



SKALA

SKALA SMART BEAM

High Longevity
Excellent Dimensional Constancy
Consistently Large Load Capacity

www.skalasolutions.com

SKALA SMART BEAM



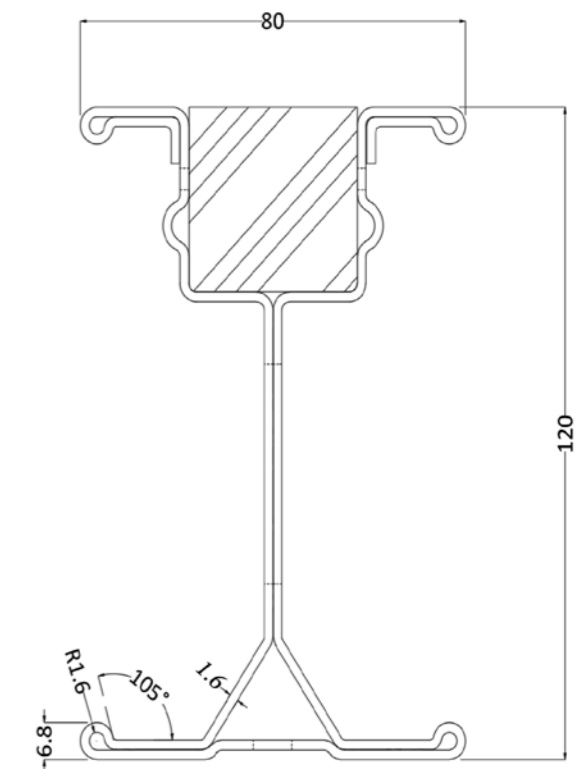
WHY WTD BEAM IS IDEAL FOR YOUR NEEDS..

A. INSTALLATION BENEFITS.

- High Allowable Uniform Loads: Designed for use as simply supported and– laterally braced.
- Lightweight: Weighing less than 6.2 kg/m (4.17 lbs/ft), including the nailing strip, making them easy to carry and install.
- Cost-Efficient: Reduces labor costs, transportation costs, and storage and stacking costs.
- Multiple Usage: Can be utilized as either a joist and stringer or both.
- Easy Plywood Attachment: Comes with a factory-installed, field-replaceable 38x38 mm nailing strip.
- Durability: Reverse flange stiffening minimizes damage during handling.
- Secure Fixation: The lower lip of the section allows for secure fixation using WTD Beam Clamps.
- Compatibility: The lower wide flange is compatible with U-heads on shoring jacks and post shores, allowing for side-by-side installation in larger U-heads.
- Standard Height: The 120 mm height is compatible with other joists.



ISOMETRIC VIEW OF SMART WTD BEAM



SMART WTD BEAM SECTION
With 38x38 mm wood Nailing

STORAGE & STACKING

The ground on which the stack is to be placed must be adequately firm and level. Best-case conditions are concreted or paved storage area.

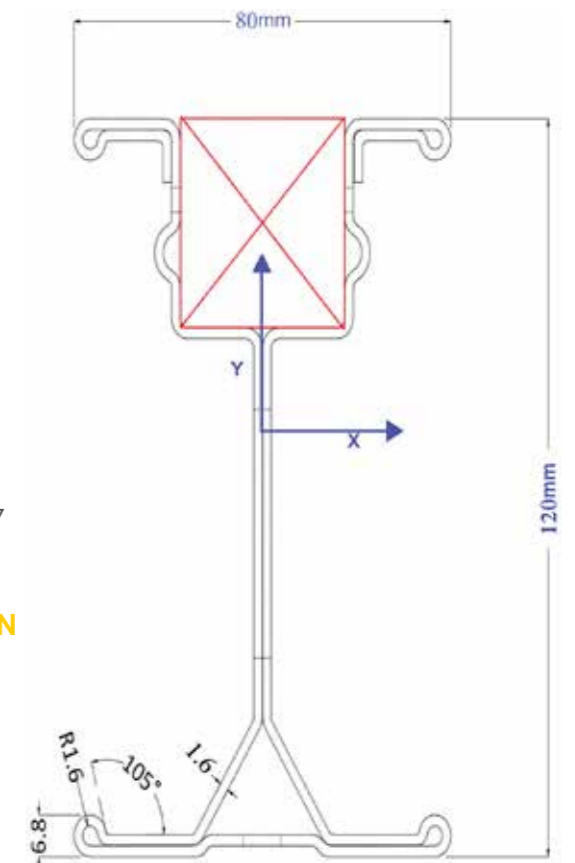
Protection from wind and weather Protect beams from extreme climatic influences such as exposure to sunshine or moisture by covering them with breathable tarpaulins.

This reduces cracking, fungal attack & mould.



C. COMPARISON WITH COMPETITORS.

	Smart WTD BEAM	H2O	ALU-BEAM
Cross Section			
MATERIAL	STEEL 37 (GALVANIZED)	WOOD	ALUMINUM (Heavy Duty)
WEIGHT (W/NAILER)	6.20kg/m (4.17 lbs./ft)	5.00kg/m (3.29 lbs./ft)	4.00kg/m (2.66 lbs./ft)
Allowable Bending moment (M)	6.40 KN.m (4.59 Kips.ft)	5 KN.m (3.6 Kips.ft)	5.30KN.m (3.90 Kips.ft)
Allowable Shear (Q)	34KN (7.60Kips)	1 KN (2.47Kips)	26KN (5.83Kips)



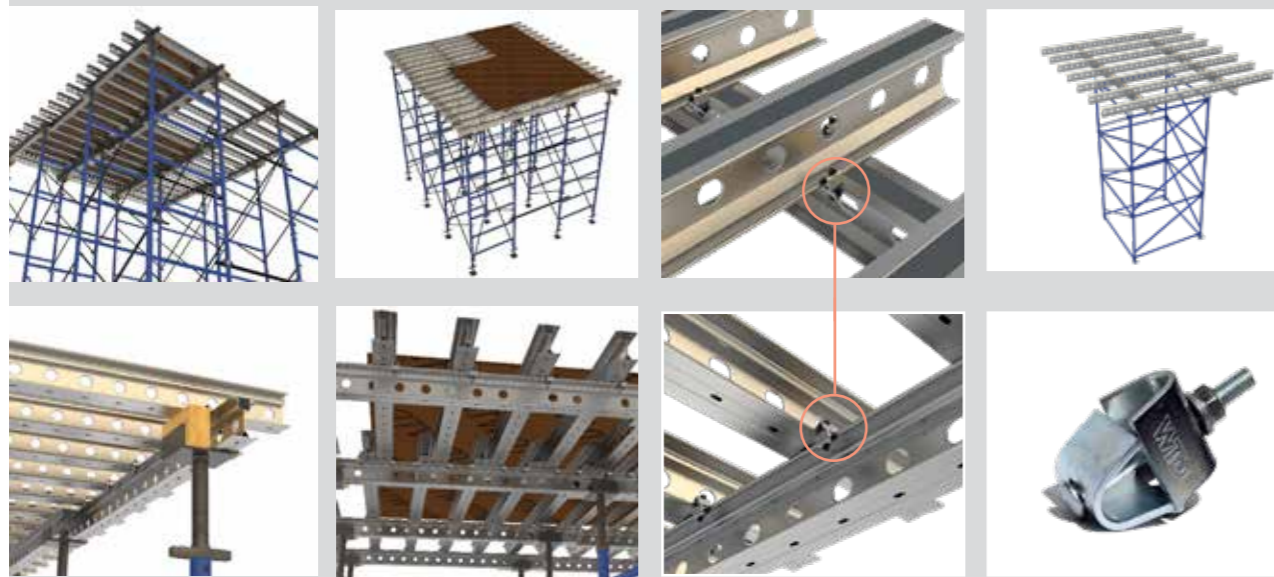
B. TECHNICAL DATA

- Material: Smart WTD Beam is made of Steel 37 (ST37)
- Minimum Yield Stress: $[F_y] = 235 \text{ MPa (34 ksi)}$
- Allowable Shear Force (tested): $[Q_{yall}] = 34 \text{ kN (7.60 kips)}$
- Allowable Bending Moment about the Strong Axis (tested): $[M_{xall}] = 6.40 \text{ kN m (4.59 kips ft)}$
- Second Moment of Inertia: $[I_x = 181.0 \text{ cm}^4 = (4.352 \text{ in}^4)]$

WTD SMART BEAM APPLICATIONS.

- **MULTIPLE USES OF BEAMS:** They can be used as beams (main beams) and joists (secondary beams), making them suitable for various structural frames.
- **SUPPORT SYSTEMS COMPATIBILITY:** Compatible with various support systems such as Cuplock, pilings, shore loading systems, and more, ensuring flexibility in temporary support structures.

A. Shoring of the HZ Concrete Forms of Concrete Slabs, Concrete Beams,...etc

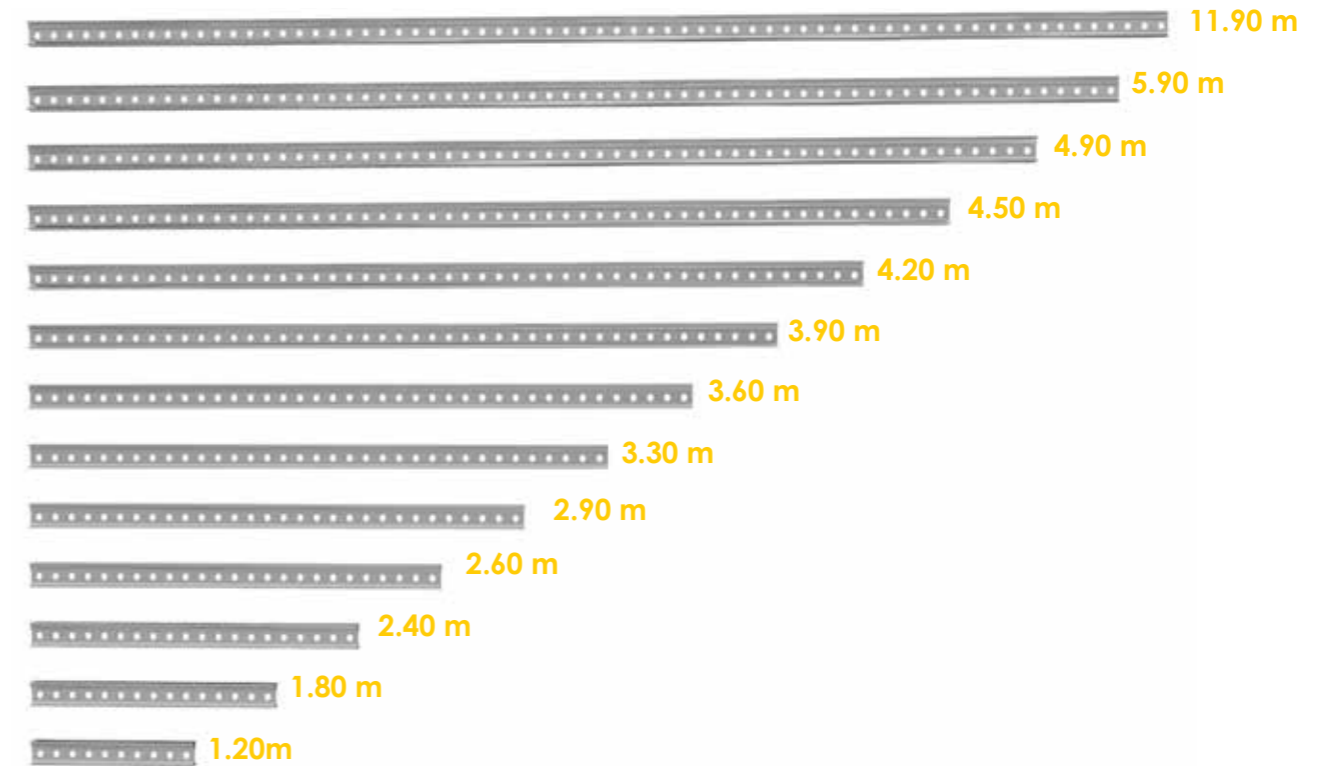


B. Shoring of the Vertical Forms Such as concrete Walls



C. Shoring of the Existing structure to be repaired

WTD SMART BEAM STANDARD.



MARKTING CODE	OPERATION Code	LENGTH (M)	WEIGHT (Kg)
120-WTD-7.44	2000	1.20	7.44
180-WTD-11.16	2001	1.80	11.16
240-WTD-14.88	2002	2.40	14.88
260-WTD-16.12	2003	2.60	16.12
290-WTD-17.98	2004	2.90	17.98
330-WTD-20.46	2005	3.30	20.46
360-WTD-22.32	2006	3.60	22.32
390-WTD-24.18	2007	3.90	24.18
420-WTD-26.04	2008	4.20	26.04
450-WTD-27.90	2009	4.50	27.90
490-WTD-30.38	2009	4.90	30.38
590-WTD-36.58	2009	5.90	36.58
1190-WTD-73.78	2009	11.90	73.78

WTD SMART BEAM DESIGN TABLES.

SPANS AND LOAD CAPACITIES

A. SI UNITS

SPAN (M)	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
CAPACITY(KN/M) [W]	77.04	25.88	10.91	5.59	3.24	2.04	1.37	0.96	0.70
DEFLECTION(MM) [D]	2.45	4.17	5.55	6.95	8.33	9.72	11.11	12.49	13.89
DEFLECTION/SPAN[L/D]	408	360	360	360	360	360	360	360	360

For Special Condition

$$L(M)=\min \left\{ \begin{array}{l} \sqrt{\frac{77.04}{W}} \\ \sqrt[3]{\frac{87.373}{W}} \end{array} \right.$$

Where: [W] (KN/m): Smart WTD Beam Capacity Load, [L] (m)= Unsupported Length, Values are calculated depends on Simple Beam and Max Span to deflection ratio does not exceed 360.

B. IMPERIAL UNITS (BRITISH UNITS)

SPAN (FT)	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
CAPACITY(lbs/FT) [W]	6133.33	3142.50	1609.6	931.11	586.94	393.13	276.05	201.60	151.07
DEFLECTION(in) [D]	0.08	0.13	0.17	0.20	0.23	0.27	0.30	0.33	0.37
DEFLECTION/SPAN[L/D]	438	360	360	360	360	360	360	360	360

For Special Condition

$$L(M)=\min \left\{ \begin{array}{l} \sqrt{\frac{55200.00}{W}} \\ \sqrt[3]{\frac{201324.44}{W}} \end{array} \right.$$

Where: [W] (lbs/ft): Smart WTD Beam Capacity Load, [L] (ft)= Unsupported Length, Values are calculated depend on Simple Beam and Max Span to deflection ratio does not exceed 360.



WTD SMART BEAM COUPLER.



Description	Weight
WTD Beam Coupler	0.765

WTD Beam Coupler



WTD SMART BEAM UNIVERSAL CLAMP.

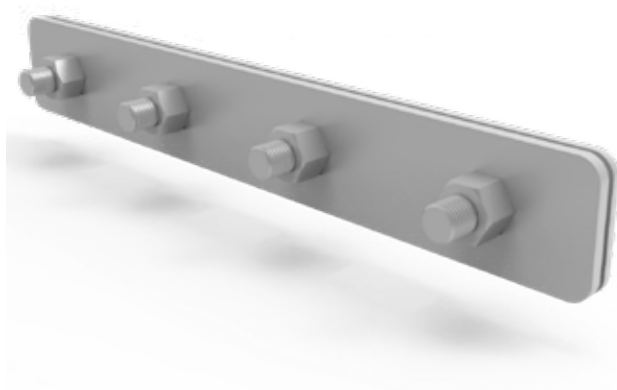


Description	Weight
Universal Clamp	0.460

Universal Clamp



SPLICE CRANE



Description	Weight
splice crane parts	2.45kg

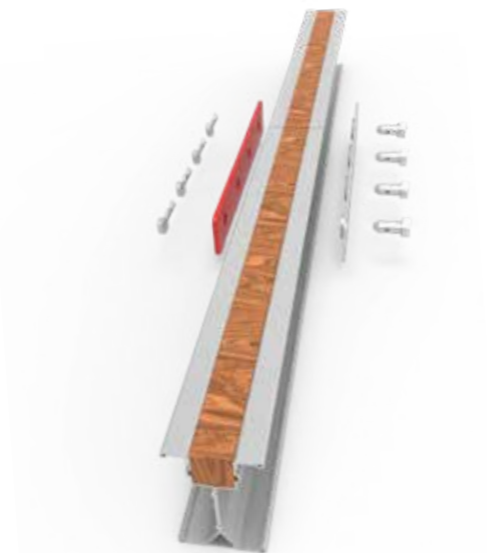
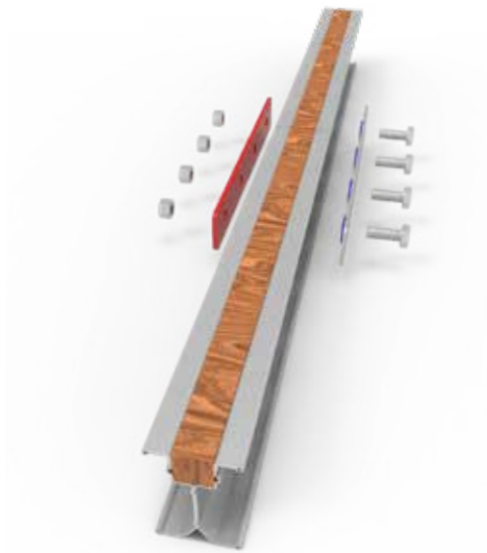
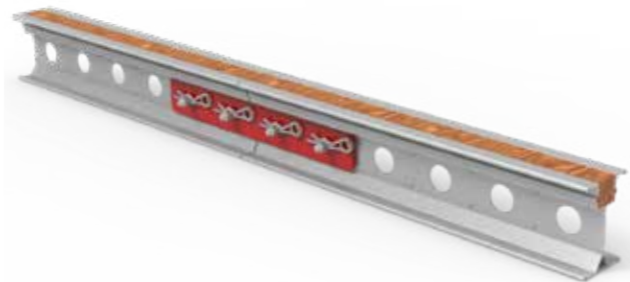
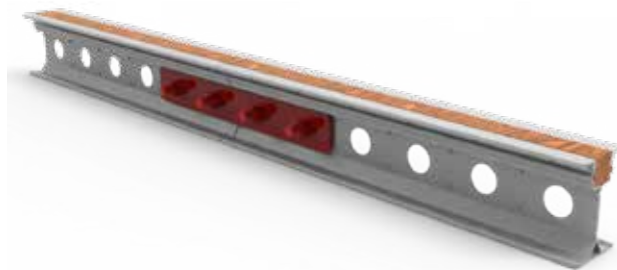
splice crane parts R-clip



Description	Weight
splice crane with revit pin	2.3kg

splice crane with revit Pin

WTD BEAM WITH SPLICE CRANE

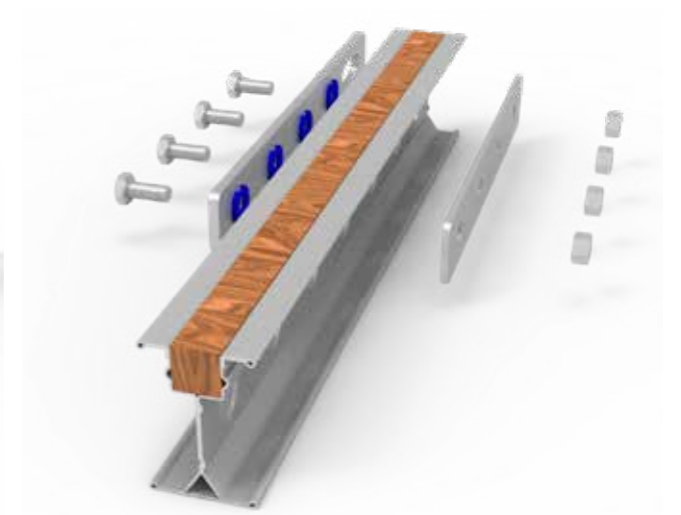


LIFTING EYE



Description	Weight
lifting eye	3.9kg

lifting eye



SKALA SMART BEAM

QATAR

Doha, Qatar

KUWAIT

Hawla, Kuwait

LEBANON

Antoura, Lebanon

KSA

Riyadh, KSA

UAE

Dubai, UAE

IVORY COAST

Abidjian, Ivory Coast

ROMANIA

Lasi, Romania

KYRGYZSTAN

Bishkek, Kyrgyzstan

INTERNATIONAL

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