



FORMWORK
SCAFFOLDING
TUBES
ROLL-FORMING
FORGING



*FORMWORK
SCAFFOLDING
SYSTEMS*

WTD Smart
Beam

2024

SINCE'2000



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ABOUT US

WTD Industries is considered as one of the major manufacturers & suppliers of Scaffolding and Formwork in the Middle East, GCC countries and North Africa.

WTD is offering wide range of services such as formwork planning- including project analysis, detailed formwork study, initial cost estimation & computer-aided formwork planning with structural calculations-design, manufacturing, engineering services, sales, rental business & technical support after sales.

All WTD products adhere to international standards and undergo rigorous laboratory testing, including tests for safe working load requirements, deformation resistance, damage resistance, tensile strength, and stress tests.

In 2000, WTD Industries began its journey as a small steel factory in Tanta, Egypt, focusing on decorative steel frames under the name Nefertiti Forge. Over the following decade, our focus shifted towards scaffolding and formwork manufacturing, driven by collaboration with esteemed partners in the construction industry.

By 2010, WTD Industries had established itself as a prominent supplier of scaffolding and formwork in the GCC countries and North Africa. Our comprehensive production facility, spanning over 30,000 square meters in the Beni Sweif Industrial area of Egypt, was home to a workforce of over 150 engineers, technicians, and laborers.

In 2014, as part of our strategic growth plans, we inaugurated the WTD Misr factory in the Hamriya Free Zone of the UAE. This expansion aimed to bolster our sales network, meet market demand, and streamline material delivery across the Gulf region.

By 2017, furthering our capabilities, we established another factory in the 10th of Ramadan in Sharqia, Egypt, dedicated to scaffolding accessories. These strategic moves align with our ongoing mission to provide comprehensive scaffolding solutions to the global market.

In 2023, The road was paved to WTD Industries to flourish in Saudi Arabia, WTD Industries established شركة وتد حلول الانشاء المحدوده WTD Construction Solution LM. Company with two giant stores in Jeddah & Riya, then successes continued.

Such a success is the result of dedication and team spirit.

WTD FORMWORK & SCAFFOLDING SYSTEMS.

Over 20 Years of Trust, WTD remains offering the most economical formwork solutions for any types of construction project.

The values of our strong specialists & workforce are reliability, Accountability ,proficiency & highest commitment.

WTD perceives our team as an asset and a trustworthy success partner.

Customers satisfaction is our utmost goal.

As we measure our achievements against the success of our customers and their satisfaction by offering the most economical Formwork & scaffolding solutions.

Digitalization & Disruptive Innovation are WTD fundamental structures for sustainable success.

WTD organizational structure & consistent enthusiasm facilitate our local presence in many markets, our representatives are capable of providing the best services with excellence & maintain strong connections with our loyal customers.



M. Bastawesy

Eng. Mostafa Bastawesy
WTD President & CEO

WTD CORPORATION

EGYPT



UAE



KSA



INDIA



WTD Network

HEADQUARTER

El Sharqia Govern, Industrial Area- A5-10th of Ramadan city, Plot No.175.



PIPE, COLD-FORMING & SCAFFOLDING
FACTORIES



Beni Sweif Govern, Industrial Area, Metal Sector, Bayad Al-Arab,
Plot No. 26.

WTD Smart Beam



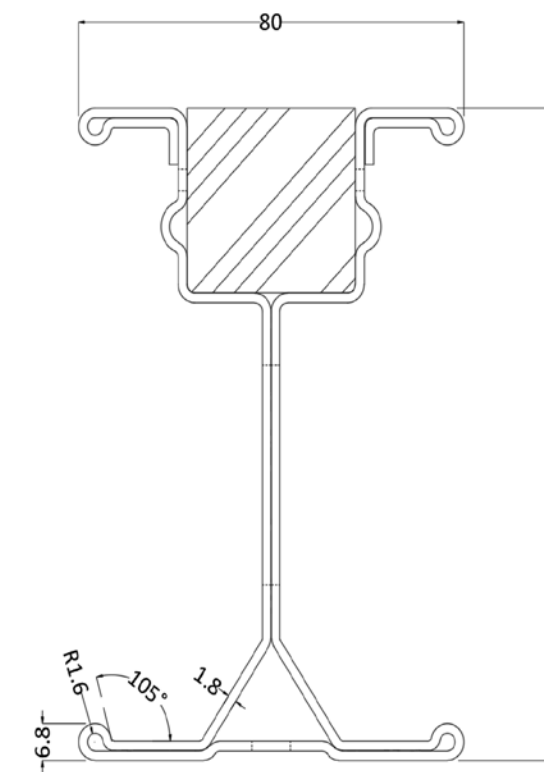
WHY WTD BEAM IS IDEAL FOR YOUR NEEDS..

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

Storgae & Stacking

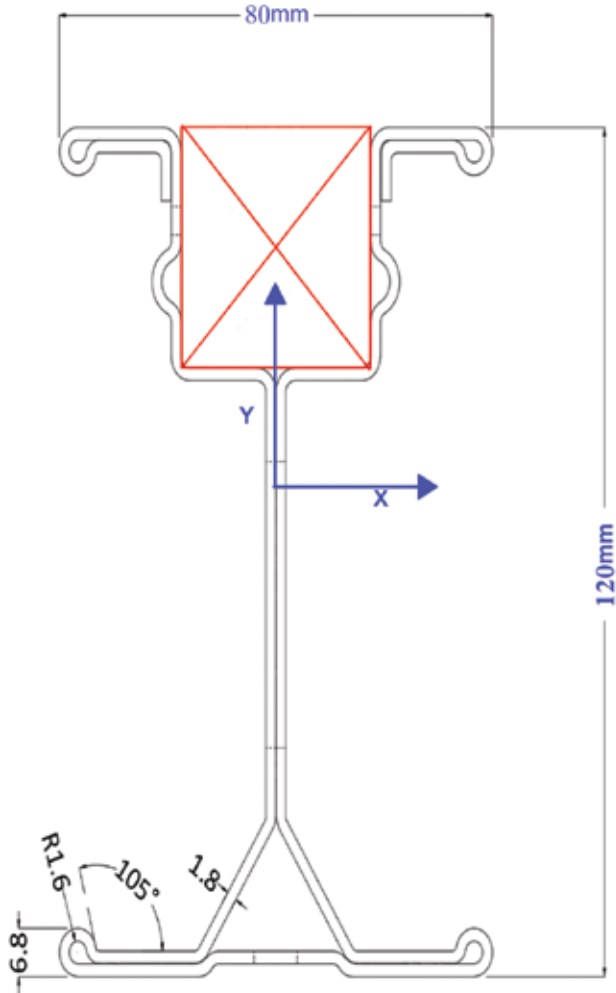
The ground on which the stack is to be placed must be adequately firm and level. Best-case conditions are concreted or paved storage area.

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.



B. TECHNICAL DATA

- Material: Smart WTD Beam is made of Steel 37 (ST37)
- Minimum Yield Stress: [Fy] = 235 MPa (34 ksi)
- Allowable Shear Force (tested): [Qyall] = 49 kN (11 kips)
- Allowable Bending Moment about the Strong Axis (tested): [Mxall] = 9.63 kN·m (6.90 kips·ft)
- Second Moment of Inertia: [Ix = 195.031 cm⁴ = (4.686 in⁴)



C. COMPARISON WITH COMPETITORS.

	Smart WTD BEAM	H20	ALU-BEAM	S-BEAM
Cross Section				
MATERIAL	STEEL 37 (GALVANIZED)	WOOD	ALUMINUM	STEEL
WEIGHT (W/NAILER)	6.2 kg/m (4.17 lbs./ft)	5 kg/m (3.36 lbs./ft)	6.36 kg/m (4.23 lbs./ft)	8 kg/m (5.38 lbs./ft)
Allowable Bending moment (M)	9.63 KN.m (6.90 Kips.ft)	5 KN.m (3.6 Kips.ft)	6.84 KN.m (5.04 Kips.ft)	5 KN.m (3.6 Kips.ft)
Allowable Shear (Q)	49 KN (11 Kips)	11 KN (2.47 Kips)	22 KN (8.94 Kips)	60 KN (13.4 Kips)



SMART WTD 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

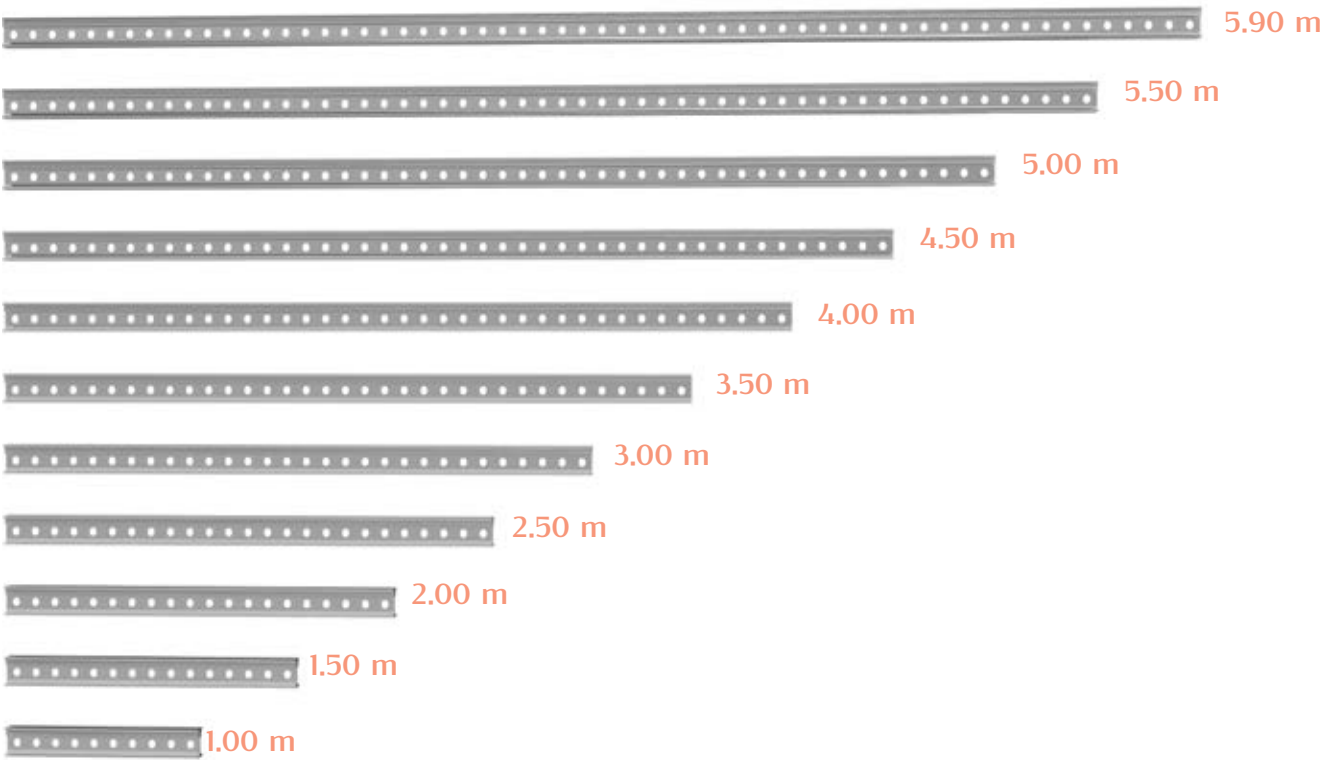


B. Shoring of the Vertical Forms Such as concrete Walls



C. Shoring of the Existing structure to be repaired

SMART WTD BEAM STANDARD.



MARKTING CODE	OPERATION Code	LENGTH (M)	WEIGHT (Kg)
100-WTD-6.30	2000	1.00	6.30
150-WTD-9.45	2001	1.50	9.45
200-WTD-12.60	2002	2.00	12.60
250-WTD-15.70	2003	2.50	15.75
300-WTD-18.90	2004	3.00	18.90
350-WTD-22.05	2005	3.50	22.05
400-WTD-25.20	2006	4.00	25.20
450-WTD-28.35	2007	4.50	28.35
500-WTD-31.50	2008	5.00	31.50
550-WTD-34.65	2009	5.50	34.65
590-WTD-37.17	2010	5.90	37.17

SMART WTD 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

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

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.





Roll-Forming Factory



WTD OFFICES WORLD WIDE



EGYPT

TURKEY

UAE

SAUDI ARABIA

INDIA

RELATED SYSTEMS

1. WTD Smart Beam
2. Waler System
3. Cuplock System
4. H-Frame System
5. Shore Load System
6. Steel Blank
7. ERW Steel Pipes & Tubes
8. Accessories
9. Column Clamp
10. Staking System
11. Circular Column



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*A LEADING GLOBAL
CONSTRUCTION GROUP*

www.wtd.me

EGYPT

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