

Product **Wooden formwork H20 beams**

Wood species **Spruce**

Wood moisture **12 % +/- 2 % at delivery**

Weight **4,5 kg/m**

Gluing **Melamine resin based adhesive, adhesive type I EN 301 - approved for use with load bearing timber components**

Surface protection **Water repellent colour glaze is used to ensure the beam is waterproof**

Chord

- Made of carefully selected spruce wood
- Finger-jointed, solid wood cross-sections, dimensions 80 x 40 mm
- Finger-jointed chords
- Web-milling on the opposing side of the core (left-sided chord surface)
- Planned and chartered to app. 0,4 mm

Web **3-ply solid wood panel, laminated, vertical growth-ring orientation**

Surface protection **The entire beam is treated with a water-resistant colour stain**

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

Dimensions and tolerances

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 to a wood moisture content of 12 % ± 2%

b) According to the standard SIST EN 13377:2002

Technical specifications

Qualities	DIN1052-1:1988-04	DIN1052:2008-12 / Eurocode 5
Strains	Permissible stress values	Characteristic limits of load-bearing capacity
Shearing force	ZUL Q = 11,0 kN	V _k = 23,9 kN
Bending moment	ZUL M = 5,0 kNm	M _k = 10,9 kNm
Support	-	R _{sk} = 47,8 kN
Section modulus ¹	W _y = 461 cm ³	
Geometrical moment of inertia ¹	I _y = 4,613 cm ⁴	
Elasticity modulus	E = 10,000 N / mm ²	
Shearing modulus	G = 600 N / mm ²	

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

Standard lengths **1,95 / 2,45 / 2,65 / 2,90 / 3,30 / 3,60 / 3,90 / 4,50 / 4,90 / 5,90 / max. 6 m**

Packaging

Standard packaging: 50 pcs package / Container packaging: 100 pcs package
The formwork beams are packed in protective packaging. The packages can be easily lifted and moved with a forklift. They are ready for immediate use at the construction site



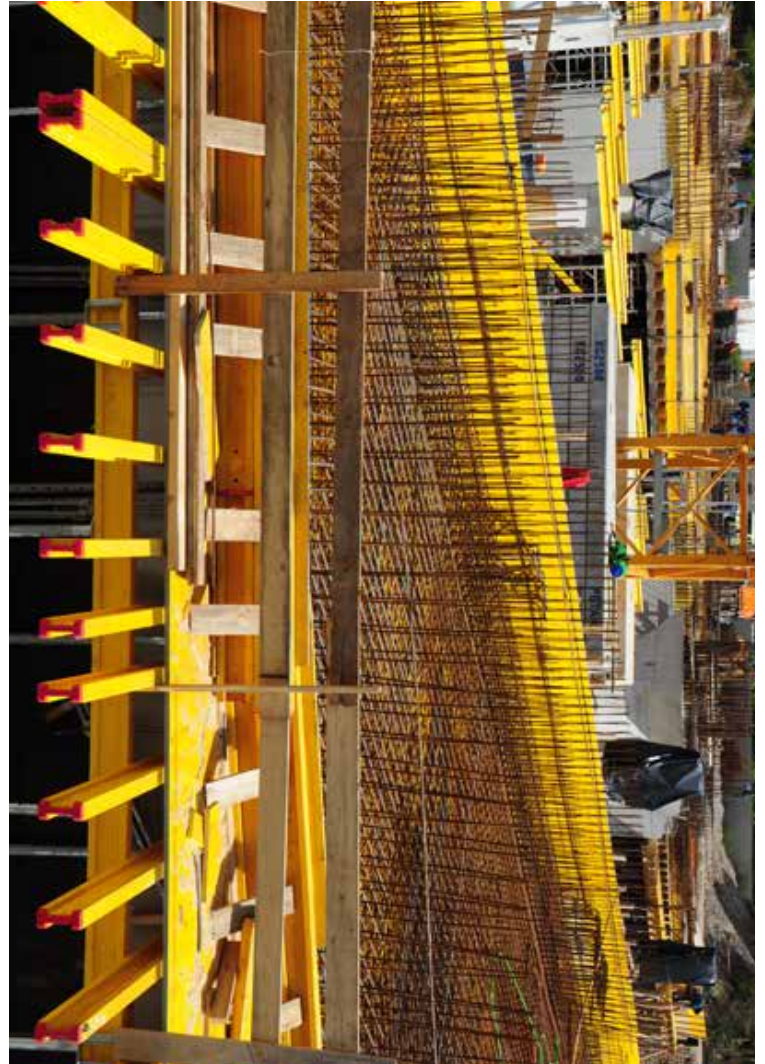
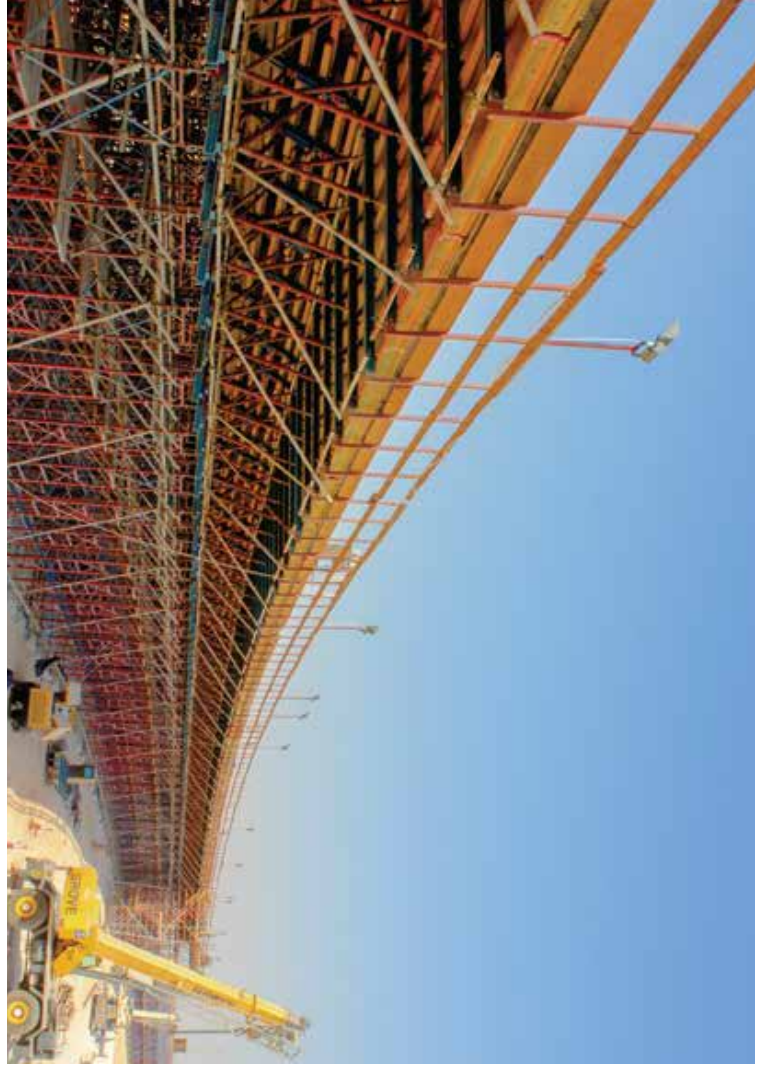


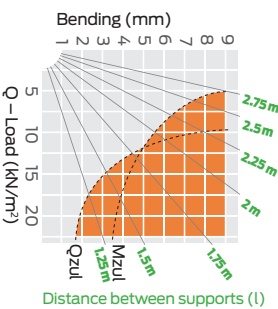
Chart of charge values

Floor thickness (cm)	Total load (kN/m ²)	Max. permissible support width of the crossbeam (m) = distance between main beams (m)					Max. permissible support width = distance between supports (m)									
		0.50	0.625	0.667	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	3.00	3.50		
10	4.38	3.70	3.43	3.35	3.22	2.93	2.72	2.50	2.31	2.16	2.04	1.93	1.70	1.45		
12	4.91	3.50	3.24	3.17	3.05	2.77	2.57	2.36	2.19	2.05	1.92	1.82	1.52	1.30		
14	5.43	3.32	3.09	3.02	2.91	2.64	2.45	2.24	2.08	1.94	1.82	1.64	1.37	1.18		
16	5.95	3.19	2.96	2.90	2.79	2.54	2.35	2.14	1.98	1.85	1.66	1.50	1.25	1.07		
18	6.48	3.07	2.85	2.79	2.69	2.44	2.25	2.06	1.90	1.72	1.53	1.38	1.15	0.99		
20	7.00	2.97	2.76	2.70	2.60	2.36	2.17	1.97	1.82	1.59	1.42	1.28	1.07	0.91		
22	7.53	2.88	2.68	2.62	2.52	2.29	2.09	1.90	1.69	1.48	1.32	1.19	0.99	0.85		
24	8.05	2.81	2.61	2.55	2.45	2.23	2.02	1.84	1.58	1.39	1.23	1.11	0.93	0.80		
26	8.57	2.74	2.54	2.49	2.39	2.18	1.95	1.73	1.49	1.30	1.16	1.04	0.87	0.75		
28	9.10	2.67	2.48	2.43	2.34	2.12	1.89	1.63	1.40	1.23	1.09	0.98	0.82	0.71		
30	9.68	2.61	2.43	2.38	2.29	2.06	1.83	1.54	1.32	1.15	1.03	0.93	0.77	0.65		
35	11.25	2.49	2.31	2.26	2.18	1.90	1.59	1.32	1.14	0.99	0.89	0.80	0.66	0.56		
40	12.83	2.38	2.21	2.17	2.07	1.74	1.39	1.16	1.00	0.87	0.78	0.70	0.58	0.49		
45	14.40	2.29	2.13	2.07	1.94	1.55	1.24	1.04	0.89	0.78	0.69	0.62	0.51	0.44		
50	15.97	2.22	2.03	1.96	1.84	1.40	1.12	0.94	0.80	0.70	0.62	0.56	0.46	0.40		
55	17.54	2.15	1.93	1.87	1.69	1.27	1.02	0.85	0.73	0.63	0.56	0.51	0.42	0.36		
60	19.11	2.07	1.85	1.75	1.56	1.17	0.94	0.78	0.66	0.58	0.52	0.46	0.39	0.33		
65	20.68	1.98	1.72	1.62	1.44	1.08	0.87	0.72	0.61	0.54	0.48	0.43	0.36	0.31		
70	22.26	1.91	1.60	1.50	1.34	1.01	0.81	0.66	0.57	0.50	0.44	0.40	0.33	0.28		
75	23.83	1.85	1.50	1.41	1.25	0.94	0.75	0.62	0.53	0.47	0.41	0.37	0.31	0.27		
80	25.40	1.76	1.41	1.32	1.17	0.88	0.71	0.58	0.50	0.44	0.39	0.35	0.29	0.25		
85	26.97	1.65	1.32	1.24	1.11	0.83	0.66	0.55	0.47	0.41	0.37	0.33	0.27	0.23		
90	28.54	1.56	1.25	1.17	1.05	0.79	0.62	0.52	0.44	0.39	0.35	0.31	0.26	0.22		
95	30.11	1.48	1.19	1.11	0.99	0.75	0.59	0.49	0.42	0.37	0.33	0.29	0.25	0.21		
100	31.69	1.41	1.13	1.06	0.94	0.71	0.56	0.47	0.40	0.35	0.31	0.28	0.23	0.20		

An example of calculation: Floor thickness: 20 cm, distance between crossbeams: 0.75 m; we are looking for the distance between the main beams and the supports. The permissible distance between the main beams according to the **table 1 = 2.60 m**. The identical or the closest distance between the main beams in the **table 2 = 2.5 m**. Look for the permissible distance between supports in the **table 2**, read vertically down the column "2.50 m" and horizontally in the row "20 cm" of the column "floor thickness", the result is **1.28 m**. Caution: Examine the supports to ensure the corresponding carrying force.

Bending which occurs in formwork beams that are loaded by a particular force at different space intervals of support.

Single span beam



Multi span beam

