

# BEAMS



## GENERAL INFORMATIONS

GBM beam H20 and GBM beam H20+ are the strongest and lightest formwork beams made of engineered fir and spruce wood. With Chords made of high-quality and graded massive finger-jointed timber, Webs made with a 3-ply laminated wood panels and optional protective cap that prevents the beam to be exposed to premature chipping on the chord ends, GBM beam H20 and GBM beam H20+ assure sustainability and durability in all climate zones.

## CHARACTERISTICS

- Wood species: Spruce, fir
- Weight: 4,5 kg/m
- Gluing: Melamine resin-based adhesive, adhesive type I EN 301-approved for gluing of load bearing timber components
- Chord: Made of carefully selected spruce wood; Finger-jointed, solid wood cross-sections with a dimension of 80x40 mm; Finger-jointing of the chords; Web milling on the opposing side of the core (left-sided chord surface); Planed and chamfered to approx. 0.4 mm;
- Web: 3-ply solid wood panel, laminated primarily showing vertical growth rings
- Surface protection: Treatment of entire beam using a water-resistant color stain

Support: Due to the 3-ply solid wood webs, Extrabeam H20 and Extrabeam H20+ can be cut into and supported at any length.

Dimension	Value (a)	Tolerance (b)
Beam height	200 mm	± 2 mm
Chord height	40 mm	± 0,6 mm
Chord width	80 mm	+ 0,8 mm / -1,2 mm
Web thickness	28 mm	± 1 mm

a) These values apply at a wood moisture content of 12 % ± 2%

b) According to standard SIST EN 13377:2002

Qualities	DIN1052-1:1988-04	DIN1052:2008-12 / Eurocode 5
Strains	Flessione	Characteristic limits of load-bearing capacity
Shearing force	ZUL Q = 11,0 kN	V <sub>k</sub> = 23,9 kN
Bending moment	ZUL M = 5,0 kN	M <sub>k</sub> = 10,9 kN
Support	-	R <sub>b,k</sub> = 47,8 kN
Section modulus (1)	W <sub>x</sub> = 461 cm <sup>3</sup>	
Geometrical moment of inertia (1)	I <sub>x</sub> = 4613 cm <sup>4</sup>	
Elasticity modulus	E = 10.000 N/mm <sup>2</sup>	
Shearing modulus	G = 600 N/mm <sup>2</sup>	

1)The values of the section modulus and the geometrical moment of inertia apply to new or used concrete formwork beams. An analogously increased factor of safety needs to be added for severely worn beams.