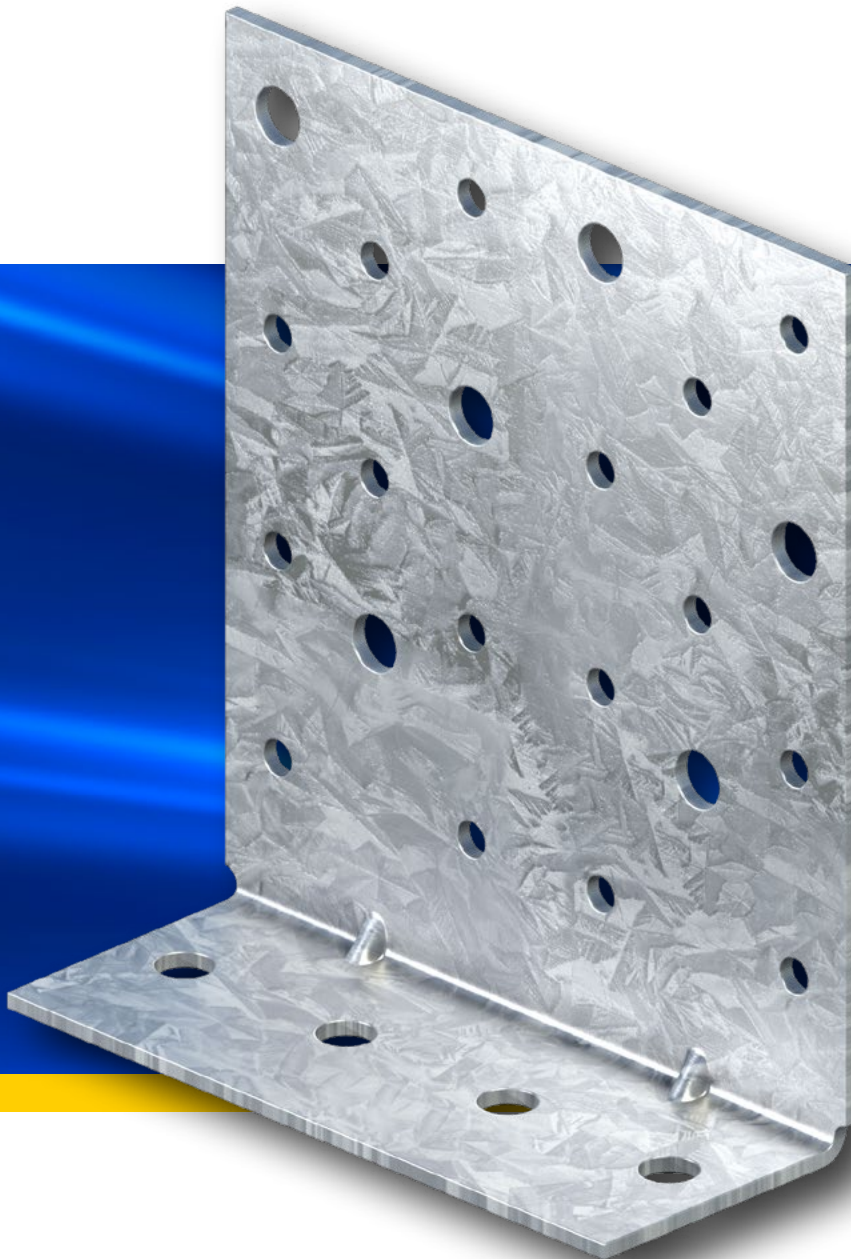
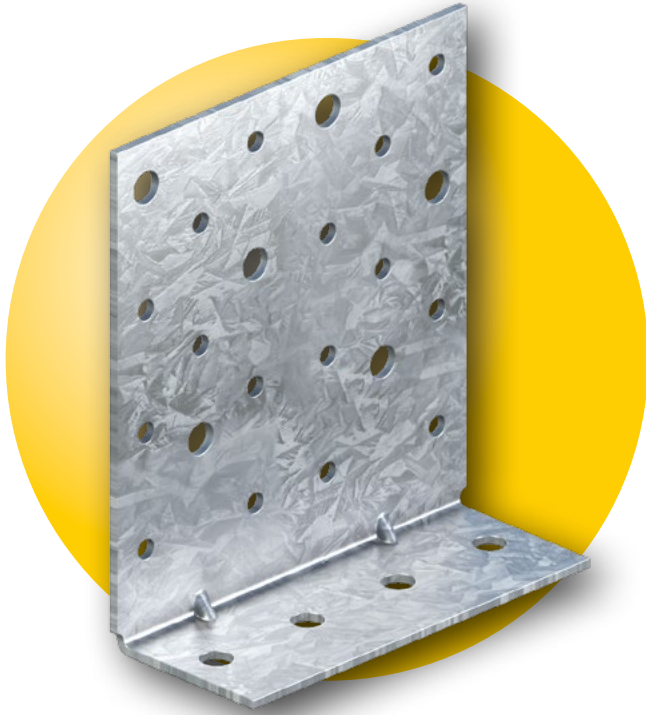


ENGINEERED BUILDING PRODUCTS

Concealed PURLIN CLEAT



creating the **advantage**



FOR HIDDEN TIE DOWN TO TOP OF SUPPORT

APPLICATION:

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

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 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.

SPECIFICATIONS:

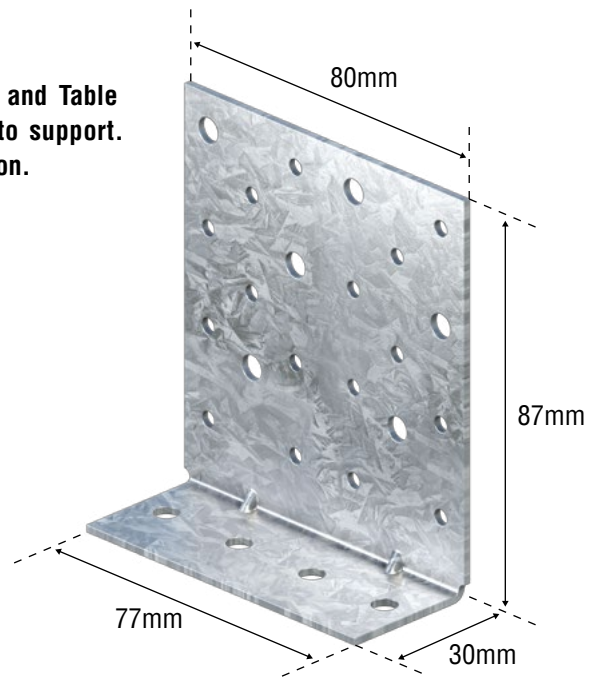
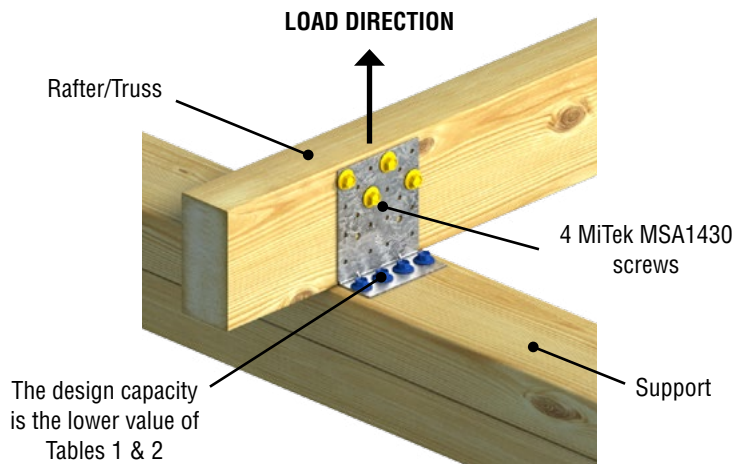
Steel Grade	G300
Thickness (Total Coated)	1.50 mm
Galvanized Coating	Z275
Screws MSA1430	MiTek No.14 x 30mm anti-split self-drilling HD galvanized screws.
Screws MSA1465	MiTek No.14 x 65mm anti-split self-drilling HD galvanized screws for use in double top plates
Product Code	CPC80

This Engineered Building Product has been designed and manufactured in accordance with ISO 9001 and meets all the requirements of the National Construction Code Series and Australian Standards.



FOR FIXING PURLINS TO RAFTERS

The design capacity is the lesser value determined from Table 1 and Table 2 based on joint group and size and number of screws fixed into support. The capacity is doubled when a pair of cleats is used in the connection.



Limit State Design Capacity in wind uplift per Concealed Purlin Cleat (lesser of Tables 1 and 2).

Table 1. Fixing into Truss/Rafter	
Joint Group	Design Capacity (kN)
	4 MiTek MSA1430 screws into truss
J2	13.1
J3	9.3
J4	6.6
J5	4.8
JD2	13.1
JD3	13.1
JD4	9.3
JD5	6.6
JD6	4.8

Table 2. Fixing into support						
Joint Group	Design Capacity (kN)					
	Number of MiTek MSA1430 screws into support			Number of MiTek 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	11.6	13.1
J4	2.3	3.5	4.7	5.5	8.3	11.1
J5	1.9	2.9	3.8	4.5	6.8	9.1
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	13.1	13.1
JD5	3.0	4.5	6.0	7.0	10.5	13.1
JD6	2.2	3.4	4.5	5.3	8.0	10.7

Values in this table incorporate the Category 1 capacity factor (ϕ) for houses. For other categories, multiply the design capacities by the following factors. Refer to AS1720.1 for a full definition of each category.

Category	1	2	3
Adjustment factor	1.00	0.94	0.88

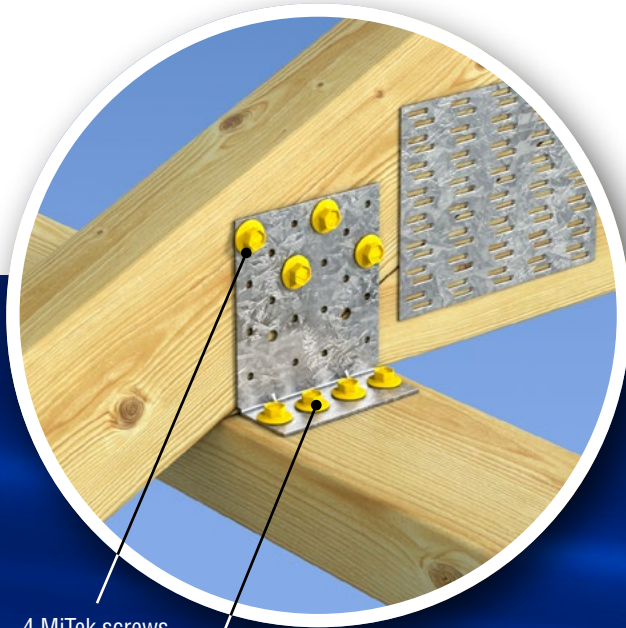
CONCEALED PURLIN CLEAT - INSTALLATION

1. Fix Concealed Purlin Cleat to side of rafter or ceiling joist and top of support.
2. Fix 4 MiTek MSA1430 onto the base of the cleat into the support. 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 shown in the table below. The location of the group of screws is to be centred on the support.

Minimum support width (mm)	Number of screws into support
90	4
70	3
45	2

3. Always fix 4 MiTek MSA1430 screws in large holes into the side of the 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 and achieve adequate edge distance of screw into member.

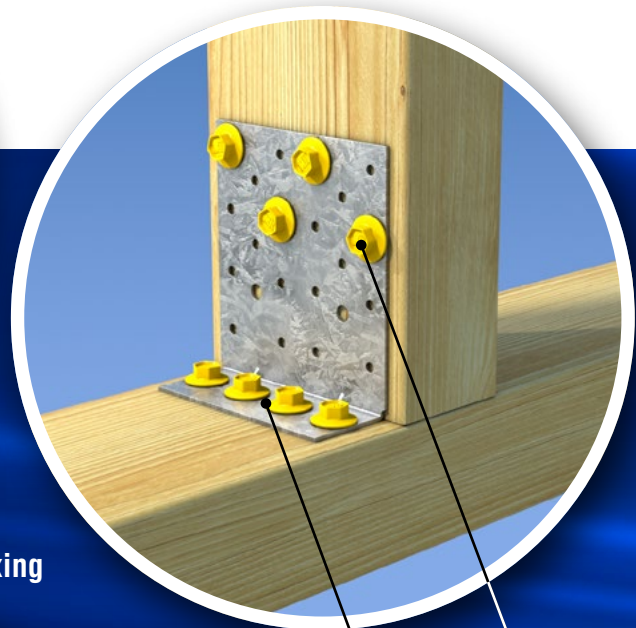
Truss to Top Plate fixing



4 MiTek screws into truss

4 MiTek screws into support

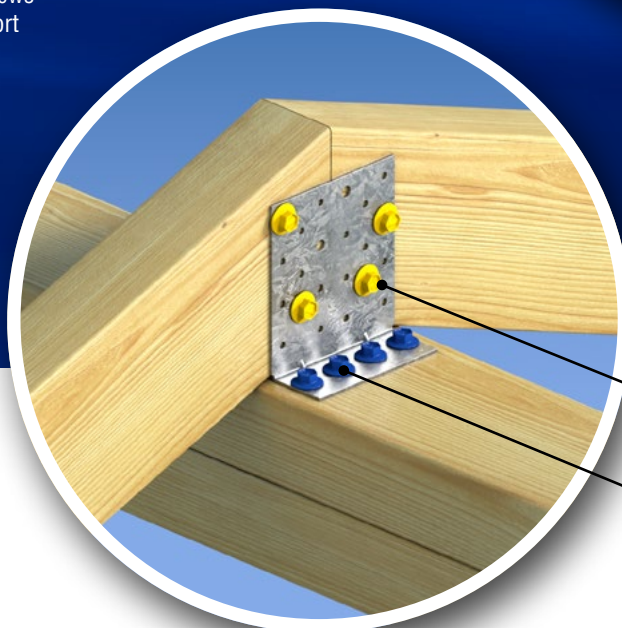
Stud to Top / Bottom Plate



4 MiTek screws into stud

4 MiTek screws into bottom plate

Rafter to Ridge Beam fixing



4 MiTek screws into rafter

4 MiTek Screws into support

For more information about MiTek's Engineered Building Products or any other MiTek products or your nearest licensed MiTek fabricator, please call your local state office or visit: mitek.com.au



CPC80 07/16

HOME OF GANG-NAIL BUILDING SYSTEMS

creating the **advantage**

VIC (03) 8795 8888 NSW (02) 8525 8000 QLD (07) 3861 2100 SA (08) 8234 1326 WA (08) 9412 3534 New Zealand (09) 274 7109