

The background of the entire image is a low-angle, upward-looking shot of a construction site's formwork. It features a grid of wooden panels held together by metal beams with numerous circular holes. The perspective creates a strong sense of depth and structure. In the top left corner, there is a solid yellow square. The Sucoot logo, a stylized blue symbol, is positioned to the left of the company name.

**Sucoot**

# TOP BEAM

NEW INVENTION OF FORMWORK BEAMS





## About Us

Top Beam is one of the latest products designed to replace wood beam in vast range of civil and architectural projects with its remarkable strength-to-weight ratio, usage versatility in different work environment, and enduring life span as guaranteed by an impeccable quality control procedure in fabrication.



Beginning with ring scaffolding system, Sucoot works out in the past 30 plus years excelling its advanced specialty formwork and support system to top Taiwanese infrastructure construction market which is rigorously competitive; and now its customer base further expands to include 65 countries and regions globally thanks to peerless products and masterful engineering services it offered complying with customer's demand.

We will respond to your request for an efficient and competitive proposal meeting your requirement for formwork and support system in various projects; and are confident that the proposals and alternatives we'd have provided will be the most economic, safe and convenient to assist you to win and finish the project.







*Site Manager*

— HCGC, Taiwan

*“Light, small and solid beam for our formwork greatly benefit us. Durability is much better than H20 beams.”*



### **EFFICIENCY**

Light weight and usage versatility can be used in wide application.



### **ENDURABILITY**

Finest material ensures its anti-rust, high strength property and long life span.

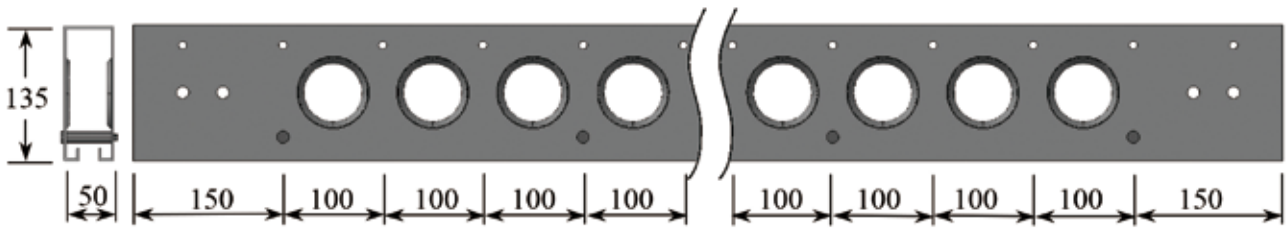


### **HIGH LOAD CAPACITY**

A Remarkable strength-to-weight ratio, the load capacity is 25% stronger than wood beam.



## TOP BEAM PROPERTIES



### Features :

- Made from High strength, antirust galvanized steel
- Connect with plywood by self-tapping screws or steel nails
- Environmental Protection
- Long life span and high durability

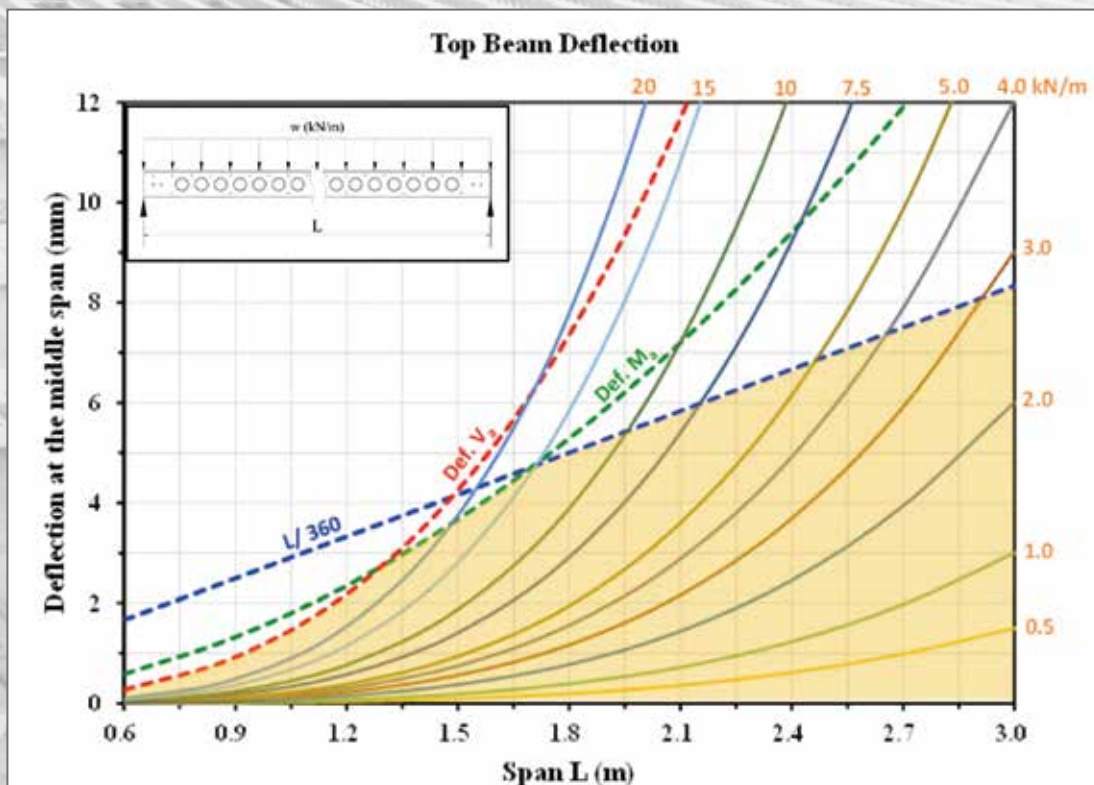
### Engineering Properties :

Unit: mm

- E (Elastic Modulus) = 200 GPa
- $F_y$  (Yield Stress) = 365 MPa
- $I_{xx}$  (Moment of Inertia) = 175.4 cm<sup>4</sup>
- $M_a$  (Allowable Bending Moment) = 5.5 kNm
- $V_a$  (Allowable Shear Force) = 17 kN

### Specifications :

- Dimensions: Height 135 mm × Width 50 mm × Thickness 2.3mm
- Nominal Weight: 5.6 kg/m
- Lengths: 1.2m, 1.5m, 1.8m, 2.4m, 3.0m, 3.6m
- ※ Available in lengths between 1.2m and 3.6m with 0.3m increment.



## COMPARISON BETWEEN TOP BEAM AND H20 BEAM



### Top Beam is

#### Deflection & Load Capacity

#### Physical Change

**Virtually**  
**0%**  
Heavier

After Water Absorption

Up To  
**25%**  
Stronger

Between 3-5mm  
Deflection

#### Transportation

Up To  
**70%**  
More

Pieces in a 20' Container

# MEASUREMENT TABLE OF TOP BEAM

## Example 1: (Table 1, Red line)

Given: Floor Thickness (80 cm),  
use Top Beam @0.3m for  
second bearer

Find: Main Bearer spacing  $\leq$  2.22m

## Example 2: (Table 2, Blue line)

Given: Floor Thickness (20 cm), use  
Top Beam@1.8m for main  
bearer

Find: Shoring support spacing  $\leq$  1.7m

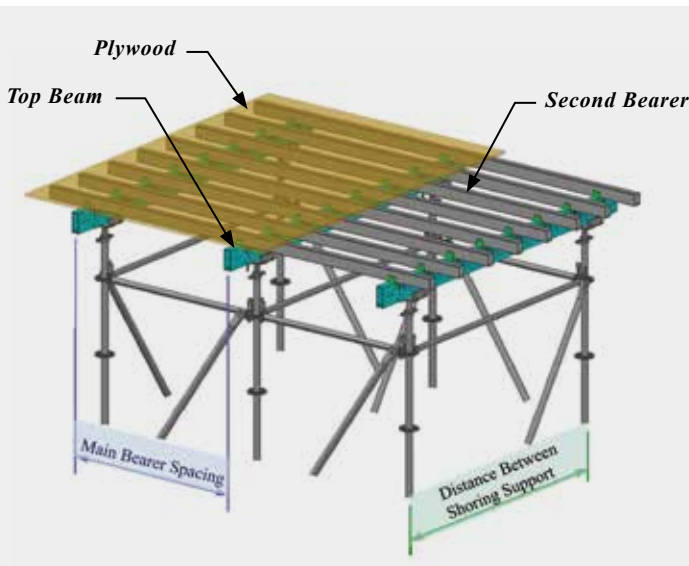
Floor Thickness (cm)	Total Load (kN/m <sup>2</sup> )	Table 1					Table 2						
		For Second Bearer Spacing (m)					For Main Bearer Spacing (m)						
		0.2	0.3	0.4	0.5	0.6	0.75	0.90	1.20	1.50	1.80	2.40	3.00
		Max. distance between Main Bearer (m)					Max. distance between Shoring Support (m)						
15	7.20	3.73	3.26	2.96	2.74	2.58	2.40	2.26	2.05	1.90	1.79	1.59	1.42
18	7.92	3.61	3.15	2.86	2.66	2.50	2.32	2.18	1.98	1.84	1.73	1.52	1.36
20	8.40	3.54	3.09	2.81	2.61	2.45	2.28	2.14	1.95	1.81	1.70	1.47	1.32
25	9.60	3.39	2.96	2.69	2.49	2.35	2.18	2.05	1.86	1.73	1.59	1.38	1.18
30	10.80	3.26	2.84	2.58	2.40	2.26	2.09	1.97	1.79	1.64	1.50	1.30	1.04
40	13.20	3.04	2.66	2.42	2.25	2.11	1.96	1.84	1.66	1.49	1.36	1.07	0.85
50	15.60	2.88	2.51	2.28	2.12	1.99	1.85	1.74	1.53	1.37	1.21	0.90	0.72
60	18.00	2.74	2.40	2.18	2.02	1.90	1.76	1.64	1.42	1.25	1.04	0.78	0.62
70	20.40	2.63	2.30	2.09	1.94	1.82	1.69	1.54	1.34	1.11	0.92	0.69	0.55
80	22.80	2.54	2.22	2.01	1.87	1.76	1.60	1.46	1.24	0.99	0.82	0.62	0.49
90	25.20	2.45	2.14	1.95	1.81	1.70	1.52	1.39	1.12	0.89	0.74	0.56	0.44
100	27.60	2.38	2.08	1.89	1.75	1.63	1.45	1.33	1.02	0.82	0.68	0.51	0.41
120	32.40	2.26	1.97	1.79	1.64	1.50	1.34	1.16	0.87	0.69	0.58	0.43	0.34
150	39.60	2.11	1.84	1.66	1.49	1.36	1.14	0.95	0.71	0.57	0.47	0.35	0.28
180	46.80	1.99	1.74	1.53	1.37	1.21	0.96	0.80	0.60	0.48	0.40	0.30	0.24
200	51.60	1.93	1.68	1.46	1.30	1.09	0.87	0.73	0.54	0.43	0.36	0.27	0.21

Note:  
 1. Top Beam deflection is limited to L/360.  
 2. Unit weight of concrete is 24 kN/m<sup>3</sup>.  
 3. According to ACI347-04, use 3.6 kN/m<sup>2</sup> for Live Load.  
 4. Total Load = Floor Thickness  $\times$  24 + 3.6.

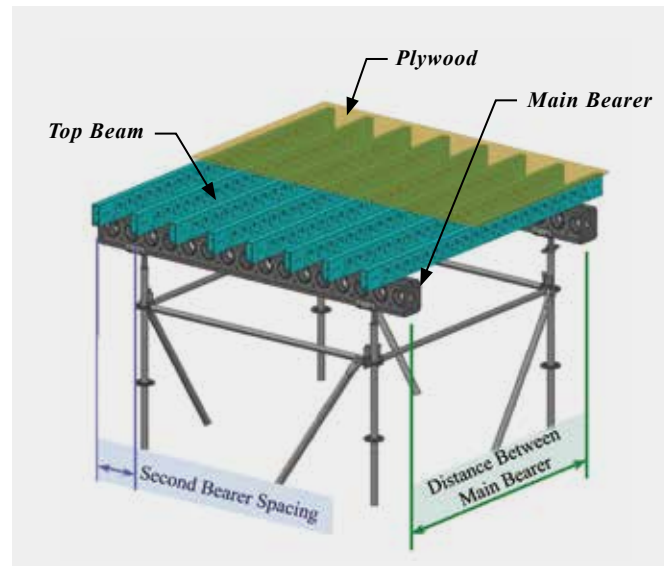
## Notes for Installation:

- The allowable open span of Top Beam may not exceed 3.0m.
- The sheeting is to be nailed directly onto the upper chord.
- Top Beams are only to be used in an upright position.
- Each Top Beam must be fixed by two Top Beam Clips at least.

### Top Beam for Main Bearer



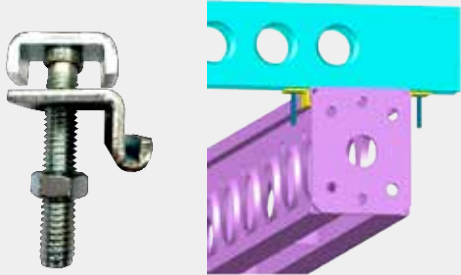
### Top Beam for Second Bearer




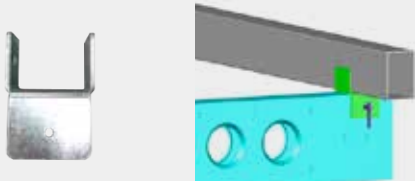


## COMPONENTS

<i>Top Beam to H Beam Clamp</i>	<i>Description</i>	<i>Weight</i>
	<ul style="list-style-type: none"> <li>• Connect Top Beam to H beam on wall formwork or crane handled soffit schemes.</li> <li>• The Allowable Tension (6.7 kN) and Slip (1.17 kN) figures are superior to GTX clamp and Timber clamp.</li> <li>• The Clamp can be set on any position on Top beam. Made from High strength, anti-rust galvanized steel.</li> </ul>	0.23Kg

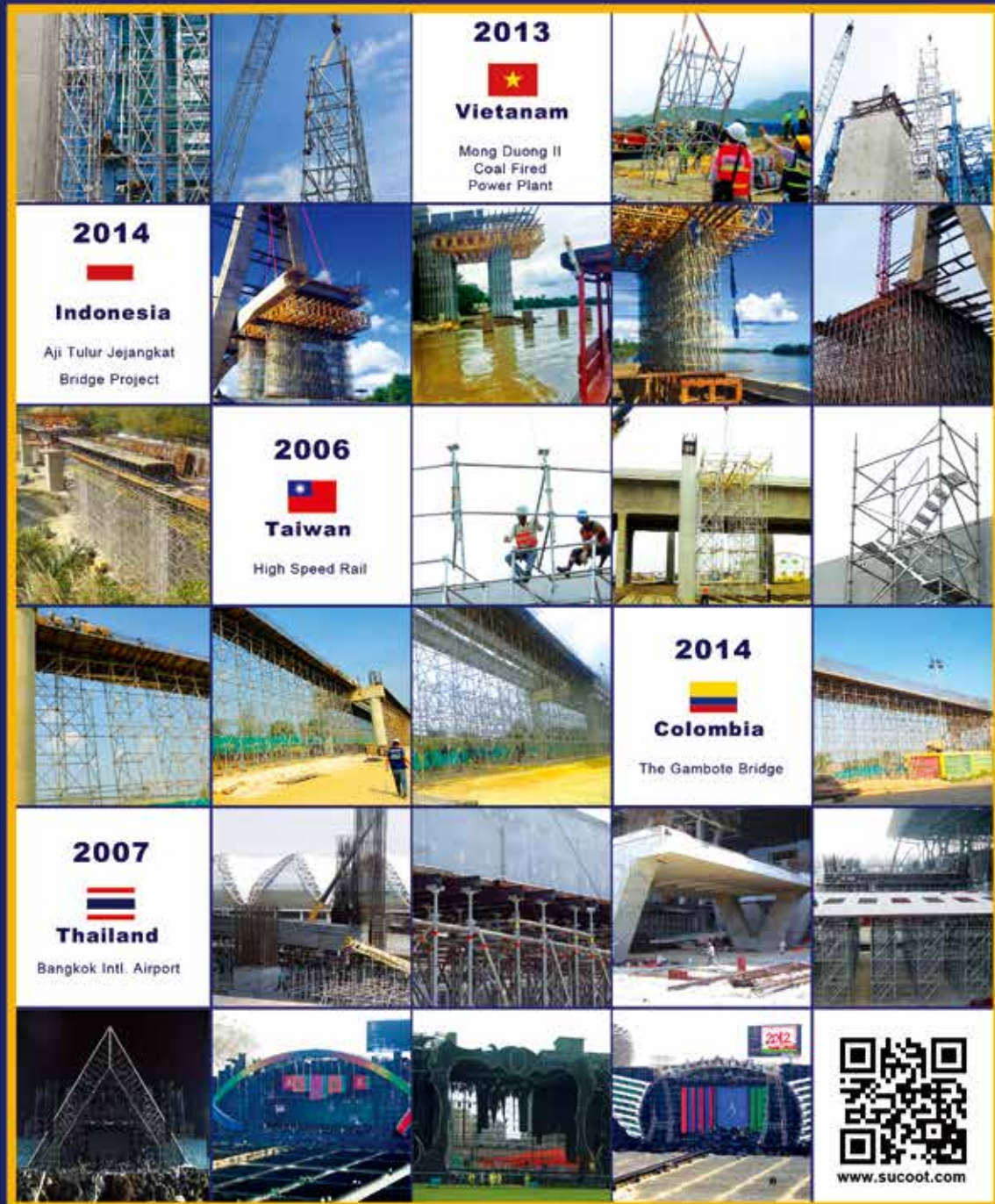
<i>Top Beam to Base Beam Clamp</i>	<i>Description</i>	<i>Weight</i>
	<ul style="list-style-type: none"> <li>• Connect Top Beam to Superslim / Base beam on wall formwork or crane handled soffit schemes.</li> <li>• The Allowable Tension (10.2 kN) and Slip (2.43 kN) figures are superior to GTX clamp and Timber clamp.</li> <li>• The Clamp can be put in any position of Top beam. No need to get in from end sides.</li> </ul>	0.17Kg

<i>Top Beam Connector</i>	<i>Description</i>	<i>Weight</i>
	<ul style="list-style-type: none"> <li>• Used to joint Top Beams.</li> <li>• Inserted into Top Beams; therefore, there is no extra external volume added and barely can see the gap.</li> <li>• Max. Load: 36.52 kN</li> </ul>	2.08Kg

<i>Square Beam Clamp</i>	<i>Description</i>	<i>Weight</i>
	<ul style="list-style-type: none"> <li>• Used to connect Top Beam to square tube and used snap lock to fix with Top Beam.</li> <li>• Fixed with Top Beam and the lighter bearer.</li> </ul>	0.19Kg

<i>Snap Lock (SL-37S)</i>	
	<ul style="list-style-type: none"> <li>• Fixed with Square Beam Clamp and Top Beam</li> </ul>

<i>Self-tapping Screws</i>	
	<ul style="list-style-type: none"> <li>• Fixed with Plywood and Top</li> </ul>



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