

EXPERIENCE THE ROOF RAZOR®



Roof Razor® is the Australian made and patented insulation spacer. Invented by Vilno Group in 2008, this roof spacer pierces the insulation blanket in a way that delivers the perfect combination of installation ease and thermal performance.

Roof Razor® has forged a strong reputation amongst architects, engineers, builders and roofers for quality, performance, usability, compliance and support.

For your next commercial roofing project, put the Roof Razor® on top of your list.



Australian Made Means Quality

Roof Razor® is designed, manufactured and assembled right here in Australia. For specifiers and roofers, this matters for two significant reasons:

1 / Quality control

With state-of-art technology and equipment, we're in complete control of the production process. We're 100% accountable for quality and are on a mission to continually improve the Roof Razor product and manufacturing process. In fact, we offer 10 year site-specific product warranties upon request.

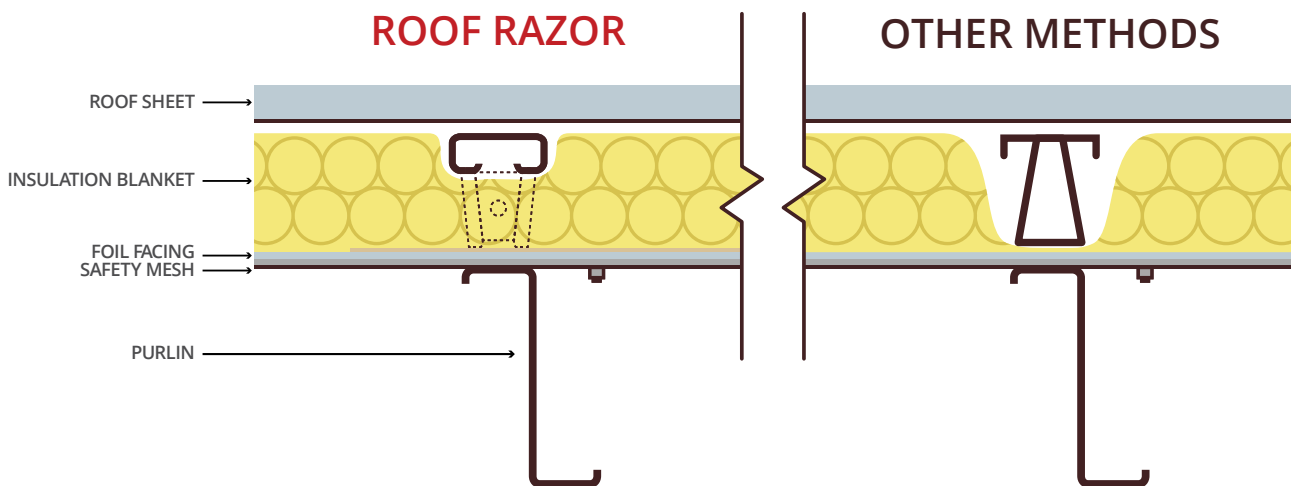
2 / Stock availability

Roof Razor® distributors and customers are based right across Australia. With our two local factories in Sydney, we have the capability and capacity to deliver orders on time and on budget. This local production means that we can be flexible based on your schedule.

Backed by Vilno Group, we truly get the commercial roofing industry. We have a strong heritage and proven record in sheet metal fabrication.

Outstanding Thermal Performance

Roof Razor® provides a direct and sturdy connection to the purlin, with a tiny thermal bridge. As the razor slices through the insulation blanket, the recovery is far superior to traditional crush methods, leading to outstanding thermal performance.



To allow for full recovery between the purlins across a wide range of insulation blankets, the Roof Razor® is available in three heights:

- > **60mm**
- > **85mm**
- > **115mm**

Roof Razor® allows the blanket to recover around the fastening points and up to the underside of its batten. This results in greater acoustic and anti-condensation performance in comparison to techniques that involve compressed blankets or loose mesh.

Further to the performance advantages, Roof Razor® also has the look up factor. The foil remains tighter and flatter than with traditional crush methods or uncomfortable drill angles. You can expect an exceptional finish to the underside of the roof.



Renowned for Usability

Based on the innovative design, Roof Razor® fixings are pre-loaded into the spacer and the screw heads are right on top. This means a combination of easy access and low probability of blanket or foil damage during the installation process.

The dimensions of 1200mm cover plus 25mm lap are all important. This ensures that the Roof Razor® accurately matches the insulation blanket and there are no gaps between brackets. Everything about Roof Razor® makes work easier.

Walk on the razor

With a 68mm wide top surface and direct connection to the purlin, Roof Razor® provides a sturdy, flat and straight surface to walk on and fix roof sheets.

Speed of installation

The pre-loaded screws and connecting tabs make Roof Razor® easy to line up on the purlin and quick to install. That's why it's preferred by commercial roofers.

Safety is everything

Roof Razor® is safe and comfortable to traverse. It also enables compliant installation of the safety mesh, which can be pulled taut as instructed by the manufacturer.





Compliance with Industry Standards

The Roof Razor® range ticks all the boxes in terms of relevant industry standards, including Section J of the Building Code of Australia. Thanks to the patented design, Roof Razor® meets or exceeds NCC requirements for thermal bridging.

To ensure this solution meets your needs across commercial roofing applications, Roof Razor® is made to be:

- 1** / Compatible with a comprehensive range of insulation blankets from different manufacturers.
- 2** / Suitable for pitches of up to 30 degrees – additional support may be required above that level.

Roof Razor® is certified and tested for use in both non-cyclonic and cyclonic regions. The adapted LHL-rated cyclonic variation includes an insert and comes pre-loaded with 14g fasteners which increases rigidity and pull-out capacity.

Test data, engineering certificates, thermal modelling and technical drawings are available upon request. Our team work with specifiers when required for site-specific certifications. Please reach out if you need further clarification.

Local and Expert Support

Vilno Group proudly invented the industry-leading Roof Razor®. This 2nd generation, family-owned manufacturing business based in Sydney, Australia has a heritage spanning more than 40 years. And with an enthusiastic and committed team, we're always here to help you get the job done.

Together with our dedicated and independent distributors, we work closely with architects, engineers, builders and roofers to ensure the effectiveness and compliance of Roof Razor® with commercial roofing projects.

This is even more important with bespoke applications for Roof Razor® such as:

- **High-pitched roofing and wall cladding.**
- **Alternative designs (e.g. timber battens).**



Thermal Modelling

Roof Razor® is engineered to help achieve maximum thermal performance. Here's an example calculation of the system R-value for the level of thermal resistance. This example is based on a metal roof deck with a 130mm R3.0 insulation blanket and 115mm Roof Razor® insulation spacer attached to steel purlins with no ceiling.

	R-value in Winter (up)	R-value in Summer (down)
Layer 1 outdoor air film	R0.04	R0.04
Layer 2 roof sheet	R0.00	R0.00
Layer 3 130mm R3.0 blanket 115mm Roof Razor® FI safety mesh	R2.97	R2.67
Layer 4 indoor air film	R0.23	R0.80
Total R-value	R3.24	R3.51

Reference: NZS 4214 methods of determining the total thermal resistance of parts of buildings.

Load Capacities

Spacing of Purlins (mm)	Load Direction	Roof Razor Fixing Centres (mm)			
		Non-Cyclonic		Cyclonic	
		240	480	240	480
600	Down	98.80	24.70	98.80	24.70
	Up	19.86	9.93	10.96	5.48
900	Down	65.87	16.47	65.87	16.47
	Up	13.24	6.62	10.96	5.48
1200	Down	49.40	12.35	49.40	12.35
	Up	9.93	4.97	9.93	4.97
1500	Down	39.52	9.88	39.52	9.88
	Up	7.94	3.97	7.94	3.97

Technical Specifications

Product Data

Product description	Spacer height mm	Spacer length mm	Pieces per pack	Lineal metres per pack
Roof Razor® standard – with pre-loaded screws	60	1200	6	7.2
	85	1200	6	7.2
	115	1200	6	7.2
Roof Razor® standard – without pre-loaded screws+	85	1200	6	7.2
	115	1200	6	7.2
Roof Razor® cyclonic – with pre-loaded screws	60	1200	6	7.2
	85	1200	6	7.2
	115	1200	6	7.2
Roof Razor® cyclonic – without pre-loaded screws	115	1200	6	7.2

+ Roof Razor® for fixing to timber battens is supplied without pre-loaded screws:

- For 85mm Roof Razor®, we recommend screws that are 62mm long + penetration depth; and
- For 115mm Roof Razor®, we recommend screws that are 92mm long + penetration depth.

Note: penetration depth is determined based on the type of timber used in addition to the screw manufacturer's recommendations.

Physical Properties

Property	Roof Razor® Standard	Roof Razor® Cyclonic
Cover	1200mm	1200mm
Weight	2kg	3kg
Wind regions	A&B	C&D
Roof sheet fastener yield capacity	0.583 kN per 12g 14TPI (not supplied)	1.43 kN per 14g 10/11TPI (not supplied)
Batten material	1.15BMT G550 Z275	1.15BMT G550 Z275
Cyclonic insert	N/A	1.15BMT G550 Z275
Pre-loaded fasteners (for fixing to purlin)	6 x 12g 14TPI Class 4	6 x 14g 10/11TPI Class 4
Minimum purlin thickness	1.2 BMT	1.5 BMT
Minimum purlin surface required	50mm*	50mm*
Fastener centres	38mm	38mm
Dead load capacity [^]	205kg between legs irrespective of span	205kg between legs irrespective of span
Pack quantity	6	6
Pallet quantity and weight	60mm: 240 (40 packs) / 500kg 85 & 115mm: 180 (30 packs) / 400kg	60mm: 240 (40 packs) / 680kg 85 & 115mm: 180 (30 packs) / 540kg
Pallet dimensions L x W x H (m)	60mm: 1.15 x 1.25 x 0.98 85mm: 1.15 x 1.25 x 0.80 115mm: 1.15 x 1.25 x 0.98	60mm: 1.15 x 1.25 x 0.98 85mm: 1.15 x 1.25 x 0.80 115mm: 1.15 x 1.25 x 0.98

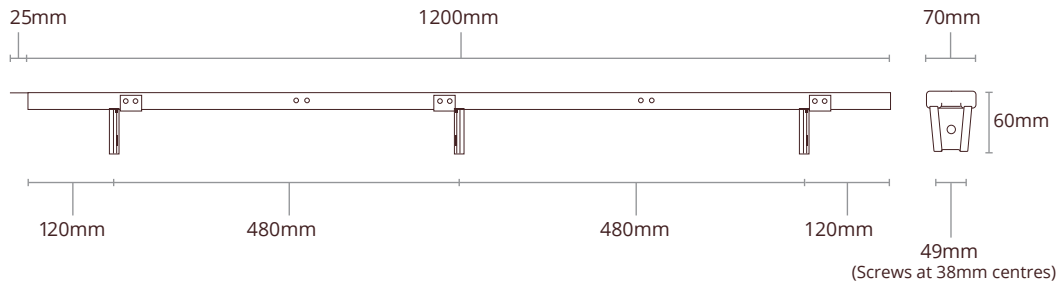
* Roof Razor requires a minimum full 50mm flat purlin surface, so consult with purlin manufacturers for exact purlin dimensions.

[^] For load bearing information, please contact Vilno Group at service@vilno.com.au

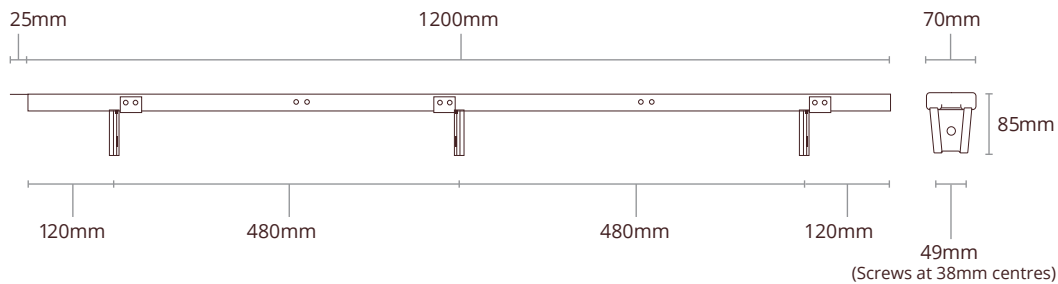
Material Specifications

Roof Razor® is available in three heights to suit most commonly used blanket thicknesses:

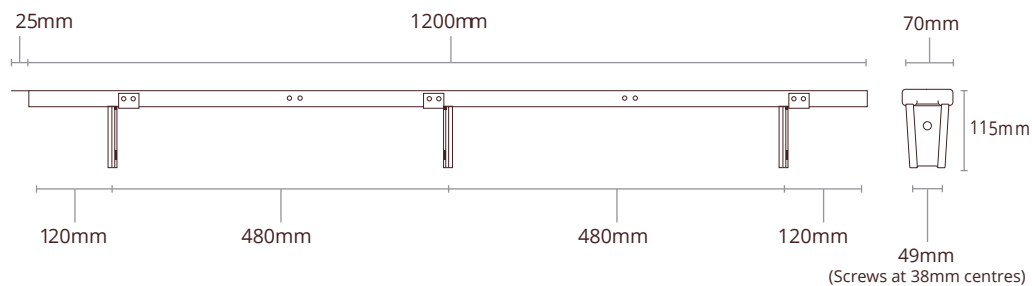
60mm Roof Razor to suit 75-80mm building blankets



85mm Roof Razor to suit 100-120mm building blankets



115mm Roof Razor to suit 130-145mm building blankets



Roof Razor is also suitable for use with additional blanket thicknesses. Please contact us to check compatibility with specific applications.

Roof Sheet Fastener Yield Capacity (Tested at 6 fasteners per length)

Non-Cyclonic	Cyclonic
0.583kN per 12 gauge 14TPI roof sheet fastener (not supplied)	1.43kN per 14 gauge 10/11TPI roof sheet fastener (not supplied)

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 10/11TPI class 4 fasteners.

Installation Guide

This installation guide provides recommendations for the use of Roof Razor® insulation spacers in commercial metal deck roofing.

- › Install the safety mesh as per the manufacturer's guidelines and in compliance with relevant codes and regulations. The safety mesh should be pulled taut.
 - › Lay the building blanket (i.e. reflective surface facing down) as per the manufacturer's guidelines and in compliance with relevant codes and regulations.
 - › In Australia's tropical climate regions, install metal roof heavy duty sarking on top of the Roof Razor® and apply reinforced foil tape directly under the metal roof cladding.
 - › Position Roof Razor® so that the end of the 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.
 - › Fasten Roof Razor® onto the purlin using the fixings provided. Apply firm downwards pressure to ensure connection of the fixing to the purlin through the building blanket.
 - › Lay the roof cladding as per manufacturer's guidelines.
 - › For cyclonic regions, the fixings must penetrate the flat surfaces of both the top channel of the Roof Razor® 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.
 - › 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. The two brackets must be hard up to avoid over running Roof Razor®.
- › The last Roof Razor® on each 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:
 - Remove the pre-loaded fasteners by unscrewing them from the vertical screw guide.
 - Disconnect the screw guide by using a flat edged tool such as a screwdriver as a wedge between the vertical flange of the screw guide and the side of the channel.
 - If the last set of pre-punched holes are within 120mm from the cut edge, relocate the bracket to these holes. If the last set of pre-punched holes are greater than 120mm from the cut edge, fix the top flat edge of the bracket to the underside of the channel with two fixings (i.e. one on either side of the underside of the channel).
 - Use 2 x 12-14 x 25s for non-cyclonic or use 2 x 14-10 x 25s 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.
 - Install fasteners as needed.

Please do not hesitate to contact Vilno Group if your application and installation is outside of these guidelines.



1 An overlapping tab specifies where to position the consecutive Roof Razor®.



2 Roof Razor® spans the entire blanket width allowing for a direct line of sight to the purlin.



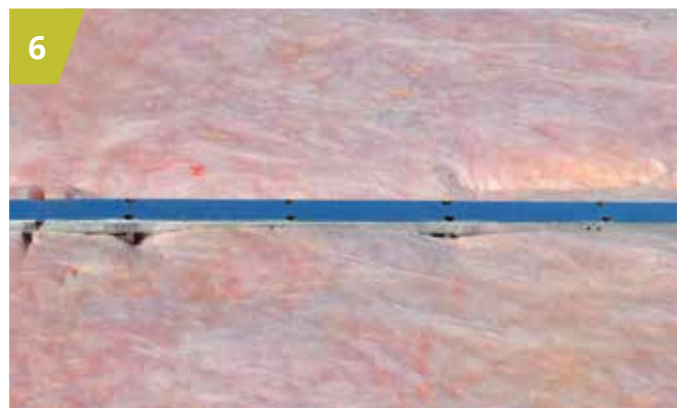
3 Fasteners are pre-loaded and provide easy access to the fastener head.



4 Roof Razor® is wide and stable enough to walk and balance on.



5 Roof Razor® can be comfortably trafficked the same way as a purlin.



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

Contact Us

Please contact us if you want to find out more about Roof Razor®, place an order or have commercial or technical questions.

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