MODIFICATION}$$

$$250\text{MM } \varnothing \text{ UPPER BEND} = \text{TRIM } 11\text{MM OFF THE NON-CRIMP END}$$

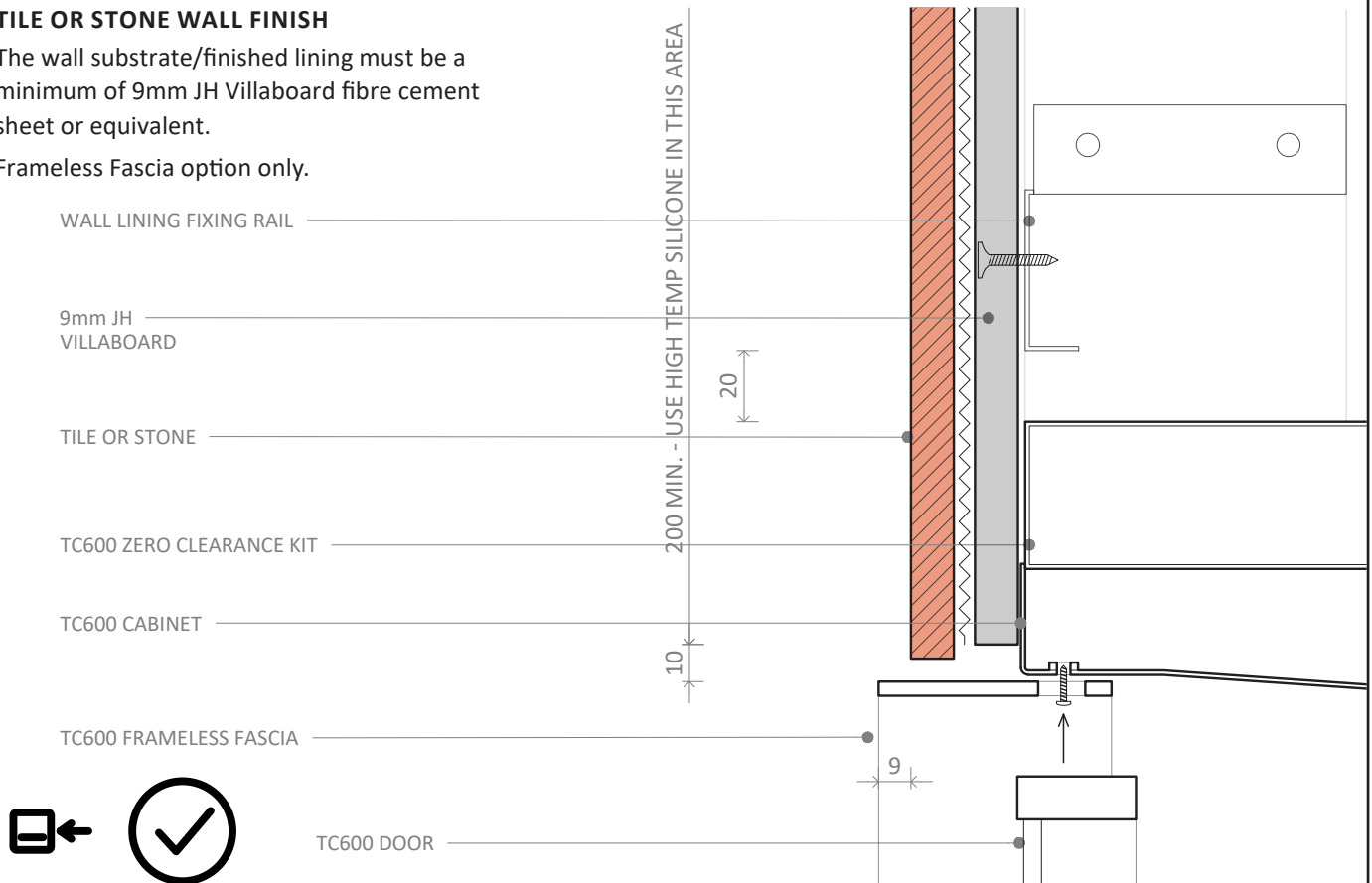


G6. ALTERNATIVE TIMBER FRAMED CAVITY WALL FINISHES

TILE OR STONE WALL FINISH

The wall substrate/finished lining must be a minimum of 9mm JH Villaboard fibre cement sheet or equivalent.

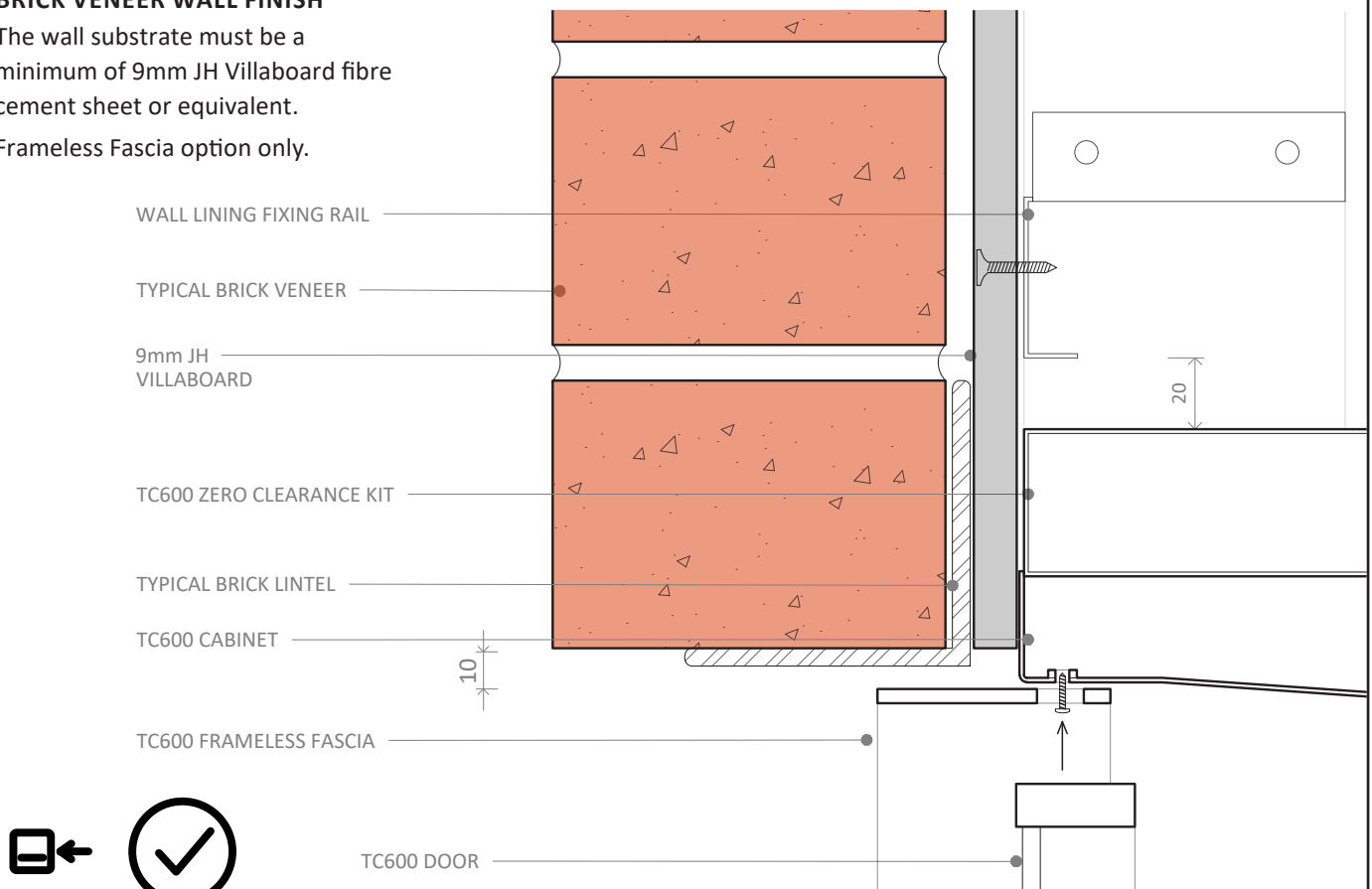
Frameless Fascia option only.



BRICK VENEER WALL FINISH

The wall substrate must be a minimum of 9mm JH Villaboard fibre cement sheet or equivalent.

Frameless Fascia option only.



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