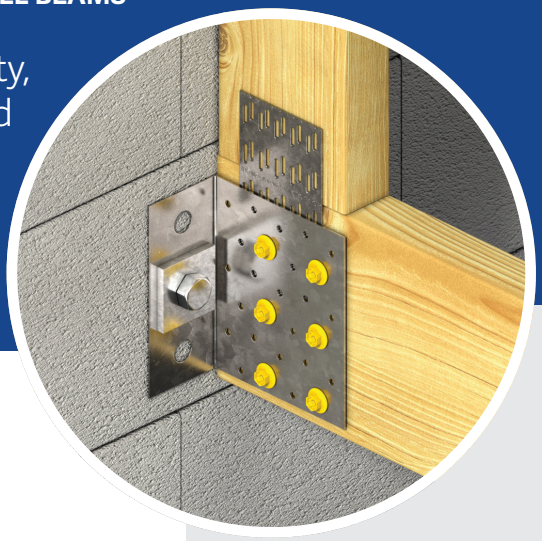
BUILDING PRODUCT

Concrete Fixing Cleat

FOR HIGH CAPACITY TIEDOWN TO CONCRETE & STEEL BEAMS

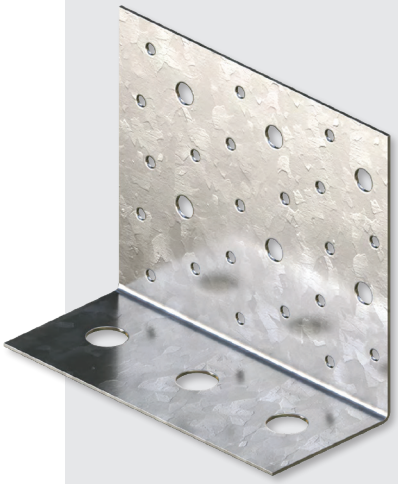
The Concrete Fixing Cleat is a heavy duty, high capacity bracket specially designed for connecting roof trusses, rafters and beams to the top or sides of concrete masonry walls and steel beams.



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

USES

- It can be bolted down into concrete masonry walls, or welded to the tops of steel beams to resist uplift and lateral loads.
- It can be bolted to the sides of concrete masonry walls or steel beams to support trusses and beams to resist vertical and horizontal loads.
- It can be used to bolt down into mass timber LVL or glue-laminated timber beams.



ADVANTAGES

- Quick and easy to apply.
- The patented MiTek self-drilling screws are capable of driving though sheet metal barriers without any need for pre-drilling.
- Options for additional screw fixings with heavier washers are provided to double the design uplift capacity.

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

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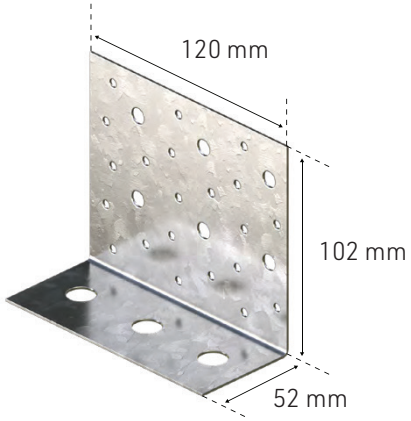
CodeMark CM70055 Australia

SPECIFICATIONS

Steel Grade	G300
Thickness (Total Coated)	1.55mm
Galvanized Coating	Z275
Screws MSA1430	MiTek No. 14 x 30mm anti-split self-drilling HD galvanised screws with Ruspert® coating
Washers	40mm x 40mm x 5mm hot dipped galvanised (supplied)
	50mm x 100mm x 8mm hot dipped galvanised (by others)
Product Code	CF1w



The limit state design capacities of the Concrete Fixing Cleat CF1 are listed in Table 1 & 2.

Table 1 – Limit State Design Capacities for Fixing CF1 to Top of Concrete Wall or Steel Beam.

Table 1	Limit State Design Wind Uplift Capacity (kN)				
	Timber Joint Group	Type A Fixing		Type B Fixing*	
		6 MSA1430 screws per Cleat and M12 tie-down rod with 40x40x5 washer		12 MSA1430 screws per Cleat and M16 tie-down rod with 50x100x8 washer	
		Single CF1	Double CF1Cleat	Single CF1 Cleat	Double CF1 Cleat (Double Truss)
	JD3	12	24	23	46
	JD4	12	24	23	46
	JD5	10	20	20	40

* If using an M16 tie-down rod, the centre base hole needs to be enlarged to 17mm diameter.

Table 2 – Limit State Design Capacities for Fixing CF1 to Face of Concrete Wall.

Table 2	Limit State Design Capacity (kN)			
	Load Case	Type C Face Fixing 6 MSA 1430 screws per Cleat and M12 anchor bolt with 40x40x5 washer		
		Double CF1 Cleat		
		Timber Joint Group		
		JD3	JD4	JD5
	DL Only k1 = 0.57	18.3	13.1	9.3
	DL + Floor LL k1 = 0.69	20.0	15.9	11.3
	DL + Roof LL k1 = 0.77	20.0	17.7	12.6
	DL + WL k1 = 1.14	20.0	20.0	18.6

Notes

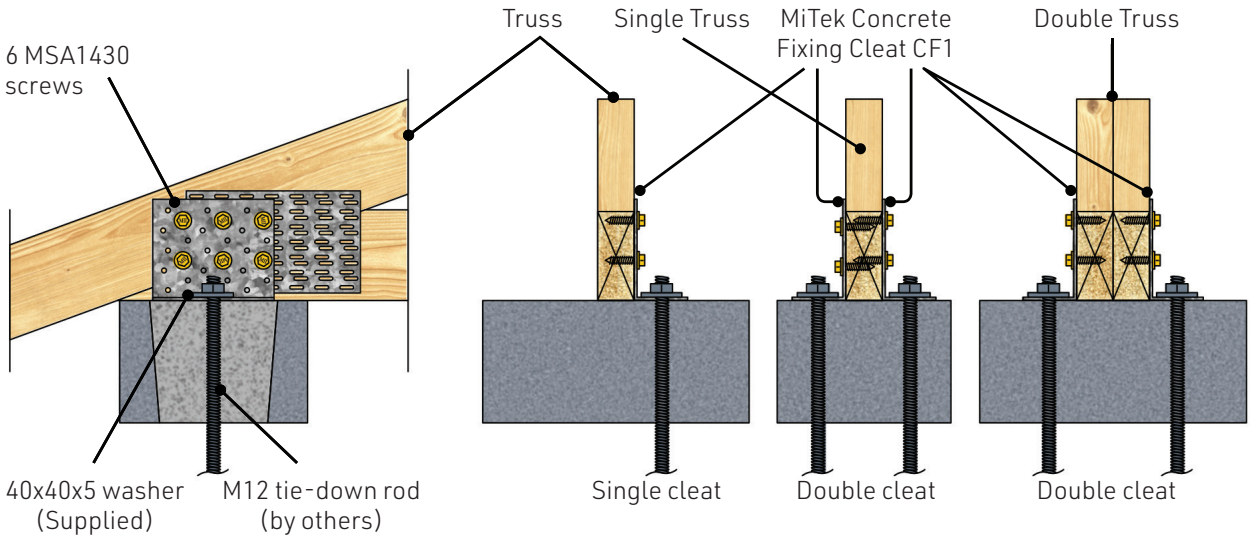
1. Design capacities have been obtained from laboratory testing and procedures given in AS 1720.1.
2. It is assumed that the tie-down rods/anchor bolts/supporting beams and walls have been adequately designed by others to support the loads from the CF1 cleats.
3. Values in the tables incorporate the Category 1 capacity factor (Ø) for houses. For other categories, multiply the design capacities in Table 2 only by the following factors. Refer to AS 1720.1 for full definition of the category.

Category	**1**	**2**	**3**
Adjustment factor	1.00	0.94	0.88

TYPE A FIXING TO CONCRETE WALL

M12 tie-down and 40mm square x 5mm thick washer (supplied)

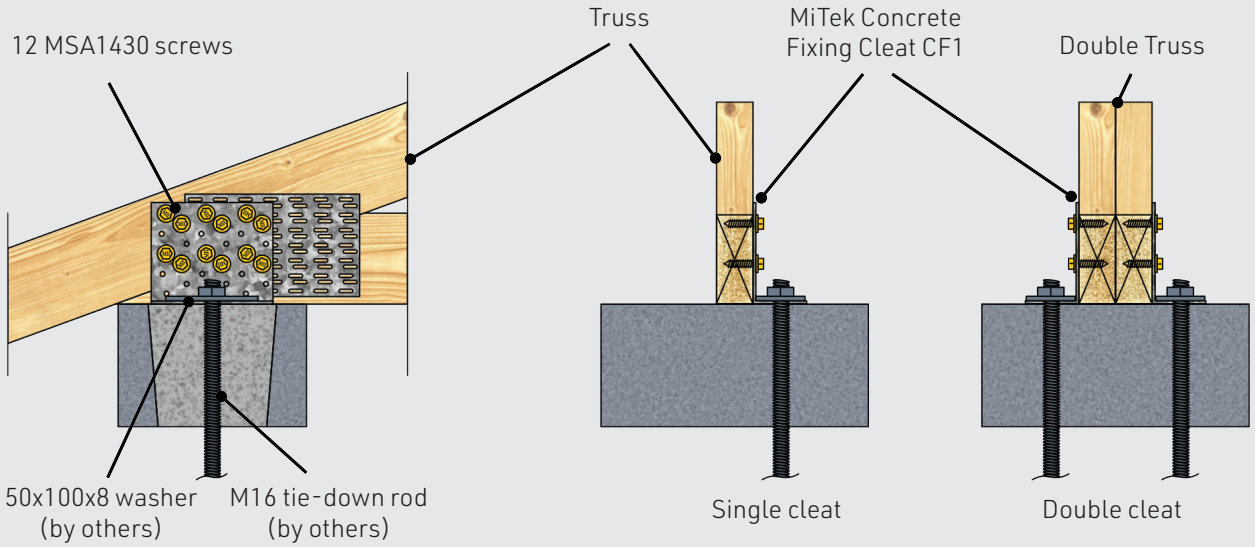
1. Fix Concrete Fixing Cleat CF1 to tie down rod through the cleat's bottom centre hole using 5mm thick washer (supplied).
2. Fix Concrete Fixing Cleat CF1 with 6 MiTek MSA1430 screws to side of the truss.
3. Double cleat for up to double truss.
4. For trusses with more than two ply, refer to engineer for additional connectors.



TYPE B FIXING TO CONCRETE WALL

M16 tie-down and 50mm wide x 100mm long x 8mm thick washer (by others)

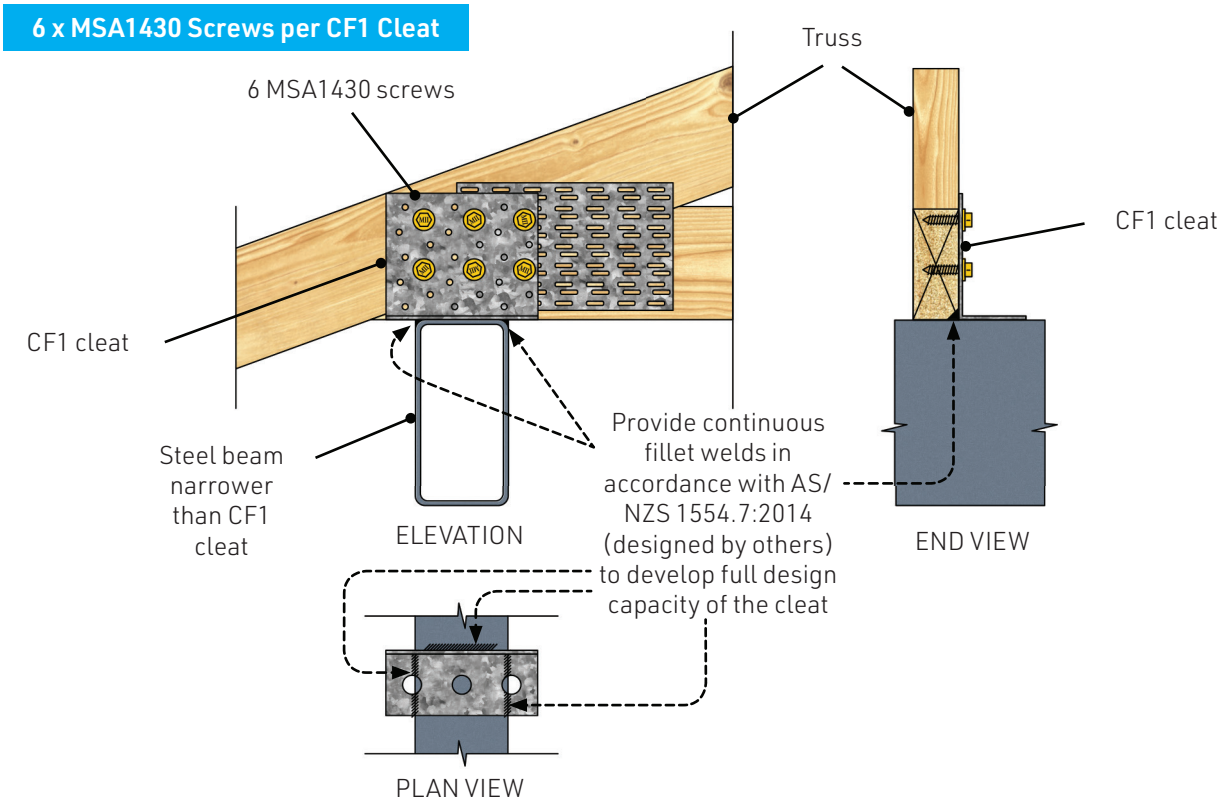
1. Enlarge the cleat's bottom centre hole to 17mm diameter.
2. Fix Concrete Fixing Cleat CF1 to tie down rod through the cleat's bottom centre hole using 8mm thick washer (by others).
3. Fix Concrete Fixing Cleat CF1 with 12 MiTek MSA1430 screws to side of the truss.
4. Double truss only for double cleat.
5. For trusses with more than two ply, refer to engineer for additional connectors.



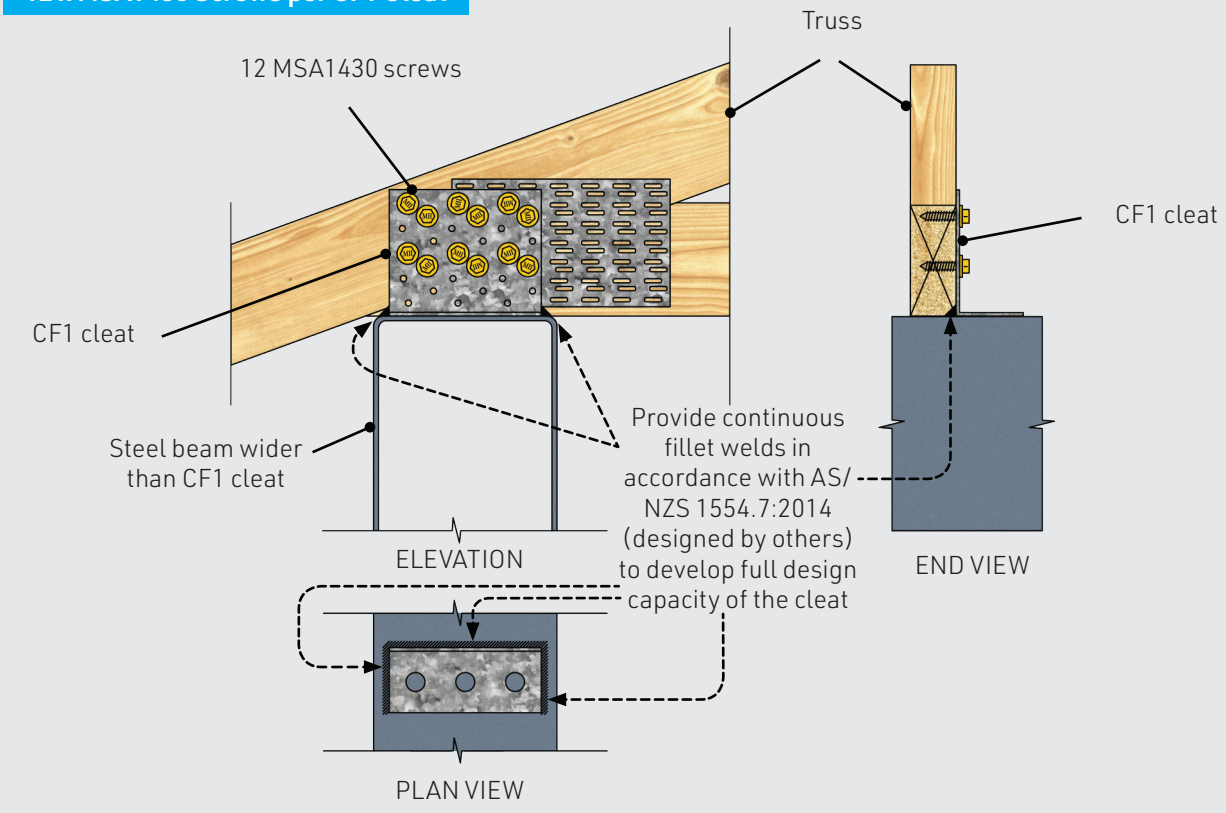
ALTERNATIVE TYPE A AND TYPE B FIXING TO STEEL BEAM

CF1 Cleat Welded to Steel Beam.

6 x MSA1430 Screws per CF1 Cleat



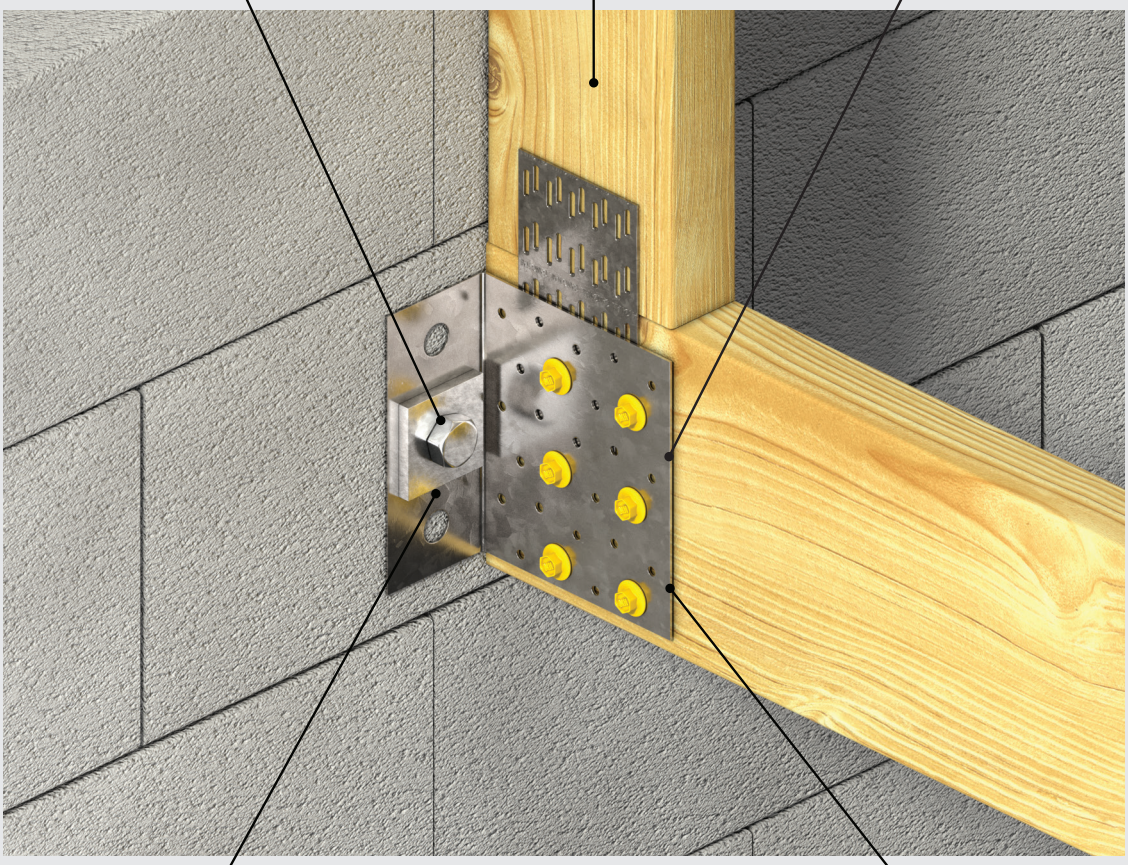
12 x MSA1430 Screws per CF1 Cleat



TYPE C FACE FIXING TO CONCRETE WALL

M12 anchor bolt and 40mm square x 5mm thick washer (supplied)

1. Fix Concrete Fixing Cleat CF1 to block wall with bolt through the cleat's centre hole using 5mm thick washer (supplied). User to consult proprietary anchor bolt specifications to choose anchor(s) with sufficient capacity. More than one bolt may be installed if necessary.
2. Fix Concrete Fixing Cleat CF1 with 6 MiTek MSA1430 screws to side of the truss.
3. Double cleat only for up to double truss.
4. For trusses with more than two ply, refer to engineer for additional connectors.



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