

### DESIGN PARAMETERS

WIND PARAMETERS ARE IN ACCORDANCE WITH AS/NZS 1170.2:2021. EARTHQUAKE AND SNOW LOADS ARE EXCLUDED  
 TABLES ARE SUITABLE FOR BUILDINGS INCLUSIVE OF PARAMETERS REFERRED TO IN THE TABLES BELOW AND ASSUMPTION MANUAL ATTACHED.

REGION = A, B, C, D  
 IMPORTANCE LEVEL = 2  
 DESIGN LIFE = 25 YEARS  
 ANNUAL PROBABILITY = 1/200

Base Wind Speed

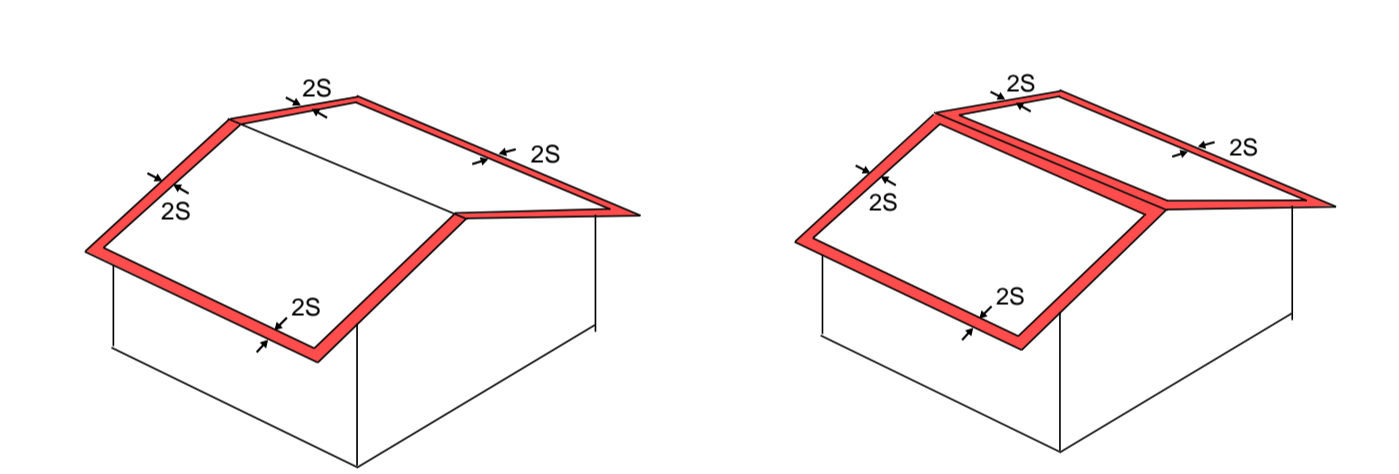
Region	A	B	C	D
V(m/s)	43	52	61	72

### GENERAL

- SPAN TABLE TO BE READ WITH PARTRIDGE ASSUMPTIONS MANUAL.
- REVIEW OF SUPPORTING BUILDING FOR STRUCTURAL ADEQUACY TO SUPPORT PANEL INSTALLATION BY OTHERS.
- REVIEW OF ROOF SHEETING FOR STRUCTURAL ADEQUACY TO SUPPORT PANEL INSTALLATION BY OTHERS.
- THESE SPANS ARE ONLY APPLICABLE TO CONTINUOUS RAILS SUPPORTED BY A MINIMUM OF 4 FASTENERS. SEE BELOW FOR SPAN REDUCTION FACTORS FOR RAILS SUPPORTED BY LESS THAN 4 FASTENERS.
- REVIEW OF SOLAR PANEL STRUCTURAL CAPACITY BY OTHERS.
- FASTENERS TO BE FIXED TO THE SUB STRUCTURE OR ROOF SHEETING WITH THE QUANTITY AND TYPE OF FASTENER NOTED IN THE TABLE.
- ALL FIXTURES TO BE INSTALLED TO THE MANUFACTURERS SPECIFICATIONS.
- ALLOWANCE HAS BEEN MADE FOR A SOLAR PANEL SELF WEIGHT OF 0.15 kPa.
- 2 RAILS MINIMUM ARE TO BE USED FOR ALL WIND REGIONS. RAILS TO BE LOCATED 15%-25% OF THE PANELS LENGTH FROM THE EDGE.
- PANELS TO BE ORIENTATED IN THE PORTRAIT POSITION.
- ALL RAILS ARE TO BE JOINED WITH RAIL CONNECTORS DOCUMENTED IN SCHLETTER Pty Ltd TECHNICAL ARTICLE Z-14.4-639.
- ALL RAILS TO SPAN THREE FULL SPAN MINIMUM (BE SUPPORTED BY MIN 4 FASTENERS). CANTILEVERS TO BE A MAXIMUM OF 40% OF THE ADJACENT SPAN CAPACITY.
- ALL RAILS, CLAMPS AND FASTENERS TO BE INSTALLED IN ACCORDANCE WITH THEIR RELEVANT SCHLETTER INC. DOCUMENTATION.
- FASTENERS FIXED TO TIMBER MUST COMPLY WITH EDGE DISTANCES OUTLINED IN AS1720.1:2010 SECTION 4.3.4.
- FASTENERS FIXED TO TIMBER FRAMING MUST USE A BREMICK VORTEX UNIVERSAL SCREW, WITH MINIMUM DIAMETER OF 6.2mm, AND A MINIMUM EMBEDMENT OF 35mm.
- TIMBER PURLINS MUST HAVE A MINIMUM WIDTH OF 10D WHERE D IS THE DIAMETER OF THE TIMBER SCREW.
- TIMBER PURLINS MUST HAVE A MINIMUM GRADE OF F7 AS DEFINED IN AS1720.1.
- FASTENERS FIXED TO COLD FORMED STEEL PURLINS MUST COMPLY WITH EDGE DISTANCES OUTLINED IN AS4600:2-18 SECTION 5.4.3.
- STEEL PURLINS MUST HAVE A MINIMUM BASE METAL EQUAL TO THE VALUE SPECIFIED IN THE TABLE.
- STEEL PURLINS MUST HAVE A MINIMUM WIDTH OF 6D WHERE D IS THE DIAMETER OF THE STEEL SCREW.
- PARTRIDGE ENGINEERS Pty Ltd PREPARED DOCUMENTATION, PROJECT NUMBER 2021S0925, IS FOR THE EXCLUSIVE USE BY SCHLETTER AUSTRALIA PTY LTD ONLY.
- INSTALLATION VERIFICATION AND ASSOCIATED CERTIFICATION IS BY OTHERS.
- NO ALLOWANCE HAS BEEN MADE FOR HYDRAULIC, HAIL OR SNOW LOADING.
- INSTALLATION OUTSIDE THE SPECIFIC PARAMETERS REQUIRES SPECIFIC ENGINEERING ANALYSIS.
- INSTALLATIONS IN TERRAIN CATEGORY = 1.0, REDUCE EQUIVALENT TERRAIN CATEGORY 2.0 VALUES BY THE FOLLOWING:  
 Region A = 18%  
 Region B = 18%  
 Region C/D = Specific engineering review required.
- REFER TO AS1170.2:2021 SECTION 4.2.1 FOR THE DETERMINATION OF TERRAIN CATEGORY.
- SOLAR PANELS HAVE BEEN CHECKED FOR WIND LOADINGS AND SHOULD BE CERTIFIED BY THE MANUFACTURER FOR THE VARIOUS SPANS AND WIND REGIONS.

### SOLAR PANEL EXCLUSION ZONE & MOUNTING RESTRAINTS

EXCLUSION ZONES FOR < PITCH 10°



J	FOR INFORMATION	JW	AKD	17/08/2023
H	FOR INFORMATION	JW	AKD	02/08/2023
G	FOR INFORMATION	JW	AKD	14/04/2023
F	FOR INFORMATION	JW	AKD	22/12/2022

PANELS MUST NOT BE INSTALLED WITHIN A DISTANCE OF 2S FROM THE ROOF EDGE WHERE S IS THE GAP BETWEEN THE UNDERSIDE OF THE PANEL AND THE ROOF SURFACE (ROOF EDGE INCLUDES RIDGES WITH PITCH < 10°)

THE EXCLUSION ZONE SHOWN ABOVE MUST BE MIN 200mm.

THE GAP BETWEEN THE UNDERSIDE OF THE PANEL AND THE ROOF SURFACE MUST BE MIN 50mm AND MAX 300mm

### ALTERATIONS TO SPAN TABLES FOR SOLAR PANEL SIZE

THIS SPAN TABLE IS FOR SOLAR PANELS OF SIZE 2100x1100mm. EACH RAIL SUPPORTS A SOLAR PANEL WIDTH OF 1050mm. THE SPACINGS SHOWN IN THE TABLES HAVE BEEN CALCULATED ASSUMING EACH PANEL IS SUPPORTED WITH TWO RAILS. THE SPANS IN THE TABLE CAN BE ALTERED FOR LARGER & SMALLER SOLAR PANELS USING THE FOLLOWING EQUATIONS.

#### FOR SOLAR PANELS WITH LENGTH LARGER THAN 2100mm

$$Span * \frac{2100}{y}$$

#### FOR SOLAR PANELS WITH LENGTH SMALLER THAN 2100mm

$$Span * \sqrt{\frac{2100}{y}}$$

WHERE y = NEW SOLAR PANEL LENGTH IN MM

### ALTERATIONS TO SPAN TABLES FOR ADDITIONAL RAILS

THIS SPAN TABLE IS FOR SOLAR PANELS OF SIZE 2100x1100mm. EACH RAIL SUPPORTS A SOLAR PANEL WIDTH OF 1050mm. THE SPACINGS SHOWN IN THE TABLES HAVE BEEN CALCULATED ASSUMING EACH PANEL IS SUPPORTED WITH TWO RAILS. THE SPANS IN THE TABLE CAN BE ALTERED FOR ADDITIONAL RAILS USING THE FOLLOWING EQUATION.

$$Span * \sqrt{\frac{1050}{\left(\frac{2100}{n}\right)}}$$

WHERE n = THE TOTAL NUMBER RAILS SUPPORTING THE PANEL. RAILS MUST BE SPACED SO THAT THEY SUPPORT EVEN WIDTHS OF THE PANEL.



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Client	SCHLETTER AUSTRALIA PTY LTD
Architect	
Project	2021S0925
Electronic Signature	Signature Date
Scale at A1	Date
Job No.	Drawing No.
2021S0925	

DO NOT SCALE DRAWINGS  
 USE FIGURED DIMENSIONS

TC2	Pitch	H	h/d & h/b	Zone	SPAN (mm)			
					Proline 35	Proline 50	Fixz-7	Fixz-15
TC2.5	0.25<sup>10</sup>	0.25m	hd & hb < 0.5	edge	1155	1468	1517	1374
			hd & hb > 0.5	mid	1224	1648	1517	1374
			hd & hb < 0.5	mid	1242	1596	1517	1374
	5m<sup>25</sup>10m	0.25m	hd & hb < 0.5	edge	1155	1468	1517	1374
			hd & hb > 0.5	mid	1224	1648	1517	1374
			hd & hb < 0.5	mid	1242	1596	1517	1374
	10m<sup>25</sup>15m	0.25m	hd & hb < 0.5	edge	869	1077	1112	1010
			hd & hb > 0.5	mid	938	1257	1112	1010
			hd & hb < 0.5	mid	1047	1206	1112	1010
	15m<sup>25</sup>20m	0.25m	hd & hb < 0.5	edge	960	1174	1047	951
			hd & hb > 0.5	mid	1029	1353	1047	951
			hd & hb < 0.5	mid	1098	1302	1047	951
20m<sup>25</sup>30m	0.25m	hd & hb < 0.5	edge	1047	1271	1112	1010	
		hd & hb > 0.5	mid	1116	1450	1112	1010	
		hd & hb < 0.5	mid	1185	1399	1112	1010	
0.25m	0.25m	hd & hb < 0.5	edge	1155	1468	1517	1374	
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					Proline 35	Proline 50	Fixz-7	Fixz-15
TC3.5	0.25<sup>10</sup>	0.25m	hd & hb < 0.5	edge	784	784	809	735
			hd & hb > 0.5	mid	853	853	809	735
			hd & hb < 0.5	mid	878	878	809	735
	5m<sup>25</sup>10m	0.25m	hd & hb < 0.5	edge	784	784	809	735
			hd & hb > 0.5	mid	853	853	809	735
			hd & hb < 0.5	mid	878	878	809	735
	10m<sup>25</sup>15m	0.25m	hd & hb < 0.5	edge	581	581	600	548
			hd & hb > 0.5	mid	650	650	600	548
			hd & hb < 0.5	mid	675	675	600	548
	15m<sup>25</sup>20m	0.25m	hd & hb < 0.5	edge	675	675	694	642
			hd & hb > 0.5	mid	744	74		