

STEICO *formwork*

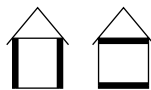
Formwork Beams

Construction elements –
made from timber



AREAS OF APPLICATION

A robust beam for economic formwork solutions.



- available in standard lengths up to 16 metres
- easy handling due to lightweight design
- high quality as standard due to continuous in house and independent laboratory testing
- state of the art production technology
- Ü-certified according to EN 13377
- high quality materials ensure a long service life
- available with edge protection

For more information please contact us via info@steico.com



Formwork beam up to 16 m

For various economical applications

STEICOformwork beams are made from high quality solid timber flanges and a specially manufactured high strength, loadbearing cross ply LVL product. Both materials are the basis for sophisticated engineering and a long service life.



STEICOformwork P20 beams are independently certified by MPA Stuttgart, a notified European institution. Ongoing Quality Control in accordance with EN 13377 ensures high quality and safety

The flanges

Made from slow grown spruce, the flanges are kiln dried and machine stress graded thereby guaranteeing a consistent quality and defined mechanical properties. The flange material is finger jointed to length according to EN 385 – all large knots and other common wood defects are eliminated.

The web

The webs are made from a 9 layer, 27 mm thick, cross ply LVL product (STEICOultralam). As a result of the characteristics of the cross ply veneers, the web material and therefore the beam, has excellent dimension stability. STEICOultralam is produced and quality controlled according to the European standard EN 14374.

QUALITY, YOU CAN RELY ON

STEICOformwork Properties	Advantages
4,8 kg/m beam	High load bearing capacities with low weight
27 mm thick 9 layer cross ply LVL web and Kiln dried flanges	<ul style="list-style-type: none"> • Dimensionally Accurate • High dimensional stability • Low weight • Slim Cross section
High strength and highly weather resistant, available with edge protection	Long service life
Available in two formats 1. Specially shaped beam end 2. Green edge protection	<ul style="list-style-type: none"> • Easy to specify the correct product for your application needs • Less susceptible to beam end damage
Customer specified marking upon request	<ul style="list-style-type: none"> • Bespoke marking to your needs • Theft protection marking • Additional marketing effect
All beams marked with Ü-Certificate number and production date	Ease of inspection and on site approval
Available with optional reliefs or can be easily cut, machined and handled	
High profitability and economy due to the good price/performance ratio	
Control of wood quality and bonding quality through regular production monitoring	
High strength finger joint connection between the web and flange using type 1 adhesive according to EN 301	
Regular external party control by the certified MPA (Stuttgart) institute	

TYPES

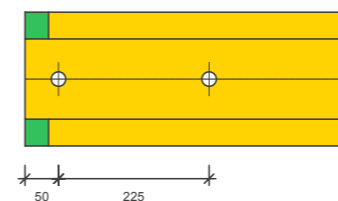


#1 With green plastic end caps



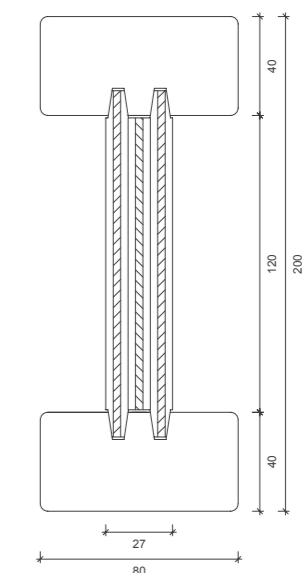
#2 With beveled edges

POSITIONS OF THE HOLES IN THE WEB



Each beam has two 22 mm diameter holes drilled into the web material at each end, enabling the use of brackets, crane hooks and pin up cleats.

DIMENSIONING



Important advice and use regulations:

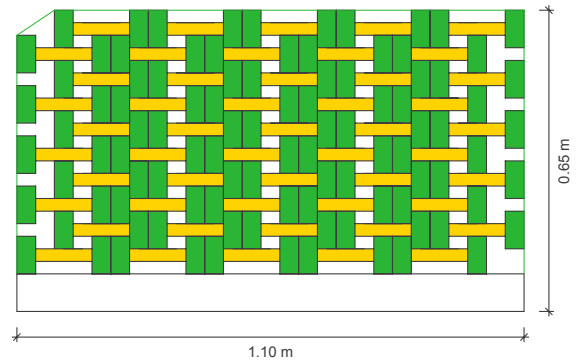
- Do not exceed a maximum a span of 4 m for formwork beams
- Do ensure the shuttering panel is immediately nailed to the upper flange.
- Ensure the Formwork beams are installed vertically and in accordance with the designers specification
- Before using the beams, please visually check each beam for defects or site damage. Damaged or defect formwork beams must not be used.

DELIVERY FORMS OF STEICO *formwork* BEAMS

Length [m]	Weight per beam [kg]	Beams per pack [Pieces]	Weight per pack [kg]
1.90	9.2	50	460
2.20	10.6	50	530
2.45	11.8	50	590
2,65	12,74	50	640
2.90	14	50	700
3.30	15.9	50	800
3.60	17.3	50	870
3.90	18.8	50	940
4.50	21.6	50	1,080
4.90	23.6	50	1,180

PACKAGING OF STEICO *formwork* BEAMS

50 beams per pack



By special request, beams are available in lengths up to 16 m . Weight per beam: 4.8 kg/m

MAXIMUM SINGLE SPAN FOR TRANSVERSE AND PRIMARY BEAMS

Maximum deflection = $l/500$

Example: Slab thickness $d = 160\text{mm}$, plate size $2.0 \times 0.625\text{m}$

Slab thickness d in mm	Total load* [kN/m ²]	Transverse beam spacing [m]				Primary beams spacing [m]											
		0.375	0.5	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.5	
		Maximum transverse beams span [m]				Maximum spans for primary beams [m] (max. distance between the supports)											
100	4.3	3.50	3.18	2.95	2.78	2.50	2.32	2.19	2.08	1.99	1.91	1.85	1.79	1.67	1.54	1.43	
120	4.8	3.37	3.07	2.85	2.68	2.42	2.24	2.11	2.01	1.92	1.84	1.78	1.63	1.50	1.38	1.28	
140	5.3	3.26	2.97	2.75	2.59	2.34	2.17	2.04	1.94	1.86	1.79	1.63	1.48	1.36	1.25	1.16	
160	5.8	3.17	2.88	2.67	2.51	2.27	2.11	1.98	1.88	1.80	1.66	1.49	1.36	1.24	1.15	1.07	
180	6.3	3.08	2.80	2.60	2.45	2.21	2.05	1.93	1.83	1.72	1.53	1.38	1.25	1.15	1.06	0.98	
200	6.8	3.00	2.73	2.53	2.38	2.16	2.00	1.88	1.79	1.59	1.42	1.28	1.16	1.06	0.98	0.91	
220	7.3	2.93	2.67	2.47	2.33	2.11	1.96	1.84	1.70	1.49	1.32	1.19	1.08	0.99	0.91	0.85	
240	7.8	2.87	2.61	2.42	2.28	2.06	1.91	1.80	1.59	1.39	1.24	1.11	1.01	0.93	0.86	0.80	
260	8.3	2.81	2.55	2.37	2.23	2.02	1.87	1.75	1.50	1.31	1.16	1.05	0.95	0.87	0.81	0.75	
280	8.8	2.76	2.50	2.32	2.19	1.98	1.84	1.65	1.41	1.24	1.10	0.99	0.90	0.82	0.76	0.71	
300	9.3	2.71	2.46	2.28	2.15	1.94	1.81	1.56	1.34	1.17	1.04	0.94	0.85	0.78	0.72	0.67	
320	9.8	2.66	2.42	2.24	2.11	1.91	1.77	1.48	1.27	1.11	0.98	0.88	0.80	0.74	0.68	0.63	
340	10.4	2.61	2.37	2.20	2.07	1.87	1.68	1.40	1.20	1.05	0.93	0.84	0.76	0.70	0.64	0.60	
360	10.9	2.57	2.33	2.16	2.04	1.85	1.60	1.33	1.14	1.00	0.89	0.80	0.73	0.67	0.62	0.57	
380	11.5	2.52	2.29	2.13	2.00	1.81	1.52	1.26	1.08	0.95	0.84	0.76	0.69	0.63	0.58	0.54	
400	12.0	2.49	2.26	2.10	1.97	1.79	1.45	1.21	1.03	0.91	0.80	0.72	0.66	0.60	0.56	0.52	
500	14.6	2.33	2.12	1.96	1.85	1.48	1.18	0.98	0.84	0.74	0.66	0.59	0.54	0.49	0.45	0.42	

* Includes an allowance for a live load of 1.5kN/m². Note: These tables serve as a guide only and do not replace independent structural calculations prepared by a qualified structural engineer.

DESIGN VALUES

Characteristic vertical shear capacity	$V_k = 23.9 \text{ kN}$
Allowable shear capacity:	$V = 11.0 \text{ kN}$
Characteristic bending capacity	$M_k = 10.9 \text{ kNm}$
Allowable bending capacity :	$M = 5.0 \text{ kNm}$

Design values for STEICO *formwork* P 20 beams according to the MPA Ü-Certification

