Technical Sheet

EGCM
End Grain Connector (Medium Duty)

SIMPSON Strong-Tie

Suitable for solid timber and Glulam joists: EGCM is a two-piece system that provides a high-strength, hidden connection between timber members where the joist header or post is fastened into the end-grain of a carried joist. As the connector is concealed within the timbers, this method provides 30 minutes fire resistance (subject to detail in Annex B5 of the ETA). EGCM can be surface mounted or recess fitted. A routing template is available separately.







Features

Material

- Joist plate: 16mm aluminium
- Header plate: 16mm aluminium

Features

- Concealed connection
- Provides up to 30 mins fire resistance
- Can be routed for flush installation, or surface mounted
- Can be pre-installed off-site for rapid assembly
- Each component easy to pair due to identical width and height
- Light weight aluminium for ease of handling

Applications

Suitable For

- Solid timber
- Glulam

Use With

- Timber to timber connections as part of single or multi-storey construction projects

Installation

- Mounting connectors EGCM is simplified by the use of a jig available on stock.
- The slot can be routed by using a Ø16mm cutter with Ø30mm washer.
- CAUTION: EGCM should not be used for an assembly with a negative slope.

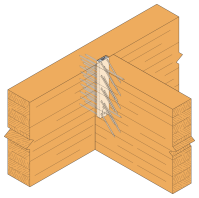
Technical Sheet

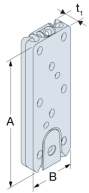
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Technical Data

Product dimensions

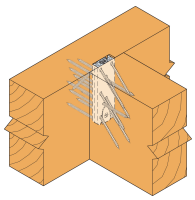




Reference	Connector Dimensions										
	Header dimensions[mm]	Product Dimensions[mm]			Timber size[mm]				Header holes[mm]	Joist holes[mm]	Other
	Post Width	A[mm]	B[mm]	t[mm]	Width	Height[mm]			Round	Round	Weight[kg]
	Min[mm]				Min[mm]	Min[mm]	Max[mm]	-15°<β<90° [mm]	Ø6.5	Ø6.5	
EGCM90	125	90	50	16	75	*	*	*	6	7	0.17
EGCM150	125	150	50	16	75	*	*	*	11	12	0.28
EGCM210	125	210	50	16	75	*	*	*	18	15	0.4
EGCM270	125	270	50	16	75	*	*	*	21	18	0.52

*Depends on CSFT screw length

Product Characteristic capacities - Timber Beam to Timber Beam

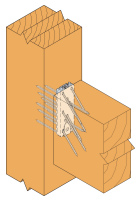


Reference	Hanger capacity																	
	Wood/wood fastening- Characteristic values in kn																	
	Number of Fasteners		Characteristic capacities - Timber C24[kN]															
	Header	Joist	CSFT6.0x110								CSFT6.0x85							
	Qty	Qty	$R_{2,k}$	$R_{1,k}$	$R_{3,k}$	$R_{4,k}$	R3,k - DE	R4,k - DE	Joist Height[mm]		$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	R3,k - DE	R4,k - DE	Joist Height[mm]	
									Min	Max							Min	Max
EGCM90	6.0	5 (7)	8.7	18.3	14	9.6	*	9.6	150	210	14.2	6.5	12.7	8.6	*	8.6	135	180
EGCM150	11.0	10 (12)	8.7	35.6	25.9	18.7	*	18.2 / kmod	210	350	27.8	6.5	23.7	16.7	*	16.7	195	270
EGCM210	16.0	13 (15)	8.7	46	31.4	24.9	*	18.2 / kmod	270	390	35.6	6.5	28.6	22.3	*	18.2 / kmod	255	360
EGCM270	21.0	16 (18)	8.7	56.2	36.4	31	*	18.2 / kmod	330	480	43.2	6.5	33	27.7	*	18.2 / kmod	315	450

The quantities in brackets are the quantities of fixings in the supported beam plus the screws to prevent lifting. The top screws going from the joist par to the header must be installed to block the uplift.

Technical Sheet

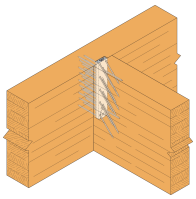
EGCM
End Grain Connector (Medium Duty)



Product Characteristic Capacities - Timber Beam to Timber Post

Reference	Hanger capacity													
	Product Characteristic Capacities - Timber Beam to Timber Post													
	Number of Fasteners		Characteristic capacities - Timber C24[kN]											
	Header	Joist	CSFT6.0x85						CSFT6.0x110					
	Qty	Qty	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Joist Height[mm]		$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Joist Height[mm]	
							Min	Max					Min	Max
EGCM90	6.0	5 (7)	14.2	6.5	12.7	8.6	135	180	18.3	8.7	14	9.6	150	210
EGCM150	11.0	10 (12)	27.8	6.5	23.7	16.7	195	270	31.6	8.7	25.9	18.7	210	350
EGCM210	16.0	13 (15)	35.6	6.5	28.6	22.3	255	360	41.1	8.7	31.4	24.9	270	390
EGCM270	21.0	16 (18)	43.2	6.5	33	27.7	315	450	56.2	8.7	36.4	31	330	480

The quantities in brackets are the quantities of fixings in the supported beam plus the screws to prevent lifting. The top screws going from the joist par to the header must be installed to block the uplift.



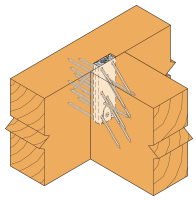
Product Characteristic Capacities - Timber Beam to Wall Plate

Reference	Hanger capacity															
	Product Characteristic Capacities - Timber Beam to Wall Plate															
	Number of Fasteners				Characteristic capacities - Timber C24[kN]											
	Header[mm]		Joist		CSFT6.0x110						CSFT6.0x85					
	Type	Qty	Qty	Type	$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Joist Height[mm]		$R_{1,k}$	$R_{2,k}$	$R_{3,k}$	$R_{4,k}$	Joist Height[mm]	
									Max	Min					Min	Max
EGCM90	TTUFS5,0x50	6.0	CSFT	5 (7)	15.2	8.7	4	9.6	150	210	14.2	6.5	4	8.6	135	180
EGCM150	TTUFS5,0x50	11.0	CSFT	10 (12)	27.9	8.7	7.3	18.7	210	350	27.8	6.5	7.3	16.7	195	270
EGCM210	TTUFS5,0x50	16.0	CSFT	13 (15)	40.6	8.7	10.6	24.9	270	390	35.6	6.5	10.6	22.3	255	360
EGCM270	TTUFS5,0x50	21.0	CSFT	16 (18)	53.3	8.7	13.9	31	330	480	43.2	6.5	13.9	27.7	315	450

The quantities in brackets are the quantities of fixings in the supported beam plus the screws to prevent lifting. The top screws going from the joist par to the header must be installed to block the uplift.

Technical Sheet

EGCM
End Grain Connector (Medium Duty)



DE - Product characteristic capacities - Timber beam to timber beam / post

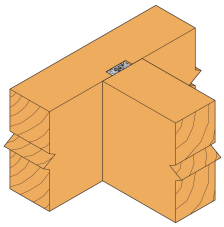
Reference	Hanger capacity													
	Wood/wood fastening- Characteristic values in kn													Product Characteristic Capacities - Timber Beam to Timber Post
	Number of Fasteners		Characteristic capacities - Timber C24[kN]											Characteristic capacities - Timber C24[kN]
	Header	Joist	CSFT6.0x110					CSFT6.0x85						CSFT6.0x110
	Qty	Qty	$R_{2,k}$	R3,k - DE	R4,k - DE	Joist Height[mm]		$R_{1,k}$	$R_{2,k}$	R3,k - DE	R4,k - DE	Joist Height[mm]		$R_{1,k}$
						Min	Max					Min	Max	
EGCM90	6.0	5 (7)	8.7	*	9.6	150	210	14.2	6.5	*	8.6	135	180	18.3
EGCM150	11.0	10 (12)	8.7	*	18.2 / kmod	210	350	27.8	6.5	*	16.7	195	270	31.6
EGCM210	16.0	13 (15)	8.7	*	18.2 / kmod	270	390	35.6	6.5	*	18.2 / kmod	255	360	41.1
EGCM270	21.0	16 (18)	8.7	*	18.2 / kmod	330	480	43.2	6.5	*	18.2 / kmod	315	450	56.2

The quantities in brackets are the quantities of fixings in the supported beam plus the screws to prevent lifting.
The top screws going from the joist par to the header / post must be installed to block the uplift.
\sum\frac{F_{i,d}} {R_{i,d}}\le1

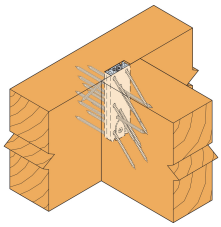
Installation

Fasteners

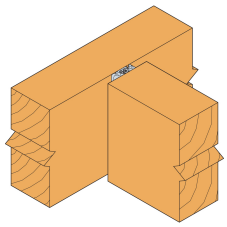
- On header, TTUFS Ø5mm according to ETA-21/0670 (for header <80mm) and CSFT Ø6mm screws.
- On joist, CSFT Ø6mm screws.



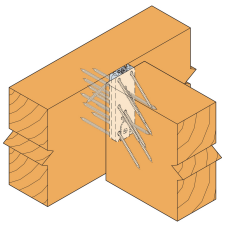
EGCM recess fit onto solid timber



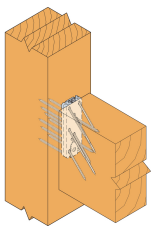
EGCM recess fit onto solid timber (cross-section)



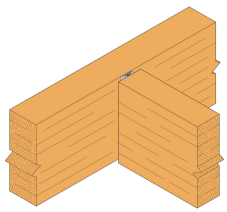
EGCM surface fit onto solid timber



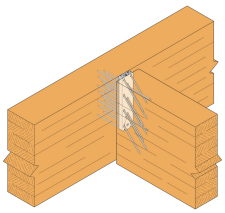
EGCM surface fit onto solid timber (cross-section)



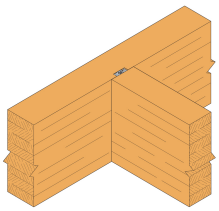
EGCM surface fit onto solid timber post (cross-section)



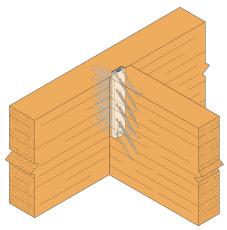
EGCM surface fit onto Glulam timber



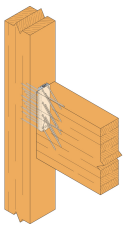
EGCM surface fit onto Glulam timber (cross-section)



EGCM recess fit onto Glulam timber



EGCM recess fit onto Glulam timber (cross-section)



EGCM surface fit onto Glulam post

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