

Scaffolding Assembly & Safety Instructions

READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRODUCT.

This manual provides important information on proper operation and maintenance. Every effort has been made to ensure the accuracy of this manual. We reserve the right to change this product at any time without prior notice.

STOP! DO NOT RETURN THIS PRODUCT TO THE RETAILER.

Questions? Problems? CONTACT CUSTOMER SERVICE.

If you experience a problem or need parts for this product, visit our website <http://www.buffalotools.com> or call our customer help line at **1-888-287-6981, Monday-Friday, 8 AM - 4 PM Central Time**. A copy of the sales receipt is required.

WARNING: Improper erection, dismantling or use of Scaffold may result in serious injury or death! Erectors, dismantlers, and users of Scaffold must read and fully understand these Safety Rules and Instructions.

MAXIMUM LOAD CAPACITY: 1,000 lbs (Workers & Materials)

WARNING: DO NOT OVERLOAD SCAFFOLD! IT MAY RESULT IN SERIOUS INJURY!

Recommended Scaffolding Erection Procedure

Introduction

This Guide has been prepared by the Scaffolding, Shoring & Forming Institute to assist contractors, architects, engineers, dealers, erectors, and users, etc. for the proper use of scaffolding equipment. Scaffolding Safety Rules published by the Institute should be used in conjunction with this publication, as well as the instruction for the use of scaffolding provided by the manufacturer. Safety precautions and requirements prescribed by local, state, and federal agencies, including OSHA, must be followed at all times and persons working with scaffolding systems should be equipped with requisite safety devices.

I. Nomenclature

1. Accessories-Those items other than the frames and braces used to facilitate the construction of scaffolding towers and structures.
2. Adjustment Screws-Device composed of a thread screw and an adjusting handle used for the vertical adjustment of the scaffolding.
3. Base Plate- A device used to distribute the leg load.
4. Climbing Ladders-A separate ladder attached to the scaffolding structure or built into the scaffold frame.
5. Casters- Wheels of a suitable dimension and unit designed to attach to the base of a tower and containing a brake to prevent the wheels from rotation.
6. Coupling Pin-Device used to align and connect lifts or tiers together vertically.
7. Cross-bracing- Systems of members connecting frames or panels of scaffolding other than an adjustment screw.
8. Extension Device- Any device used to obtain vertical adjustment of scaffolding other than an adjustment screw.
9. Factor of Safety- The ratio of ultimate load to the allowable load.
10. Frame or Panel-The principal prefabricated, welded structural unit.
11. Guardrail-A rail secured to uprights and erected along the exposed sides and ends of platforms.
12. Horizontal Diagonal Bracing- Diagonal braces running horizontally between frames of scaffolding.
13. Lifts or Tiers- The number of frames stacked one above the other in a direction.
14. Locking Device- A device used to secure the cross brace to the panel.
15. Putlog or Truss-A separate horizontal load carrying member.
16. Rolling Towers- A composite structure of frames, braces, platforms, guardrails, and accessories supported by casters.
17. Safe Leg Load- That load which can safely be directly imposed on a horizontal member.
18. Safe Scaffold Frame Horizontal Member Load- That load which can safely be directly imposed on a horizontal member.
19. Scaffolding Layout- A engineered drawing prepared prior to erection showing arrangement of equipment for proper scaffolding use.
20. Side Basket- A cantilevered arm unit supported by the scaffolding frame.
21. Sill or Mud Sill*- A footing, usually wood, which distributes the vertical leg loads to the ground.
22. Ties- A tension compression member used to securely attach scaffold to a structure.
23. Toeboard- A barrier secured along the sides and ends of a platform to guard against the falling of material.
24. Towers- A composite structure of frames, braces, and accessories.
25. Ultimate Load- The maximum load which may be placed on the scaffolding causing failure by buckling of column members or yielding of some component.

*These terms can be used synonymously.

Inspection of Scaffolding Equipment Prior to Erection

Three main areas of inspection are for corrosion, straightness of members and welds. This applies to all components of a scaffolding system.

1. Corrosion- Heavily rusted or eroded scaffolding equipment is a telltale sign of abuse or neglect.
3. Straightness of Members- Mishandling, trucking and storing may cause damage to scaffolding equipment. All scaffolding components should be straight and free from bends, kinks or dents.
3. Welds- Equipment should be checked before use for damage of welds and any piece of equipment showing damaged welds or rewelding beyond the original factory welds should not be used. The factory weld reference pertains to location and quality of welds.
While corrosion, straightness of members, and welds are of primary concern other component parts should be checked.
4. Locking devices on frames and braces shall be in good working order, and if not, must be repaired or replaced prior to use.
5. Coupling pins must effectively align the frame or panel legs.
6. Pivoted cross braces must have the center pivot securely in place.
7. Caster Brakes shall be in good working order and if not must be repaired or replaced prior to use.

Safe Bearing Loads For Soils

Considering that the allowable loads (bearing) on various soils and rock range from less than 1,000 p.s.f. to more than 50,000 p.s.f. care should be exercised in determining the capacity of the soil for every scaffolding job, realizing that weather conditions can turn an otherwise suitable ground condition into a hazardous situation. As an example, dry clay with an allowable bearing capacity of 8,000 p.s.f. could become very plastic after a rainfall and drop to less than 2,000 p.s.f.

Care should also be taken not to excessively disturb the soil. If fill is required in areas where scaffolding is used, a qualified engineer should be consulted as to materials and compaction.

II. Foundations

The purpose of a good foundation or mud sill is to distribute the scaffolding load over a suitable ground area. The size of the footing or sill is determined by the total load carried over a particular ground area, and by the nature of the soil supporting these sills.

The total load should be computed and the sills designed accordingly.

When scaffolding from earth fill, the areas should be leveled and the sills spaced in a pattern assuring adequate stability for all scaffolding legs.

III. Erection of Frames

The work of erecting the scaffolding should be under the supervision of a person with proper experience and aptitude for securing a safe installation and who is familiar with all Local, State and Federal Regulations concerning scaffolding as well as the SSFI Scaffolding Safety Rules.

It shall be the responsibility of the person supervising the erection of the scaffold to see that all components and locking devices are in working order, and no damaged or deteriorated equipment is used in the setup. Should any scaffolding become damaged after the equipment has been erected, Workman shall not be allowed on the same until the damaged items have been repaired or replaced.

Advance planning will help the erection of scaffolding to progress smoothly. The equipment should be unloaded as close to the area of use as possible and should be arranged in the order it is to be used in the setup. Adjustment screws should be set to the approximate final adjustment before setting up the scaffolding. Check that all coupling pins are matched with the proper panels. Consult safety rules as recommended by the Institute.

After erecting the first tier of scaffold frames, plumb and level (using instruments) all frames so that no matter how high the final scaffolding setup, the additional frames will also be in correct alignment.

As erection proceeds, securely tie all scaffolding to the structure at the ends and at least every 30' horizontally, and at height intervals not to exceed * four (4) times the minimum base dimension. Freestanding scaffold towers must be restrained from tipping by guying or other means. Scaffold frames must be fastened together at coupling pins where there is a possibility of uplift.

**CODE OF SAFE PRACTICES FOR FRAME SCAFFOLDS, SYSTEM SCAFFOLDS,
TUBE AND CLAMP SCAFFOLDS & ROLLING SCAFFOLDS
DEVELOPED FOR INDUSTRY BY SCAFFOLD INDUSTRY ASSOCIATION, INC.**

It shall be the responsibility of all users to read and comply with the following common sense guidelines which are designed to promote safety in the erecting, dismantling and use of Scaffolds. These guidelines do not purport to be all-inclusive not to supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines in any way conflict with any state, local, federal or other government statute or regulation, said statute or regulation should supersede these guidelines and it shall be the responsibility of each user to comply therewith.

I. GENERAL GUIDELINES

- A. POST THESE SCAFFOLDING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle or use scaffolding are aware of them.
- B. FOLLOW ALL STATE, LOCAL, AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to scaffolding.
- C. SURVEY THE JOB SITE. A survey shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings, and other hazardous conditions created by other trades. These conditions should be avoided as noted in the following sections.
- D. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is damaged or defective in any way. Remove it from the job site.
- E. SCAFFOLDS MUST BE ERECTED IN ACCORDANCE WITH DESIGN AND/OR MANUFACTURERS' RECOMMENDATIONS.
- F. DO NOT ERECT, DISMANTLY OR ALTER A SCAFFOLD unless under the supervision of a qualified person.
- G. DO NOT ABUSE OR MISUSE THE SCAFFOLD EQUIPMENT.
- H. ERECTED SCAFFOLDS SHOULD BE CONTINUALLY INSPECTED by users to be sure that they are maintained in safe condition. Report any unsafe condition to your supervisor.
- I. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SCAFFOLD, CONSULT YOUR SCAFFOLD SUPPLIER.
- J. NEVER USE EQUIPMENT FOR PURPOSES OR IN WAYS FOR WHICH IT WAS NOT INTENDED.
- K. DO NOT WORK ON SCAFFOLDS if your physical condition is such that you feel dizzy or unsteady in any way.

IV. GUIDELINES FOR ERECTION AND USE OF SCAFFOLDS

- A. SCAFFOLD BASE MUST BE SET ON AN ADEQUATE SILL OR PAD to prevent slipping or sinking and fixed thereto where required. Any part of a building structure used to support the scaffold shall be capable of supporting the maximum intended load to be applied.
- B. USE ADJUSTING SCREWS or other approved methods instead of blocking to adjust to uneven grade conditions.
- C. BRACING, LEVELING, & PLUMING OF FRAME SCAFFOLDS—

- 1. Plumb and level all scaffolds as the erection proceeds. Do not force frames or braces to fit – level the scaffold until proper fit can easily be made.
- 2. Each frame or panel shall be braced by horizontal bracing, cross bracing, diagonal bracing or any combination thereof for securing vertical members together laterally. All brace connections shall be made secure, in accordance with the manufacturer's recommended procedures.

D. BRACING, LEVELING, & PLUMING OF TUBE & CLAMP AND SYSTEM SCAFFOLDS –

- 1. POST SHALL BE ERECTED PLUMB in all directions, with the first level of runners and bearers positioned as close to the base as feasible. The distance between bearers and runners shall not exceed manufacturer's recommended procedures.
 - 2. PLUMB, LEVEL AND TIE all scaffolds as erection proceeds.
 - 3. FASTEN ALL COUPLERS AND/OR CONNECTIONS securely before assemble of next level.
 - 4. VERTICAL AND/OR HORIZONTAL DIAGONAL BRACING MUST BE INSTALLED according to manufacturer's recommendations.
- E. TIE CONTINUOUS (RUNNING) SCAFFOLDS TO THE WALL OR STRUCTURE at each end and at least every 30 feet of length when scaffold height exceeds the maximum allowable free standing dimension.

Begin ties or stabilizers when the scaffold height exceeds that dimension, and repeat at vertical intervals not greater than 26 feet. The top anchor shall be placed no lower than four (4) times the base dimension from the top of the completed scaffold. Anchors must prevent scaffold from tipping into or away from wall or structure. Stabilize circular or irregular scaffolds in such a manner that completed scaffold is secure and restrained from tipping.

When scaffolds are partially or fully enclosed or subjected to overturning loads, specific precautions shall be taken to insure the frequency and accuracy of ties to the wall and structure. Due to increased loads resulting from wind or overturning loads the scaffolding component to which ties are subjected shall be checked for additional loads.

- F. WHEN FREE STANDING SCAFFOLD TOWERS exceed four (4) times their minimum base dimension vertically, they must be restrained from tipping. (CAL/OSHA and some government agencies require stricter ratio of 3 to 1)
- G. DO NOT ERECT SCAFFOLDS NEAR ELECTRICAL POWER LINES UNLESS PROPER PRECAUTIONS ARE TAKEN. Consult the power service company for advice.
- H. A MEANS OF ACCESS TO ALL PLATFORMS SHALL BE PROVIDED.
- I. DO NOT USE ladders or makeshift devices on top of scaffolds to increase the height.
- J. PROVIDE GUARDRAILS AND MID-RAILS AT EACH WORKING PLATFORM LEVEL where open sides and ends exist, and toeboards where required by code.
- K. BRACKETS AND CANTILEVERED PLATFORMS –

1. Brackets for SYSTEM SCAFFOLDS shall be installed and used in accordance with manufacturer's recommendations.
 2. Brackets for FRAME SCAFFOLDS shall be seated correctly with side bracket parallel to the frames and end brackets at 90 degrees to the frames. Brackets shall not be bent or twisted from normal position. Brackets (except mobile brackets designed to carry materials) are to be used as work platforms only and shall not be used for storage of material or equipment.
 3. Cantilevered platforms shall be designed, installed and used in accordance with manufacturer's recommendations.
- L. ALL SCAFFOLDING COMPONENTS shall be installed and used in accordance with the manufacturer's recommended procedure. Components shall not be altered in the field. Scaffold frames and their components manufactured by different companies shall not be intermixed, unless the component parts readily fit together and the resulting scaffold's structural integrity is maintained by the user.

M. PLANKING –

1. Working platforms shall cover scaffold bearer as completely as possible. Only scaffold grade wood planking, or fabricated planking and decking meeting scaffold use requirements shall be used
2. Check each plank prior to use to be sure plank is not warped, damaged, or otherwise unsafe.
3. Planking shall have at least 12" overlap and extend 6" beyond center of support, or be cleated or restrained at both ends to prevent sliding off supports.
4. Solid sawn lumber, LVL (laminated veneer lumber) or fabricated scaffold planks and platforms (unless cleated or restrained) shall extend over their end supports not less than 6" nor more than 18". This overhang should not be used as a work platform.

N. FOR "PUTLOGS" AND "TRUSSES" THE FOLLOWING ADDITIONAL GUIDELINES APPLY:

1. Do not cantilever or extend putlogs/trusses as side brackets without thorough consideration for loads to be applied.
2. Putlogs/trusses should be extended at least 6" beyond point of support.
3. Place recommended bracing between putlogs/trusses when the span of putlog/truss is more than 12 feet.

O. FOR ROLLING SCAFFOLDS THE FOLLOWING ADDITIONAL GUIDELINES APPLY:

1. RIDING A ROLLING SCAFFOLD IS VERY HAZARDOUS. The Scaffold Industry Association does not recommend nor encourage this practice. However, if you choose to do so, be sure to follow all state, federal or other governmental guidelines.
2. Casters with plain stems shall be attached to the panel or adjustments screw by pins or other suitable means.
3. No more than 12 inches of the screw jack shall extend between the bottom of the adjusting nut and the top of the caster.
4. Wheels or casters shall be provided with a locking means to prevent caster rotation and scaffold movement and kept locked.
5. Joints shall be restrained from separation.
6. Use horizontal diagonal bracing near the bottom and at 20 foot intervals measured from the rolling surface.
7. Do not use brackets or other platform extensions without compensating for the overturning effect.
8. The platform height of a Rolling Scaffold must not exceed four (4) times the smallest base dimension (CAL/OSHA and some Government agencies require a stricter ratio of 3 to 1).
9. Cleat or secure all plank.
10. Secure or remove all materials and equipment from platform before moving.
11. Do not attempt to move a rolling scaffold without sufficient help – watch out for holes in floor and overhead obstructions – stabilize against tipping.

P. SAFE USE OF SCAFFOLD –

1. Prior to use, inspect scaffold to insure it has not been altered and is in safe working condition.
2. Erected scaffolds and platforms should be inspected continuously by those using them.
3. Exercise caution when entering or leaving a work platform.
4. Do not overload scaffold. Follow manufacturer's safe working load recommendations.
5. Do not jump onto planks or platforms.
6. Do not use ladders or makeshift devices on top of working platforms to increase height or provide access from above.
7. Climb in access areas only and USE BOTH HANDS

I. WHEN DISMANTLING SCAFFOLDING THE FOLLOWING ADDITIONAL GUIDELINES APPLY:

- A. Check to assure scaffolding has not been structurally altered in a way which would make it unsafe and, if it has, reconstruct where necessary before commencing with dismantling procedures. This includes all scaffold ties.
- B. Visually inspect plank prior to dismantling to be sure they are safe.
- C. Consideration must be given as to the effect removal of a component will have on the rest of the scaffold prior to that component's removal.
- D. Do not accumulate excess components or equipment on the level being dismantled.
- E. Do not remove ties until scaffold above has been removed (dismantled).
- F. Lower dismantled components in an orderly manner. Do not throw off of scaffold.
- G. Dismantled equipment should be stockpiled in an orderly manner.
- H. FOLLOW ERECTION PROCEDURES AND USE MANUALS.

These safety guidelines (Code of Safe Practice) set forth common sense procedures for safely erecting, dismantling and using scaffolding equipment. However, equipment and scaffolding systems differ, and accordingly, reference must always be made to the instructions and procedures of the supplier and/or manufacturer of the equipment.