鼎维固
Wenma

Tube & Fittings

Scaffold System User Manual

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The Tube and Fittings Scaffold System was originally invented in 1913 by Daniel Palmer Jones and David Henry Jones from UK, modern-day scaffolding standards, practices and processes can be attributed to the two brothers. Until they patented their inventions in the early 20th century, scaffolding was erected by individual firms with wildly varying standards and sizes. Their creations led to a standardization across the scaffolding industry. This helped to make working with scaffolding safer for all involved.

The Tube and Fittings Scaffold System represents a versatile and adaptable solution for various industrial, construction and maintenance projects, offering unparalleled flexibility in design and application. Despite potentially higher labor intensity during erection and dismantling, the system's adaptability makes it highly suitable for complex and unique job sites, providing access to challenging areas and accommodating various scaffold configurations.

- **Easy Assembly & Disassembly**

Structurally simple, the Tube & Fittings Scaffold System consists of just three primary components: tubes, couplers, and base plates. This simplicity facilitates quick setup and tear-down, minimizing downtime and maximizing productivity.

Tube & Fittings Scaffold System

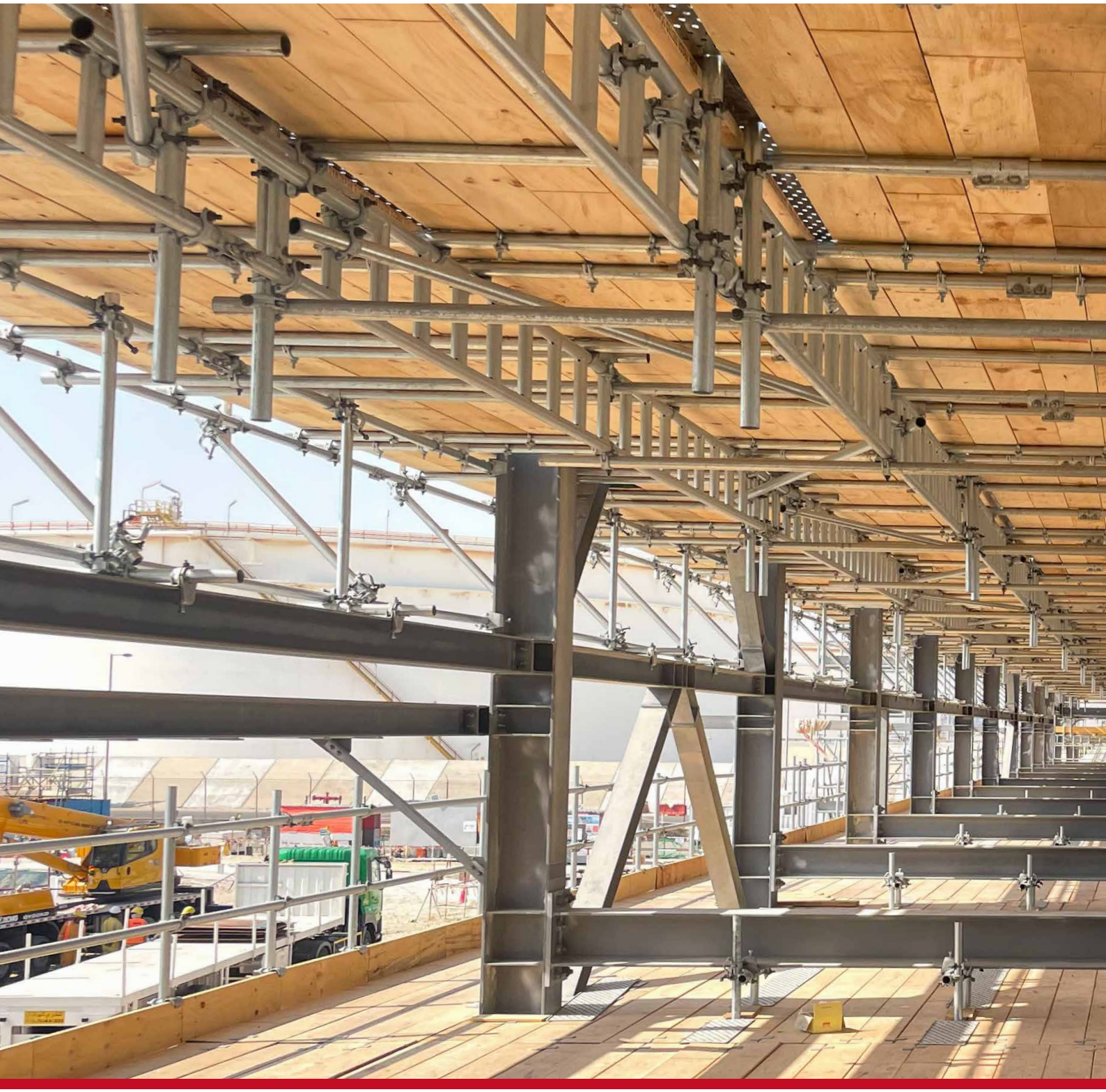
- **Compatibility**

The Tube & Fittings System is compatible with other scaffold systems like Finelock M48 System Scaffold and Fineshore M60 Shoring System, allowing it to be used either independently or in conjunction with other scaffolds to supplement and enhance existing setups based on specific job conditions.

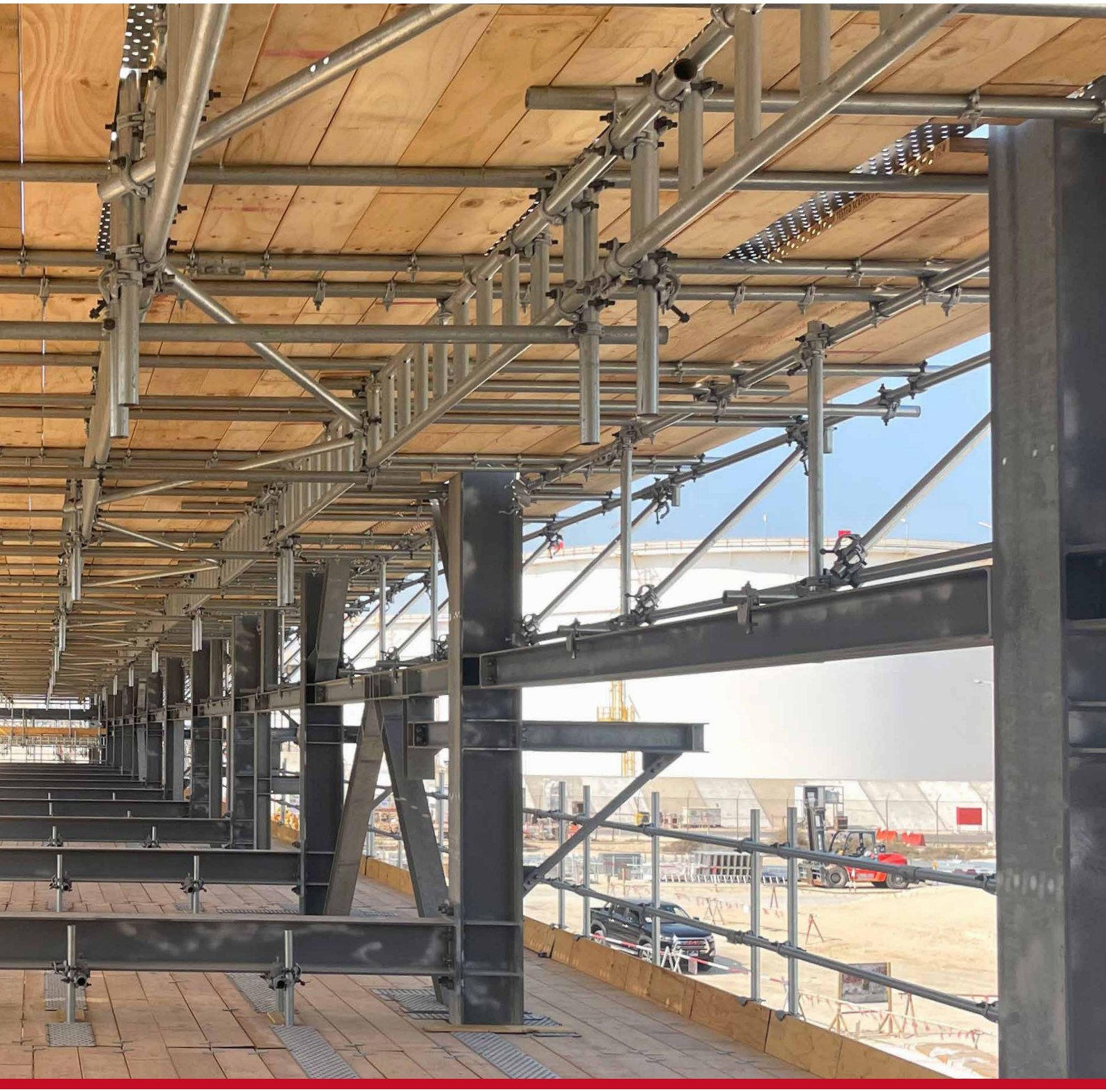
• **Unlimited Adaptability**

The system's adaptability is its hallmark, capable of adjusting to high or low elevation requirements, indoor or outdoor environments, and both straight and curved structures. It excels in handling standard as well as irregular shapes, making it ideal for a wide array of construction scenarios.

Tube & Fittings Scaffold System



Tube & Fittings Scaffold System



Tube & Fittings Scaffold System

• Trainings & Seminars Accredited by CISRS

The right planning, the correct handling, and the ability to know what to do in case of an emergency are equally important as high-quality scaffolding systems. That is why Wenma offers regular trainings as well as special trainings for scaffolders, engineers or your external partners. We are proud to have received CISRS accreditation for our training centers in China, which allows us to provide world-class scaffolding safety training to our clients and workers. Finelock M48 System Scaffold and Fineshore M60 Shoring System training course covered by CISRS and Simian Skills.

• Independantly Tested and Approved

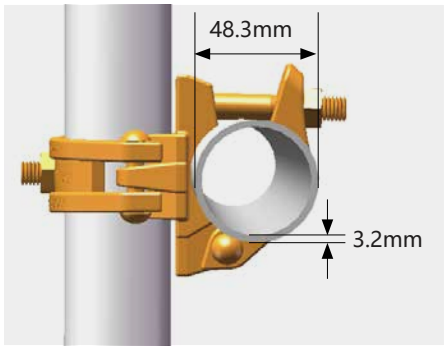
Certificates and approvals from independent institutes help you to determine that a scaffold meets your standards of safety and quality. We always put the quality of our Scaffolding and Shoring systems first. Sourcing our raw materials only from trusted partners plays a big part in this, more importantly, continuous professional testing is required from raw materials to product performance to ensure that every Scaffolding and Shoring component meets quality standards. We have our own physical, chemical, and mechanical lab accredited by CNAS, meanwhile, our products are also certified and tested by independent institutions such as TUV, SGS and CIDB. In addition, we have regular audits carried out by independent third parties such as NASC - English National Access & Scaffolding Confederation.

High-Tensile Galvanized Steel Tube

Introducing our premium line of EN10219-1:2006 and TG20 compliant high-tensile galvanized steel tubes, designed with a diameter of 48.3mm and a wall thickness of 3.2mm, boasting a minimum design strength of 355N/mm². These tubes, engineered for both performance and convenience, weigh a mere 3.61kg per meter, making them significantly lighter and easier to handle compared to conventional options. Ideal for the scaffolding industry, where cold-formed tubes are widely favored for their superior structural integrity.

Our high-tensile steel tubes are meticulously manufactured to withstand extreme conditions, offering unparalleled reliability in construction and engineering projects. The cold-forming process ensures enhanced mechanical properties and dimensional accuracy, contributing to the tubes' widespread use in demanding applications. Compliant with international standards, these tubes are galvanized for corrosion resistance, extending their service life in harsh environments.

Part No.	Overall Length		Weight		Material
	m	in	kg	lb	
TF-ST60	6	19′ 8″	21.66	47.75	S355JR
TF-ST50	5	16′ 5″	18.05	39.79	S355JR
TF-ST40	4	13′ 1″	14.44	31.83	S355JR
TF-ST30	3	9′ 10″	10.83	23.88	S355JR
TF-ST24	2.4	7′ 10″	8.67	19.11	S355JR
TF-ST20	2	6′ 7″	7.22	15.92	S355JR
TF-ST15	1.5	4′ 11″	5.42	11.95	S355JR
TF-ST12	1.2	3′ 11″	4.33	9.55	S355JR
TF-ST10	1.0	3′ 3″	3.61	7.96	S355JR



Marking

Each steel pipe shall be distinctly marked by stamping. The height of the lettering shall be 6.35mm, and the depth of the lettering should exceed 0.2mm to ensure it remains clear and legible. The spacing between individual stamps should not be more than 1.5 meters.

The content of the stamping should read: "**WENMA EN10219-1 S355JR 3.2MM**".

Meaning of the Marking:

• **WENMA:** This is the corporate identifier.

• **EN10219-1:** Refers to the European standard specifying the technical delivery conditions fornon-alloy and fine grain structural steels, hot finished, cold formed, and pre-bent hollow sections.

• **S355JR:** Specifies the steel grade, indicating a minimum yield strength of 355MPa.

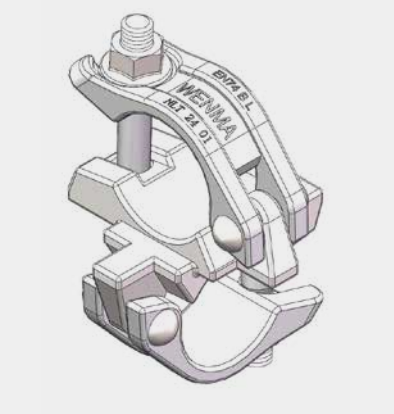
• **3.2MM:** Denotes the nominal wall thickness of the tube.

Therefore, the stamping "WENMA EN10219-1 S355JR 3.2MM" conveys essential information about the tube's conformity to a recognized standard and identifies the entity that produced or supplied it. This practice is critical in the chemical, oil and gas industry, where material traceability and adherence to standards are paramount for safety and quality assurance.

Tube & Fittings Scaffold System
Right Angle Coupler

Right Angle Coupler

Part No.	Weight		Material
	kg	lb	
TF-RAC-B	1.06	2.34	S235JR



Product Specifications

• **Compliance Standard:** EN74, ensuring high-quality and safety standards for scaffolding components.

• **Surface Treatment:** Hot-dip galvanized caps and body, zinc-plated T-bolts, nuts and Washers, providing exceptional corrosion resistance and durability.

• **Functionality:** Designed as a single-purpose Right Angle Clamp for scaffolding systems, compatible with 48.3mm outer diameter (OD) tubes. Features replaceable T-bolts and collar nuts for secure and adjustable connections.Features replaceable T-bolts, nuts and Washers for secure and adjustable connections.

Marking

Each coupling is marked by embossing on the coupling flap or body, ensuring that the marking remains clearly legible even after the application of a protective coating. The characters must have a height of at least 4.0 millimeters and a depth of no less than 0.2 millimeters.

The couplings are marked with the following information, presented in the following sequence:

• The standard that the coupling conforms to, which is EN74;

• The coupler load-bearing class: B;

• The quality control method used, designated by L;

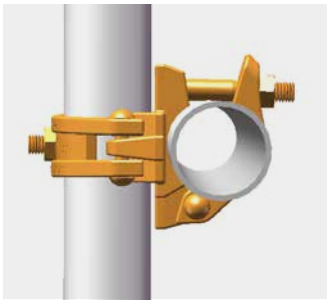
• The company identifier: WENMA;

• The factory code: XXX;

• The year of manufacture, represented by the last two digits;

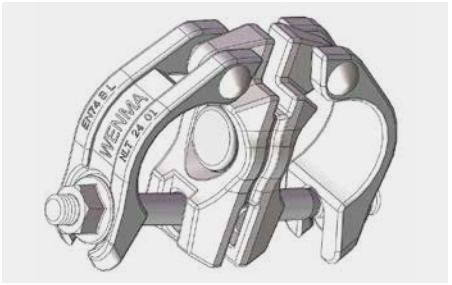
• The batch number: XX.

Example : EN74 B L
WENMA
XXX 24 XX



Tube & Fittings Scaffold System
Swivel Coupler

Swivel Coupler



Part No.	Weight		Material
	kg	lb	
TF-SC-B	1.19	2.62	S235JR

Product Specifications

• **Compliance Standard:** EN74, ensuring compatibility with other scaffolding components and adherence to stringent safety and quality benchmarks.

• **Surface Treatment:** Hot-dip galvanized, offering superior corrosion resistance and durability for long-term reliability in various environmental conditions.

• **Functionality:** Designed as a single-purpose clamp for scaffolding systems, accommodating a 48.3mm outer diameter (OD) tube. Features replaceable T-bolts, nuts and Washers for secure and adjustable connections.

Marking

Each coupling is marked by embossing on the coupling flap or body, ensuring that the marking remains clearly legible even after the application of a protective coating. The characters must have a height of at least 4.0 millimeters and a depth of no less than 0.2 millimeter.

The couplings are marked with the following information, presented in the following sequence:

• The standard that the coupling conforms to, which is EN74;

• The coupler load-bearing class: B;

• The quality control method used, designated by L;

• The company identifier: WENMA;

• The factory code: XXX;

• The year of manufacture, represented by the last two digits;

• The batch number: XX.

Example : EN74 B L

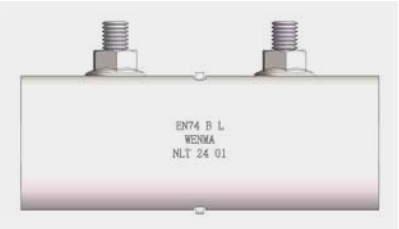
WENMA

XXX 24 XX

Tube & Fittings Scaffold System
Sleeve Coupler

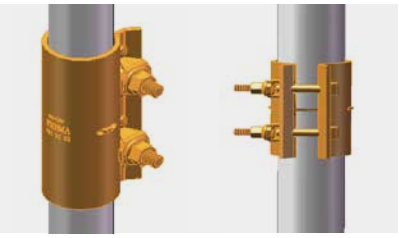
Sleeve Coupler

Part No.	Weight		Material
	kg	lb	
TF-SLC-B	1.08	2.38	S235JR



Product Specifications

- **Compliance Standard:** EN74, ensuring compatibility with other scaffolding components and adherence to safety and quality benchmarks.
- **Surface Treatment:** Galvanized, offering superior corrosion resistance and durability for long-term reliability in various environmental conditions.
- **Tube Diameter Compatibility:** Designed for 48.3mm outer diameter (OD) tubes, a standard size in scaffolding systems.



Sleeve Coupler

Marking

Each coupling is marked by embossing on the coupling flap or body, ensuring that the marking remains clearly legible even after the application of a protective coating. The characters must have a height of at least 4.0 millimeters and a depth of no less than 0.2 millimeters.

The couplings are marked with the following information, presented in the following sequence:

- The standard that the coupling conforms to, which is EN74;
- The coupler load-bearing class: B;
- The quality control method used, designated by L;
- The company identifier: WENMA;
- The factory code: XXX;
- The year of manufacture, represented by the last two digits;
- The batch number: XX.

Example : EN74 B L

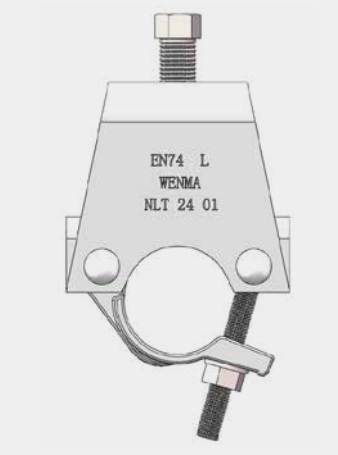
WENMA

XXX 24 XX

Tube & Fittings Scaffold System
Girder Coupler

Girder Coupler

Part No.	Weight		Material
	kg	lb	
TF-GC	1.54	3.40	S235JR

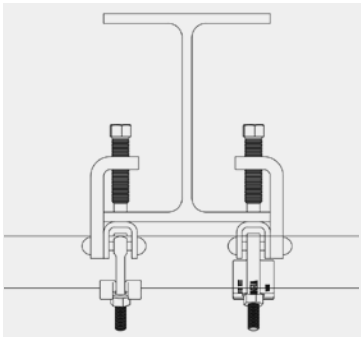


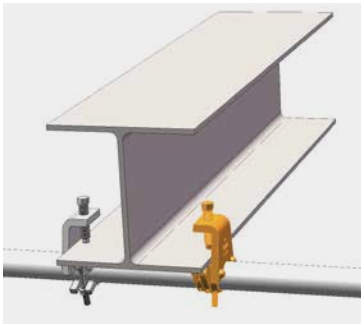
Product Specifications

• **Material & Finish:** Galvanized steel, providing enhanced durability and corrosion resistance suitable for various construction environments.

• **Functionality:** Designed for connecting scaffold tubes to steel beams, fitting beam flanges up to 1½" thickness. Compatible only with 48.3mm outer diameter (OD) tubes.

• **Usage Requirement:** Must be used in pairs on the same steel beam for secure and balanced attachment.

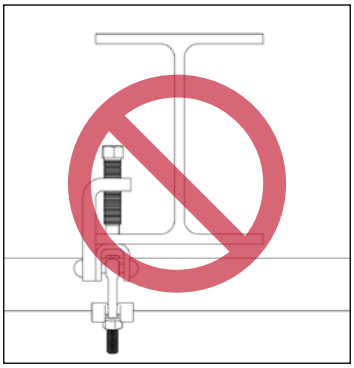




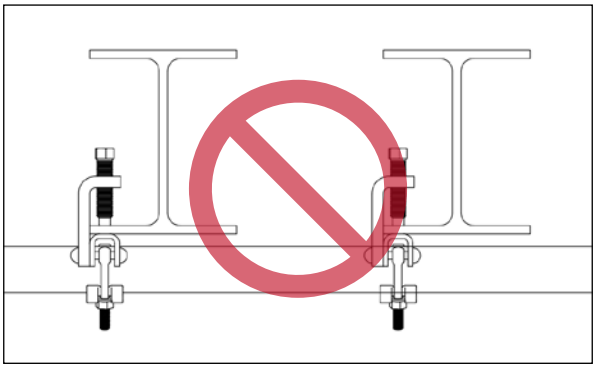
Tube & Fittings Scaffold System
Girder Coupler

Important Safety Notes

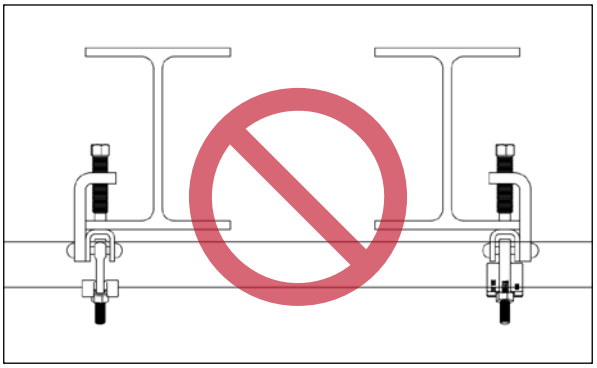
• **Avoid Single Clamp Usage:** Never attach a tube to a beam using only one beam clamp. This practice can lead to instability and potential failure of the connection.



• **Multiple Beam Connections:** When attaching a tube to multiple beams, avoid using only one beam clamp at each connection. This could compromise the structural integrity of the scaffolding system.



• **Engineer-Designed Exceptions:** If a scenario requires attaching a tube to multiple beams using a single beam clamp at each connection, ensure that this arrangement has been specifically designed and approved by a qualified engineer who has taken into account all safety factors and load-bearing capacities.



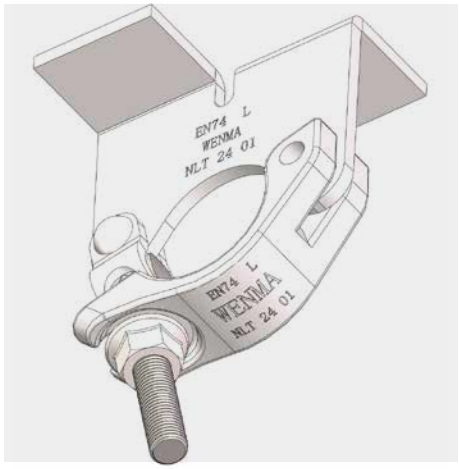
Tube & Fittings Scaffold System
Board Retaining Coupler

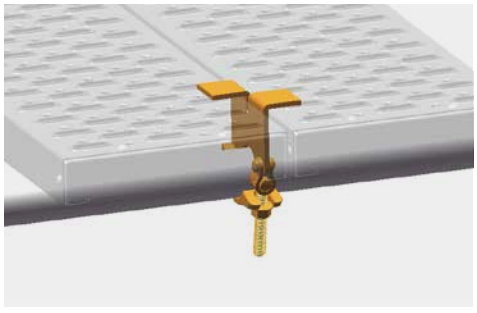
Board Retaining Coupler

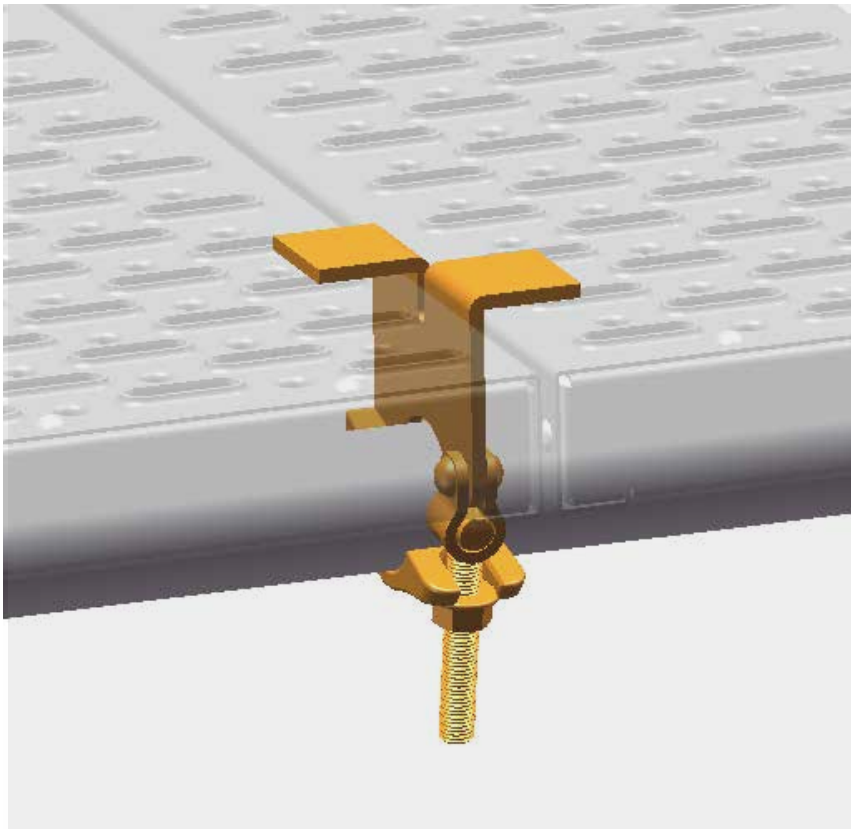
Part No.	Weight		Material
	kg	lb	
TF-BRC	0.62	1.37	S235JR

Product Specifications

- **Standard Compliance:** EN74, ensuring compatibility with other scaffolding components and adherence to safety and quality benchmarks.
- **Surface Treatment:** Galvanized, offering superior corrosion resistance and durability for long-term reliability in various environmental conditions.
- **Functionality:** Designed to retain boards securely in place within scaffolding systems, preventing movement and ensuring stability, particularly for boards shorter than 2.13 meters.







Board Retaining Coupler

Tube & Fittings Scaffold System
Putlog Coupler

Putlog Coupler

Part No.	Weight		Material
	kg	lb	
TF-PC	0.70	1.54	S235JR

Product Specifications

• **Standard Compliance:**EN74, ensuring compatibility with other scaffolding components and adherence to safety and quality benchmarks.

• **Surface Treatment:** Galvanized, offering superior corrosion resistance and durability for long-term reliability in various environmental conditions.

• **Functionality:** Designed to connect transoms (horizontal crossbars) to ledgers (main horizontal tubes) in scaffolding systems, and to secure toe boards for safety.

Marking

Each coupling is marked by embossing on the coupling flap or body, ensuring that the marking remains clearly legible even after the application of a protective coating. The characters must have a height of at least 4.0 millimeters and a depth of no less than 0.2 millimeters.

The couplings are marked with the following information, presented in the following sequence:

• The standard that the coupling conforms to, which is EN74;

•The quality control method used, designated by L;

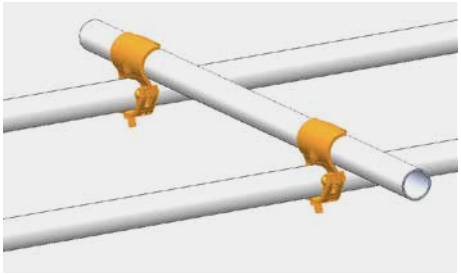
•The company identifier: WENMA;

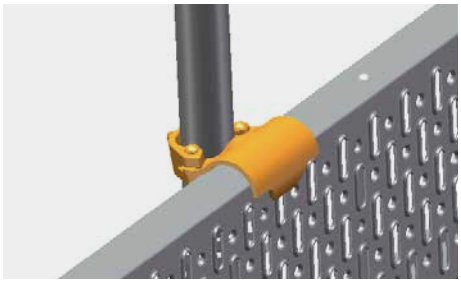
•The factory code: XXX;

•The year of manufacture, represented by the last two digits;

•The batch number: XX.

Example : EN74 L
WENMA
XXX 24 XX





Tube & Fittings Scaffold System
Ladder Clamp

Ladder Clamp

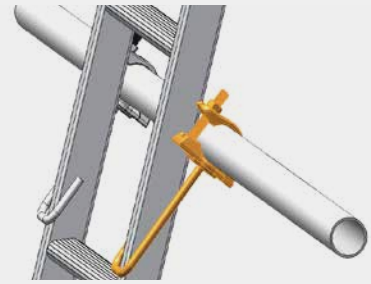
Part No.	Weight		Material
	kg	lb	
TF-LC	0.84	1.85	S235JR

Product Specifications

• **Compliance Standard:** EN74, ensuring the ladder clamp meets the high standards of safety and quality for scaffolding components.

• **Surface Treatment:** Galvanized finish, providing superior corrosion resistance and durability for long-term reliability in various construction environments.

• **Functionality:** The Ladder Clamp is designed to securely attach ladders to scaffolding systems, ensuring safe and stable access for workers. It is compatible with 48.3mm outer diameter (OD) tubes commonly used in scaffolding structures. The clamp features a robust mechanism for gripping the ladder rungs firmly, preventing any movement or slippage during use.

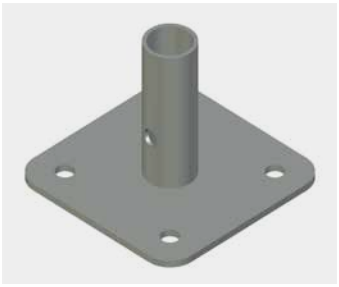


Ladder Clamp

Tube & Fittings Scaffold System
Base Plate

Base Plate

Part No.	Weight		Material
	kg	lb	
TF-BP	1.25	2.76	S235JR



Product Specifications

• **Surface Treatment:** Galvanized, providing excellent corrosion resistance and durability suitable for outdoor and construction environments.

• **Functionality:** Designed to distribute the load from the scaffolding structure evenly to the ground, enhancing stability and preventing sinking or shifting in soft or uneven terrain.

• **Compatibility:** Fits standard 48.3mm outer diameter (OD) tubes commonly used in scaffolding systems.

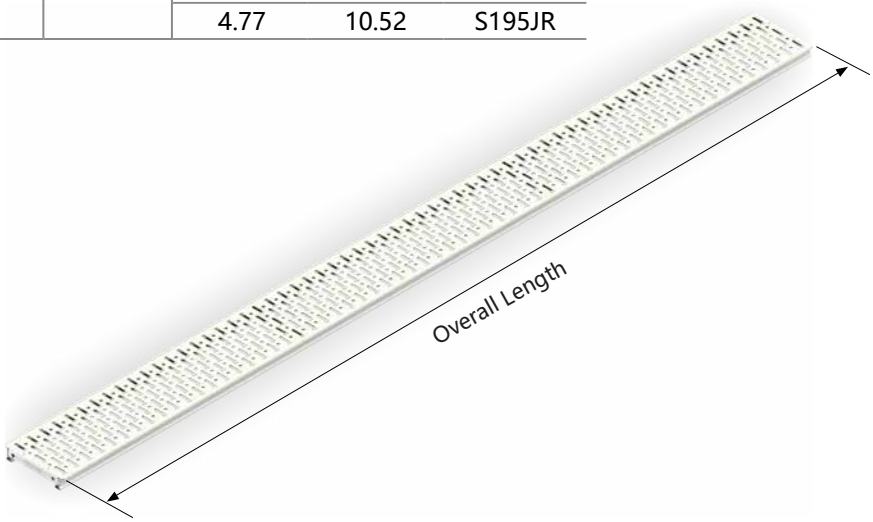
Tube & Fittings Scaffold System
Steel Scaffold Board

Steel Scaffold Board

Part No.	Overall Length		Width	Thickness	Weight		Material
	m	in	mm	mm	kg	lb	
TF-SSB248_40	4.0	13′ 1″	248	45	20.70	45.64	S195JR
TF-SSB248_30	3.0	9′ 10″			15.60	34.39	S195JR
TF-SSB248_25	2.5	8′ 2″			13.06	28.79	S195JR
TF-SSB248_20	2.0	6′ 7″			10.52	23.19	S195JR
TF-SSB248_15	1.5	4′ 11″			7.99	17.61	S195JR
TF-SSB248_10	1.0	3′ 3″			5.45	12.02	S195JR
TF-SSB225_40	4.0	13′ 1″	225	38	18.82	41.49	S195JR
TF-SSB225_30	3.0	9′ 10″			14.23	31.37	S195JR
TF-SSB225_20	2.0	6′ 7″			9.63	21.23	S195JR
TF-SSB225_15	1.5	4′ 11″			7.01	15.45	S195JR
TF-SSB225_10	1.0	3′ 3″			4.77	10.52	S195JR

TF-SSB225

TF-SSB248



Product Specifications

• **Material:** Premium-grade Zinc-Aluminum-Magnesium Coated Steel sheet, typically used in appliances and automotive industries, grade S195JR, offering high tensile strength, superior corrosion resistance and extended product lifespan, ideal for industrial applications.

• **Thickness:** 1.5mm, providing a balance between structural integrity and weight, ideal for various construction applications. secure platform for workers and equipment.

• **Maximum Allowable Span:**

	Service Load Class[1]	Target span of board
Steel Scaffold Board (W 248)	2,3,4,5,6	2.1m
Steel Scaffold Board (W 225)	2,3,4,5,6	2.1m

[1] in accordance with Table 3 of EN 12811-1:2003

Service loads on working areas (EN 12811-1:2003 Table 3)

Load class	Uniformly distributed load q_1 kN/m²	Concentrated load on area 500 mm x 500 mm F_1 kN	Concentrated load on area 200 mm x 200 mm F_2 kN	Partial area load	
				q_2 kN/m²	Partial area factor a_p
1	0.75	1.50	1.00	---	---
2	1.50	1.50	1.00	---	---
3	2.00	1.50	1.00	---	---
4	3.00	3.00	1.00	5.00	0.4
5	4.50	3.00	1.00	7.50	0.4
6	6.00	3.00	1.00	10.00	0.5

Features

• **Superior Corrosion Resistance:** The Zinc Aluminum-Magnesium Coated Steel Sheet is one newly developed with coating layers which owns very strong corrosion-resistant ability. The magnesium (Mg) in the coating layer contributes to the stable tightly corrosion object of Simonkolleite, Zn5(OH)8Cl2·H2O (chlorinated zinc). The corrosion object is formed on the galvanized surface as Film, taking the function to prevent corrosion of the steel sheet. The corrosion resistance of this zinc aluminum magnesium alloy coated steel sheet is 5 to 10 times higher than that of the hot-dip galvanized steel sheet.

• **Excellent Rust Resistance of the Cutting End Face:** When the cross section occurs, the upper galvanized layer is dissolved and then covers the section, and promote the stable corrosion object growth. But has been exposed on the steel plate will occur red rust phenomenon. After the cross section is coated with the corrosion product film, it can prevent the cross section corrosion. Magnesium aluminum zinc plating the exposed portion of the base end surface of the cut, will produce a slight initial red rust coating composition but then begin to dissolve surrounding the cut end surface, to form a dense protective film of zinc hydroxide, basic zinc chloride and magnesium hydroxide as a main component, this process will continue to cover the end face portion after a few months, thereby inhibiting the corrosive reaction of the end face portion.

• **Excellent in Severe Environments:** Suitable for use under various harsh environmental conditions, such as coastal areas, chemical plants, and other environments with high corrosivity.

1 week exposure

15 week exposure

25 week exposure

• **Cost Savings through Longer Service Life:** Compared with Scaffold Walkboard products that use traditional hot dip galvanizing processes, the special coating structure gives it excellent corrosion resistance, while also making it easier to achieve automation in the production process, extending the service life and reducing manufacturing and maintenance costs.

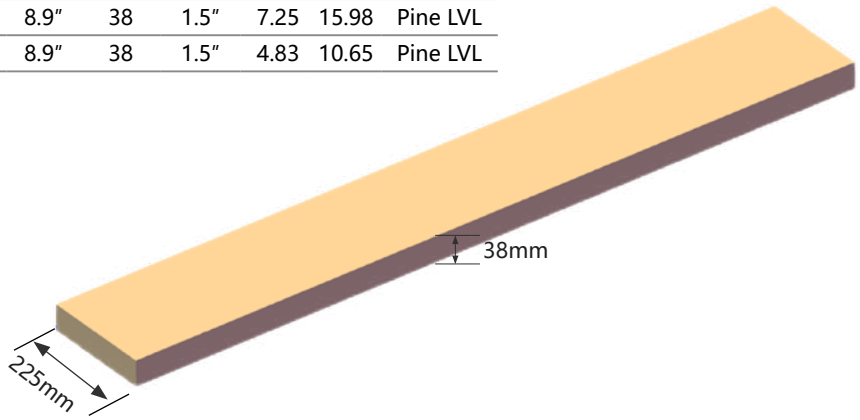
• **Versatility:** Suitable for multiple applications including scaffolding decks, mezzanine floors, and industrial walkways, providing a sturdy and reliable surface. The Steel Scaffold Board (W 225) is a standard size with high versatility, while the Steel Scaffold Board (W 248) is a special size with higher load-bearing capacity.

Tube & Fittings Scaffold System

Pine Laminated Veneer Lumber (LVL) Scaffold Board

LVL Scaffold Board

Part No.	Overall Length		Width		Thickness		Weight		Material
	m	in	mm	in	mm	in	kg	lb	
TF-LVLB39	3.9	12′ 10″	225	8.9″	38	1.5″	18.84	41.54	Pine LVL
TF-LVLB29	2.9	9′ 51″	225	8.9″	38	1.5″	14.01	30.89	Pine LVL
TF-LVLB25	2.5	8′ 20″	225	8.9″	38	1.5″	12.08	26.63	Pine LVL
TF-LVLB20	2.0	6′ 56″	225	8.9″	38	1.5″	9.66	21.30	Pine LVL
TF-LVLB15	1.5	4′ 11″	225	8.9″	38	1.5″	7.25	15.98	Pine LVL
TF-LVLB10	1.0	3′ 3″	225	8.9″	38	1.5″	4.83	10.65	Pine LVL



Compliance Standards

- **BS2482:2009:** Specification for timber scaffold boards.
- **OSHA Regulations (Standard-29 CFR) 1926.451:** Standards for scaffolding safety in the construction industry.
- **TG20 (Temporary Works Guidance):** Guidelines for temporary works, including scaffolding.

Product Specifications

- **Thickness:** 38mm
- **Width:** 225mm
- **Material:** Pine Laminated Veneer Lumber (LVL) - Offers enhanced strength and stability.
- **Surface Finish:** Anti-slip coating for improved traction and safety.
- **Load Capacity:** Complies with safety standards for maximum load bearing capacity.
- **Maximum Allowable Span:** 1200mm

Tube & Fittings Scaffold System
Scaffolding Caster Wheel

Scaffolding Caster Wheel

Part No.	Weight		Material
	kg	lb	
TF-SCW	5.88	12.96	Polyurethane & Cast Iron

Compliance with Standards: Manufactured in strict adherence to EN1004, ensuring the highest levels of safety and performance across all applications.

Material

• **Tread Material:** Polyurethane, offering superior floor protection and noise reduction.

• **Core Material:** Cast Iron, providing robust support for heavy-duty applications, ensuring strength and stability over prolonged use.

Surface Treatment

• **Durable Coating:** Metal surfaces undergo galvanization, providing enhanced corrosion resistance. This treatment ensures long-lasting protection against rust and environmental wear, maintaining structural integrity and aesthetics even in harsh environments.

Dimensions

• **Diameter:** 8 inches (200 mm), offering a balance between stability and ease of movement on various surfaces.

•**Wheel Width:** 2 inches (50 mm), Optimized width for enhanced load distribution and rolling performance.

•**Load Load Capacity:** Safe Working Load (SWL) of 500 kg per wheel, suitable for demanding construction environments where heavy loads are common.

Self-Locking Mechanism

• **Locking Feature:** Metal surfaces undergo galvanization, providing enhanced corrosion resistance. This treatment ensures long-lasting protection against rust and environmental wear, maintaining structural integrity and aesthetics even in harsh environments.

Functionality

• **Load Bearing & Mobility:** Each caster wheel has a maximum allowable load of 500 kg, ideal for supporting heavy scaffolding platforms, material carts, and other equipment while ensuring easy mobility on different surfaces.

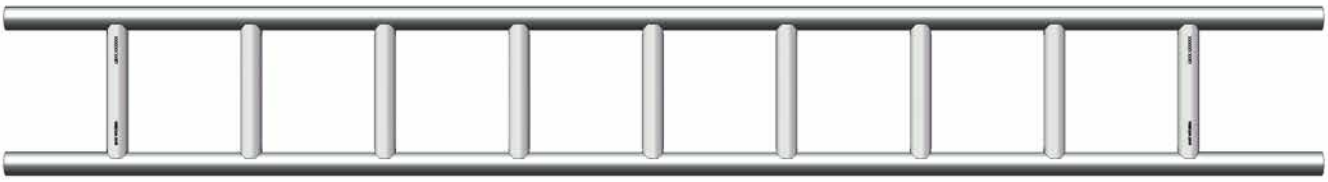
• **Noise Reduction & Floor Protection:** The polyurethane tread significantly reduces operational noise and minimizes damage to flooring, making it suitable for environments where quiet operation and floor preservation are important.

• **Versatility:** Suitable for a wide range of applications including scaffolding, mobile work platforms, industrial carts, and more, providing a sturdy and reliable mobility solution.

Tube & Fittings Scaffold System
Ladder Beam

Steel Ladder Beam

Part No.	Overall Length		Weight		Material
	m	in	kg	lb	
TF-SLB40	4.0	13′ 1″	41.00	90.39	S355JR
TF-SLB50	5.0	16′ 5″	51.75	114.09	S355JR
TF-SLB60	6.0	19′ 8″	62.50	137.79	S355JR



Product Specifications

• **Material:** Fabricated from high-tensile steel tubes complying with BS EN10210-1 or BS EN10219-1 Grade S355, featuring a 3.2mm wall thickness for strength and durability.

• **Design:** Constructed in a ladder-like form by welding steel scaffolding tubes together, providing stability and load-bearing capacity.

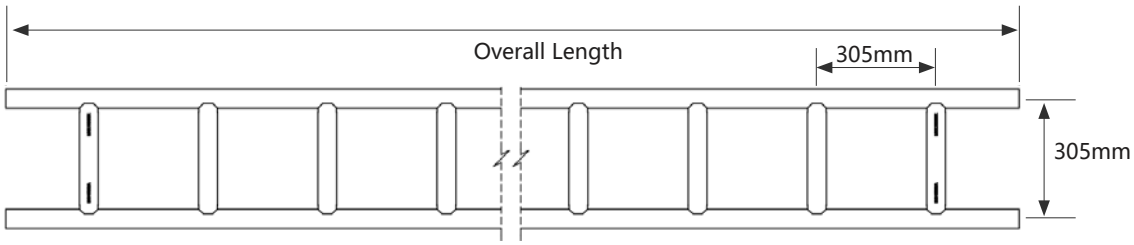
• **Surface Treatment:** Galvanized for enhanced corrosion resistance, ensuring longevity in demanding construction environments.

• **Dimensions:** Fabricated to a depth of 305mm, measured from the center of the top chord to the center of the bottom. Rungs are spaced no more than 305mm apart for optimal structural integrity and load distribution.

Functionality

• **Bridge Formation:** Used to create a bridge over openings in scaffolding, supporting lifts and ensuring safe passage above the gap.

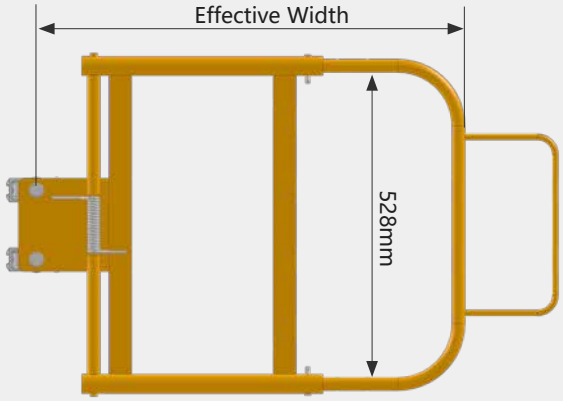
• **Loading Bay Platform Strengthening:** Reinforces loading bay platforms, enabling them to support the storage of heavy materials and withstand impact loads from cranes or forklifts.



Tube & Fittings Scaffold System
Adjustable Swing Gate

Adjustable Swing Gate

Part No.	Effective Width min		Effective Width max		Weight		Material
	m	in	mm	in	kg	lb	
TF-ASG	0.635	25″	0.863	34″	10.40	23.93	S235JR



Product Specifications

• **Compliance with Standards:** Manufactured in strict adherence to OSHA 1910.23, ANSI/ASSE A10.14, BS EN12811-1, and other relevant construction and safety regulations, ensuring the highest levels of safety and performance across all applications.

• **Material:** Constructed from high-strength carbon steel compliant with S235JR standards, guaranteeing outstanding strength and durability of the Adjustable Swing Gate.

• **Design:** The Adjustable Swing Gate features a versatile design with all-welded steel square tubing sections that adjust to fit openings from 25 inches to 34 inches, optimized for structural integrity and ease of installation.

• **Surface Treatment:** Undergoes a durable powder-coating process, resulting in a high-visibility safety yellow finish that effectively resists corrosion and wear, ensuring the Adjustable Swing Gate maintains its structural integrity and aesthetics in harsh environments.

• **Dimensions:** Precision-fabricated to fit openings ranging from 25 inches to 34 inches, providing stable support and excellent load-bearing capacity in various construction applications.

Functionality:

• **Access Control:** Utilized to control access to loading dock ladders, mezzanine or platform access points, rooftop ladders, and maintenance access ladders, ensuring safe passage and preventing unauthorized access.

• **Fall Protection:** Enhances safety by preventing accidental falls or objects going over the edge of elevated platforms, especially in high-traffic areas where vertical ladders are located in out-of-the-way places.

Tube & Fittings Scaffold System
Safety Guidelines

Scaffolding Operations

Please note that this guidance is offered to you as a minimum requirement for scaffolders to work safely. If you work on a site with more stringent Company procedures (i.e. continuous attachment policy, inertial reels, etc.) then this will take precedence.

1. It is recommended that Scaffolders wear safety harnesses and maintain 100% hook up all times when erecting dismantling or altering scaffolding. Working at height PPE should be worn as dictated by procedure and/or site requirements. Your fall arrest equipment should be thoroughly checked each shift before starting work. Report any suspected defects to your Company management.
2. Measures to prevent falls should always be considered before resorting to fall arrest equipment. Scaffolders should therefore install as a minimum, a single guardrail to each lift at all locations in accordance with SG4:21 (latest edition). Advanced guardrail systems, Scaffolders Step or other propriety equipment may be employed to erect the edge protection.
3. Additional methods may be employed including safety nets, inertia reel blocks, and horizontal line systems. These should be considered when planning your job and if necessary be included in your Risk Assessment. Specialist training or guidance will be required to use this proprietary equipment.
4. Scaffolders must erect the full width of the platform by using the appropriate number of Boards.
5. It is recommended the Scaffolder clips to a suitable anchorage point and remain attached at all times when at risk of a fall. This will include when:

- Working outside the protected area (i.e. decked platform and single guardrail).
- Climbing up or down the structure.
- Raising and lowering scaffolding components.
- Fixing/dismantling scaffolding components.
- Moving the working platform .

6. Ladders should be fitted as early as possible during erection and removed as late as possible during dismantling to eliminate the need to climb the scaffold structure.
7. A suitable rescue procedure should be considered to be put in place to urgently retrieve an individual in the event of an arrested fall. This should be part of your Risk Assessment and understood by all involved before starting any job.
8. The erection of Tube & Fittings system scaffolding is a skilled task and must only be carried out by trained personnel. By the very nature of the work, the hazards are severe and accidents frequently result in serious injuries or fatalities.
9. Before commencing work, check that all necessary clearances or permits have been obtained and always check the Risk Assessment and sign to signify your understanding.
10. It is recommended that you check your scaffold tools each day before work, to ensure that all parts are in good condition, if you discover or suspect any defects, report them immediately to your Company management. Do not use faulty equipment.

11. Be aware, and make your workmates aware of any potential hazards near your place of work, i.e. noxious fumes, acids, electrical plant, overhead conductors, excessive heat, working machinery etc.
12. Obtain and use any required safety equipment, e.g. inertia reel blocks, running lines respirator, goggles, etc., and always wear a safety helmet, safety boots, overalls, gloves, eye protection and a safety harness.
13. Where there is a possibility of other persons passing through or near the work zone, ensure that suitable barriers or signs are erected to warn and exclude them from the danger area.
14. During scaffold erection, ensure that you and all other members of the scaffolding gang, do the following:
    - Use gin wheel and rope for raising and lowering scaffolding components, DO NOT throw scaffolding components up or down.
    - When at height ensure that at all times you take the necessary precautions to ensure a safe method of work and prevent a fall.
    - Erect advanced guardrails wherever possible and as soon as practicable.
    - Ensure that all members of the scaffolding gang have sufficient experience of erecting "Advanced" or "Special" structures. Do not take unnecessary risks.
    - Check all components are serviceable before use. Reject and report to your Company management any defective components.
15. Always ensure that the foundations or structure from which a scaffold is to be built are adequate:
    - Use Adjustable Base Jacks and timber sole boards under every standard. On soft ground or where there is any likelihood of surface penetration ensure an adequate base is provided for each standard.
    - If the scaffold is to be erected on a roof or over a basement or upper fl oor, check with the Client, that the foundation is suitable or if back propping or shoring is required.
    - Inform your Company management if excavations are taking place in the immediate vicinity of the scaffold base.
    - Ensure that the scaffold is erected with appropriate bay length and lift height to suit the specified loading. Safe Axial Loads are available for each possible lift height .
    - Ensure that the scaffold is adequately tied to the building or structure in accordance with the tie patterns in this TG20. During erection, fit ties progressively as soon as the specified height is reached. When dismantling each tie should be removed as late as possible and if necessary fit alternative means to maintain stability.
    - Ensure that all guardrails and toeboards are fitted to all edges of platforms (including return ends) where a fall could occur, to comply with statutory regulations.
    - Ensure that all incomplete structures are fitted with "DO NOT USE" or "SCAFFOLD INCOMPLETE" signs as soon as possible after erection and before dismantling has commenced.

Tube & Fittings Scaffold System
Safety Guidelines

- A system should be in place to communicate (such as a scaffolding tag procedure) whether the scaffold is safe for use, its duty rating/suitability i.e. access, general purpose or heavy duty.

- Ensure that all spare scaffolding components are safely and securely stowed or returned to a rack or compound. No scaffold is "Complete" until this task has been performed.
- Before dismantling is commenced, check that all ties are in position and that the scaffold is safe to access.
- Ensure that during dismantling operations a safe method of work is maintained and that a sequence of operations is adopted to ensure that the scaffold is stable and secure at each stage.
- Do not overload the scaffold with stored scaffolding components or other materials, when dismantling or re-erecting.

Usage of the Scaffolding

1. Upon completion of assembly, the scaffold must undergo inspection and be tagged by the qualified scaffolding erector to certify its safety for use.
2. Access to the scaffolding is restricted to its designated entrances; direct climbing onto the scaffolding is strictly prohibited.
3. Heavy objects are not to be thrown onto scaffolding decks; these decks should only bear loads up to the maximum limits specified for their respective load classes.
4. Jumping onto scaffolding decks is strictly forbidden to prevent structural damage and ensure personal safety.
5. At the top scaffolding level, the use of ladders, boxes, or any other means to increase working height is prohibited to maintain structural integrity and prevent overloading.
6. When storing materials or components on working platforms, a minimum clearance of 20 cm must be maintained to ensure safe access and prevent overloading.
7. Only complete and properly assembled decks should be walked upon to ensure stability and safety.
8. Hatches in access decks must remain closed when not in use to prevent accidental falls and maintain a secure work environment.

By adhering to these usage guidelines, the safety and integrity of the scaffolding can be maintained throughout its period of use, ensuring the protection of all individuals working on or near the structure. Proper use and respect for these rules are crucial to preventing accidents and ensuring the scaffolding remains a safe and effective tool for construction and maintenance operations.

Tube & Fittings Scaffold System
Safety Guidelines

Dismantling The Scaffolding

To safely dismantle scaffolding, the working sequence must follow the reverse order of assembly. Prior to dismantling, it is essential to confirm the stability of the scaffolding. Alongside these prerequisites, additional safety considerations include:

1. Hazard Identification: The scaffolding contractor shall ensure that all health and safety risks that can be reasonably anticipated in relation to the dismantling process are identified before and during the dismantling.
2. Risk Assessment and Control: Any identified hazards must undergo a risk assessment and be controlled by the scaffolding contractor to maintain a safe working environment.
3. Anchor Release: The anchoring must not be released until the scaffolding levels situated above have been fully dismantled to prevent structural instability.
4. Immediate Removal of Loose Components: Once the connectors of components have been detached, those components should be removed promptly to avoid safety hazards.
5. Prohibition of Throwing Components: Scaffolding components that have been removed must not be discarded by throwing them off the scaffolding.
6. Proper Storage of Components: Scaffolding components that have been taken apart must be stored appropriately to prevent damage or loss.
7. Walking Only on Complete Surfaces: Walking is permitted only on decking surfaces that are entirely intact to prevent falls due to missing components.
8. Use of Designated Entrances: Entry to the scaffolding is allowed only through its designated access points; climbing directly onto the scaffolding is not permitted.
9. Climbing Prohibition: Climbing the scaffolding without authorization is strictly forbidden; instead, use stairs or designated ladders for ascending and descending.

By adhering strictly to these dismantling guidelines, potential safety risks during the process can be minimized to the greatest extent possible, safeguarding the lives of construction workers.

Handling and Storage

1. Plan lay-down/storage areas in advance to minimize the distance materials have to be manually handled. Ensure the area is clear of any tripping hazards.
2. Only handle loads that can be reasonably managed by the individuals involved, considering their physical capabilities.
3. Where possible, eliminate manual handling by using mechanical handling equipment and aids, such as light-lines, gin wheels, forklifts, and cranes.
4. Always employ the correct kinetic handling techniques:

• Stand with your feet firmly on a level surface, about 300mm apart, bending with your legs rather than your back.

• Slightly raise your head and tuck your chin to maintain a straight spine. Avoid twisting your torso.

5. Before manual handling, always verify the transit route is suitable and free from obstructions.
6. When handling long materials, be cautious of potential damage to property, overhead power lines, other people, and moving vehicles.
7. Use proper knots and hitches when lifting equipment with ropes.
8. Wear appropriate gloves to protect your hands when necessary, especially when handling sharp-edged metal components.
9. Always pass scaffolding components by hand or use a gin wheel and rope. Never throw or let scaffolding components drop.
10. Do not carry scaffold components up or down a ladder.
11. Ensure all components and equipment are neatly stored in a scaffolding storage rack. Stack them up to no more than five levels high (subject to local site/regional rules and regulations).
12. Ensure scaffolding storage racks are loaded within the approved Safe Working Load and not overloaded.
13. Scaffolding storage racks should be moved using a forklift or crane onto a flatbed truck for transportation. Individual or loose items should be stacked into scaffolding storage racks and wrapped/strapped before loading and transportation.
14. Store all equipment in a dry and secure environment whenever possible.
15. Visually inspect all scaffolding after use and upon return to the storage area. Refer to the Technical and Maintenance Information for component inspection and quarantine procedures.
16. Inspect scaffolding equipment at regular intervals not exceeding 30 days to check for general wear and tear. All scaffold components should be checked prior to erection and use.
17. If stored outdoors, take care to ensure ground stability when stacking and moving scaffolding components.

Adherence to the aforementioned guidelines effectively ensures the safety of Tube & Coupler scaffolding system components during handling and storage, thereby minimizing the potential for accidents and preserving the longevity of the equipment. Whether it is planning storage areas, employing correct handling techniques, or conducting regular inspections and maintenance, each measure is integral to safeguarding the well-being of workers and maintaining the integrity of the apparatus.

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