



Ring Lock System Scaffold Installation Manual

Issued January 2026

Ring Lock System Scaffold Installation Manual

TABLE OF CONTENTS

- 1. GENERAL NOTES..... 3**
 - 1.1. DECKING & ACCESS 3
 - 1.2. LOAD CAPACITY & USE CONSIDERATIONS.....3
 - 1.3. INSPECTION & MAINTENANCE.....4
 - 1.4. FALL PROTECTION.....4
 - 1.5. DISCLAIMER.....7
- 2. FREE-STANDING SCAFFOLD (FSS) 7**
 - 2.1. FSS – SINGLE BAY BRACING 7
 - 2.2. FSS WITH OUTRIGGERS / BUTTRESS BAY.....8
 - 2.3. FSS – MULTI-BAY BRACING.....10
 - 2.4. FSS - BIRDCAGE 11
- 3. NON-FREE-STANDING SCAFFOLD (NFSS) 14**
 - 3.1. GENERAL 14
 - 3.2. WALL TIE SCAFFOLD 14
 - 3.3. GUY WIRE RESTRAINED SCAFFOLD TOWER 16
 - 3.4. CANTILEVER SCAFFOLD 17
- 4. ASSEMBLY DETAILS.....20**
 - 4.1. SYSTEM TOWER INSTALLATION 20
 - 4.2. STAIR TOWER INSTALLATION 26
 - 4.3. STAIR TOWER TYPICAL LAYOUT 31
 - 4.4. STAIR TOWER LAYOUT WITH EXTENDED HEIGHT 31
 - 4.5. SYSTEM LADDER INSTALLATION 32
 - 4.6. LADDER WITH TUBE AND CLAMP SYSTEM 34
 - 4.7. SYSTEM SCAFFOLD BOILER ASSEMBLY.....36
- 5. PRODUCT IDENTIFICATION 40**

Ring Lock System Scaffold Installation Manual

⚠ DANGER

DO NOT EXCEED THE MAXIMUM INTENDED LOAD OF THE SCAFFOLD. Overloading may cause structural failure leading to collapse.

⚠ WARNING

IMPROPER ERECTION, DISMANTLING, OR USE OF SCAFFOLDING CAN RESULT IN DEATH OR SERIOUS INJURY. Only trained and competent personnel shall erect, dismantle, alter, or use this equipment.

FOLLOW ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS AND SAFETY REQUIREMENTS WHEN ERECTING, USING, OR DISMANTLING SCAFFOLDS. Failure to comply may result in serious injury or death.

⚠ WARNING

ALL SCAFFOLDS MUST BE ADEQUATELY BRACED, ANCHORED, OR TIED TO A STRUCTURE TO PREVENT TIP-OVER OR COLLAPSE. Failure to provide proper stability can result in severe injury or death.

HIGH WINDS OR SUDDEN GUSTS CAN CAUSE SCAFFOLDS TO BECOME UNSTABLE OR COLLAPSE. DISCONTINUE USE WHEN WIND CONDITIONS EXCEED SAFE LIMITS.

UNSTABLE OR UNEVEN FOOTING CAN COMPROMISE SCAFFOLD STABILITY. ENSURE THAT ALL BASES REST ON SOLID, LEVEL SURFACES AND THAT ADEQUATE MUDSILLS OR FOUNDATIONS ARE PROVIDED BEFORE USE.

⚠ WARNING

FALLS FROM HEIGHTS ARE A LEADING CAUSE OF DEATH IN CONSTRUCTION. Guardrails, toe boards, and personal fall protection equipment must be used where required by law or job conditions.

FALL ARREST SYSTEMS ATTACHED TO SCAFFOLDING MAY NOT PREVENT SERIOUS INJURY OR DEATH IF A FALL OCCURS. Additional protective measures must be used as required.

⚠ WARNING

DO NOT USE SCAFFOLDS NEAR POWER LINES OR EXPOSED ELECTRICAL CIRCUITS. Contact with electricity can result in electrocution and death.

⚠ CAUTION

INSPECT ALL COMPONENTS BEFORE EACH USE. Do not use damaged, corroded, or incompatible parts. Remove defective equipment from service immediately.

⚠ CAUTION

DO NOT MODIFY, WELD, OR DRILL INTO ANY COMPONENTS. Alteration of equipment may reduce strength and stability, resulting in failure.

Ring Lock System Scaffold Installation Manual

1. General Notes

1.1. Decking & Access

- 1.1.1. Platforms must be fully planked within the perimeter of the guardrails, ensuring compliance with load capacity ratings.
- 1.1.2. Decking ledger and vertical standard capacity must be checked when installing bird cage type scaffolding to ensure load capacities are not exceeded.
- 1.1.3. Safe access and egress must be provided, such as stair towers or ladders, ensuring no worker is required to climb the scaffold frame for access.
- 1.1.4. Toeboards must be installed along all open sides of work platforms when there is a risk of tools or materials falling.

1.2. Load Capacity & Use Considerations

- 1.2.1.  **DANGER** Failure to understand and adhere to load capacities can lead to scaffolding collapse and cause significant injury and death.
- 1.2.2. Consult this manual and DSS Product Specific Data Sheets to determine the load rating of each scaffold component.
- 1.2.3. The scaffold shall not be overloaded beyond its design capacity. Workers must adhere to the scaffold's load classification, whether light-duty (≤ 25 psf), medium-duty (≤ 50 psf), or heavy-duty (≤ 75 psf).
- 1.2.4. Dynamic loads such as excessive movement, stacking materials, or impact forces should be avoided to prevent structural instability.
- 1.2.5. If the scaffold is to support equipment, dynamic or additional loads, a qualified engineer must verify load capacity before use. Scaffold components must be checked regularly if scaffold is imposed through dynamic load.

Ring Lock System Scaffold Installation Manual

1.3. Inspection & Maintenance

- 1.3.1. **NOTICE** A competent person must inspect the scaffold prior to each work shift and after any event that could compromise its stability (e.g., high winds, impact, modifications).
- 1.3.2. Any damaged or worn components (e.g., bent braces, cracked planks, loose couplers) shall be immediately replaced before the scaffold is used.
- 1.3.3. Modifications to the scaffold shall only be made under the supervision of a qualified person to maintain design compliance

1.4. Fall Protection



WARNING

Failure to account for adequate fall protection, can lead to significant injury and death. Refer to all Federal, local and jobsite requirements regarding fall protection requirements with regard to scaffolding.

The Direct Scaffold Supply (DSS) Ring Lock system is engineered to withstand fall arrest forces when properly erected and secured by competent scaffold erectors. Adequate anchorage points are integrated into the system components to support personal fall arrest systems (PFAS).

This guide serves as a safety reference when using DSS Ring Lock scaffolding. DSS strongly recommends compliance with OSHA regulations, as well as all applicable local, state, provincial, and federal codes. Scaffold erection should be performed by a qualified scaffold company and reviewed by a Qualified Scaffold Engineer.

1.4.1. Approved Tie-Off Points for Fall Protection

When selecting anchorage locations for tying off, the following DSS components are approved. See.

- Ledgers: Only ledgers 10 ft (3.05 m) or shorter may be used, with a single user tied off at a time.
- Standards (Vertical Posts): Use any point on the rosette, with one user at a time.

Ring Lock System Scaffold Installation Manual

Tie-off must be at the same level as horizontal ledgers. Standards can be:

- Captured: Supported by two or more ledgers at the same rosette forming a 90° angle.
- Uncaptured: Must be braced by adjacent ledgers on both sides.
- Trusses/Lattice Girders: Only the top chord may be used for tie-off.
- Davit Arm: DSS part number UDA is approved for use as an anchorage point.

1.4.2. **NOTICE** Do NOT use the following components as tie-off points:

- Diagonal braces
- Ladder rungs
- Handrails on swing gate extensions
- Swing gates
- Bottom chords or inner webbing of trusses

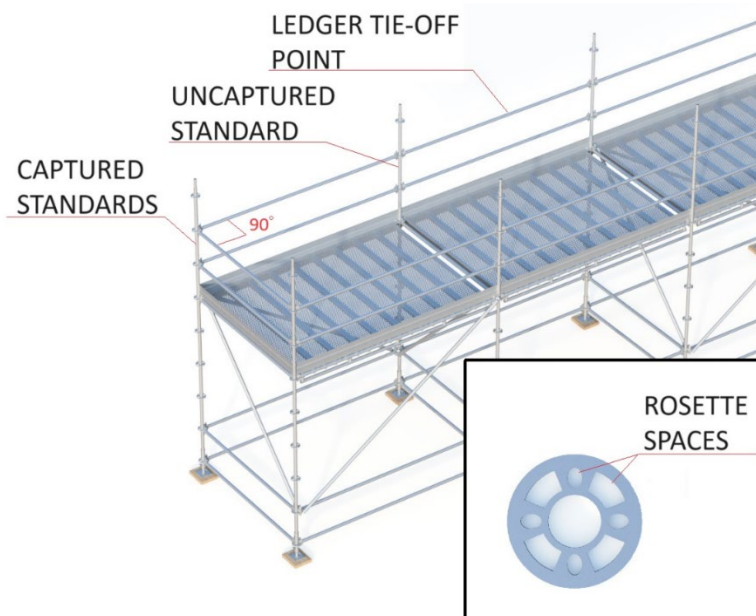


Figure 1 - RL Tie-off locations

1.4.3. Recommended Fall Arrest Equipment

Ring Lock System Scaffold Installation Manual

To meet fall protection standards, DSS recommends the following:

- Full-body harness
- Lanyard with a deceleration device
- Double-locking snap hook for ledger attachment (do not wrap lanyard around ledger unless specifically designed for it)
- Approved anchorage device such as the DSS Davit Arm

1.4.4. Scaffold Structure Requirements to maintain structural integrity:

- Install diagonal braces during erection according to DSS specifications.
- Tie scaffold to existing structures:
 - ◆ At the first lift
 - ◆ At vertical intervals not exceeding 18 ft
- Horizontal ties must withstand at least 750 lbf lateral force (with a 4:1 safety factor).
- Install ties every 30 ft along the scaffold length.
- Place ties as close to node (rosette) points as possible.

1.4.5. **NOTICE** Additional OSHA & Best Practice Recommendations for Tie-Offs

- Anchor strength: OSHA requires each anchorage point for PFAS to support at least 5,000 lbs per worker, or be part of a system designed and certified by a qualified person to provide a 2:1 safety factor.
- Training: Workers must be trained in fall protection use, anchor identification, and emergency procedures.
- Inspection: All tie-off points, fall protection gear, and scaffold components must be inspected daily and after any event that could compromise integrity (e.g., impact, weather).

Ring Lock System Scaffold Installation Manual

- Rescue Plan: A rescue plan must be in place for retrieving a fallen worker promptly.
- Fall Distance: Ensure lanyard length and tie-off height prevent the worker from hitting lower levels (calculate total fall clearance).

1.5. Disclaimer

- 1.5.1. **NOTICE** DSS disclaims any liability for damages, injuries, or losses resulting from improper placement, installation, or failure to comply with regulatory standards.

2. FREE-STANDING SCAFFOLD (FSS)

Definition: A free-standing scaffold is one that is not secured to a structure and has a height-to-base ratio of 4:1 or less, which may be achieved by buttressing or outriggers.

2.1. FSS – Single Bay Bracing

- 2.1.1. Freestanding towers should have horizontal braces installed at the base, at increments of every third lift, and beneath deck height. DSS recommends using DSS plan bracing and bracing at rosette level. If DSS plan bracing is not available or not possible to install for the bay sizing, tube and clamp may be used as plan bracing. See Figure 2 and refer to Table 1 for the different Plan Braces available.
- 2.1.2. Vertical diagonal bay bracing is required on all sides at each lift level
- 2.1.3. **NOTICE** Base to deck height is not to exceed 4 times the minimum base dimension: In accordance with OSHA 1926.451(a)(1), the overall height of a freestanding scaffold tower must not exceed four times (4:1) the smallest base dimension, unless adequate buttressing, guy wires, or tie-in connections are implemented to prevent overturning. (See Section 2.2)

Ring Lock System Scaffold Installation Manual

Table 1 - Plan Brace Chart

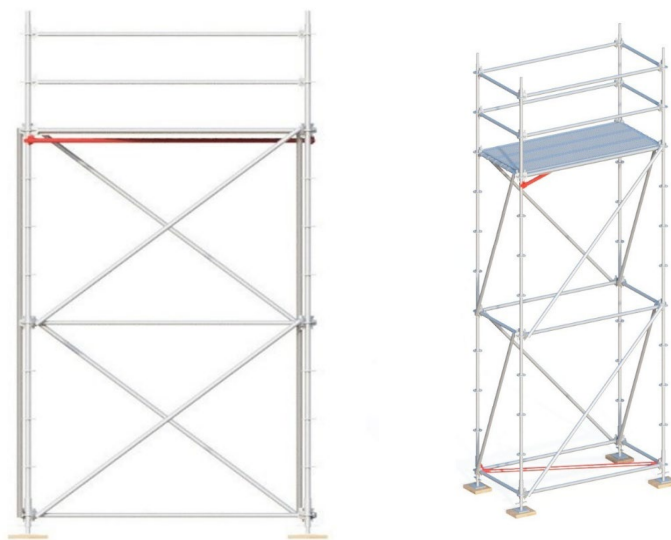


Figure 2 - FSS Tower with Plan Braces

Part Number	Bay Width (mm)	Bay Length (mm)	Bay Width (Ft)	Bay Length (Ft)
	A	B	A	B
*RLPB070	2130	2130	7'-0"	7'-0"
*RLPB080	2440	2440	8'-0"	8'-0"
*RLPB082	2500	2500	8'-2"	8'-2"
RLPB70X36	1088	2130	3'-7"	7'-0"
RLPB70X36S	1065	2130	3'-6"	7'-0"

2.1.4. Plan brace as per plan bracing chart. Base level to be braced, plan braced minimum of 3 every 3 lifts, with plan bracing beneath top working platform.

2.2. FSS with Outriggers / Buttress Bay

Definition: outriggers / buttress bays are commonly used to enhance stability and prevent tipping in free-standing scaffold by achieving a height-to-base ratio of 4:1 as specified in section 2.1.3.

Ring Lock System Scaffold Installation Manual

2.2.1. In Figure 3, the total height of the scaffold A1 shall not exceed four times the total base A, the same way that the top portion of the scaffold (B1) above the buttress/outrigger shall not exceed four times the non-buttressed width (B). In other words, buttress/outrigger is only required to increase base dimension until upper portion (B1) is within the 4:1 ratio of the minimum base width (B) and the total base of the scaffold A1 shall not exceed four times total height A.

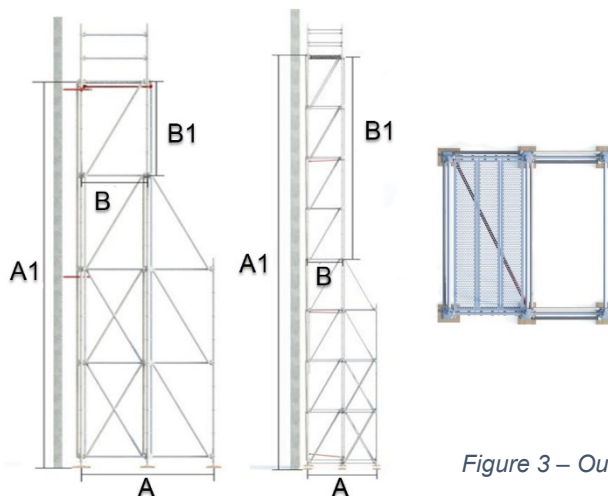


Figure 3 – Outrigger/ buttress bay

2.2.2. The scaffold erector is responsible for ensuring compliance with this stability requirement in all directions where the scaffold is not secured to a structure.

Ring Lock System Scaffold Installation Manual

- 2.2.3. Top portion of the scaffold (C1) above the buttress must be at min 4:1 for the non-buttressed width (C)

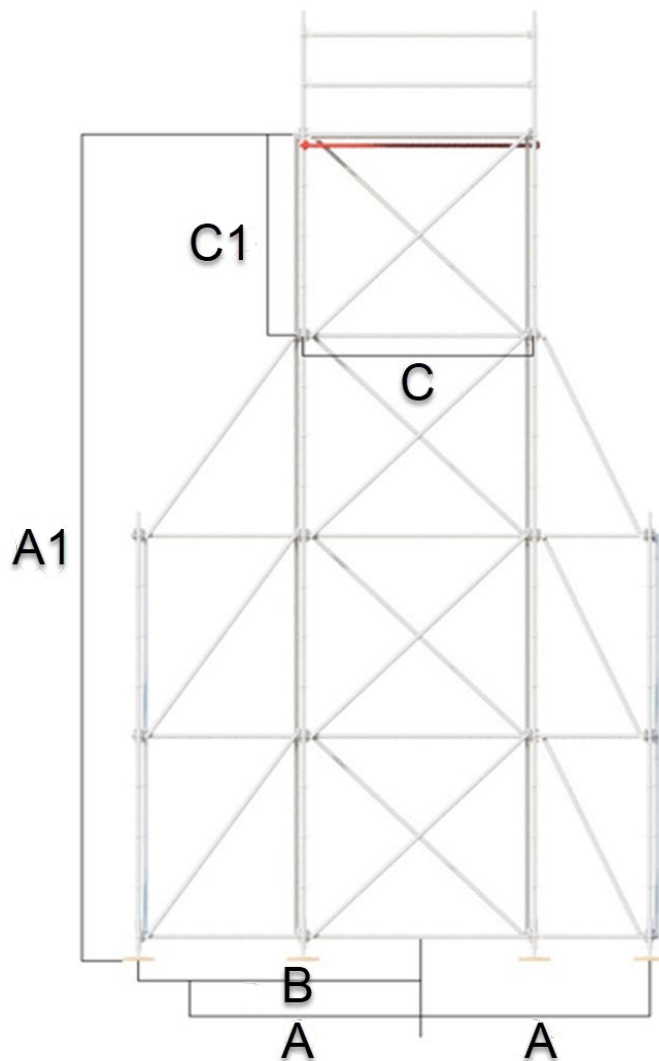


Figure 4 - FSS Buttress

2.3. FSS – Multi-bay Bracing

- 2.3.1. Tower Diagonal Bracing is required at a minimum of every fourth bay, not to exceed 30' or 9M between braced bays. Each diagonal brace secures laterally the

Ring Lock System Scaffold Installation Manual

bay to each side of the braced bay.

- 2.3.2. Transverse bracing required at each end, and at intervals in between not to exceed 30', or every fourth bay through diagonal bracing or outrigger bracing.

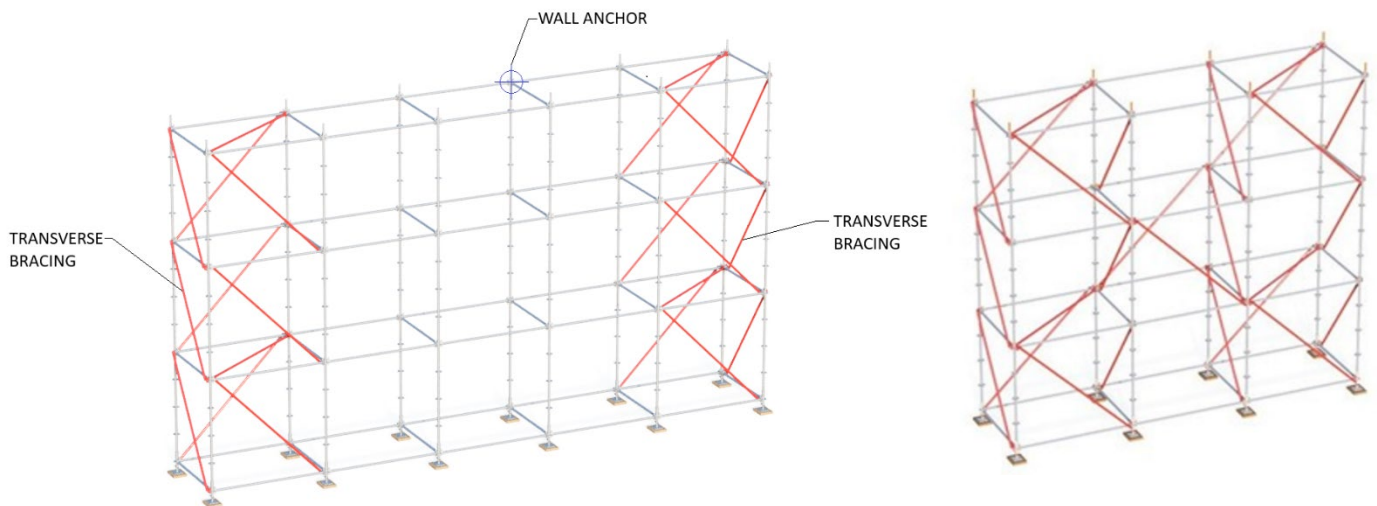
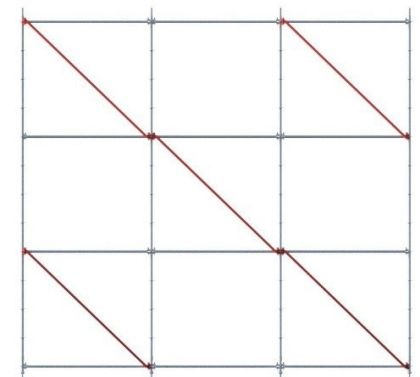


Figure 5 - Bracing for Multi-Bay Scaffold

2.4. FSS - Birdcage

Definition: A birdcage scaffold is a self-supporting, independent scaffold structure consisting of more than two rows of standards in both longitudinal and transverse directions,

Ring Lock System Scaffold Installation Manual

interconnected by ledgers and transoms as shown in Figure 6. This scaffold type is primarily intended for work conducted at a single elevation, such as ceiling installations, maintenance, and other overhead tasks.

2.4.1. Erection and Safety Requirements

- 2.4.1.1. **NOTICE** Erection and dismantling of birdcage scaffolds constructed from modular scaffolding systems must strictly adhere to the designer's specifications and applicable safety regulations (e.g., OSHA 29 CFR 1926 Subpart L or relevant local codes) to ensure compliance with structural integrity and worker safety requirements.

2.4.2. Birdcage Structural Control Measures

- 2.4.2.1. To ensure stability and prevent collapse, the following control measures shall be implemented:

2.4.3. Bracing Requirements

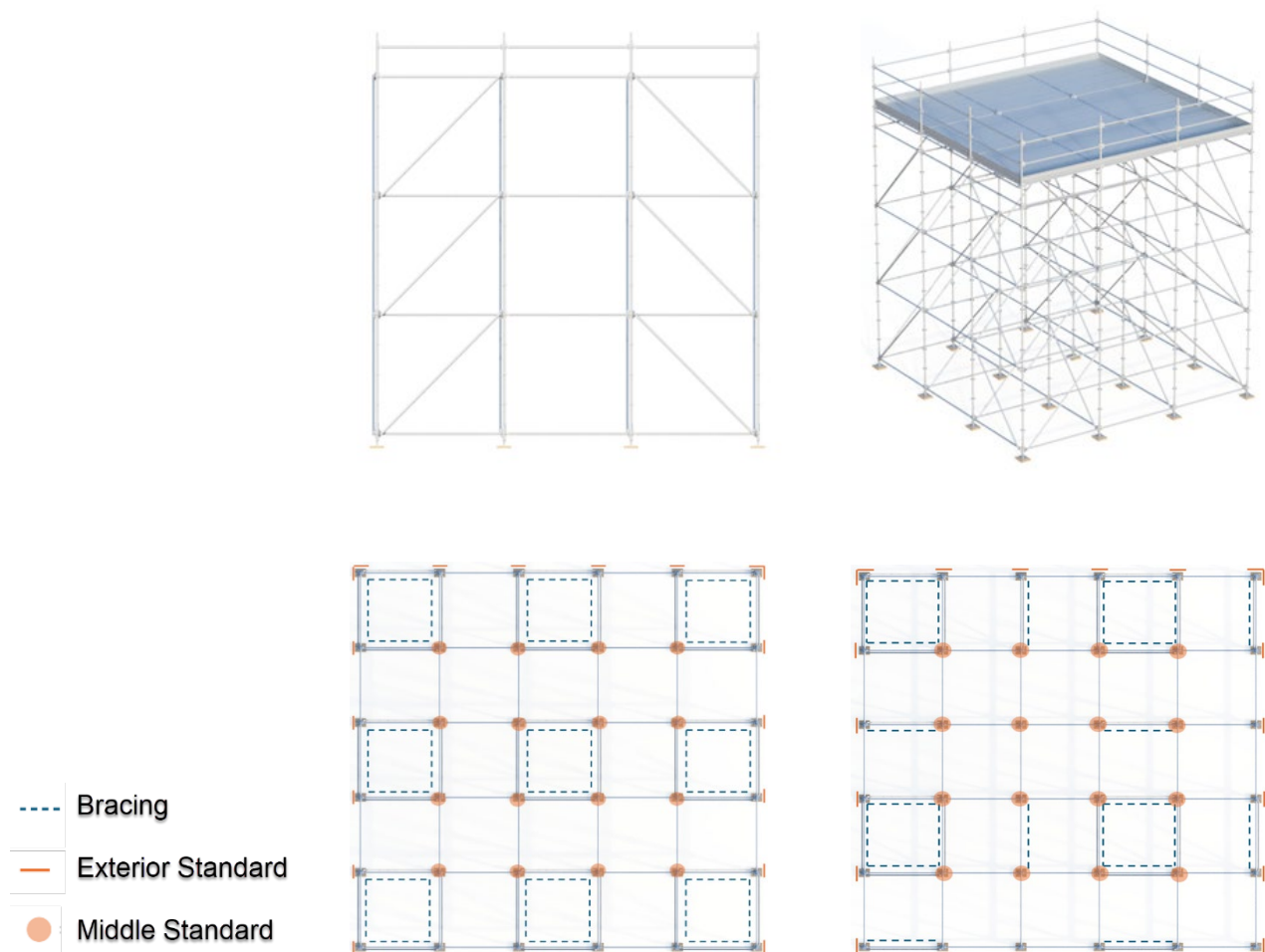
- 2.4.3.1. Untied birdcage scaffolds must be reinforced with lengthwise bracing along each outer longitudinal row of standards to prevent excessive movement or deformation.
- 2.4.3.2. Longitudinal bracing or a tied face shall be installed at a minimum of every third longitudinal row of standards to maintain lateral stability.
- 2.4.3.3. The outermost row of standards on each face, as well as every third internal row, shall be secured with longitudinal bracing to enhance structural integrity.
- 2.4.3.4. Transverse bracing shall be installed at a minimum of every fourth bay along the scaffold's end sections to provide additional stability and resistance to lateral forces.

2.4.4. Support & Stability

- 2.4.4.1. Birdcage scaffolds shall not be used to support formwork unless explicitly designed, engineered, and approved for such a purpose.

Ring Lock System Scaffold Installation Manual

- 2.4.4.2. The scaffold must be plumbed and leveled during assembly, and no forced fitting of members shall be allowed.
- 2.4.4.3. Base plates or adjustable jacks must be used to distribute loads properly and prevent settlement or movement of the scaffold.
- 2.4.4.4. **NOTICE** If the height of the scaffold exceeds four times the minimum base dimension, it must be tied or braced to a stable structure per OSHA or local engineering requirements. See Section 2.4.4.4.



Ring Lock System Scaffold Installation Manual

3. NON-FREE-STANDING SCAFFOLD (NFSS)

Definition: Scaffolds that are secured to a structure against tipping or displacement.

3.1. General

3.1.1. **NOTICE** Per OSHA 1926.451(c)(1)(ii) “Guys, ties, and braces shall be installed according to the scaffold manufacturer’s recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet (6.1 m) or less thereafter for scaffolds 3 feet (0.91 m) wide or less, and every 26 feet (7.9 m) or less thereafter for scaffolds greater than 3 feet (0.91 m) wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (9.1 m) (measured from one end [not both] towards the other)”.

3.1.2. **NOTICE** For compliance, scaffolding must also adhere to wind loads, lateral forces, and structural stability per OSHA 1926 Subpart L and ANSI standards. If your scaffold is particularly tall or exposed to high winds, an engineer should confirm the adequacy of the tie spacing. See Wall Tie Scaffold

3.2. Wall Tie Scaffold

3.2.1. DSS aligns with common industry wall anchor standards every 15 feet (4.6m) vertically and 21 feet (6.4m) horizontally), but this must be verified against site-specific engineering requirements.

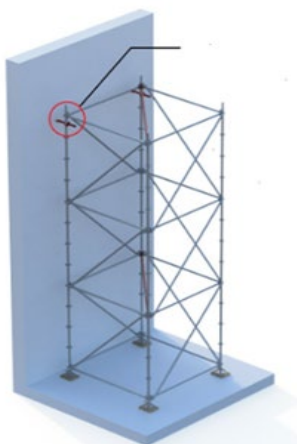


Figure 7 - Wall Tied Scaffold

Ring Lock System Scaffold Installation Manual

3.2.2. The complete system must be secured to the wall using a suitable wall anchor or plate, installed in accordance with engineered specifications to maintain scaffold integrity and prevent displacement.

3.2.3. These anchors must be installed in accordance with engineering specifications to ensure proper load distribution and compliance with safety regulations.

3.2.4. Typical Scaffold Ties Configurations

3.2.4.1. Single Tie: Wall tie anchors consist of an anchoring tube incorporating a specialized hook (3) or pigtail, which securely attaches to the designated wall tie plate or anchor (1). A right-angle coupler (2) is utilized to affix the anchoring assembly to the scaffold structure, ensuring stability and load transfer. See Figure 8.

3.2.4.2. Triangulated Tie: When direct placement of wall anchors is not feasible, triangulated anchors may be utilized at a 45° angle to maintain scaffold stability. A triangulated anchor assembly consists of an anchoring tube with a specialized hook (3) or pigtail that connects to the wall tie plate or anchor (1), couplers (2) that secure the assembly to the scaffold structure, and a wall anchor or plate for structural attachment. See Figure 8.

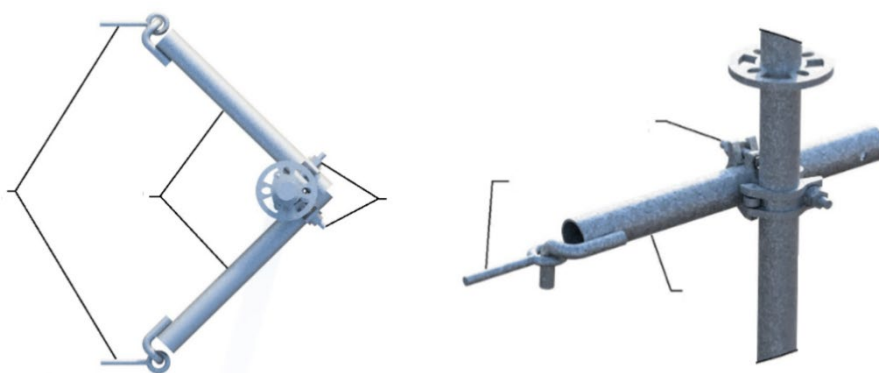


Figure 8 - Triangulated tie (left) and Single tie (right)

Ring Lock System Scaffold Installation Manual

3.3. Guy Wire Restrained Scaffold Tower

- 3.3.1.1. When guy-wiring a freestanding scaffold tower, the guy wires must be installed to maintain compliance with the 4:1 base-to-height ratio, thereby preventing excessive slenderness and instability.
- 3.3.1.2. The angle between the upper guy wire and the ground shall not exceed 45° to ensure proper load distribution and structural integrity. All guy wire anchors must be designed and installed to adequately resist overturning forces, as determined by a qualified engineer.
- 3.3.1.3. Guy Wires to be rated as per tie-in requirements and secured as per engineering or design requirements.

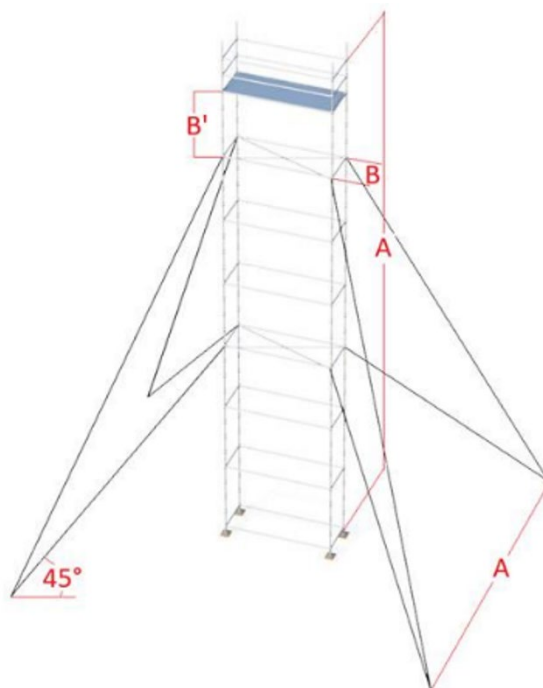


Figure 9 - Guy Wire Scaffold Tower

Ring Lock System Scaffold Installation Manual

3.4. Cantilever Scaffold

3.4.1. Cantilevers must be tied back at deck level to sufficient anchor able to prevent overturning.

3.4.2. Cantilevered scaffolds that are not secured with tie-backs must be stabilized using a buttress or counterweight system capable of preventing overturning, ensuring compliance with safety requirements and structural integrity.

3.4.3. Typical Cantilever Assembly

3.4.3.1. **NOTICE** Supported scaffolds with a height-to-base width (including outrigger supports, if used) ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means as per OSHA 1926.451(c)(1)

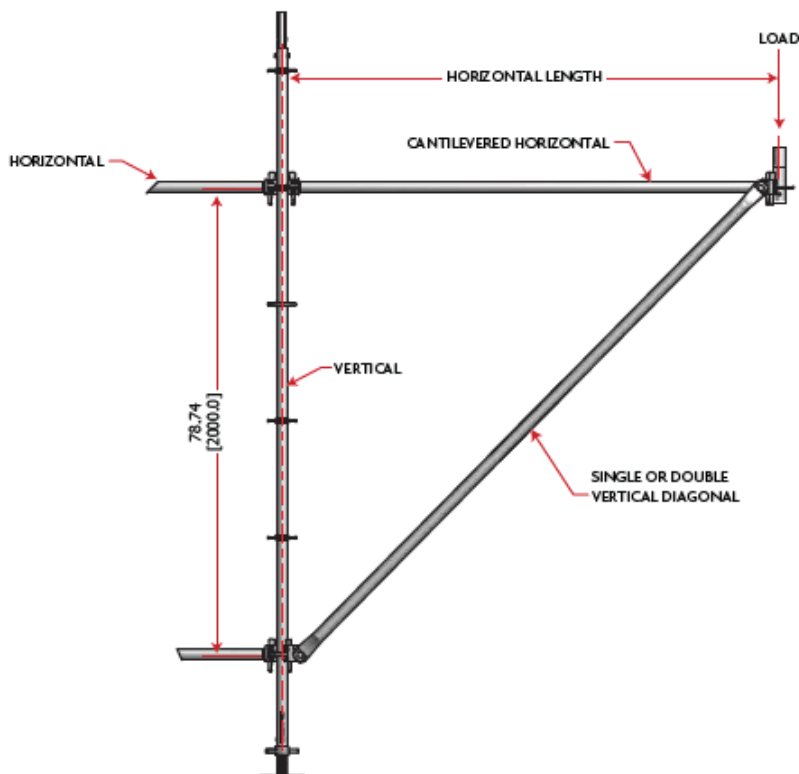


Figure 10 – Cantilever Detail in Scaffold

Ring Lock System Scaffold Installation Manual

Table 2 - Cantilever Load Rating

Horizontal Length		Ledger Part Number	Load Rating			
			Single Vertical Diagonal		Double Vertical Diagonal	
in	mm		lbf	kN	lbf	kN
45.28	1150	RLH39	540	2.4	1,080	4.8
61.89	1570	RLH52	490	2.2	800	3.6
83.86	2130	RLH70	420	1.9	580	2.6

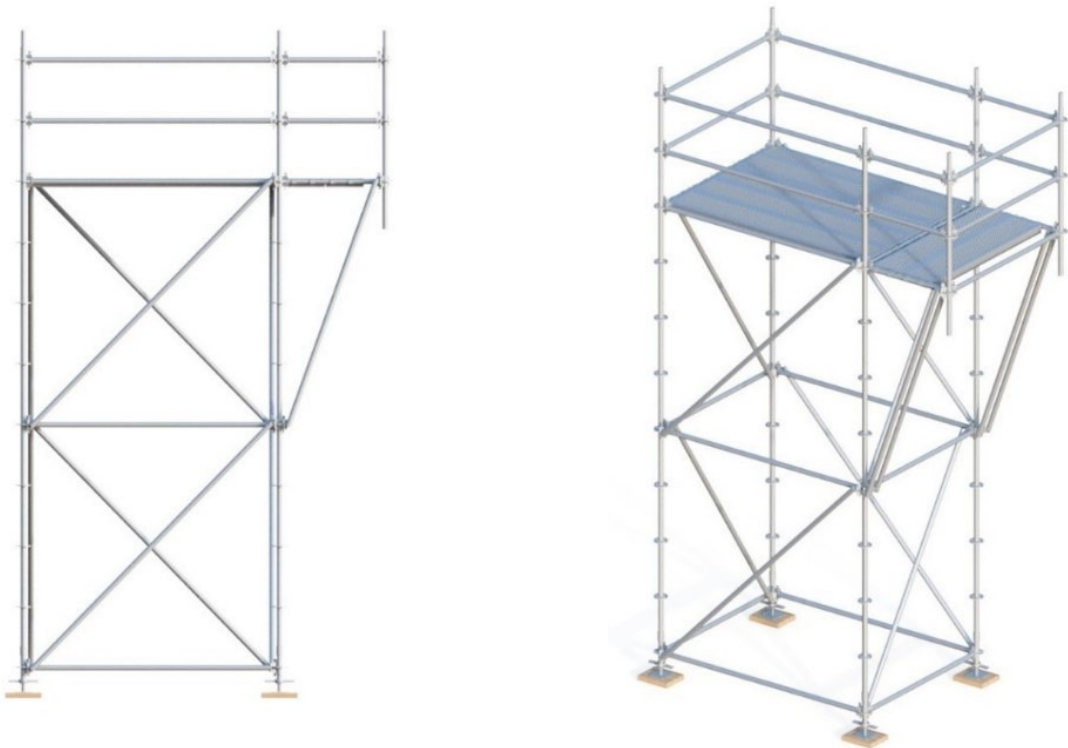


Figure 11 - Scaffold Tower with Cantilever

Ring Lock System Scaffold Installation Manual

3.4.4. Cantilever Assembly in Tanks

When a scaffold is built inside or outside of a tank, cantilever towers are used to follow the shape of the tank and bump ties are required at the top of the tower, at the top of the cantilever and at deck level.

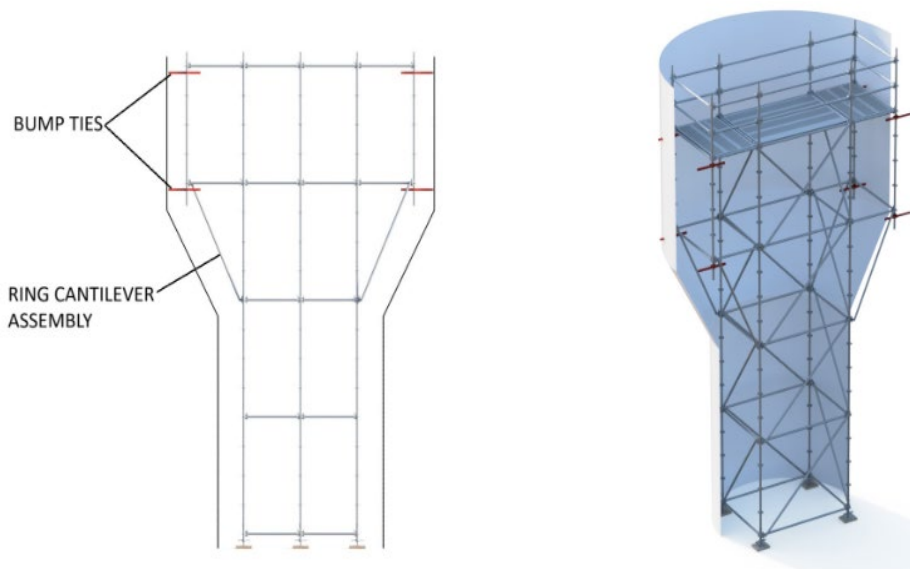


Figure 12 - Cantilever Scaffold in Interior Tank

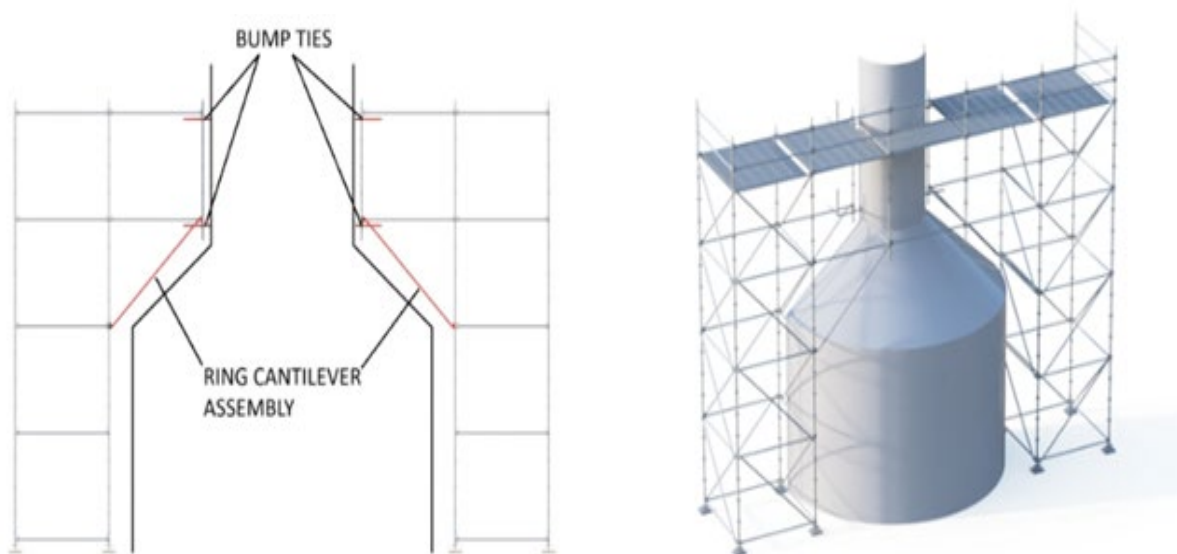


Figure 13 - Cantilever Scaffold in Outside Tank

4. ASSEMBLY DETAILS

4.1. System Tower Installation

- 4.1.1. Place a mudsill (1), a Base Jack (2) and base collar (3) on top of each other as shown in Figure 14. If a wooden plank is used, center the jack and collar assembly along the centerline of length of the wood plank.



Figure 14 - Scaffold Tower starter

- 4.1.2. Place the ledgers (1) into the rosettes of the base collars like shown in Figure 15. To properly square the scaffold bay, use a tape measure to measure diagonally from one corner to the opposite corner (kitty-corner), ensuring accuracy in both directions A & B as in Figure 16.

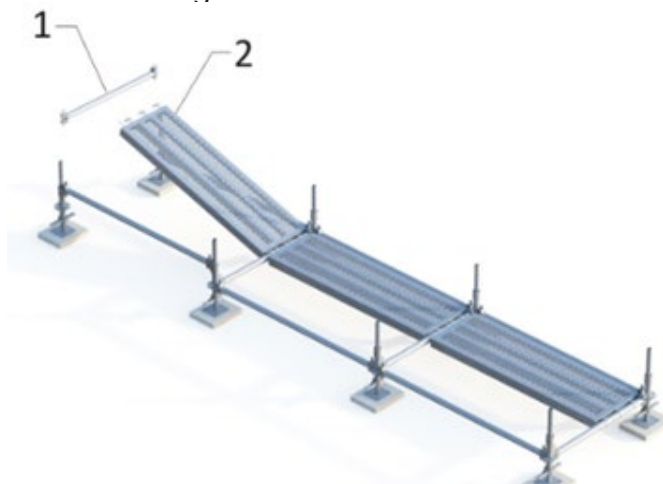


Figure 15 - Scaffold Base

Ring Lock System Scaffold Installation Manual

- 4.1.3. The installation of planks (2) may be utilized to assist in squaring the bays and provide a stable platform for the safe installation of materials required for the subsequent steps.

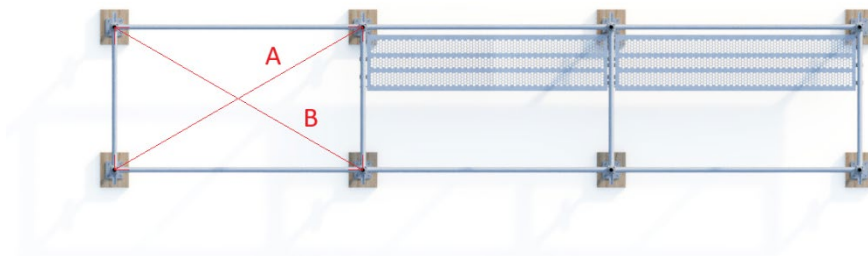


Figure 16 - Scaffold Base squaring with planks

- 4.1.4. Insert the standards into the base collars (1) as in Figure 17 and, while standing on the planks, safely install the ledgers at a maximum increment of 6'-6" (2 meters), or at the desired deck height, ensuring secure attachment and alignment for stability and safety.
- 4.1.5. Personnel installing scaffold materials beyond the perimeter of a fully handrailed working deck shall adhere to the fall protection requirements set forth in this document. Refer to the section titled 'Fall Protection' on Section 1.4 for specific tie-off instructions.
- 4.1.6. Diagonal bracing (1) as in Figure 18 is to be added every second bay at the minimum, from the bottom to the top of the scaffolding. Specific engineering design may dictate brace frequency. While standing on the plank below, install the planks (2) as shown in Figure 18.

Ring Lock System Scaffold Installation Manual



Figure 17 – Standards and Ledgers Installation for Scaffold Levels



Figure 18 – Planks and Diagonals Installation for Scaffold levels

4.1.7. Install ladder (1) as per Ladder Assembly directions in Section 4.5. Personnel installing scaffold materials beyond the perimeter of a fully handrailed working deck shall adhere to the fall protection requirements set forth in this document. Refer to the section titled 'Fall Protection' on Section 1.4 for specific tie-off instructions.

Ring Lock System Scaffold Installation Manual



Figure 19 - Ladder Installation

4.1.8. Install ledger (1 Ring) below deck ledger to allow for Crazy Leg.



Figure 20 - Ledger for Crazy Leg

Ring Lock System Scaffold Installation Manual

4.1.9. Install Crazy Leg (1) onto deck and lower ledger.

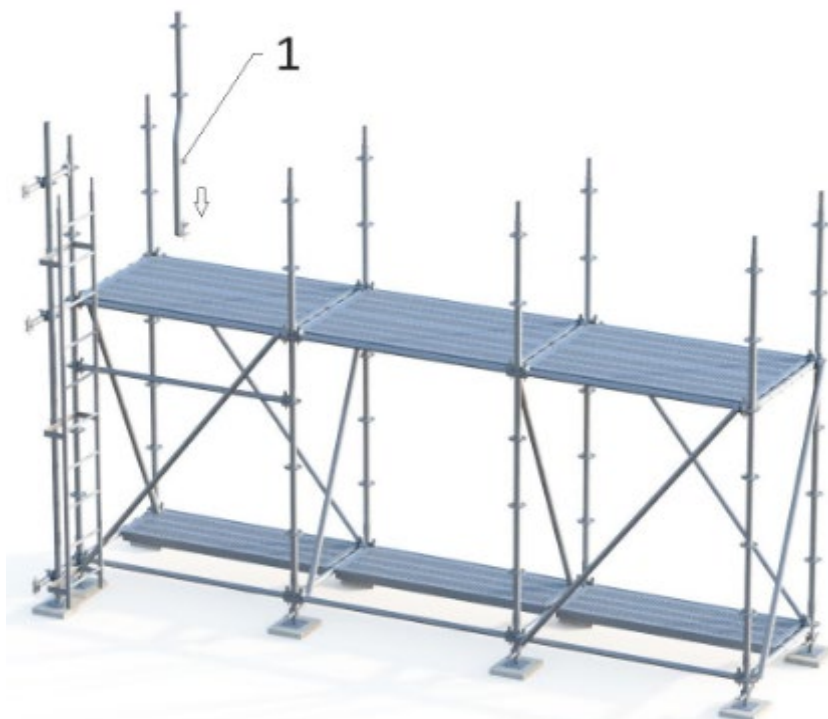


Figure 21 - Crazy Leg Installation

4.1.10. As in Figure 4, install mid and upper handrails (2) at the designated positions on the crazy leg, ensuring proper alignment to allow the swing gate (1) to make contact with the **opposite** standard when closed, thereby preventing the gate from over-opening and mitigating the risk of creating a fall hazard at the ladder. In the event that the swing gate cannot be installed to make contact with the opposing standard, a locking mechanism or an additional vertical standard must be installed to prevent the safety gate from opening beyond the working envelope of the scaffold.

4.1.11. **NOTICE** The swing gate must be configured to open exclusively towards the interior of the tower. Upon completion, install the toeboard (3) along the perimeter of the scaffold, including attachment of the toeboard to the safety gate, thereby finalizing the scaffold assembly in full compliance with all applicable safety standards.

Ring Lock System Scaffold Installation Manual

Note: Guardrails are required on all open sides and ends of scaffold platforms, with both top and mid-rails, and must comply with local codes regarding height regulations. DSS handrails and gates are designed to meet OSHA's 1926.502(b)(3) requirements.

4.1.12. **NOTICE** Any modifications to handrails, specifically outside of the vertical standard to vertical standard node point connections, must also comply with OSHA's 1926.502(b)(3) standards. This includes ensuring that guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge.

4.1.13. DSS disclaims any liability for damages, injuries, or losses resulting from non-compliance with these guidelines.

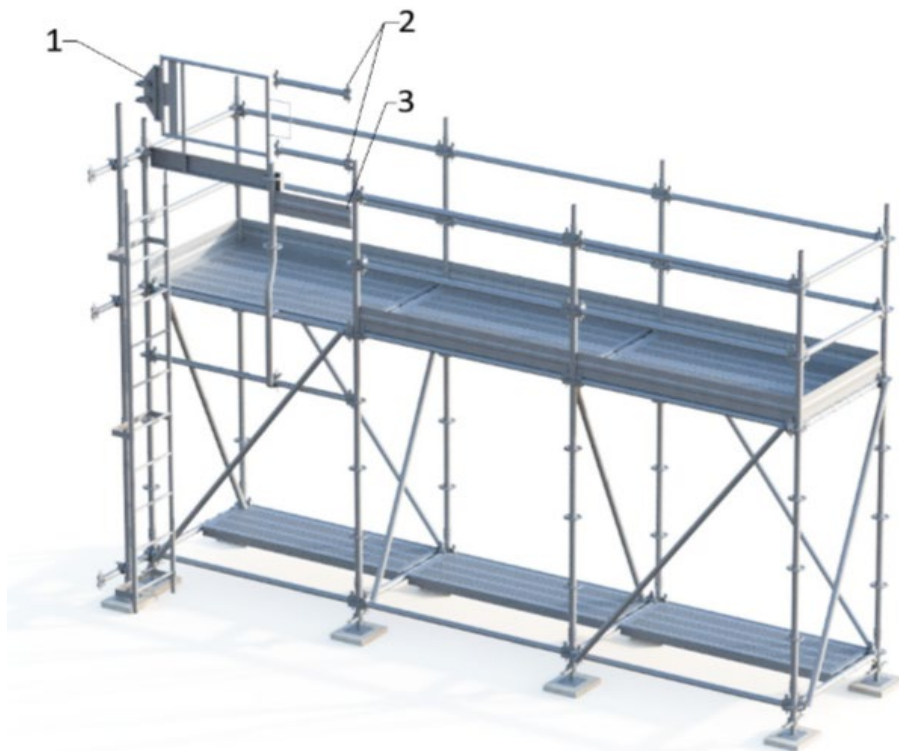


Figure 22 - Handrails Installation

Ring Lock System Scaffold Installation Manual

4.1.14. Completed scaffold ready to be Inspected and tagged

4.2. Stair Tower Installation

4.2.1. Place a mudsill (1), a Base Jack (2) and base collar (3) on top of each other as shown. If a wooden plank is used, center the jack and collar assembly along the centerline of length of the wood plank.

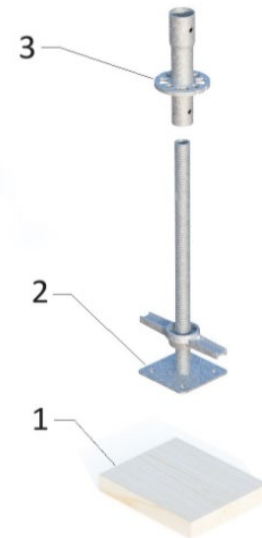


Figure 23 - Stair Tower starter

4.2.2. Place ledgers (1) into the rosettes of the base collars. Square the bays as described in Section 4.1.3 to provide a safe platform for the installation of material required for the next steps.

Ring Lock System Scaffold Installation Manual

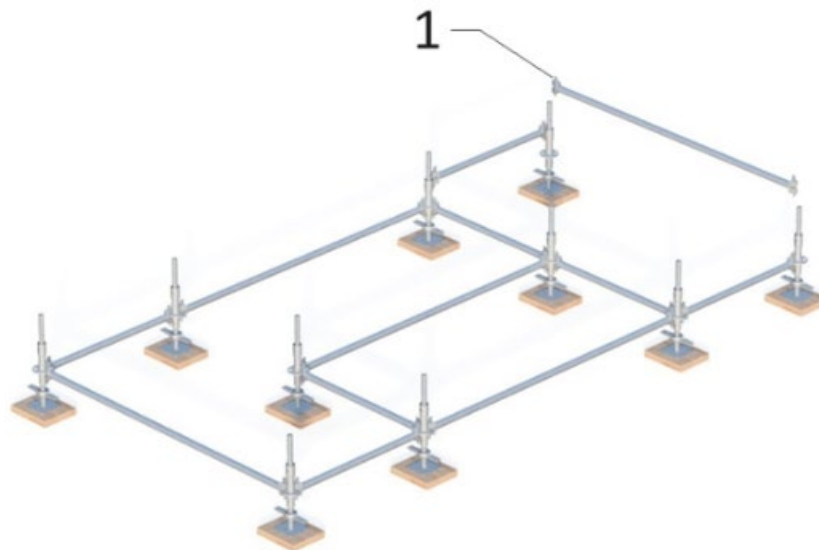


Figure 24 - Stair Tower Base Ledger Installation

4.2.3. Install system standards (1) onto base collars, followed by the placement of all ledgers at 6'-6" for example (2 meters) ring height. DSS recommends that the second lift of stair stringer bay ledgers be positioned at the base of the upper handrail brace to prevent pinch points and reduce the risk of hand injuries when ascending or descending the stairs.

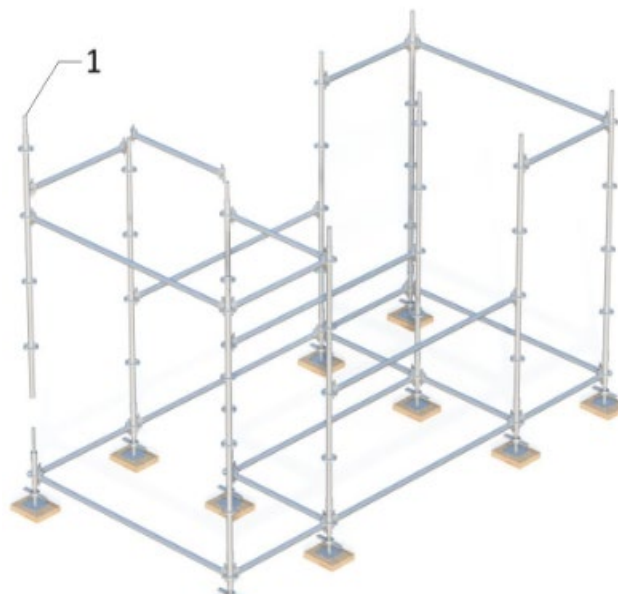


Figure 25 - Stair Tower Standards Installation

Ring Lock System Scaffold Installation Manual

- 4.2.4. Utilize the desired Stair Stringers (1) and install them onto the base ring in the designated stair access bay, ensuring proper alignment and secure attachment.

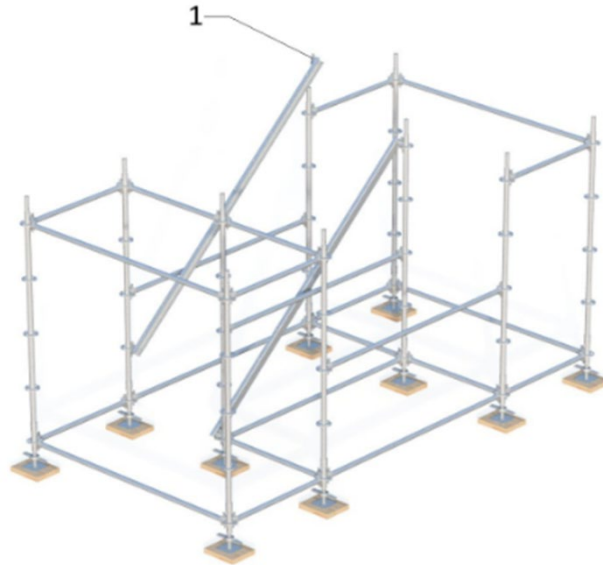


Figure 26 - Stair Tower Stair Stringer Installation

- 4.2.5. Secure matching Stair Tread (1) onto Stair Stringers (2).

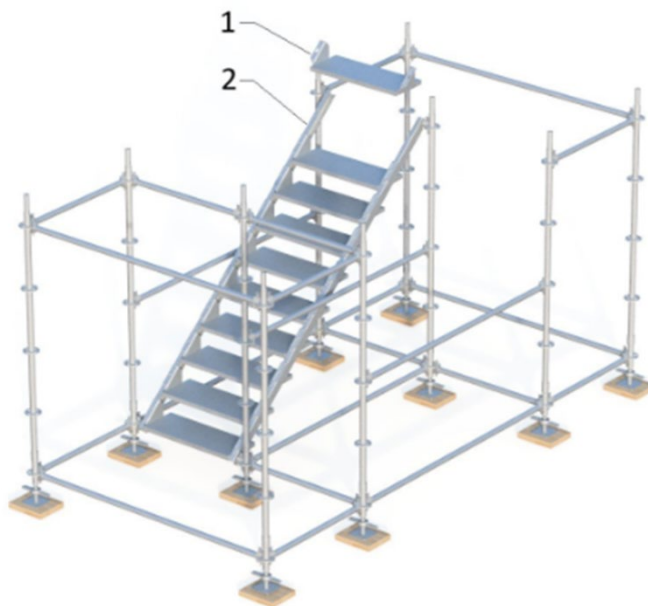


Figure 27 - Stair Tower Stair Tread Installation

Ring Lock System Scaffold Installation Manual

- 4.2.6. Complete the installation of bracing (1), ensuring all components are securely fastened. Subsequently, install the decks (2) at the stair landings, ensuring proper alignment and secure attachment to finalize the scaffold assembly.

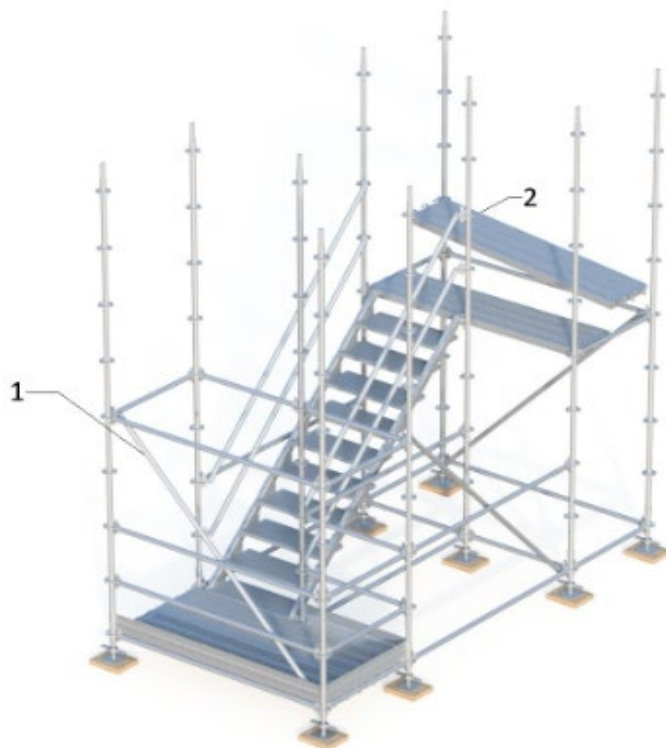


Figure 28 - Stair Tower Bracing and Decking Installation

NOTICE

Toeboards shall be installed in accordance with OSHA 1917.112(d), and site-specific requirements to prevent falling objects from endangering personnel working or passing beneath scaffold platforms.

- 4.2.7. DSS recommends the use of toeboards on all applicable decks and requires handrail screening for stacked materials that exceed the height of the toeboard.

Ring Lock System Scaffold Installation Manual

4.2.8. Complete landing with high and mid rails (1) and toe boards (2)

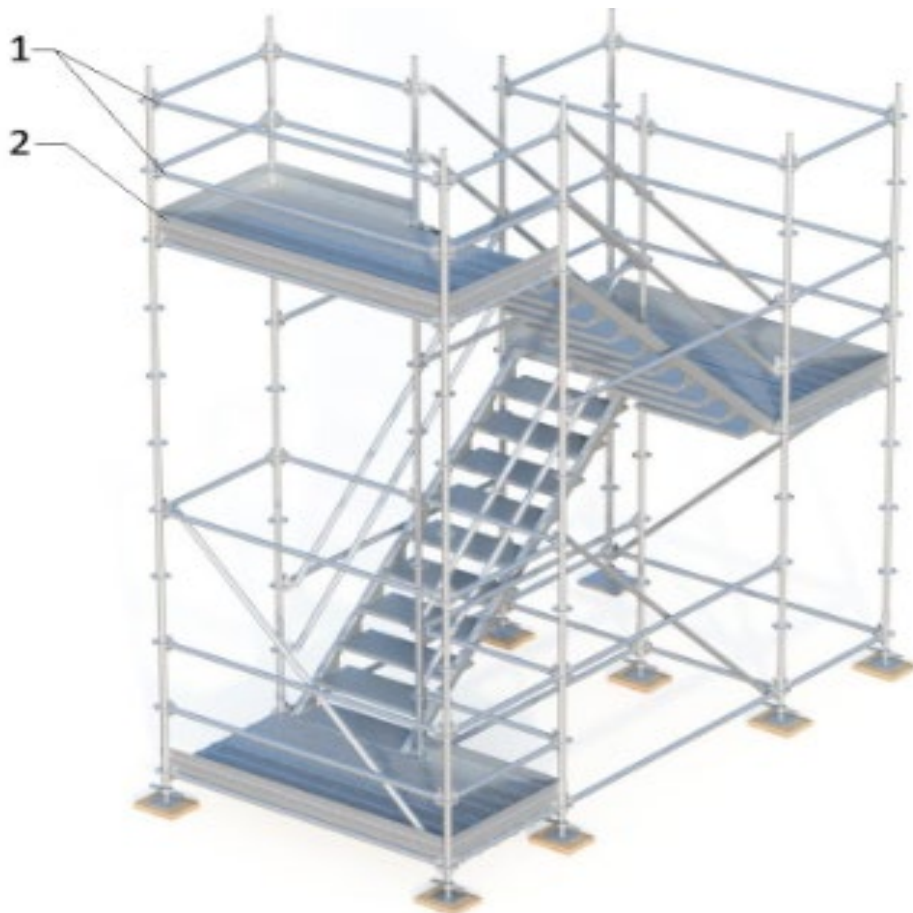


Figure 29 - Complete Stair Tower

4.3. Stair Tower Typical Layout

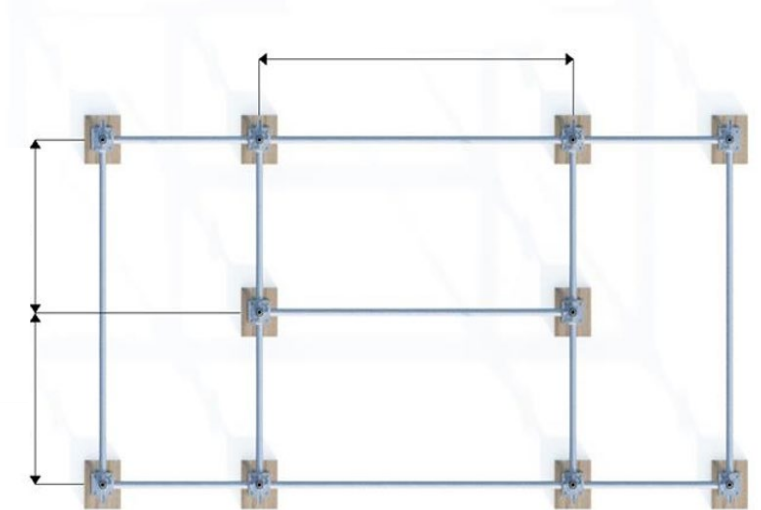


Figure 30 - Stair Tower Base Layout

4.4. Stair Tower Layout with Extended Height

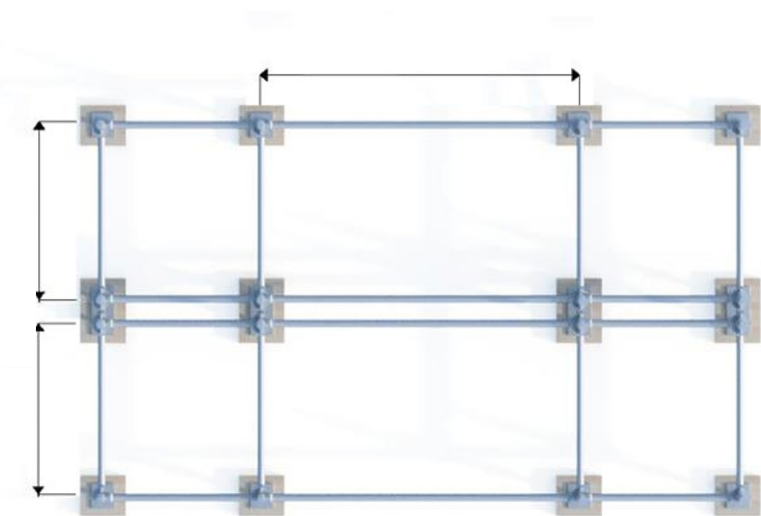


Figure 31 - Stair Tower Base Layout for Extended Height

Ring Lock System Scaffold Installation Manual

Table 3 - Stair Stringer Chart

Stair Stringer Part Number	Stringer Length (mm)	Stringer Length (ft)	Bay Width (mm)	Bay Width (mm)	Bay Width (Ft)	Bay Width (Ft)	Stair Tread Part Number
RLSS7-C	2130	7'-0"	1065	1065	3'-6"	3'-6"	RLST32-C
RLSS8	2440	8'-0"	1219	1219	4'-0"	4'-0"	RLST40
RLSS86	2572	8'-6"	1286	1286	4'-3"	4'-3"	RLST43

4.5. System Ladder Installation

4.5.1. Place Mud Sill (1) when needed on level flat ground rated to support the scaffold structure. Base jack (2) is placed on the center of the Mud Sill followed by the Starter Collar (3) and finally, the Standard (4) Fully fixed to the assembled scaffold.

4.5.2. The starter ladder bracket (1) shall be securely attached to the standard at a height of 11 inches (279.5mm) from the ground to the top of the bracket, ensuring that ladder rungs maintain a consistent spacing of 12 inches (305mm) for safe and uniform access.

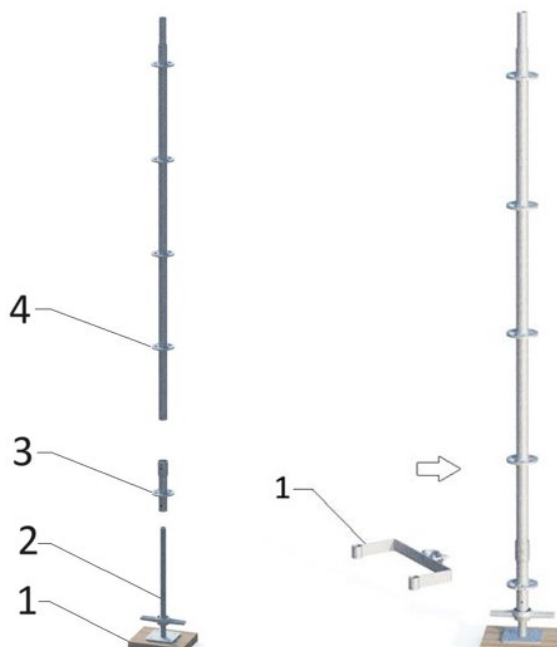


Figure 32 - Initial Ladder Installation

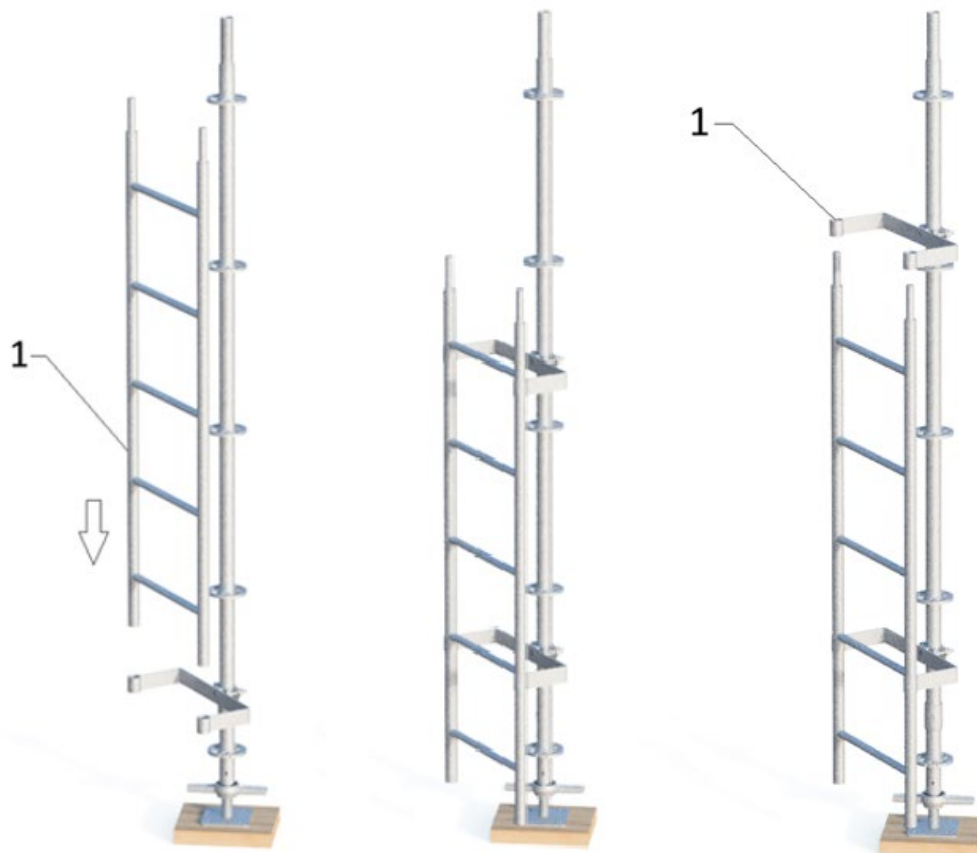
Ring Lock System Scaffold Installation Manual

4.5.3. The ladder (1) shall be properly positioned into the Starter Ladder Bracket, ensuring it is fully lowered to the designated position, as illustrated in Fig 43, to maintain secure engagement and compliance with safety requirements

4.5.4. Ladder brackets shall be installed beneath the top rung of all ladders to provide structural support for user-imposed loads. The base ladder must be secured with a ladder bracket beneath both the bottom and top rungs to ensure stability and proper weight distribution. Upon full ladder assembly, the final ladder bracket must be fastened over the top rung to prevent the ladder from being lifted or dislodged from the ladder below.

The ladder must extend to a minimum of 3 feet (0.91 meters) above the highest entry point to provide a secure handhold for users accessing or exiting the scaffold.

4.5.5. Completed system standard ladder assembly



4.6. Ladder with Tube and Clamp System

- 4.6.1. Position the Mud Sill (1) on level, compacted ground capable of supporting the scaffold structure in accordance with load-bearing requirements. Center the Base Plate (2) on the Mud Sill to ensure even load distribution and stability. Securely install the upright Tube (3) onto the Base Plate, ensuring it is fully integrated into the assembled scaffold system (not shown for clarity) and compliant with applicable safety standards.
- 4.6.2. The Starter Ladder Bracket (1) shall be securely attached to the scaffold standard at a height of 11 inches (279.5 mm) from the ground to the top of the bracket, ensuring proper alignment. This placement maintains uniform ladder rung spacing at 12 inches (305 mm) for consistent and safe access. All attachments must be properly secured to prevent movement or displacement during use.
- 4.6.3. The Ladder (1) is to be inserted into the Starter Ladder Bracket, ensuring that the ladder is fully lowered and properly positioned.
- 4.6.4. The base/first ladder must be secured with a ladder bracket beneath both the bottom and top rungs to ensure stability and proper weight distribution. Subsequent ladder brackets shall be installed beneath the top rung of all next ladders to provide structural support for user-imposed loads.
- 4.6.5. Upon full ladder assembly, the last ladder bracket must be secured over the top of the ladder rung to ensure ladder cannot be lifted and become dislodged from the ladder below.

Note: ladder must extend a minimum of 3' past the highest entry point.

Ring Lock System Scaffold Installation Manual



Figure 46



Figure 47



Figure 48



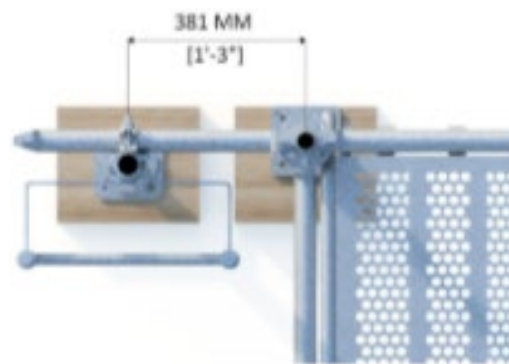
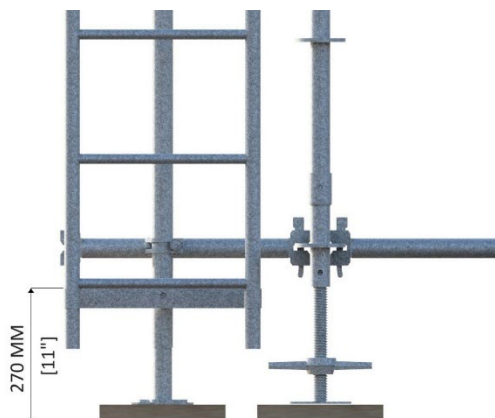
Figure 49



Figure 50

4.6.6. **NOTICE** In the case of a 90-degree mounted ladder, the ladder must be positioned to allow for adequate shoulder clearance on each side of the ladder cage, if required by OSHA 1926.1053(b), or site specifications.

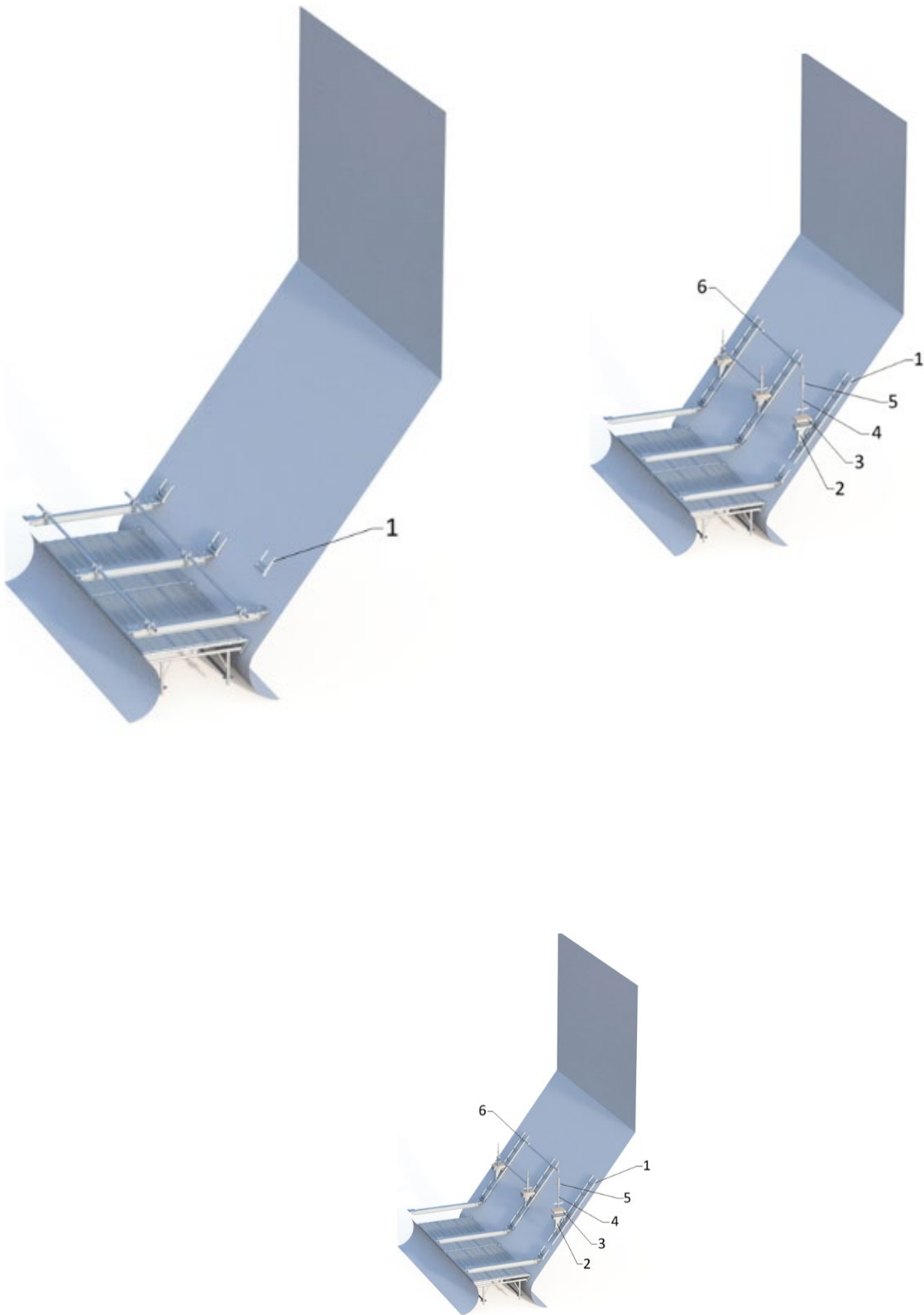
4.6.7. **NOTICE** All cages and ladder systems must comply with OSHA 1926.1053(b), and DSS disclaims liability for injuries or accidents resulting from improper installation, use, or failure to comply with these safety regulations



4.7. System Scaffold Boiler Assembly

- 4.7.1. Throat headers are installed and adjusted to the boiler throat and decked in for access along throat length.
- 4.7.2. Boiler Base Beams shall be installed securely against the edge of the boiler tube wall structure at engineered-specified intervals to provide adequate support for scaffold legs, ensuring stability and compliance with structural load requirements ().
- 4.7.3. Horizontal tubes shall be installed securely to the top flange of the boiler beam at engineered-specified intervals to prevent beam roll ().
- 4.7.4. Install the Boiler Founding System Base Starting Ladder (1) at the ends of the Base Beams
- 4.7.5. ensuring proper alignment and secure attachment to provide structural support for the scaffold foundation in accordance with engineered specifications.

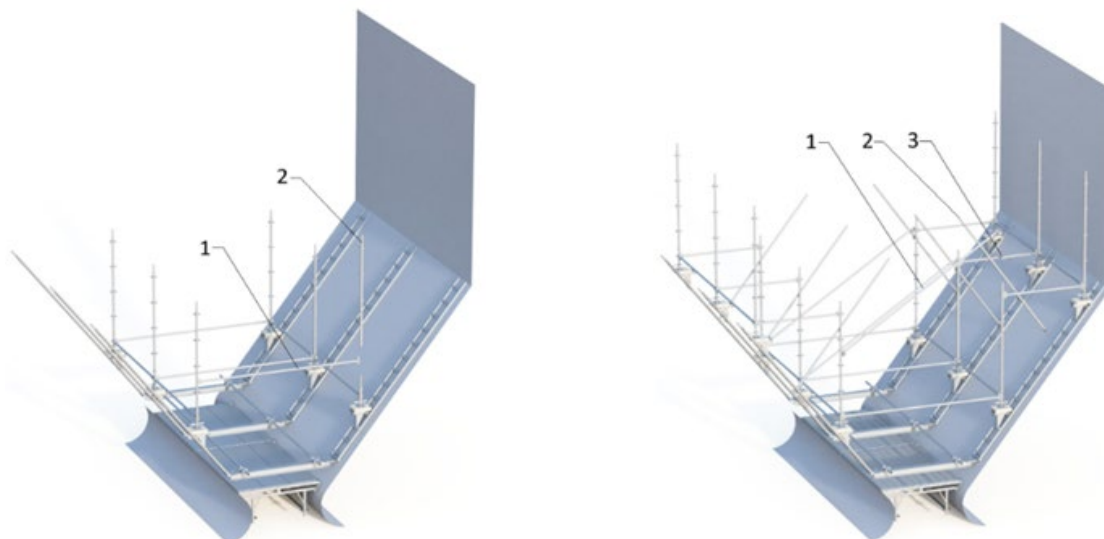
Ring Lock System Scaffold Installation Manual



Ring Lock System Scaffold Installation Manual

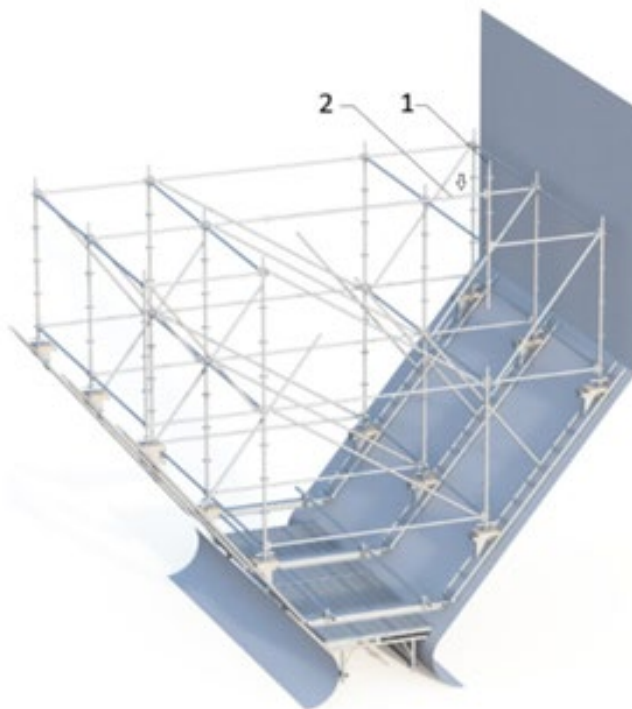
4.7.6. Attach the corresponding Boiler Founding Ladder Frame to the top ends of the Boiler Founding Starting Ladder (1), ensuring secure and proper alignment. Install the Adjustable Vee Chair (2) onto the Ladder Frame at the designated rungs, followed by placing the mud sill (3), base jack (4), and base collar (5) on top of the Adjustable Vee Chair. Complete the assembly by installing the ring ledger (6) and mirror the process on the opposite side to maintain structural stability and compliance with engineered specifications.)

4.7.7. Securely install the ledgers (1) between the base collars, ensuring proper alignment and engagement with the rosettes. Once the ledgers are in place, position the standards (2) onto the base collars. (Figure)



4.7.8. Install Ring Vertical Bracing (1) securely between Ring Standards, ensuring proper engagement for structural stability. Utilize Saddle Bracing (2) and connect it to the Ring Standard using swivel clamps, maintaining a maximum vertical spacing of 6 feet between the vee chair and Saddle Brace to Founding Ladder node point. Verify all connections are properly secured. (Figure 60)

Ring Lock System Scaffold Installation Manual



- 4.7.9. Complete the base assembly by installing all required Ring Standards (1) and Ring Ledgers (2) at designated points (Figure 61), ensuring proper engagement and alignment. Verify that all components are securely fastened and in compliance with engineering specifications. Conduct a final inspection before proceeding to the next stage of scaffold erection.
- 4.7.10. The load capacity of Base Beams is dependent on the specific scaffold base-out configuration and must be evaluated accordingly by a Qualified Person. It is the responsibility of the user to ensure that all loading conditions comply with applicable safety standards and structural requirements. Consult a qualified engineering firm to provide assistance with design and load calculations to ensure compliance and structural integrity.

Ring Lock System Scaffold Installation Manual

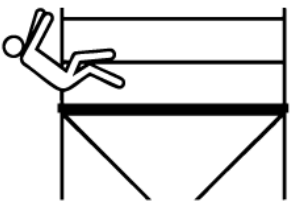
5. Product Identification

For your safety and to ensure proper use, main components of the scaffolding systems are marked, as space allows, with the following:

- 1) **Traceability Code** – Permanently stamped on each product. This code links to documentation of all quality control processes the part has undergone during manufacturing. Provide this code to your sales representative if additional information on a specific product is required.
- 2) **Country of Origin** – Permanently stamped on each product, indicating where the product was manufactured.
- 3) **Warning Label** – Affixed to each product, as space allows. Always read and follow the instructions on the label together with this manual.

NOTICE

Products manufactured prior to April 1, 2026 may not include the Warning Label.



⚠ WARNING

Fall hazard when assembling, using, moving, or dismantling this scaffold.
CAN CAUSE SERIOUS INJURY OR DEATH.
Consult a competent person and follow company safety guidelines. Do not move scaffold while occupied.
Use only components compatible with the DSS scaffolding system in use.

SAFETY INSTRUCTIONS — Refer to the DSS User Guide for usage and load ratings.

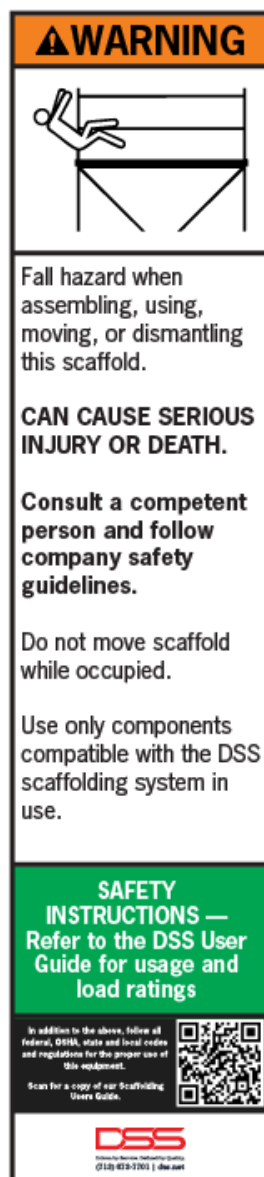


In addition to the above, follow all federal, OSHA, state and local codes and regulations for the proper use of this equipment.
Scan for a copy of our Scaffolding Users Guide.



Division of Safety Systems, Inc. | Quality
(713) 673-7701 | dss.net

Ring Lock System Scaffold Installation Manual



Important:

- Do not remove, cover, or alter any labels or markings.
- Ensure all labels and marking remain visible and legible throughout the product's service life.
- If any label or marking is missing or unreadable, contact DSS for a replacement before using the product.