

METAL ROOFING & WALLING

Frequently Asked Questions

1 Why metal roof?

Metal roof is fast becoming the material of choice for many building owners thanks to its many benefits:

Lightweight	Metal roof systems are lighter in weight, compared to tiled roofs. With the reduction in weight, this contributes to lower building self-weight, thereby leading to lower foundation costs.
Longevity	Metal roofs can easily last more than 25 years, if it is designed and installed properly with the right material.
Minimal Maintenance	Metal roofs require little maintenance compared to other roofing materials, which means you won't have to spend as much time and resources on frequent roofing maintenance.
Energy Efficiency	Metal roofs have better ability to reflect solar radiant heat. Depending on choice of roof colour, it helps to reduce cooling cost tremendously.
Environmentally Friendly	New metal roofing typically contains recycled content and is 100% recyclable.

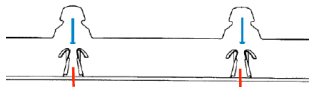

2 Is metal roof noisy in the rain?

Metal roofs have always been perceived as being noisy — especially when it rains. This perception usually comes from people who have stood under a barn or shed with a metal roof during a storm and heard the raindrops hitting a roof with no underlayment or insulation. Without the underlayment and insulation the metal panels can intensify the sound. But as soon as those building components are added, noise levels return to what could be generally expected with any other roofing material. For higher acoustic performance, it is recommended to use double skin insulated roof system. For more details, please refer to Q5 – The Common Roof Systems of Metal Roofs.

3 Will a metal roof make the building hot inside during the hot day?

No. Unlike conventional roofing materials such as concrete tile or asphalt shingle, which store and transfer heat, metal absorbs and dissipates heat quickly. Further, BlueScope's **COLORBOND®** steel paint system is incorporated with **THERMATECH®** solar reflectance technology can reflect rays from the sun, keeping the building cooler during hot days and reduced energy costs for the building. For better thermal insulation performance, it is recommended to use double skin insulated roof system. For more details, please refer to Q5 – The Common Roof Systems of Metal Roofs.

4 What are the common types of metal roofs?

Type of Metal Roofs	Concealed-Fix Metal Roofing	Pierced-Fix Metal Roofing
<p>Description & Illustrations</p>	<p>Concealed-fixing process is a method where the roofing sheets are fixed to the purlins or batten with a clip system and are not pierced with any fasteners.</p> 	<p>Pierce-fixing process is laying the roofing sheets individually across supports (purlin or batten) and then fix the sheets with exposed fasteners or screws through the metal roof sheeting into the structure below to firmly secure the roof sheeting.</p> 
<p>Features</p>	<ul style="list-style-type: none"> • Concealed fasteners metal roof panel – no visible fixing. • Commonly used on architectural, residential and commercial buildings, due to its aesthetics appeal of an uninterrupted visual surface. 	<ul style="list-style-type: none"> • Exposed fasteners metal roof panel – the fastener is visible. • Typically used in corrugated roofing profiles. • Classically used on industrial and agricultural buildings.
<p>Benefits</p>	<ul style="list-style-type: none"> • Suitable for low-pitched roofs due to the sheet is not punctured with fasteners and therefore remains completely watertight even at a low slope. • Improved aesthetics – Fasteners or screws are hidden by the roofing sheet and provides a sleek, consistent & modern look. • Unique locking mechanisms can efficiently control thermal expansion and contraction. 	<ul style="list-style-type: none"> • Better wind-uplift capacity. • Economical choice of metal roofing – quick and easy to install which provide savings in construction time and installation cost.

Concerns	<ul style="list-style-type: none"> • Price – Required clip accessories compared to exposed fasteners metal roofing. • Replacement and repairs – It become harder to replace or repair this type of roofing system because of its complex nature, sealing and adhesion. 	<ul style="list-style-type: none"> • Water penetration due to fasteners drilled through the face of the panels. However, the washer on the fastener will reduce the chances of water intrusion at the fastener. • The heads of the fasteners raised above the surface of the metal give these systems a less sleek look.
LYSAGHT® Profiles	KLIP-LOK OPTIMA™, KLIP-LOK® 406, 360 SEAM®, SELECT SEAM® II & ZIPDEK®	SPANDEK OPTIMA™, SPANDEK®, TRIMDEK OPTIMA™, TRIMDEK®, HR-29® SERIES, CUSTOM ORB® & CUSTOM BLUE ORB®, BORNEO TILE®, STYLEDEK® OPTIMA

5 What are the common roof systems of metal roofs?

Metal Roof Systems	Single Skin Insulated Roof System	Double Skin Insulated Roof System
Features	<ul style="list-style-type: none"> • A roof system having only single roofing sheet (self-supporting steel profiled) as an external skin to a built-up roof system. • Normally used in applications where performance demands in terms of aesthetic, thermal and acoustic insulation are moderate. • Figure 1 shows the typical built-up of single skin insulated roof system with LYSAGHT® roofing profiles. * 	<ul style="list-style-type: none"> • Comprising of two metal decking sheets aligning parallel, one on top and the other at the bottom. • Normally used in applications where performance demands in terms of aesthetic, thermal and acoustic insulation are high. • Figure 2 shows the typical built-up of double skin insulated roof system with LYSAGHT® roofing profiles. *

<p>Benefits</p>	<ul style="list-style-type: none"> • Easy installation than double skin roof system. • An economical solution where performance demands are moderate. 	<ul style="list-style-type: none"> • Better energy saving & acoustic performance. • Architectural metal roofing profiles as top skin to provide an elegant & modern appearance.
<p>Suitable Building Types</p>	<p>Industrial building, food court, hypermarket, carpark, etc.</p>	<p>Residential, lecture hall, stadium or sports centre, auditorium or theatres, airport, railway station, etc.</p>

* LYSAGHT® metal roofing profiles can be used in single skin and double skin insulated roof systems. These systems are dependent on specific requirements and can be tailored to suit the thermal, acoustic, ventilation or economic requirements.

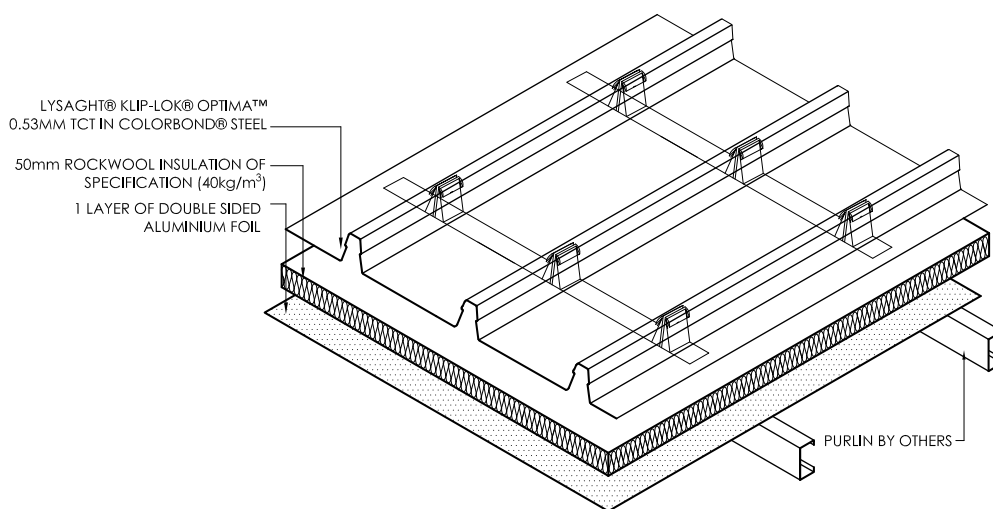


Figure 1: Single Skin Insulated Roof Systems Typical Built-up

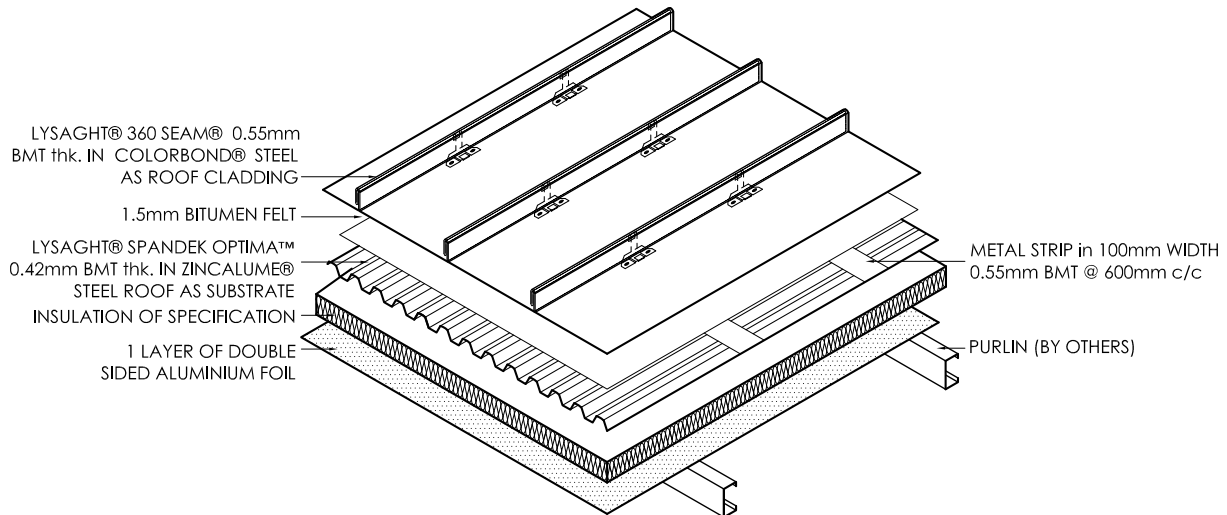


Figure 2: Double Skin Insulated Roof Systems Typical Built-up

6 What are the minimum slope requirements for roof panels?

The higher the roofing sheet rib height, the lower the minimum pitch angle is required. The reason is because the pan in between two ribs of roofing sheets act like water channels to drain the rainwater. The wider pan and higher rib perform high rainwater runoff capacity. The higher the rainwater runoff capacity, the lower slope of roof is needed. The suggested slope requirements of LYSAGHT® metal roofing profiles can be found in [Product & Solutions](#) or [Product Catalogue](#).

7 Which LYSAGHT® profiles can be used for roofs?

KLIP-LOK OPTIMA™, KLIP-LOK® 406, SPANDEK OPTIMA™, SPANDEK®, TRIMDEK OPTIMA™, TRIMDEK®, HR-29® SERIES, 360 SEAM®, SELECT SEAM® II, ZIPDEK®, CUSTOM ORB® & CUSTOM BLUE ORB®, BORNEO TILE®, STYLEDEK® OPTIMA

8 Which LYSAGHT® profiles can be used for walls?

SPANDEK OPTIMA™, SPANDEK®, TRIMDEK OPTIMA™, TRIMDEK®, HR-29® SERIES, CUSTOM ORB®, PRESTIGE PANEL® II, MULTICLAD® OPTIMA

9 Which LYSAGHT® profiles can be curved & tapered?

360 SEAM® & ZIPDEK®. Profiles that can be crimp-curved: TRIMDEK OPTIMA™, TRIMDEK®

10 What is the longest length of LYSAGHT® roof panels that I can order?

For long length roofs, we provide on-site rolling solutions. For roof profiles that must be transported from our factory to site, the longest length will depend on the maximum transportable length.

11 What are the factors to consider when choosing roof materials?

Material	Premium material like BlueScope's COLORBOND® steel, combines the superior strength of aluminium-zinc alloy-coated steel with proprietary paint system technology, can have a service life of more than 25 years which may allow you to enjoy the cost benefits.
Maintenance	A combination of airborne particles, heat and humidity sticks on the surface of a steel sheet will bond and create dark stains on the building material. Over time, the building will look dirty and aged. BlueScope's COLORBOND® steel unique paint system prevents this bonding process, making the dirt particles remain loose and washable by rainfall for a brand-new look. Besides, with COLORBOND® steel proprietary paint system technology, the colours are proven to last, so low maintenance is needed.
Environmental Benefits	With BlueScope's THERMATECH® solar reflectance technology, the solar reflectance ability is increased without affecting the colour shade. Hence COLORBOND® steel, incorporated with THERMATECH® technology, is able to absorb least heat from the sun compared to conventional paint of the same colour, ultimately lowering the heat transmitted through the roof into the living space. Lower heat transmission means better thermal comfort.

12 Can I overpaint my LYSAGHT® roofs/ walls made from COLORBOND® / ZINCALUME® steel?

If required, **COLORBOND®** steel and **ZINCALUME®** steel can be successfully overpainted. However, please be aware that overpainting will void the warranty of the roofs/ walls. Download BlueScope Technical Bulletin: [Overpainting and restoration of exterior BlueScope coated steel products](#).

13 I am designing a building with a metal roof/wall and need more detail. What do I do?

We try to publish the most commonly used details but cannot possibly foresee every situation that could be utilised by a Designer. NS BlueScope Lysaght has full-time Technical Representatives and Engineers on-call, specifically to assist with attachment, panel usage and selection, and flashing alternatives.

After reading this FAQs, if you still find yourself needing further explanation, or you would like to schedule a meeting, contact us today.



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The FAQs are some commonly asked questions. The information and images provided are intended for general knowledge and/or recommended use of our products. It serves as a basic guide only and the information contained thereto may be subject to changes, revisions or amendments as may be necessary. We encourage you to consult with a Lysaght Representative regarding your individual requirements, areas of interest or for any clarification required.

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