

CBH Concealed Beam Hanger

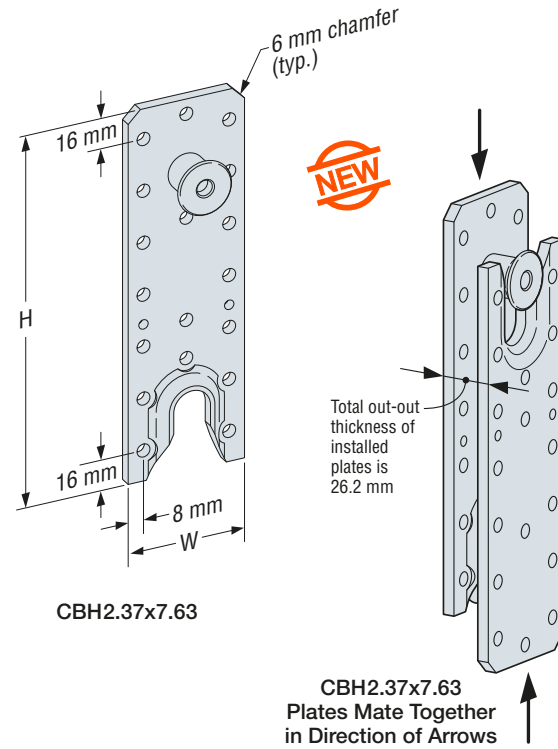
Computer modeling and CNC manufacturing enables glulam to be delivered to the jobsite in precise lengths and with preinstalled concealed hangers. The CBH concealed beam hanger is specifically designed for such applications and is installed with readily available Strong-Drive® SDS Heavy-Duty Connector screws. The CBH hanger design provides for a +/- 1 mm beam length tolerance at each connector, making it easier to crane into place than other concealed hanger designs.

Material: 6 mm

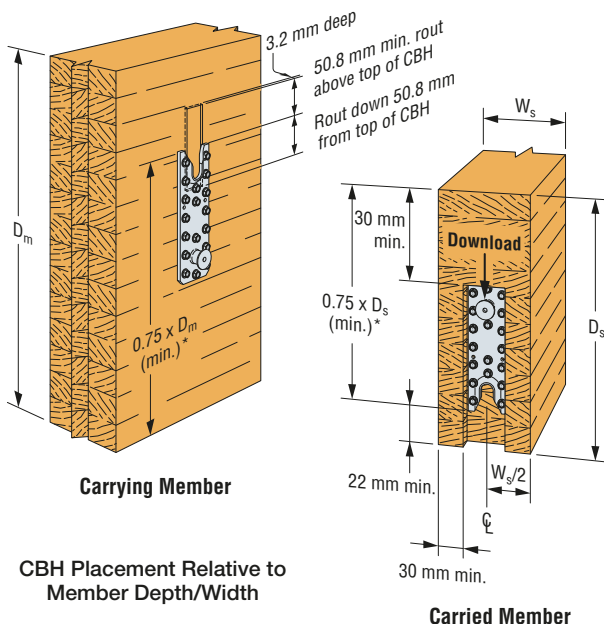
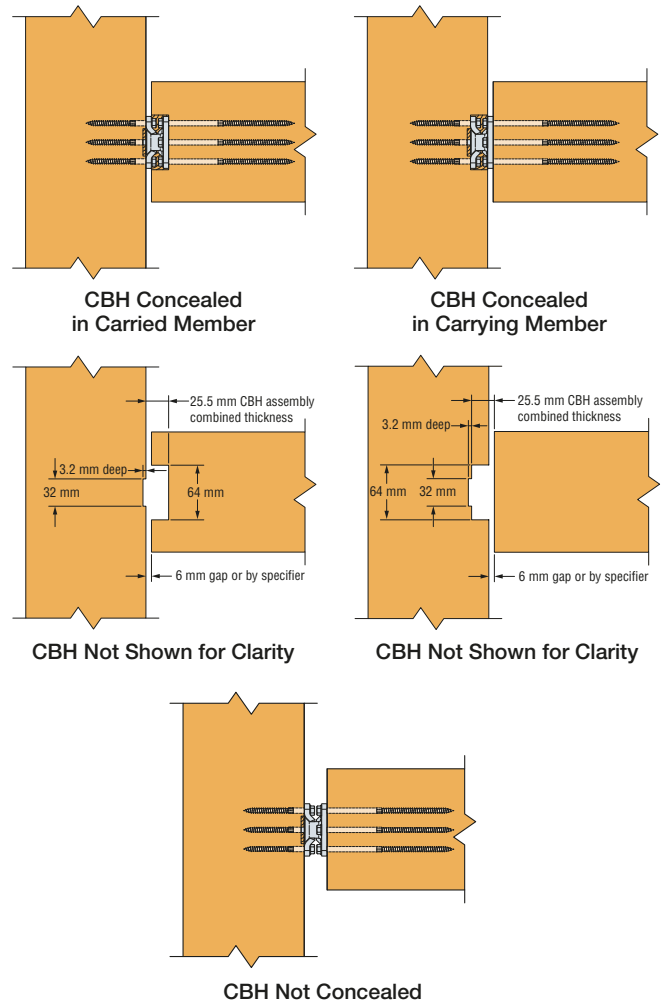
Finish: Galvanised

Installation:

- Use all specified fasteners; see General Notes.
- Rout carried and/or carrying member according to application needs.
- A 6 mm minimum gap is recommended between the carried and carrying members to prevent timber-timber binding during field assembly. Project specific fire sealant is required at the CBH connection location when considering fire resistance at the CBH connection. Gaps larger than 6 mm may further improve ease of installation but need to be approved by the engineer when considering fire resistance. One- and two-hour fire resistance ratings per ASTM E119 (see L-C-CBHCHAR).
- Do not overdrive SDS screws during fastener installation. Doing so can reduce the clearance for stud engagement and can complicate final installation.
- Predrilling lead holes for SDS screws is recommended if wood members tend to split, or if driving the SDS fasteners properly at 90 degrees to the face of the timber member is difficult due to timber grain resistance. Lead holes for the SDS screws shall be 4 mm diameter.
- For installation clearance, an additional 3 mm deep rout allowing for the CBH stud head is recommended in the supporting beam/column face.
- Install CBH plates on carried and carrying members using all specified SDS fasteners.
- Mate carried member to carrying member according to installation illustrations.
- In order to ensure smooth installation, care should be taken to ensure that the mating surfaces between the carried and carrying members are precisely parallel with one another.



Plan View



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CBH Concealed Beam Hanger (cont.)

CBH — Concealed Beam Hanger for Cross-Laminated Timber

Model No.	Dimensions (mm)				Fasteners (No. – Length x Dia., mm)		Country	Characteristic Capacity (kN)	Design Capacity (kN)	
	Thickness	W	H	Route Depth	Joist	Beam			Download	Download
								Floor		Roof
CBH2.37x5.5B- KT	6	60	140	25.5	13 – SDS6.4x152	13 – SDS6.4x76	Aus	22.6	$k_1 = 0.69$	$k_1 = 0.77$
									18.1	18.1
CBH2.37x7.63- KT	6	60	194	25.5	18 – SDS6.4x152	18 – SDS6.4x76	NZ	22.6	$k_1 = 0.80$	$k_1 = 0.80$
									15.8	15.8
CBH2.37x7.63- KT	6	60	194	25.5	18 – SDS6.4x152	18 – SDS6.4x76	Aus	28.8	$k_1 = 0.69$	$k_1 = 0.77$
									23.0	23.0
CBH2.37x7.63- KT	6	60	194	25.5	18 – SDS6.4x152	18 – SDS6.4x76	NZ	28.8	$k_1 = 0.80$	$k_1 = 0.80$
									20.2	20.2

- Design Capacity is the lesser of (1) the Characteristic Capacity multiplied by the Australian Capacity Factor, or the NZ Strength Reduction Factor (Φ), and applicable the k modification factors following AS 1720.1 and NZS 3603 and (2) the Serviceability Capacity, which is the load at 3.2 mm joint slip. Design Capacity is the minimum of test data and structural joint calculation.
- For Australia, the Capacity Factor (Φ) is 0.80 for nails and screws for structural joints in a Category 2 application. Change tabulated values where other Category applications govern. For NZ, the Strength Reduction Factor (Φ) is 0.80 for nails in lateral loading and 0.70 for other fasteners.
- Duration of Load Factor (k_1) is as shown. Reduce Duration of Load Factor (k_1) where applicable. Capacities may not be increased.
- The timber species design density for joint design is 480 kg/m³.
- Member sizes based on minimum fastener edge distances will achieve tabulated allowable download, but do not consider required char edge distances for desired fire ratings. Member sizes required to achieve desired fire ratings shall be determined by the designer.
- Minimum SDS edge distance is 38 mm.
- Screws: 6.07 mm shank diameter x 152 mm and 76 mm Long SDS Heavy Duty Connector Screws