DESIGN PARAMETERS

WIND PARAMETERS ARE IN ACCORDANCE WITH AS/NZS1170.2:2021. EARTHQUAKE AND SNOW LOADS ARE EXCLUDED TABLES ARE SUITABLE FOR BUILDINGS INCLUSIVE OF PARAMETERS REFFERED 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
Vr(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 INSALLATION BY OTHERS.**
- **THESE SPANS ARE ONLY APPLICABLE TO CONTINUOUS RAILS SUPPORTED BY A MINIMUM OF 4 A-FRAMES. SEE BELOW FOR SPAN REDUCTION FACTORS FOR RAILS SUPPORTED BY LESS THAN 4 A-FRAMES.**
- **REVIEW OF SOLAR PANEL STRUCTURAL CAPACITY BY OTHERS.**
- A-FRAMES TO BE FIXED TO THE SUB STRUCTURE OR ROOF SHEETING WITH THE QUANTITY AND TYPE OF SCREWS 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 HAVE AN EDGE DISTANCE OF 5D, WHERE 'D' IS THE DIAMETER OF THE SCREW. THIS IS IN COMPLIANCE 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 HAVE AN EDGE DISTANCE OF 3D WHERE 'D' IS THE DIAMETER OF THE SCREW. THIS IS IN COMPLIANCE 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 WITDTH 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.
- **ALL SPANS IN THE TABLE MUST BE MULTIPLIED BY A REDUCTION FACTOR BASED ON THEIR POSITION ON THE ROOF.**

REDUCTION FACTORS FOR RAILS SUPPORTED BY LESS THAN 4 FASTENERS

SPANS FROM THE ABOVE TABLE CANNOT BE USED ON CONTINUOUS RAILS THAT ARE SUPPORTED BY LESS THAN 4 A-FRAMES. WHERE A RAIL IS SUPPORTED BY LESS THAN 4 A-FRAMES THE SPANS IN THE TABLE SHOULD BE MULTIPLIED BY THE BELOW FACTOR.

RAIL SUPPORT REDUCTION FACTOR = 0.89

NOTE: RAIL MUST SPAN BETWEEN MIN TWO FASTENERS.

A Frame 15 Degree Tilt - Fixing to substructure - F7 Softwood - Using Using 2/Bremick Vortex Universal Screw - 2100 Modules

Wind Region A

WR	TC	Roof Pitch	Height	H/d	Zone	SPAN (mm) Proline 35	SPAN (mm) Proline 50
A	TC2	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1338	1814
				h/d > 0.5	All	1206	1546
			5m<z≤10m	h/d ≤ 0.5	All	1219	1584
				h/d > 0.5	All	1099	1262
			10m<z≤15m	h/d ≤ 0.5	All	1162	1426
				h/d > 0.5	All	1047	1137
			15m<z≤20m	h/d ≤ 0.5	All	1130	1342
				h/d > 0.5	All	1019	1071
			20m<z≤30m	h/d ≤ 0.5	All	1091	1241
				h/d > 0.5	All	983	992
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1338	1814
				h/d > 0.5	All	1206	1546
			5m<z≤10m	h/d ≤ 0.5	All	1219	1584
				h/d > 0.5	All	1099	1262
			10m<z≤15m	h/d ≤ 0.5	All	1162	1426
				h/d > 0.5	All	1047	1137
			15m<z≤20m	h/d ≤ 0.5	All	1130	1342
				h/d > 0.5	All	1019	1071
			20m<z≤30m	h/d ≤ 0.5	All	1091	1241
				h/d > 0.5	All	983	992
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1379	1870
				h/d > 0.5	All	1249	1693
			5m<z≤10m	h/d ≤ 0.5	All	1138	1362
				h/d > 0.5	All	1197	1522
			10m<z≤15m	h/d ≤ 0.5	All	1088	1227
				h/d > 0.5	All	1164	1432
			15m<z≤20m	h/d ≤ 0.5	All	1055	1155
				h/d > 0.5	All	1124	1324
			20m<z≤30m	h/d ≤ 0.5	All	1018	1069
	TC2.5	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1400	1897
				h/d > 0.5	All	1324	1795
			5m<z≤10m	h/d ≤ 0.5	All	1193	1510
				h/d > 0.5	All	1132	1347
			10m<z≤15m	h/d ≤ 0.5	All	1207	1551
				h/d > 0.5	All	1088	1235
			15m<z≤20m	h/d ≤ 0.5	All	1151	1397
				h/d > 0.5	All	1038	1114
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1400	1897
				h/d > 0.5	All	1260	1705
			5m<z≤10m	h/d ≤ 0.5	All	1324	1795
				h/d > 0.5	All	1261	1510
			10m<z≤15m	h/d ≤ 0.5	All	1256	1693
				h/d > 0.5	All	1132	1347
			15m<z≤20m	h/d ≤ 0.5	All	1207	1551
				h/d > 0.5	All	1066	1235
			20m<z≤30m	h/d ≤ 0.5	All	1151	1397
				h/d > 0.5	All	1038	1114
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1435	1945
				h/d > 0.5	All	1306	1770
			5m<z≤10m	h/d ≤ 0.5	All	1364	1850
				h/d > 0.5	All	1235	1631
			10m<z≤15m	h/d ≤ 0.5	All	1295	1755
				h/d > 0.5	All	1173	1454
			15m<z≤20m	h/d ≤ 0.5	All	1244	1656
				h/d > 0.5	All	1127	1333
			20m<z≤30m	h/d ≤ 0.5	All	1186	1491
				h/d > 0.5	All	1075	1202
	TC3	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1467	1988
				h/d > 0.5	All	1320	1790
			5m<z≤10m	h/d ≤ 0.5	All	1467	1988
				h/d > 0.5	All	1320	1790
			10m<z≤15m	h/d ≤ 0.5	All	1368	1855
				h/d > 0.5	All	1232	1622
			15m<z≤20m	h/d ≤ 0.5	All	1296	1757
				h/d > 0.5	All	1168	1441
			20m<z≤30m	h/d ≤ 0.5	All	1219	1584
				h/d > 0.5	All	1099	1262
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1467	1988
				h/d > 0.5	All	1320	1790
			5m<z≤10m	h/d ≤ 0.5	All	1467	1988
				h/d > 0.5	All	1320	1790
			10m<z≤15m	h/d ≤ 0.5	All	1368	1855
				h/d > 0.5	All	1232	1622
			15m<z≤20m	h/d ≤ 0.5	All	1296	1757
				h/d > 0.5	All	1168	1441
			20m<z≤30m	h/d ≤ 0.5	All	1219	1584
				h/d > 0.5	All	1099	1262
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1485	2013
				h/d > 0.5	All	1368	1854
			5m<z≤10m	h/d ≤ 0.5	All	1485	2013
				h/d > 0.5	All	1368	1854
			10m<z≤15m	h/d ≤ 0.5	All	1410	1912
				h/d > 0.5	All	1277	1731
			15m<z≤20m	h/d ≤ 0.5	All	1336	1811
				h/d > 0.5	All	1210	1557
			20m<z≤30m	h/d ≤ 0.5	All	1256	1693
				h/d > 0.5	All	1131	1343

Wind Region B

WR	TC	Roof Pitch	Height	H/d	Zone	SPAN (mm) Proline 35	SPAN (mm) Proline 50
B	TC2	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1167	1439
				h/d > 0.5	All	1052	1148
			5m<z≤10m	h/d ≤ 0.5	All	1064	1176
				h/d > 0.5	All	940	940
			10m<z≤15m	h/d ≤ 0.5	All	1014	1060
				h/d > 0.5	All	849	849
			15m<z≤20m	h/d ≤ 0.5	All	986	999
				h/d > 0.5	All	800	800
			20m<z≤30m	h/d ≤ 0.5	All	925	925
				h/d > 0.5	All	742	742
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1167	1439
				h/d > 0.5	All	1052	1148
			5m<z≤10m	h/d ≤ 0.5	All	1064	1176
				h/d > 0.5	All	940	940
			10m<z≤15m	h/d ≤ 0.5	All	1014	1060
				h/d > 0.5	All	849	849
			15m<z≤20m	h/d ≤ 0.5	All	986	999
				h/d > 0.5	All	800	800
			20m<z≤30m	h/d ≤ 0.5	All	925	925
				h/d > 0.5	All	742	742
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1202	1537
				h/d > 0.5	All	1089	1238
			5m<z≤10m	h/d ≤ 0.5	All	1096	1254
				h/d > 0.5	All	993	1013
			10m<z≤15m	h/d ≤ 0.5	All	1045	1130
				h/d > 0.5	All	915	915
			15m<z≤20m	h/d ≤ 0.5	All	1016	1065
				h/d > 0.5	All	862	862
			20m<z≤30m	h/d ≤ 0.5	All	980	986
				h/d > 0.5	All	799	799
	TC2.5	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1220	1586
				h/d > 0.5	All	1099	1263
			5m<z≤10m	h/d ≤ 0.5	All	1155	1406
				h/d > 0.5	All	1041	1121
			10m<z≤15m	h/d ≤ 0.5	All	1096	1255
				h/d > 0.5	All	988	1002
			15m<z≤20m	h/d ≤ 0.5	All	1053	1151
				h/d > 0.5	All	921	921
			20m<z≤30m	h/d ≤ 0.5	All	1005	1039
				h/d > 0.5	All	832	832
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1220	1586
				h/d > 0.5	All	1099	1263
			5m<z≤10m	h/d ≤ 0.5	All	1155	1406
				h/d > 0.5	All	1041	1121
			10m<z≤15m	h/d ≤ 0.5	All	1096	1255
				h/d > 0.5	All	988	1002
			15m<z≤20m	h/d ≤ 0.5	All	1053	1151
				h/d > 0.5	All	921	921
			20m<z≤30m	h/d ≤ 0.5	All	1005	1039
				h/d > 0.5	All	832	832
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1257	1694
				h/d > 0.5	All	1139	1363
			5m<z≤10m	h/d ≤ 0.5	All	1190	1501
				h/d > 0.5	All	1078	1210
			10m<z≤15m	h/d ≤ 0.5	All	1129	1339
				h/d > 0.5	All	1023	1081
			15m<z≤20m	h/d ≤ 0.5	All	1085	1228
				h/d > 0.5	All	983	992
			20m<z≤30m	h/d ≤ 0.5	All	1035	1108
				h/d > 0.5	All	896	896
	TC3	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1278	1732
				h/d > 0.5	All	1151	1397
			5m<z≤10m	h/d ≤ 0.5	All	1278	1732
				h/d > 0.5	All	1151	1397
			10m<z≤15m	h/d ≤ 0.5	All	1193	1510
				h/d > 0.5	All	1075	1203
			15m<z≤20m	h/d ≤ 0.5	All	1130	1342
				h/d > 0.5	All	1019	1071
			20m<z≤30m	h/d ≤ 0.5	All	1064	1176
				h/d > 0.5	All	940	940
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1278	1732
				h/d > 0.5	All	1151	1397
			5m<z≤10m	h/d ≤ 0.5	All	1278	1732
				h/d > 0.5	All	1151	1397
			10m<z≤15m	h/d ≤ 0.5	All	1193	1510
				h/d > 0.5	All	1075	1203
			15m<z≤20m	h/d ≤ 0.5	All	1130	1342
				h/d > 0.5	All	1019	1071
			20m<z≤30m	h/d ≤ 0.5	All	1064	1176
				h/d > 0.5	All	940	940
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1317	1785
				h/d > 0.5	All	1193	1509
			5m<z≤10m	h/d ≤ 0.5	All	1317	1785
				h/d > 0.5	All	1193	1509
			10m<z≤15m	h/d ≤ 0.5	All	1229	1613
				h/d > 0.5	All	1113	1298
			15m<z≤20m	h/d ≤ 0.5	All	1165	1432
				h/d > 0.5	All	1055	1155
			20m<z≤30m	h/d ≤ 0.5	All	1096	1254
				h/d > 0.5	All	993	1013

Wind Region C

WR	TC	Roof Pitch	Height	H/d	Zone	SPAN (mm) Proline 35	SPAN (mm) Proline 50
C	TC2	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1003	1035
				h/d > 0.5	All	829	829
			5m<z≤10m	h/d ≤ 0.5	All	849	849
				h/d > 0.5	All	681	681
			10m<z≤15m	h/d ≤ 0.5	All	767	767
				h/d > 0.5	All	616	616
			15m<z≤20m	h/d ≤ 0.5	All	723	723
				h/d > 0.5	All	581	581
			20m<z≤30m	h/d ≤ 0.5	All	670	670
				h/d > 0.5	All	539	539
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1003	1035
				h/d > 0.5	All	829	829
			5m<z≤10m	h/d ≤ 0.5	All	849	849
				h/d > 0.5	All	681	681
			10m<z≤15m	h/d ≤ 0.5	All	767	767
				h/d > 0.5	All	616	616
			15m<z≤20m	h/d ≤ 0.5	All	723	723
				h/d > 0.5	All	581	581
			20m<z≤30m	h/d ≤ 0.5	All	670	670
				h/d > 0.5	All	539	539
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1033	1104
				h/d > 0.5	All	893	893
			5m<z≤10m	h/d ≤ 0.5	All	905	905
				h/d > 0.5	All	733	733
			10m<z≤15m	h/d ≤ 0.5	All	817	817
				h/d > 0.5	All	663	663
			15m<z≤20m	h/d ≤ 0.5	All	770	770
				h/d > 0.5	All	625	625
			20m<z≤30m	h/d ≤ 0.5	All	714	714
				h/d > 0.5	All	580	580
	TC2.5	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1048	1139
				h/d > 0.5	All	911	911
			5m<z≤10m	h/d ≤ 0.5	All	992	1011
				h/d > 0.5	All	810	810
			10m<z≤15m	h/d ≤ 0.5	All	905	905
				h/d > 0.5	All	726	726
			15m<z≤20m	h/d ≤ 0.5	All	831	831
				h/d > 0.5	All	667	667
			20m<z≤30m	h/d ≤ 0.5	All	752	752
				h/d > 0.5	All	604	604
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1048	1139
				h/d > 0.5	All	911	911
			5m<z≤10m	h/d ≤ 0.5	All	992	1011
				h/d > 0.5	All	810	810
			10m<z≤15m	h/d ≤ 0.5	All	905	905
				h/d > 0.5	All	726	726
			15m<z≤20m	h/d ≤ 0.5	All	831	831
				h/d > 0.5	All	667	667
			20m<z≤30m	h/d ≤ 0.5	All	752	752
				h/d > 0.5	All	604	604
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1080	1214
				h/d > 0.5	All	978	982
			5m<z≤10m	h/d ≤ 0.5	All	1022	1078
				h/d > 0.5	All	873	873
			10m<z≤15m	h/d ≤ 0.5	All	964	964
				h/d > 0.5	All	781	781
			15m<z≤20m	h/d ≤ 0.5	All	886	886
				h/d > 0.5	All	718	718
			20m<z≤30m	h/d ≤ 0.5	All	801	801
				h/d > 0.5	All	650	650
	TC3	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	1098	1259
				h/d > 0.5	All	989	1006
			5m<z≤10m	h/d ≤ 0.5	All	1098	1259
				h/d > 0.5	All	989	1006
			10m<z≤15m	h/d ≤ 0.5	All	1025	1085
				h/d > 0.5	All	967	967
			15m<z≤20m	h/d ≤ 0.5	All	775	775
				h/d > 0.5	All	849	849
			20m<z≤30m	h/d ≤ 0.5	All	681	681
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	1098	1259
				h/d > 0.5	All	989	1006
			5m<z≤10m	h/d ≤ 0.5	All	1098	1259
				h/d > 0.5	All	989	1006
			10m<z≤15m	h/d ≤ 0.5	All	1025	1085
				h/d > 0.5	All	868	868
			15m<z≤20m	h/d ≤ 0.5	All	967	967
				h/d > 0.5	All	775	775
			20m<z≤30m	h/d ≤ 0.5	All	849	849
				h/d > 0.5	All	681	681
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	1131	1343
				h/d > 0.5	All	1025	1084
			5m<z≤10m	h/d ≤ 0.5	All	1131	1343
				h/d > 0.5	All	1025	1084
			10m<z≤15m	h/d ≤ 0.5	All	1056	1157
				h/d > 0.5	All	936	936
			15m<z≤20m	h/d ≤ 0.5	All	1001	1030
				h/d > 0.5	All	834	834
			20m<z≤30m	h/d ≤ 0.5	All	905	905
				h/d > 0.5	All	733	733

Wind Region D

WR	TC	Roof Pitch	Height	H/d	Zone	SPAN (mm) Proline 35	SPAN (mm) Proline 50
D	TC2	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	731	731
				h/d > 0.5	All	587	587
			5m<z≤10m	h/d ≤ 0.5	All	601	601
				h/d > 0.5	All	484	484
			10m<z≤15m	h/d ≤ 0.5	All	544	544
				h/d > 0.5	All	438	438
			15m<z≤20m	h/d ≤ 0.5	All	513	513
				h/d > 0.5	All	413	413
			20m<z≤30m	h/d ≤ 0.5	All	476	476
				h/d > 0.5	All	383	383
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	731	731
				h/d > 0.5	All	587	587
			5m<z≤10m	h/d ≤ 0.5	All	601	601
				h/d > 0.5	All	484	484
			10m<z≤15m	h/d ≤ 0.5	All	544	544
				h/d > 0.5	All	438	438
			15m<z≤20m	h/d ≤ 0.5	All	513	513
				h/d > 0.5	All	413	413
			20m<z≤30m	h/d ≤ 0.5	All	476	476
				h/d > 0.5	All	383	383
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	779	779
				h/d > 0.5	All	632	632
			5m<z≤10m	h/d ≤ 0.5	All	640	640
				h/d > 0.5	All	520	520
			10m<z≤15m	h/d ≤ 0.5	All	579	579
				h/d > 0.5	All	471	471
			15m<z≤20m	h/d ≤ 0.5	All	546	546
				h/d > 0.5	All	444	444
			20m<z≤30m	h/d ≤ 0.5	All	507	507
				h/d > 0.5	All	412	412
	TC2.5	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	803	803
				h/d > 0.5	All	645	645
			5m<z≤10m	h/d ≤ 0.5	All	715	715
				h/d > 0.5	All	574	574
			10m<z≤15m	h/d ≤ 0.5	All	640	640
				h/d > 0.5	All	515	515
			15m<z≤20m	h/d ≤ 0.5	All	589	589
				h/d > 0.5	All	474	474
			20m<z≤30m	h/d ≤ 0.5	All	533	533
				h/d > 0.5	All	429	429
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	803	803
				h/d > 0.5	All	645	645
			5m<z≤10m	h/d ≤ 0.5	All	715	715
				h/d > 0.5	All	574	574
			10m<z≤15m	h/d ≤ 0.5	All	640	640
				h/d > 0.5	All	515	515
			15m<z≤20m	h/d ≤ 0.5	All	589	589
				h/d > 0.5	All	474	474
			20m<z≤30m	h/d ≤ 0.5	All	533	533
				h/d > 0.5	All	429	429
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	856	856
				h/d > 0.5	All	694	694
			5m<z≤10m	h/d ≤ 0.5	All	761	761
				h/d > 0.5	All	618	618
			10m<z≤15m	h/d ≤ 0.5	All	682	682
				h/d > 0.5	All	554	554
			15m<z≤20m	h/d ≤ 0.5	All	627	627
				h/d > 0.5	All	510	510
			20m<z≤30m	h/d ≤ 0.5	All	568	568
				h/d > 0.5	All	462	462
	TC3	0≤x5°	0≤z≤5m	h/d ≤ 0.5	All	886	886
				h/d > 0.5	All	711	711
			5m<z≤10m	h/d ≤ 0.5	All	886	886
				h/d > 0.5	All	711	711
			10m<z≤15m	h/d ≤ 0.5	All	766	766
				h/d > 0.5	All	615	615
			15m<z≤20m	h/d ≤ 0.5	All	684	684
				h/d > 0.5	All	549	549
			20m<z≤30m	h/d ≤ 0.5	All	601	601
				h/d > 0.5	All	484	484
		5≤x10°	0≤z≤5m	h/d ≤ 0.5	All	886	886
				h/d > 0.5	All	711	711
			5m<z≤10m	h/d ≤ 0.5	All	886	886
				h/d > 0.5	All	711	711
			10m<z≤15m	h/d ≤ 0.5	All	766	766
				h/d > 0.5	All	615	615
			15m<z≤20m	h/d ≤ 0.5	All	684	684
				h/d > 0.5	All	549	549
			20m<z≤30m	h/d ≤ 0.5	All	601	601
				h/d > 0.5	All	484	484
		10≤x30	0≤z≤5m	h/d ≤ 0.5	All	944	944
				h/d > 0.5	All	765	765
			5m<z≤10m	h/d ≤ 0.5	All	944	944
				h/d > 0.5	All	765	765
			10m<z≤15m	h/d ≤ 0.5	All	816	816
				h/d > 0.5	All	662	662
			15m<z≤20m	h/d ≤ 0.5	All	728	728
				h/d > 0.5	All	591	591
			20m<z≤30m	h/d ≤ 0.5	All	640	640
				h/d > 0.5	All	520	520

REDUCTION FACTOR FOR SOLAR PANEL LOCATION ON ROOF

ALL A-FRAME SPACINGS IN THE ABOVE TABLE MUST BE MULTIPLIED BY ONE OF THE BELOW FACTORS BASED ON THEIR LOCATION ON THE ROOF.
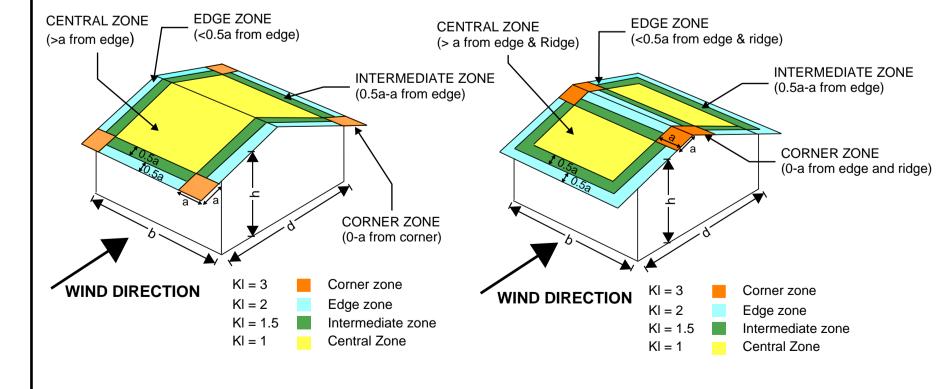
CORNER ZONE: SPACINGS MUST BE MULTIPLIED BY 0.33
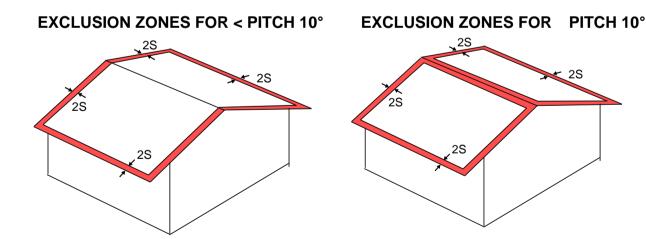EDGE ZONE: SPACINGS MUST BE MULTIPLIED BY 0.5
INTERMEDIATE ZONE: SPACINGS MUST BE MULTIPLIED BY 0.66
CENTRAL ZONE: SPACINGS DO NOT NEED TO BE MULTIPLIED BY ANY FACTOR

WHERE a = MIN(0.2d, 0.2b) if h/d or h/b   0.2, or 2h if h/d and h/b < 0.2

ROOF ZONES FOR ROOVES WITH PITCHES < 10°

CENTRAL ZONE (>a from edge)
EDGE ZONE (<0.5a from edge)
INTERMEDIATE ZONE (0.5a-a from edge)
CORNER ZONE (0-a from corner)
WIND DIRECTION

KI = 3 — Corner zone
KI = 2 — Edge zone
KI = 1.5 — Intermediate zone
KI = 1 — Central Zone

ROOF ZONE FOR ROOVES WITH PITCHES   10°

CENTRAL ZONE (> a from edge & Ridge)
EDGE ZONE (<0.5a from edge & ridge)
INTERMEDIATE ZONE (0.5a-a from edge)
CORNER ZONE (0-a from edge and ridge)
WIND DIRECTION

KI = 3 — Corner zone
KI = 2 — Edge zone
KI = 1.5 — Intermediate zone
KI = 1 — Central Zone

SOLAR PANEL EXCLUSION ZONE & MOUNTING RESTRAINTS

EXCLUSION ZONES FOR < PITCH 10°

EXCLUSION ZONES FOR PITCH 10°

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

TERRAIN CATEGORY DEFINITIONS

AS1170.2 :2021 CLAUSE 4.2.1

TC1 - VERY EXPOSED OPEN TERRAIN WITH VERY FEW OR NO OBSTRUCTIONS, AND ALL WATER SURFACES

TC2 - OPEN TERRAIN, INCLUDING GRASSLAND, WITH WELL SCATTER OBSTRUCTIONS HAVING HEIGHTS GENERALLY FROM 1.5m TO 5m, WITH NO MORE THAN TWO OBSTRUCTIONS PER HECTARE

TC2.5 - TERRAIN WITH SOME TREES OR ISOLATED OBSTRUCTIONS, TERRAIN IN DEVELOPING OUTER URBAN AREAS WITH SCATTERED HOUSES, OR LARGE ACREAGE DEVELOPMENTS WITH MORE THAN TWO AND LESS THAN 10 BUILDINGS PER HECTARE

TC3 - TERRAIN WITH NUMEROUS CLOSELY SPACED OBSTRUCTIONS HAVING HEIGHTS GENERALLY FROM 3m TO 10m. THE MINIMUM DENSITY OF OBSTRUCTIONS SHALL BE ATLEAST THE EQUIVALENT OF 10 HOUSE-SIZE OBSTRUCTIONS PER HECTARE

TC4 - TERRAIN WITH NUMEROUS LARGE, HIGH (10m TO 30m TALL) AND CLOSELY SPACED CONSTRUCTIONS, SUCH AS LARGE CITY CENTRES AND WELL-DEVELOPED INDUSTRIAL COMPELXES.

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 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 WIDTH LARGER THAN 2100mm

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

Where y = NEW SOLAR PANEL WIDTH IN mm

FOR SOLAR PANELS WITH WIDTH SMALLER THAN 2100mm

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

WHERE y = NEW SOLAR PANEL WIDTH 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.

A	FOR INFORMATION		JW	AKD	4/10/2023
Rev.	Issue / Amendment		By	App.	Date

PARTRIDGE

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Client
SCHLETTER AUSTRALIA PTY LTD

Architect

Project
2021S0925

Title
A FRAME 15 DEGREE SETUP FIXING TO F7 SOFTWOOD USING 2/BREMICK VOTREX UNIVERSAL SCREWS 2100 MODULES

ELECTRONIC SIGNATURE.
THIS DRAWING HAS BEEN ASSIGNED AN ELECTRONIC SIGNATURE CODE. THE PRESENCE OF THIS CODE SIGNIFIES THAT THIS IS THE CERTIFIED DRAWING ISSUED FOR CONSTRUCTION.

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS

Electronic Code	Signature Date	Designed JW
Scale at A1	Date 04/10/2023	Drawn JW
Job No. 2021S0925	Drawing No.	Revision A