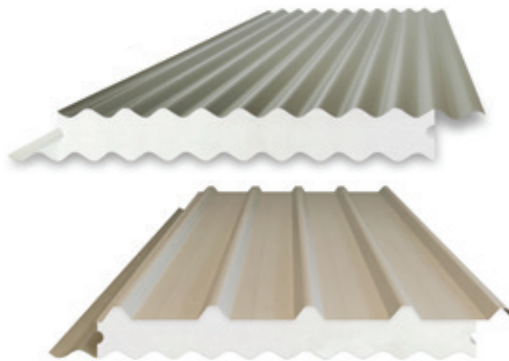


Design & Detailing Manual
Firetek Roof Panel

Version 2015.02



A pre-fabricated insulated roof panel with a fire resistant PIR core tested for bushfire attack levels up to BAL 40; making it the ideal solution for all roof applications in bushfire prone areas.



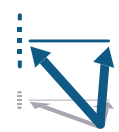
UP TO 25 YEAR
WARRANTY



BAL 40
FIRE RATED



HIGH THERMAL
RATING



SUPERIOR SPAN
& CANTILEVERS



CORROSIVE
SOLUTION

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FIRETEK PANEL DESIGN AND DETAILING MANUAL - VERSIONS ISSUED AND AMENDMENTS

Version	Date issued	Comments
2015.01	19.05.15	First published
2015.02	01.11.17	Logo Updated

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ARCPANEL Firetek Roof Panel - Overview

FULLY INTEGRATED ROOF SYSTEM

In response to mandatory bushfire attack level ratings, **ARCPANEL** is proud to introduce its new Firetek roof system; a pre-fabricated insulated panel that consists of two single Colorbond® sheets which are bonded to a fire-retardant PIR core. **ARCPANEL** Firetek roof systems have an excellent thermal insulation and are especially suitable for use in bushfire prone areas.

The **ARCPANEL** Firetek roof system is available in an extensive range of Colorbond® colours and materials to suit Australia's climatic conditions and coastal locations. **ARCPANEL** Firetek roof systems combine aesthetic, innovative design, with high strength, durability and excellent fire safety and energy efficiency. The **ARCPANEL** Firetek roof system is suitable for use in multiple applications including residential, patios, awnings, carports, educational and defence; especially in bushfire prone areas.

UNIQUE DESIGN & CONSTRUCTION

ARCPANEL pre-fabrication starts with standard COLORBOND® sheeting bonded to both sides of a profiled PIR core. The panel yields high strength resulting in large spans & cantilevers along with a high insulation value. Standard ratings from R3.4 to R6.6 can easily be achieved. 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** Firetek roof system.

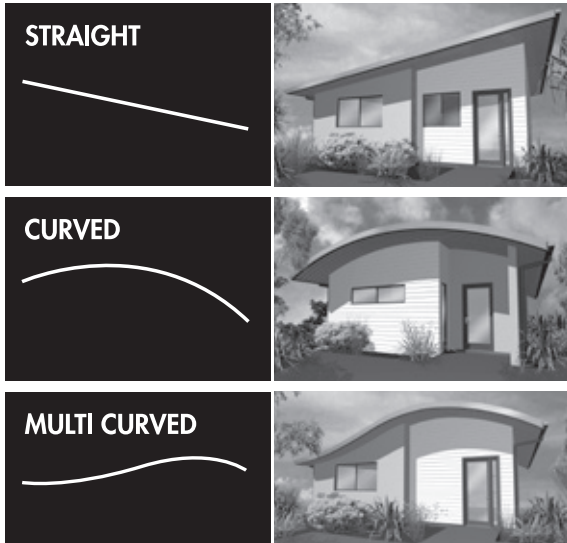
KEY FEATURES AND BENEFITS

- ✓ BAL 40 - Tested for Bushfire and Fire Resistance (AS3959 - 2009)
- ✓ Available panel thickness: 85mm, 105mm, 125mm and 150mm
- ✓ R-Value up to 6.6 allows you to maximise energy efficiency, reduce energy costs and your carbon footprint
- ✓ Suitable for roof pitches between 2 degrees to 17 degrees
- ✓ Available in straight, curved and/or multi-curved configurations
- ✓ Available in corrugated and Trimdek® roof profiles
- ✓ Spans up to 9 metres and cantilevers up to 3 metres
- ✓ Available in all Colorbond® colours
- ✓ Simple to install with built in service core
- ✓ High comfort, all in one insulated roof system



ARCPANEL Firetek Roof Panel - Applications

ROOF TYPES



Straight panels can be manufactured up to 24 metres in length. Straight, Curved & Multi-curved panels can be manufactured using XRW, Ultra, Stainless Steel, Xtreme, ZINCALUME® in a range of colours.

Curved panels can be manufactured to a minimum radius of 6.5m for the corrugated profile.

Curved panels can be manufactured in lengths up to 24 metres long. Panels can be joined to achieve longer runs.

Multi-curved panels can be manufactured to a minimum radius of 6.5m for the corrugated profile.

Multi-curved panels can be manufactured in lengths up to 24 metres long. Panels can be joined to achieve longer runs.

MATERIAL SELECTION

Due to the extreme weather conditions and geographic locations in Australia, care should be taken when selecting the material type that will be used in the construction of the **ARCPANEL** Firetek Roof Panel. Technical Bulletins developed by Bluescope Steel are available from **ARCPANEL**, or visit www.bluescopesteel.com.au.

A **ARCPANEL** insulated roof system with **COLORBOND®** steel plays a major part in the design of a thermally efficient building. **COLORBOND®** steel now includes **Thermatech®** solar reflectance technology to reflect more of the sun's heat, especially in summer. In hot weather, **COLORBOND®** steel with **Thermatech®** can help reduce peak roof temperatures by up to 11°C.

ARCPANEL Firetek Roof Panel - Xtreme Material Specifici-

An ideal alternative solution for your roof system in coastal, aquatic, industrial or harsh chemical environments.

Firetek Xtreme Roofing Solution

Firetek Xtreme is an insulated roof solution suitable for corrosive environments especially those that are in close proximity to coastal areas, aquatic centres, industrial or chemical environments. The weather side of the sheet has an advanced exterior coat paint system containing at least 70% PVF2 resin in the dry paint film. The Xtreme material finish can be applied to both the top and bottom sides of the panel.

Key Features and Benefits

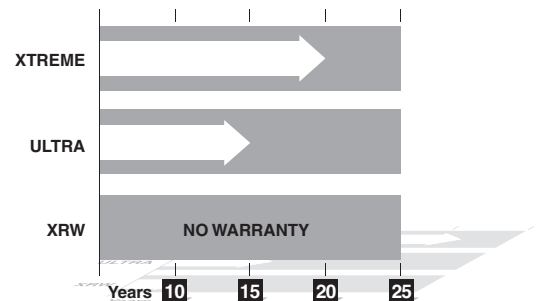
- ✓ Ideal for open and enclosed applications
- ✓ Corrosion Warranties up to 25 years (depending on location)
- ✓ No flaking or peeling of the paint film for up to 20 years*
- ✓ Outstanding colour and gloss retention suitable for roofing, cladding, and rainwater goods
- ✓ Suitable for severe marine and industrial sites with a high risk of deterioration from corrosive elements

WARRANTY INFORMATION

Historically, to obtain a significant warranty in severe marine, coastal, aquatic centres, industrial or harsh chemical environments stainless steel products are generally specified. However, using **ARCPANEL** Firetek Xtreme Roof Panel™ will provide warranties up to 25 years. *Note: Refer to page 42 for full warranty details




TOP SHEET WARRANTY PERIOD
SEVERE MARINE (ISO CAT.4)



ARCPANEL Firetek Roof Panel - Material and Colour Selection

BLUESCOPE STEEL - COLORBOND MATERIAL AND COLOUR SELECTION CHART

TABLE 1

Colour	Classification	Solar Absorbance	Availability		Suitable for use to		Curving Grade	NSW Basix Sustainability Index
			XRW	Ultra Steel	Roof Side	Ceiling Side		
COLORBOND								
Basalt™	Dark	0.69	✓		✓	✓		M
Classic Cream™	Very Light	0.31*	✓		✓	✓	✓	L
Cottage Green	Dark	0.75	✓			✓	✓	D
Cove™	Light	0.54	✓		✓	✓		L
Deep Ocean®	Dark	0.749	✓			✓	✓	D
Dune®	Light	0.466	✓	✓	✓	✓	✓	L
Evening Haze®	Light	0.427	✓		✓	✓	✓	L
Gully™	Dark	0.63	✓		✓	✓		M
Ironstone®	Dark	0.74	✓			✓	✓	D
Jasper®	Dark	0.682	✓		✓	✓	✓	M
Mangrove™	Dark	0.64	✓		✓	✓		M
Manor Red®	Dark	0.688	✓		✓	✓	✓	M
Monument®	Dark	0.73	✓	✓		✓	✓	D
Night Sky®	Dark	0.96	✓			✓		D
Pale Eucalypt®	Dark	0.597	✓		✓	✓	✓	M
Paperbark®	Light	0.421	✓		✓	✓	✓	L
Shale Grey®	Light	0.433	✓		✓	✓	✓	L
Surfmist®	Very Light	0.318*	✓	✓	✓	✓	✓	L
Terrain™	Dark	0.69	✓		✓	✓		M
Wallaby™	Dark	0.69	✓	✓	✓	✓		M
Whitehaven®	Very Light	0.23	✓		✓	✓		L
Windspray®	Dark	0.584	✓	✓	✓	✓	✓	M
Woodland Grey®	Dark	0.706	✓	✓		✓		D
Zincalume	Very Light	≤0.35*			✓		✓	L
STAINLESS STEEL								
Surfmist®	Very Light	0.318*			✓	✓		L
XTREME								
 PROTECT YOUR ROOF FROM HARSH CORROSIVE ENVIRONMENTS								
Off White	Very Light	0.318*			✓	✓		L

*Greater deemed to satisfy insulation concessions apply to these colours when used for class 5 to 8, 9a and 9b buildings. Price on application. Other Colorbond® colours are available, please contact **ARCPANEL** for further information.

General Disclaimer: Colours and availability are subject to change, please contact **ARCPANEL** to confirm colours and availability prior to specification.

- Notes:
- Some colours listed above may require longer manufacturing lead times. please contact **ARCPANEL** for further information.
 - Colorbond® and colour names are registered trademarks of bluescope steel limited™.

Additional Note: If poly film is supplied on any **ARCPANEL** panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any **ARCPANEL** panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to do so may result in difficulty to remove the film and possible staining.

Refer to Page 43 for colour swatches.

ARCPANEL Firetek Roof Panel - Corrugated Profile General Specifications

Panel Sizes

Standard panel thicknesses are available:
 85mm – 105mm – 125mm – 150mm
 (other panel thicknesses are available upon request, including 75mm)

Panel Lengths

Generally straight, curved and multi-curved panels can be supplied up to 24 metres in lengths.
 Longer lengths can be supplied, please contact **ARCPANEL** for details.

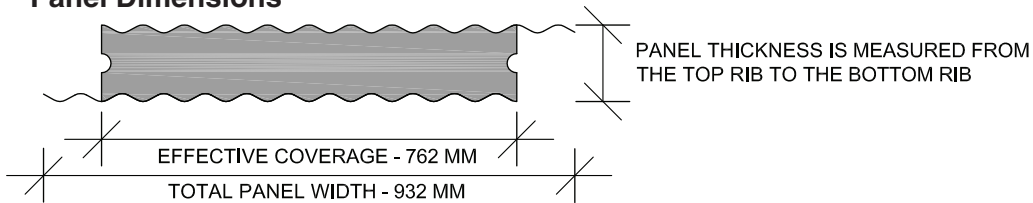
Panel Configurations

Panels can be manufactured in straight, curved or multi-curved configurations.
 Refer to roof type guide on page 4 for further information

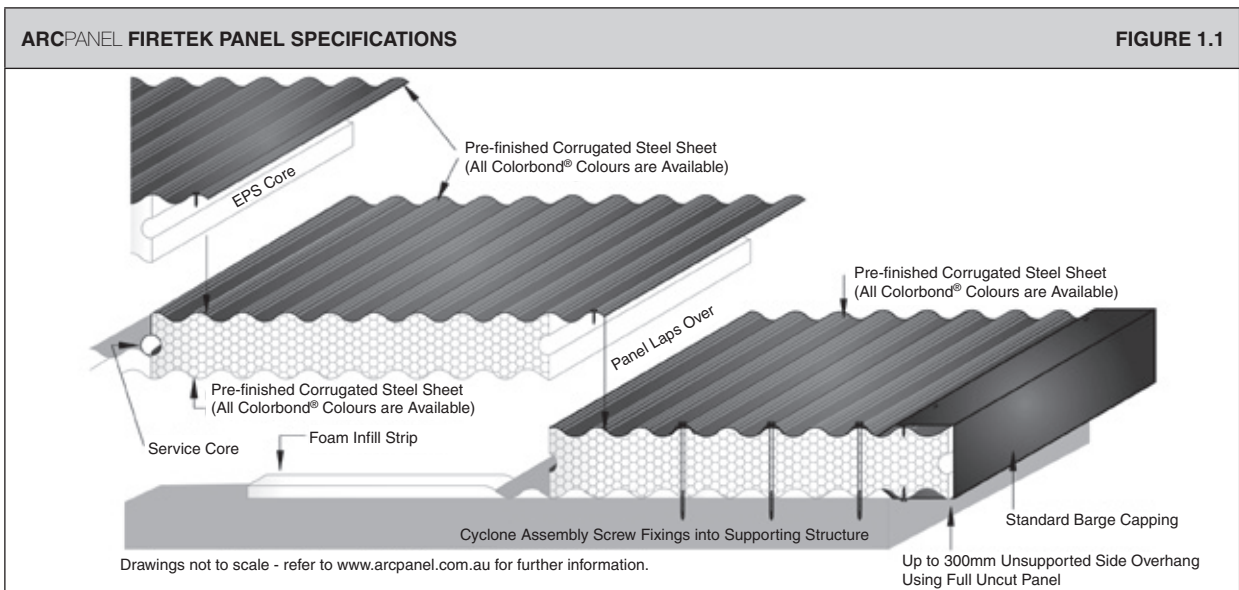
Panel Finish

The **ARCPANEL** Corrugated Firetek Panel is only available in a corrugated finish to both the inside and outside linings. Base metal thickness for XRW Steel sheet 0.420mm and a total coated thickness of 0.470mm used as standard, unless otherwise stated.

Panel Dimensions



CORRUGATED PROFILE PANEL SPECIFICATIONS							TABLE 2
Cover Width	Core Material	Length	Thermal Conductivity	Top Sheet Finish	Bottom Sheet Finish	Sheet Material	Typical Panel Weight
762mm	PIR Foam	Ordered to Size	0.022 W/mK	COLORBOND® XRW COLORBOND® ULTRA STAINLESS STEEL XTREME ZINCALUME®	COLORBOND® XRW COLORBOND® ULTRA STAINLESS STEEL XTREME ZINCALUME®	0.42 BMT G550 Steel	85mm = 11.2kg/m ²
							105mm = 12kg/m ²
							125mm = 12.7kg/m ²
							150mm = 13.7kg/m ²



ARCPANEL Firetek Roof Panel - Trimdek® Profile General Specifications

Panel Sizes

Standard panel thicknesses are available:
 105mm – 125mm – 150mm
 (other panel thicknesses are available upon request, including 85mm and 75mm)

Panel Lengths

Generally straight and curved panels can be supplied up to 24 metres in lengths.
 Longer lengths can be supplied, please contact **ARCPANEL** for details.

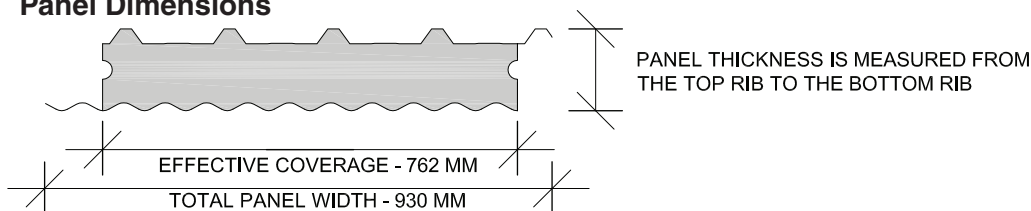
Panel Configurations

Panels can be manufactured in straight or large curve configurations.
 Refer to roof type guide on page 4 for further information.

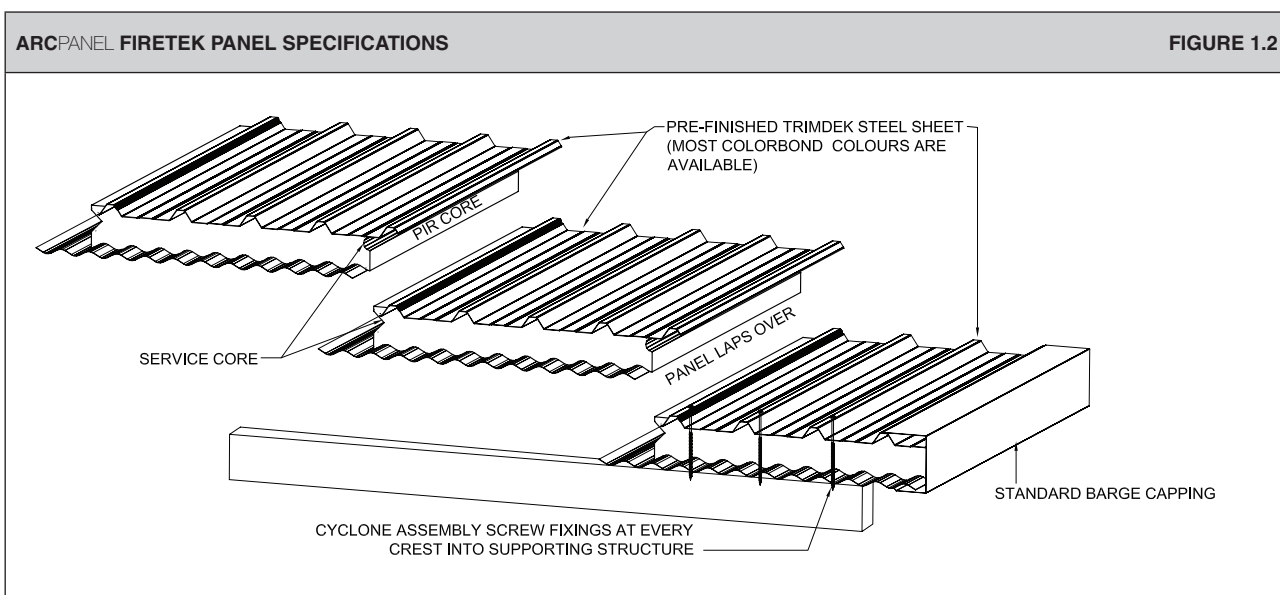
Panel Finish

The **ARCPANEL Trimdek® Firetek Panel** is only available in a corrugated finish to the inside linings, and a Trimdek® (trapezoidal) finish to the outside lining. Base metal thickness for top XRW Steel sheet 0.420mm and a total coated thickness of 0.470mm, is used as standard, unless otherwise stated.

Panel Dimensions



TRIMDEK® PROFILE PANEL SPECIFICATIONS							TABLE 3
Cover Width	Core Material	Length	Thermal Conductivity	Top Sheet Finish	Bottom Sheet Finish	Sheet Material	Typical Panel Weight
762mm	PIR Foam	Ordered to Size	0.022 W/mK	COLORBOND® XRW	COLORBOND® XRW	0.42 BMT G550 Steel	105mm = 11.5kg/m ²
				COLORBOND® ULTRA	COLORBOND® ULTRA		125mm = 12.3kg/m ²
				STAINLESS STEEL XTREME ZINCALUME®	STAINLESS STEEL XTREME ZINCALUME®		150mm = 13.3kg/m ²



ARCPANEL Firetek Roof Panel - Corrugated Firetek Span Table

FIRETEK ROOF PANEL - SPAN TABLES & THERMAL RATINGS

TABLE 4



NON CYCLONIC - Corrugated top and bottom sheet

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



PANEL TYPE		85mm		105mm		125mm		150mm	
R VALUE		R3.4		R4.4		R5.4		R6.6	
Wind Class (Permissible)	Ultimate Limit State Design Wind Pressure (P) (kPa)	MAX SPAN	MAX CANTILEVER	MAX SPAN	MAX CANTILEVER	MAX SPAN	MAX CANTILEVER	MAX SPAN	MAX CANTILEVER
N2-W33	1.52	5750	1725	6500	1950	8000	2400	9000	3000
	1.68	5550	1650	6300	1875	7750	2325	8700	2850
	1.85	5350	1600	6100	1825	7500	2250	8400	2700
	2.01	5150	1525	5900	1750	7250	2175	8100	2550
	2.18	4950	1475	5700	1700	7000	2100	7800	2400
N3-W41	2.34	4750	1425	5500	1650	6750	2025	7500	2250
	2.57	4450	1325	5200	1550	6350	1900	7000	2100
	2.80	4150	1225	4900	1450	5950	1775	6500	1950
	3.03	3850	1150	4600	1375	5550	1650	6000	1800
	3.26	3550	1050	4300	1275	5150	1525	5500	1650
N4-W50	3.50	3250	975	4000	1200	4750	1425	5000	1500
	3.80	3150	925	3850	1150	4600	1375	4900	1425
	4.11	3050	900	3700	1100	4450	1325	4800	1375
	4.41	2950	875	3550	1050	4300	1275	4700	1300
	4.72	2850	850	3400	1000	4150	1225	4600	1250

Span selection notes (non cyclonic areas)

- The above span tables 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.
- Roof pressure coefficients: Cpe = 1.5 X - 0.9 = - 1.35, Cpi = + 0.2 [Cpi = + 0.7 at cantilever]
- The building designer must take into account any application where the Cpi would exceed > 0.2 in open or partly open structures
- Maximum cantilever for N2-W33 & N3-W41 is up to 50% actual backspan no greater than max length shown.
- Maximum cantilever for N4-W50 is up to 40% 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)
- Wind Load Serviceability Criteria based on AS 4055, Vs=0.64 x Vu
- Over sized gutters may affect the cantilever capability, contact **ARCPANEL** for advice
 - Limited raking, diaphragm action and lateral restraint capacity
 - 300mm maximum side cantilever using full uncut panel
- Thermal R-Values are Total R Values
(Winter - Tested conductivity 0.038 W/m.K at 23°C)
- Spans shown are for XRW and ULTRA materials. For Xtreme material, spans reduce by 5% for each use of the Xtreme material (top / bottom sheet) for ULS Design Wind.
- 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

The Ultimate Strength Limit State Design Wind Pressures (P) indicated in the above span tables represent generalised design pressures applicable for single span panels located within edge zones of a roof where local pressure factors K(local) apply, for the appropriate Permissible Wind Class. Assumed values of pressure coefficients for Single Spans:- Cpe=1.5x-0.9=-1.35, Cpi=+0.2, Kc=1.0 [Cpi=+0.7 for cantilever]. The above pressure coefficients and design wind pressures are recommended as a minimum. Where a designer determines more severe pressure coefficients than those indicated above or wish to limit deflections, they must select a thicker panel, reduce the span accordingly, or consult **ARCPANEL** for technical advice.

General notes

Live Loads:
Maximum distributed live load 0.25kPa.
Roofs in Alpine areas: Designer must refer to **ARCPANEL** for specialist 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 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 building 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) / 500.

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

ARCPANEL Firetek Roof Panel - Trimdek® Firetek Span Table

FIRETEK ROOF PANEL - SPAN TABLES & THERMAL RATINGS

TABLE 5



NON CYCLONIC - Trimdek® top and corrugated bottom sheet

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



PANEL TYPE		105mm		125mm		150mm	
R VALUE		R3.5		R4.4		R5.6	
Wind Class (Permissible)	Ultimate Limit State Design Wind Pressure (P) (kPa)	MAX SPAN	MAX CANTILEVER	MAX SPAN	MAX CANTILEVER	MAX SPAN	MAX CANTILEVER
N2-W33	1.52	5950	1650	7000	1950	8000	2225
	1.68	5740	1575	6745	1875	7750	2150
	1.85	5530	1525	6490	1800	7500	2075
	2.01	5320	1450	6235	1725	7250	2000
	2.18	5110	1400	5980	1650	7000	1925
N3-W41	2.34	4900	1350	5725	1600	6750	1875
	2.57	4640	1275	5435	1500	6300	1750
	2.80	4380	1200	5145	1425	5850	1625
	3.03	4120	1125	4855	1325	5400	1500
	3.26	3860	1050	4565	1250	4950	1375
N4-W50	3.50	3600	1000	4275	1175	4500	1250
	3.81	3430	950	4120	1125	4400	1200
	4.11	3260	900	3965	1075	4300	1175
	4.42	3090	850	3810	1050	4200	1150
	4.72	2920	800	3655	1000	4100	1125

Span selection notes (non cyclonic areas)

- The above span tables 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.
- Roof pressure coefficients: $C_{pe} = 1.5 X - 0.9 = -1.35$, $C_{pi} = +0.2$ [$C_{pi} = +0.7$ at cantilever]
- The building designer must take into account any application where the C_{pi} would exceed > 0.2 in open or partly open structures
- Maximum cantilever for N2-W33 & N3-W41 is up to 40% actual backspan no greater than max length shown.
- Maximum cantilever for N4-W50 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)
- Wind Load Serviceability Criteria based on AS 4055, $V_s = 0.64 \times V_u$
- Over sized gutters may affect the cantilever capability, contact ARCPANEL for advice
- Limited raking, diaphragm action and lateral restraint capacity
- 300mm maximum side cantilever using full uncut panel
- Thermal R-Values are Total R Values (Winter - Tested conductivity 0.038 W/m.K at 23°C)
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General notes

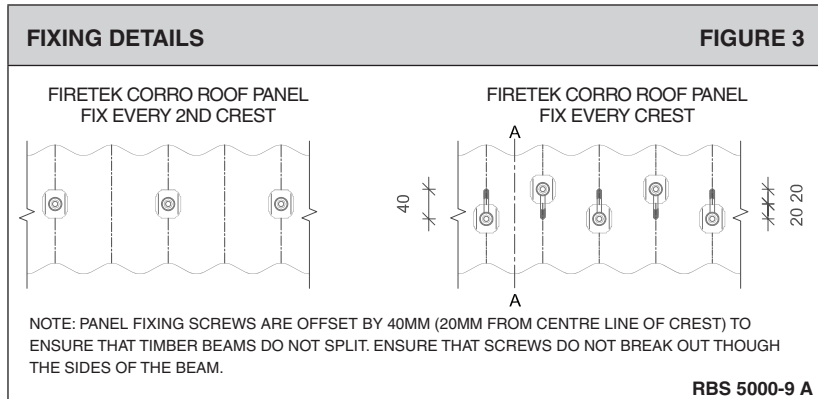
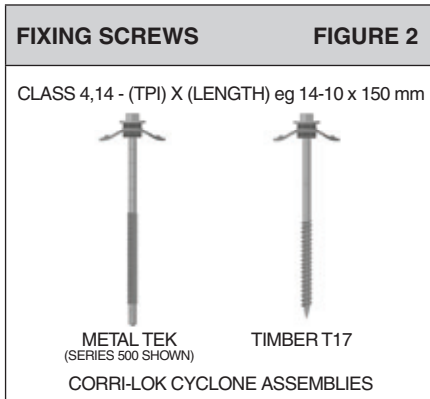
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Cantilever Deflections:
Note that cantilever deflections will depend on the backspan, rigidity of supports, building geometry and building permeability. Cantilever deflection can be up to (cantilever length) / 50 at serviceability wind speeds. The 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 building 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) / 500.

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ARCPANEL Firetek Roof Panel - Corrugated Panel Fixing Information



FIRETEK CORRO PANEL FIXING CLASS 4 WITH CORRI-LOK CYCLONE ASSEMBLY **TABLE 6**
Approved fixings: Buildex and Powers Fasteners AS 3566 Class 4

FIXING TO STEEL						FIXING TO TIMBER		
Panel size (MM)	Minimum fixing screw length (MM)	Actual to order steel screw steel thickness 2.0mm to 5.0mm		Actual to order steel screw steel thickness 5.1mm to 12.0mm		Minimum fixing screw length (MM)	Actual to order timber screw	
		SCREW TYPE	SIZE	SCREW TYPE	SIZE		SCREW TYPE	SIZE
85	115	METAL TEK	14 - 14 x 115 MM	METAL TEK	14 - 20 x 150 MM SERIES 500	120	TIMBER T17	14 - 10 X 125 MM
105	130	METAL TEK	14 - 14 x 135 MM	METAL TEK	14 - 20 x 150 MM SERIES 500	140	TIMBER T17	14 - 10 X 150 MM
125	155	METAL TEK	14 - 14 x 175 MM	METAL TEK	14 - 20 x 200 MM SERIES 500	160	TIMBER T17	14 - 10 X 175 MM
150	180	METAL TEK	14 - 14 x 205 MM	METAL TEK	14 - 20 x 200 MM SERIES 500	185	TIMBER T17	14 - 10 X 200 MM

NOTES:

14 - 10 x 'X' MM SCREWS CAN BE SUBSTITUTED FOR 14 - 14 - 'X' MM SCREWS IN STEEL BETWEEN 1.3MM TO 4.0MM CLEARANCE MUST BE CHECKED TO ALLOW FOR PROTRUDING SCREW LENGTH THROUGH FIXING POINT
FIXING BEAM / TOP PLATE MUST BE PITCHED TO SUIT THE ROOF PANEL PITCH

FIXING TO OTHER SUBSTRATES (ALUMINIUM, STAINLESS STEEL ETC) MAY BE POSSIBLE, REFER TO TECHNICAL SERVICES

FIXING TO STEEL SUBSTRATES LESS THAN 2.0mm, REFER TO TECHNICAL SERVICES

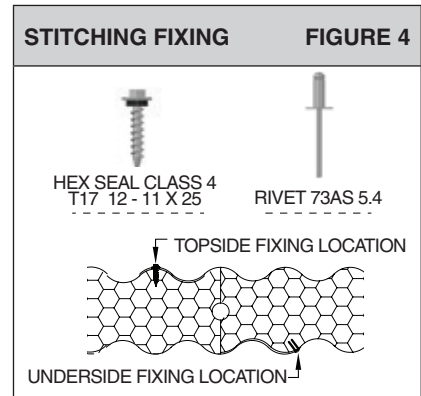
FIXING SCREW TABLE REFLECTS THE RANGE OF SCREWS CURRENTLY AVAILABLE FROM BUILDDEX OR POWERS FASTENERS

End Support Fixing, Corri-Lok Cyclone Assembly AS 3566, Class 4

- Every second crest when pressure [P] x (3/4 backspan + 4/3 cantilever [m]) is not greater than 22.5 [kN/m]
- Every crest when pressure [P] x (3/4 backspan + 4/3 cantilever [m]) is greater 22.5 [kN/m]
- Raked external walls running parallel to the span fixing point at every 200mm c/c

Internal Support Fixing, Corri-Lok Cyclone Assembly AS 3566, Class 4

- Every second crest when pressure [P] x 1.25 x larger span not greater than 22.5 [kN/m]
- Every crest when Pressure [P] x 1.25 x larger span is greater than 22.5 [kN/m]
- Raked external walls running parallel to the span fixing point at every 200mm c/c



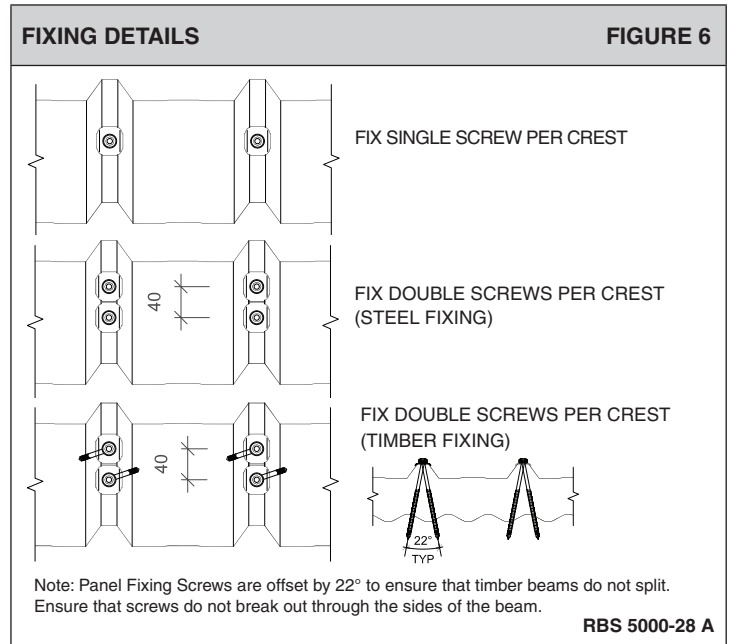
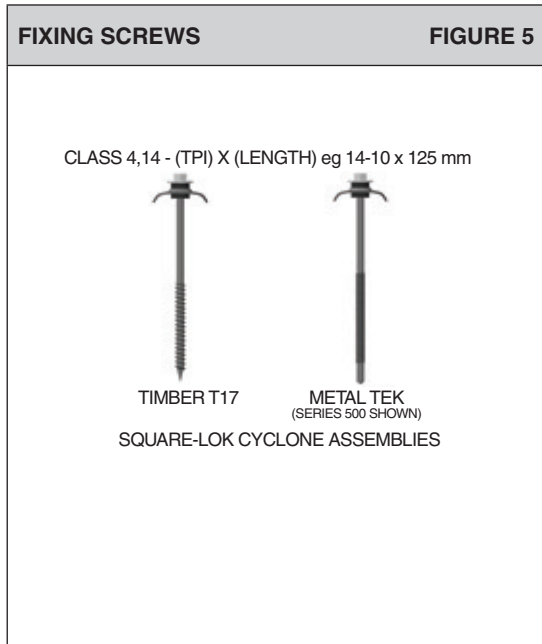
Stitching Screws – Top

Details: Hex Seal Class 4 – 12 – 11 x 25 – Type T17 with seal washer
Spacing: Used at 300mm centres on the top sheet lap and may be used to attach rainwater goods

Rivets – Underside

Details: 73 AS 54
Spacing: Used at 300mm centres on the underside of the sheet lap

ARCPANEL Firetek Roof Panel - Trimdek® Panel Fixing Information



FIRETEK TRIMDEK® PANEL FIXING CLASS 4 WITH CORRI-LOK CYCLONE ASSEMBLY **TABLE 7**
Approved fixings: Buildex and Powers Fasteners AS 3566 Class 4

Panel size (MM)	Minimum fixing screw length (MM)	FIXING TO STEEL				FIXING TO TIMBER		
		Actual to order steel screw steel thickness 2.0mm to 5.0mm		Actual to order steel screw steel thickness 5.1mm to 12.0mm		Minimum fixing screw length (MM)	Actual to order timber screw	
		SCREW TYPE	SIZE	SCREW TYPE	SIZE		SCREW TYPE	SIZE
105	135	METAL TEK	14 - 14 x 135 MM	METAL TEK	14 - 20 x 150 MM SERIES 500	140	TIMBER T17	14 - 10 X 150 MM
125	155	METAL TEK	14 - 14 x 175 MM	METAL TEK	14 - 20 x 200 MM SERIES 500	160	TIMBER T17	14 - 10 X 175 MM
150	180	METAL TEK	14 - 14 x 205 MM	METAL TEK	14 - 20 x 200 MM SERIES 500	185	TIMBER T17	14 - 10 X 200 MM

NOTES:

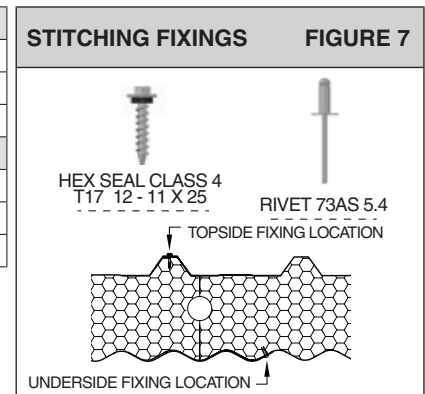
- 14 - 10 x 'X' MM SCREWS CAN BE SUBSTITUTED FOR 14 - 14 - 'X' MM SCREWS IN STEEL BETWEEN 1.3MM TO 4.0MM
- CLEARANCE MUST BE CHECKED TO ALLOW FOR PROTRUDING SCREW LENGTH THROUGH FIXING POINT
- FIXING BEAM / TOP PLATE MUST BE PITCHED TO SUIT THE ROOF PANEL PITCH
- FIXING TO OTHER SUBSTRATES (ALUMINIUM, STAINLESS STEEL ETC) MAY BE POSSIBLE, REFER TO TECHNICAL SERVICES
- FIXING TO STEEL SUBSTRATES LESS THAN 2.0mm, REFER TO TECHNICAL SERVICES
- FIXING SCREW TABLE REFLECTS THE RANGE OF SCREWS CURRENTLY AVAILABLE FROM BUILDDEX OR POWERS FASTENERS

End Support Fixing, Square-Lok Cyclone Assembly AS 3566, Class 4

1. Every crest when pressure [P] x (3/4 backspan + 4/3 cantilever [m]) is not greater than 15 [kN/m]
2. Double every crest when Pressure [P] x (3/4 backspan + 4/3 cantilever [m]) is greater than 15 [kN/m]
3. Raked external walls running parallel to the span fixing point at every 200mm c/c

Internal Support Fixing, Square-Lok Cyclone Assembly AS 3566, Class 4

1. Every crest when pressure [P] x 1.25 x larger span not greater than 15 [kN/m]
2. Double every crest when Pressure [P] x 1.25 x larger span is greater than 15 [kN/m]
3. Raked external walls running parallel to the span fixing point at every 200mm c/c



Stitching Screws – Top

Details: Hex Seal Class 4 - 12 - 11 x 25 - Type T17 with seal washer
Spacing: Used at 300mm centres on the top sheet lap and may be used to attach rainwater goods

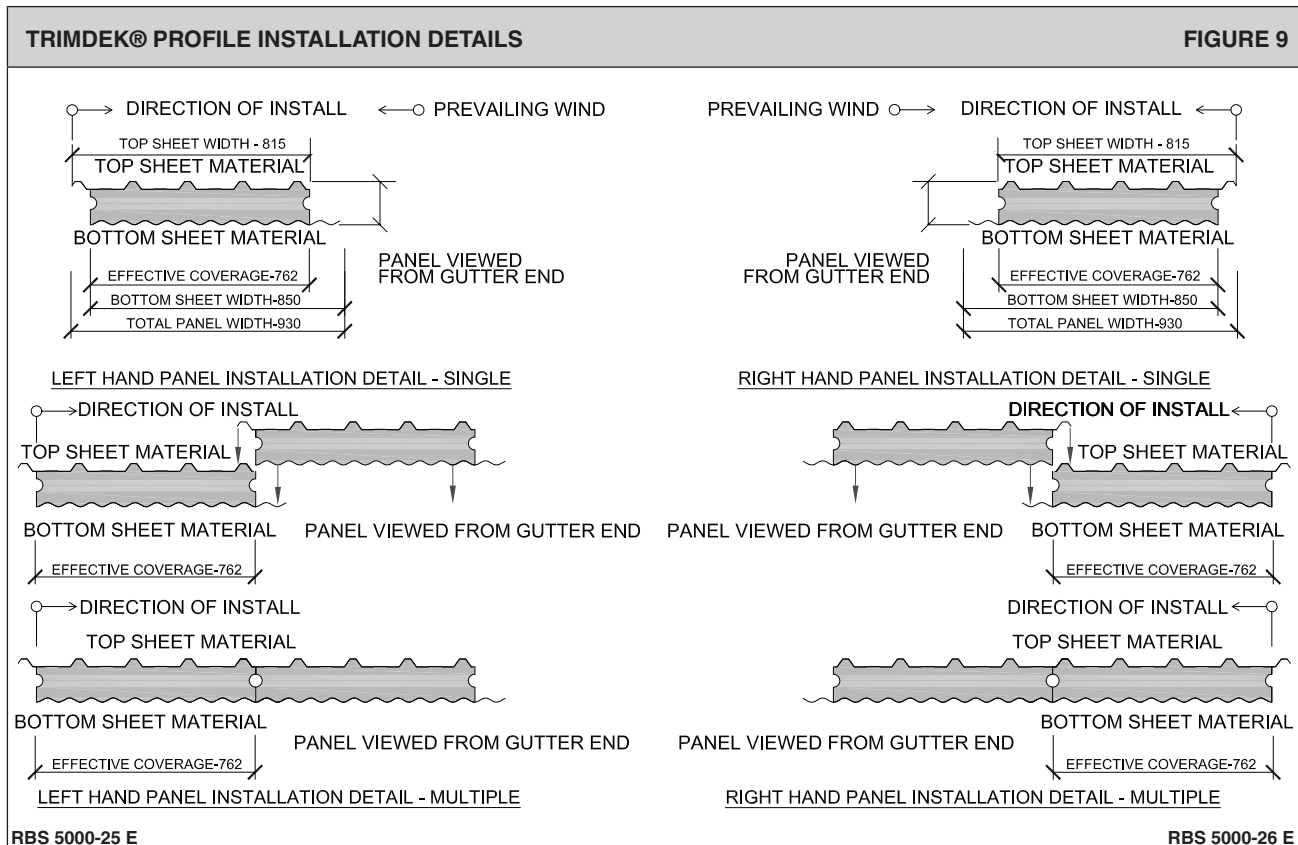
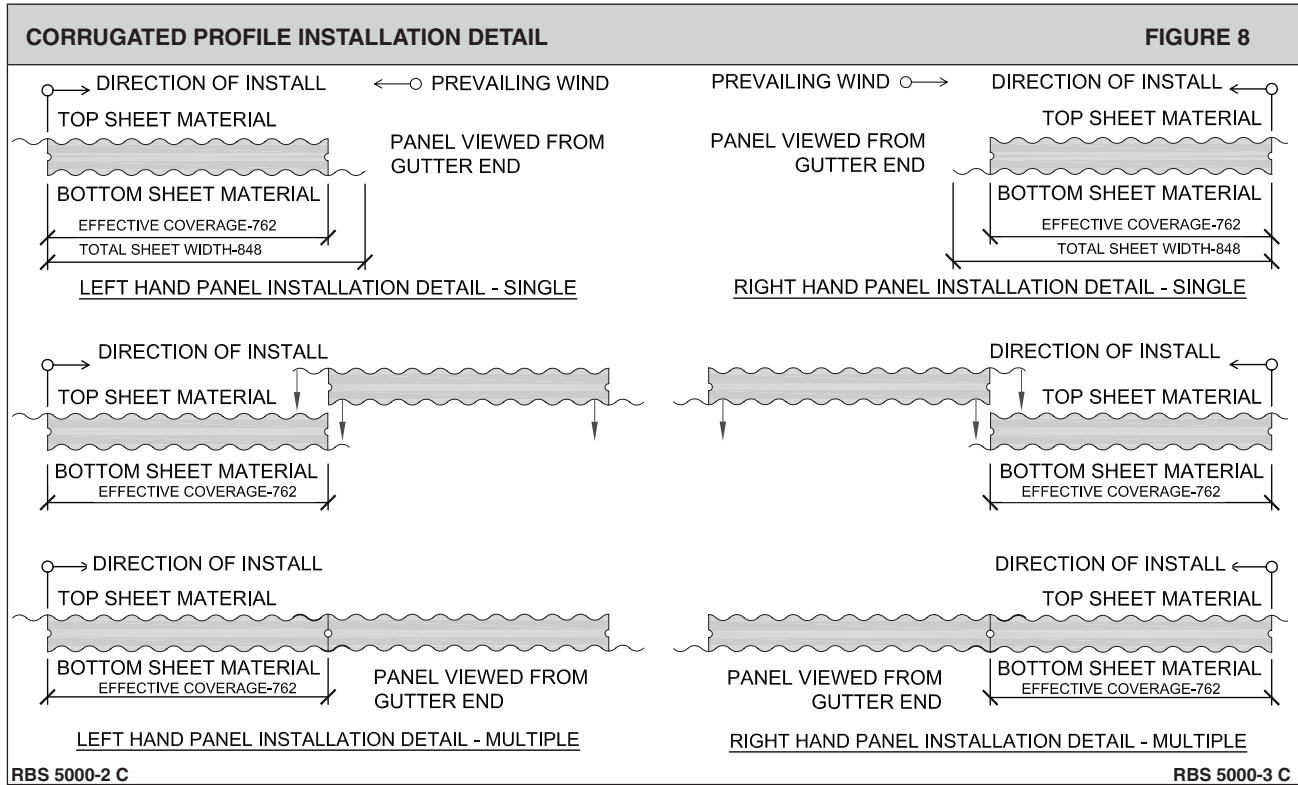
Rivets – Underside

Details: 73AS 54
Spacing: Used at 300mm centres on the underside sheet lap

ARCPANEL Firetek Roof Panel - Installation Details

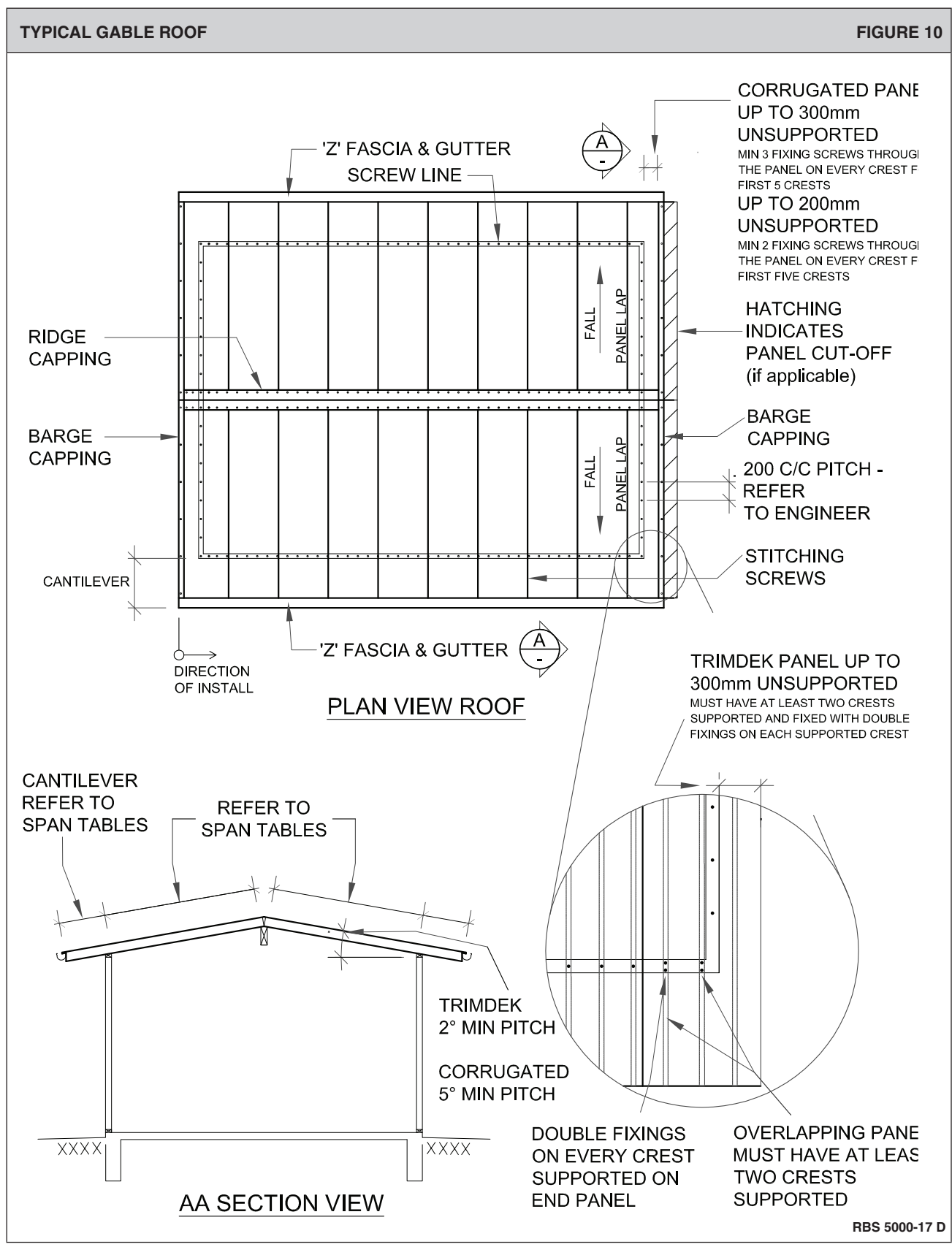
Lapping Details

As shown in the following details, the **ARCPANEL** Firetek Roof Panel can be installed from left to right (left hand) or right to left (right hand), this is normally determined prior to the undertaking of the workshop drawings. Should a specific installation direction be required please advise **ARCPANEL** at time of order. Direction of lap is determined by looking from the gutter end of the roof panel.



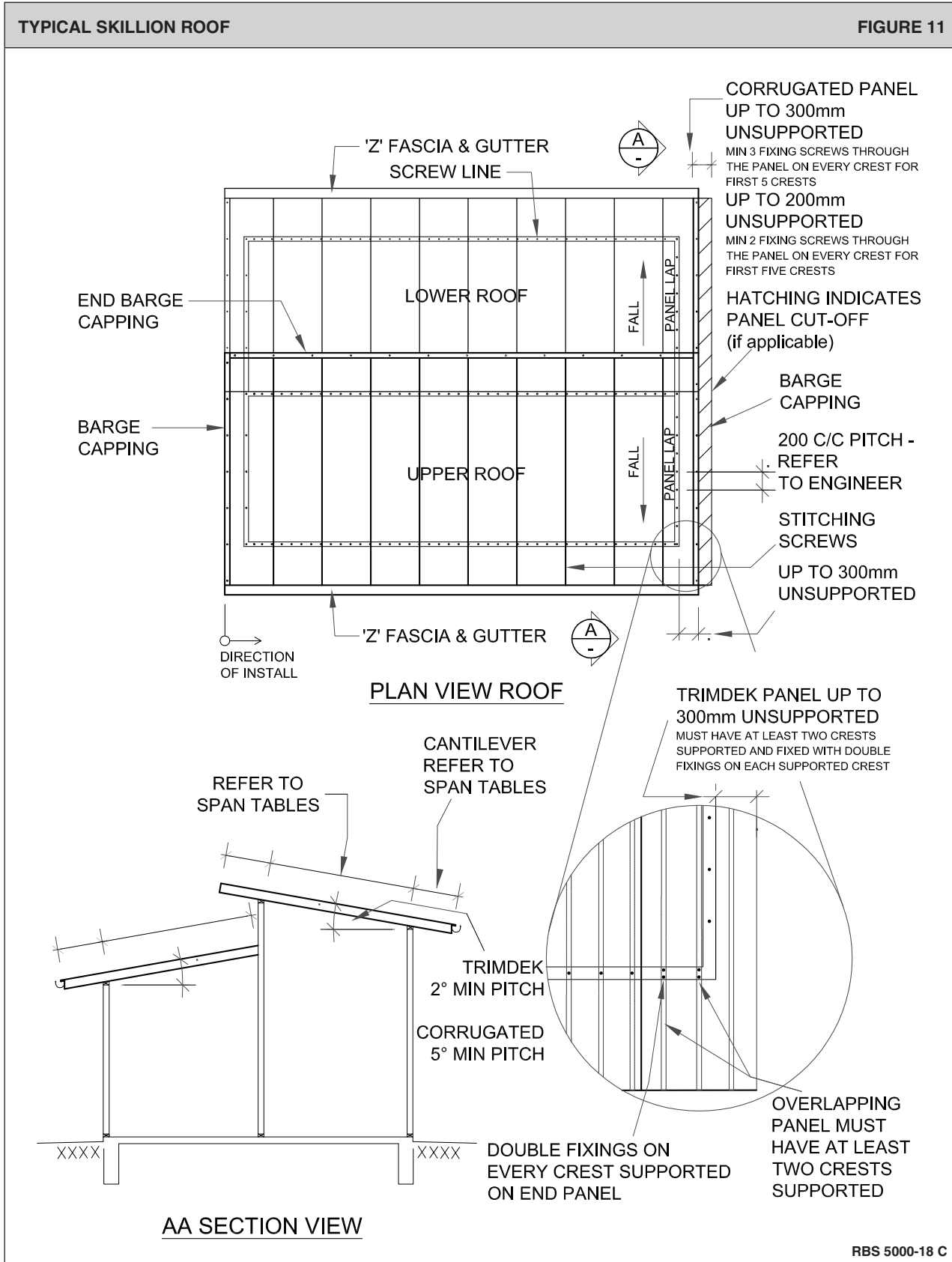
ARCPANEL Firetek Roof Panel - Typical Roof Plans

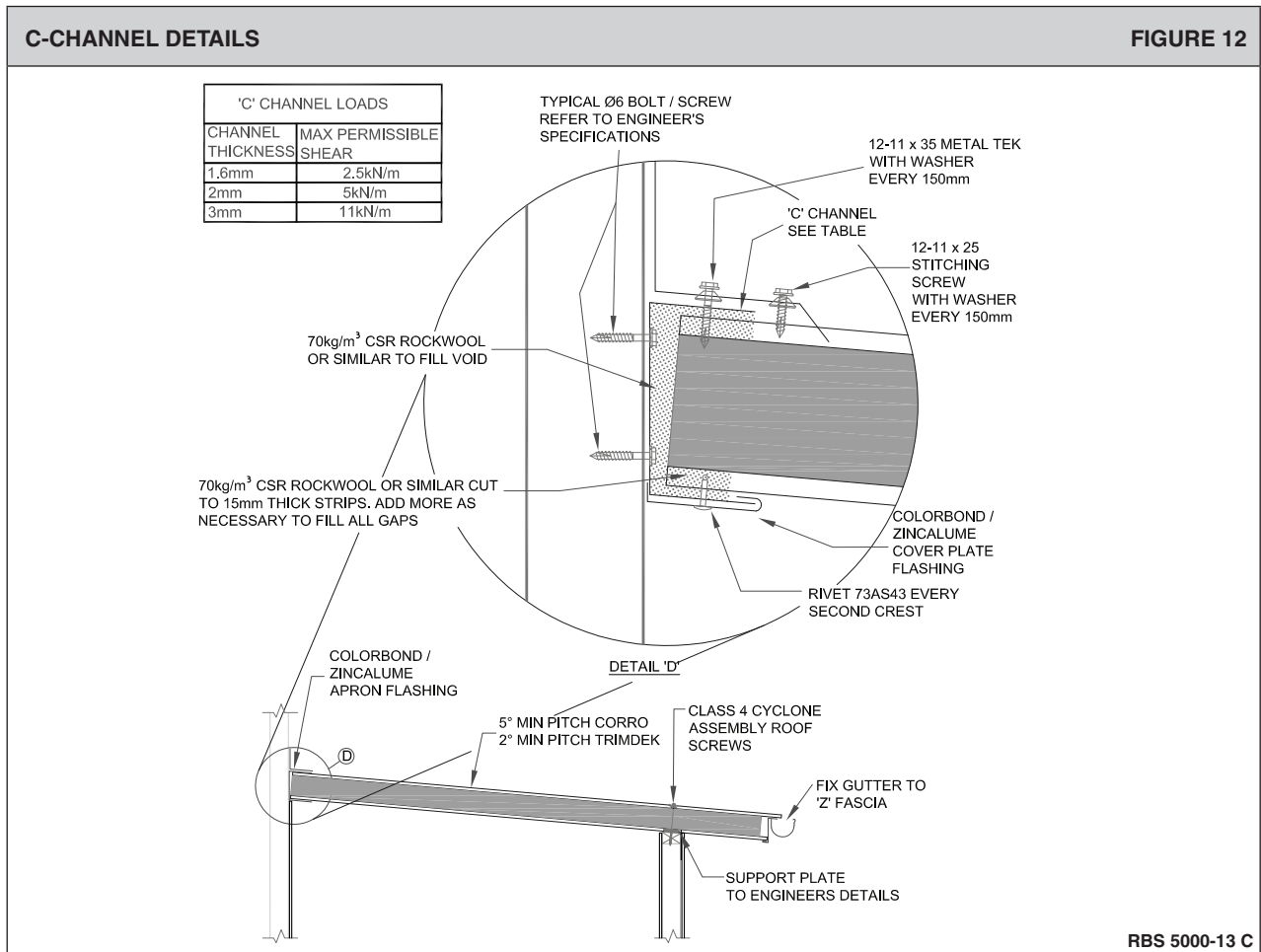
Figure 10 shows standard components used in construction of a gable end roof using **ARCPANEL** Firetek roof panels. This includes hold down positions, stitching screw layout and rainwater goods.



ARCPANEL Firetek Roof Panel - Typical Roof Plans

Figure 11 shows standard components used in construction of a skillion roof using **ARCPANEL** Firetek roof panels. This includes hold down positions, stitching screw layout and rainwater goods.





FIRETEK CORRUGATED PROFILE MAXIMUM ALLOWABLE DISTRIBUTED DEAD LOAD					TABLE 8
KG / M2 FOR INTERNAL SPANS (DEFLECTION < SPAN / 300)					
Panel thickness (corro / corro)					
SPAN	85	105	125	150	
< 3M	10	15	20	20	
3M - 5M	5	10	15	15	
5M - 7M	-	7.5	7.5	10	
7M - 9M	-	-	-	7.5	

FIRETEK TRIMDEK PROFILE MAXIMUM ALLOWABLE DISTRIBUTED DEAD LOAD			
KG / M2 FOR INTERNAL SPANS (DEFLECTION < SPAN / 300)			
Panel thickness (Trimdek® / corro)			
SPAN	105	125	150
< 3M	15	20	20
3M - 5M	10	15	15
5M - 7M	-	7.5	10
7M - 9M	-	-	5

Notes:

- 1) For dead loads requirements that exceed the above criteria, refer to **ARCPANEL** for specific engineering advice
- 2) No dead load is permitted on cantilevers without specific written approval from **ARCPANEL**
- 3) The above loads are unfactored

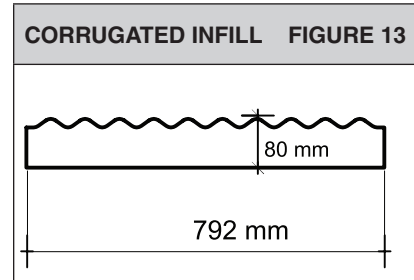
ARCPANEL Firetek Roof Panel - **Accessory Information**

Corrugated Infill

The use of the corrugated infill is recommended to fully seal wall and soffit junctions. Refer to page 19 for further details.

Details: 792mm x 80mm x 0.55 BMT steel

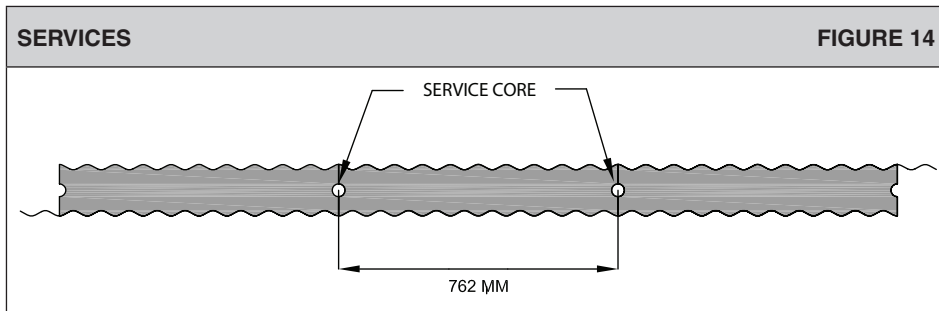
- Suitable for all external and internal walls
- Attached to the wall prior to installing the lining
- Used as a permanent barrier between the inside and outside on walls perpendicular to the run of the roof panels.



Services

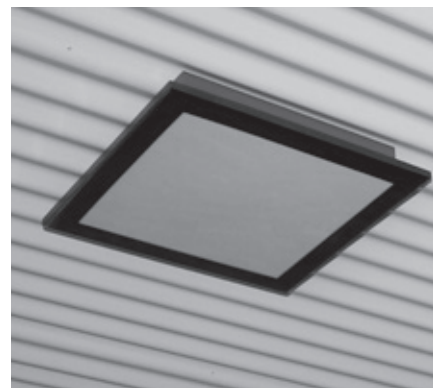
The **ARCPANEL** Firetek Panels incorporate a service duct at panel joints ie. @ 762 mm approx c/c. The duct is 30 mm in diameter and runs the full length of the panel.

Electrical fixtures are best placed on panel joints where possible. It is advisable that the electrical contractor is present during the installation of the **ARCPANEL** Firetek roof panels.



Corrugated Profile shown above

- The electrical contractor can run wiring from supporting walls through service ducts to the required outlets.
- The underside sheet of the Firetek roof panels can be drilled or a circular opening cut for inlet or outlet of wiring.
- Electrical fixtures that are not on the panel joints can be wired by drilling an opening or use a long auger bit and drill into the PIR core to the required outlet.



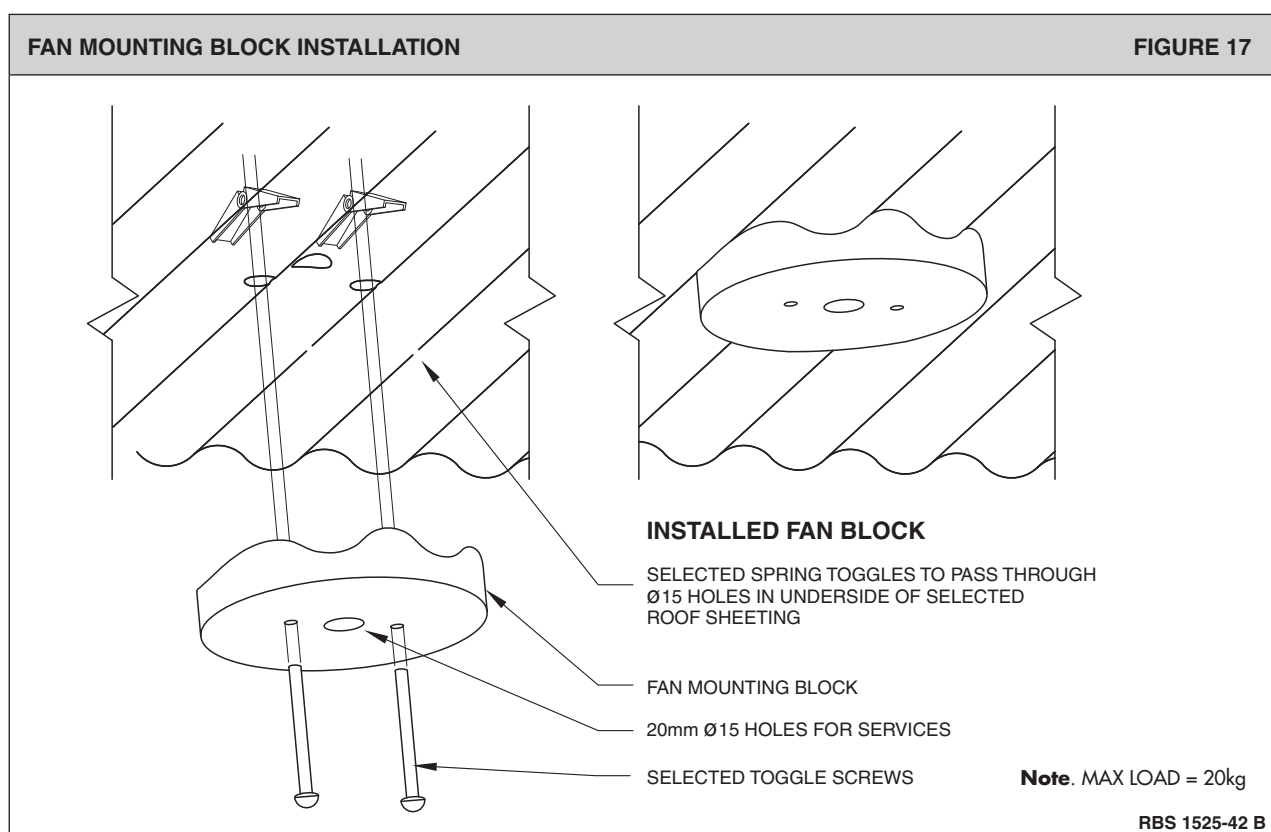
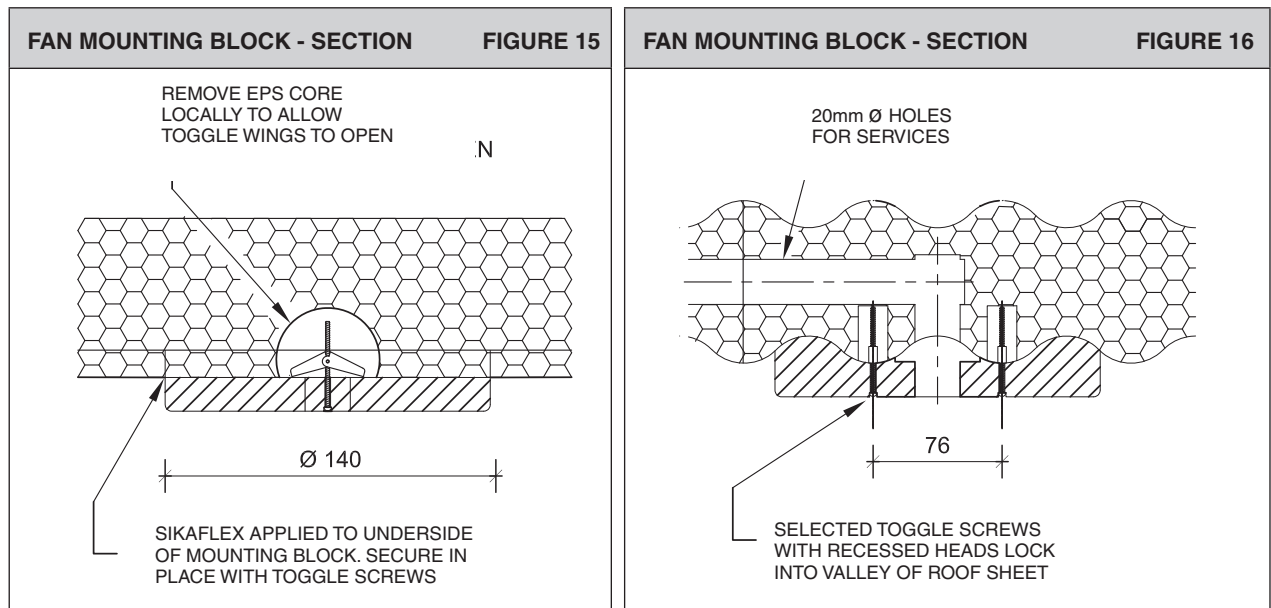
ARCPANEL Firetek Roof Panel - Timber Mounting Blocks

A profiled circular timber block is available to mount low voltage lights, pendant lights, ceiling fans etc. The timber block is supplied natural (unpainted), it will need to be painted or oiled on site to suit the ceiling colour.

The mounting of the timber block is to be undertaken in the following method: for light weight lighting and fans, two toggle bolts are used to secure the mounting block to the underside of the ceiling.

For heavier items such as large ceiling fans and large pendant lighting the block is to be bolted through the panel, using a standard bolt fitted with a cyclone plate, washer and seal.

The dimensions of the block are approximately 140mm in diameter (170mm also available) and will sit proud of the ceiling lining by approximately 16mm. The maximum recommended load is 20kg.

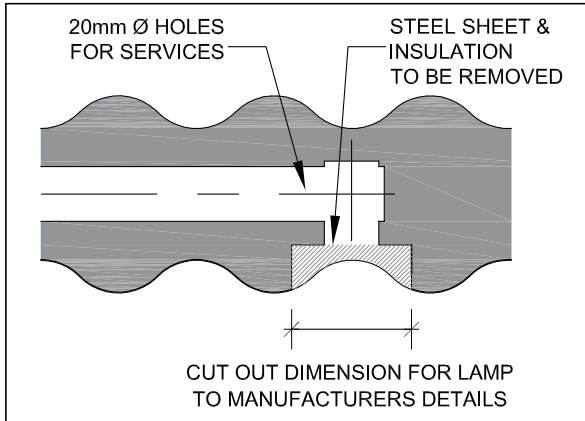


ARCPANEL Firetek Roof Panel - Installation of LED Down Lights

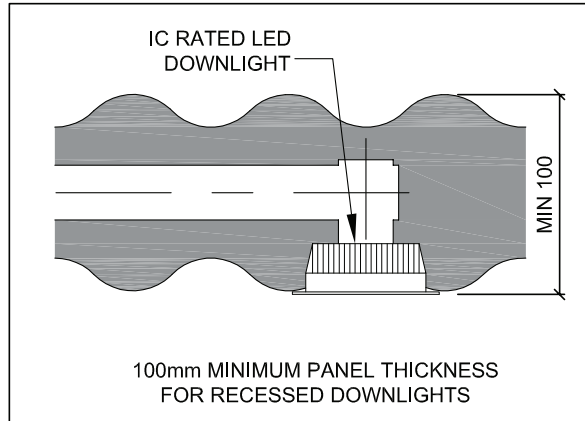
LED down lights can be installed directly into **ARCPANEL** panels with a thickness of 100mm or more. For panels less than 100mm, down lights can be surface mounted using the timber mounting block.

LED DOWNLIGHTS INSTALLATION

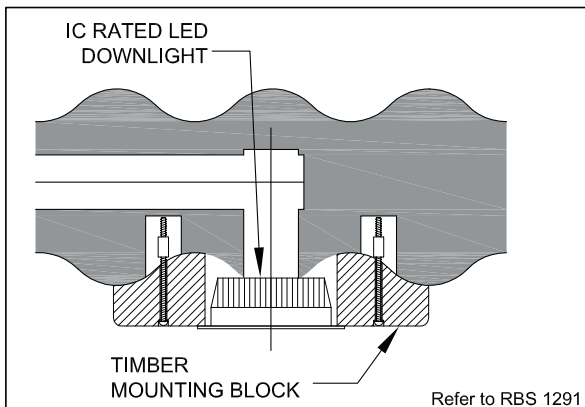
FIGURE 18



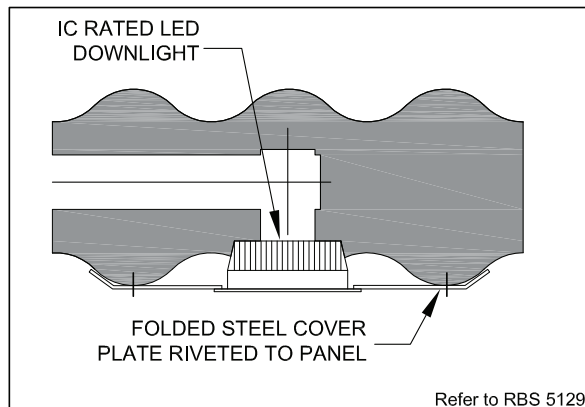
PREPARATION OF PANEL FOR INSTALLATION OF IC RATED LED DOWNLIGHTS



IC RATED LED DOWNLIGHT INSTALLED DIRECTLY INTO PANEL



IC RATED LED DOWNLIGHT INSTALLED IN TIMBER MOUNTING BLOCK ATTACHED TO PANEL



IC RATED LED DOWNLIGHT INSTALLED IN STEEL COVER PLATE ATTACHED TO PANEL

ALL ELECTRICAL WORK TO BE CARRIED OUT BY A LICENSED ELECTRICIAN TO RELEVANT AUSTRALIAN STANDARDS

LED DOWNLIGHTS TO BE IC CLASS - ABUTTED & COVERED.

CUT OUT DIMENSIONS TO LIGHT MANUFACTURERS SPECIFICATIONS

RECOMMENDED DOWNLIGHTS:

SUNNY AUSTRALIA LIGHTING
PREMIER MODELS S9071, S9072, S9073
FIXED HEAD RECESSED LED DOWNLIGHT KITS

REFER TO DESIGN & DETAILING MANUAL FOR INSTALLATION OF ELECTRICAL SERVICES AND TIMBER MOUNTING BLOCKS

SPECIFIED LIGHTS RECOMMENDED AND SUPPLIED BY

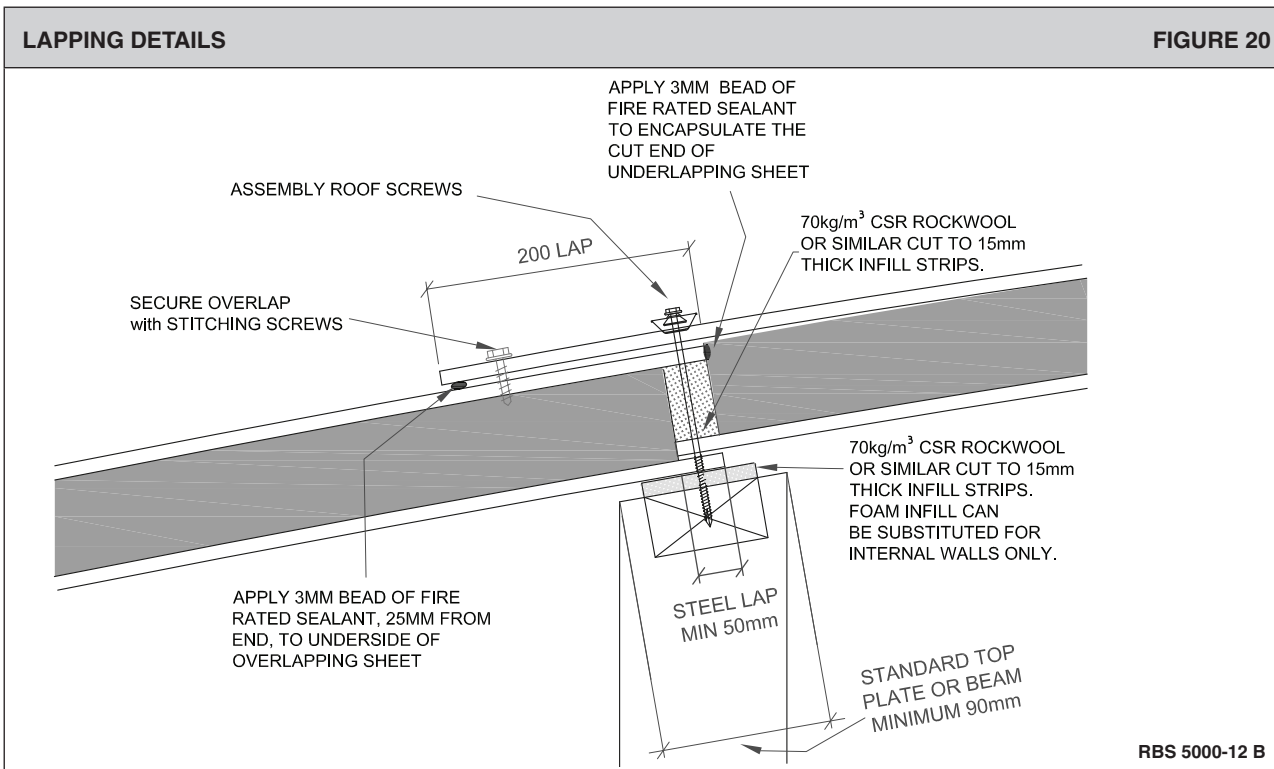
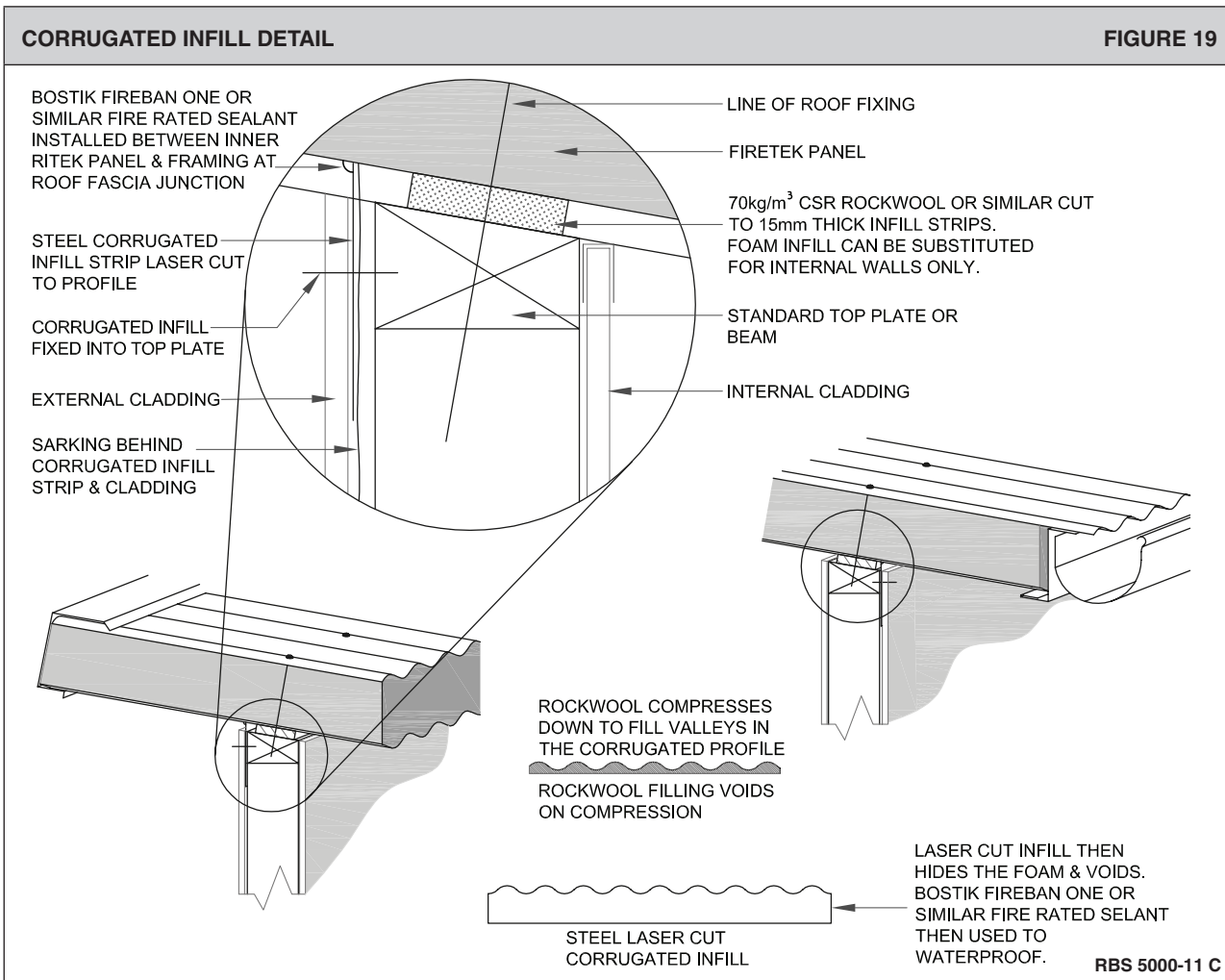
NOOSA LIGHTING
www.noosalighting.com.au

S9071 Model shown



FOR FURTHER INFORMATION VISIT
www.sunnylighting.com.au/downlights/led-downlights/premier

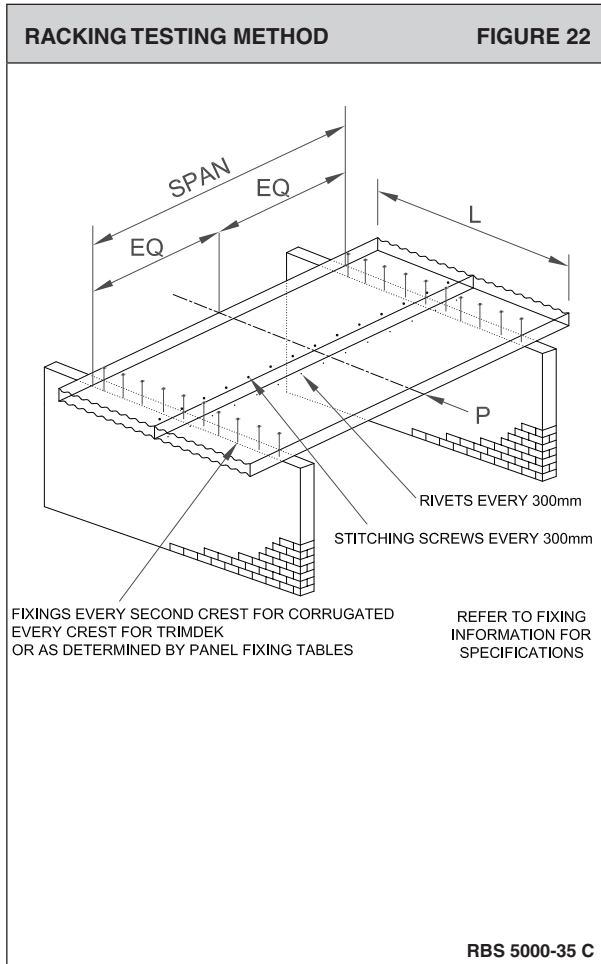
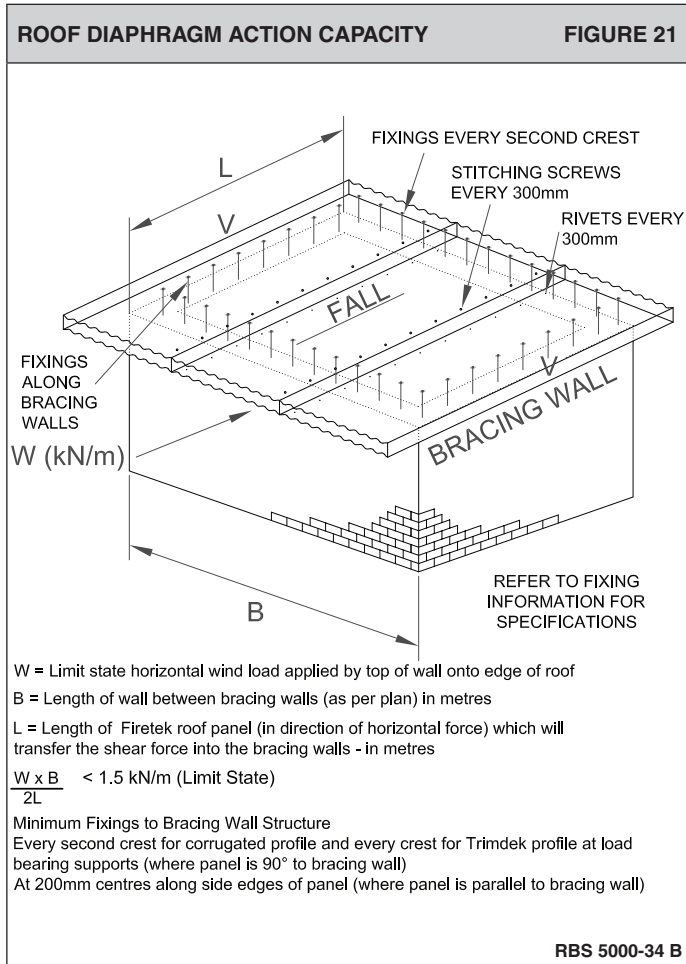
ARCPANEL Firetek Roof Panel - Corrugated Infill and Lapping Detail



ARCPANEL Firetek Roof Panel - Diaphragm Action Capacity

RACKING CAPACITY KN (LIMIT STATE) (P)		TABLE 9							
FIRETEK PANEL THICKNESS 85 - 150mm	Span mm								
	4800	5400	6000	6600	7200	7800	8400	9000	
1 Panel (L=762mm)	2	1.8	1.6	1.5	1.35	1.25	1.1	0.95	
2 Panels (L=1524mm)	4.1	3.6	3.3	3	2.7	2.5	2.3	2.1	
kN per m	2.7	2.4	2.1	1.95	1.8	1.6	1.5	1.45	

Allowable lateral load (kN) Min length 762mm *Note: For straight, curved and multi-curved panels



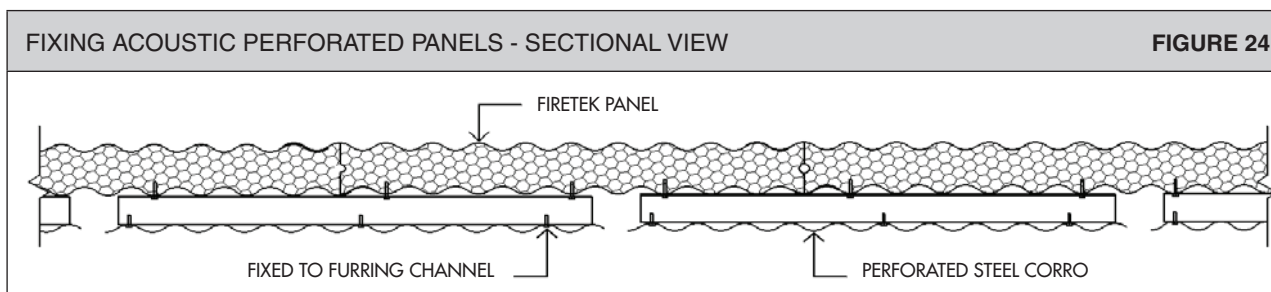
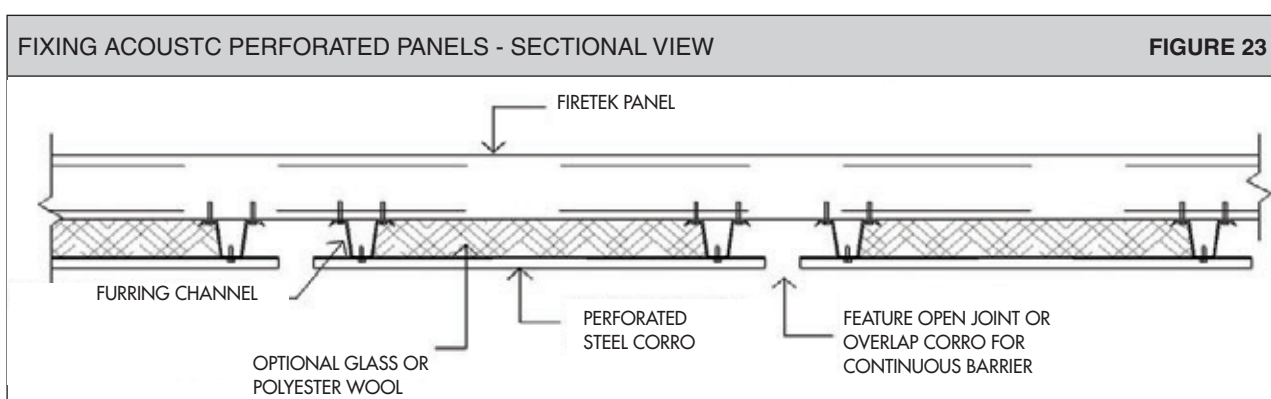
ARCPANEL roof diaphragm action assumes there is adequate structural connection through the full length of the building along supporting walls and beams, capable of resisting the resulting overall tension and compressive loads caused by any ARCPANEL roof diaphragm action, as would be normally required in a traditionally braced roof.

ARCPANEL Firetek Roof Panel - Acoustic Properties

Options for Acoustic Absorbent Panels

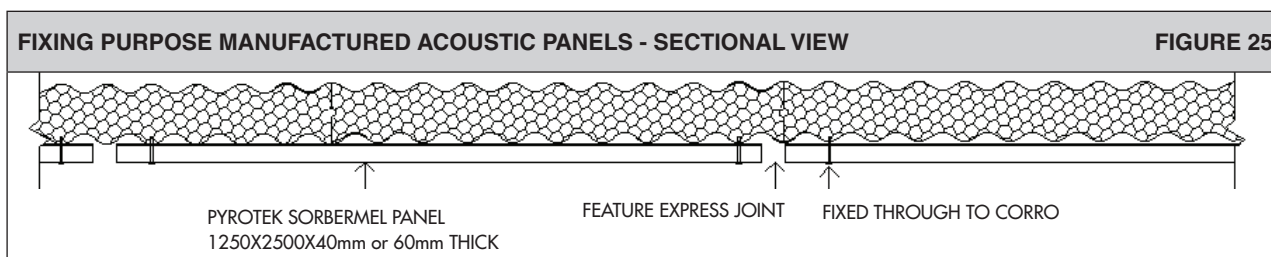
Option 1 – Firetek roof panel system in conjunction with a perforated metal sheet, filled with an acoustic absorbent material. Predictions for acoustic absorption coefficient are tabulated below:

Insulation Material	125Hz	250Hz	500Hz	1K Hz	2K Hz	4k Hz
25mm 32kg Glasswool	0.15	0.35	0.6	0.8	0.95	0.95
50mm 32kg Glasswool	0.35	0.75	0.95	0.95	0.95	0.95
25mm Tontine Acoustisorb 2	0.15	0.4	0.7	0.9	0.9	0.95
50mm Tontine Acoustisorb 2	0.35	0.7	0.9	0.95	0.95	0.95



Option 2 - Firetek panel system in conjunction with a purpose manufactured acoustic panel. eg Pyrotek Sorbermel Panels. Predictions for acoustic absorption coefficient are tabulated below.

Insulation Material	125Hz	250Hz	500Hz	1K Hz	2K Hz	4k Hz
40mm Sorbermel	0.15	0.4	0.75	0.95	0.95	0.95
60mm Sorbermel	0.25	0.6	0.95	0.95	0.95	0.95



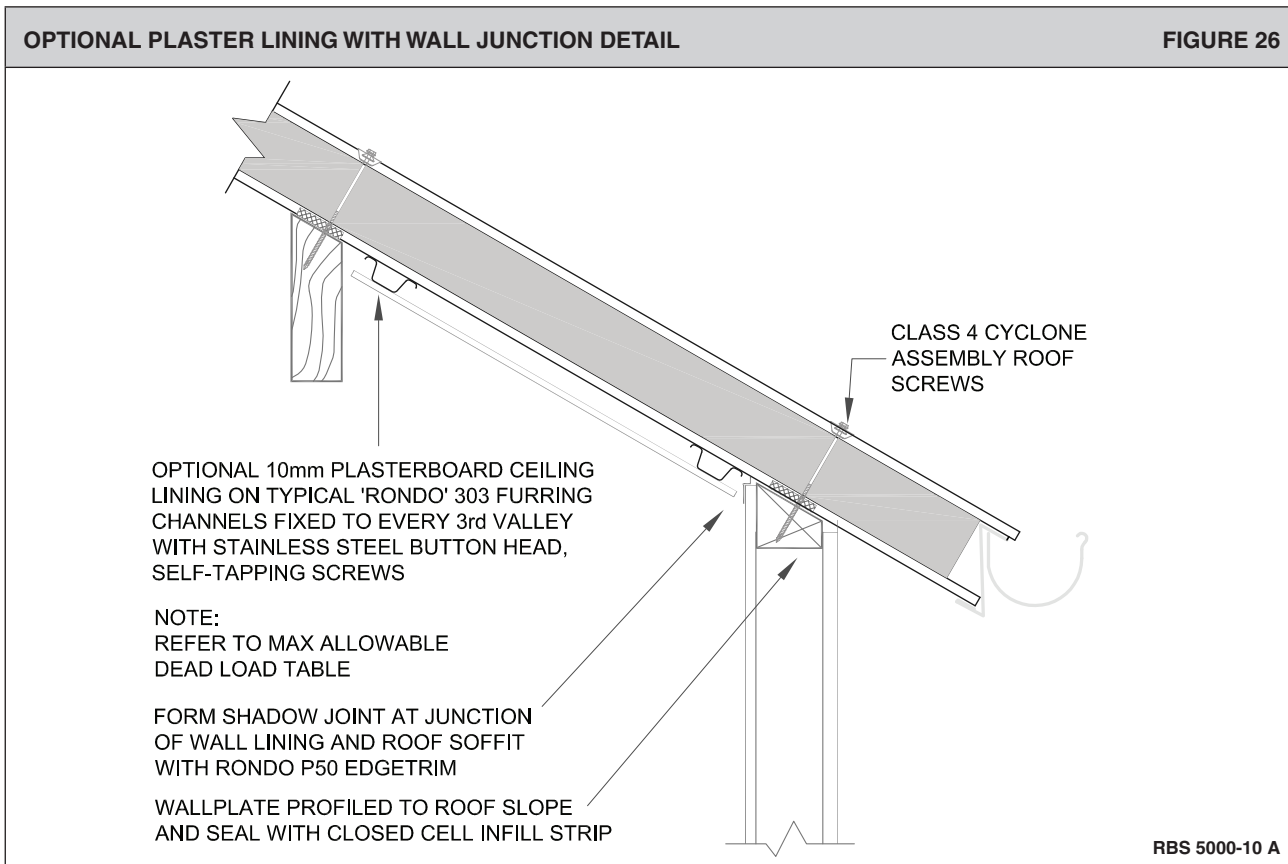
As the absorption coefficient only applies to the surface area of the added acoustic absorbing panel, it is recommended that at least 80% of the panel should be treated. A full acoustic report from our acoustic consulting consultant is available on request.

ARCPANEL Firetek Roof Panel - Acoustic Properties

The following predictions are based on determination of Sound Transmission Loss carried out at the acoustic laboratories of Lorient Australia Pty Ltd, Banyo, Qld.

ACOUSTIC PROPERTIES		TABLE 12			
Assessment Number	Firetek Roof Panel Thickness	75mm to 100mm		125mm to 175mm	
	Description	Rw	Rw + Ctr	Rw	Rw + Ctr
1	Firetek panel with PIR core	23dB	15dB	23dB	18dB
2	Firetek/PIR panel with Rondo 303 furring channels direction fixed to the panel with a ceiling comprising one layer of 13mm CSR Soundcheck plasterboard	32dB	26dB	33dB	26dB
3	As Assessment 2 with an additional layer of 13mm SCR Soundcheck plasterboard	36dB	29dB	36dB	29dB
4	As Assessment 3 with the addition of Tontine HSB2 polyester insulation in the cavity. The intention was to use Tontine TSB2 polyester insulation but the HSB2 was supplied in lieu of the TSB2.	38dB	30dB	38dB	30dB
5	Firetek/PIR panel with 96mm top hat sections resiliently mounted to the Firetek/PIR panel. The ceiling comprising one layer of 13mm CSR Soundcheck plasterboard.	41dB	30dB	41dB	30dB
6	As above with the addition of R2.0 105mm glasswool batt placed in the cavity so that there was mild compression of the insulation by the plasterboard panel.	51dB	36dB	51dB	36dB

Figure 25 provides details on how to attach a plasterboard lining to the underside of the **ARCPANEL** Firetek roof panel, by using standard metal furring channel, the plasterboard is attached in the conventional manner. The wall/ceiling junction as shown, does require a shadow joint junction.



Refer to maximum allowable distributed dead load table on page 15.

Suspended ceilings can be used, contact **ARCPANEL** for further information.

EARLY FIRE HAZARD PROPERTIES	AS/NZS 1530.3	TABLE 13
Ignitability Index	=	0
Spread of flame	=	0
Heat evolved index	=	0
Smoke produced index	=	5

CONSTRUCTION OF BUILDINGS IN BUSHFIRE PRONE AREAS

ARCPANEL FIRETEK PANEL MEETS THE REQUIREMENTS FOR BUILDINGS ASSESSED IN BUSHFIRE PRONE AREAS IN ACCORDANCE WITH SECTION 2 AS 3959 - 2009 AS BAL - 40

Designated bushfire prone area means land which has been designated under a power in legislation as being subject, or likely to be subject to bushfires.

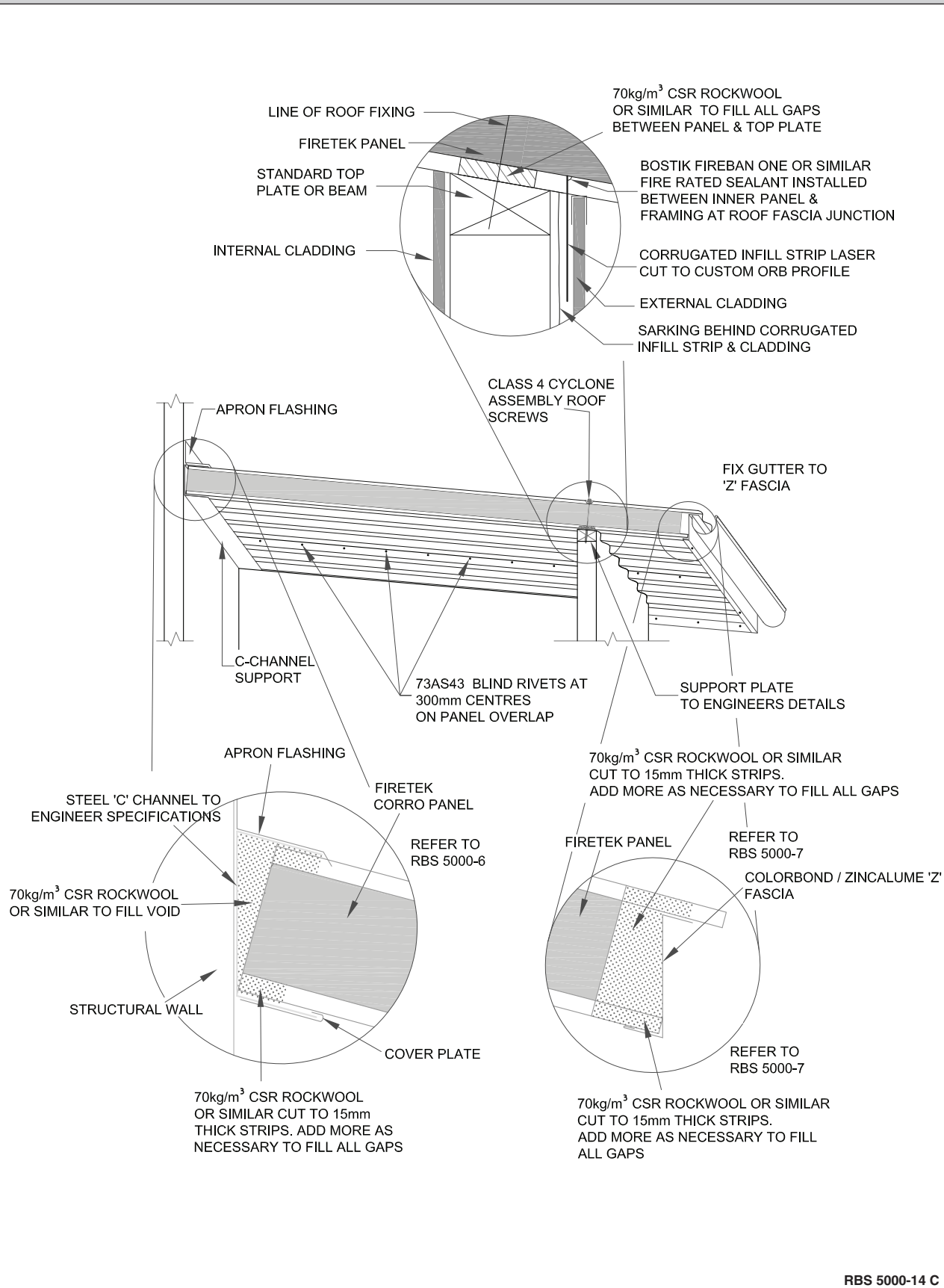
AS 3959-2009 determines that any residence situated less than 100m from unmanaged vegetation (including forests, woodlands, scrub, rainforests and shrubland) over one hectare in size, is deemed to be in a bushfire prone area and all new houses or alterations and additions must meet the Bushfire Attack Level (BAL) requirements.

To achieve a BAL 40 Rating the **ARCPANEL** Firetek roof panel must be installed in accordance with the following details. All penetrations through the panel must also be suitably sealed with fire retardant products. Please refer to the tables and data on pages 40 & 41 for further information on the BAL 40 rating. Should you require any further information please contact **ARCPANEL** for further details.

ARCPANEL Firetek Roof Panel - Fire Properties

BAL 40 INSTALLATION DETAILS

FIGURE 27

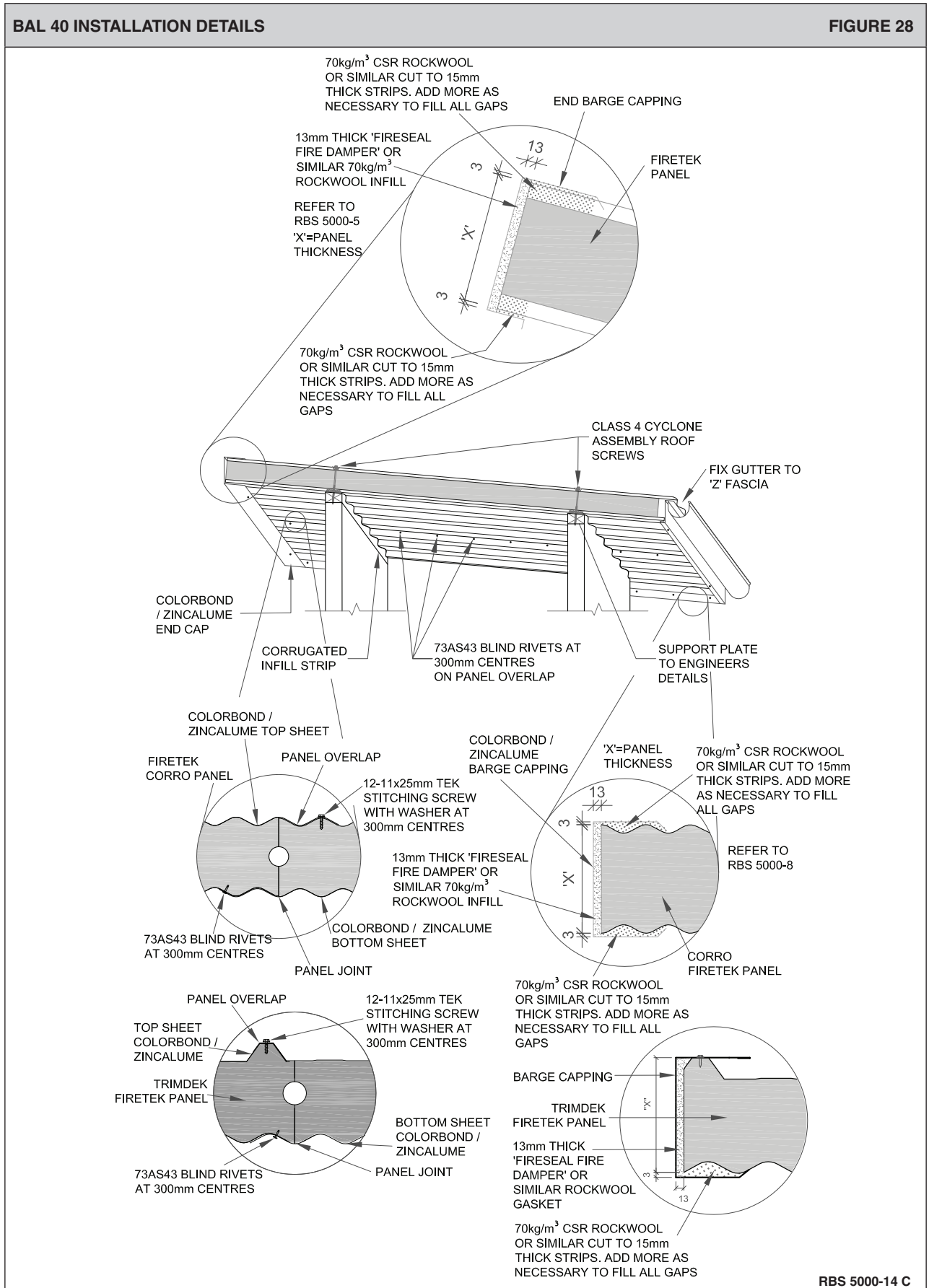


RBS 5000-14 C

ARCPANEL Firetek Roof Panel - Fire Properties

BAL 40 INSTALLATION DETAILS

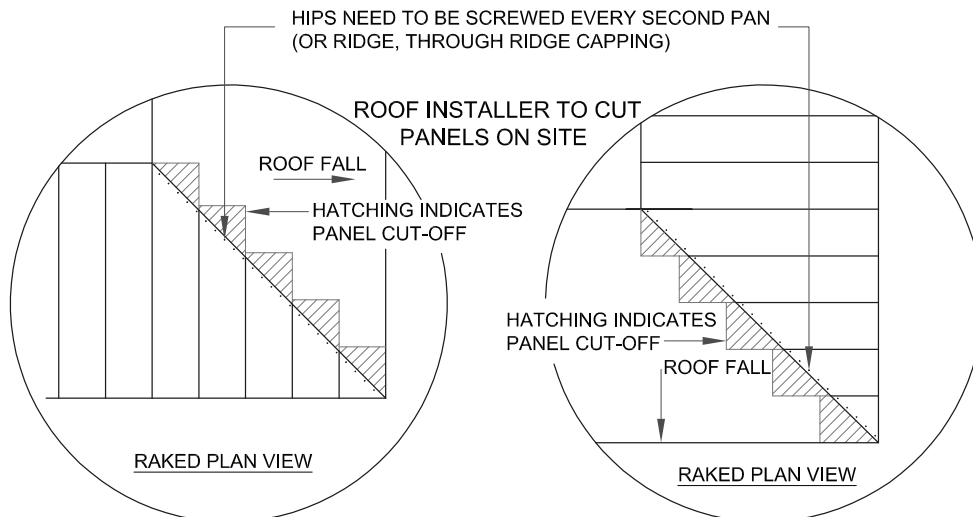
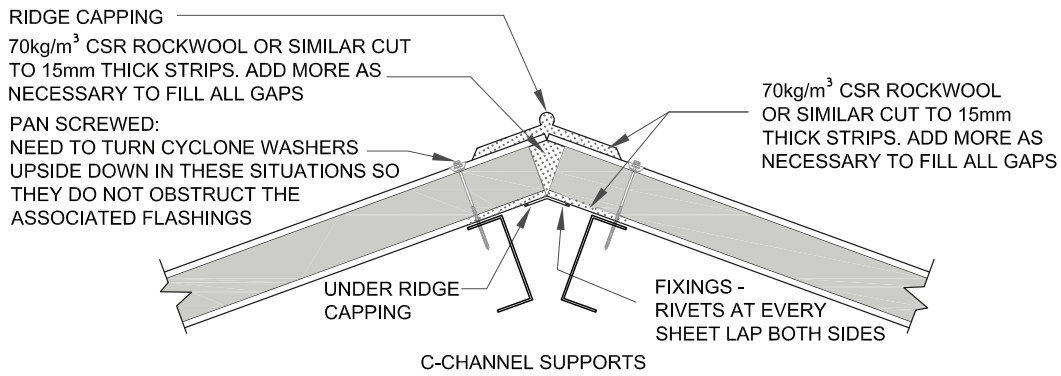
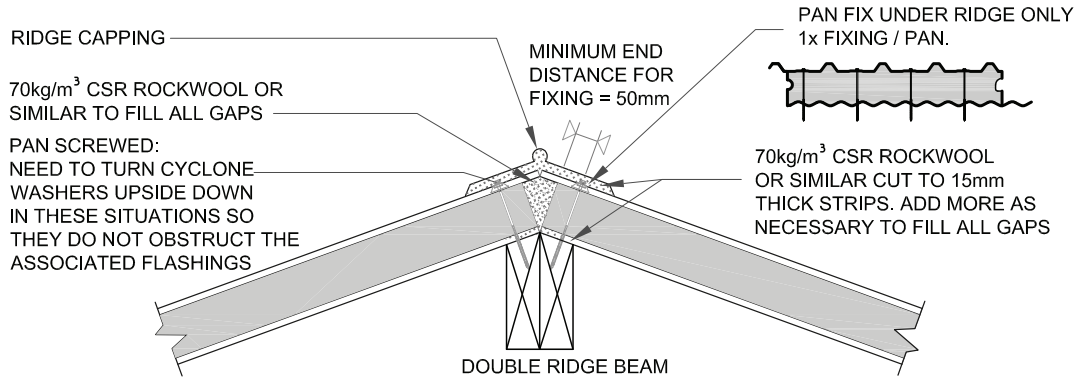
FIGURE 28



ARCPANEL Firetek Roof Panel - Fire Properties

TYPICAL HIP BEAM ARRANGEMENTS FOR BAL 40 REQUIREMENTS

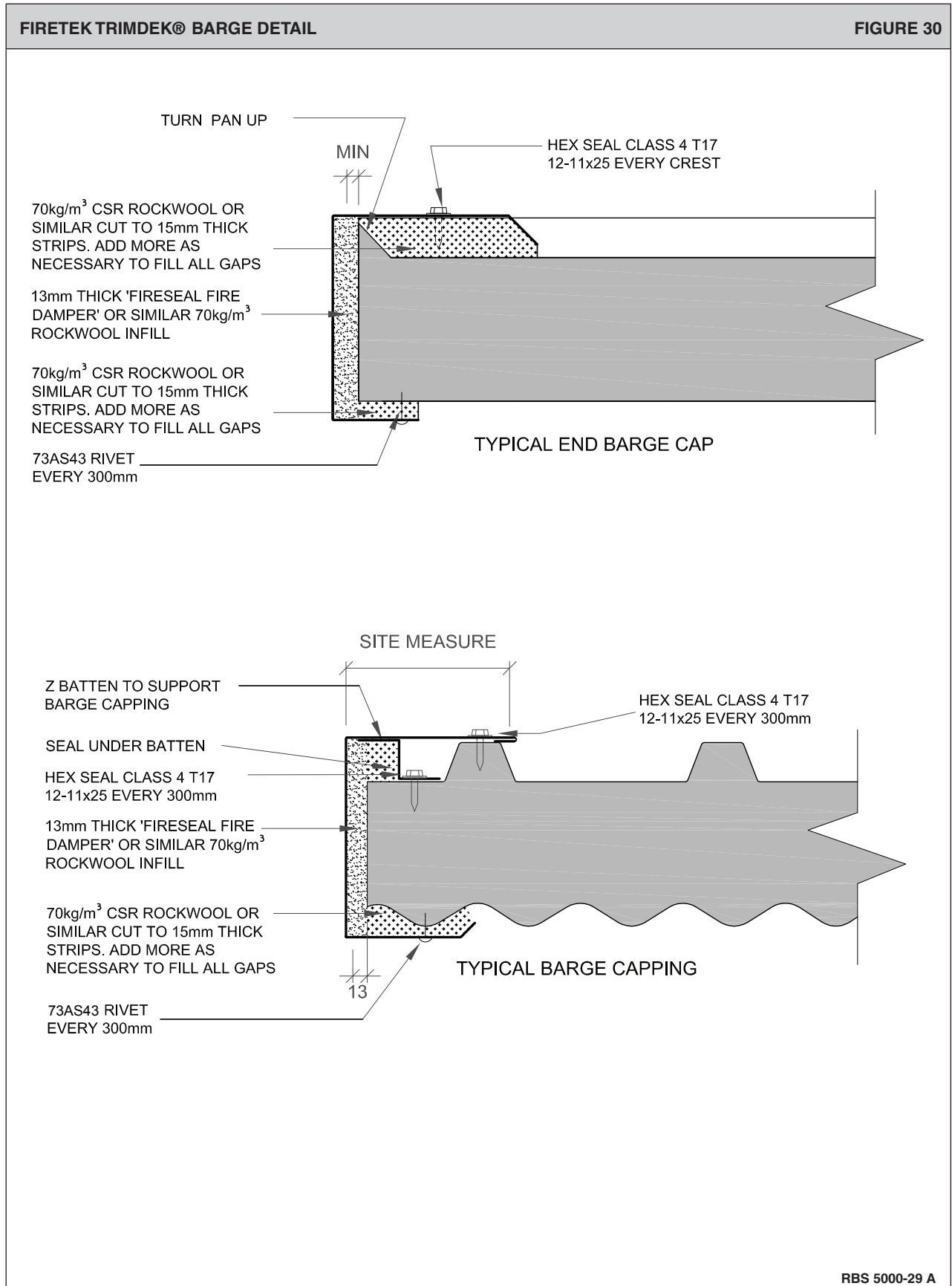
FIGURE 29



RBS 5000-23 A

ARCPANEL Firetek Roof Panel - Typical Details

Figure 30 shows standard barge capping details for the **ARCPANEL** Firetek Trimdek profiled roof panel.

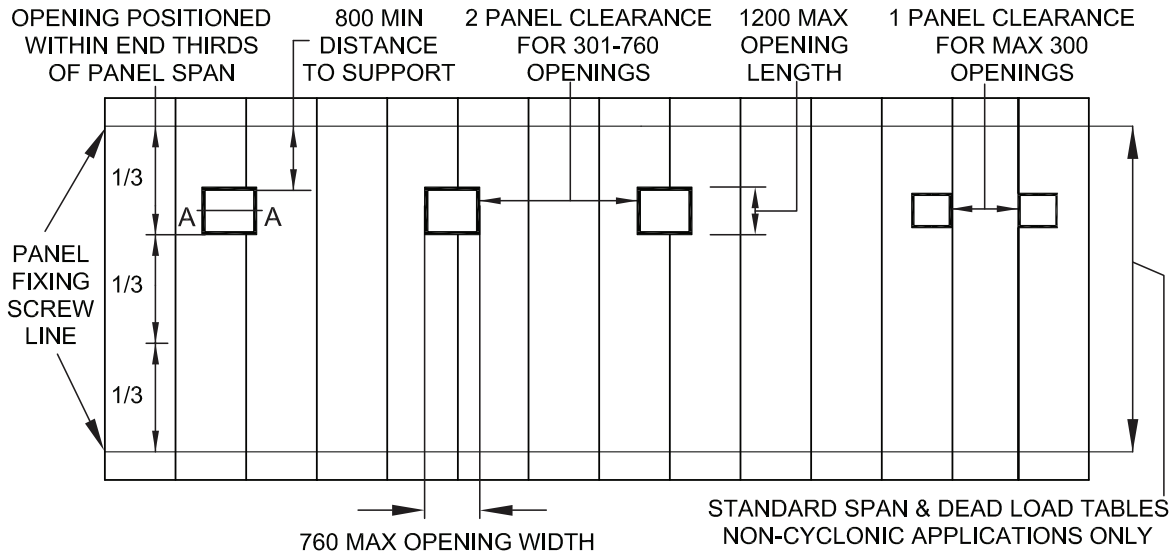


ARCPANEL Firetek Roof Panel - Roof Penetrations

ROOF PENETRATIONS

FIGURE 31

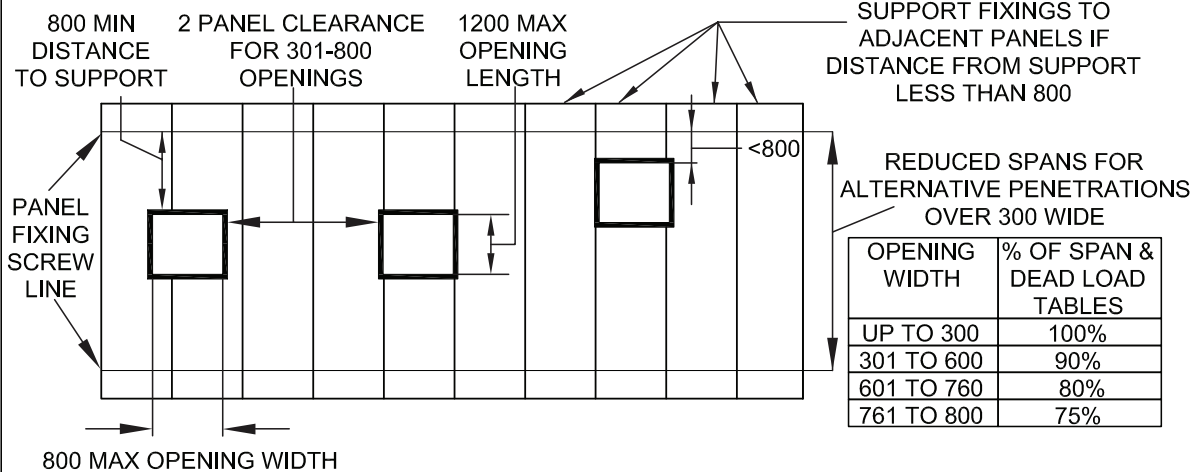
STANDARD ROOF PENETRATIONS - NON CYCLONIC ONLY



STANDARD ROOF PENETRATIONS - NOTE

If the (non-cyclonic) roof penetration is a maximum of 760mm wide by 1200mm long, and is positioned within the first third of the panel span, is 800mm minimum from the support, and has the continuous fully welded 2mm thick C-Channel, then the standard span tables apply.

ALTERNATIVE ROOF PENETRATIONS



ALTERNATIVE ROOF PENETRATIONS - NOTES

- Openings up to 300mm wide - full span tables
- Openings 301mm to 600mm wide - 90% of span tables
- Openings 601mm to 760mm wide - 80% of span tables
- Openings 761mm to 800mm wide - 75% of span tables
- Superimposed dead load capacity is reduced by the equivalent percentages as above
- Maximum length of openings to be 1200mm
- Continuous welded 2mm C-Channel to be provided to perimeter of openings greater than 300mm width
- Penetrations to be at least 800mm from the support OR Corrugated: where support fixing situation requires fixing every second crest; penetration can be within 800mm of support provided the adjacent whole panels each side to the penetration are provided with fixings to every crest. Trimdek: where support fixing situation requires one fixing every crest; penetration can be within 800mm of support provided the adjacent whole panels each side to the penetration are provided with two fixings to every crest.
- A minimum of 2 whole panels to be provided between roof penetrations greater than 300mm; 1 whole panel for openings of 300mm or less
- When considering the racking capacity of the roof diaphragm; the project design engineer is to allow that roof penetrations with length more than 800mm will divide up the length of roof sections
- Refer to ARCPANEL for any proposed penetrations outside the rules stated.

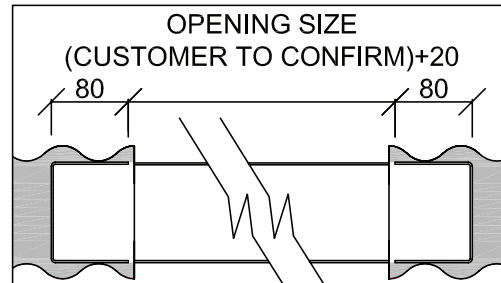
RBS 5000-33-1 A

ROOF PENETRATIONS

FIGURE 32

SECTION A-A

(corrugated profile shown)



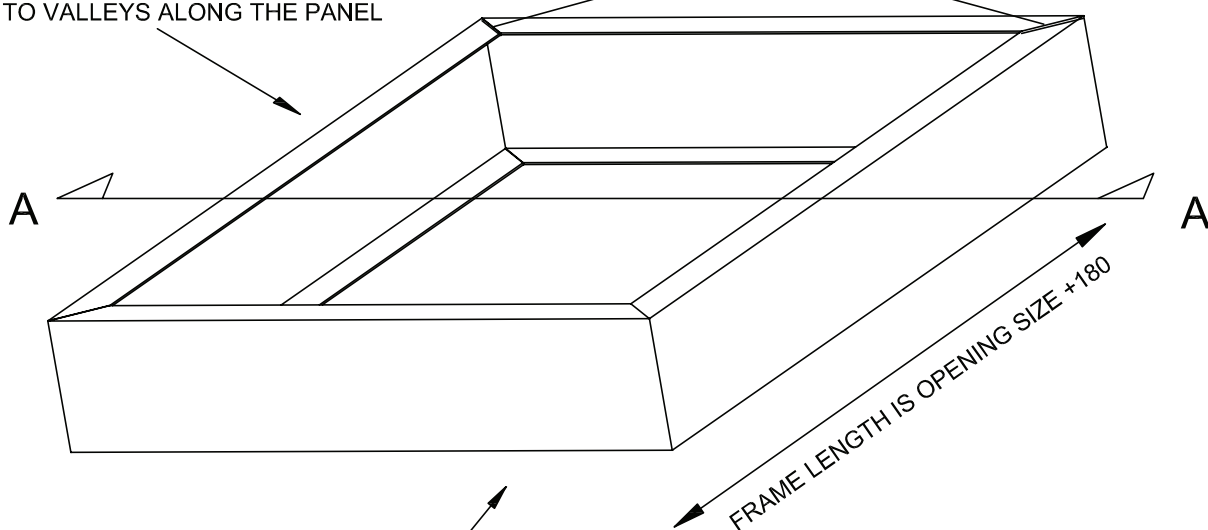
CONTINUOUS C - CHANNEL FRAME

TOP FIXINGS

SCREWS FIXED INTO FRAME EVERY 2ND CREST FOR CORRUGATED AND EVERY CREST FOR TRIMDEK ACROSS THE PANEL VALLEY AND AT 150MM CENTRES TO VALLEYS ALONG THE PANEL

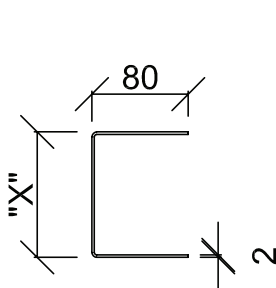
FRAME WIDTH IS OPENING SIZE + 180

WELD SEAMS



BOTTOM FIXINGS

RIVETS FIXED INTO FRAME EVERY 2ND CREST ACROSS THE PANEL VALLEY AND AT 150MM CENTRES TO VALLEYS ALONG THE PANEL



CONTINUOUS C CHANNEL CORRUGATED PROFILE	
PANEL THICKNESS	DIMENSION 'X'
85mm	49mm
105mm	69mm
125mm	89mm
150mm	104mm

CONTINUOUS C CHANNEL TRIMDEK PROFILE	
PANEL THICKNESS	DIMENSION 'X'
105mm	50mm
125mm	70mm
150mm	95mm

CONTINUOUS C-CHANNEL ONLY REQUIRED FOR OPENINGS GREATER THAN 300mm WIDE

RBS 5000-33-2 C

ARCPANEL Firetek Roof Panel - Fixing & Rainwater Lapping Information

FIXING SCHEDULE FIRETEK CORRUGATED PANEL - RAINWATER GOODS							TABLE 14
Item	Topside		Underside		Vertical Face		
	Type	Spacing	Type	Spacing	Type	Spacing	
Barge Capping	Stitching screws	300mm	Rivet	300mm	Rivets	All external corners	
Z Fascia	Rivet	Every 2nd crest	Rivet	Every 2nd crest	Rivet	All external corners	
Apron Flashing	Stitching screws (end)	Every 2nd crest	N/A		N/A		
	Stitching screws (side)	300mm					
C - Channel (Refer to Fixing Detail)	Stitching screws	Every 2nd crest *1	Rivets attach to cover plate	300mm	No allowance is made for fixings required to attach C - Channel to the wall or frame		
	12 x 35 Metal Tek						
End Cap	Stitching screws	Every 2nd crest	Rivet	300mm	N/A		
Ridge Cap	Stitching screws	Every 2nd crest	N/A		N/A		

FIXING SCHEDULE FIRETEK TRIMDEK® PANEL - RAINWATER GOODS							TABLE 15
Item	Topside		Underside		Vertical Face		
	Type	Spacing	Type	Spacing	Type	Spacing	
Barge Capping	Stitching Screws	300mm	Rivet	300mm	Rivets	All external corners	
Z Batten Support	Stitching Screws	300mm	Stitching Screws	300mm	N/A		
			Add Sealant to underside prior to fixing				
Z Fascia	Rivet	Every Pan	Rivet	Every 2nd Crest	Rivet	All external corners	
Apron Flashing	Stitching Screws (End)	Every Crest	N/A		N/A		
	Stitching Screws (Side)	300mm					
C - Channel (Refer to Fixing Detail)	Stitching Screws	Every Crest *1	Rivets attach to cover plate	300mm	No allowance is made for fixings required to attach C - Channel to the wall or frame		
	12 x 35 Metal Tek						
End Cap	Stitching Screws	Every Crest	Rivet	300mm	N/A		

Fixing and Rainwater lapping Information

The tables above list the recommended fixing method for the **ARCPANEL** Firetek roof panels, however in some situations additional fixing and/or different spacing may be required due to wind loads, structural requirements etc. An engineer should be consulted to confirm that the above fixings will be adequate for the individual project. **ARCPANEL** recommends that an experienced installer is used for fixing and finishing of the **ARCPANEL** Firetek roof panels.

*1 Please refer to standard fixing C - Channel details

STANDARD RAINWATER LAPPING ALLOWANCE FOR RAINWATER GOODS					TABLE 16
Wastage Allowance - (Amount added to exact roof dimension, in mm)					
Item	Length	At Joins	External Corners (Mitred Joins)	90 Degree Returns	
Barge Capping Side & End	150mm	150mm	N/A	250mm	
Z Fascia	150mm	150mm	N/A	N/A	
Gutter	150mm	150mm	250mm	250mm	
Apron Flashing	150mm	150mm	250mm	250mm	
C-Channel	100mm	0	150mm	150mm	

Downpipe Outlets

Details: Supplied to suit gutter chosen.

Used: Are supplied at intervals specified on customer's drawing, failing this they will be typically supplied to suit a spacing of 12.0m, refer to relevant standards.

Downpipes

Downpipes are not supplied by **ARCPANEL**.

Gutter Stop Ends

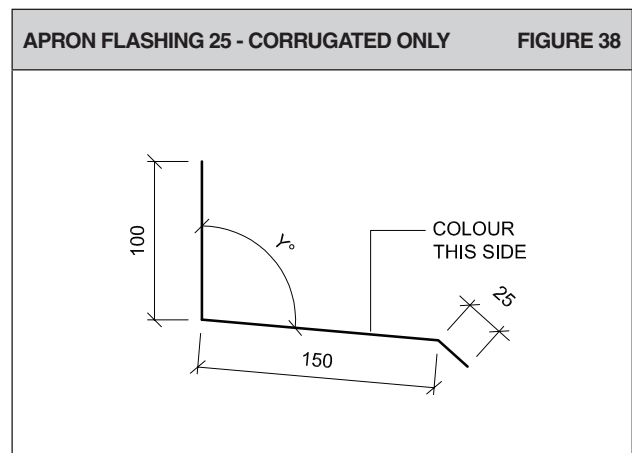
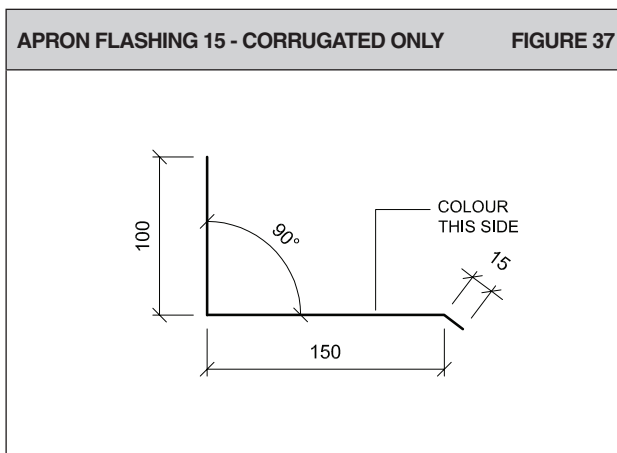
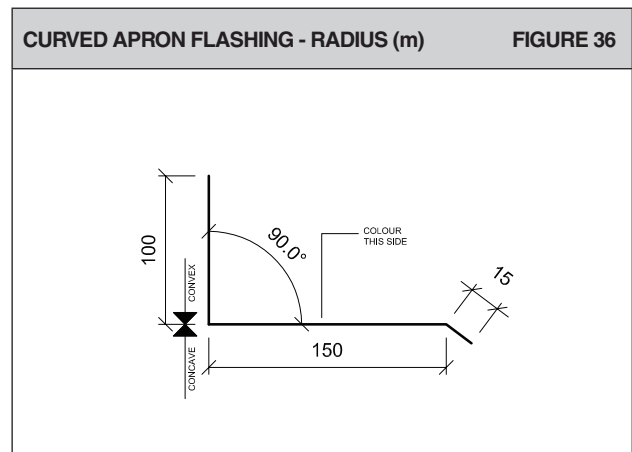
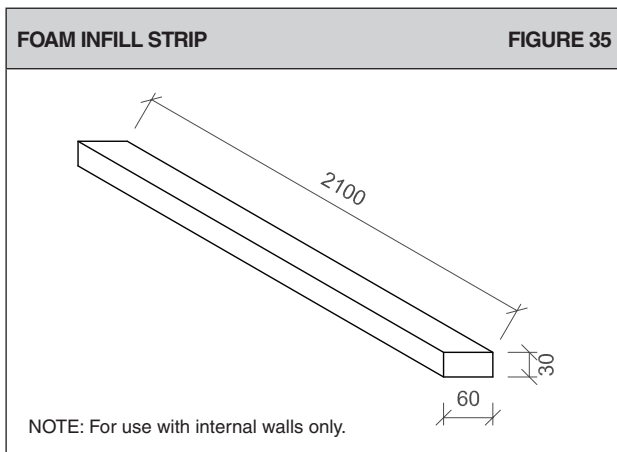
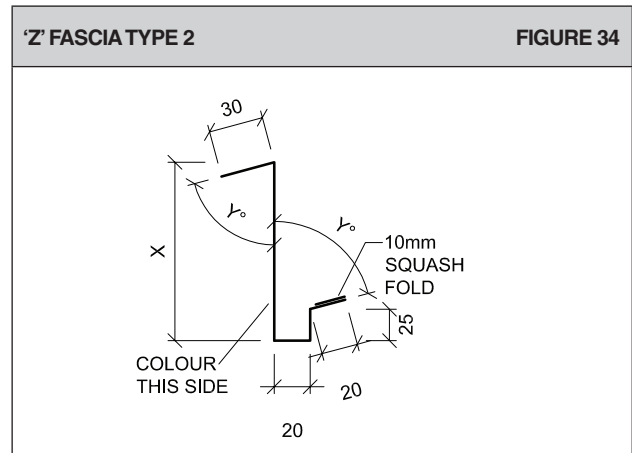
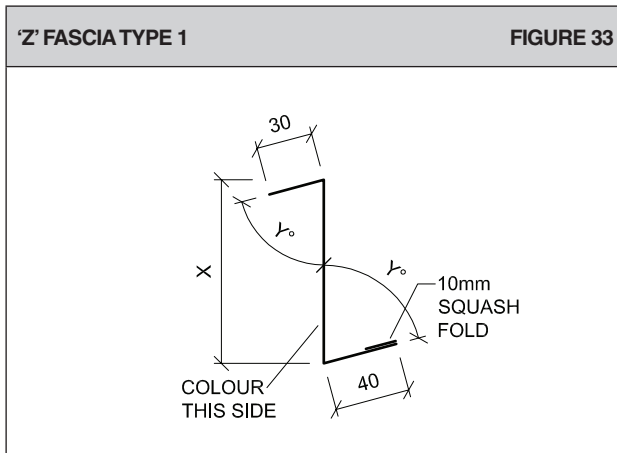
Supplied in left and right hand, to suit gutter chosen.

Gutter Brackets (Concealed)

Brackets are typically calculated at 900 C / C (mm).

Gutter Brackets (External for half round)

Brackets are typically calculated at 900 C / C (mm).

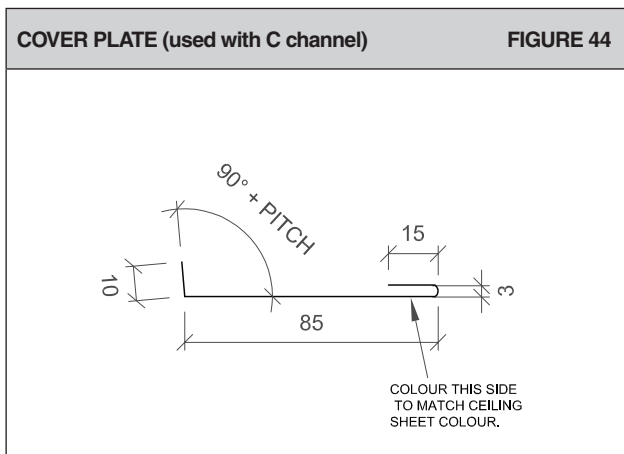
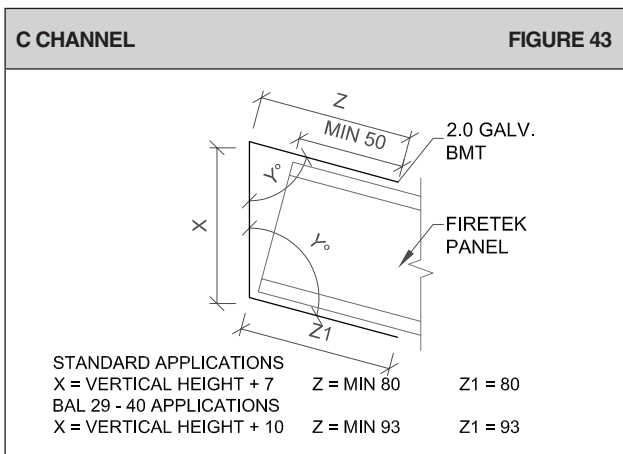
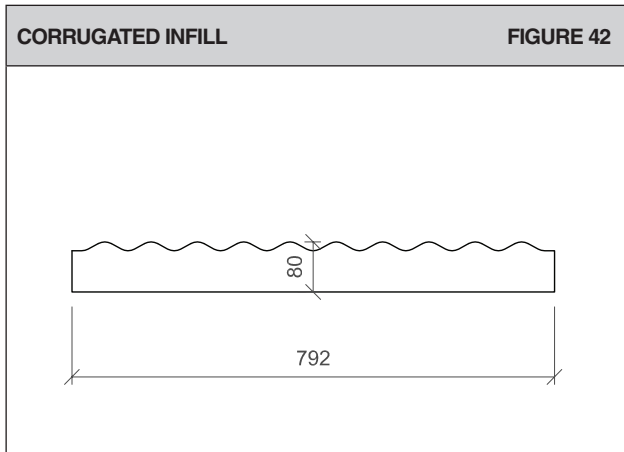
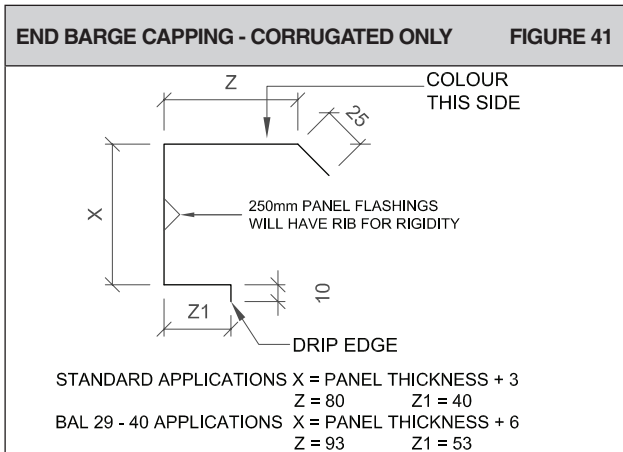
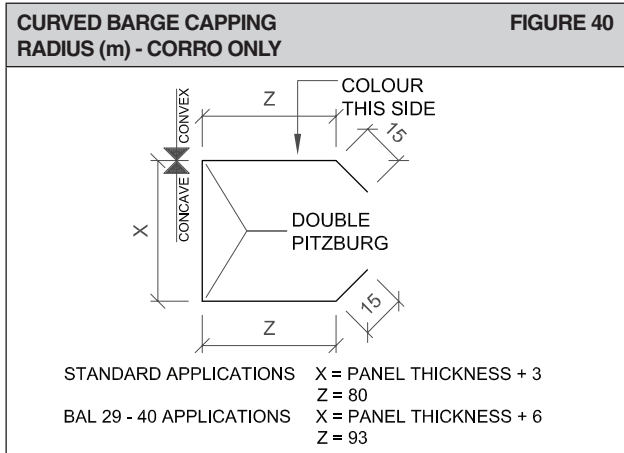
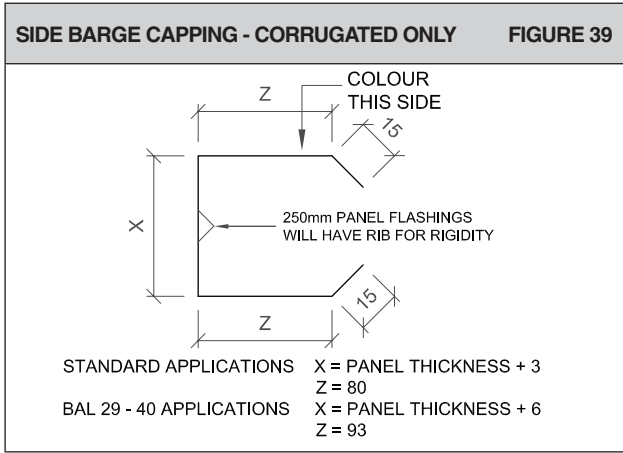


RBS 5000-21A

X = Dependent on panel thickness, Y = Dependent on roof pitch. Typically BMT = 0.55. Refer to page 30 for fixing details.

Additional Note. If poly film is supplied on any ARCPANEL panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any ARCPANEL panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to remove the poly film may result in difficulty to remove the film and possible staining.

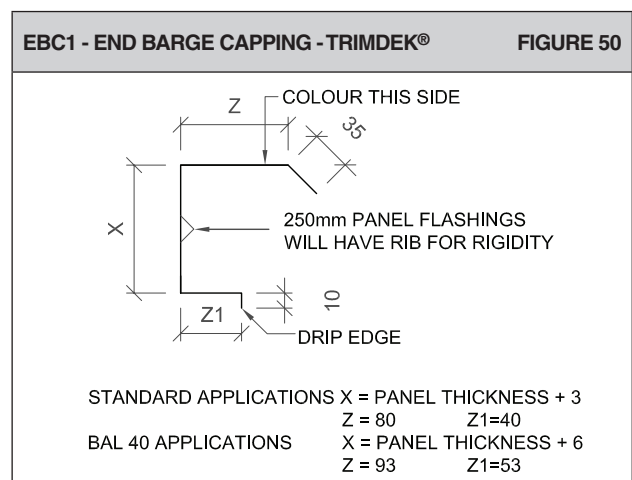
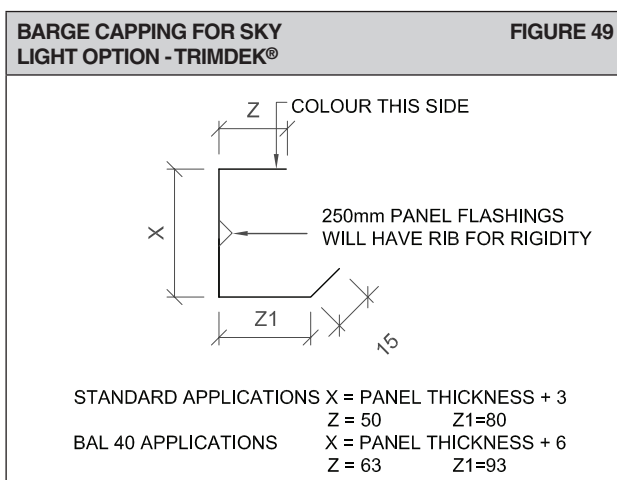
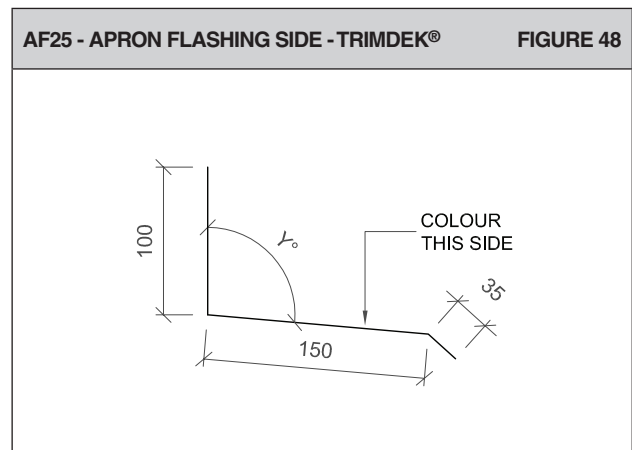
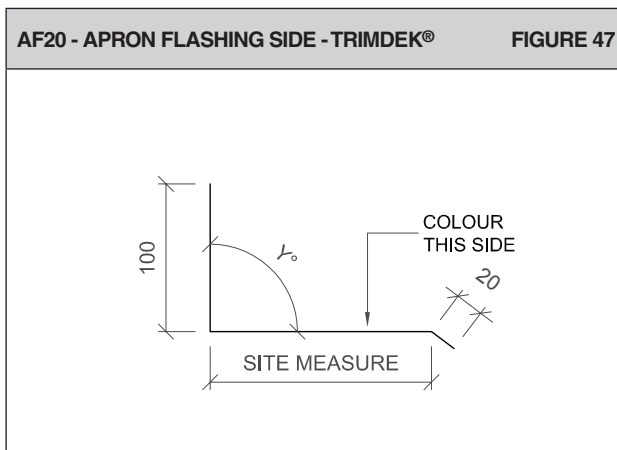
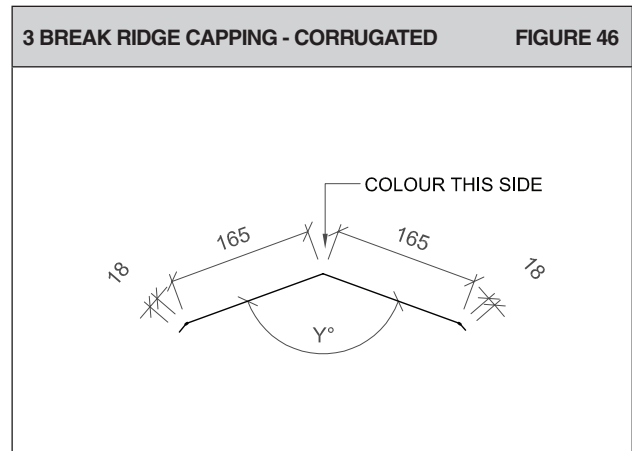
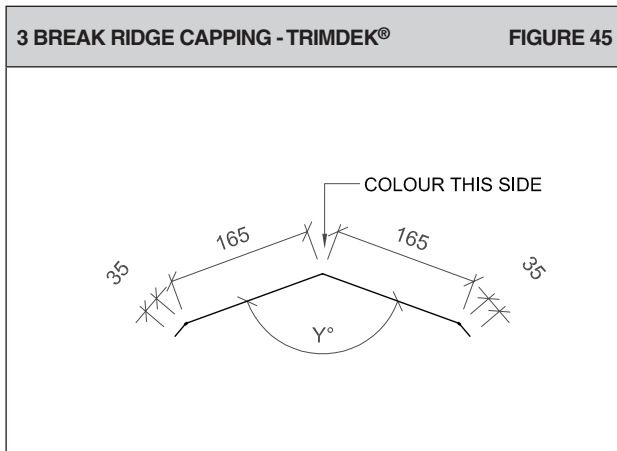
ARCPANEL Firetek Roof Panel - Accessories



RBS 5000-22 B

X = Dependent on panel thickness, Y = Dependent on roof pitch. Typically BMT = 0.55. Refer to page 30 for fixing details.

Additional Note. If poly film is supplied on any ARCPANEL panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any ARCPANEL panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to remove the poly film may result in difficulty to remove the film and possible staining.

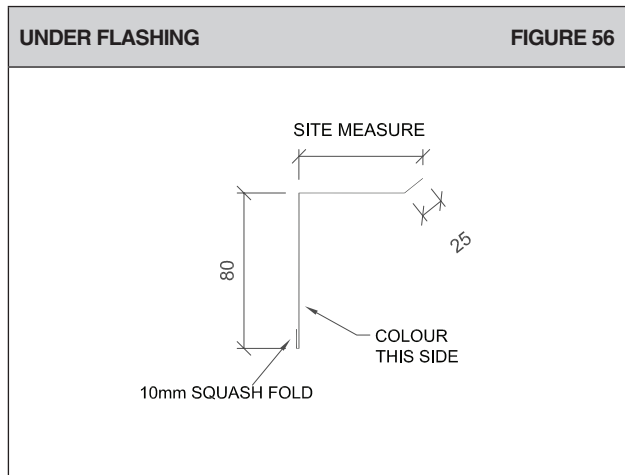
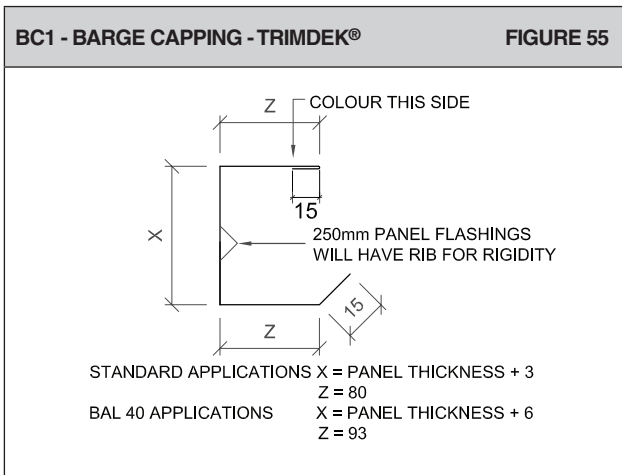
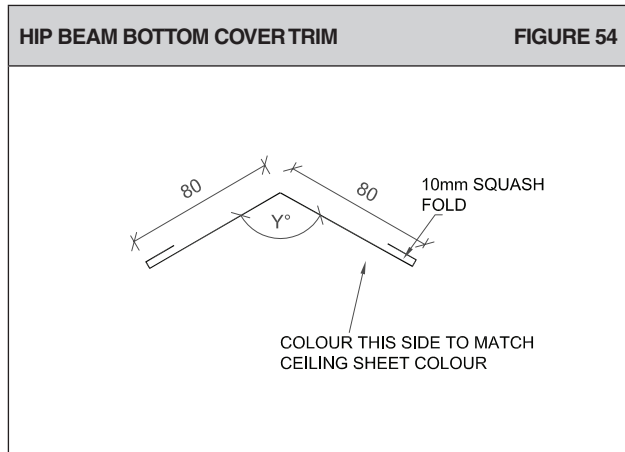
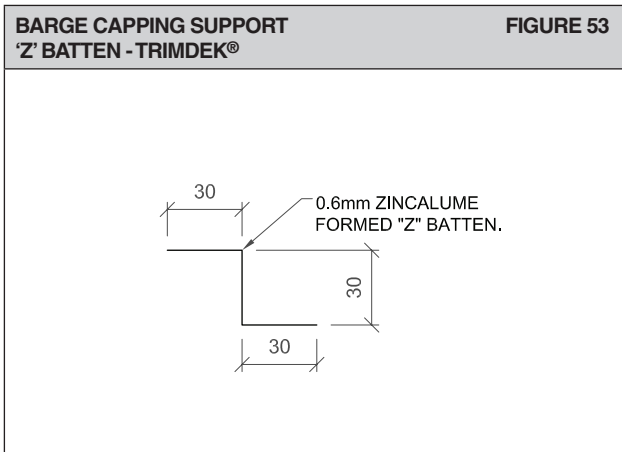
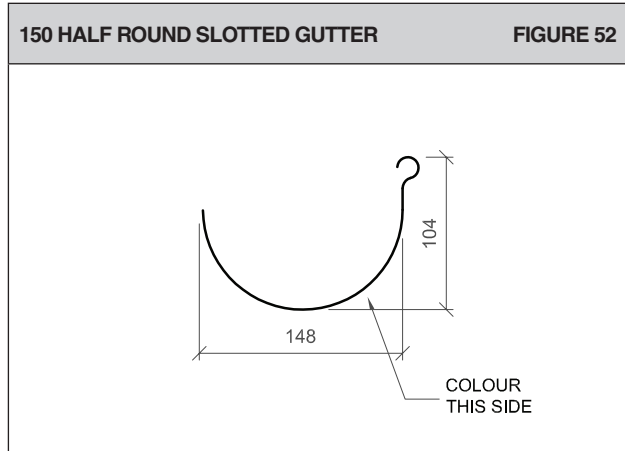
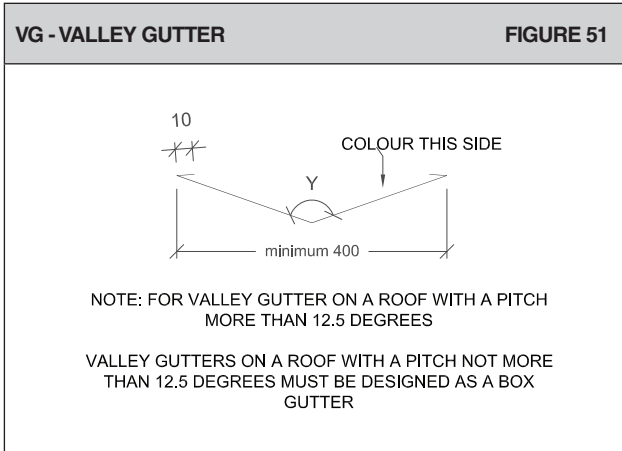


RBS 5000-31 B

X = Dependent on panel thickness, Y = Dependent on roof pitch. Typically BMT = 0.55. Refer to page 30 for fixing details.

Additional Note. If poly film is supplied on any ARCPANEL panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any ARCPANEL panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to remove the poly film may result in difficulty to remove the film and possible staining.

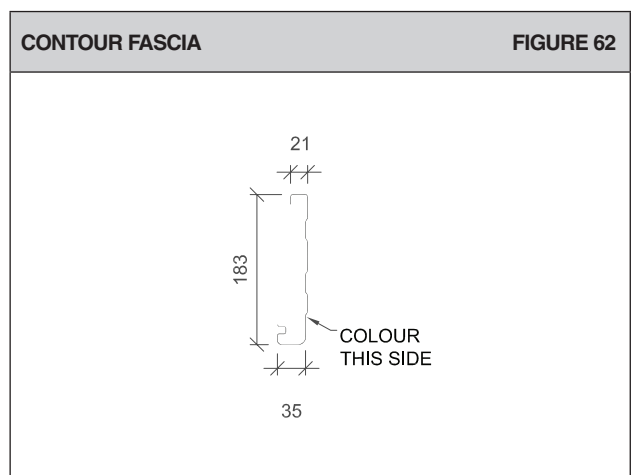
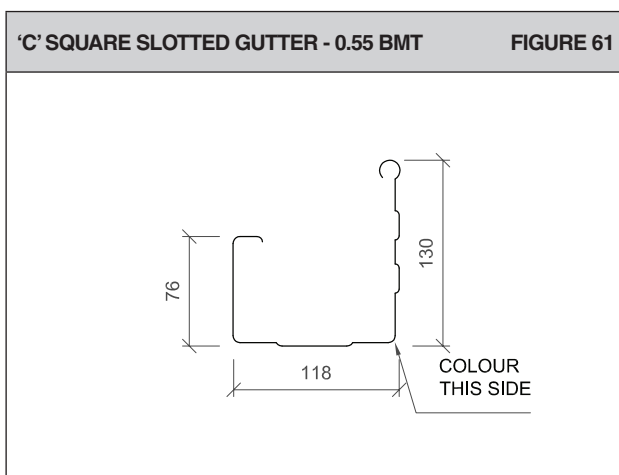
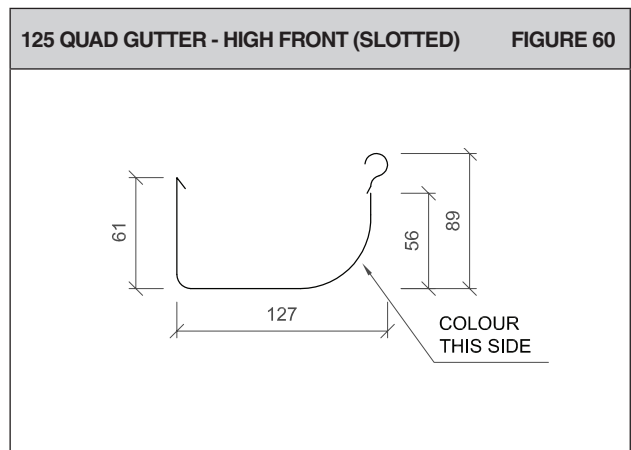
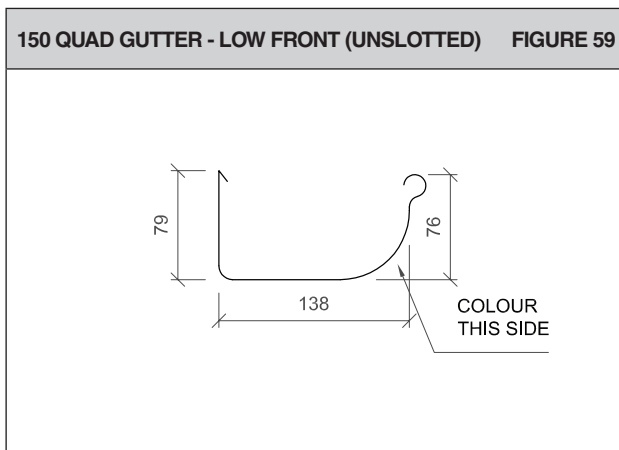
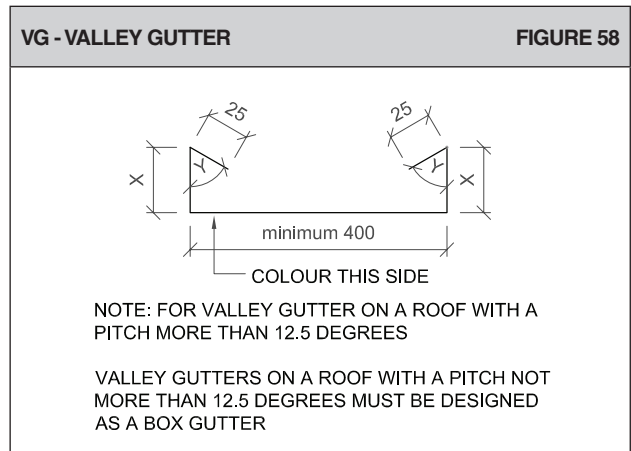
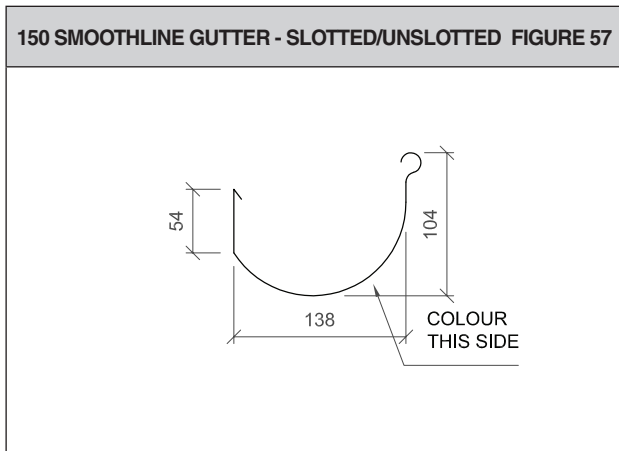
ARCPANEL Firetek Roof Panel - Accessories



RBS 5000-32 C

X = Dependent on panel thickness, Y = Dependent on roof pitch. Typically BMT = 0.55. Refer to page 30 for fixing details.

Additional Note. If poly film is supplied on any ARCPANEL panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any ARCPANEL panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to remove the poly film may result in difficulty to remove the film and possible staining.



RBS 5000-31 B

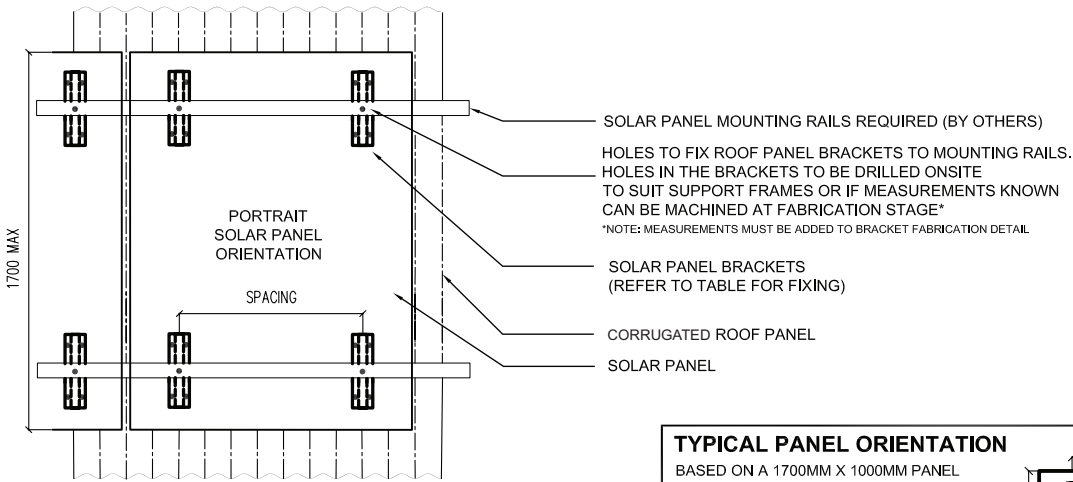
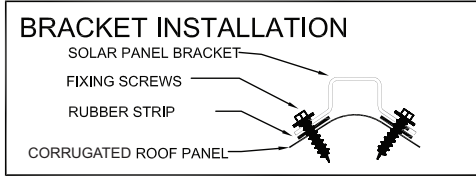
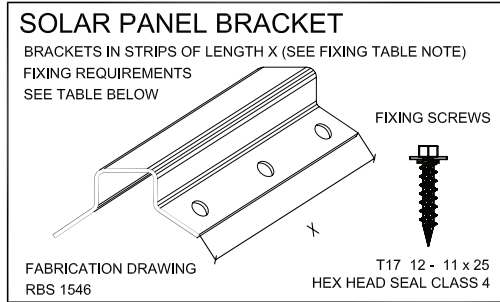
X = Dependent on panel thickness, Y = Dependent on roof pitch. Typically BMT = 0.55. Refer to page 30 for fixing details.

Additional Note. If poly film is supplied on any ARCPANEL panels, flashings and accessories, it must be removed within one week of manufacture. In the event that any ARCPANEL panels, flashings and accessories require storage in excess of one week, they must be fully covered and protected from direct sunlight and weathering. Failure to remove the poly film may result in difficulty to remove the film and possible staining.

ARCPANEL Firetek Roof Panel - Solar Panel Bracket - Corrugated

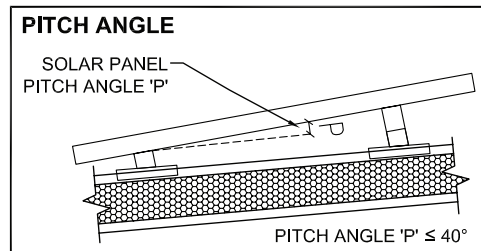
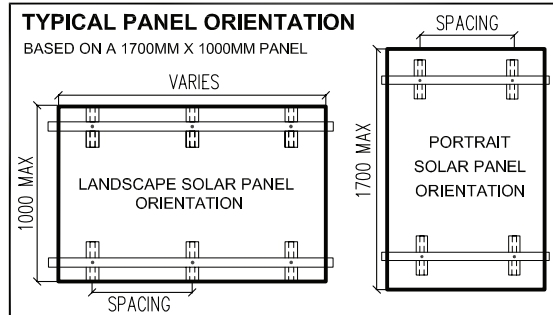
SOLAR PANEL BRACKET - CORRUGATED

FIGURE 63



FIXING REQUIREMENTS							
USING TYPE 17 12-11-25 CLASS 4 WITH SEAL							
PORTRAIT SOLAR PANEL ORIENTATION							
SOLAR PANEL PITCH < 5°				SOLAR PANEL PITCH ≥ 5°			
WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET	WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET
N2-W33	1.52	600	4	N2-W33	2.16	600	6
N3-W41	2.34	450	6	N3-W41	3.32	450	6
N4-W50	3.50	300	6	N4-W50	4.97	300	6
N5-W60	5.03	300	6	N5-W60	7.14	300	10
C1-W41	3.11	300	4	C1-W41	3.79	300	6
C2-W50	4.62	300	6	C2-W50	5.64	300	8
C3-W60	6.65	225	6	C3-W60	8.11	300	10
C4-W70	9.05	225	10	C4-W70	11.04	225	10

LANDSCAPE SOLAR PANEL ORIENTATION							
SOLAR PANEL PITCH P < 5°				SOLAR PANEL PITCH P ≥ 5°			
WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET	WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET
N2-W33	1.52	600	4	N2-W33	2.16	600	4
N3-W41	2.34	600	4	N3-W41	3.32	450	4
N4-W50	3.50	450	4	N4-W50	4.97	300	4
N5-W60	5.03	450	6	N5-W60	7.14	300	6
C1-W41	3.11	450	4	C1-W41	3.79	450	4
C2-W50	4.62	300	4	C2-W50	5.64	450	6
C3-W60	6.65	450	8	C3-W60	8.11	450	10
C4-W70	9.05	300	8	C4-W70	11.04	300	8



NOTES

IF BRACKETS TO BE USED IN A COASTAL AREA WE RECOMMEND POWDER COATING THE BRACKETS FOR CORROSION RESISTANCE.

TYPE 17 12-11-25 CLASS 4 WITH SEAL
TYPICAL PULLOUT PER SCREW 260N
LOCATE PANELS AWAY FROM ROOF EDGES AND RIDGE

NOTE: 4/6/8 SCREW BRACKET = 200MM LONG, 10 SCREW BRACKET = 250MM LONG
FIXING TABLE APPLIES TO SOLAR PANELS UP TO 1700MM X 1000MM INSTALLED WITH RAILS DISTRIBUTING THE LOAD ACROSS NUMEROUS BRACKETS. FOR PANELS OUTSIDE THIS SPEC AND INSTALLATION METHOD, PROFESSIONAL CONSULTANTS ARE REQUIRED AND JOB SPECIFIC FIXING REQUIREMENTS SHOULD BE CALCULATED USING THE PULL OUT VALUE OF 260N/SCREW.

NOTE: THE DESIGN OF THE ROOF BRACKET SYSTEM FOR A SOLAR PANEL MOUNTING APPLICATION REQUIRES THE SERVICES OF PROFESSIONAL CONSULTANTS. THIS INFORMATION HAS BEEN PREPARED AS A SOURCE OF INFORMATION TO PROVIDE GENERAL GUIDANCE TO PROFESSIONAL CONSULTANTS AND NO WAY REPLACES THE SERVICES OF PROFESSIONAL CONSULTANTS. NO LIABILITY CAN THEREFORE BE ACCEPTED BY ARCHITECTURAL PANELS PTY LTD FOR ITS USE.

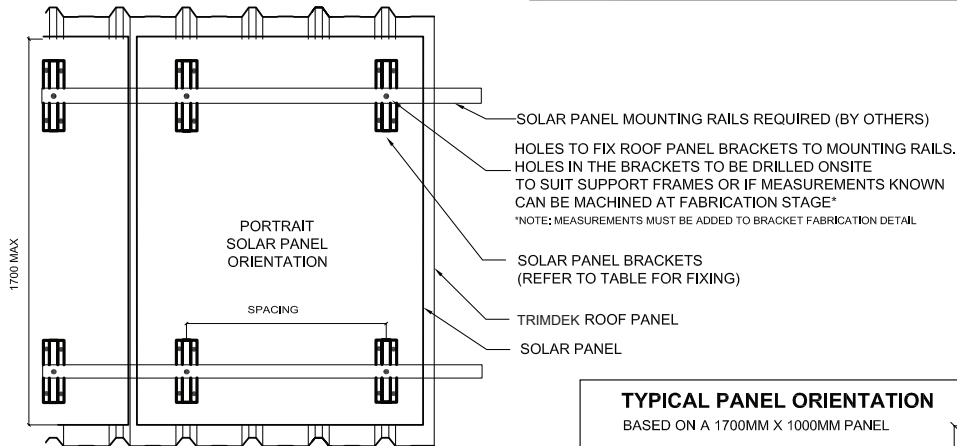
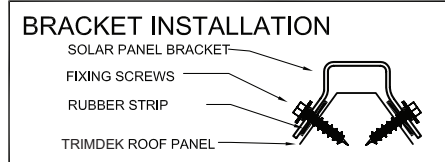
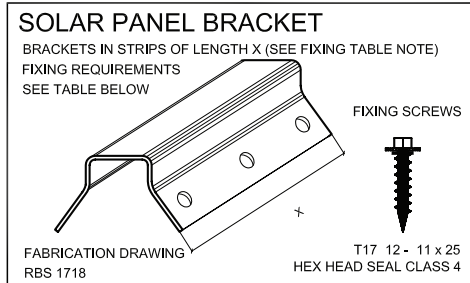
WHEN PLACING OBJECTS ON ROOF: MAXIMUM DISTRIBUTED LIVE LOAD IS 0.25KPA. REFER TO MAX ALLOWABLE DEAD LOADS ON PAGE 15.

CERTIFIED BY TOD CONSULTING ENGINEERS 21/06/13

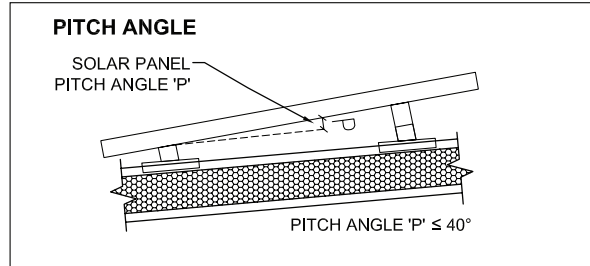
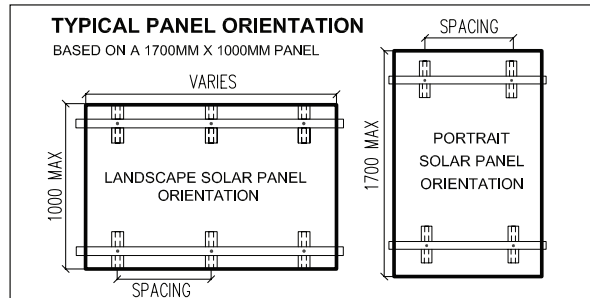
RBS 1546-D

SOLAR PANEL BRACKET - TRIMDEK®

FIGURE 64



FIXING REQUIREMENTS						
USING TYPE 17 12-11-25 CLASS 4 WITH SEAL						
PORTRAIT SOLAR PANEL ORIENTATION						
SOLAR PANEL PITCH < 5°				SOLAR PANEL PITCH ≥ 5°		
WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET	WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SCREWS PER BRACKET
N2-W33	1.52	570	4	N2-W33	2.16	570
N3-W41	2.34	570	6	N3-W41	3.32	380
N4-W50	3.50	380	6	N4-W50	4.97	380
N5-W60	5.03	380	8	N5-W60	7.14	190
C1-W41	3.11	380	6	C1-W41	3.79	380
C2-W50	4.62	380	8	C2-W50	5.64	380
C3-W60	6.65	190	6	C3-W60	8.11	190
C4-W70	9.05	190	8	C4-W70	11.04	190
LANDSCAPE SOLAR PANEL ORIENTATION						
SOLAR PANEL PITCH P < 5°				SOLAR PANEL PITCH P ≥ 5°		
WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SPACING OF BRACKETS (mm)	SCREWS PER BRACKET	WIND CLASS	LIMIT STATE DESIGN PRESSURE (kPa)	SCREWS PER BRACKET
N2-W33	1.52	570	4	N2-W33	2.16	570
N3-W41	2.34	570	4	N3-W41	3.32	570
N4-W50	3.50	380	4	N4-W50	4.97	380
N5-W60	5.03	380	6	N5-W60	7.14	380
C1-W41	3.11	570	6	C1-W41	3.79	570
C2-W50	4.62	380	6	C2-W50	5.64	380
C3-W60	6.65	380	6	C3-W60	8.11	380
C4-W70	9.05	380	8	C4-W70	11.04	190



NOTES

IF BRACKETS TO BE USED IN A COASTAL AREA WE RECOMMEND POWDER COATING THE BRACKETS FOR CORROSION RESISTANCE.

TYPE 17 12-11-25 CLASS 4 WITH SEAL
TYPICAL PULLOUT PER SCREW 260N

LOCATE PANELS AWAY FROM ROOF EDGES AND RIDGE

NOTE: 4/6/8 SCREW BRACKET = 200MM LONG, 10 SCREW BRACKET = 250MM LONG

FIXING TABLE APPLIES TO SOLAR PANELS UP TO 1700MM X 1000MM INSTALLED WITH RAILS DISTRIBUTING THE LOAD ACROSS NUMEROUS BRACKETS. FOR PANELS OUTSIDE THIS SPEC AND INSTALLATION METHOD, PROFESSIONAL CONSULTANTS ARE REQUIRED AND JOB SPECIFIC FIXING REQUIREMENTS SHOULD BE CALCULATED USING THE PULL OUT VALUE OF 260W SCREW.

NOTE: THE DESIGN OF THE ROOF BRACKET SYSTEM FOR A SOLAR PANEL MOUNTING APPLICATION REQUIRES THE SERVICES OF PROFESSIONAL CONSULTANTS. THIS INFORMATION HAS BEEN PREPARED AS A SOURCE OF INFORMATION TO PROVIDE GENERAL GUIDANCE TO PROFESSIONAL CONSULTANTS AND NO WAY REPLACES THE SERVICES OF PROFESSIONAL CONSULTANTS. NO LIABILITY CAN THEREFORE BE ACCEPTED BY ARCHITECTURAL PANELS PTY LTD FOR ITS USE.

WHEN PLACING OBJECTS ON ROOF: MAXIMUM DISTRIBUTED LIVE LOAD IS 0.25KPA. REFER TO MAX ALLOWABLE DEAD LOADS ON PAGE 15.

CERTIFIED BY TOD CONSULTING ENGINEERS 21/06/13

RBS 1718 D

ARCPANEL Firetek Roof Panel - Fire Test Certificate

AWTA PRODUCT TESTING

Australian Wool Testing Authority Ltd - trading as AWTA Product Testing
 A.B.N. 43 006 014 106
 1st Floor, 191 Racecourse Road, Flemington, Victoria 3031
 P.O. Box 240, North Melbourne, Victoria 3051
 Phone (03) 9371 2400 Fax (03) 9371 2499

TEST REPORT

CLIENT : RITEK BUILDING SOLUTIONS
 19 LOWER MILL ROAD
 COOROY QLD 4563

TEST NUMBER : 7-583853-CQ
 ISSUE DATE : 05/03/2012
 PRINT DATE : 16/03/2012

SAMPLE DESCRIPTION Clients Ref: "enquiries@ritek.net.au"
 White corrugated iron face and back with expanded foam
 in middle of panels
 Colour: White Iron Face
 Approximate Total Thickness: 90mm
 Approximate Total Weight: 11kg/m2

THESE RESULTS MUST BE CONSIDERED IN CONJUNCTION
 WITH THE COMMENTS ON THE FOLLOWING PAGE(S)

Material Specification provided by client:
 Nominal Composition: Polyisocyanurate, 40kg/m3

AS/NZS 1530.3 - 1999 Simultaneous determination of Ignitability, Flame
 Propagation, Heat Release and Smoke Release

RESULTS: Face tested: Face
 Date tested: 29/02/2012

	Mean	min	Standard Error
Ignition time	Nil	min	Nil
Flame propagation time	Nil	s	Nil
Heat release integral	Nil	kJ/m2	Nil
Smoke release, log d	-0.5925		0.0377
Optical density, d	0.2605	/m	

Number of specimens ignited: 0
 Number of specimens tested: 6

REGULATORY INDICES: Ignitability Index 0 Range 0-20
 Spread of Flame Index 0 Range 0-10
 Heat Evolved Index 0 Range 0-10
 Smoke Developed Index 5 Range 0-10

Comments:

These results only apply to the specimen mounted, as described in this report.

The results of this fire test may be used to directly assess fire hazard,
 but it should be recognized that a single test method will not provide a full
 assessment of fire hazard under all fire conditions.

192679 1

CONTINUED NEXT PAGE

PAGE 1

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This Laboratory is accredited by the National Association of Testing Authorities, Australia, for:
 -Chemical Testing of Textiles & Related Products : Accreditation No. 983
 -Mechanical Testing of Textiles & Related Products : Accreditation No. 985
 -Heat & Temperature Measurement : Accreditation No. 1356

This document is issued in accordance with NATA's accreditation requirements. Samples, and their identifying descriptions have been provided by the client unless otherwise stated. AWTA Ltd makes no warranty, implied or otherwise, as to the source of the tested samples. The above test results relate only to the sample or samples tested. This document shall not be reproduced except in full and shall be rendered void if amended or altered. This document, the names AWTA Product Testing and AWTA Ltd may be used in advertising providing the content and format of the advertisement have been approved in advance by the Managing Director of AWTA Ltd.



APPROVED SIGNATORY

MICHAEL A. JACKSON B.Sc (HONS)
 MANAGING DIRECTOR

0204/11/06

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Testing. Advising. Assuring.

EWFA CERTIFICATE OF ASSESSMENT **CERTIFICATE No : SFC 26709A-01** **Page 1 of 1**

Report Sponsor	Certificate Issue Date	Product Name
Ritek Building Solutions 19 Lowermill Road, Cooroy, QLD, 4563	19/12/2011	Ritek Corrugated Roof panel

Assessment Report Reference	Referenced Standard	Report Issue Date	Report Validity Date
EWFA 26709-01	AS 1530.8.1- 2007	19/12/2011	31/12/2016

Introduction
 The element of construction described below was assessed by this laboratory on behalf of the report sponsor in accordance with the stated test standard and achieved the results stated below. Refer to the referenced test report(s) or Regulatory Information Reports for a complete description of the assessed construction.

Assessed Corrugated Roof Panel description and performance																								
Roof Panel Description	Panel Thickness Options	BAL																						
Roof panel fabricated from 0.42 BMT Corrugated outer and inner facings with PIR foam core.	<table border="1"> <thead> <tr> <th>Panel thickness</th> <th>Minimum thickness</th> </tr> </thead> <tbody> <tr><td>85mm</td><td>51mm</td></tr> <tr><td>95mm</td><td>61mm</td></tr> <tr><td>105mm</td><td>71mm</td></tr> <tr><td>115mm</td><td>81mm</td></tr> <tr><td>125mm</td><td>91mm</td></tr> <tr><td>135mm</td><td>101mm</td></tr> <tr><td>150mm</td><td>116mm</td></tr> <tr><td>175mm</td><td>141mm</td></tr> <tr><td>200mm</td><td>166mm</td></tr> <tr><td>250mm</td><td>216mm</td></tr> </tbody> </table>	Panel thickness	Minimum thickness	85mm	51mm	95mm	61mm	105mm	71mm	115mm	81mm	125mm	91mm	135mm	101mm	150mm	116mm	175mm	141mm	200mm	166mm	250mm	216mm	BAL 40 A
Panel thickness	Minimum thickness																							
85mm	51mm																							
95mm	61mm																							
105mm	71mm																							
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135mm	101mm																							
150mm	116mm																							
175mm	141mm																							
200mm	166mm																							
250mm	216mm																							
<p>CORRUGATED: Minimum panel thickness = Total Panel thickness - 34mm</p>																								

- Conditions/Validity**
- THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE.
 - Reference should be made to the relevant test report or regulatory information report to determine the applicability of the test result to a proposed installation. Full details of the constructions and justification for the conclusions given, along with the validity statements, are given in the assessment reports.
 - The assessment report or short form assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the performance of the actual products supplied. It is intended to provide a brief outline of the above referenced assessment reports and not to replace them.
 - The conclusions in this certificate of assessment relate to the configurations as detailed, and should not be applied to any other configuration. The conclusions expressed in this document assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.
 - Full copies of the assessment and relevant test reports may be obtained from the sponsor.

TESTING AUTHORITY	Exova Warringtonfire Aus Pty Ltd	
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Phone / Fax	+61 (0)2 8270 7600 / +61 (0)2 9299 6076	
ABN	81 050 241 524	
Email / Home Page	www.exova.com	
Authorisation	Prepared By: M. Kamal	Reviewed By: K. G. Nicholls

ARCPANEL Firetek Roof Panel - Trimdek® Panel Bal 40 Compliance

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EWFA CERTIFICATE OF ASSESSMENT	CERTIFICATE No : SFC 26709B-01	Page 1 of 1
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Report Sponsor	Certificate Issue Date	Product Name
Ritek Building Solutions 19 Lowermill Road, Cooroy, QLD, 4563	19/12/2011	Ritek Trapezoidal Roof panel

Assessment Report Reference	Referenced Standard	Report Issue Date	Report Validity Date
EWFA 26709-01	AS 1530.8.1- 2007	19/12/2011	31/12/2016

Introduction

The element of construction described below was assessed by this laboratory on behalf of the report sponsor in accordance with the stated test standard and achieved the results stated below. Refer to the referenced test report(s) or Regulatory Information Reports for a complete description of the assessed construction.

Assessed Trapezoidal Roof Panel description and performance

Roof Panel Description	Panel Thickness Options	BAL																						
Roof panel fabricated from 0.42 BMT Trapezoidal outer and inner facings with PIR foam core.	<table border="1"> <thead> <tr> <th>Panel thickness</th> <th>Minimum thickness</th> </tr> </thead> <tbody> <tr><td>100mm</td><td>57mm</td></tr> <tr><td>110mm</td><td>67mm</td></tr> <tr><td>120mm</td><td>77mm</td></tr> <tr><td>130mm</td><td>87mm</td></tr> <tr><td>140mm</td><td>97mm</td></tr> <tr><td>150mm</td><td>107mm</td></tr> <tr><td>175mm</td><td>132mm</td></tr> <tr><td>200mm</td><td>157mm</td></tr> <tr><td>210mm</td><td>167mm</td></tr> <tr><td>250mm</td><td>207mm</td></tr> </tbody> </table>	Panel thickness	Minimum thickness	100mm	57mm	110mm	67mm	120mm	77mm	130mm	87mm	140mm	97mm	150mm	107mm	175mm	132mm	200mm	157mm	210mm	167mm	250mm	207mm	BAL 40 A
Panel thickness	Minimum thickness																							
100mm	57mm																							
110mm	67mm																							
120mm	77mm																							
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140mm	97mm																							
150mm	107mm																							
175mm	132mm																							
200mm	157mm																							
210mm	167mm																							
250mm	207mm																							
<p>TRAPEZOIDAL: Minimum panel thickness = Total Panel thickness – 43mm</p>																								

Conditions/Validity

- THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE.
- Reference should be made to the relevant test report or regulatory information report to determine the applicability of the test result to a proposed installation. Full details of the constructions and justification for the conclusions given, along with the validity statements, are given in the assessment reports.
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Compliance Certificate for Building Design or Specification



TOD CONSULTING JOB NO: 06665-20150415A

RITEK FIRETEK PANEL

1. Description of component/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Ritek Firetek Roof Panel

Prefabricated roof panel with standard 0.42mm thick Custom Orb or Trimdeck roof sheeting, bonded to the top side of a profiled fire resistant PIR core; and standard 0.42mm thick Custom Orb roof sheeting bonded to the bottom side of the fire resistant PIR core.

Panels fixed into position using the specified screws (Class 4 with Cyclone Assembly Washers)

For the range of Non-cyclonic wind loads, spans and fixing spacings nominated in the Ritek Firetek Panel design and detailing manual (Version 2015.01)

Contact Ritek 1300 929 782 to design and certify projects with wind loads, spans and fixing spacings beyond the range nominated in the Ritek Firetek Panel design and detailing manual (Version 2015.01)

2. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

AS 1770 - Parts 1 & 2 Loading Code

AS 1562.1 - Design and Installation of Metal Roofing

AS 4055 - Wind Load for Housing

3. Reference Documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Refer to Ritek Firetek Panel design and detailing manual (Version 2015.01) for technical design and installation specifications.

4. Competent person details

A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practice the aspect.

If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help.

If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.

Name (in full)

Stefan Prystupa - B.E., M.I.E. Aust

Company Name (if applicable)

Tod Consulting Pty Ltd

Contact person

Phone no. business hours

07 5449 9600

Mobile no.

Fax no.

07 5449 9494

Email address

sp@todconsulting.com

Postal address

PO Box 61

NOOSAVILLE QLD

Postcode 4566

Licence or registration number (if applicable)

R.P.E.Q. 1137 NPER 97009

5. Signature of competent person

This certificate must be signed by the individual assessed by the building certifier as competent.

Signature

S. Prystupa

Date

15.04.2015

ARCPANEL Firetek Roof Panel - Warranty Period

Architectural Panels Pty Ltd, (the Company), warrants that **ARCPANEL** Roofing Panels (the "Product") are manufactured from prime materials and further warrants up to a maximum period, dependent on Panel Material type, location and environmental exposure, the following:

ENVIRONMENTAL EXPOSURE - ARCPANEL PANEL TOP SHEET (ROOF SIDE) MAXIMUM WARRANTY PERIOD

Panel Material Top Sheet (Roof Side)	Non Coastal – Location (ISO Cat. 1)	Coastal - Location >1km to 5km (ISO Cat. 2)	Marine / Industrial >200m - 1km (ISO Cat. 3)	Severe Marine / Industrial >100 - 200m (ISO Cat. 4)	Very Severe Marine / Industrial 0<100m (ISO Cat. 5)	Aquatic / Chemical / Swimming Pool - Exposure
XRW COLORBOND / ZINCALUME	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 20yrs Paint System	12yrs Corrosion 10yrs Paint System	No Warranty	No Warranty	No Warranty
ULTRA COLORBOND	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 18yrs Paint System	15yrs Corrosion 10yrs Paint System	10yrs Corrosion 10yrs Paint System	6yrs Corrosion 6yrs Paint System
ARCPANEL XTREME	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 18yrs Paint System	20yrs Corrosion 15yrs Paint System	15yrs Corrosion 10yrs Paint System	15yrs Corrosion 10yrs Paint System
COLORBOND STAINLESS	30yrs Corrosion 25yrs Paint System	30yrs Corrosion 25yrs Paint System	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 15yrs Paint System	25yrs Corrosion 15yrs Paint System	25yrs Corrosion 15yrs Paint System

ENVIRONMENTAL EXPOSURE - ARCPANEL PANEL BOTTOM SHEET (CEILING SIDE) MAXIMUM WARRANTY PERIOD

Panel Material Bottom Sheet (Ceiling Side)	Non Coastal – Location (ISO Cat. 1)	Coastal - Location >1km to 5km (ISO Cat. 2)	Marine / Industrial >200m - 1km (ISO Cat. 3)	Severe Marine / Industrial >100 - 200m (ISO Cat. 4)	Very Severe Marine / Industrial 0<100m (ISO Cat. 5)	Aquatic / Chemical / Swimming Pool - Exposure
XRW COLORBOND / ZINCALUME	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 20yrs Paint System	12yrs Corrosion 10yrs Paint System	No Warranty	No Warranty	No Warranty
ULTRA COLORBOND	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 18yrs Paint System	15yrs Corrosion 10yrs Paint System	10yrs Corrosion 10yrs Paint System	6yrs Corrosion 6yrs Paint System
ARCPANEL XTREME	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 20yrs Paint System	20yrs Corrosion 18yrs Paint System	20yrs Corrosion 15yrs Paint System	15yrs Corrosion 10yrs Paint System	15yrs Corrosion 10yrs Paint System
COLORBOND STAINLESS	30yrs Corrosion 25yrs Paint System	30yrs Corrosion 25yrs Paint System	25yrs Corrosion 20yrs Paint System	25yrs Corrosion 15yrs Paint System	25yrs Corrosion 15yrs Paint System	25yrs Corrosion 15yrs Paint System

Definitions:

- **Warranty Periods** shown in the table are the maximum warranty periods available. A specific project warranty will be determined in consideration of the intended use of the Product and the location at which the Product will be used. Warranty periods for severe / very severe marine applications are conditional and subject to calm, exposed & surf conditions.
- **Corrosion Warranty** is prior to corrosion to perforation by weathering in the natural elements.
- **Paint System Warranty** is that paint system will not flake or peel by weathering in the natural elements.
- **Structural Performance Warranty** is governed by the lowest Corrosion Warranty period of the selected Panel Material.
- **Environmental Exposure** refers to the Panel Material being subject or allowing to be subjected to an action, influence, or condition.
- **Panel Material** refers to the top and bottom sheeting material used to manufacture the Product.

Marine Definition:

Surf: Area exposed to breaking surf and ocean spray

Exposed: Open expanses of salt or brackish water exposed to onshore winds, but not typically prone to breaking surf

Calm: Protected areas of salt or brackish water, including ports, harbours, bays, and river estuaries

Refer to Warranty Full Terms and Conditions

ARCPANEL Firetek Roof Panel Warranty Terms & Conditions

Colorbond®

Warranty Full Terms and Conditions

The warranty is subject to the following terms and conditions:

- The Product is installed in accordance with the Company's published fixing recommendations current at the time of supply and conforms to AS 3566 Class 4.
- If installation is delayed by more than one month after delivery then packaging must be removed and replaced by a cover which does not apply pressure to the Product but provides full protection from weather and direct sunlight.
- All flashings, fasteners or components fixed to or used with the product must be manufactured from materials approved by the Company.
- Installation is made in environments/locations using only recommended materials as listed above.
- Installed pitch of the roof is equal to or greater than 5 degrees for Product with corrugated top sheet profile and 2 degrees for product with Trimdek top sheet profile above the horizontal.
- The warranty applies to the product only, all flashings, fasteners or components fixed to the roof are excluded.
- The Product must not be scratched, abraded, or damaged in any way, or coated with an incompatible material.
- The warranty does not apply if the defective area comprises less than 10% of the sheet length. Costs of dismantling and re-assembly as well as other costs will not be covered by ARCPANEL.
- Maintenance cleaning of the Product is required wherever the finish is not washed by rain to remove traces of dust, dirt and any build-up of salts or chemicals. Examples of applications requiring maintenance cleaning include, but are not limited to, fascia, soffits, eaves, car ports, patios and internal ceiling / underside of roof areas which are exposed to any build-up of salts or chemicals. Maintenance cleaning must be done six monthly as a minimum, or every three months in coastal areas where marine salt is prevalent and/or in aquatic/swimming pool applications and/or areas where high levels of industrial fallout occur. Maintenance cleaning must be conducted in accordance with the Company's "Maintaining Your ARCPANEL Roof System" brochure.
- Where used as an internal liner in a swimming pool environment the warranty is conditional upon:
 - No direct splash contact of the underside of roof by water from the pool; Internal RH <50% at all times achieved by effective HVAC; Minimal interstitial condensation (usually temporary overnight super cooling effect) consistent with this level of RH on a correctly installed roof (effective sealing of vapour check);
 - Avoidance of chlorine deposits, and hence hydrochloric acid, to underside of roof;
 - All cut edges to be sealed;
 - Regular ventilation through louvers;
 - Any mechanical extraction must be sealed; and
 - Open ceiling line without suspended ceiling below.
- The design and structural data specified is based on standard details. The successful installation depends on factors outside the control of the Company. For every project, the buyer's Design Engineer must be satisfied that the application of these guidelines will achieve the required level of structural performance and is suited to the environment/location.

This warranty does not cover:

- Consequential loss or damage, howsoever arising, whether or not it was aware of the possibility of such loss or damage;
- willful or accidental damage caused by others to goods supplied by the company;
- erection or structural defects;
- normal weathering, which includes natural reduction in paint gloss and a natural colour change of the paint finish;
- "baking of poly film onto materials. If poly film is supplied on any panels, flashings and accessories it must be removed as soon as practical after delivery, but no later than one month after delivery.
- The Product after any application of post paint treatments or systems.
- The warranty does not apply if the defective area comprises less than 10% of the sheet length. Costs of dismantling and re-assembly as well as other costs are not covered by the Company.
- perforations partly or wholly due to the following causes:
 - mechanical, chemical, corrosion or other damage sustained during transport, handling, storage, erection or subsequent to erection.
 - attack from chemical agents, fumes, liquids or solids other than direct rain falling onto the Product under warranty.
 - contact with soils, ashes, fertilizers or other moisture retaining substances.
 - areas in metallic contact with lead or copper or subject to run off from copper flashings and pipes.
 - Failure to remove debris and/or failure to provide free drainage of water including internal condensation from all surfaces of the Product.
 - deterioration of the Product caused by contact with green or wet timber or treated timber
 - installations subject to unusually corrosive environments at any time in the future.
 - storm and tempest or other acts of God.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

If it is proven to the reasonable satisfaction of the Company that any goods supplied by the Company or any services performed by the Company are defective, then the Company will (at the option of the Company) rectify the defect by the replacement, repair or payment for the cost of replacement of the affected goods, limited exclusively to the pro-rata share of the goods, as follows:

- Replacement goods will be supplied at a discount, which bears the same ratio to the then current price as that part of the warranty period not achieved bears to the full warranty period.
- The Company shall only be liable for:
 - The cost of replacing the affected product, or
 - The cost of having the product repaired, whichever is the lowest.

All warranties other than those specified by the Company are hereby excluded, and all conditions, obligations and liabilities, however arising, are hereby excluded. Nothing in this warranty, however, shall be construed as affecting any rights the buyer may have under Australian Consumer Law, the Trade Practices Act or any other Legislation which gives the buyer rights which cannot be modified or excluded by agreement.

Due to Architectural Panels Pty Ltd' policy of continued improvement to its systems, the specifications and details contained in its publications may change without notice.

COLOUR RANGE

	Basalt™
	Classic Cream™
	Cottage Green
	Cove™
	Deep Ocean®
	Dune®
	Evening Haze®
	Gully™
	Ironstone®
	Jasper®
	Mangrove™
	Manor Red®
	Monument®
	Night Sky®
	Pale Eucalypt®
	Paperbark®
	Shale Grey®
	Surfmist®
	Terrain™
	Wallaby™
	Whitehaven®
	Windspray®
	Woodland Grey®
	Zincalume
	XTREME
	Off White
	STAINLESS
	Surfmist®

For further information on COLORBOND® steel, the following technical bulletins are available from ARCPANEL.

- Tb-1a steel roofing products – selection guide
- Tb-4 maintenance of Colorbond® steel and Zincalume® steel
- Tb-8 flashing materials for Zincalume® steel and Colorbond® steel sheet
- Tb-10 cut edge protection of Zinc-coated and Zinc/aluminium alloy-coated steel



The new Firetek roof system is an insulated roof panel with a PIR core tested for bushfire resistance up to BAL 40, making it suitable for bushfire prone areas.

1300 200 004

www.arcpanel.com.au info@arcpanel.com.au

16 Action Street | PO Box 1197 | Noosaville QLD 4566
20/58 Box Road | PO Box 2086 | Taren Point NSW 2229



ARC PANEL Firetek Roof Panel
Design & Detailing Manual
Version 2015.02