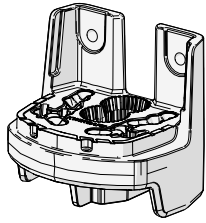


## Common Products

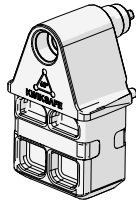
Products needed to assemble Kwiktech designs.



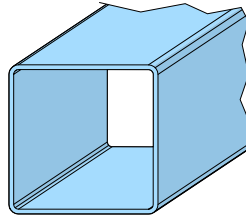
Kwiktech  
Universal  
Connector



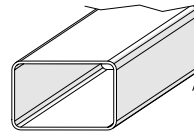
Kwiktech  
Rail Insert  
Standard



Kwiktech  
Rail Insert  
60°



50 SHS  
(1.5-2.5mm)



25x38 RHS  
(1.2-1.6mm)



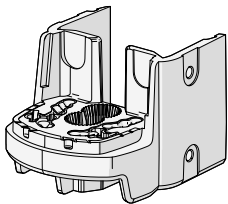
Socket-head  
Cap Screw  
(M6x40mm)



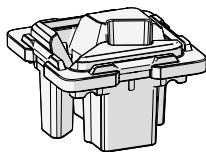
Metal Screw A  
Wafer Head  
10g x 16mm  
(Self Drilling)

## Additional Products

Additional products needed to assemble some Kwiktech designs.



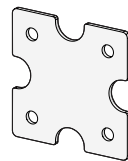
Kwiktech  
Post  
Connector



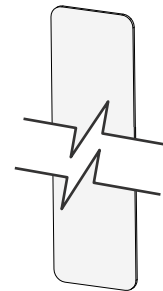
Kwiktech  
Star Picket  
Stopper



Kwiktech  
Stopper Cap



Kwiktech  
Displacement  
Plate



Tension  
Strapping  
(various lengths)



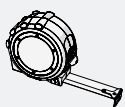
M6x20mm Bolt  
M6 Nut



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

## Tools Required

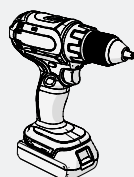
To assemble Kwiktech designs.



Tape  
Measure



Marker



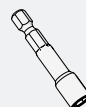
Power Drill or  
Impact Driver



No 2.  
Phillips  
Head Bit



Hex 5 Bit  
and/or  
Allen Key



5/16"  
Hex  
Socket



Safety  
Glasses



Metal Cutting  
Tool for DIY  
Cutting

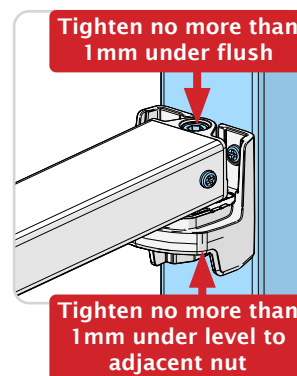
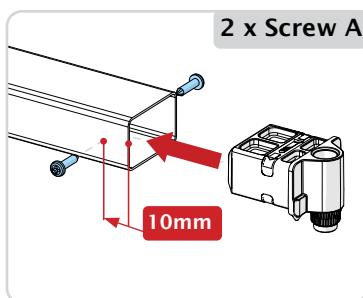


Shifting  
Spanner

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.

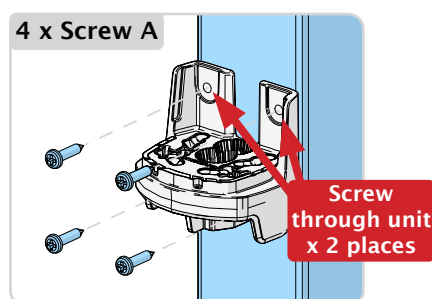
## Rail Assembly

Fit Rail Insert as shown both ends.

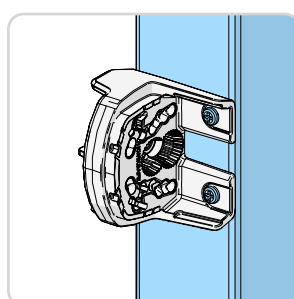


## Installation Types

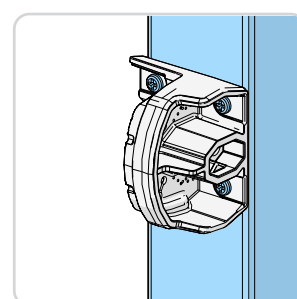
There are 3 typical different ways to install the **Universal Connector** to a 50x50 hollow member.



Upright Fit



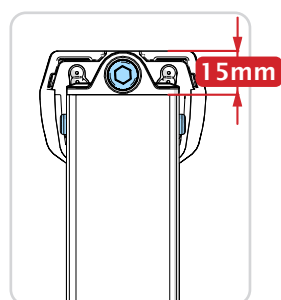
Outside Fit



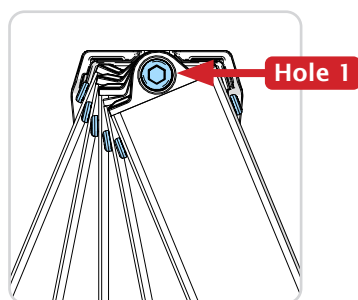
Inside Fit

## Rail Positions

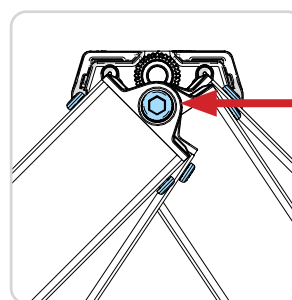
When following the dimensions stated on Kwiktech drawings, the angles will be predefined. Just select the correct hole when fitting.



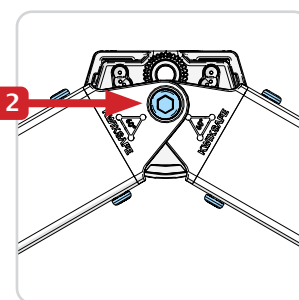
0°



0° - 22.5° Angles



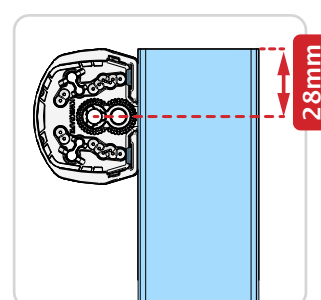
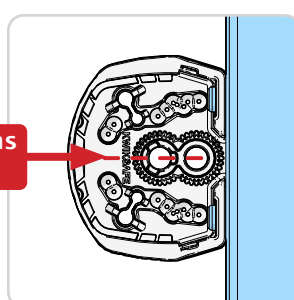
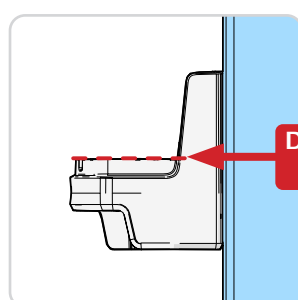
33.75° - 45° Angles



60° Angle

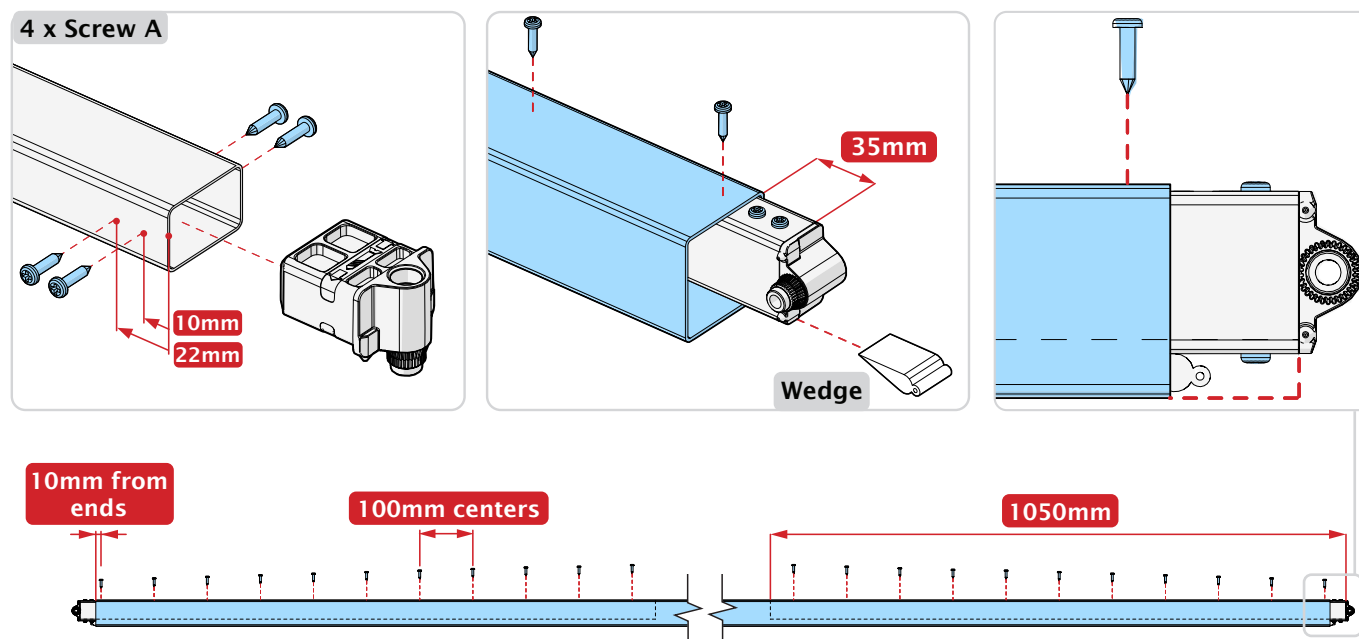
## Reading Drawings

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



## Extra Strong Rail Assembly

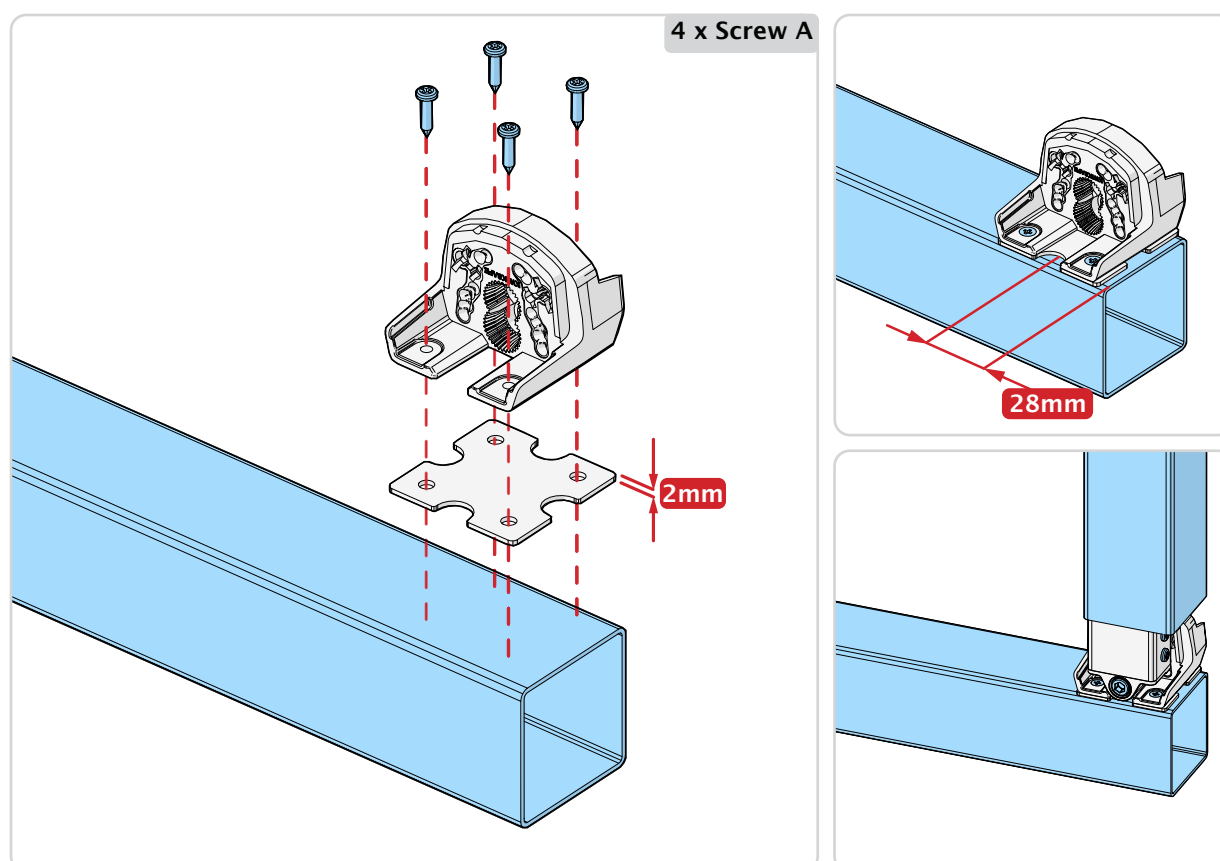
Fit **Rail Insert** as shown both ends. 4 x screws to fix Rail Insert only when specified on drawings. Assembly wedge supplied in some Kwiktech DIY Kits.



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

## Load Displacement Plate Assembly

Only needed where specified on drawings.

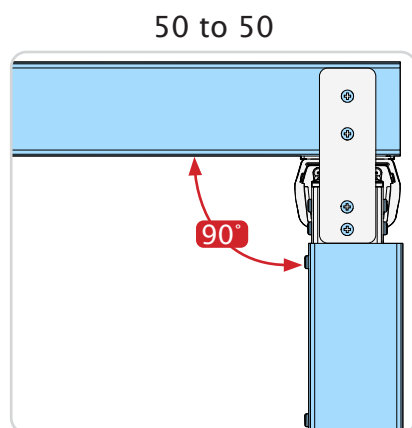


## Tension Strapping

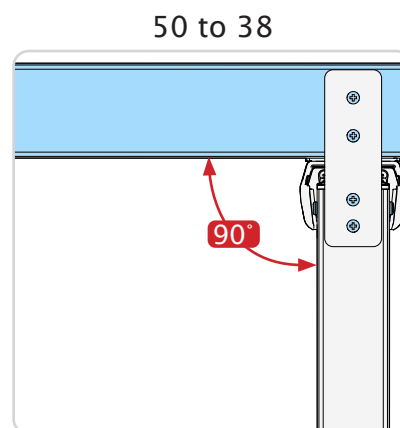
10gx16 Self Drilling small head Flat Top Screws (Screw B) used for all steps.

2 Screws used at each end of Strapping.

### 90° Intersection

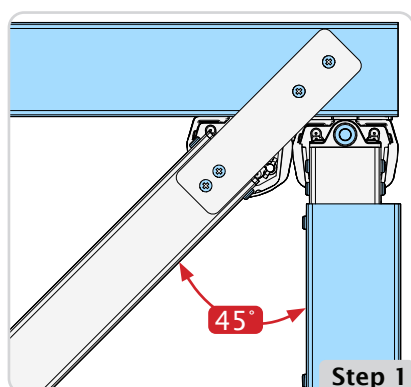


95mm long strap

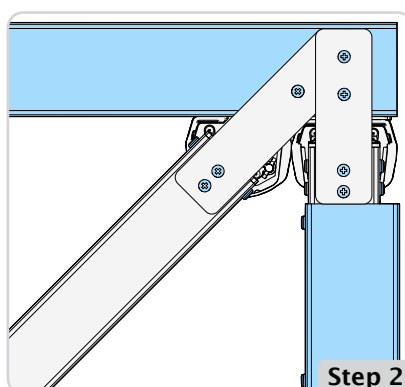


95mm long strap

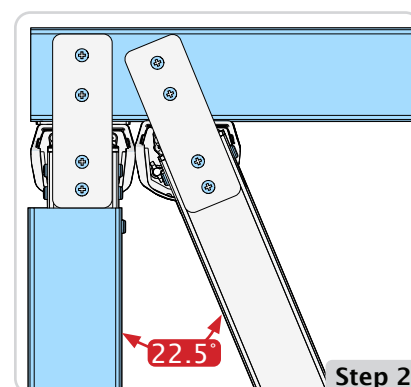
### Double Intersections



135mm strap on  
45° member

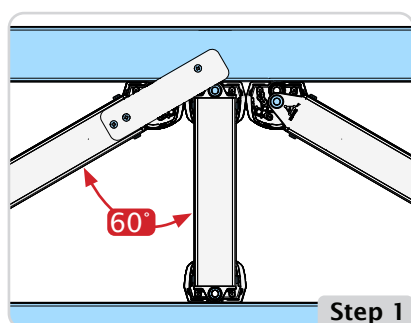


95mm strap on  
0° member

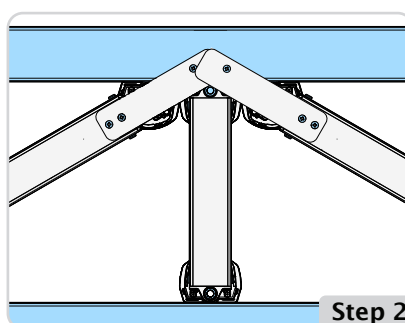


95mm strap on 0° member.  
85mm strap on  
22.5° member

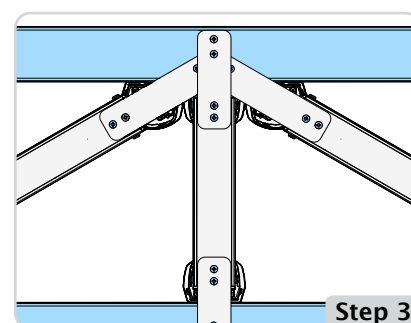
### Triple Intersection



135mm strap on  
60° member

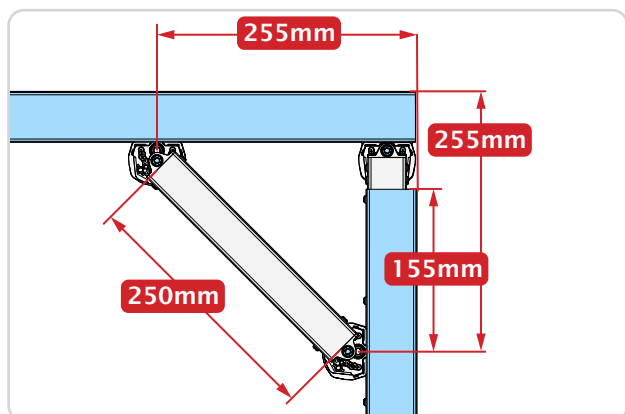


135mm strap on  
60° member

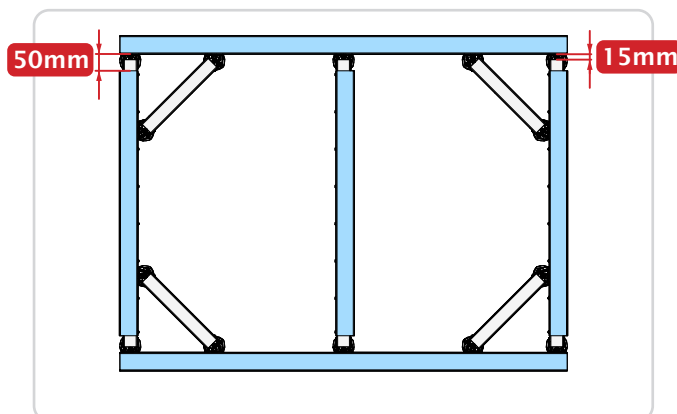


95mm strap on  
0° member

## 50 to 50 Corner Brace



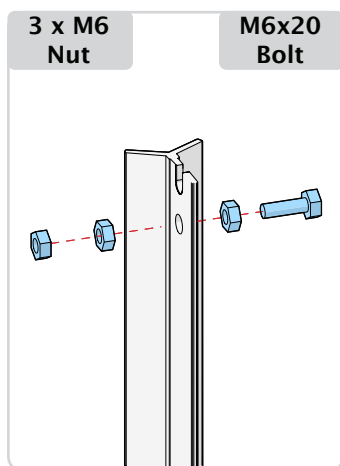
Refer to “DIY-Metal Framework - Easy Fabrication” on the Kwiktech website for cross bracings from 1m x 1m up to 2.4m x 2.4m



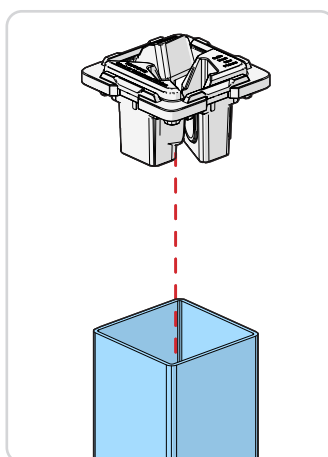
Example 1

## Star Picket Stopper & Cap

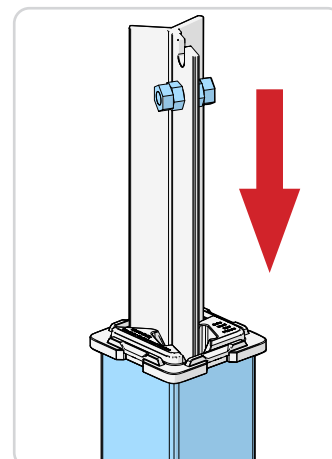
Standard Star Picket to be a minimum of 400mm longer than its 50x50 housing.



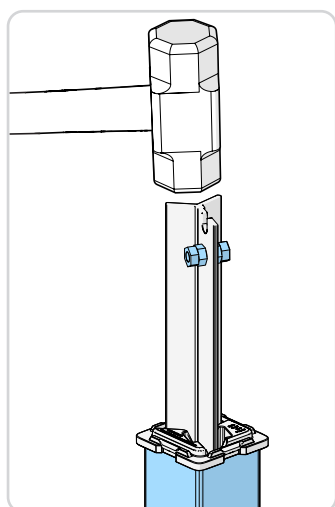
Fit bolt through top hole in star picket & secure with nuts



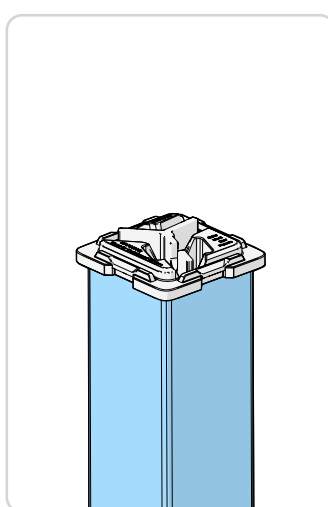
Lower star picket stopper into the 50x50 member



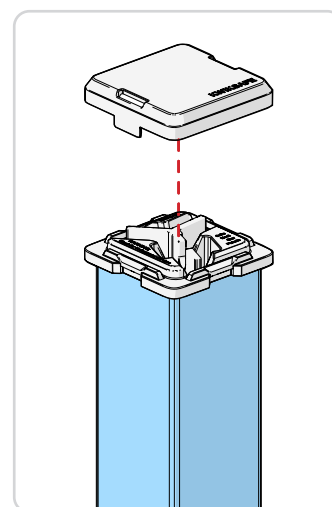
Place star picket through the designated slot



Hammer star picket down until bolt assembly rests in the stopper

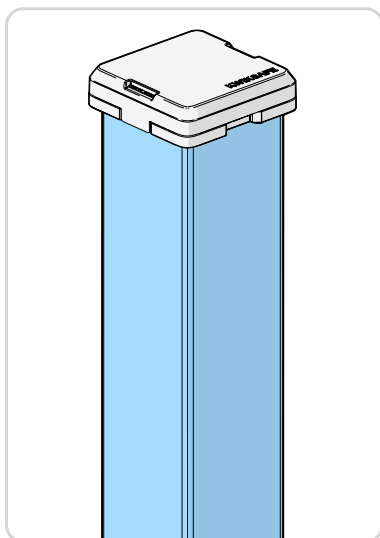


**CAUTION:** Stopper not designed for impact. Do not continue to hammer once bottomed on stopper

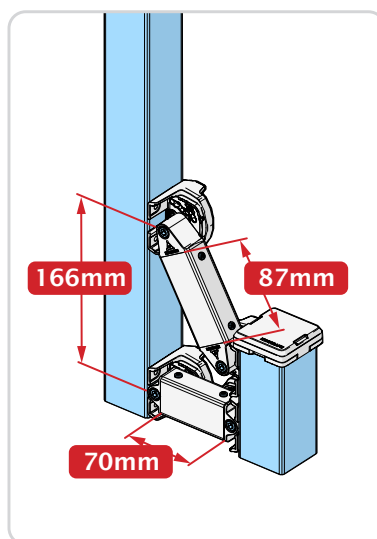


Press and click cap onto stopper unit

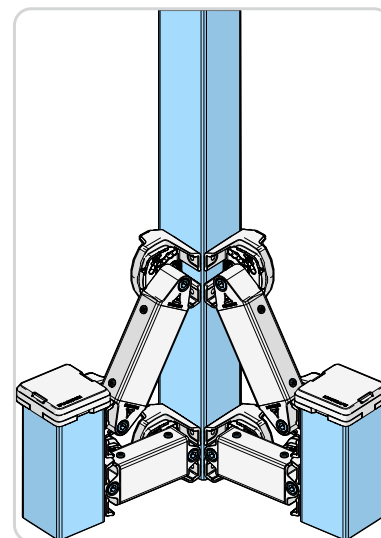
## Stair Picket Stopper & Cap



Finished assembly



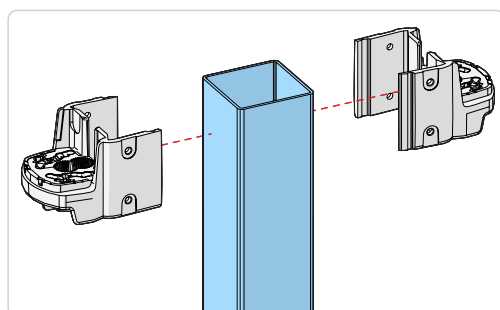
Example 1



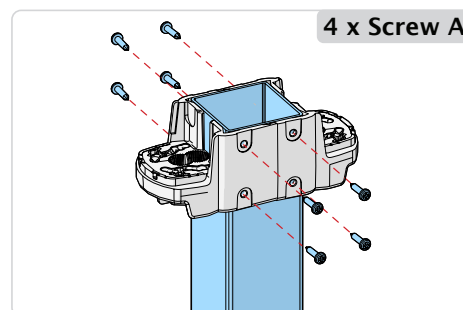
Example 2

## Post Connector

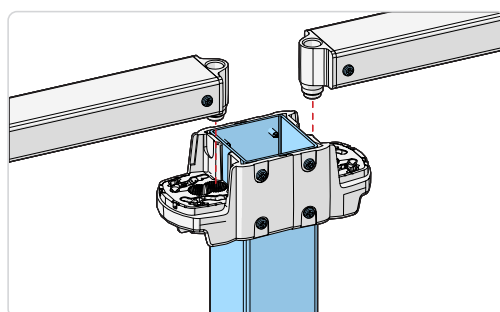
Click fit to 50x50 posts.



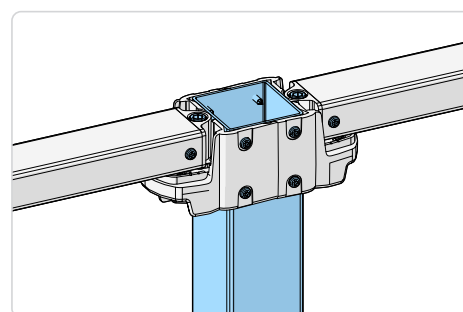
Press and click both  
Post Connectors onto  
50x50 SHS



Screw fix to the SHS

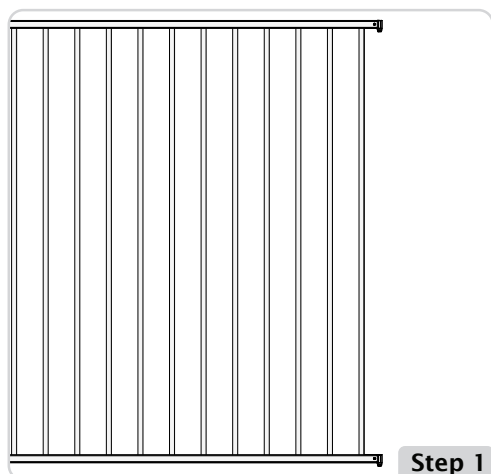


Place Rails in correct  
hole position and angle

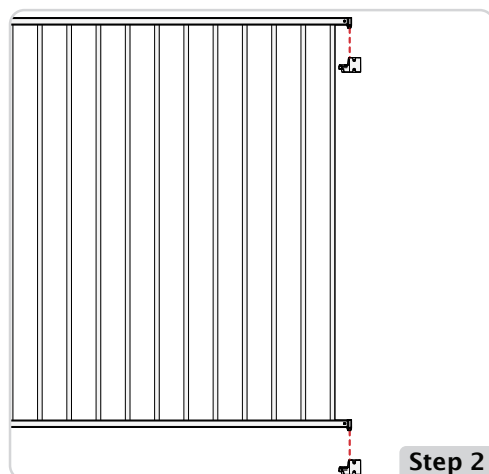


Secure Rails as per  
standard Rail Assembly

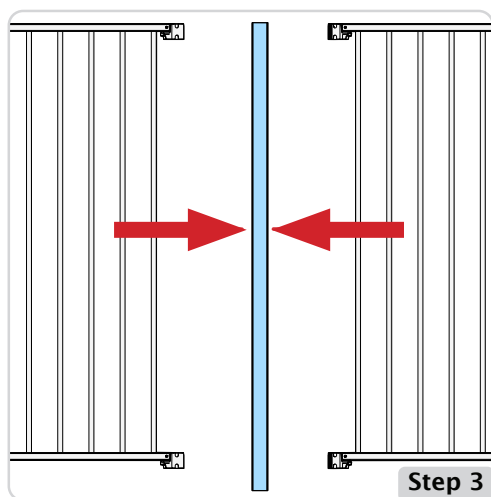
## Fencing Assembly



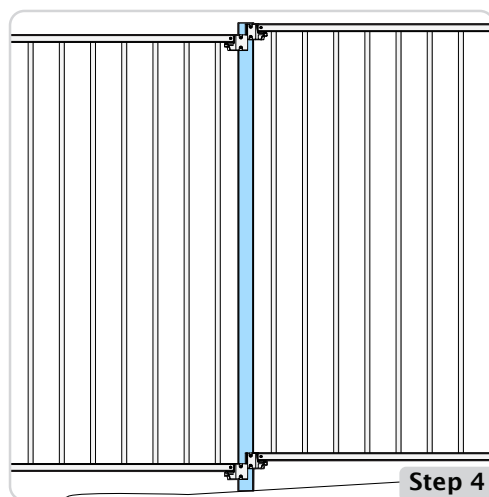
Insert Rail Inserts into the 38x25 and screw fix



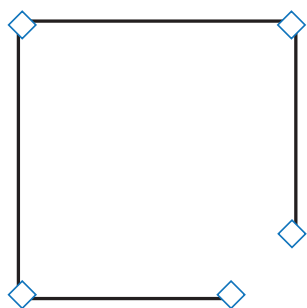
Attach Post Connectors at the correct angle for the desired perimeter and lightly fit with Socket-head Cap Screws



Align Post Connectors.  
Click onto the post

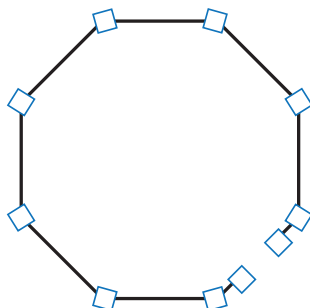


Level fence panels and screw fix in position, then tighten all Socket-head Cap Screws



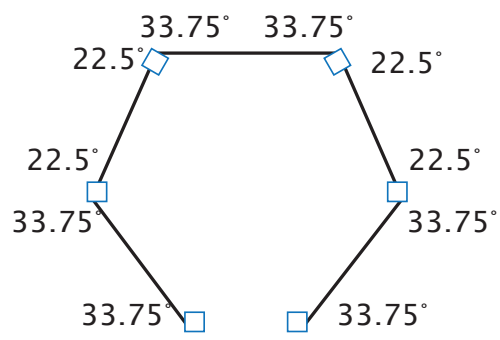
Square Perimeter  
45° Connection

5.6m<sup>2</sup>  
(2.4m long panels)



Octagon Perimeter  
22.5° Connection

27.8m<sup>2</sup>  
(2.4m long panels)



Polygon Perimeter  
Different Angle Connections

13.2m<sup>2</sup>  
(2.4m long panels)

## Test Specifications

AS/NZS 1170.0-2002

$$\begin{array}{c} \text{10,000N} \\ \text{Newtons} \end{array} = \begin{array}{c} \text{1019kg} \\ \text{Kilogram} \\ \text{Force} \end{array} \text{ or } \begin{array}{c} \text{2248lbs} \\ \text{Pound} \\ \text{Force} \end{array}$$

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

