

Specification for Hyne Structural Products

DESCRIPTION OF HYNE PRODUCTS

Hyne-I-Beam

Description: Hyne-I-Beam is a unique combination of timber resources, components and advanced technology forming a structurally efficient “I” section. Manufactured at the Hyne plant in Brisbane, Hyne-I-Beams are produced using high performance finger jointed pine flanges and 9.5mm structural OSB webs. All components are assembled using only durable, exterior grade adhesives. Hyne I-Beam is available untreated or treated to H3.1 on order. Hyne I-Beams can only be used at internal application.

Advantages: Dimensional stability, lightweight, long spanability, elimination of mid-span blocking in floor joists.

Applications: Floor joists, rafters, lintels.

Section sizes: 200x90 up to 360x90

Available lengths: 1.2 up to 11.7 m in 0.3 increments.

Availability: Generally available. Check with your local supplier.

Specification example: HI 24590 Hyne-I-Beam

HYNEBEAM 17

Description: Hynebeam 17 products are high grade glued-laminated timber beams formed from Australian pine, into larger rectangular sections. The Hynebeam 17 product range is manufactured by Hyne in Maryborough. The Hynebeam 17 is made from pine feedstock. All components are assembled using only durable, exterior grade adhesives (service class 3). The beams are specified as cambered (C) to 600 m radius. Available in appearance grades structural (STR). Hynebeam 17 is available untreated or treated to H3.1.

Advantages: Dimensional stability, long spanability, aesthetically appealing, variety of shapes and curved beam options, simple high-tech connections, termite resistance and durability (when treated), easier to handle and install than steel members, third party certified through the Glue Laminated Timber Association of Australia (GLTAA) and ISO 9002.

Applications: Roof beams, bearers, columns, floor joists, rafters, lintels, portal frames.

Section sizes: 130x65 up to 525x135

Available lengths: 0.9 to 11.7 m in 0.6 increments.

Availability: Readily available. Check with your local supplier.

Specification example: 295x85 Hynebeam 17C

HYNEBEAM 18C

Description: Hynebeam 18C products are high grade glued-laminated timber beams formed from Australian hardwoods, into larger rectangular sections. The Hynebeam product range is manufactured by Hyne in Maryborough. The Hynebeam is made from Tasmanian Oak. All components are assembled using only durable, exterior grade adhesives (service class 3). The beams are specified as cambered (C) to 600 m radius with option of straight (S) or curved. Available in select grade (SEL). Hynebeams 18C can only be used at internal application.

Advantages: Dimensional stability, long spanability, aesthetically appealing, variety of shapes and curved beam options, simple high-tech connections, easier to handle and install than steel members, third party certified through the Glue Laminated Timber Association of Australia (GLTAA).

Applications: Roof beams, bearers, lintels

Section sizes: 245x65 up to 450x85

Available lengths: 0.9 to 11.7 m in 0.6 increments.

Availability: Readily available. Check with your local supplier.

Specification example: 270x65 Hynebeam 18C (STR)

Edgebeam LGL

Description: Edgebeam LGL is a high grade edge glued-laminated timber beam product assembled from finger jointed pine scantling, into deeper rectangular sections. The Edgebeam LGL product range is manufactured by Hyne in Maryborough. All components are assembled using only durable, exterior grade adhesives (service class 3). Available in a range of depths to ensure compatibility with Hyne-I-Beam. Edgebeam LGL is available H3.1 treated only.

Advantages: Dimensional stability, lightweight, long spanability, treatable to H3.1, may be nail-laminated to provide wider sections.

Applications: Floor joists, bearers, rafters, purlins, lintels.

Section sizes: 200x44 up to 360x44

Available lengths: 1.2 up to 11.7 m in 0.6 m increments.

Availability: Readily available. Check with your local supplier.

Specification example: 300x44 Edgebeam LGL

Table 1: Member application matrix – list of allowable applications per product

Member application	Hyne I-Beam	HYNEBEAM 17	HYNEBEAM 18	Edgebeam LGL
FLOOR MEMBERS				
Bearers	ü	ü	ü	ü
Bearer with roof load	ü	ü	ü	ü
Floor joists	ü	ü	ü	ü
Deck joists	ü	ü	ü	ü
Trimmer joists	ü	ü	ü	ü
Floor trimmer	ü	ü	ü	ü
Load bearing joist	ü	ü	ü	ü
WALL MEMBERS				
Verandah Post	ü	ü	ü	ü
Wall studs	ü	ü	ü	ü
Wall plates	ü	ü	ü	ü
Lintels	ü	ü	ü	ü
Wind beam	ü	ü	ü	ü
Window sill	ü	ü	ü	ü
Wall girt	ü	ü	ü	ü
Wall Mullion	ü	ü	ü	ü
ROOF MEMBERS				
Ceiling joists	ü	ü	ü	ü
Ceiling battens	ü	ü	ü	ü
Hanging beams	ü	ü	ü	ü
Counter beams	ü	ü	ü	ü
Verandah beams	ü	ü	ü	ü
Rafters	ü	ü	ü	ü
Hip rafters	ü	ü	ü	ü
Roof/intermediate beams	ü	ü	ü	ü
Ridge beams	ü	ü	ü	ü
Pitching beams	ü	ü	ü	ü
Underpurlins	ü	ü	ü	ü
Strutting beams	ü	ü	ü	ü
Counter strutting beams	ü	ü	ü	ü
Strutting/hanging beams	ü	ü	ü	ü
Roof battens	ü	ü	ü	ü
Roof purlins	ü	ü	ü	ü

Table 2a: Complete list of available section sizes and lengths.

Hyne Product	Type	Grades	Tolerance on section (mm)	Under-size (mm)	Lengths (m)
Hyne-I-Beam	I-beam	HI	-0.5, +2	0	1.2 to 11.7 (in 0.3 increments)
HYNEBEAM (precamber per Hynebeam spec. to 600m radius)	glulam	GL17, GL18	Approx. Depth: 151-300 +/- 3mm, 301-450 +/- 4mm, 451-600 +/- 5mm; Width: +/- 2mm	0	0.9 to 11.7 (in 0.3 increments)
Edgebeam LGL	Glued edge laminated	LGL	Approx. +/-1mm depth, +/-1 mm width	0	1.2 to 11.7 (in 0.3 increments)

Table 2b: List of available products incorporated in software.

Product name	Product tag	Product type	Manufacturer	Grades	Size list (mm)
HYNE-I-BEAM	HYNE-I-BEAM	Timber composite I-beam	Hyne & Son Pty Ltd	HI	HI20090, HI24590, HI30090, HI36090
HYNEBEAM 17	HYNEBEAM 17	Glued-laminated timber	Hyne & Son Pty Ltd	GL17C	130x65, 165x65, 195x65, 230x65, 245x65, 260x65, 295x65, 330x65, 360x65, 395x65, 425x65, 295x85, 330x85, 360x85, 425x85, 460x85, 525x85, 295x135, 330x135, 360x135, 425x135, 495x135, 525x135
HYNEBEAM 18	HYNEBEAM 18	Glued-laminated timber	Hyne & Son Pty Ltd	GL18C	245x65, 270x65, 300x65, 330x65, 360x65, 270x85, 300x85, 330x85, 360x85, 420x85, 450x85
Edgebeam LGL	Edgebeam LGL	Edge glued-laminated timber	Hyne & Son Pty Ltd	LGL	200x44, 245x44, 300x44, 360x44
Glulam beam GL8	Glulam GL8	Glued-laminated timber	Generic	GL8	135x90, 180x90, 225x90, 270x90, 315x90, 360x90
KD pine MSG8	KD pine MSG8	Machine graded pine	Generic	MSG8	70x35, 90x35, 140x35, 190x35, 70x45, 90x45, 140x45, 190x45, 240x45, 290x45
KD pine MSG10	KD pine MSG10	Machine graded pine	Generic	MSG10	90x35, 140x35, 70x45, 90x45, 140x45, 190x45, 240x45, 290x45
KD pine MSG12	KD pine MSG12	Machine graded pine	Generic	MSG12	90x35, 140x35, 90x45, 140x45, 190x45, 240x45, 290x45

Characteristic Strength and Stiffness Properties of Hyne Products

Effective October 2008

Hyne product	Type	Grade	bending f'_b (MPa)	tension f'_t (MPa)	shear f'_s (MPa)	comp. f'_c (MPa)	Modulus of Modulus		Density (kg/m^3)	Joint Group	Strength group	bearing perp f'_p (MPa)	Bearing p'llel f'_l (MPa)	Shear at joints f'_{sj} (MPa)	Tension perp f'_{tp} (MPa)	Durability class
							elasticity E (MPa)	of rigidity G (MPa)								
Edgebeam LGL	glulam	LGL	30	16	3.7	30	13300	890	540	JD4	SD6	12	35	5.0	0.6	4
Hynebeam 17	glulam	GL17	42	21	3.7	35	16700	1110	650	JD3	SD5	15	45	6.1	0.6	4
Hynebeam 18	glulam	GL18	50	25	5.0	50	18500	1230	750	JD3	SD3	23	70	8.7	0.7	4

The above product properties represent published values listed in Australian Standard AS1720.1-1997 "Timber Structures Code". Design properties are generally assumed to be derived or evaluated in accordance with AS/NZS4063 "Timber - Stress-graded - In-grade strength and stiffness". Compliance with these published grades is claimed by Hyne and Son when the products or literature identify the relevant grade marks and the grading/manufacturing Australian Standards AS1748, AS2858, or AS1328. Association of the products with the design properties enables design in accordance with AS1720.1 "Timber structures code" and AS1684-1999 "Residential timber-framing construction". These two design application standards are "deemed to comply" under the 1996 Building Code of Australia. Note applicability of k11 factor to MGP grades.