



WENMA Galvanized Ladder Beam is a light steel truss beam specially designed for large-span scaffolding passages, loading and unloading platforms and temporary bridges. Manufactured with S355JR structural steel tubes and "ladder-like" professional welding technology, the product achieves a perfect balance between high load-bearing capacity and low self-weight. With its outstanding performance, it has become the first choice for scaffolding reinforcement components in high-end scaffolding construction projects in Europe, America, the Middle East and Southeast Asia, providing safe, efficient and economical large-span support solutions for various construction scenarios.

Compliant material, multiple models available, stable structure, clear load capacity, anti-corrosion and durable, multi-functional. With 4:1 high safety factor design, it provides an ideal supporting component with both safety and practicality for scaffolding construction.

Ladder Beam

01 | Product Positioning & Core Value

As a professional component focusing on large-span construction needs, WENMA Ladder Beam takes "safe and reliable, compatible and efficient" as its core advantages. Through high-quality materials, precise technology and scientific design, it solves the problems of insufficient load-bearing and poor stability of traditional scaffolding in large-span scenarios. Whether it is the construction of scaffolding passages in high-end scaffolding construction projects or the structural reinforcement of heavy-duty loading and unloading platforms, it can provide support guarantees in line with international standards, helping projects improve construction efficiency and safety factors.



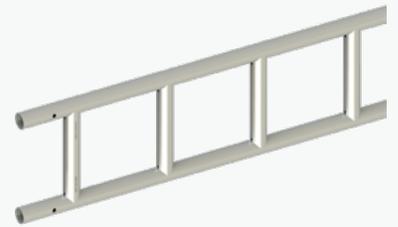
| Part No. | Overall Length | | Weight | | Material |
|----------|----------------|-------|--------|--------|----------|
| | m | in | kg | lbs | |
| TF-LB40 | 4.0 | 13'1" | 42.00 | 92.59 | S355JR |
| TF-LB50 | 5.0 | 16'5" | 48.41 | 106.72 | S355JR |
| TF-LB60 | 6.0 | 19'8" | 62.50 | 132.83 | S355JR |

02 | Core Technical Highlights

1

High-Grade Steel Base Material Guarantee

High-tensile structural steel tubes complying with BS EN 10219-1 Grade S355 are adopted, with a yield strength of not less than 355MPa and a uniform wall thickness of 3.2mm. It has excellent mechanical properties and can withstand impact loads in low-temperature environments of -20°C, ensuring product strength and durability from the source, and adapting to various scaffolding construction environments.



2

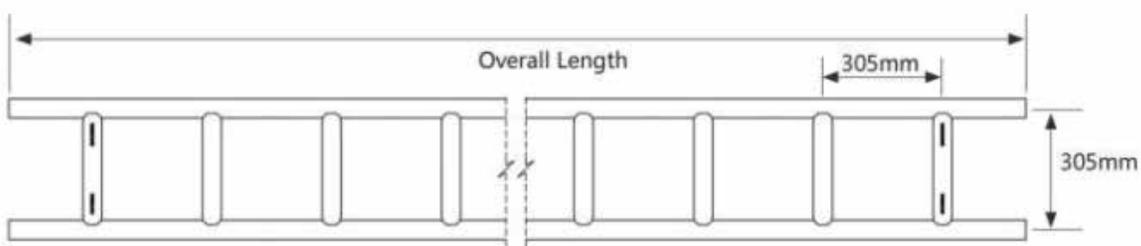
Effective Hot-Dip Galvanizing Protection

Adopting full-immersion hot-dip galvanizing process, the average thickness of the zinc layer reaches 40µm, which has passed the 500-hour salt spray test verification. In harsh scaffolding construction environments with strong corrosion such as coastal areas and chemical industrial areas, it can double the service life, effectively resist rust and reduce later maintenance costs.

3

Stable Ladder-Shaped Geometric Structure

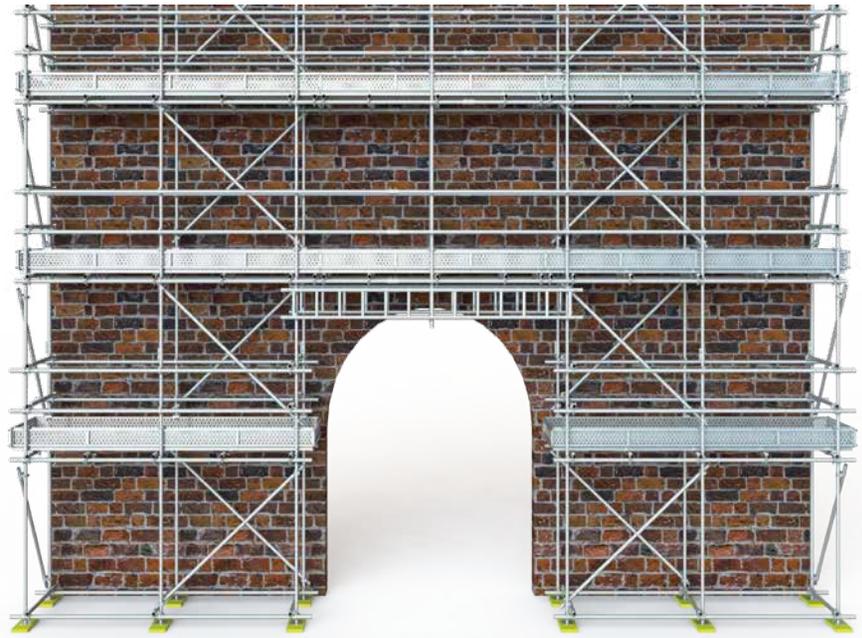
The beam depth (distance from the center of the top chord to the center of the bottom chord) is 305mm, and the rung spacing is no more than 305mm, forming a stable structural system of "double chord + multi-node". This scientific geometric design makes the load distribution more uniform, greatly improving the overall stability and deformation resistance of the product.



03 | Core Functionality

■ Scaffolding Bridge Formation

It can be used to build temporary bridges across openings in scaffolding. It can not only stably support equipment such as construction elevators, but also provide a safe crossing path for construction workers, effectively solving the problem of space barriers during construction and improving work efficiency.



■ Pipe Rack Suspended Scaffolding Support

It provides key longitudinal support for the pipe rack suspended scaffolding system and forms a stable stress framework in combination with other scaffolding components. Designed specifically for special operating environments, relying on the excellent structural stability of the ladder beam, it can build stable operating platforms in interlayer areas and high-altitude pipe racks that are difficult to access directly from the ground, breaking through the limitations of traditional ground-supported scaffolding and effectively expanding the construction space.

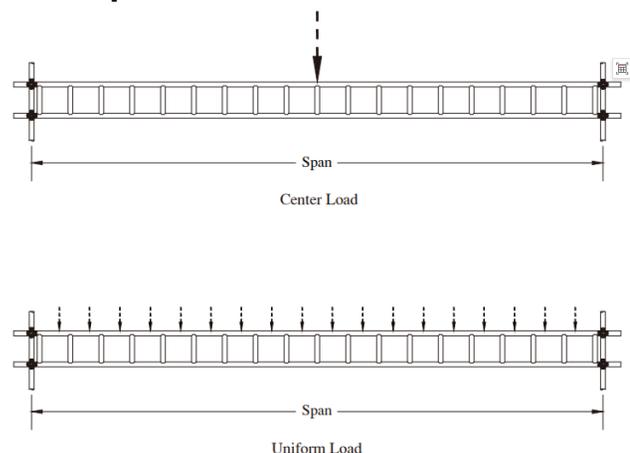


04 | Safe Working Load

The allowable load parameters under different spans are as follows:

| Span (m) | Allowable Uniform Load (kN/m) | Allowable Center Load (kN) |
|----------|-------------------------------|----------------------------|
| 3.0 | 14.3 | 21.5 |
| 4.0 | 8.1 | 16.1 |
| 5.0 | 5.2 | 12.9 |
| 6.0 | 3.6 | 10.8 |

Safety factor 4:1, deflection limit $L/250$; the tabulated values are for a simply-supported single beam. Re-check on site according to local codes before use.





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