FIREFLY®

TBA Textiles Pty Ltd
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Installation Guide
Service Penetrations & Ventilation through BAL-FZ Roof System

Tested to AS1530.8.2 and meets the requirements for BAL-FZ exposed construction elements within 10 metres of the classified vegetation in AS3959 (2018)

Drain, Waste, Vent – Steel Roof

75mm Steel (0.5 BMT) Sewer vent pipe penetrating roof skin

Step 1 Cut through the roof sheeting in the desired location, such that not more than a 5 mm annular gap is formed between the steel roof sheet and the max. 75 mm steel pipe.

Step 2 Cut a cross approximately 75 x 75 mm through the Aluminised Rockwool blanket and the FIREFLY Plus 60 blanket.

Step 3 Push the vent pipe section through the hole in the roof sheet and the cuts in the blankets, such that the blankets maintain a snug fit around the pipe.

Step 4 Attach the steel vent pipe to the continuation of the sewer vent.

Step 5 Apply FIREFLYMastic to the Plus 60 blanket, forming a 10 mm fillet between the pipe and blanket.

Step 6 Measure up a section of FIREFLYBatt such that there is a snug fit between the truss / rafters proximal to the pipe penetration.

Step 7 Mark the location of the pipe in relation to the FIREFLYBatt, ensuring that there is a minimum of 50 mm of FIREFLYBatt, taking into consideration the angle at which the pipe will pass through the FIREFLYBatt.

Step 8 Cut the FIREFLYBatt in halves through the hole, and coat all raw edges including the aperture with FIREFLYMasticBG.

Step 9 Install the FIREFLYBatt with a friction fit between the rafters / truss, ensuring that there is full coverage of FIREFLYMastic BG on the FIREFLYBatt edge and the mating surfaces.

Step 10 Fill any gaps with the FIREFLYBatt, steel pipe and rafters /truss with FIREFLYMastic BG, and finish the penetration of the pipe through the FIREFLYBatt with a 10 mm fillet of FIREFLYMastic.

Step 11 Wrap the pipe with 300 mm length of Penowrap. **Note:** the minimum distance between the end ofthe Penowrap and the FIREFLYBatt. For steep pitched roofs, additional infill of Penowrap may be required to ensure that all pipe for at least 300 mm from the FIREFLYBatt is protected.

Step 12 Secure the Penowrap with stainless steel cable ties at approximately 50 mm from each end and at approximately 100 mm centres (3 x cable ties).

Step 13 Apply a 10 mm fillet of FIREFLYMastic between the roof sheet and the pipe, and finish the pipe orifice with weather hood and 2 mm steel mesh to AS3959. Weather seal the pipe and the roof sheet with a silicone rubber water proofing boot to the manufacturer's specifications.

Step 14 If any fastening of the pipe is needed within the roof space, this can be achieved either clamping over the Penowrap with a pipe clamp, ensuring not more than a 10% compression of the Penowrap results. Alternatively, the pipe can be fastened with pipe clamps at any location beyond the 300 mm Penowrap.

Double Casing Flue to AS2918

Triple skin, Vented ~ø 250 mm outer

Step 1 Cut through the roof sheeting in the desired location, such that not more than a 5 mm annular gap is formed between the steel roof sheet and the outer flue casing. Push a nail or similar through the centre of the hole to mark where to cut the 50 mm Aluminised Rockwool and Plus 60 blankets, with consideration of the roof pitch.
Note: Ensure this marker is perpendicular to the ground / floor - not to the roof skin.

Step 2 From the underside, locate the puncture mark and cut 8-10 slits approximately 130 x 130 mm radiating out from the centre point through both the Plus 60 blanket and the 50 mm Aluminused Rockwool blanket.

Step 3 From the roof topside, push the outer flue casing through the hole in the roof sheet and blankets, such that the bankets flare out and maintain a snug fit around the outer flue casing.

Step 4 Attach the penetrating flue casing to the continuation of the flue casing from below.

Step 5 Trim back the flared blanket sections, such that there is a flush finish in line with the Plus 60 blanket.

Step 6 Apply FIREFLYMastic to the Plus 60 blanket, forming a 10 mm fillet between the flue pipe and the blanket.

Step 7 Measure up a section of minimum 600 mm length of FIREFLYBatt such that there is a snug fit between the truss / rafters and FIREFLYBatt width, proximal to the flue casing penetration.

Step 8 Mark the location of the pipe in relation to the FIREFLYBatt, ensuring that there is a minimum of 50 mm of FIREFLYBatt between the pipe and any edge of the FIREFLYBatt.

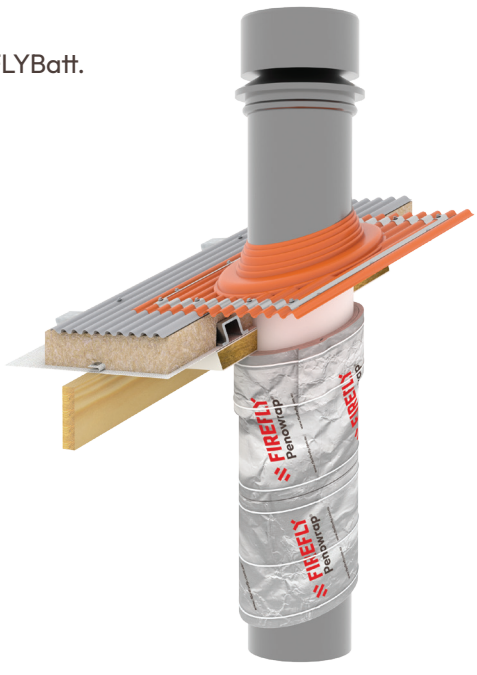
Step 9 Cut the FIREFLYBatt into halves, and cut out the space to the aperture, taking into consideration the roof pitch angle and the subsequent angle that the flue casing will pass through the FIREFLYBatt.

Step 10 Coat all raw edges including the aperture halves with FIREFLYMastic BG.

Step 11 Install the FIREFLYBatt with a friction fit between the rafters / truss, and the flue, ensuring that there is full coverage of FIREFLYMastic BG on the FIREFLYBatt edges and the mating surfaces, and halves have ample FIREFLYMastic to bond them together. Push the FIREFLYBatt up as far as it will go, in contact with the Plus 60 above.

Step 12 Fill any gaps between the FIREFLYBatt, flue outer casing and rafters / truss with FIREFLYMastic BG.

Step 13 Finish the penetration of the pipe through the FIREFLYBatt with a 10 mm fillet of FIREFLYMastic between the flue outer casing and the FIREFLYBatt.



Step 14 Wrap the flue casing with Penowrap for a minimum 650 mm from the FIREFLYBatt, followed by a second layer of 150 mm width Penowrap proximal to the FIREFLYBatt.
Note: The minimum distance between the end of the Penowrap and the FIREFLYBatt. For steel pitched roofs, additonal infill of Penowrap may be required to ensure that the flue casing for at least 650 mm (and double layer 150 mm) from the FIREFLYBatt is protected.

Step 15 Secure the Penowrap with stainless steel cable ties at approximately 50 mm from all ends of the Penowrap layers, and at approximately 100 mm centres. Install the flue cowling and a silicone rubber waterproofing boot as per the manufacturer's specifications.

Step 16 If any fastening of the flue casing is needed within the roof space, this can be achieved either clamping over the Penowrap with a large pipe clamp, ensuring not more than 10% compression of the Penowrap results. Alternatively, the flue casing can be fastened with pipe clamps at any location beyond the 650 mm Penowrap.

Eaves Ventilation

Damper

Step 1 After the Plus 60 blanket has been installed and fastened in Step 6 of this Installation Guide, locate the facia noggins, wall plate or wall frame and eaves framing proximal to the proposed vent position.

Step 2 Mark the centre of the rectangle that is formed by the frame.

Step 3 Cut the Plus 60 blanket diagonally to each corner from the centre.

Step 4 Fold up the 4 resulting triangular flaps into the eave space and hammer tack these into position onto the surrounding frame. Trim the excess material in order to prevent obstruction of the vent.

Step 5 Measure up a 50 mm thin FIREFLYBatt to friction fit snugly within the void that has been formed within the framing and opening in the Plus 60 blanket.

Step 6 Liberally coat the edges of the FIREFLYBatt with FIREFLYMastic BG, and install the FIREFLYBatt to be flush with the frame / Plus 60 blanket.

Step 7 Determine the location for the damper within the FIREFLYBatt, and cut out a 150 x 150 mm section of FIREFLYBatt, using the damper as a template (check that there will be a snug friction fit between the damper and FIREFLYBatt).

Step 8 Coat the cut edges of the FIREFLYBatt and damper with FIREFLYMastic BG, and friction fit the damper into the opening in the FIREFLYBatt. Ensure that the damper sits flush with the underside of the FIREFLYBatt.

Step 9 Install 2 mm AS3959 compliant steel mesh ~ 200 mm width, over the damper opening and secure to the nearest frame members either side of the damper (beyond the FIREFLYBatt) with 8G 32 mm bugle head timber screws for a timber frame; or 8G 32 mm self drilling screws for a steel frame.

Step 10 Proceed with the relevant steps in the BAL-FZ Roof Installation Guide (9), using FIREFLYBatt FZ or plasterboard covering, with a 140 x 140 mm hole cut out to leave the damper exposed except for the steel mesh for ember protection.

Roof Ventilation

Damper and Ventilator

Step 1 Cut through the roof sheet in the desired location such that 0- 5 mm annular gap is formed between the steel roof and the ø150 mm damper casing. Push a nail or similar through the centre of the required opening through the Aluminised Rockwool and Plus 60 blankets. **Note:** Ensure this marker is perpendicular to the ground / floor - not to the roof skin.

Step 2 From the underside, locate the puncture mark and cut 8-10 slits approximately 80- x 80 mm radiating out from the centre point through both the Plus 60 and Aluminised Rockwool blankets.

Step 3 Measure up a section of FIREFLYBatt such that there is a snug fit between the truss / rafters and FIREFLYBatt, proximal to the flue casing penetration.

Step 4 Liberally coat the edges of the FIREFLYBatt with FIREFLYMastic BG, and install the FIREFLYBatt to be flush with the frame and pressing firmly against the Plus 60 blanket.

Step 5 Determine the location for the damper within the FIREFLYBatt, and cut out a ø150 mm section of FIREFLYBatt.

Step 6 Cut the damper casing such that it will extend to just above the line of the roof sheeting whilst the damper is flush with the underside of the FIREFLYBatt.

Step 7 Coat the edges of the FIREFLYBatt and damper casing with FIREFLYMastic BG, and friction fit the damper to the FIREFLYBatt. Ensure that the damper does not protrude beyond the batt.

Step 8 From the topside, trim any excess Plus 60 and Aluminised Rockwool blanket that may obstruct the damper casing, and seal the gap between the flue casing and roof sheeting with a 10 mm fillet of FIREFLYMastic.

Step 9 Install the weather protection / ventilator to the manufacturer's specifications, and such that the damper casing extends into the void of the ventilator.