

Our Ref: 30253

January 2020

Fujian Antai New Energy Tech. Co., Ltd.

Klip-Lok Type Clamp PV Mounting System for use within Australia - Type VI Rail

Dome Consulting (Aust) Pty Ltd have carried out a structural design check of the Fujian Antai New Energy Tech. Co., Ltd. Klip-Lok System for use in Australia. The design check has been based on the information provided by Fujian Antai New Energy Tech.

Australian Standards

AS 1170. 2011 – Structural Design Actions

Part 0 – General Principles

Part 1 – Permanent imposed and other actions

Part 2 – Wind Actions

Part 3 – Snow and Ice Actions

AS 1664.1 – Aluminium structures - Limit state design

Following design criteria has been used for the structural verification

Wind Region A, B, C, D

Wind Terrain Category 2 & 3

Wind average recurrence interval of 100 years

Maximum Building height 20 m

Max. Solar Panel length 1650mm (for larger panel, refer to notes)

The design and documentation has determined that all supporting componentry in the above mentioned documentation was found to be acceptable.

Refer to attached summary table for interface spacing.

Construction is to be carried out strictly in accordance with the manufacturers instructions. This work was designed in accordance with the provisions of Australian Building Regulations and in accordance with sound, widely accepted engineering principles

Yours faithfully,

FOR & ON BEHALF OF DOME CONSULTING PTY LTD



Robert Cilia
BE (Civil) RBP RPEQ TBP

Our Ref: 30253

January 2020

Fujian Antai New Energy Tech. Co., Ltd.

Structural Design Summary Table

KLIP-LOK TYPE CLAMP ACCREDITATION WITH TYPE VI RAIL

For

Adjustable Triangle, Adjustable Tilt Legs and Direct Mounting
in accordance to AS1170.2 2011 Amdt 5 - June 2017

Terrain Category 3

Direct Mounting or using L-feet and rails - Anywhere on the roof

SUMMARY - T.C. 3 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Direct Mounting System

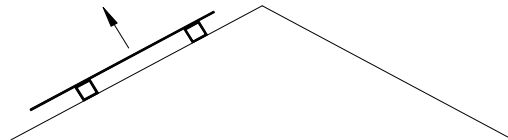
Fixing anywhere on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 0.40 |
| Lysaght 700 | 0.87 |
| Longline 305 | 1.68 |
| Stramit SDU | 0.73 |
| Fielders 700 | 0.43 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.80 | 0.75 | 0.84 | 0.84 | 1.02 | 0.90 | 1.10 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 685 | 560 | 595 | 530 | 530 | 430 | 500 | 400 |
| KlipLok 700 | 1475 | 1215 | 1305 | 1160 | 1160 | 950 | 1090 | 885 |
| KingKlip 700 | 735 | 595 | 635 | 570 | 570 | 470 | 530 | 430 |
| Stramit SDU | 1255 | 1020 | 1090 | 970 | 970 | 795 | 910 | 745 |
| Longline 305 | 1555 | 1475 | 1555 | 1475 | 1500 | 1425 | 1460 | 1385 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.40 | 1.14 | 1.50 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 535 | 400 | 460 | 350 | 420 | 310 | 390 | 290 |
| KlipLok 700 | 1165 | 890 | 1020 | 775 | 920 | 695 | 850 | 645 |
| KingKlip 700 | 575 | 440 | 500 | 380 | 450 | 340 | 420 | 310 |
| Stramit SDU | 980 | 745 | 850 | 645 | 765 | 575 | 715 | 535 |
| Longline 305 | 1430 | 1360 | 1430 | 1360 | 1385 | 1265 | 1345 | 1135 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 350 | 195 | 300 | 185 | 270 | 165 | 255 | 155 |
| KlipLok 700 | 765 | 440 | 655 | 420 | 595 | 370 | 545 | 350 |
| KingKlip 700 | 370 | 215 | 320 | 205 | 290 | 185 | 270 | 165 |
| Stramit SDU | 635 | 370 | 545 | 350 | 500 | 310 | 460 | 290 |
| Longline 305 | 1195 | 970 | 1195 | 970 | 1040 | 840 | 930 | 755 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
- 4 The above mentioned spacing table is for Roof Interface Bracket fixing including edge of the roof.
5. On purlin means that distance from the purlin to the Klip-Lok type bracket (centre to centre) is not more than 100mm
6. Angle refers to roof angle.
7. For panels lengths upto 1800mm reduce spacings by 12.0%
8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Angle refers to roof angle

Direct Mounting or using L-feet and rails - On top of the purlin

SUMMARY - T.C. 3 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Direct Mounting System

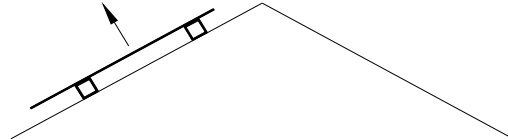
Fixing on purlin on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 1.37 |
| Lysaght 700 | 1.17 |
| Longline 305 | 1.76 |
| Stramit SDU | 1.80 |
| Fielders 700 | 0.50 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.8 | 0.75 | 0.84 | 0.84 | 1.02 | 0.9 | 1.1 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1475 | 1415 | 1435 | 1400 | 1400 | 1340 | 1380 | 1320 |
| KlipLok 700 | 1475 | 1415 | 1435 | 1400 | 1400 | 1275 | 1380 | 1195 |
| KingKlip 700 | 865 | 695 | 745 | 665 | 665 | 540 | 615 | 510 |
| Stramit SDU | 1475 | 1415 | 1435 | 1400 | 1400 | 1340 | 1380 | 1320 |
| Longline 305 | 1555 | 1475 | 1555 | 1475 | 1500 | 1425 | 1460 | 1385 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.4 | 1.14 | 1.5 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1400 | 1320 | 1360 | 1215 | 1325 | 1085 | 1305 | 1020 |
| KlipLok 700 | 1400 | 1195 | 1360 | 1040 | 1235 | 930 | 1145 | 870 |
| KingKlip 700 | 665 | 510 | 575 | 440 | 525 | 390 | 490 | 370 |
| Stramit SDU | 1400 | 1320 | 1360 | 1275 | 1325 | 1245 | 1305 | 1225 |
| Longline 305 | 1430 | 1360 | 1430 | 1360 | 1385 | 1315 | 1345 | 1195 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1205 | 695 | 1040 | 655 | 940 | 585 | 870 | 545 |
| KlipLok 700 | 1030 | 595 | 890 | 555 | 800 | 510 | 745 | 470 |
| KingKlip 700 | 440 | 255 | 380 | 235 | 340 | 215 | 310 | 195 |
| Stramit SDU | 1275 | 920 | 1235 | 870 | 1205 | 785 | 1145 | 725 |
| Longline 305 | 1255 | 1020 | 1255 | 1020 | 1085 | 880 | 970 | 790 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
- 4 The above mentioned spacing table is for Roof Interface Bracket fixing including edge of the roof.
5. On purlin means that distance from the purlin to the Klip-Lok type bracket (centre to centre) is not more than 100mm
6. Angle refers to roof angle.
7. For panels lengths upto 1800mm reduce spacings by 12.0%
8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Angle refers to roof angle

Single Tripod and Adjustable Tilting System - Anywhere on the roof

SUMMARY - T.C. 3 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Tripod and Adjustable Tilting System

Fixing anywhere on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 0.40 |
| Lysaght 700 | 0.87 |
| Longline 305 | 1.68 |
| Stramit SDU | 0.73 |
| Fielders 700 | 0.43 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.80 | 0.75 | 0.84 | 0.84 | 1.02 | 0.90 | 1.10 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 685 | 560 | 595 | 530 | 530 | 430 | 400 | 320 |
| KlipLok 700 | 1475 | 1215 | 1305 | 1160 | 1160 | 950 | 875 | 705 |
| KingKlip 700 | 735 | 595 | 635 | 570 | 570 | 470 | 430 | 350 |
| Stramit SDU | 1255 | 1020 | 1090 | 970 | 970 | 795 | 735 | 595 |
| Longline 305 | 1555 | 1475 | 1555 | 1475 | 1500 | 1425 | 1460 | 1385 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.40 | 1.14 | 1.50 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 535 | 400 | 460 | 350 | 420 | 310 | 390 | 290 |
| KlipLok 700 | 1165 | 890 | 1020 | 775 | 920 | 695 | 850 | 645 |
| KingKlip 700 | 575 | 440 | 500 | 380 | 450 | 340 | 420 | 310 |
| Stramit SDU | 980 | 745 | 850 | 645 | 765 | 575 | 715 | 535 |
| Longline 305 | 1430 | 1360 | 1430 | 1360 | 1385 | 1275 | 1345 | 1145 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 350 | 195 | 300 | 185 | 270 | 165 | 255 | 155 |
| KlipLok 700 | 765 | 440 | 655 | 420 | 595 | 370 | 545 | 350 |
| KingKlip 700 | 370 | 215 | 320 | 205 | 290 | 185 | 270 | 165 |
| Stramit SDU | 635 | 370 | 545 | 350 | 500 | 310 | 460 | 290 |
| Longline 305 | 1275 | 930 | 1275 | 930 | 1105 | 810 | 990 | 725 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
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6. Angle refers to tilt angle between roof and panels – not to horizontal.
7. For panels lengths upto 1800mm reduce spacings by 12.0%
8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Spacing applies to roofs with pitch <=10 degrees

Single Tripod and Adjustable Tilting System - On top of the purlin

SUMMARY - T.C. 3 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Tripod and Adjustable Tilting System

Fixing on purlin on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 1.37 |
| Lysaght 700 | 1.17 |
| Longline 305 | 1.76 |
| Stramit SDU | 1.80 |
| Fielders 700 | 0.50 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.8 | 0.75 | 0.84 | 0.84 | 1.02 | 0.9 | 1.1 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1475 | 1415 | 1435 | 1400 | 1400 | 1340 | 1375 | 1120 |
| KlipLok 700 | 1475 | 1415 | 1435 | 1400 | 1400 | 1275 | 1180 | 960 |
| KingKlip 700 | 865 | 695 | 745 | 665 | 665 | 540 | 500 | 400 |
| Stramit SDU | 1475 | 1415 | 1435 | 1400 | 1400 | 1340 | 1380 | 1320 |
| Longline 305 | 1555 | 1475 | 1555 | 1475 | 1500 | 1425 | 1460 | 1385 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.4 | 1.14 | 1.5 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1400 | 1320 | 1360 | 1215 | 1325 | 1085 | 1305 | 1020 |
| KlipLok 700 | 1400 | 1195 | 1360 | 1040 | 1235 | 930 | 1145 | 870 |
| KingKlip 700 | 665 | 510 | 575 | 440 | 525 | 390 | 490 | 370 |
| Stramit SDU | 1400 | 1320 | 1360 | 1275 | 1325 | 1245 | 1305 | 1225 |
| Longline 305 | 1430 | 1360 | 1430 | 1360 | 1385 | 1275 | 1345 | 1085 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1205 | 695 | 1040 | 655 | 940 | 585 | 585 | 545 |
| KlipLok 700 | 1030 | 595 | 890 | 555 | 800 | 510 | 745 | 470 |
| KingKlip 700 | 440 | 255 | 380 | 235 | 340 | 215 | 310 | 195 |
| Stramit SDU | 1275 | 920 | 1235 | 870 | 1205 | 785 | 1145 | 725 |
| Longline 305 | 1255 | 1020 | 1255 | 1020 | 1085 | 880 | 940 | 790 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
- 4 The above mentioned spacing table is for Roof Interface Bracket fixing including edge of the roof.
5. On purlin means that distance from the purlin to the Klip-Lok type bracket (centre to centre) is not more than 100mm
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7. For panels lengths upto 1800mm reduce spacings by 12.0%
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9. Spacing applies to roofs with pitch <=10 degrees

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Structural Design Summary Table

KLIP-LOK TYPE CLAMP ACCREDITATION WITH TYPE VI RAIL

For

Adjustable Triangle, Adjustable Tilt Legs and Direct Mounting
in accordance to AS1170.2 2011 Amdt 5 - June 2017

Terrain Category 2

Direct Mounting or using L-feet and rails - Anywhere on the roof

SUMMARY - T.C. 2 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Direct Mounting System

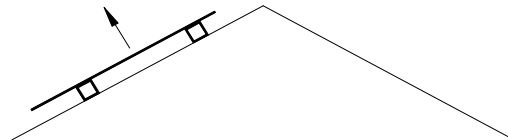
Fixing anywhere on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 0.40 |
| Lysaght 700 | 0.87 |
| Longline 305 | 1.68 |
| Stramit SDU | 0.73 |
| Fielders 700 | 0.43 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.80 | 0.75 | 0.84 | 0.84 | 1.02 | 0.90 | 1.10 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 655 | 530 | 540 | 480 | 490 | 400 | 460 | 370 |
| KlipLok 700 | 1435 | 1170 | 1185 | 1060 | 1070 | 875 | 1010 | 825 |
| KingKlip 700 | 705 | 570 | 590 | 520 | 530 | 430 | 500 | 400 |
| Stramit SDU | 1195 | 980 | 990 | 885 | 890 | 735 | 855 | 695 |
| Longline 305 | 1550 | 1465 | 1415 | 1345 | 1380 | 1255 | 1360 | 1180 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.40 | 1.14 | 1.50 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 510 | 380 | 420 | 320 | 380 | 290 | 360 | 270 |
| KlipLok 700 | 1115 | 840 | 920 | 705 | 840 | 635 | 790 | 595 |
| KingKlip 700 | 545 | 410 | 450 | 340 | 410 | 310 | 390 | 290 |
| Stramit SDU | 940 | 705 | 775 | 585 | 705 | 525 | 665 | 500 |
| Longline 305 | 1410 | 1335 | 1235 | 1000 | 1115 | 910 | 1055 | 860 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 330 | 195 | 270 | 175 | 245 | 155 | 235 | 145 |
| KlipLok 700 | 725 | 420 | 595 | 380 | 545 | 340 | 510 | 320 |
| KingKlip 700 | 360 | 205 | 290 | 185 | 260 | 165 | 255 | 155 |
| Stramit SDU | 605 | 350 | 500 | 310 | 460 | 280 | 430 | 270 |
| Longline 305 | 1075 | 860 | 820 | 665 | 745 | 605 | 705 | 565 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
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8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Angle refers to roof angle

Direct Mounting or using L-feet and rails - On top of the purlin

SUMMARY - T.C. 2 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Direct Mounting System

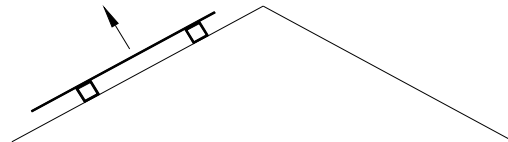
Fixing on purlin on the Roofing sheet

Two Klip-Lok per frame

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| Longline 305 | 1.76 |
| Stramit SDU | 1.80 |
| Fielders 700 | 0.50 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.8 | 0.75 | 0.84 | 0.84 | 1.02 | 0.9 | 1.1 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1465 | 1400 | 1385 | 1130 | 1255 | 1020 | 1185 | 960 |
| KlipLok 700 | 1465 | 1355 | 1180 | 960 | 1070 | 875 | 1010 | 825 |
| KingKlip 700 | 725 | 570 | 500 | 410 | 450 | 370 | 430 | 340 |
| Stramit SDU | 1465 | 1400 | 1405 | 1370 | 1375 | 1315 | 1360 | 1265 |
| Longline 305 | 1550 | 1465 | 1415 | 1345 | 1380 | 1310 | 1360 | 1235 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.4 | 1.14 | 1.5 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1380 | 1095 | 1010 | 810 | 910 | 745 | 860 | 695 |
| KlipLok 700 | 1175 | 940 | 860 | 695 | 775 | 635 | 735 | 595 |
| KingKlip 700 | 500 | 400 | 360 | 290 | 330 | 260 | 310 | 255 |
| Stramit SDU | 1385 | 1305 | 1320 | 1075 | 1195 | 980 | 1135 | 920 |
| Longline 305 | 1410 | 1335 | 1295 | 1050 | 1165 | 950 | 1105 | 900 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1145 | 665 | 950 | 595 | 860 | 545 | 810 | 520 |
| KlipLok 700 | 980 | 565 | 810 | 510 | 735 | 460 | 695 | 440 |
| KingKlip 700 | 420 | 245 | 340 | 215 | 310 | 195 | 290 | 185 |
| Stramit SDU | 1260 | 880 | 1205 | 790 | 1135 | 715 | 1065 | 675 |
| Longline 305 | 1125 | 900 | 860 | 695 | 775 | 635 | 735 | 595 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
- 4 The above mentioned spacing table is for Roof Interface Bracket fixing including edge of the roof.
5. On purlin means that distance from the purlin to the Klip-Lok type bracket (centre to centre) is not more than 100mm
6. Angle refers to roof angle.
7. For panels lengths upto 1800mm reduce spacings by 12.0%
8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Angle refers to roof angle

Single Tripod and Adjustable Tilting System - Anywhere on the roof

SUMMARY - T.C. 2 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Tripod and Adjustable Tilting System

Fixing anywhere on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 0.40 |
| Lysaght 700 | 0.87 |
| Longline 305 | 1.68 |
| Stramit SDU | 0.73 |
| Fielders 700 | 0.43 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.80 | 0.75 | 0.84 | 0.84 | 1.02 | 0.90 | 1.10 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 655 | 530 | 540 | 480 | 490 | 400 | 370 | 300 |
| KlipLok 700 | 1435 | 1170 | 1185 | 1060 | 1070 | 875 | 815 | 665 |
| KingKlip 700 | 705 | 570 | 590 | 520 | 530 | 430 | 400 | 320 |
| Stramit SDU | 1195 | 980 | 990 | 885 | 890 | 735 | 675 | 560 |
| Longline 305 | 1550 | 1465 | 1415 | 1325 | 1380 | 1205 | 1360 | 1140 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.40 | 1.14 | 1.50 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 510 | 380 | 420 | 320 | 380 | 290 | 360 | 270 |
| KlipLok 700 | 1115 | 840 | 920 | 705 | 840 | 635 | 790 | 595 |
| KingKlip 700 | 545 | 410 | 450 | 340 | 410 | 310 | 390 | 290 |
| Stramit SDU | 940 | 705 | 775 | 585 | 705 | 525 | 665 | 500 |
| Longline 305 | 1410 | 1295 | 1305 | 960 | 1195 | 870 | 1135 | 820 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 | ≤ 15 | ≤ 30 |
| KlipLok 406 | 330 | 195 | 270 | 175 | 245 | 155 | 235 | 145 |
| KlipLok 700 | 725 | 420 | 595 | 380 | 545 | 340 | 510 | 320 |
| KingKlip 700 | 360 | 205 | 290 | 185 | 260 | 165 | 255 | 155 |
| Stramit SDU | 605 | 350 | 500 | 310 | 460 | 280 | 430 | 270 |
| Longline 305 | 1155 | 830 | 880 | 635 | 790 | 575 | 755 | 545 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
- 4 The above mentioned spacing table is for Roof Interface Bracket fixing including edge of the roof.
5. On purlin means that distance from the purlin to the Klip-Lok type bracket (centre to centre) is not more than 100mm
6. Angle refers to tilt angle between roof and panels – not to horizontal.
7. For panels lengths upto 1800mm reduce spacings by 12.0%
8. For panels lengths upto 2200mm reduce spacings by 24.0%
9. Spacing applies to roofs with pitch <=10 degrees

Single Tripod and Adjustable Tilting System - On top of the purlin

SUMMARY - T.C. 2 for Regions A, B, C - Type VI Rail

Roof Interface Bracket Spacing (mm) Across for PV – Tripod and Adjustable Tilting System

Fixing on purlin on the Roofing sheet

Two Klip-Lok per frame

Design Data

| KlipLok Type | Capacity kN |
|--------------|-------------|
| Lysaght 406 | 1.37 |
| Lysaght 700 | 1.17 |
| Longline 305 | 1.76 |
| Stramit SDU | 1.80 |
| Fielders 700 | 0.50 |

Panel 'L' 1650



| WIND REGION | A | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.65 | 0.8 | 0.75 | 0.84 | 0.84 | 1.02 | 0.9 | 1.1 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1465 | 1400 | 1405 | 1370 | 1375 | 1315 | 1285 | 1050 |
| KlipLok 700 | 1465 | 1400 | 1405 | 1370 | 1375 | 1180 | 1100 | 890 |
| KingKlip 700 | 825 | 665 | 675 | 605 | 605 | 500 | 460 | 380 |
| Stramit SDU | 1465 | 1400 | 1405 | 1370 | 1375 | 1315 | 1360 | 1300 |
| Longline 305 | 1550 | 1465 | 1415 | 1345 | 1380 | 1255 | 1360 | 1185 |
| Force (kN/m) | 0.59 | 0.73 | 0.68 | 0.76 | 0.76 | 0.93 | 0.82 | 1.00 |

| WIND REGION | B | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 0.83 | 1.09 | 0.96 | 1.26 | 1.06 | 1.4 | 1.14 | 1.5 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1385 | 1305 | 1330 | 1105 | 1305 | 1000 | 1255 | 950 |
| KlipLok 700 | 1385 | 1135 | 1245 | 940 | 1135 | 850 | 1065 | 810 |
| KingKlip 700 | 635 | 480 | 525 | 400 | 480 | 360 | 450 | 340 |
| Stramit SDU | 1385 | 1305 | 1330 | 1250 | 1305 | 1225 | 1285 | 1205 |
| Longline 305 | 1410 | 1335 | 1305 | 1010 | 1255 | 910 | 1185 | 860 |
| Force (kN/m) | 0.75 | 0.99 | 0.87 | 1.14 | 0.96 | 1.27 | 1.03 | 1.36 |

| WIND REGION | C | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|
| qu (K Pa) | 1.27 | 2.19 | 1.47 | 2.31 | 1.63 | 2.57 | 1.75 | 2.75 |
| hz | 5 m | | 10 m | | 15 m | | 20 m | |
| Angle | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 | ≤ 15 | ≤30 |
| KlipLok 406 | 1145 | 665 | 950 | 595 | 860 | 545 | 545 | 520 |
| KlipLok 700 | 980 | 565 | 810 | 510 | 735 | 460 | 695 | 440 |
| KingKlip 700 | 420 | 245 | 340 | 215 | 310 | 195 | 290 | 185 |
| Stramit SDU | 1260 | 880 | 1205 | 790 | 1135 | 715 | 1065 | 675 |
| Longline 305 | 1205 | 870 | 920 | 675 | 830 | 605 | 785 | 575 |
| Force (kN/m) | 1.15 | 1.99 | 1.33 | 2.10 | 1.48 | 2.33 | 1.59 | 2.50 |

1. Roof Interface bracket spacing in the above table for panel length of 1.65 m.
2. The table prepared based on Rail VI capacity and Klip-Lok bracket pull-out capacity
3. The panels or L-Foot have to be fixed using 1-M8 bolt.
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