

General Certification for Titanergy Solar Flush Mounted System on Tin (Penetrative) Roof with Titan Solar TT Rail

For: JIANGYIN TITANERGY CO. LTD
No.11 Wuxiang Road
Yunting Street, Jiangyin
China 214422

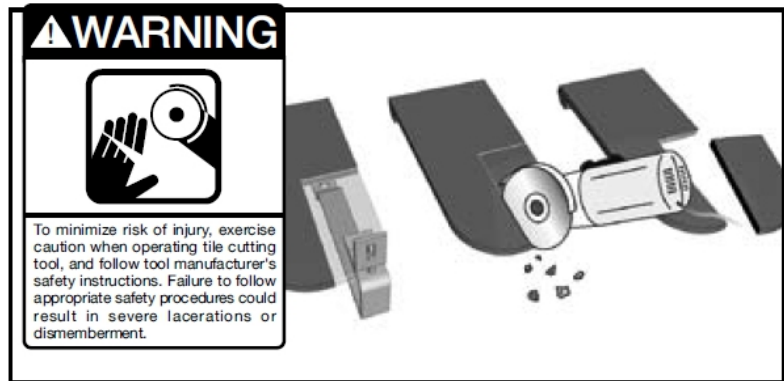
Job No.: 11323-RM03
Date: 28/06/2022

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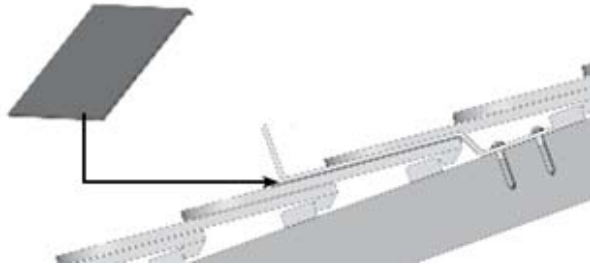
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Install on Plain Tile Roof

1. Mark roof hook installation points, and cut recesses for hooks into plain tiles/slate at each installation point.



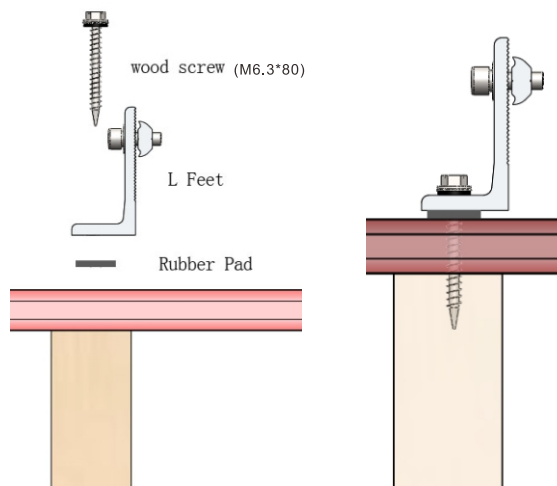
2. Cut titanium zinc metal sheets to fit and install them under the roof hooks. Fix the roof hooks to the rafter using two 6.3 x 60 mm wood screws.



Install on Tin Roof

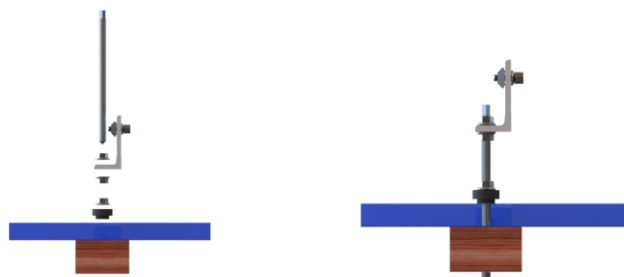
3. Mark roof hook installation points and use the power tool to drill the wood screw through the point to fasten the L feet with the purlin.

※Tighten the screws in the situation when the roof undamaged.



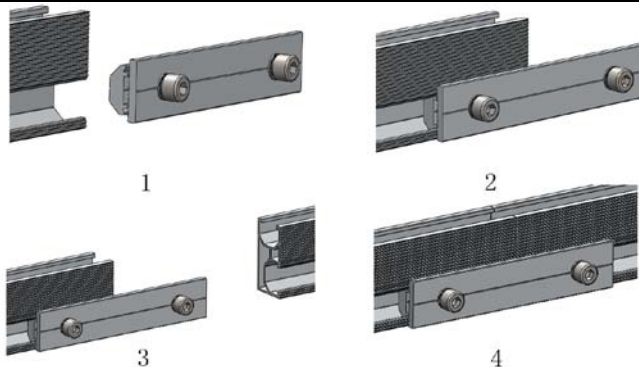
4. Mark roof hook H04 installation points and use the power tool to drill the M10*200 blot through the point to fasten the L feet with the purlin.

※Tighten the bolt in the situation when the roof undamaged.



5. TT Rail connect

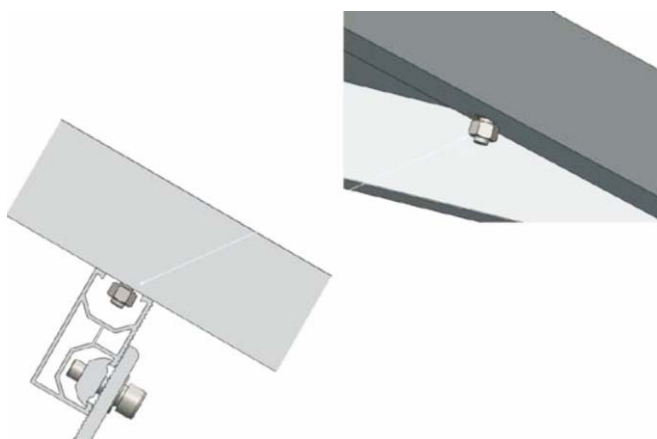
- a. Put the TT Rail Splice into the side channel of the TT Rail about 75mm, then fasten the M8 Bolt.
 - b. Put the other TT Rail into the other side of the TT Rail Splice and fasten the other M8 bolt.
- ※ Torsion:23-25N.m



Install the module

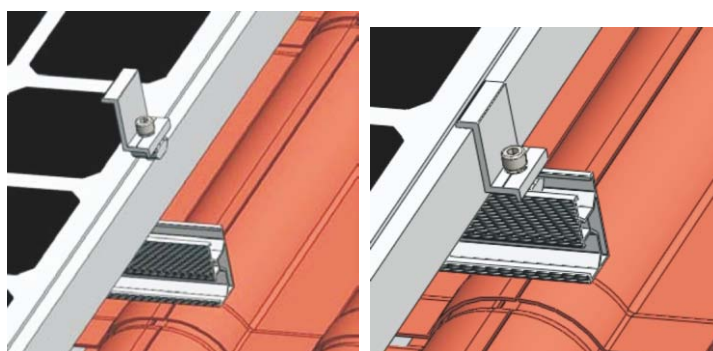
6. Installing anti-slip protection

- The anti-slip protection is only necessary on the lowermost row of modules. At first, fit two bolts M6*20 and nuts into the lower holes of each module. Then place the first module of the bottom row so that the anti-slip protection sits in the rail channel of the lowest row of rails
- ※ Torsion:23-25N.m



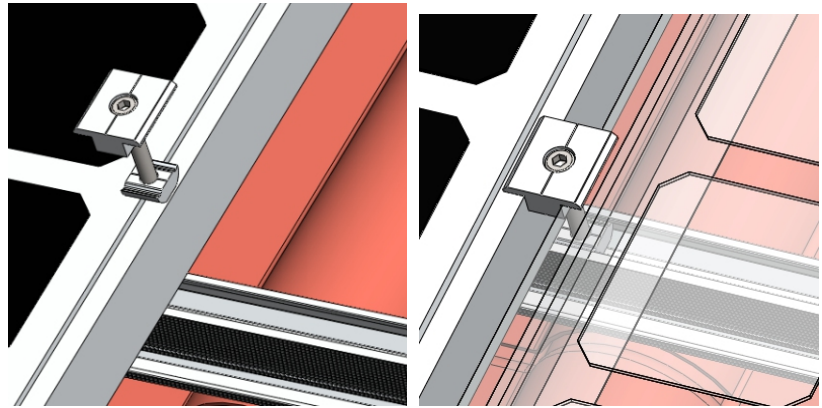
7. Fixing the outer modules by End clamp.

- a. Put the end clamp kit into the top channel of the TT -Rail as the step 9.
 - b. Push the side of module to firmly against the end clamp and then fasten the bolt.
- ※ Torsion:23-25N.m

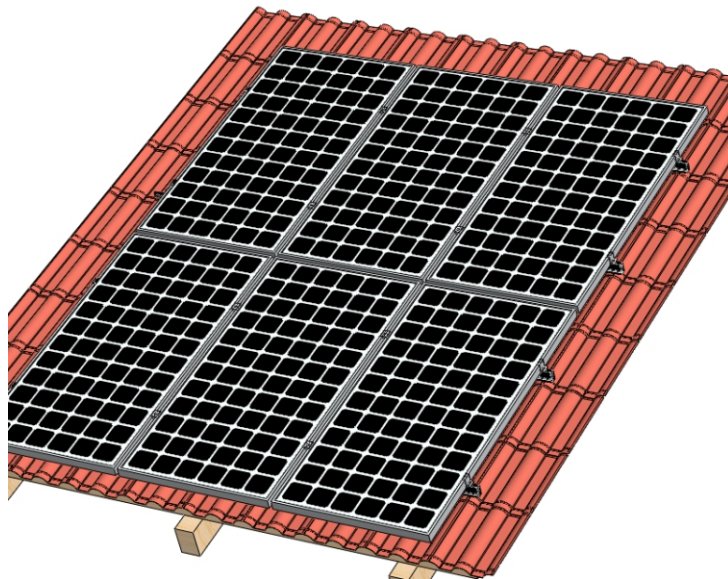


8. Fixing the inter modules by inter clamp.
 - a. Put the inter clamp kit into the top channel of the TT -Rail as the step 9.
 - b. Push the Inter-module clamp firmly against the already fixed module.
 - c. Push the next module against the other side of the module-inter clamp.
 - d. Tighten the bolt

※ Torsion:23-25N.m



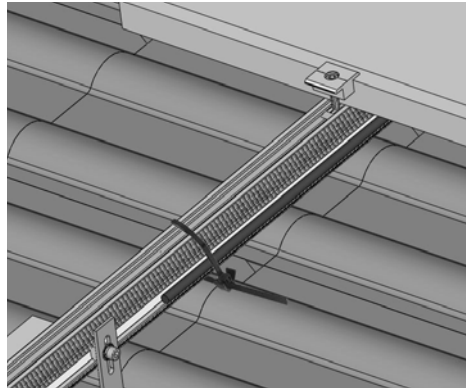
9. Installing the further rows of modules



Cable tie and Grounding

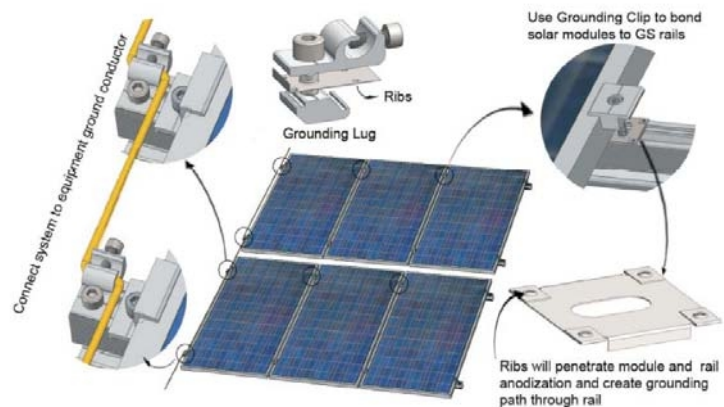
10. Tie cable with the rail

- a. Tie the cable with the rail using the zip tie



11. Grounding

Please see the Titan Solar Grounding System Installation Guide.



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Document Control						
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Rev	Date	Revision Details	Prepared By	Author	Verifier	Approver
0	28/06/2022	First Issue	BL	BL	AA	LvS
Current Revision		0				

Approval			
Author Signature	<i>baincaliu</i>	Approver Signature	
Name	Bianca Liu	Name	L. Van Spaandonk
Title	Structural Engineer	Title	Principal Engineer

Our Ref: 11323-RM03/BL
28 June 2022

JIANGYIN TITANERGY CO. LTD

No.11 Wuxiang Road
Yunting Street, Jiangyin
China 214422

RE: General Certification for Titanergy Solar Flush Mounted System on Tin (Penetrative) Roof with Titan Solar TT Rail

Gamcorp (Melbourne) Pty Ltd, being Structural Engineers within the meaning of Australian Building Regulations, have carried out a structural design check of Tin (Penetrative) Roof Mount Flush Array Frame System installation within Australia. The design check has been based on the information and test reports provided by JIANGYIN TITANERGY ENERGY CO. LTD.

Components of the system covered in this certificate shown in the table below:

Component	Part No.
Rail	Titan Solar TT Rail
L-Feet	Titan Solar L-Feet set
Mid Clamp	Titan Solar Mid Clamp Kit 40mm
End Clamp	Titan Solar Clamp Kit 40mm

This certificate is **only valid** for Titanergy Solar Flush Mounted System on the Tin (Penetrative) Roof with Titan Solar TT rail. The roof structure or the building structure shall be assessed separately and accordingly.

This certificate is **only valid** when fixing into minimum 1.9mm thick steel purlin or JD4 seasoned timber. If the fixing condition is different from this conditions, interface spacing shall be reviewed and validated.

This certificate is **only valid** as a whole. Any information extracted from this certificate is not valid if standing alone.

We find the Installation of Flush Mounted System on Tin (Penetrative) Roof for Australian use to be structurally sufficient based on the following conditions:

- Wind loads to **AS/NZS1170.2:2021**
- Wind region **A, B1, B2, C & D**
- Wind terrain category **2 & 3**
- Wind average recurrence interval of **200 years**
- Maximum building height **20m**
- The PV panel dimensions to be **1800mm x 1100mm, 2000mm x 1100mm, 2200mm x 1200mm, 2400mm x 1200mm**
- Maximum weight of the PV panel and array frame to be **15 kg / m²**
- Rails to be **Titan Solar TT rails**
- Material of rails and other components to be **AL/6005-T5 UNO**
- The spacings are determined based on fixings into minimum JD4 seasoned timber and 1.9mm thick steel purlins
- Each PV panel to be installed using **2 rails** minimum in all circumstances

- No PV panel to be installed within 2xs from edges and ridge. "s" is the maximum gap between the underside of the panel and the roof surface when installed on the roof ($50\text{mm} \leq s \leq 300\text{mm}$)
- Installation of PV panels to be done in accordance with the PV panels installation manual
- The certification **excludes** assessment of roof structure and PV panels

Refer to attached summary table for interface spacing (unit: mm)

NOTES:

- **The recommended spacing nominated in this certification is based on the capacity of the array frame and the fixing of array frames to the roof, not the roof structure and PV panels. It is the responsibility of the installer to adopt the most critical spacing.**
- **If any of the above conditions cannot be met, the structural engineer must be notified immediately.**
- **The spacing shown in the interface tables shall be adjusted based on the assessment and requirement of the roof structures.**

Construction is to be carried out strictly in accordance with the manufacturer's instructions. This work was designed by **Bianca Liu** in accordance with the provisions of Australian Building Regulations and in accordance with sound, widely accepted engineering principles.

This certification is only valid till **30/06/2024**. Gamcorp should be contacted for future validation. Contact Gamcorp for a customised system or if the site conditions are not covered by this assessment.

Yours faithfully,
Gamcorp (Melbourne) Pty Ltd



L. Van Spaandonk

Principal Engineer
FIEAust CPEng NER 5038980
NT Registration: 244137ES
QLD Registration: 18703
VIC Registration: PE0001956
TAS Registration: CC7366

Attachments:

- Summary table for interface spacing - flush mount installation on tin (penetrative) roof with Titan Solar TT rail

Structural Design Documentation

Flush Array Frame System Spacing Table

According to AS/NZS 1170.2-2021

**with Titan Solar TT Rail – Tin (Penetrative) Roof
within Australia**

Terrain Category 2 & 3

For: Jiangyin Titanergy Co. Ltd
No.11 Wuxiang Road
Yunting Street, Jiangyin
China 214422

Job Number: 11323-RM03
Date: 27 June 2022



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Job No: 11323-RM03
Client: Jiangyin Titanergy Co. Ltd
Project: Flush Array Frame System Spacing Table
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: within Australia
Wind Terrain Category: Terrain Category 2 & 3

Australian / New Zealand Standards

AS/NZS 1170.0:2002	Structural design actions Part 0: General principles
AS/NZS 1170.1:2002 (R2016)	Structural design actions Part 1: Permanent, imposed and other actions
AS/NZS 1170.2:2021	Structural design actions Part 2: Wind actions
AS/NZS 1664.1:1997 (R2020)	Aluminium structures Part 1: Limit state design
AS/NZS 4600:2018	Cold-formed steel structures
AS 4100:2020	Steel structures

Designed: BL
Checked: AA
Date: Jun-22

Client: **Jiangyin Titanergy Co. Ltd**
Project: **Flush Array Frame System Spacing Table**
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: **within Australia**

Job: **11323-RM03**
Date: **Jun-22**
Designed: **BL**
Checked: **AA**

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 1.8mx1.1m
Terrain category: 3

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	1195	1630	1820	2000	1195	1630	1820	2000	1030	1545	1725	1985	920	1420	1650	1910
B1	890	1375	1815	2000	890	1375	1815	2000	770	1180	1610	1980	685	1055	1435	1910
B2	725	1110	1510	1940	725	1110	1510	1940	625	955	1300	1860	560	850	1155	1795
C	415	630	855	1325	415	630	855	1325	--	545	740	1140	--	485	660	1015
D	--	450	605	930	--	450	605	930	--	385	520	800	--	--	465	710

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	810	1245	1580	1840	810	1245	1580	1840	700	1070	1460	1755	625	955	1300	1675
B1	605	930	1260	1840	605	930	1260	1840	525	800	1085	1680	--	715	970	1495
B2	495	750	1020	1575	495	750	1020	1575	--	650	880	1355	--	580	785	1205
C	--	430	580	890	--	430	580	890	--	--	505	770	--	--	450	685
D	--	--	410	630	--	--	410	630	--	--	--	540	--	--	--	485

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

Client: **Jiangyin Titanergy Co. Ltd**
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Address: **within Australia**

Job: **11323-RM03**
Date: **Jun-22**
Designed: **BL**
Checked: **AA**

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 1.8mx1.1m
Terrain category: 2

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	$h \leq 5$				$5 < h \leq 10$				$10 < h \leq 15$				$15 < h \leq 20$			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	985	1515	1695	1955	805	1240	1575	1840	725	1115	1515	1780	685	1055	1435	1735
B1	735	1125	1535	1955	605	920	1255	1835	545	830	1130	1750	515	785	1060	1645
B2	595	910	1235	1830	490	745	1010	1565	--	675	915	1410	--	635	860	1325
C	--	520	705	1085	--	430	575	885	--	385	520	800	--	--	490	755
D	--	--	500	760	--	--	410	625	--	--	--	565	--	--	--	530

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	$h \leq 5$				$5 < h \leq 10$				$10 < h \leq 15$				$15 < h \leq 20$			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	670	1025	1395	1720	550	840	1140	1600	495	755	1025	1540	--	715	970	1495
B1	500	760	1035	1595	--	630	850	1305	--	565	765	1175	--	535	720	1105
B2	--	620	835	1290	--	510	685	1055	--	--	620	950	--	--	585	895
C	--	--	480	735	--	--	395	600	--	--	--	540	--	--	--	510
D	--	--	--	520	--	--	--	425	--	--	--	385	--	--	--	--

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

Client: Jiangyin Titanergy Co. Ltd
Project: Flush Array Frame System Spacing Table
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: within Australia

Job: 11323-RM03
Date: Jun-22
Designed: BL
Checked: AA

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2mx1.1m
Terrain category: 3

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	1075	1570	1765	2000	1075	1570	1765	2000	925	1435	1670	1930	825	1275	1595	1860
B1	800	1235	1695	2000	800	1235	1695	2000	690	1060	1450	1930	620	950	1290	1860
B2	650	1000	1360	1890	650	1000	1360	1890	560	860	1170	1810	500	765	1040	1615
C	370	570	770	1195	370	570	770	1195	--	490	665	1025	--	440	590	910
D	--	405	545	835	--	405	545	835	--	--	470	720	--	--	420	640

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	730	1120	1525	1795	730	1120	1525	1795	630	965	1315	1695	565	860	1170	1620
B1	545	835	1135	1765	545	835	1135	1765	470	720	975	1510	--	645	870	1345
B2	445	675	915	1415	445	675	915	1415	--	585	790	1215	--	520	705	1085
C	--	385	520	800	--	385	520	800	--	--	450	690	--	--	405	615
D	--	--	370	565	--	--	370	565	--	--	--	490	--	--	--	435

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

Client: Jiangyin Titanergy Co. Ltd
Project: Flush Array Frame System Spacing Table
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: within Australia

Job: 11323-RM03
Date: Jun-22
Designed: BL
Checked: AA

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2mx1.1m
Terrain category: 2

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	885	1370	1635	1900	725	1115	1520	1790	655	1005	1365	1715	620	950	1290	1680
B1	660	1010	1380	1900	545	830	1130	1755	490	750	1015	1575	460	705	955	1480
B2	535	820	1115	1735	440	675	910	1410	--	610	820	1270	--	570	775	1190
C	--	470	635	975	--	385	520	795	--	--	470	720	--	--	445	675
D	--	--	450	685	--	--	370	560	--	--	--	505	--	--	--	480

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	605	925	1255	1660	495	755	1025	1545	445	680	920	1425	--	645	870	1345
B1	450	685	930	1440	--	565	765	1175	--	510	690	1055	--	480	650	995
B2	--	560	755	1160	--	460	620	950	--	--	560	855	--	--	525	805
C	--	--	430	660	--	--	--	540	--	--	--	490	--	--	--	460
D	--	--	--	465	--	--	--	385	--	--	--	--	--	--	--	--

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

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Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2.2mx1.2m
Terrain category: 3

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	980	1520	1710	1980	980	1520	1710	1980	840	1305	1615	1885	750	1160	1545	1820
B1	730	1125	1540	1975	730	1125	1540	1975	630	965	1320	1885	560	860	1175	1820
B2	590	905	1235	1845	590	905	1235	1845	510	780	1060	1655	455	695	945	1470
C	--	515	700	1085	--	515	700	1085	--	445	605	935	--	395	540	830
D	--	--	495	760	--	--	495	760	--	--	425	655	--	--	--	580

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	660	1020	1395	1735	660	1020	1395	1735	570	875	1195	1640	510	785	1065	1570
B1	495	760	1030	1605	495	760	1030	1605	430	655	885	1375	--	585	790	1225
B2	405	615	835	1290	405	615	835	1290	--	530	720	1105	--	475	640	985
C	--	--	475	730	--	--	475	730	--	--	410	630	--	--	--	560
D	--	--	--	515	--	--	--	515	--	--	--	445	--	--	--	390

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

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Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2.2mx1.2m
Terrain category: 2

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	805	1245	1585	1860	660	1015	1385	1735	595	910	1245	1660	560	860	1175	1625
B1	600	920	1255	1860	495	755	1025	1595	445	680	920	1430	420	640	870	1345
B2	485	745	1010	1575	400	610	830	1280	--	555	750	1155	--	520	700	1080
C	--	425	575	890	--	--	470	725	--	--	425	655	--	--	400	615
D	--	--	405	625	--	--	--	510	--	--	--	460	--	--	--	435

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal	Corner	Edge	Intermediate	Internal
A	550	840	1140	1610	450	685	930	1445	405	620	835	1295	--	585	790	1225
B1	410	625	845	1305	--	515	695	1070	--	465	625	960	--	435	590	905
B2	--	505	685	1055	--	415	560	860	--	--	510	780	--	--	480	730
C	--	--	390	600	--	--	--	490	--	--	--	445	--	--	--	420
D	--	--	--	425	--	--	--	--	--	--	--	--	--	--	--	--

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

Client: **Jiangyin Titanergy Co. Ltd**
Project: **Flush Array Frame System Spacing Table**
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: **within Australia**

Job: **11323-RM03**
Date: **Jun-22**
Designed: **BL**
Checked: **AA**

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2.4mx1.2m
Terrain category: 3

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	895	1395	1660	1935	895	1395	1660	1935	770	1195	1570	1845	690	1065	1460	1775
B1	670	1030	1410	1935	670	1030	1410	1935	575	885	1210	1845	515	790	1075	1685
B2	540	830	1135	1780	540	830	1135	1780	470	715	975	1520	420	640	865	1345
C	--	475	640	995	--	475	640	995	--	410	555	855	--	--	495	760
D	--	--	455	695	--	--	455	695	--	--	365	600	--	--	--	535

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	605	935	1275	1685	605	935	1275	1685	525	805	1095	1595	470	715	975	1520
B1	455	695	945	1475	455	695	945	1475	390	600	810	1260	--	535	725	1120
B2	--	565	765	1180	--	565	765	1180	--	485	660	1015	--	435	585	900
C	--	--	435	665	--	--	435	665	--	--	--	575	--	--	--	515
D	--	--	--	470	--	--	--	470	--	--	--	405	--	--	--	--

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for definition h and d.

Client: **Jiangyin Titanergy Co. Ltd**
Project: **Flush Array Frame System Spacing Table**
with Titan Solar TT Rail – Tin (Penetrative) Roof
Address: **within Australia**

Job: **11323-RM03**
Date: **Jun-22**
Designed: **BL**
Checked: **AA**

Flush Array Frame System Spacing Table for Tin (Penetrative) Roof (mm)

Type of Rail: Titan Solar TT Rail
Type of Interface: Tin Roof L Feet
Solar Panel Dimension: 2.4mx1.2m
Terrain category: 2

$h/d \leq 0.5$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	740	1140	1540	1815	605	930	1270	1685	545	835	1140	1615	515	790	1075	1580
B1	550	845	1150	1805	450	690	940	1465	410	625	845	1310	--	585	795	1230
B2	445	685	925	1445	--	560	760	1175	--	505	685	1055	--	475	645	990
C	--	365	530	815	--	--	430	665	--	--	365	600	--	--	--	565
D	--	--	--	570	--	--	--	470	--	--	--	420	--	--	--	395

$h/d \geq 1.0$ *

Wind Region	Building Height – h (m)															
	h≤5				5<h≤10				10<h≤15				15<h≤20			
	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal	Corner	Edge	Intermed iate	Internal
A	500	770	1045	1565	410	630	855	1325	--	565	765	1185	--	535	725	1120
B1	--	570	775	1200	--	470	635	980	--	425	575	880	--	400	540	830
B2	--	465	625	965	--	--	515	790	--	--	465	715	--	--	440	670
C	--	--	--	550	--	--	--	450	--	--	--	405	--	--	--	--
D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

* For intermediate values of h/d ratios, linear interpolation shall be used. Refer Note 9 for defination h and d.

Client: **Jiangyin Titanergy Co. Ltd**
Project: **Flush Array Frame System Spacing Table**
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Designed: **BL**
Checked: **AA**

General Notes

Note 1 Following components are satisfied to use according to AS/NZS 1170.2:2021

Components	Part Number	Description
Rail	Titan Solar TT Rail	As per drawing or test report provided by client
Mid Clamp	Mid Clamp Kit 40mm	
End Clamp	End Clamp Kit 40mm	
L-Feet	Titan Solar L-Feet set	

Note 2 Spacing calculated based on 1.9mm steel purlin or 35mm screw embedment length into timber (JD4 seasoned timber).

Recommended screws

Metal Purlins/Battens	Fasteners to use
1.9mm and above	14g-10 TPI Teks screws or approved equivalent
Timber Purlins/Battens/Rafters	Fasteners to use
Softwood / Hardwood (35mm embedment and above)	14g-10 TPI T17 screws or approved equivalent

Note 3 Maximum uplift wind pressure is limited to 5kPa.

Note 4 Deflection is limited to Minimum of L/120 and 15mm.

Note 5 Panels to be installed parallel to roof surface.

Note 6 "-" states NOT SUITABLE FOR INSTALLATION.

Note 7 Refer section 4.2.1 of AS/NZS 1170.2:2021 for terrain category definition.

Note 8 Wind regions are shown in Figure 3.1(A) of AS/NZS 1170.2:2021.

Note 9 Building height is average roof height of structure above ground. Refer Figure 1 for definition of h, d and b.

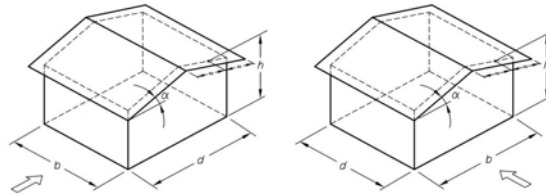
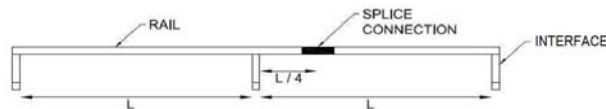


Figure 1 – h, d and b definition

Note 10 Rail splice connection must be placed a quarter length of the spacing of interface. No Splice connection should be placed at the centre of spacing or over the interface.



Note 11 Refer Figure 2 for definition of roof zones.

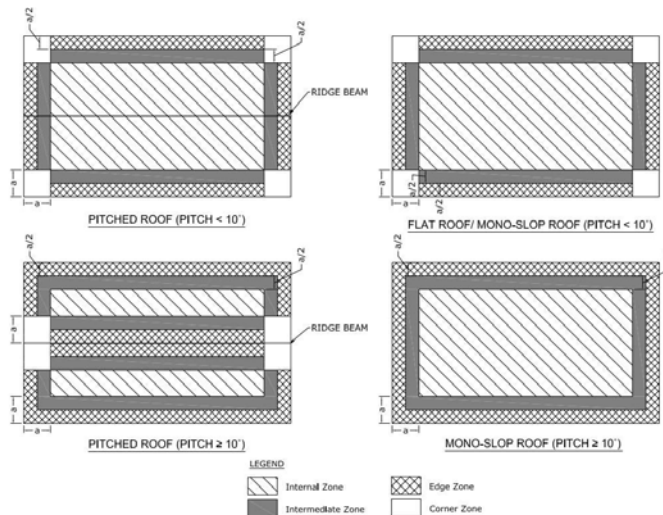


Figure2- Roof Zones Definition

In Figure 2, the value of dimension "a" is the minimum of 0.2b or 0.2d, if (h/b) or (h/d) ≥ 0.2; or 2h if both (h/b) and (h/d) < 0.2 (b & d are building dimensions and h is average roof height, see Figure 1)