

Ritek®


ROOFSYSTEMS



 **CYCLONE RATED**
CYCLONE TESTED

 **THERMAL RATED**
UP TO R5.0

 **ENERGY EFFICIENT**
CLIMATE READY

 **SUPERIOR SPAN**
UP TO 9.2 METRES

 **FIRE RATED**
GROUP 1 RATING

 **Ritek** Building Solutions
 1983-2008



"I was so amazed that after my walls were erected, the Ritek® Custom Roof Panel went up and was completed in two days. Within the first week of construction, the trades could work, sheltered from the sun and rain. The builder too soon fell in love with the product. The speed and ease of installation of the Ritek roof saves the builder construction time of an average of 2 to 3 weeks per project."

*Award winning Architect
Scott Carpenter*



RITEK® CUSTOM ROOF PANEL FULLY INTEGRATED ROOF SYSTEM

Ritek® Custom Roof Panels combine aesthetic, innovative design, with high strength, durability and excellent thermal insulation. Ritek® Custom Roof Panel can achieve significant cantilevers, in some applications up to half the actual back span and this unique system eliminates the need for complex, expensive roof structures.

Uninterrupted views, wider than normal access and outstanding architectural roof designs are all achievable using the Ritek® Custom Roof Panel. Combining aesthetic design with excellent strength, durability and thermal insulation the Ritek® Custom Roof Panel allows for unlimited applications. Curved, straight and multi-curved configurations; spanning capabilities of over 9 metres and cantilever capability up to half of the backspan - roof design is NOW limited ONLY by imagination!

Pre-fabricated, made-to-order panels ensure quick and easy installation and minimal on-site wastage. Savings on time and

project costs are achieved by eliminating the need to fit eave linings, plasterboard, battens, insulation lining, roof sheeting and painting. The superior spanning and cantilever capability also reduces the need for expensive support structures such as roof trusses and support beams.

The superior aesthetics of the Ritek® Custom Roof Panel are undeniable and there is virtually no maintenance required other than the occasional wash down of soffits. Environmental benefits are also ensured when using the Ritek® Custom Roof Panel and these can also be translated into savings. Excellent thermal ratings reduce energy usage and costs associated with heating and cooling. And incorporating low energy lighting into the design can further reduce energy consumption. Excellent for rainwater and dew collection, the Ritek® Custom Roof Panel can be connected to a storage system providing a self-contained system that can reduce or eliminate usage of mains water.



MAXIMISE YOUR GREEN STAR

Green Star™ is a voluntary rating system developed by the Green Building Council of Australia to evaluate the environmental design, efficiency and performance of Australian buildings.

Make the most of local climatic conditions, capture cool breezes and improve interior space ventilation. Ritek® insulated roof panels can reduce energy needs and impact on emissions, are fibre-free and help maintain temperatures for a higher level of thermal comfort.



green building council australia
MEMBER

Ritek® pre-fabrication starts with standard Custom Orb COLORBOND® sheeting, bonded to both sides of profiled EPS. This yields high strength resulting in large spans & cantilevers along with a high insulation value. Ratings from R1.72 to R5.0 can easily be achieved. The strength of this construction means that the Ritek® Custom Roof Panel is suitable for use in cyclonic conditions. After the panels are fixed in place, there is virtually no maintenance required other than the occasional wash down of soffits.

- ⇒ On site time spent fitting trusses, eave linings, plasterboard, battens, insulation lining, roof sheeting and painting, is eliminated when using Ritek® Custom Panel
- ⇒ Can achieve up to 9.2m unsupported spans - reduces the need for expensive support structure such as roof trusses and support beams
- ⇒ High thermal values (up to R5.00). With our all-in-one roof system, let it regulate the temperature within your home rather than relying on machines to do it. Reduce your exposure to air-conditioning and heating systems
- ⇒ Custom Orb profile is used on both sides, reducing the need for ceilings and internal painting
- ⇒ Panels can be manufactured in straight, curved or multi curved configurations, suitable for most architectural designs
- ⇒ Brilliant cantilever capability of up to half the roof back span (up to 4m)
- ⇒ Suitable for use in cyclonic wind conditions
- ⇒ The Ritek® Custom Roof Panel is available in COLORBOND® XRW, Ultra, Stainless Steel, Metallic Steel and Aluminium
- ⇒ Rapid installation makes the Ritek® Custom Roof Panel a clear winner over traditional roof construction
- ⇒ Group 1 Fire rating - Tested to the highest standards for your protection
- ⇒ BCA Section J ready - continually meeting the highest standards for your protection and benefit
- ⇒ Design for air change effectiveness, maximize internal space, ventilation and thermal efficiency (Green Star compliance criteria IEQ-2, IEQ-3 & IEQ-9)
- ⇒ Provide good levels of daylight and shade the glare of direct sunlight (Green Star compliance criteria IEQ-4, IEQ-5, IEW-8)
- ⇒ Minimise the contribution and levels of VOCs and formaldehyde in the building (Green Star compliance criteria IEQ-13, IEQ-14)
- ⇒ Reduction in building energy

SELECT YOUR ROOF PROFILE

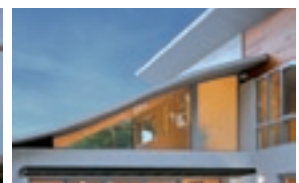
STRAIGHT



CURVED



MULTI-CURVE



The Ritek® Custom Roof Panel features in many award winning designs throughout Australia in residential, multi-storey residential and commercial buildings. All COLORBOND® colours are available in any combination of top and bottom sheet. Don't be restricted by the limited range of colours a supplier has available, let your imagination and creativity run wild and make your next project unique!



ARCHITECTS

"The Ritek® Custom Roof Panel's sleek lines are attractive and the installation process was smooth as the panels are prefabricated. We were afforded significant savings due to the speed and ease of installation. The brilliant cantilever and spanning features of the roof panels are a designers' dream as they provide the ability to use both curved and straight configurations. We are very happy with the overall result the roof provides, which is a contemporary finish that complements the eco-efficiency and overall aesthetics of the building."

Award winning designer John Whittingham, Associate – Allen Jack+Cottier, Sydney



BUILDERS

Ritek's highly experienced, professional team will work with you to deliver effective, profitable buildings as our project managers and drafting team are heavily involved in and thoroughly understand the construction process. It is the ability to understand the whole process and our design service that will help you to manage and build, on time, every time!

The light weight architectural roof panels are installed quickly and easily and at a fraction of the time of conventional roofing. A recently completed project was able to lay 850m² per day as well as saving considerable crane usage.

On average most builders/installers who have tried conventional roofing and Ritek® Custom Roofing agree that you can save significant time (and money) by using the Ritek® Custom Roof Panel on your project. Increase your bottom line with Ritek®!



HOME OWNERS

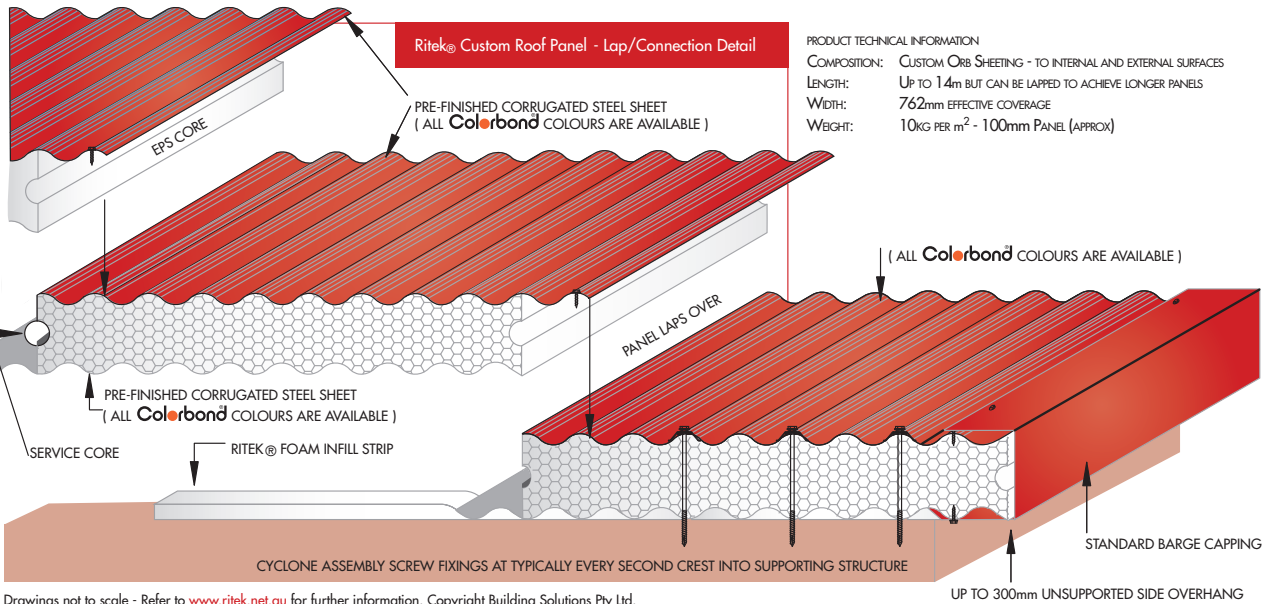
The Ritek® Custom Roof Panel's industry leading unsupported spans of up to 9.2 metres, allows internal space to evolve as unnecessary supports such as beams and purlins are not required, providing you with uninterrupted views.

The intelligent cantilever ability of up to half the back span (up to 4 metres) allows you to screen out the glare, while welcoming in the winter sun. The high thermal values of up to R5.0 will increase your comfort inside the building and reduce your heating and cooling costs.

Make the most of local climatic conditions, capture cool breezes and improve interior space ventilation. Our insulated roof panel system can help you reduce the need for air conditioning and energy needs, by helping to maintain temperatures for a higher thermal level of comfort.

Save time and money! Ritek's Custom Roof Panel provides insulation and is a pre-finished ceiling, so there is no need to plasterboard or paint, and other than the occasional wash down of soffits, there is virtually no maintenance required.

RITEK® CUSTOM ROOF PANEL TECHNICAL



Drawings not to scale - Refer to www.ritek.net.au for further information. Copyright Building Solutions Pty Ltd.

TABLE 1A - SINGLE SPAN
(MIDSPAN DEFLECTION UP TO SPAN/120 AT SERVICEABILITY LIMIT STATE)

NON CYCLONIC MAXIMUM UNSUPPORTED SPANS (mm)

WIND CLASS (PERMISSIBLE)	LIMIT STATE DESIGN WIND PRESSURE (P) (kPa)	75mm PANEL	100mm PANEL	125mm PANEL	140mm PANEL
N2-W33	1.0	4900	6200	7500	8100
N3-W41	1.6	4000	5100	6100	6700
N4-W50	2.4	3200	4150	5000	5500
N5-W60	3.5	2400	3300	4100	4500

TABLE 1B - DOUBLE SPAN
(MIDSPAN DEFLECTION UP TO SPAN/120 AT SERVICEABILITY LIMIT STATE)

NON CYCLONIC MAXIMUM UNSUPPORTED SPANS (mm)

WIND CLASS (PERMISSIBLE)	LIMIT STATE DESIGN WIND PRESSURE (P) (kPa)	75mm PANEL	100mm PANEL	125mm PANEL	140mm PANEL
N2-W33	1.0	5390	6820	8250	8910
N3-W41	1.6	4400	5610	6710	7370
N4-W50	2.4	3400	4565	5500	6050
N5-W60	3.5	2600	3600	4510	4950

TABLE 1C - SINGLE SPAN
(MIDSPAN DEFLECTION LESS IMPORTANT - UP TO SPAN/100 AT SERVICEABILITY LIMIT STATE)

NON CYCLONIC MAXIMUM UNSUPPORTED SPANS (mm)

WIND CLASS (PERMISSIBLE)	LIMIT STATE DESIGN WIND PRESSURE (P) (kPa)	75mm PANEL	100mm PANEL	125mm PANEL	140mm PANEL
N2-W33	1.0	5100	6450	7750	8400
N3-W41	1.6	4350	5500	6600	7250
N4-W50	2.4	3200	4550	5500	6000
N5-W60	3.5	2400	3350	4300	4800

TABLE 1D - DOUBLE SPAN
(MIDSPAN DEFLECTION LESS IMPORTANT - UP TO SPAN/100 AT SERVICEABILITY LIMIT STATE)

NON CYCLONIC MAXIMUM UNSUPPORTED SPANS (mm)

WIND CLASS (PERMISSIBLE)	LIMIT STATE DESIGN WIND PRESSURE (P) (kPa)	75mm PANEL	100mm PANEL	125mm PANEL	140mm PANEL
N2-W33	1.0	5600	7100	8500	9200
N3-W41	1.6	4785	6050	7260	7975
N4-W50	2.4	3400	4800	6050	6600
N5-W60	3.5	2600	3600	4700	5280

TABLE 1E - SINGLE SPAN

CYCLONIC MAXIMUM UNSUPPORTED SPANS (mm)

WIND CLASS (PERMISSIBLE)	75mm PANEL	100mm PANEL	125mm PANEL	140mm PANEL
C1-W41	3100	4100	4600	5100
C2-W50	2600	3400	3800	4200
C3-W60	2100	2800	3100	3300
C4-W70	N/A	1800	2100	2400

CALCULATED THERMAL R VALUES (STANDARD PANELS)

	WINTER R _T	SUMMER R _T
75 MM PANEL	R1.67	R1.72
100 MM PANEL	R2.35	R2.40
125 MM PANEL	R3.02	R3.07
140 MM PANEL	R3.41	R3.46

CALCULATED THERMAL R VALUES (ALTERNATIVE SIZES)

	WINTER R _T	SUMMER R _T
150 MM PANEL	R3.68	R3.73
175 MM PANEL	R4.34	R4.39
200 MM PANEL	R5.00	R5.05

Span Selection Notes

Please refer to Ritek® Design & Detailing Manual for span selection criteria. Maximum panel cantilever up to 40% of the unsupported backspan

Working with the environment to build a better future

Building Solutions Pty Ltd was formed in 1983 with the clear objective to provide innovative, functional, products for the building industry in Australia and overseas.

The essential criteria were simple, cost efficient designs, utilising high-tech, man-made materials. Importantly, Ritek® Roof Systems do not rely on the use of dwindling supplies of our natural materials. Rather, Ritek® Roof Systems have combined aesthetic design features with functional building needs. This has been achieved without compromising structural, or environmental integrity.



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