ARCPANEL

Product Colours & Span Tables

VERSION 2021

Refer to Design, Detailing & Installation Guide for full product information

AS 5637.1 GROUP 1
AS 3959 BAL-40

THERMAL RATING
UP TO R6.1

COASTAL &
SEVERE MARINE

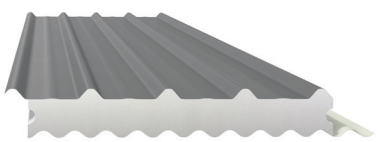
CYCLONE RATED
UP TO C4

LARGE SPANS
& CANTILEVERS

Ecotek Panel

STRAIGHT & LARGE CURVED CONFIGURATIONS

Updated: 01/11/2022



Colorbond®
MADE BY AUSTRALIA

Introduction & General Notes

ARCPANEL

Ecotek Panel

FULLY INTEGRATED ROOF SYSTEM

ARCPANEL Ecotek roof panel combines aesthetic, innovative design, with high strength, durability and excellent thermal insulation. ARCPANEL panels can also be curved to produce an outstanding architectural feature and provide increased interior space. The ARCPANEL Ecotek 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. The lightweight ARCPANEL panels are easily handled on site, achieving faster, lower cost installation.

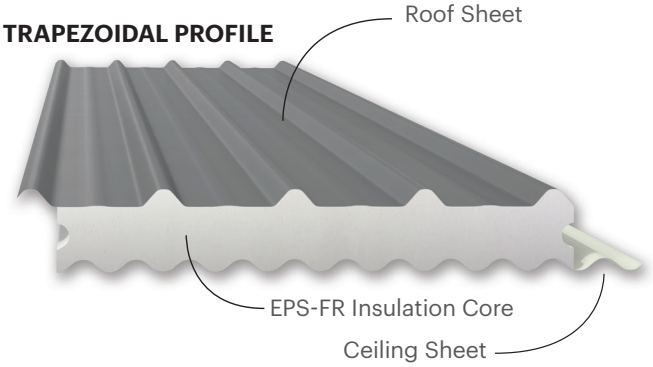
UNIQUE DESIGN & CONSTRUCTION

ARCPANEL pre-fabrication starts with standard Corrugated COLORBOND® steel sheeting, bonded to both sides of profiled EPS. The panel yields high strength resulting in large spans and cantilevers along with a high insulation value. Standard ratings from R1.7 to R6.1 can easily be achieved. The strength of this construction means that the ARCPANEL Ecotek 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 ARCPANEL Ecotek roof panel.

Straight and Large Curve panels can be manufactured using COLORBOND® steel, COLORBOND® steel Matt, COLORBOND® Ultra steel, COLORBOND® Metallic steel, SUPERDURA™ Stainless steel, ZINCALUME® steel and Xtreme (Magnaflow®). Available in a range of classic and contemporary COLORBOND® steel colours with limited colours in Stainless Steel and Xtreme (Magnaflow®).

TRAPEZOIDAL PROFILE



BAL-40 CERTIFIED & COMPLIANT

KEY FEATURES AND BENEFITS

- ✓ Achieve up to 12.3m unsupported spans - reduce expensive support structures e.g. roof trusses & support beams
- ✓ Superior low pitch (2 Degrees) capability
- ✓ Corrugated profile is used on both sides, reducing the need for ceilings and internal painting
- ✓ Pre-finished - extensive range of COLORBOND® Steel colours available
- ✓ Straight and large curved configurations, suitable for most architectural designs
- ✓ Dependant on the design, cantilevers of up to 40% the actual backspan can be achieved
- ✓ Suitable for use in cyclonic wind conditions
- ✓ ARCPANEL Ecotek roof panel is available in COLORBOND® steel, COLORBOND® steel Matt, COLORBOND® Ultra steel, COLORBOND® Metallic steel, SUPERDURA™ Stainless steel, ZINCALUME® steel & Xtreme Magnaflow®
- ✓ Rapid installation makes the ARCPANEL Ecotek roof panel a clear winner over traditional roof construction
- ✓ Fire rated to Group 1 - roof and wall lining material
- ✓ Superior standard thermal ratings up to R6.1 are achieved using the ARCPANEL Ecotek roof panel
- ✓ Panels meet the requirements for live and concentrated imposed loads for roofs not accessible except for normal maintenance as per AS1170.1:2002
- ✓ Bushfire attack level BAL-12.5 to BAL-40

ROOF TYPES

STRAIGHT PROFILE

Straight panels can be manufactured up to 20 metres in length, suitable for housing, awnings, patios, commercial and industrial projects.

LARGE CURVED PROFILE

Curved panels can be manufactured to radii greater than 60 metres.

Curved panels can be manufactured in lengths up to 20 metres, panels can be joined to achieve longer runs.

ARCPANEL Insulated panel's offer industry leading warranties, it is important that care is taken when selecting the sheeting material. Environmental conditions, coastal & geographic locations and extreme weather conditions should all be considered. Other points such as roof pitch, metal thickness and direction of lay are also important. The sheeting plays an important part in the structural design of ARCPANEL's insulated roof system.

Please feel free to contact us for further information. Technical Bulletins from Bluescope Steel are available from ARCPANEL or visit www. bluescopesteel.com.au.

Sheeting Material Types

COLORBOND® STEEL (Standard Finish)

While standard COLORBOND® steel will suit most residential and commercial designs in most locations it is most suitable for: Non-Coastal, Coastal Locations 1km-5km and Marine location greater than 200mm from salt or brackish environments.

ZINCALUME® STEEL

Next generation ZINCALUME® steel's patented Activate® technology introduces magnesium into the aluminium-zinc alloy coating, improving galvanic protection by activating the aluminium. The result is a tougher protective coating that's more resistant to scratches and scuffs encountered during construction. Suitable for: Non-Coastal, Coastal Locations 1km-5km and Marine location greater than 200mm from salt or brackish environments.

COLORBOND® ULTRA STEEL

CCOLORBOND® Ultra steel is especially designed for severe coastal and industrial environments - where there is exposure to salt or brackish water in the air and approximately 100 to 200 metres from breaking surf. Similarly, the effects of industrial emissions (fumes and/or particulate fallout) are typically lessened 100 to 200 metres from the source. Suitable for: Severe Marine Locations to Coastal Location and Aquatic/Swimming Pool environments.

SUPERDURA™ STAINLESS STEEL

SUPERDURA™ Stainless steel is the recommended roofing material for coastal areas where there is a constant salt spray in the air – within 100 metres from breaking surf - or within proximity to industrial emissions. Suitable for: Non Coastal, Coastal to Severe Marine Locations and Aquatic/Swimming Pool environments.

ARCPANEL XTREME (MAGNAFLOW)

The superior corrosion resistance of ARCPANEL's Xtreme roofing material is achieved using Magnaflow, means it is an ideal choice for more demanding environments, such as roofs 100m from the coastline. The magnesium in the aluminium/zinc/magnesium alloy coating 'magically' helps zinc flow over cut edges, sealing them and providing long term protection against corrosion. Suitable for: Severe Marine Locations to Coastal Location and Aquatic/ Swimming Pool environments.

AQUATEK APPLICATIONS

For enclosed aquatic applications, ARCPANEL recommends the use of ARCPANEL Aquatek Panel with large spanning capabilities and a range of panel thicknesses to suit your project, the ARCPANEL Aquatek Roof systems is the ultimate roof solution.

Please refer to ARCPANEL's Aquatek Guide for further information.

COLORBOND® steel is a registered trademark of Bluescope Steel. Magnaflow is a registered trademark of Fletcher Steel Ltd.

Colorbond®

COLOUR RANGE - CLASSIC

Dover White™ SA = 0.28 BCA = L	Surfmist® SA = 0.32 BCA = L	Southerly® SA = 0.40 BCA = L	Shale Grey™ SA = 0.45 BCA = M
Bluegum® SA = 0.57 BCA = M	Windspray® SA = 0.58 BCA = M	Basalt® SA = 0.71 BCA = D	Classic Cream™ SA = 0.32 BCA = L
Paperbark® SA = 0.42 BCA = M	Evening Haze® SA = 0.43 BCA = M	Dune® SA = 0.47 BCA = M	Gully® SA = 0.63 BCA = D
Jasper® SA = 0.68 BCA = D	Manor Red® SA = 0.69 BCA = D	Wallaby® SA = 0.64 BCA = D	Woodland Grey® SA = 0.71 BCA = D
Pale Eucalypt® SA = 0.60 BCA = M	Cottage Green® SA = 0.75 BCA = D	Ironstone® SA = 0.74 BCA = D	Deep Ocean® SA = 0.75 BCA = D
Monument® SA = 0.73 BCA = D	Night Sky® SA = 0.96 BCA = D		

COLOUR RANGE - MATT FINISH

Surfmist® SA = 0.35 BCA = L	Dune® SA = 0.48 BCA = M	Shale Grey™ SA = 0.45 BCA = M	Bluegum® SA = 0.57 BCA = M
Basalt® SA = 0.71 BCA = D	Monument® SA = 0.79 BCA = D		

COLORBOND® ULTRA STEEL

Surfmist® SA = 0.32 BCA = L	Shale Grey™ SA = 0.45 BCA = M	Windspray® SA = 0.58 BCA = M	Dune® SA = 0.47 BCA = M
Wallaby® SA = 0.64 BCA = D	Woodland Grey® SA = 0.71 BCA = D	Monument® SA = 0.73 BCA = D	

SUPERDURA™ STAINLESS STEEL

SURFMIST®

Surfmist® Stainless SA = 0.36 BCA = L

COOLMAX® STEEL

WHITEHAVEN®

Whitehaven® SA = 0.23 BCA = L

COLORBOND® STEEL METALLIC FINISH (subject to availability)

Galactic™ SA = 0.34 BCA = L	Cosmic™ SA = 0.39 BCA = L	Rhea™ SA = 0.49 BCA = M	Astro™ SA = 0.62 BCA = D

COLOUR RANGE ARCPANEL XTREME (MAGNAFLOW®)

Off White SA = 0.35 BCA = L	Birch* SA = 0.45 BCA = M	Armour Grey* SA = 0.59 BCA = M
Slate Grey* SA = 0.72 BCA = D	Monolith* SA = 0.75 BCA = D	

*Lead times are subject to supplier availability.

Colour swatches are provided as an indication of colour only and may not be an actual representation of colour. We recommend checking your chosen colour against an actual sample of the product before purchasing.

Corrosion resistant options available for coastal applications - please contact us for more details.

Version 2021. Always refer to local state building regulations and current safety requirements. Updated: 01/11/2022.

ARCPANEL PRODUCT STRUCTURAL WARRANTY FOR ROOFING APPLICATIONS (SAMPLE ONLY)

INDICATIVE & MAXIMUM STRUCTURAL WARRANTY PERIOD - SUBJECT TO PRIOR APPROVAL

Environment	(ISO Cat.1)	(ISO Cat.2)	(ISO Cat.3)	(ISO Cat.4)	(ISO Cat.5)	(Highly Corrosive)
Panel Material	Non-Coastal 5km+	Coastal 1km to 5km	Marine (calm) Industrial 500m to 1km	Severe Marine (calm) Industrial 100 to 500m	Very Severe Marine (surf) 50m to 500m Corrosive Industrial 0m to 100m	Enclosed Aquatic Centre Swimming Pools
COLORBOND® STEEL / ZINCALUME®	**20 years**	**15 years**	**10 years**	By Enquiry	No Warranty	No Warranty
COLORBOND® ULTRA STEEL	**20 years**	**20 years**	**15 years**	**10 years**	By Enquiry	By Enquiry
COLORCOTE MAGNAFLOW®	**20 years**	**20 years**	**20 years**	**15 years**	By Enquiry	By Enquiry
SUPERDURA™ STAINLESS STEEL	**20 years**	**20 years**	**20 years**	**20 years**	**20 years**	**20 years**
COOLMAX® STEEL	**20 years**	**20 years**	**20 years**	**20 years**	**20 years**	**20 years**

BLUESCOPE STEEL - COLORBOND® STEEL MATERIAL AND COLOUR SELECTION CHART — TABLE 1

Colour	Classification	Solar Absorbance	Availability		Recommended for use to		Curving Grade	NSW Basix Sustainability Index
			Standard	Ultra	Roof Side	Ceiling Side		
COLORBOND® steel								
Basalt®	Dark	0.69	✓		NO**	✓		M
Bluegum®	Medium	0.57	✓		✓	✓	✓	M
Classic Cream™	Light	0.31	✓		✓	✓	✓	L
Cottage Green	Dark	0.75	✓		NO**	✓	✓	D
Deep Ocean®	Dark	0.75	✓		NO**	✓	✓	D
Dover White™	Light	0.28	✓		✓	✓	✓	L
Dune®	Medium	0.47	✓	✓	✓	✓	✓	L
Evening Haze®	Medium	0.43	✓		✓	✓	✓	L
Gully®	Dark	0.63	✓		✓	✓		M
Ironstone®	Dark	0.74	✓		NO**	✓	✓	D
Jasper®	Dark	0.68	✓		✓	✓	✓	M
Manor Red®	Dark	0.69	✓		NO**	✓	✓	M
Monument®	Dark	0.73	✓	✓	NO**	✓	✓	D
Night Sky®	Dark	0.96	✓		NO**	✓		D
Pale Eucalypt®	Medium	0.60	✓		✓	✓	✓	M
Paperbark®	Medium	0.42	✓		✓	✓	✓	L
Shale Grey®	Medium	0.43	✓	✓	✓	✓	✓	L
Southerly®	Light	0.40	✓		✓	✓	✓	L
Surfmist®	Light	0.32	✓	✓	✓	✓	✓	L
Wallaby®	Dark	0.64	✓	✓	✓	✓		M
Whitehaven®	Light	0.23	✓		✓	✓		L
Windspray®	Medium	0.58	✓	✓	✓	✓	✓	M
Woodland Grey®	Dark	0.71	✓	✓	NO**	✓		D
ZINCALUME®*	Light	<0.35			✓		✓	L
STAINLESS STEEL								
Surfmist®	Light	0.318			✓	✓		L
COOLMAX® STEEL								
Whitehaven®	Light	0.23			✓	✓		L
ARCPANEL XTREME (MAGNAFLOW®)								
Off White	Light	0.35			✓	✓		L
Birch	Medium	0.45	✓		✓	✓		M
Armour Grey	Medium	0.59	✓		✓	✓		M
Slate Grey	Dark	0.72	✓		NO**	✓		D
Monolith	Dark	0.75	✓		NO**	✓		D

IMPORTANT NOTES: USE OF DARK COLOURS FOR EXTERNAL FINISHES, LIMITED WARRANTY APPLIES, PLEASE CONTACT ARCPANEL FOR FURTHER INFORMATION.

* Galv, ZINCALUME®, COLORBOND® Matt and COLORBOND® dark colours may show minor visible roll forming process marks, this is a characteristic of roll forming process and not a defect.

** Colours with a NCC / BCA 'Dark' classification having a solar absorbance of greater than 0.68 are not recommended to be used as a top roof or outer wall sheeting. Increased surface temperature, expansion, deflection and thermal movement can be expected of an insulated panel when using dark colours exposed to direct sunlight. The building designer is responsible for colour selection, acknowledges and accepts any associated design risks. Arcpanel warranty does not cover structural damage to the building or to the panels caused by extreme or concentrated dry heat loads and surface temperatures in excess of 78 degrees Celsius.

NON CYCLONIC - SINGLE SPAN — TABLE 3A

Midspan deflection up to span/120 at serviceability limit state; Self weight deflection up to span/600. Maximum unsupported Spans (mm)

Wind Class (Permissible)	Strength Limit State Design Wind Pressure (P) (kPa)	Total R Value R1.7 90mm Panel		Total R Value R2.3 110mm Panel		Total R Value R2.8 130mm Panel		Total R Value R3.4 150mm Panel		Total R Value R4.0 175mm Panel		Total R Value R4.7 200mm Panel		Total R Value R5.0 210mm Panel		Total R Value R6.1 250mm Panel	
		Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever
N2-W33	**1.52**	**4900**	**1715**	**6200**	**2170**	**7500**	**2625**	**8100**	**2835**	**8500**	**2975**	**9500**	**3325**	**10500**	**3675**	**11400**	**3990**
	1.68	4720	1650	5980	2090	7220	2525	7820	2735	8200	2870	9200	3220	10160	3555	11020	3855
	1.85	4540	1585	5760	2015	6940	2425	7540	2635	7900	2765	8900	3115	9820	3435	10640	3720
	2.01	4360	1525	5540	1935	6660	2330	7260	2540	7600	2660	8600	3010	9480	3315	10260	3590
	2.18	4180	1460	5320	1860	6380	2230	6980	2440	7300	2555	8300	2905	9140	3195	9880	3455
N3-W41	**2.34**	**4000**	**1400**	**5100**	**1785**	**6100**	**2135**	**6700**	**2345**	**7000**	**2450**	**8000**	**2800**	**8800**	**3080**	**9500**	**3325**
	2.57	3840	1310	4910	1675	5880	2005	6460	2205	6760	2305	7720	2635	8500	2900	9200	3140
	2.80	3680	1220	4720	1565	5660	1880	6220	2065	6520	2165	7440	2470	8200	2720	8900	2955
	3.03	3520	1135	4530	1460	5440	1750	5980	1925	6280	2020	7160	2305	7900	2545	8600	2770
	3.26	3360	1045	4340	1350	5220	1625	5740	1785	6040	1880	6880	2140	7600	2365	8300	2585
N4-W50	**3.50**	**3200**	**960**	**4150**	**1245**	**5000**	**1500**	**5500**	**1650**	**5800**	**1740**	**6600**	**1980**	**7300**	**2190**	**8000**	**2400**
	3.80	3040	885	3980	1160	4820	1405	5300	1545	5600	1630	6360	1850	6980	2035	7540	2205
	4.11	2880	815	3810	1075	4640	1310	5100	1440	5400	1520	6120	1725	6660	1880	7080	2010
	4.41	2720	740	3640	990	4460	1215	4900	1335	5200	1415	5880	1600	6340	1730	6620	1815
	4.72	2560	670	3470	905	4280	1120	4700	1230	5000	1305	5640	1475	6020	1575	6160	1620
N5-W60	**5.03**	**2400**	**600**	**3300**	**825**	**4100**	**1025**	**4500**	**1125**	**4800**	**1200**	**5400**	**1350**	**5700**	**1425**	**5700**	**1425**

PLEASE NOTE: Maximum cantilever is 40% of backspan (span closest to cantilever) in N1 to N3 wind classes, 30% maximum cantilever for N4 & N5 wind classes.

NON CYCLONIC - MULTI SPAN (OPTION) - (Y SPAN MUST BE BETWEEN 30-70% OF SPAN X) — TABLE 3B

Midspan deflection up to span/120 at serviceability limit state; Self weight deflection up to span/600. Maximum unsupported Spans (mm)

Wind Class (Permissible)	Strength Limit State Design Wind Pressure (P) (kPa)	Total R Value R1.7 90mm Panel		Total R Value R2.3 110mm Panel		Total R Value R2.8 130mm Panel		Total R Value R3.4 150mm Panel		Total R Value R4.0 175mm Panel		Total R Value R4.7 200mm Panel		Total R Value R5.0 210mm Panel		Total R Value R6.1 250mm Panel	
		Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever
N2-W33	**1.52**	**5390**	**1615**	**6820**	**2045**	**8250**	**2475**	**8910**	**2670**	**9350**	**2805**	**9975**	**2990**	**11025**	**3305**	**12000**	**3600**
	1.68	5190	1555	6575	1970	7940	2380	8600	2575	9020	2705	9660	2895	10665	3195	11600	3480
	1.85	4990	1495	6335	1895	7630	2285	8290	2485	8690	2605	9345	2800	10310	3090	11200	3360
	2.01	4795	1435	6090	1825	7325	2195	7985	2390	8360	2505	9030	2705	9950	2980	10800	3240
	2.18	4595	1375	5850	1750	7015	2100	7675	2300	8030	2405	8715	2610	9595	2875	10400	3120
N3-W41	**2.34**	**4400**	**1320**	**5610**	**1680**	**6710**	**2010**	**7370**	**2210**	**7700**	**2310**	**8400**	**2520**	**9240**	**2770**	**10000**	**3000**
	2.57	4220	1230	5400	1570	6465	1880	7105	2070	7435	2165	8105	2360	8925	2595	9680	2820
	2.80	4045	1140	5190	1460	6225	1755	6840	1930	7170	2020	7810	2200	8610	2425	9360	2640
	3.03	3870	1055	4980	1355	5980	1625	6575	1790	6905	1880	7515	2045	8295	2255	9040	2460
	3.26	3695	965	4770	1245	5740	1500	6310	1650	6640	1735	7220	1885	7980	2085	8720	2280
N4-W50	**3.50**	**3520**	**880**	**4565**	**1140**	**5500**	**1375**	**6050**	**1510**	**6380**	**1595**	**6930**	**1730**	**7665**	**1915**	**8400**	**2100**
	3.80	3340	805	4375	1055	5300	1280	5830	1405	6160	1485	6675	1610	7325	1770	7980	1930
	4.11	3165	735	4190	970	5100	1185	5610	1300	5940	1375	6425	1490	6990	1625	7560	1760
	4.41	2990	665	4000	890	4905	1090	5390	1195	5720	1270	6170	1370	6655	1480	7140	1595
	4.72	2815	595	3815	805	4705	995	5170	1090	5500	1160	5920	1250	6320	1335	6720	1425
N5-W60	**5.03**	**2640**	**525**	**3630**	**725**	**4510**	**900**	**4950**	**990**	**5280**	**1055**	**5670**	**1130**	**5985**	**1195**	**6300**	**1260**

PLEASE NOTE: Maximum cantilever is 40% of backspan (span closest to cantilever) in N1 to N3 wind classes, 30% maximum cantilever for N4 & N5 wind classes.

SPAN SELECTION NOTES (NON CYCLONIC AREAS)

1. Tables 3A, 3B and 3C apply to typical enclosed buildings built on the ground, less than 20m high with sealed doors and windows capable of resisting the applied wind pressures
2. Roof pressure coefficients: Cpe = 1.5 X -0.9 = -1.35, Cpi = +0.2 [Cpi = +0.7 at cantilever]
3. The building designer must take into account any application where the Cpi would exceed > 0.2 in open or partly open structures
4. Maximum cantilever for N1-W28, N2-W33 & N3-W41 is up to 40% actual backspan no greater than max length shown
5. Maximum cantilever for N4-W50 & N5-W60 is up to 30% actual backspan no greater than max length shown (Maximum cantilever lengths cannot be exceeded. Choose a thicker panel to achieve the required cantilever) (Minimum width of cantilevered roof is 1.5 x cantilever)
6. Wind Load Serviceability Criteria based on AS 4055, Vs=0.64 x Vu
7. Oversized gutters may affect the cantilever capability, please contact ARCPANEL
8. Limited racking, diaphragm action and lateral restraint capacity, refer to page 16
9. 300mm maximum side cantilever using full uncut panel
10. Thermal R-Values are Total R-Values (Winter - Tested conductivity 0.038W/m.K at 23˚C)
11. In locations where the roof panels are not fixed to the parallel raked external walls (due to glazing and the like), the engineer shall select the panels using the max wind pressure calculated with upwind local pressure coefficients in accordance with AS1170.2

Version 2021. Always refer to local state building regulations and current safety requirements. Updated: 01/11/2022.

SPAN TABLE - CYCLONIC - SINGLE SPAN — TABLE 3C

Midspan deflection up to span/120 at serviceability limit state; Self weight deflection up to span/700. Maximum unsupported Spans (mm)

Wind Class (Permissible)	Strength Limit State Design Wind Pressure (P) (kPa)	Total R Value R1.7 90mm Panel		Total R Value R2.3 110mm Panel		Total R Value R2.8 130mm Panel		Total R Value R3.4 150mm Panel		Total R Value R4.0 175mm Panel		Total R Value R4.7 200mm Panel		Total R Value R5.0 210mm Panel		Total R Value R6.1 250mm Panel	
		Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever	Max Span	Max Cantilever
C1-W41	**3.11**	**3000**	**840**	**3800**	**1080**	**4600**	**1310**	**5000**	**1425**	**5500**	**1565**	**6100**	**1735**	**6500**	**1850**	**8000**	**2250**
	3.41	2840	780	3640	1010	4440	1235	4840	1350	5320	1480	5880	1635	6280	1750	7640	2110
	3.71	2680	720	3480	945	4280	1165	4680	1275	5140	1395	5660	1540	6060	1650	7280	1970
	4.02	2520	665	3320	880	4120	1090	4520	1200	4960	1315	5440	1440	5840	1550	6920	1830
	4.32	2360	605	3160	815	3960	1020	4360	1125	4780	1230	5220	1345	5620	1450	6560	1690
C2-W50	**4.62**	**2200**	**550**	**3000**	**750**	**3800**	**950**	**4200**	**1050**	**4600**	**1150**	**5000**	**1250**	**5400**	**1350**	**6200**	**1550**
	5.03	2090	505	2840	685	3580	865	4010	970	4400	1060	4840	1165	5180	1250	5820	1410
	5.43	1980	460	2680	625	3360	785	3820	890	4200	975	4680	1085	4960	1150	5440	1270
	5.84	1870	415	2520	560	3140	700	3630	810	4000	890	4520	1000	4740	1055	5060	1135
	6.24	1760	370	2360	500	2920	620	3440	730	3800	805	4360	920	4520	955	4680	995
C3-W60	**6.65**	**1650**	**330**	**2200**	**440**	**2700**	**540**	**3250**	**650**	**3600**	**720**	**4200**	**840**	**4300**	**860**	**4300**	**860**
	7.13	1580	315	2100	420	2560	510	3040	605	3380	675	3960	790	4060	810	4060	810
	7.61	1510	300	2000	400	2420	480	2830	565	3160	630	3720	740	3820	760	3820	760
	8.09	1440	285	1900	380	2280	455	2620	525	2940	585	3480	695	3580	715	3580	715
	8.57	1370	270	1800	360	2140	425	2410	485	2720	540	3240	645	3340	665	3340	665
C4-W70	**9.05**	**1300**	**260**	**1700**	**340**	**2000**	**400**	**2200**	**445**	**2500**	**500**	**3000**	**600**	**3100**	**620**	**3100**	**620**

PLEASE NOTE: Maximum cantilever is 30% of backspan (span closest to cantilever) in cyclonic Regions

SPAN SELECTION NOTES (CYCLONIC AREAS)

1. Table 3C applies to typical enclosed buildings built on the ground, less than 20m high with sealed doors and windows capable of resisting the applied wind pressures
2. Roof pressure coefficients: Cpe = 1.5 X -0.9 = -1.35, Cpi = +0.7
3. Maximum cantilever for all cyclonic areas is up to 30% actual backspan (Maximum cantilever lengths cannot be exceeded. Choose a thicker panel to achieve the required cantilever) (Minimum width of cantilevered roof is 1.5 x cantilever)
4. Wind Load Serviceability Criteria based on AS 4055, Vs=0.64 x Vu
5. Oversized gutters may affect the cantilever capability, please contact ARCPANEL for advice
6. Limited racking, diaphragm action and lateral restraint capacity, refer to page 16
7. 300mm maximum side cantilever using full uncut panel
8. Thermal R-Values are Total R-Values (Winter - Tested conductivity 0.038W/m.K at 23˚C)
9. In locations where the roof panels are not fixed to the parallel raked external walls (due to glazing and the like), the engineer shall select the panels using the max wind pressure calculated with upwind local pressure coefficients in accordance with AS1170.2

REFER TO PAGE 18 FOR MAXIMUM DEAD LOADS.

GENERAL SPAN SELECTION NOTES

Live Loads:
Maximum distributed live load 0.25kPa.

Roofs in Alpine Areas:
Designer must refer to ARCPANEL for engineering advice regarding snow loadings.

Deflection Limits:
The ARCPANEL span tables have been provided with specific deflection limits indicated for serviceability wind speeds. The building designer must take all necessary care to select an appropriate panel thickness for their specific situation, taking into account the amount of potential roof panel movement relative to any attached non-structural elements, such as internal wall partitions and window frames etc. The building designer must also make allowance for deflections which can exceed those in the tables when the wind speeds are occasionally above the designated serviceability wind speed during extreme weather conditions.

Cantilever Deflections:
Note that cantilever deflections will depend on the backspan, rigidity of supports, building geometry and building permeability. Cantilever deflection can be up to (cantilever length) / 50 at serviceability wind speeds. The building designer must take all necessary care to select an appropriate panel thickness for their specific situation taking into account the amount of potential roof panel movement at the ends of and along the sides of cantilevered sections of the roof, relative to any adjacent attached flashings, downpipes, screen partitions and walls. The builder designer must also make allowance for cantilever deflections which can exceed (cantilever length) / 50 when wind speeds occasionally exceed serviceability wind speeds during extreme weather conditions. Cantilever deflections due to self weight can be up to (cantilever length) / 400.

NOTE: ABOVE SPAN TABLES ARE APPLICABLE TO ARCPANEL ECOTEK PANEL ONLY AND ARE ACHIEVABLE BY USING PROVEN MANUFACTURING METHODS AND PRODUCT TESTING. STRUCTURAL ADEQUACY OF THE PANEL IS CERTIFIED BY ARCPANEL CONSULTING ENGINEERS.

ARCPANEL ECOTEK PANEL
SPAN TABLE - ATTACHED CANOPY (NON CYCLONIC)

TABLE 3D

SPAN TABLES FOR CANOPIES, AWNINGS & CARPORTS ***ATTACHED TO BUILDINGS***

WIND CLASS	PANEL THICKNESS	ATTACHED					FREE STANDING		ALL
		3 Sides Open Case A	2 Sides Open Case B	1 Side Open Case C	Enclosed Case D	Attached Fly-over Roof	Free Roof Blockage <75%	Free Roof Blockage >75%	
		Max Span	Max Span	Max Span	Max Span	Max Span	Max Span	Max Span	Max Cantilever
N2-W33	90	5250	5100	4900	4900	5100	5250	5100	1615
	110	6400	6350	6200	6200	6350	6550	6350	2045
	130	7500	7500	7500	7500	7500	7600	7500	2475
	150	8450	8350	8100	8100	8350	8600	8350	2670
	175	9600	9500	8500	8500	9500	9750	9500	2805
	200	10700	10600	9500	9500	10600	10760	10600	2990
	210	10900	10900	10500	10500	10900	10940	10900	3305
	250	12300	12300	11400	11400	12300	12300	12300	3600
N3-W41	90	5000	4600	4000	4000	4600	5250	4600	1320
	110	6000	5550	5100	5100	5550	6550	5550	1680
	130	7000	6450	6100	6100	6450	7550	6450	2010
	150	7950	7300	6700	6700	7300	8550	7300	2210
	175	9050	8350	7000	7000	8350	9750	8350	2310
	200	10100	9350	8000	8000	9350	10760	9350	2520
	210	10500	9700	8800	8800	9700	10940	9700	2770
	250	12100	11200	9500	9500	11200	12300	11200	3000
N4-W50	90	4150	3800	3200	3200	3800	4500	3800	880
	110	5000	4550	4150	4150	4550	5450	4550	1140
	130	5800	5300	5000	5000	5300	6325	5300	1925
	150	6600	6050	5500	5500	6050	7175	6050	1510
	175	7550	6900	5800	5800	6900	8200	6900	1595
	200	8450	7750	6600	6600	7750	9175	7750	1730
	210	8800	8050	7300	7300	8050	9425	8050	1915
	250	10150	9300	8000	8000	9300	10875	9300	2100
N5-W60	90	3250	2850	2400	2400	2850	3800	2850	525
	110	4150	3700	3300	3300	3700	4575	3700	725
	130	4850	4400	4100	4100	4400	5325	4400	900
	150	5550	5000	4500	4500	5000	6050	5000	990
	175	6350	5750	4800	4800	5750	6925	5750	1055
	200	7100	6450	5400	5400	6450	7750	6450	1130
	210	7400	6750	5700	5700	6750	7975	6750	1195
	250	8100	6800	5700	5700	6800	9225	6800	1300

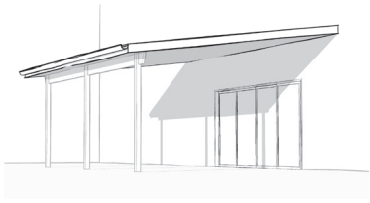
SPAN SELECTION NOTES (NON CYCLONIC AREAS)

1. Spans selected in accordance with the above maximum limits are certified to be structurally adequate in accordance with AS1170.2-2011.
2. Refer to Ecotek roof panel span notes for cyclonic and non cyclonic spans on page 8 and 9. Refer to Ecotek roof panel fixing information (pages 12-13).
3. Max deflections at midspan are L/70 at permissable design wind pressures. Max deflections at midspan are L/250 for 0.25kPa Live Load.
4. Max Dead Load deflections are L/500 (N2-W33).
5. The slope of an attached canopy, fly-over roof, or free roof with a monoslope (single skillion roof must be less than or equal to 10 degrees. The slope of an attached canopy, fly-over roof, or free roof with a pitched (gable, double skillion) roof must be less than or equal to 22.5 degrees.

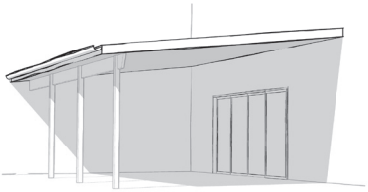
APPLICATION EXAMPLES

Attached canopy span tables apply to panels used for canopies, awnings, patio and building roofs that are attached to another building.

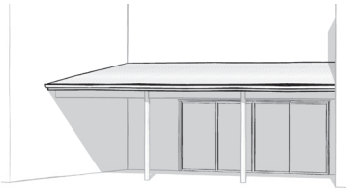
Case A, B, C and D attached canopies must be lower than the building eaves.



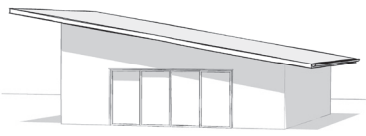
3 SIDES OPEN (CASE A)



2 SIDES OPEN (CASE B)



1 SIDE OPEN (CASE C)

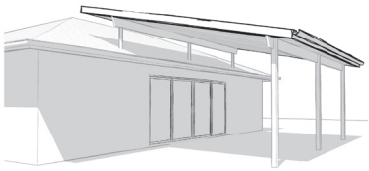


FULLY ENCLOSED (CASE D)

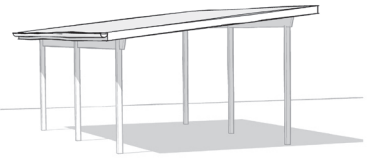
APPLICATION EXAMPLES

Free roof and attached fly-over span tables apply to panels used for canopies, patio and building roofs that are not enclosed by walls underneath.

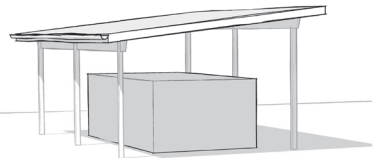
'Roof Blockage >75%' implies that items stored under the roof block more than 75% of the cross section exposed to the wind.



ATTACHED FLY OVER



FREE ROOF BLOCKAGE < 75%



FREE ROOF BLOCKAGE > 75%

ARCPANEL ECOTEK PANEL
SPAN TABLE - ATTACHED CANOPY (CYCLONIC)

TABLE 3E

*SPAN TABLES FOR CANOPIES, AWNINGS & CARPORTS **ATTACHED TO BUILDINGS***

WIND CLASS	PANEL THICKNESS	ATTACHED				FREE STANDING			ALL
		3 Sides Open Case A	2 Sides Open Case B	1 Side Open Case C	Enclosed Case D	Attached Fly-over Roof	Free Roof Blockage <75%	Free Roof Blockage >75%	
		Max Span	Max Span	Max Span	Max Span	Max Span	Max Span	Max Span	Max Cantilever
C1-W41	90	5000	4450	3800	2790	4450	5250	4450	840
	110	6000	5550	5100	3600	5550	6500	5550	1080
	130	7000	6450	5950	4140	6450	7550	6450	1310
	150	7950	7300	6750	4680	7300	8550	7300	1425
	175	9050	8350	7700	4770	8350	9750	8350	1565
	200	10100	9350	8650	5310	9350	10760	9350	1735
	210	10500	9700	9000	5760	9700	10940	9700	1850
	250	12100	11200	10350	8000	11200	12300	11200	2250
C2-W50	90	3650	3150	2750	2160	3150	4325	3150	550
	110	4900	4150	3600	2880	4150	5450	4150	750
	130	5800	5200	4450	3420	5200	6325	5200	950
	150	6600	6050	5350	3780	6050	7175	6050	1050
	175	7550	6900	6350	3870	6900	8200	6900	1150
	200	8450	7750	7150	4320	7750	9175	7750	1250
	210	8800	8050	7450	4770	8050	9425	8050	1350
	250	10100	9300	8200	6200	9300	10875	9300	1550
C3-W60	90	2700	2300	2050	1620	2300	3150	2300	330
	110	3550	3000	2650	2160	3000	4200	3000	440
	130	4400	3750	3200	2700	3750	5250	3750	540
	150	5300	4450	3850	2970	4450	6050	4450	650
	175	6350	5400	4600	3060	5400	6925	5400	720
	200	7100	6300	5400	3510	6300	7750	6300	840
	210	7400	6600	5700	3780	6600	7975	6600	860
	250	8050	6600	5700	4300	6600	9225	6600	860
C4-W70	90	2100	1850	1650	1260	1850	2450	1850	260
	110	2700	2350	2050	1620	2350	3200	2350	340
	130	3350	2850	2500	1980	2850	3950	2850	400
	150	4000	3350	2900	2160	3350	4750	3350	445
	175	4800	4050	3500	2250	4050	5725	4050	500
	200	5600	4700	4050	2700	4700	6650	4700	600
	210	5950	5000	4200	3060	5000	6850	5000	620
	250	6000	5000	4200	3100	5000	7200	5000	620

SPAN SELECTION NOTES (CYCLONIC AREAS)

1. Spans selected in accordance with the above maximum limits are certified to be structurally adequate in accordance with AS1170.2-2011.
2. Refer to Ecotek roof panel span notes for cyclonic and non cyclonic spans on page 8 and 9. Refer to Ecotek roof panel fixing information on (pages 12-13).
3. Max deflections at midspan are L/70 at permissable design wind pressures.
   Max deflections at midspan are L/250 for 0.25kPa Live Load.
4. Max Dead Load deflections are L/500 (N2-W33).

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