www.roofrazor.com.au

PRODUCT INFORMATION FOR ARCHITECTS, ENGINEERS AND INSTALLERS

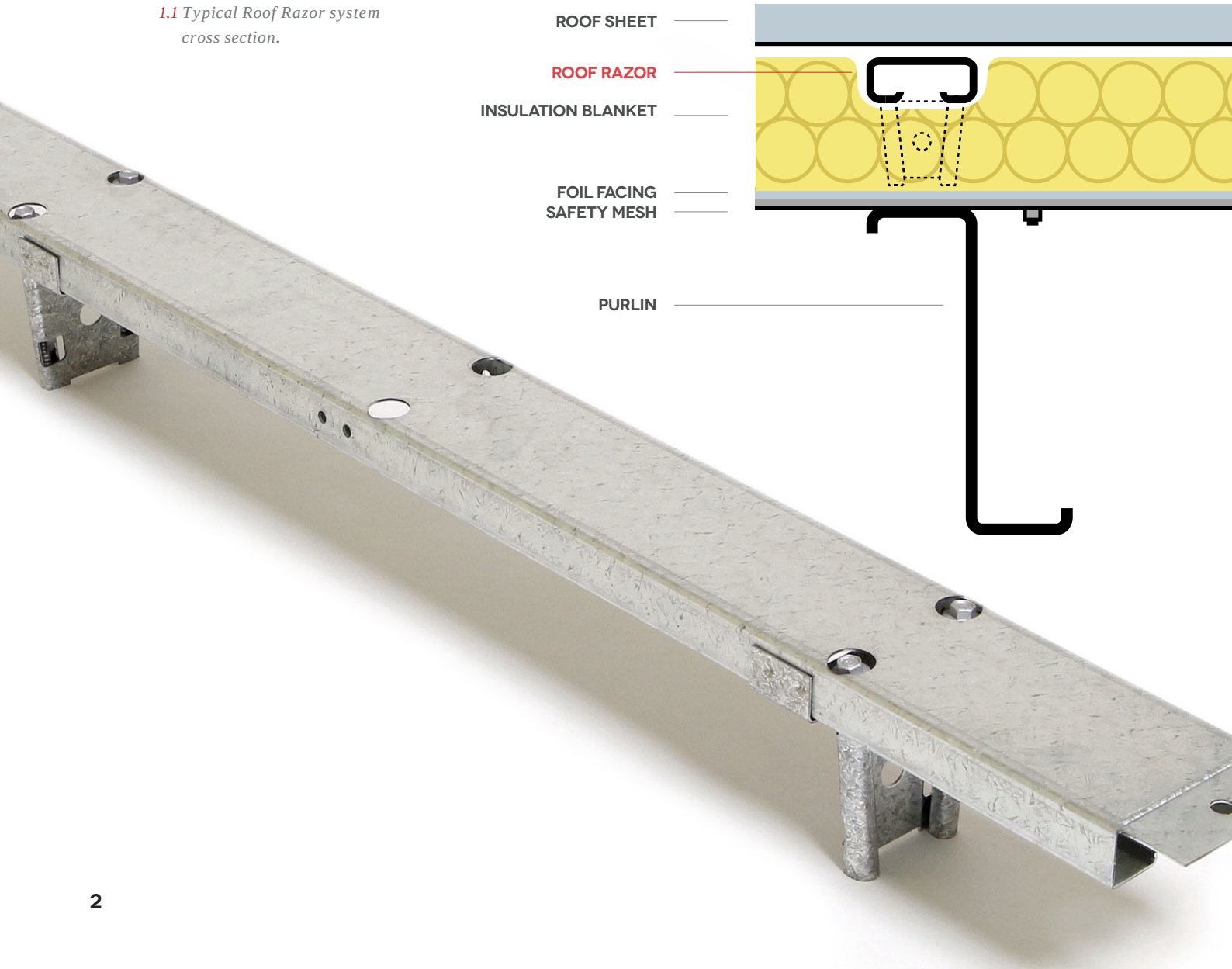
INSULATION SPACERS FOR COMMERCIAL METAL ROOFING

ROOF RAZOR

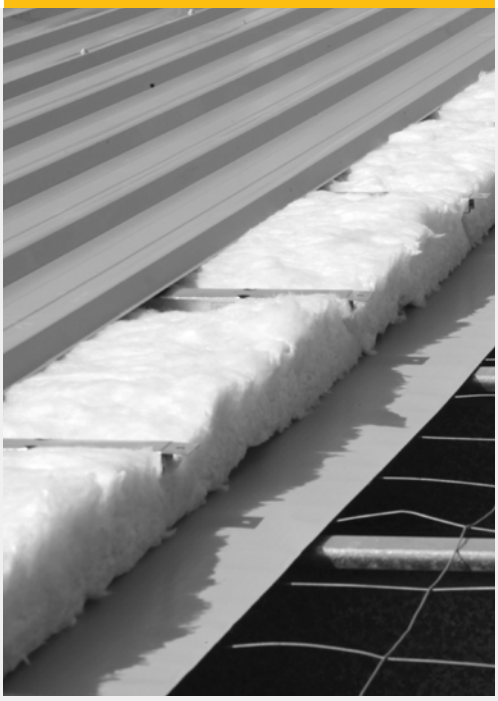
1.0 WHAT IS THE ROOF RAZOR?

◆ **The Roof Razor is a roof insulation spacer bracket, specifically designed for Australian metal roof construction.** The Roof Razor sits between the roof structure and the external cladding membrane, creating a space for insulation to recover to its full nominal thickness between the purlins. The Roof Razor is a solution to the Section J requirement of the BCA, that insulation must maintain its position and thickness between purlins.

1.1 Typical Roof Razor system cross section.



2.1 The Roof Razor gives the appearance of a purlin on top of the blanket.



2.0 WHAT IS UNIQUE ABOUT THE ROOF RAZOR?

◆ The Roof Razor design philosophy is to achieve the highest product performance possible, while simultaneously reducing installation and unit costs through thoughtful design. As such, the Roof Razor boasts an impressive national reputation built on ease and speed of installation, and seamless compatibility with all relevant insulation blankets and roof cladding profiles.

2.3 THE ROOF RAZOR IS SO EASY TO INSTALL DUE TO THE FASTENERS BEING PRE-LOADED INTO THE UNIT, AND THE SYSTEM IS COMFORTABLE TO WALK ON ONCE INSTALLED.

2.4 Compared to competing products the patented design offers the least amount of compression of insulation, atop the purlin, allowing for the highest possible thermal performance.

2.5 As the name suggests; the Roof Razor cuts through glass wool insulation to give a direct connection to the purlin. There is no compressed glass wool at the join, ensuring that over time, the bracket will not loosen as a result of vibration and movement.

Visit http://www.roofrazor.com.au for a full installation video.

3.0 INSTALLATION

3.1

3.1 Overlapping tab locates next consecutive Roof Razor.

3.3

3.3 Fasteners are pre-loaded and the fastener heads are easily accessible.

3.2

3.2 The Roof Razor spans the entire blanket width allowing direct line of sight to the purlin.

3.4

3.4 The Roof Razor is wide and stable enough to walk and balance on.

4.0 PREPARATION

To install the Roof Razor system the following components are needed:

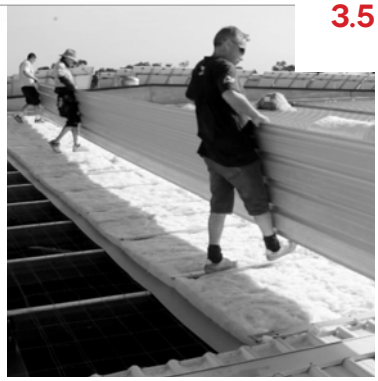
4.1 Assembled Roof Razor brackets

4.2 Fasteners of at least 80mm length for Roof Razor 85 and at least 110mm length for Roof Razor 115 (unless supplied pre-loaded) being:

4.2.A 12g Roof Razor fasteners for non cyclonic regions, 6 per bracket

4.2.B 14g fasteners for cyclonic regions, 6 per bracket

3.5



3.5 The Roof Razor can be trafficked the same as a purlin.

3.6

3.6 A direct connection to the purlin gives a straight and consistent finish.

5.0 PROCEDURE

5.1 Install the safety mesh as per the manufacturer's instructions and in compliance with the BCA. The safety mesh can be pulled tight.

5.2 Roll out the foil faced glass wool building blanket as per the manufacturer's instructions and in compliance with the BCA.

5.3 Position the Roof Razor so that the end of its top channel is in line with the side edge of the building blanket, and is centred above and parallel to the top side of the purlin.

5.4 Fasten the Roof Razor onto the purlin using the fixings provided. Firm downward pressure will be needed to ensure contact of the fixing to the purlin through the glass wool blanket.

5.5 Lay roof cladding as per manufacturer's instructions. For cyclonic regions the fixings must penetrate the flat surfaces of both the Roof Razor top channel and the smaller channel reinforcement beneath it. Fixings must be in the centre of the channel with a variance of no more than 12mm to either side.

5.6 When laying consecutive Roof Razor brackets ensure that the tab from one end of the bracket slides completely into the flush end of the next. Abut the two brackets 'hard up' to avoid 'over running' of the Roof Razor over long runs.

5.7 The last Roof Razor on the run can be cut to length by way of a suitable metal cutting tool such as a saw or grinder. A vertical support bracket must be no greater than 120mm from the cut edge. The last vertical support bracket can be removed from the off cut and relocated as follows:

5.7.A Remove the pre-loaded fasteners by unscrewing them from the vertical screw guide.

5.7.B Using a flat edged tool such as a screw driver, disconnect the screw guide by using the tool as a wedge between the vertical flange of the screw guide and the side of the channel.

5.7.C If the last set of pre-punched holes are within 120mm from the cut edge, then relocate the bracket to these holes. If the last set of pre-punched holes are greater than 120mm from the cut edge, then fix the top flat edge of the bracket to the underside of the channel with two fixings (one on either side of the underside of the channel). Use 2 x 12-14x25's for non-cyclonic and 2 x 14-10x25's for cyclonic regions (not supplied). Fix the bracket so that the pre-supplied fixing screws can be replaced into the bracket, and so that the heads of the fixings clear the channel when installed.

5.7.D Install fasteners as needed.

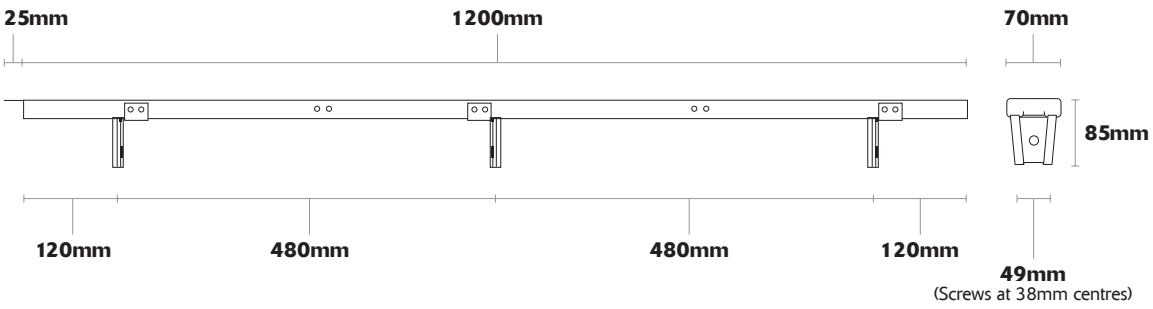
6.0 THERMAL PERFORMANCE

◆ Although having a direct connection to the purlin, the patented design has such little contact with the purlin that it still provides a more than adequate thermal break, in full compliance with the BCA.

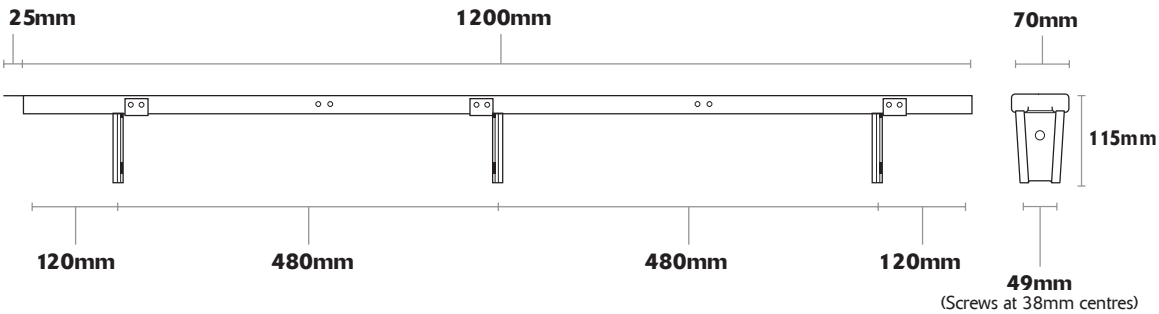
When compared to other spacers on the market, the Roof Razor stands alone in that it cuts through the wool, drastically minimising the amount of compressed insulation atop the purlin.

6.1 THE ROOF RAZOR IS AVAILABLE IN TWO HEIGHTS TO SUIT MOST COMMONLY USED BLANKET THICKNESSES.

6.2 85MM HIGH TO SUIT BLANKETS 100–120MM



6.3 115MM HIGH TO SUIT BLANKETS 130–145MM



6.4 THE FOLLOWING THERMAL PREDICTION TABLE CAN BE USED AS A PRODUCT SELECTION GUIDE, AND ASSUMES THE FOLLOWING:

- Non-ventilated flat metal roof, no ceiling
- Safety mesh
- Glass wool insulation with reflective foil underside

INSULATION THICKNESS (MM)	MATERIAL R-VALUE	SYSTEM TOTAL R WINTER (UP)	SYSTEM TOTAL R SUMMER (DOWN)	ROOF RAZOR HEIGHT REQUIRED	ROOF RAZOR PART NUMBER	
					NON-CYCLONIC	CYCLONIC
100	2.5	2.9	3.2	85MM	1040111	1040211
110	2.5	2.9	3.2	85MM	1040111	1040211
120	3.0	3.4	3.7	85MM	1040111	1040211
130	3.0	3.4	3.7	115MM	1040121	1040221
140	3.3	3.7	4.0	115MM	1040121	1040221
145	3.6	4.1	4.2	115MM	1040121	1040221

NB: The above table is a guide only, refer to insulation manufacturer's product specifications to confirm material R-Value at the specified thickness.

7.0 ROOF RAZOR CYCLONIC

To battle Australia's cyclonic regions, the Roof Razor CYCLONIC is Low High Low tested and boasts an increased fastener yield capacity to satisfy wider purlin spacing.

FASTENER YIELD CAPACITY

NON-CYCLONIC

0.583 kN per 12 gauge 14 TPI fastener

CYCLONIC

1.43kN per 14 gauge 10 TPI fastener

7.1 The Roof Razor CYCLONIC is equipped with an extra batten insert to increase the fastener yield capacity, and is pre-loaded with (6 x 14 gauge 10TPI class 4 fasteners. **7.2**)

8.0 COMPLIANCE

- Compliant with the BCA requirements for thermal breaks
- Compliant with section J of the BCA
- Structurally engineered and certified for use
- Roof Razor Cyclonic is LHL tested
- Safety mesh can be installed taut
- Compatible with both pierced fix and concealed fix roof cladding

9.0 OTHER BENEFITS

- Compatible with polyester blanket, the Roof Razor pinches the polyester tight so the fastener can puncture the polyester without becoming tangled
- Manufactured and assembled locally in Australia
- Low environmental impact, recycled packaging materials and minimal cardboard packaging.

10.0 TECHNICAL DATA
SPEC TABLE

	STANDARD	CYCLONIC
Cover	1200mm	1200mm
Weight	2kg	3kg
Wind Regions	A&B	C&D
Fastener yield capacity	0.583 kN per 12g 14TPI	1.43 kN per 14g 10TPI
Batten material	1.15BMT G550 Z275	1.15BMT G550 Z275
Cyclonic insert	N/A	1.15BMT G550 Z275
Fasteners	6 x 12g 14TPI Class 4	6 x 14g 10TPI Class 4
Minimum purlin thickness	1.2 BMT	1.5 BMT
Minimum purlin width	50mm	50mm
Fastener centres	38mm	38mm
Dead load capacity	205kg	205kg
Pack QTY	6	6
Pallet QTY and weight	180 (30 packs), 400kg	180 (30 packs), 540kg
Pallet dimensions l x w x h (m)	1.15 x 1.25 x 0.8	1.15 x 1.25 x 0.98

ROOF RAZOR

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Manufactured under a management system certified as complying with ISO 9001:2000

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