

eCo CLEATS

creating the *advantage* in timber fasteners



All Cleats are clearly marked for ease of identification



eCo Heavy Duty Cleats type H

eCo Heavy Duty type H Cleats are designed to ensure sound connections at truss and girder junctions. These cleats can be specified in a variety of different configurations to suit different loads and structural arrangements. Three alternative vertical flanges to cater for either 5, 8, or 12 bolts of 12 mm diameter are available and long flange plate, designed to prevent rotation of the incoming truss or girder. The length of the bolts must be chosen to suit the thickness of the girder, truss and washers to be connected. Incoming girders or trusses must be securely strapped to the main girder with **eCo Bracing strap** or punched **eCo Hoop iron**.

The cleat is specified using an acronym which comprises the following:

H: indicates the cleat type

F, A: indicates the flange angle

Eg. **A90, A60, A45** or any specified angle: indicates the angle of the flange plate to the cleat. The flange will be offset 20mm from the centre of the cleat

V: indicates the vertical flange type.

Eg. **V5, V8, V12** or none: specifies the vertical flange number of bolts.

⊕ See Girder Requirement for Bolting note on last page



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TIMBER FASTENERS

We are the world leaders in the industry, with our Engineers totalling 170 years experience (combined), we are also ISO 9001 accredited and backed with an international P.I. Insurance.

We also offer full size prototype truss testing as an alternative truss design method. With a network of over 190 licensed truss manufacturers utilizing MiTek's state-of-the-art software we can provide a competitive and economic solution to even the most complex of roofs.

With all our products and designs warranted, we offer total peace of mind.

The timber fastening solution.

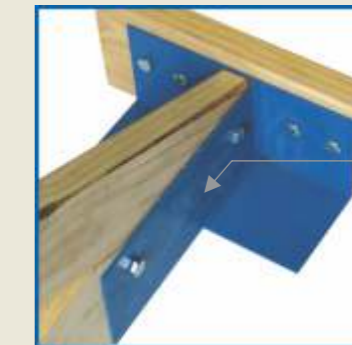


⊕ Girder Requirement for Bolting:

Vertical web of girder to which flange is to be bolted is recommended to be minimum 111 graded timber for single row bolting and minimum 149 graded timber for double row bolting.

"CLEAT" 90°

Single Ply

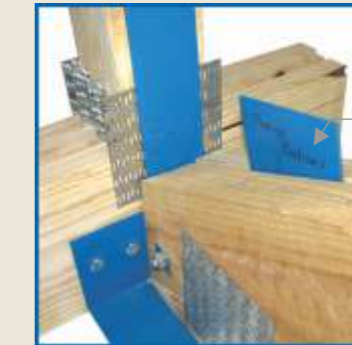


Double Ply

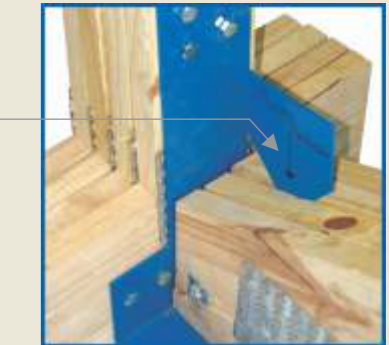


Flange
Flange position shown in relation to plies

Three Ply



Four Ply



"CLEAT" 45°

P1



P2



creating the *advantage*

MiTek Industries South Africa (Pty) Ltd

MiTek Park, 754 16th Road, Randjespark, Ext. 34, Halfway House, 1685. Midrand (Head Office) Tel: + 27(0) 11 237 8700
Cape Town Tel: 021 905 0244 • Durban Tel: 031 700 6332 • Port Elizabeth Tel: 041 360 2214
www.mitek.co.za • email: marketing@mitek.co.za

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HFAV5 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90V5	300	125	650	20



HFAV8 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90V8	300	125	600	33



HFAV12 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90V12	300	125	700	45

eCo 45° Heavy Duty Cleats

eCo 45° heavy duty cleats are designed to form a sound connection between the hip trusses, jack truss and the main girder on a 45° hip system. The cleats are available in widths to suit single ply (40mm thick) or double ply (80mm thick) hip trusses with vertical flanges to cater for either 5, 8, 12 bolts of 12 mm diameter. The length of the bolts must be chosen to suit the number of plies or thickness of the girder including the washers.

P1 and P2 in the cleat description indicates the width to match either 1 ply or 2ply incoming hip trusses respectively.

Incoming hip trusses and jack trusses must be securely strapped to the main girder with eCo Bracing strap or punched eCo Hoop iron.

⊕ See Girder Requirement for Bolting note on last page



HFA45 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA45	300	125	125	6.8



H45V5P1 CLEAT

Description of Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
H45V5P1	260	100	325	15



H45V5P2 CLEAT

Description of Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
H45V5P2	360	125	325	15



H45V8P2 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
H45V8P2	360	125	475	25



H45V12P2 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
H45V12P2	360	125	575	37



HFA90 CLEAT MINI

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90M	250	100	75	3.4

Bottom chord of girder to which cleat is to be bolted must be a minimum of 111 graded timber for HFA90 Cleat.



HFA90 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90	280	125	100	6.8

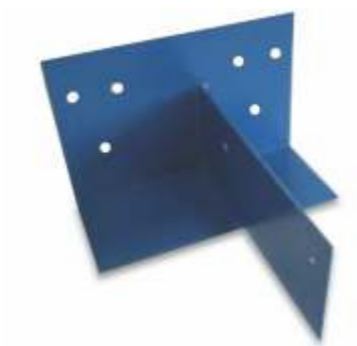
Bottom chord of girder to which cleat is to be bolted must be a minimum of 111 graded timber for HFA90 Cleat.



HFAV2 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90V2	280	125	400	10

Bottom chord of girder to which cleat is to be bolted must be a minimum of 149 graded timber for HFA90 Cleat.



HFA90H2 CLEAT

Description of type "H" Cleat	Width of base plate (mm)	Length of base plate (mm)	Height of Flange (mm)	Maximum Load (kN)
HFA90H2	300	125	200	10

Bottom chord of girder to which cleat is to be bolted must be a minimum of 225 graded timber for HFA90H2 Cleat.