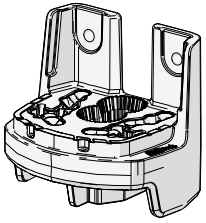


Common Products

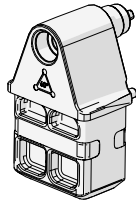
Products needed to assemble Kwiktech designs.



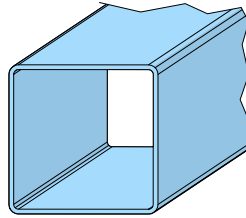
Kwiktech
Universal
Connector



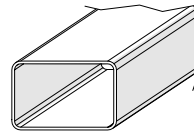
Kwiktech
Rail Insert
Standard



Kwiktech
Rail Insert
60°



50 to 150mm
SHS or RHS
(1.5-2.5mm
THK)



25x38 mm
RHS
(1.2-1.6mm
THK)



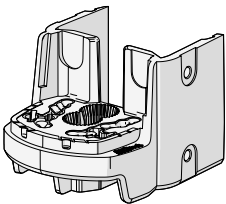
Socket-head
Cap Screw
(M6x40mm)



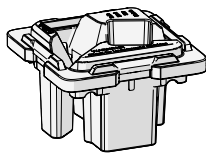
Metal Screw A
Wafer Head
10g x 16mm
(Self Drilling)

Additional Products

Additional products needed to assemble some Kwiktech designs.



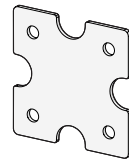
Kwiktech
Post
Connector



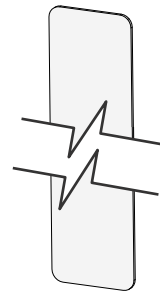
Kwiktech
Star Picket
Stopper



Kwiktech
Stopper Cap



Kwiktech
Displacement
Plate



Tension
Strapping
(various lengths)



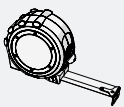
M6x20mm Bolt
M6 Nut



Metal Screw B
Flat Top
10g x 16mm
(Self Drilling)

Tools Required

To assemble Kwiktech designs.



Tape
Measure



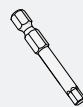
Marker



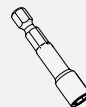
Power Drill or
Impact Driver



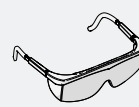
No 2.
Phillips
Head Bit



Hex 5 Bit
and/or
Allen Key



5/16"
Hex
Socket



Safety
Glasses



Metal Cutting
Tool for DIY
Cutting

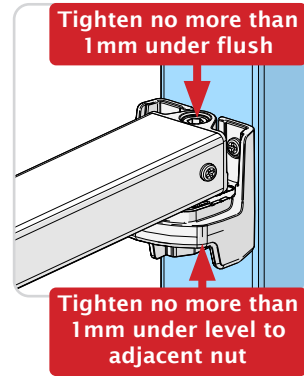
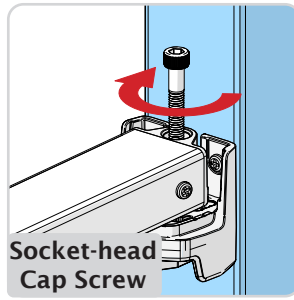
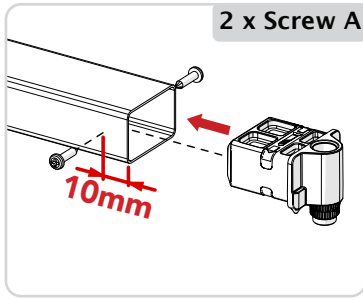


Adjustable
Spanner

Additional safety, clamping and access equipment maybe required at the users discretion.
3.5mm and 13mm Ø drill bits will be required for some frame work designs.

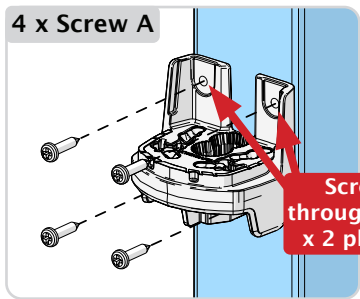
Rail Assembly

Fit Rail Insert as shown both ends.

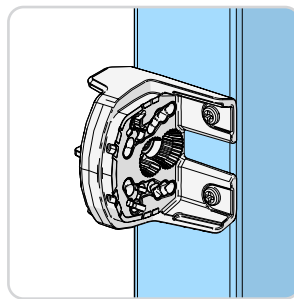


Installation Types

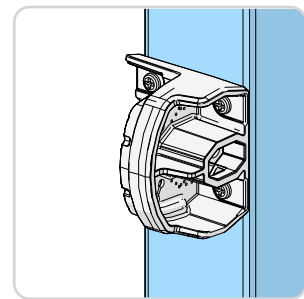
There are 3 typical different ways to install the **Universal Connector** to a 50x50 hollow member.



Upright Fit



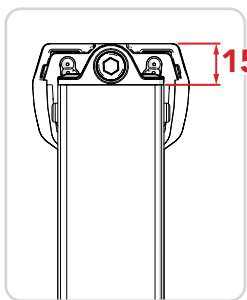
Outside Fit



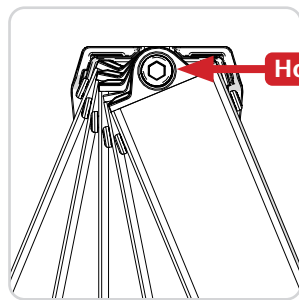
Inside Fit

Rail Positions

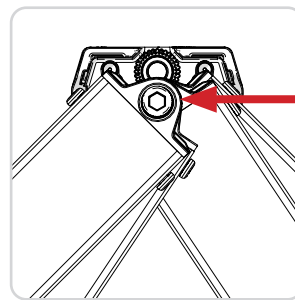
When following the dimensions stated on Kwiktech drawings, the angles will be predefined by the **Universal Connector** placement and rail length. Just select the correct hole when fitting.



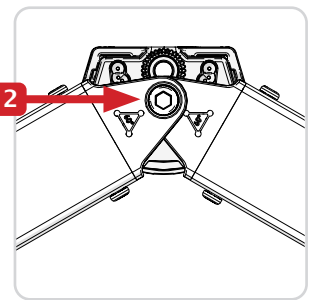
0°



0° - 22.5° Angles



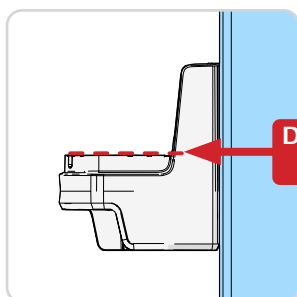
33.75° - 45° Angles



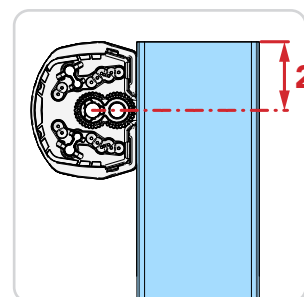
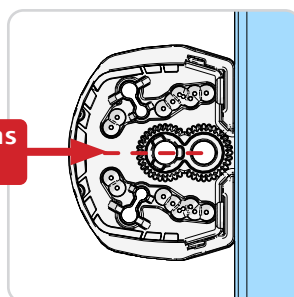
60° Angle

Reading Drawings

When reading Kwiktech drawings the dimensions will refer to these centre positions on the **Universal Connector**.

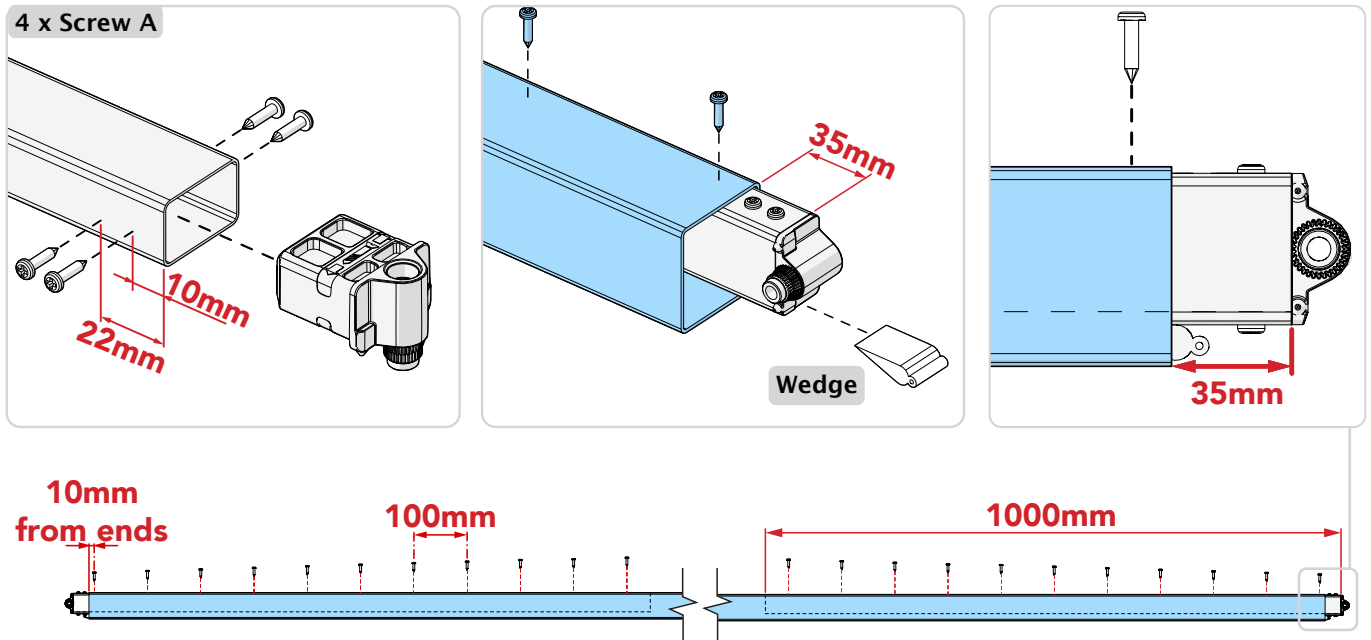


Dimensions to here



Extra Strong Rail Assembly

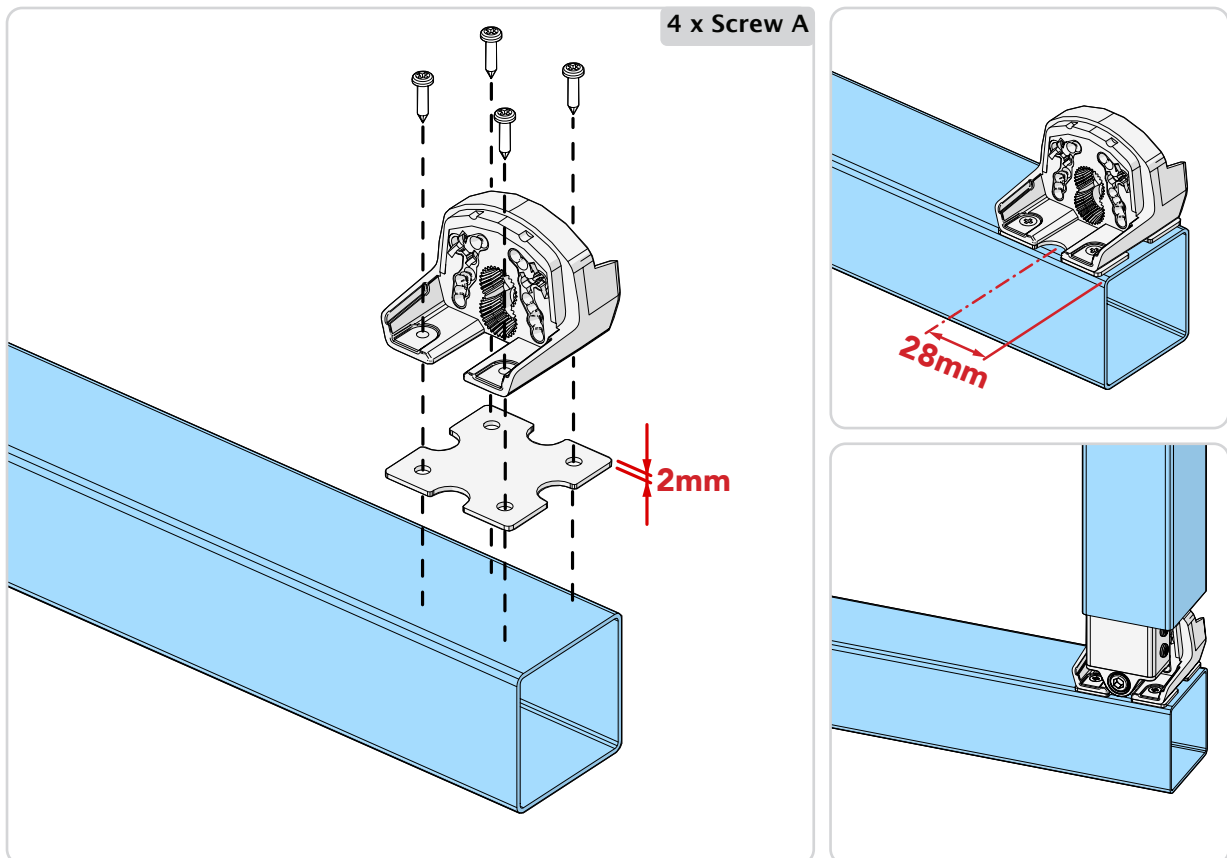
Fit Rail Insert as shown both ends. 2x additional screws to fix Rail Insert only when specified on drawings. Assembly wedge supplied in some Kwiktech DIY Kits.



Start fixing screws from the end closest to the Rail Insert. Temporary wedge or clamp to assist securing steel members together. Remove wedge after first screw is fixed.

Load Displacement Plate Assembly

Only needed where specified on drawings. Used to strengthen light-gauge member wall surface.

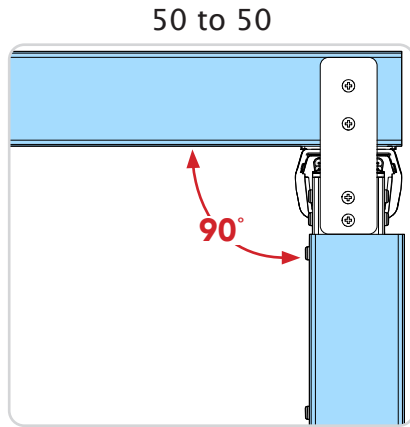


Tension Strapping

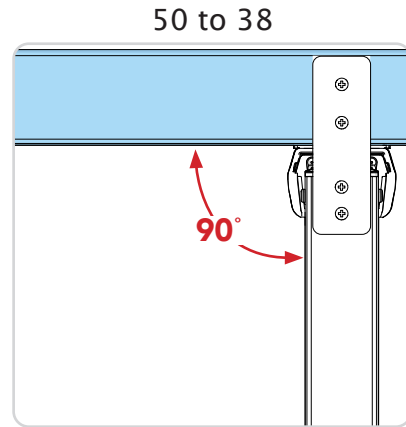
10gx16 Self Drilling small head Flat Top Screws (Screw B) used for all steps.

2 Screws used at each end of Strapping. Refer to **Kwiktech Trusses Manual** for member cut lengths & Universal Connector positioning measurements.

90° Intersection

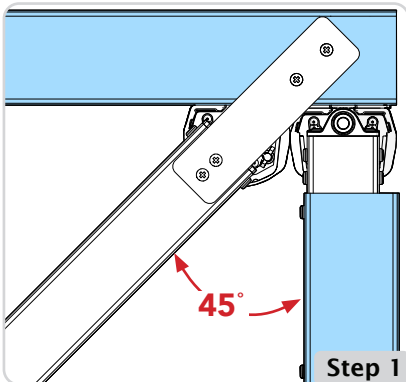


95mm long strap

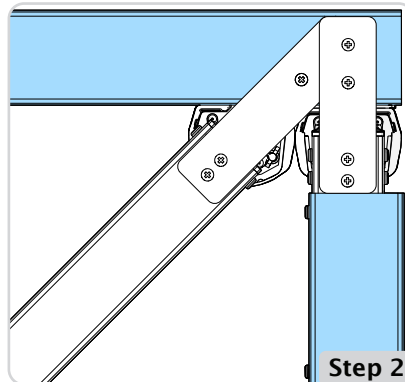


95mm long strap

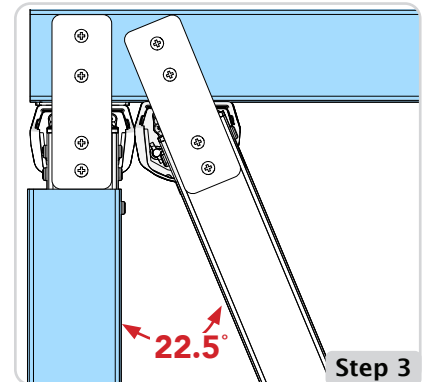
Double Intersections



135mm strap on 45° member

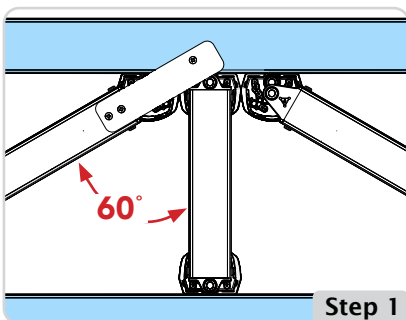


85mm/95mm strap on 0° member

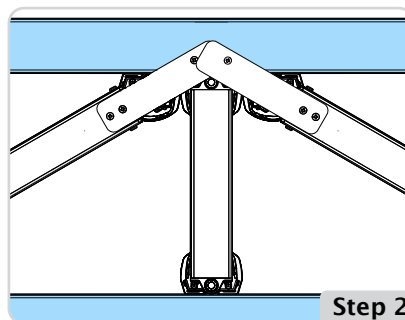


95mm strap on 0° member.
85mm/95mm strap on 22.5° member

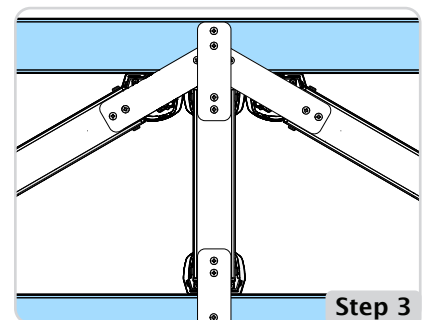
Triple Intersection



135mm strap on 60° member

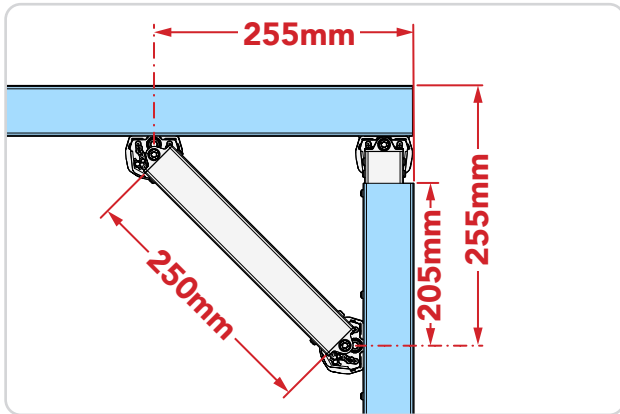


135mm strap on 60° member

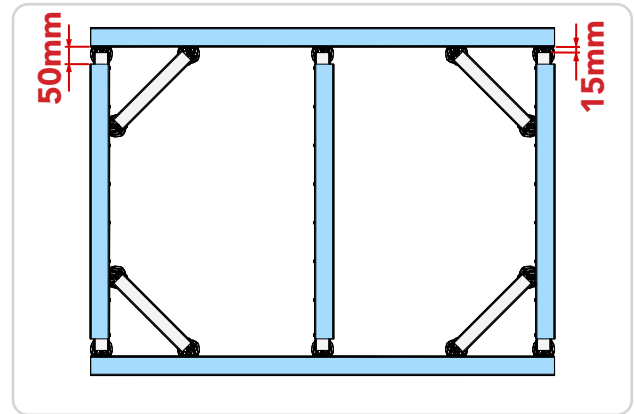


95mm strap on 0° member

50 to 50 Corner Brace



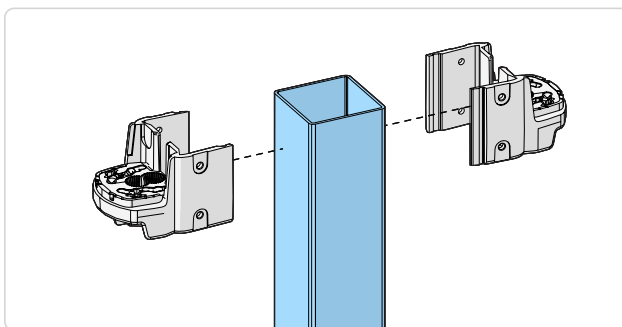
Refer to “Easy Frame DIY” on the Kwiktech website for cross bracings from 1m x 1m up to 2.4m x 2.4m in 100mm increments.



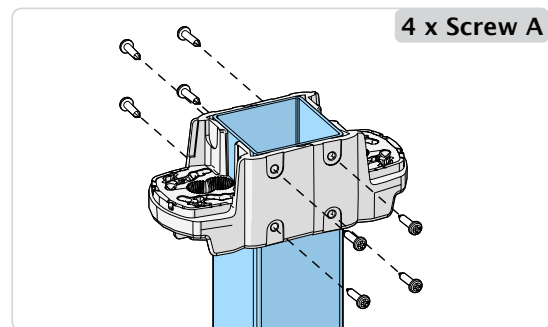
Example 1

Post Connector

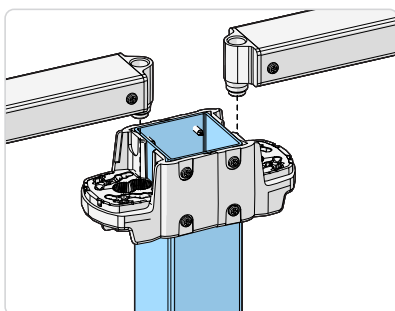
Click fit to 50x50 posts.



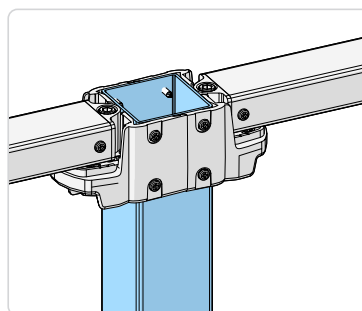
Press and click both Post Connectors onto 50x50 SHS



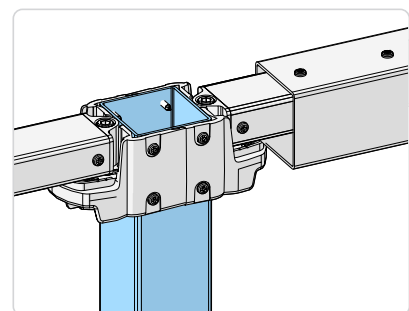
Screw fix to the SHS



Place Rails in correct hole position and angle

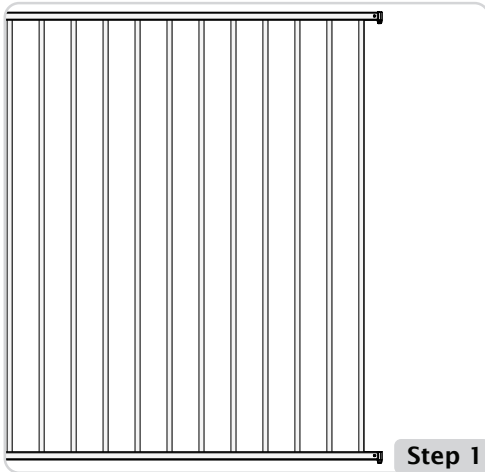


Secure Rails as per standard Rail Assembly

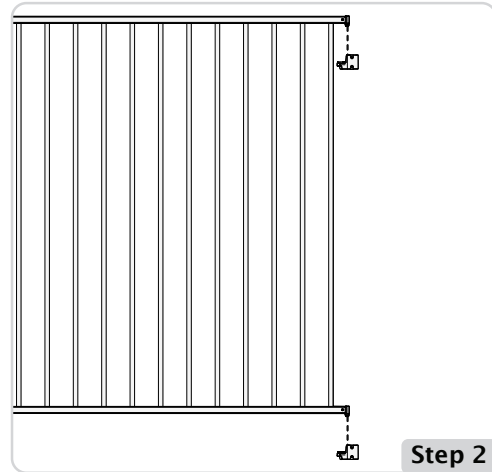


Option; Attach larger hollow section for longer spans

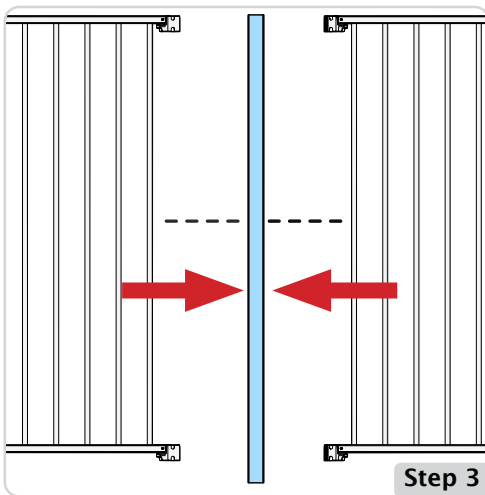
Fencing Assembly



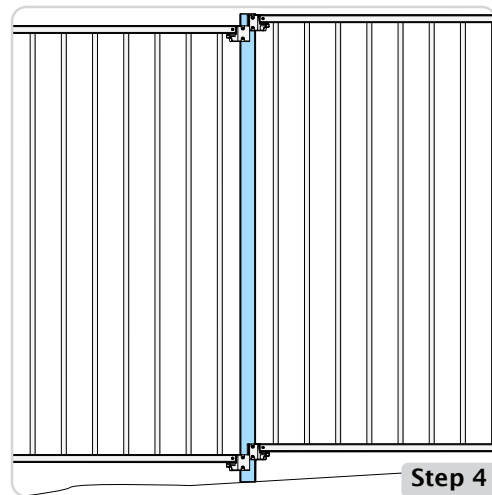
Insert Rail Inserts into the 38x25 rails and screw fix



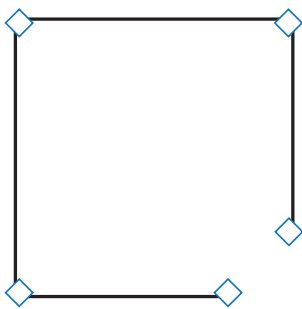
Attach Post Connectors at the correct angle for your desired perimeter and lightly fit with Socket-head Cap Screws



Align Post Connectors. Click onto the 50x50 SHS post

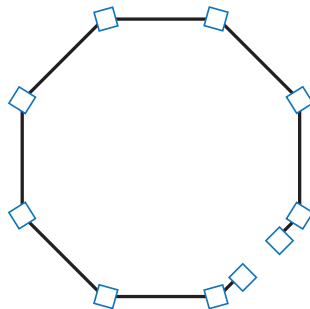


Level fence panels and screw fix in position, then tighten all Socket-head Cap Screws



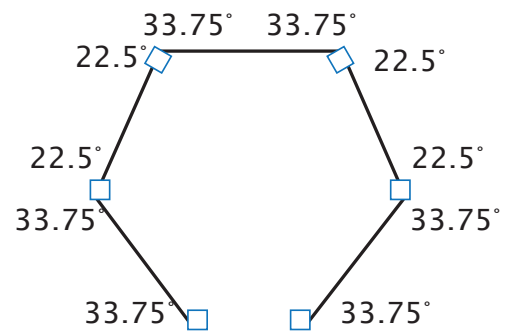
Square Perimeter
45° Connection

5.6m²
(2.4m long panels)



Octagon Perimeter
22.5° Connection

27.8m²
(2.4m long panels)

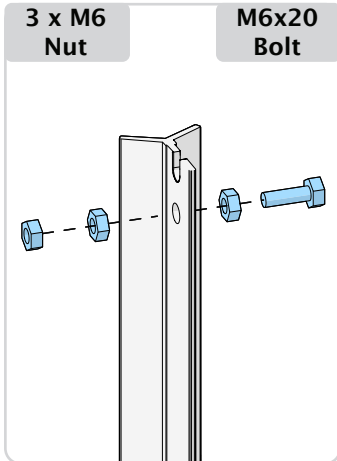


Polygon Perimeter
Different Angle Connections

13.2m²
(2.4m long panels)

Star Picket Stopper & Cap

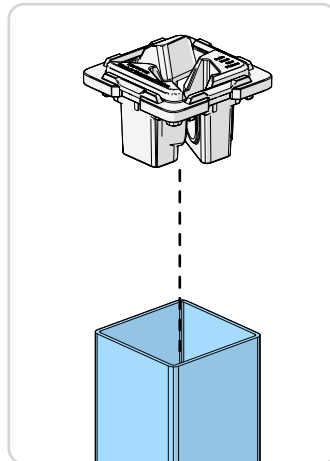
Standard Star Picket to be a minimum of 400mm longer than its 50x50 post.



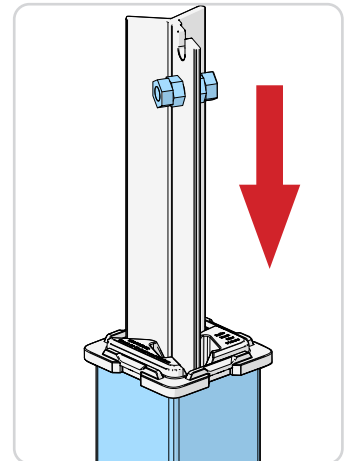
3 x M6 Nut

M6x20 Bolt

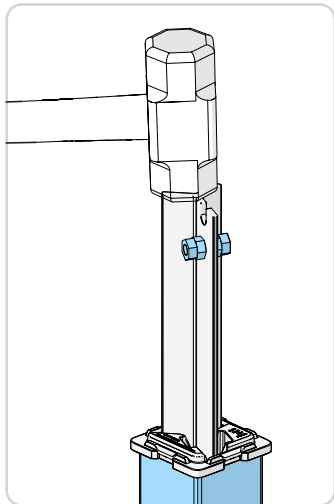
Fit bolt through top hole in star picket & secure with nuts



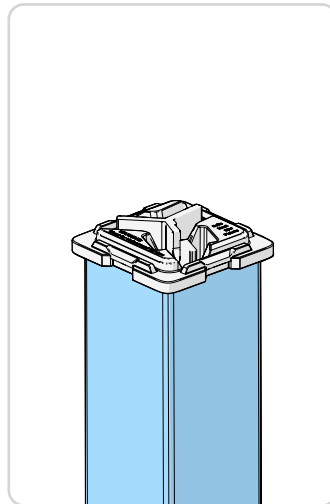
Lower star picket stopper into the 50x50 member



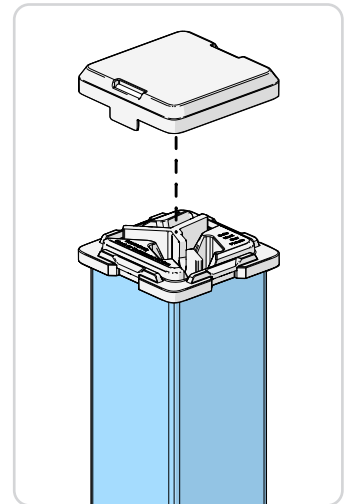
Place star picket through the designated slot



Hammer star picket down until bolt assembly rests in the stopper

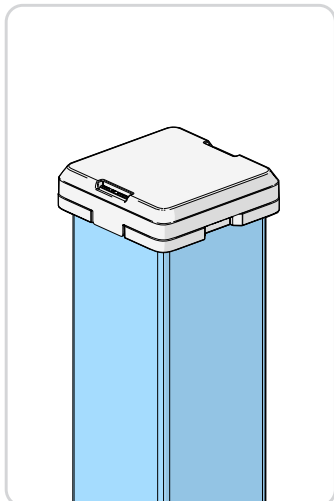


CAUTION: Stopper not designed for impact. Do not continue to hammer once bottomed on stopper

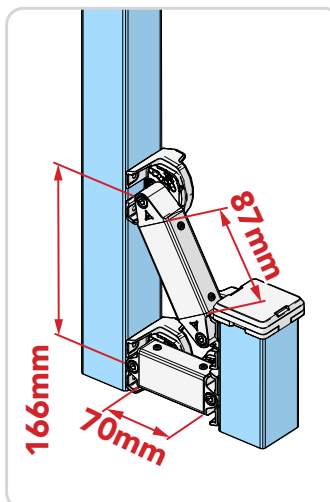


Press and click cap onto stopper unit

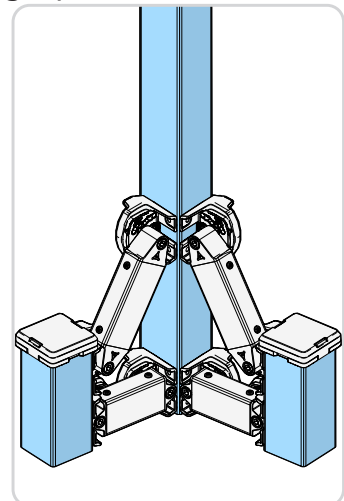
Additional Bracing Options



Finished assembly



Example 1



Example 2

Test Specifications

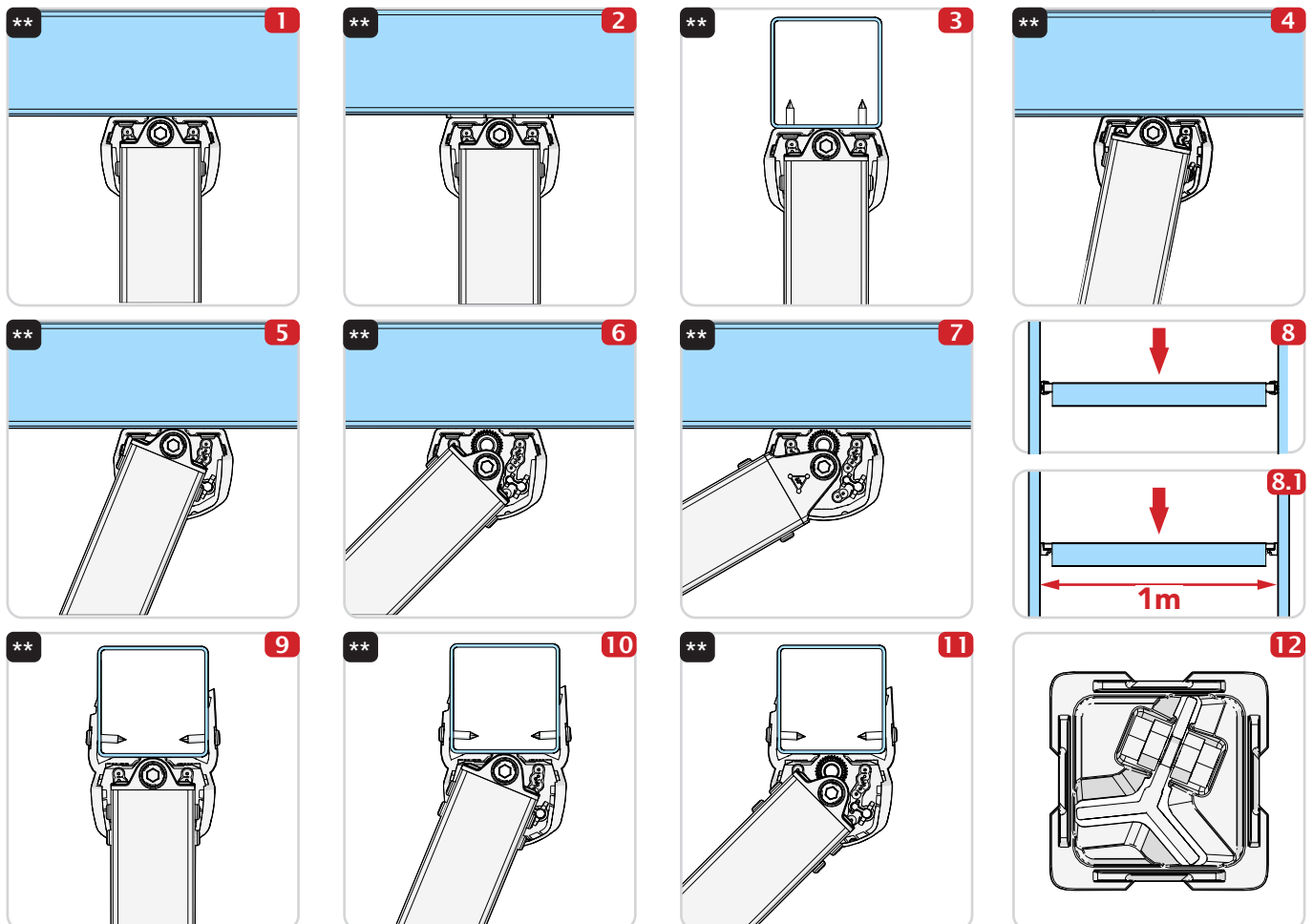
AS/NZS 1170.0-2002



CONNECTION TYPE	ID #	COMPRESSION NEWTONS	TENSION NEWTONS	TENSION WITH STRAP NEWTONS*
Universal Connector + Rail Insert - 0°	1	3000	2000	5600
Universal Connector + Displacement Plate + Rail Insert - 0°	2	11500	2000	5600 - Ref ID #1
Universal Connector Rotated 90° + Rail Insert - 0°	3	8500	2000 - Ref ID #1	Not Applicable
Universal Connector + Rail Insert - 11.25°	4	11000	2000 - Ref ID #1	5600 - Ref ID #1
Universal Connector + Rail Insert - 22.5°	5	12000	2000	5600
Universal Connector + Rail Insert - 45°	6	3800	2500	6000
Universal Connector + 60° Rail Insert - 60°	7	3800	3000	6000
Universal Connector + Rail Insert - 0° Load Test 1m span	8	10000	Not Applicable	Not Applicable
Universal Connector + Rail Insert - 0° Load Test 1m span	8.1	10000	Not Applicable	Not Applicable
Post Connector + Rail Insert (4 Screws) - 0°	9	8500 - Ref ID #3	3500	Not Applicable
Post Connector + Rail Insert (4 Screws) - 22.5°	10	8000	3500	Not Applicable
Post Connector + Rail Insert (4 Screws) - 45°	11	3800	3500	Not Applicable
Star Picket Stopper	12	3500	Not Applicable	Not Applicable

* 1 Screw at each end of Galvanized 0.8mm x 30mm wide Strapping - 10gx16 Self Drilling Small Head Flat Top (Screw B)

** 50x50x1.6 SHS where indicated



Refer to next page for additional load testing.

Test Specifications

AS/NZS 1170.0-2002



CONNECTION TYPE	ID #	COMPRESSION NEWTONS	TENSION NEWTONS	TENSION WITH STRAP NEWTONS*
Universal Connector + Rail Insert - 0° Load Test 1m span	13	7000	Not Applicable	Not Applicable
Universal Connector + Rail Insert - 33.75° Load Test 1m span	14	7500	Not Applicable	Not Applicable
Universal Connector + Rail Insert - 0° onto 50x50x2.5mm SHS	15	11500	2000 - Ref ID #1	5600 - Ref ID #1
Universal Connector + Rail Insert - 0° onto 65x65x1.5mm SHS	16	10000	2000 - Ref ID #1	5600 - Ref ID #1
Universal Connector + Rail Insert - 0° onto 100x100x2.4mm SHS	17	11500	2000 - Ref ID #1	5600 - Ref ID #1

