BUILDING PRODUCT

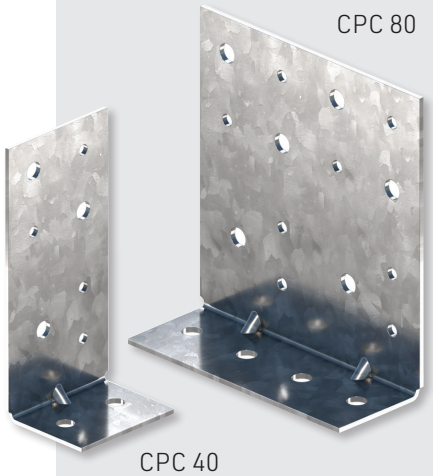
Concealed Purlin Cleat

FOR HIDDEN TIE DOWN TO TOP OF SUPPORT

The Concealed Purlin Cleat is an economical hidden bracket for fixing purlins to top of rafters, or trusses to top of walls to resist uplift.

For durability information, please refer to **Corrosion Resistance of MiTek Metal Connectors,** available on the MiTek website at **mitek.com.au**

Available in two sizes, the CPC40 is 40mm wide and suited to narrow top support installations, while the CPC80, with an 80mm width is best suited to high wind uplift situations.



USES

- Concealed Purlin Cleats provide a fast and easy method of anchoring purlins, rafters and trusses to the top of supports away from view.
- They are also useful for fixing to timber plates on top of block walls.

ADVANTAGES

- Quick and easy to apply, no nails required.
- No fixing to side of support required.
- Hidden from view.
- Resists wind uplift.

This Certified Engineering Building Product complies with the National Construction Code and Australian Standards.

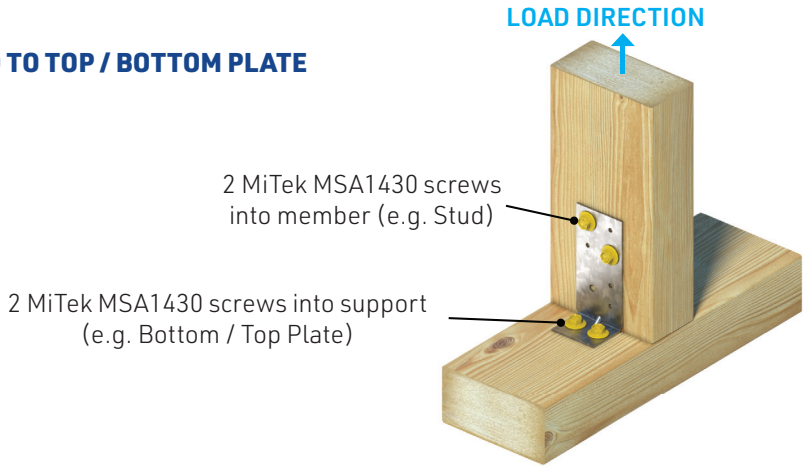
MITEK.COM.AU

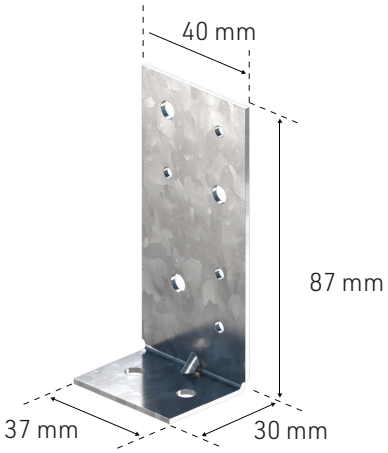
CodeMark CM70055 Australia

SPECIFICATIONS

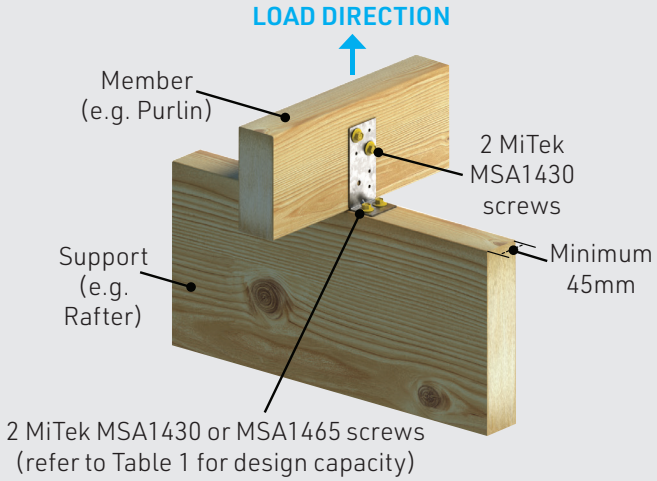
Steel Grade	G300
Thickness (Total Coated)	1.55 mm
Galvanised Coating	Z275
Screws MSA1430	MiTek No.14 x 30mm anti-split self-drilling HD galvanised screws with Ruspert® coating
Screws MSA1465	MiTek No.14 x 65mm anti-split self-drilling HD galvanised screws with Ruspert® coating for use in double top plates or beams
Product Code	CPC40; CPC80

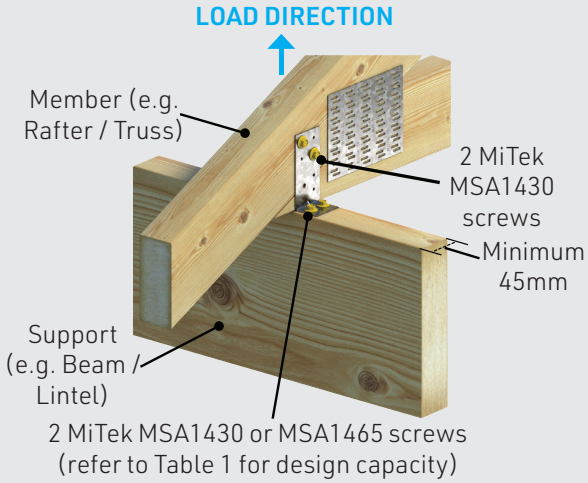
STUD TO TOP / BOTTOM PLATE



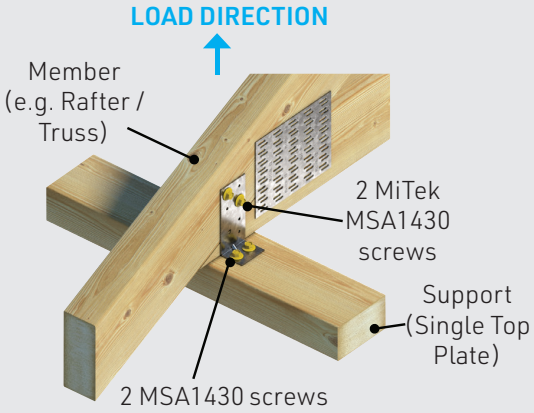


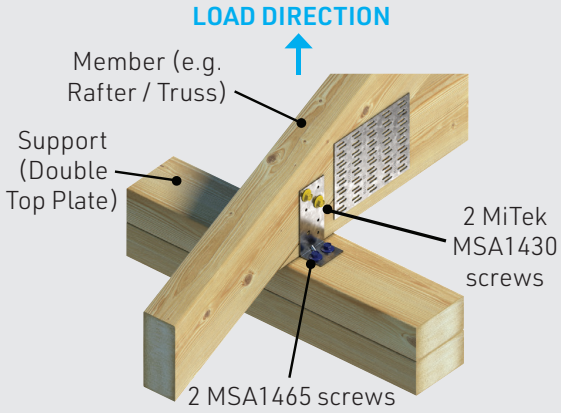
PURLIN / RAFTER / TRUSS TO LINTEL / BEAM



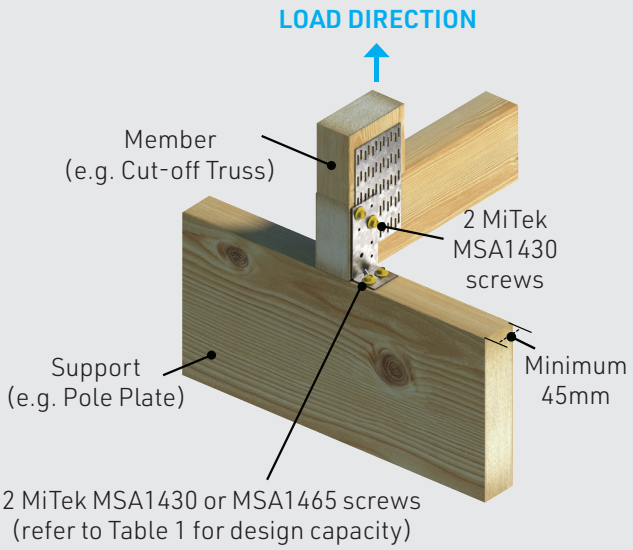


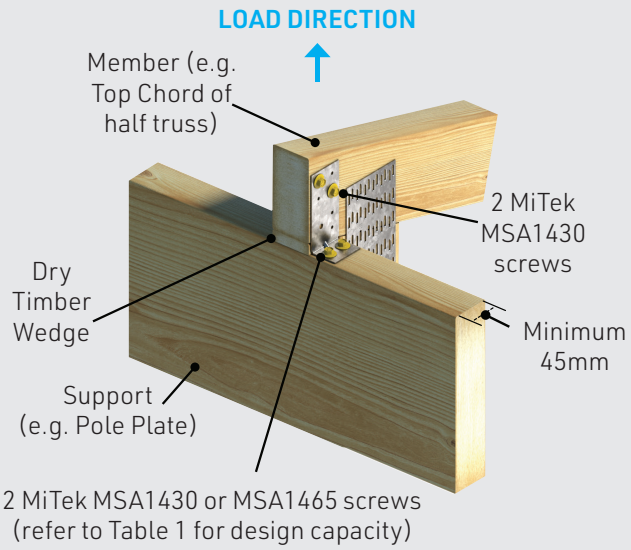
RAFTER / TRUSS TO TOP PLATE





TRUSS TO POLE PLATE





The design capacity is determined from Table 1 and 2 based on joint group, the number of screws and screw sizes fixed into member and support. When different timbers are used, base capacity on weaker joint group of member and support. The capacity is doubled when a pair of cleats is used in the connection.

Longer MiTek MSA1465 screws are required if fixing down to double top plates or supporting beams for higher uplift capacity. The required number of screws into the support depends on its width as per Table 3. The location of the group of screws is to be centred on the support.

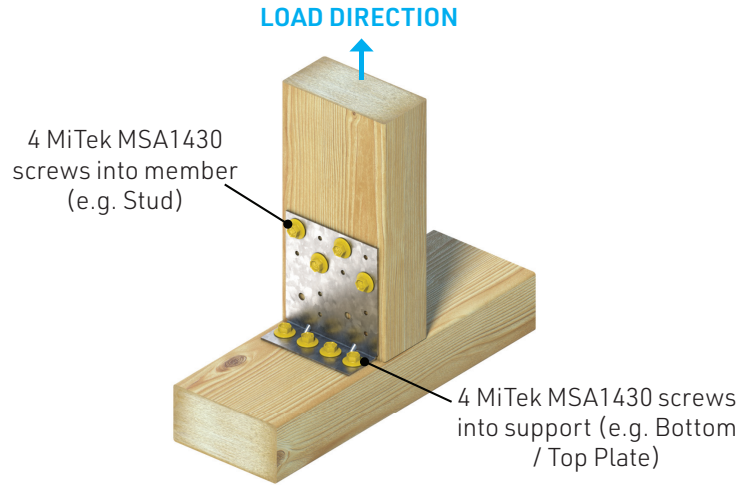
Always fix MSA1430 screws in large holes into the side of truss no matter how many screws are fixed into the support.

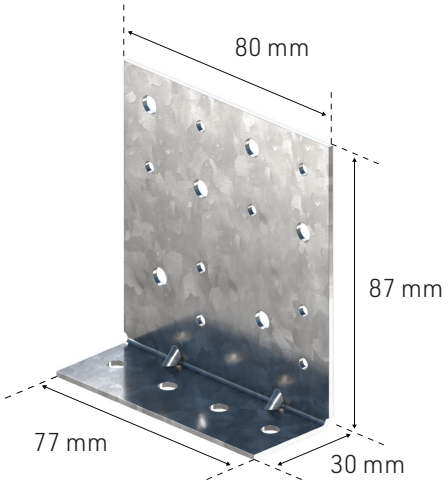
A sloping rafter may require a birdsmouth over the support to lower its bottom edge to achieve adequate edge distance of screw into member.

Table 1

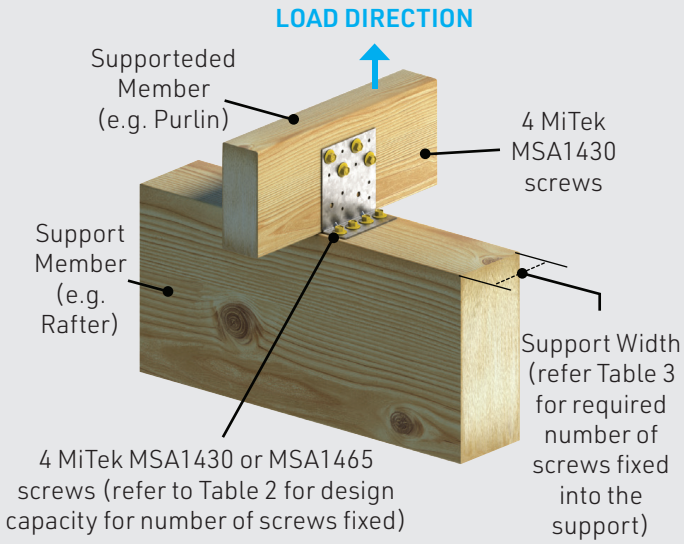
Limit State Design Wind Uplift Capacity for Fixing a Single CPC40 (kN)		
Timber Joint Group	**2/MSA1430 screws into Member, and 2/MSA1430 screws into Support**	**2/MSA1430 screws into Member, and 2/MSA1465 screws into Support**
J2	4.4	6.6
J3	3.3	4.7
J4	2.3	3.3
J5	1.9	2.4
JD2	4.9	6.6
JD3	4.9	6.6
JD4	3.7	4.7
JD5	3.0	3.3
JD6	2.2	2.4

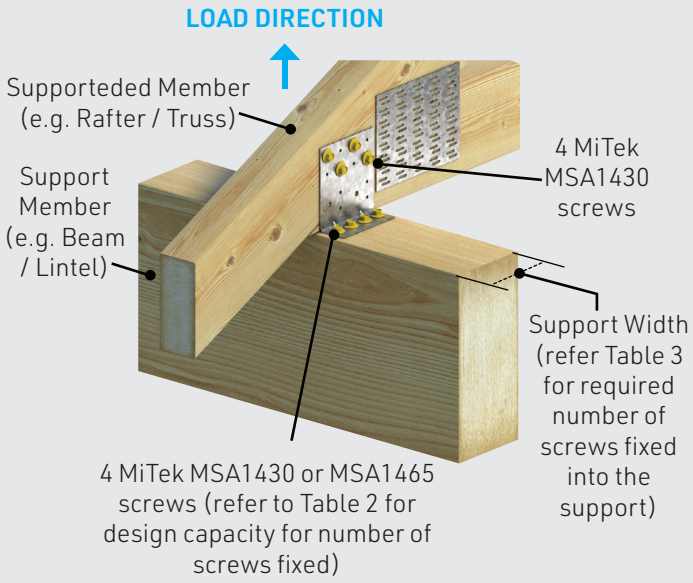
STUD TO TOP / BOTTOM PLATE



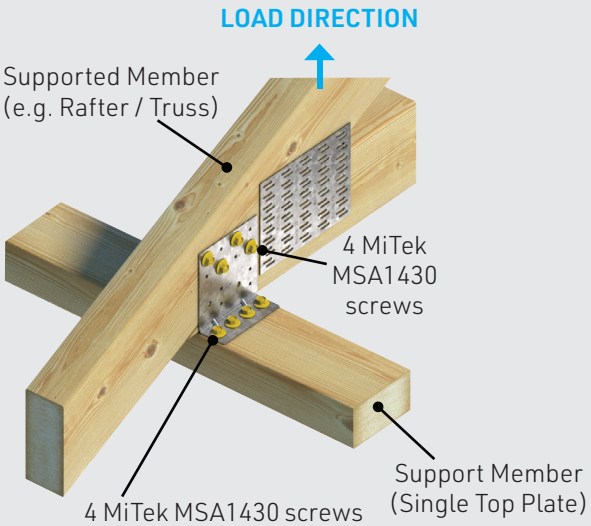


PURLIN / RAFTER / TRUSS TO LINTEL / BEAM





RAFTER / TRUSS TO TOP PLATE



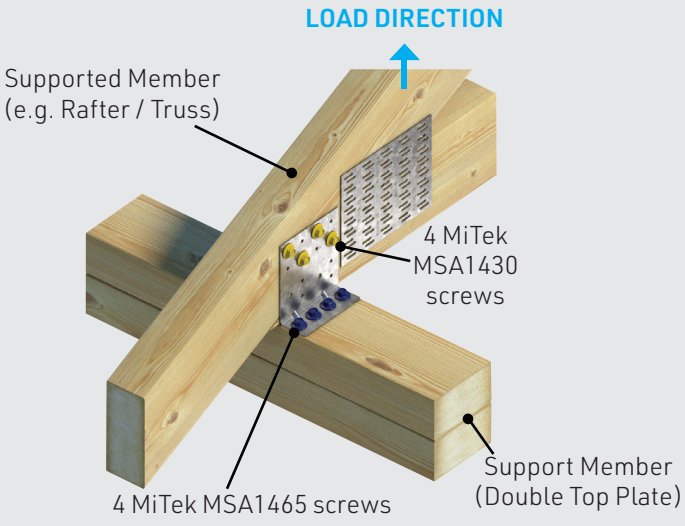


Table 2

Limit State Design Wind Uplift Capacity for Fixing a Single CPC80 (kN)						
Timber Joint Group	4/MSA1430 screws into Member, and			4/MSA1430 screws into Member, and		
	Number of MSA1430 screws into Support			Number of MSA1465 screws into Support		
	2	3	4	2	3	4
J2	4.4	6.6	8.8	10.3	13.1	13.1
J3	3.3	4.9	6.6	7.7	9.3	9.3
J4	2.3	3.5	4.7	5.5	6.6	6.6
J5	1.9	2.9	3.8	4.5	4.8	4.8
JD2	4.9	7.4	9.9	11.6	13.1	13.1
JD3	4.9	7.4	9.9	11.6	13.1	13.1
JD4	3.7	5.6	7.5	8.8	9.3	9.3
JD5	3.0	4.5	6.0	6.6	6.6	6.6
JD6	2.2	3.4	4.5	4.8	4.8	4.8

General notes

1. Design capacities have been obtained from laboratory testing and procedures given in AS 1720.1.

2. Design capacities in the tables incorporate the Category 1 factor (φ) for houses. For other categories, multiply the design capacities by the following factors. Refer to AS 1720.1 for full definition of each category.

Category	1	2	3
Adjustment factor	1.00	0.94	0.88

Table 3

Minimum support width	
Minimum Support Width (mm)	Number of Screw into Support
90	4
70	3
45	2

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