



FALCON
Ladder & Scaffold Mfg.

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FRS600HD

Rolling Tower

Operating Procedures

1,000 Lbs Rated Capacity



WARNING:

Failure to read and follow instructions could lead to serious injury or death!

Danger: This product can conduct electricity, do not use near power lines or other electrical equipment. Always maintain a safe working distance from any electrical hazard.

This product conforms to all applicable sections of ANSI 10.8 – 2011 – Scaffold Safety Requirements – Section 11 – Manually Propelled and Prefabricated Mobile Scaffolds. The end user must ensure that all local regulations are being followed at all times.

The FRFRS600HDHD Rolling Tower Scaffold has a maximum intended load rating of 1,000 lbs and is rated “special duty” as described in ANSI A10.8 Section 5.1.2.3.6. The FRS600HD has been independently tested and verified by the Acuren Group (Test Report Feb 28th, 2014) with a test load of 4,000 lbs to yield a 4:1 safety factor.

Warnings:

- Never use this product if under the influence of drugs or alcohol. Medications, illegal drugs or alcohol will impair your ability to work safely.
- Never overload scaffold. The total combined weight of man and materials shall not exceed the rated capacity of the unit.
- In order to conform to **safe climbing practices**, the FRS600HD Tower Scaffold shall be used with a hatch deck platform (**Model FRS600-14**) and be accessed by climbing on the inside of the ladder frame (See exceptions under the heading “During Use” when platform is 36” and lower. **WARNING:** Climbing on the outside of the ladder frame could result in turnover of the unit.
- Never attempt to move scaffold with workers on the platform.
- Never use ladders or other devices on scaffold to gain additional height.
- Never stand on guardrails to gain additional height.
- Never allow loose objects to accumulate on the platform.
- Never leave an assembled unit unattended.
- Do not use this product if it has been exposed to fire or corrosive materials.
- Never mix frames, trusses, platforms, guardrails, casters or outrigger assemblies with components from other manufacturers. Component dimensions differ enough to be hazardous when mixed.
- A guardrail system shall be installed when the platform height exceeds 48”. Check your local regulations to ensure you are meeting the minimum requirement.

Prior to Use:

- **Worksite Inspection:** The user of FRS600HD Tower Scaffold must walk around the area in which they will work in order to remove any materials that may be hazardous to the safe operation of the FRS600HD Tower Scaffold;
- Particular care must be made to note floor hazards such as construction debris, holes in the floor, etc. Debris should be removed, holes should be repaired or the worker must work in areas free of such hazards. FRS600HD Tower Scaffold must only be used on solid (concrete, etc.), flat floor surfaces.
- **Equipment inspection:** The user of a FRS600HD Tower Scaffold must thoroughly inspect the FRS600HD Tower Scaffold prior to use. All components must be complete, functioning properly and correctly assembled. Any incomplete part, missing part, or ill-fitting part must be replaced prior to use. Never access an FRS600HD Tower Scaffold without a complete inspection. (See Inspection and Maintenance Checklist)
- Determine the platform height required to complete the job safely and prepare the required equipment. **CAUTION:** It is only recommended to operate the FRS600HD Tower Scaffold to a maximum platform height of 120”. This limits the number of units that can be stacked to two. If stacking units, outriggers will be required to maintain a minimum platform height to base-width ratio of 3:1. If stacking units, additional trusses will be required on the 2nd unit to reduce racking or collapse.

ASSEMBLY PROCEDURES

Setup:

- **STEP 1: Insert casters** (Fig 1a) and locking pins (Fig 1b) into all four corners of the ladder frames. Lock all casters from rolling by using your foot to press down on the caster locking tab. **CAUTION:** the FRS600HD Tower Scaffold shall never be used without the casters affixed to the ladder frame. The casters are an integral part of the design of this scaffold.

FIG 1a



FIG 1b



- **STEP 2: Secure trusses** to ladder frames by placing one end of the truss over the ladder frame. Depress the daisy wheel to contract the spring pin (Fig 2a). Align the spring pin with the selected adjustment hole in the end frame then release the daisy wheel to snap lock the spring pin into the adjustment hole. Install and lock manual safety pins as shown (Fig 2b). Continue this procedure on all four truss-to-frame connections. **CAUTION:** Ensure that all trusses are engaged at the same level or adjustment hole.

FIG 2a

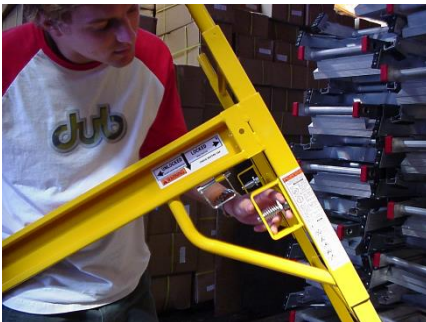


FIG 2b



- **STEP 3: Install the platform** onto the trusses making sure that it is fully seated down against the top flange of the truss and that the two vertical index pins engage the platform at opposite corners. Engage the platform hold-downs by rotating the spring clamps over the platform (Fig 3).
- **STEP 4: A guardrail kit must be installed when the platform height exceeds 48".** The guardrail and gate assembly is a two part system – one for each side and end. To install the guardrail and gate assembly, position the bottom posts of the guardrail and gate assembly into the holder tubes located at each end of the truss. Make sure that the gate is operational and swings inwards. Insert the guardrail pins in holes in the guardrail holder tubes. Position other guardrail and gate assembly on the other side of the unit in the same manner.

FIG 3



This completes the single unit assembly.

To readjust height of unit:

- Remove guardrail and gate assembly (if applicable);
- Remove platform;
- Remove manual safety pins from trusses;
- Depress daisy wheel to contract the spring pins in truss;
- Remove one truss, reposition and secure truss as described in **STEP 2**. Repeat for the other truss;
- Reinstall platform as described in **STEP 3**;
- Reinstall guardrail and gate assembly as described in **STEP 4** (if required).

When stacking FRS600HD Tower Scaffold units:

- **CAUTION:** The capacity of the FRS600HD Tower Scaffold is reduced when stacking units. **The capacity of a stacked unit system is 850 lbs.**
- Two people will be required to ensure safe assembly of the unit.
- **STEP 5:** Set the truss height of the base unit to approximately 48”.
- **STEP 6:** Install the hatch deck platform onto the trusses of the base unit.
- **STEP 7:** Connect outriggers (4 pcs) to both sides of the frames of the base unit. Once outriggers have been connected, reconfirm that all casters are securely affixed and all wheel locks are engaged. The casters on the outriggers should be in contact with the floor surface.
- **STEP 8:** Have one person access the base unit platform.
- **STEP 9:** Have the person on the ground pass a ladder end frame to the person on the platform and place the end frame on top of each base ladder end frames. Lock the end frames in position using a safety “U-Pin”.
- **STEP 10:** For the upper frame assembly, two sets of truss units will be required to reduce racking or collapse. Have the person on the ground pass truss units to the person on the platform and attach the truss units to each side of the upper ladder frames as described in STEP 2. This set of trusses should be positioned approximately 44” above the base unit platform (Approximately 1 index hole above the bottom of the upper end frame units).
- **STEP 11:** Have the person on the ground pass additional truss units to the person on the platform and attach the truss units at the desired working platform height (maximum 120” from the floor surface).
- **STEP 12:** Have the person on the ground pass the upper hatch deck platform to the person on the scaffold and install it on the upper truss set as described in STEP 3.
- **STEP 13:** Have the person on the platform climb up and half way through the upper hatch deck.
- **STEP 14:** Have the person on the ground pass up one part of the guardrail assembly and install it as described in STEP 4 on the side of the platform away from the hatch deck door.

- **STEP 15:** Have the person on the scaffold climb up and through the hatch deck to access the upper platform.
- **STEP 16:** Have the person on the ground pass up the second part of the guardrail assembly and secure it in place as described in STEP 4.
- **STEP 17:** Ensure that both guardrail safety doors are locked.

This completes the multi-unit assembly.

During Use:

- **ACCESS:** It is recommended to always access the FRS600HD Tower Scaffold by climbing on the inside of the ladder frame up through the hatch deck **except when** the hatch deck platform is 36” or less. When the hatch deck platform is 36” or less, the platform may be accessed by sitting on the platform swinging your legs onto the platform and then standing up.
- **CAUTION:** Keep the platform free from trip hazards. Do not allow loose objects and debris to accumulate on the platform. Make sure the unit is free from paint, mud, grease or other slippery or hazardous materials. Never leave the FRS600HD Tower Scaffold unattended. If you do leave the unit unattended, re-inspect the unit prior to use.
- **STACKED UNITS SETUP NEAR WALL:** If you are operating on a multi-unit assembly and are required to be in close proximity to a wall you may either operate from the long end of the scaffold or use outriggers on one side of the unit and tie off the scaffold to the building or structure.
- **CAUTION:** Fall protection may be required depending upon jurisdiction. Check local regulations.
- **CAUTION:** A guardrail system shall be installed when the platform height exceeds 48”. Check your local regulations to ensure you are meeting the minimum requirement.

After Use:

- **Equipment Inspection:** FRS600HD Tower Scaffold components must be inspected when returned from the job-site. The inspector should look for damage, deterioration, and missing or non-functioning parts. Use the Maintenance and Inspection Checklist in this booklet to maintain an inspection log. Any part or component that falls within any of these categories must be repaired, replaced or the component discarded and replaced. Do not mix frames, braces, platforms, guardrails, casters or outrigger assemblies with components from other manufacturers. Component dimensions differ enough to be hazardous when mixed. Discard the FRS600HD Tower Scaffold if it has been exposed to fire or corrosive chemicals.

Conformance with ANSI A10.8 – 2011 Scaffold Safety Requirements

Falcon Ladder and Scaffold's **Liberty / Falcon** brand FRS600HD Rolling Tower Scaffold conforms with Section 11 "Manually Propelled and Prefabricated Mobile Scaffolds" of ANSI A10.8 – 2011 Scaffolding Safety Requirements. The FRS600HD is a "specially designed scaffold" of a "truss and platform" design as noted in ANSI A10.8 – 2011 s. 11.1.3 "that do not use bracing, to secure vertical members together laterally and to square and align vertical members." "The platform is supported by the truss / support member. The truss is attached to the end frame / access ladder. The platform is secured in position through placement of the platform upon the inner ledge and within the side and end rails of the truss / support member." The load rating for all scaffolds is indicated in ANSI A10.8 Section 4 – General Requirements for All Scaffolds. Section 4.8 states that: "Scaffolds shall be capable of supporting, without failure, their own weight and at least four times the maximum intended load". **The FRS600HD Rolling Tower Scaffold has a maximum intended load rating of 1,000 lbs and is rated "special duty" as described in ANSI A10.8 Section 5.1.2.3.6.** The FRS600HD has been independently tested and verified by the Acuren Group (Test Report Feb 28th, 2014) to a load limit of 4,000 lbs.

Section 11.1.1 of ANSI A10.8 – 2011 states that: "When freestanding mobile scaffold towers are used, the height shall not exceed four times the base". This requirement will vary depending upon jurisdiction, but it is recommended to maintain a height to base ratio of 3:1. The height is based on the platform height of the assembled unit including casters. "Outrigger frames may be included as part of the minimum base dimension." The base width (without outriggers) of the FRS600HD Rolling Tower Scaffold is 29". When outriggers are attached on both sides, the base can be extended to a maximum width of 63". The maximum platform height of a single unit **Liberty / Falcon** brand FRS600HD Rolling Tower Scaffold is 71".

Section 11.1.2 states that: "The minimum platform width for any work level shall not be less than 18" for mobile scaffolds." The FRS600HD Rolling Tower Scaffold has a platform width of 29".

Section 11.1.3 states that: "Scaffolds shall be braced by cross, horizontal or diagonal braces by restrained platforms, or by equivalent means, except for specially designed scaffolds." The FRS600HD is a "specially designed scaffold" of a "truss and platform" design as noted in ANSI A10.8 – 2011 s. 11.1.3 "that do not use bracing, to secure vertical members together laterally and to square and align vertical members." "The platform is supported by the truss / support member. The truss is attached to the end frame / access ladder. The platform is secured in position through placement of the platform upon the inner ledge and within the side and end rails of the truss / support member."

Section 11.1.4 states that: "When height adjustments are required, screwjacks or other means for adjusting the height shall be provided . . . "The FRS600HD does not come with screwjacks and therefore once set up is not adjustable in height.

Section 11.1.5 states that: "The working platform shall be secured in place so as to prevent any horizontal movement in a longitudinal platform length direction." The platform of the FRS600HD is secured in position through the placement of the platform upon the inner ledge and within the side and end rails of the truss / support members as well as by indexing pins on each truss.

Section 11.1.6 states that: "The working platform shall be fully decked except for access openings when they are provided." The FRS600HD is a fully decked platform.

Section 11.1.7 states that: "The maximum permissible spans for planking shall be in conformance with 5.2, 5.3 and 5.4 and be consistent with allowable bearer loads." The FRS600HD uses a fabricated platform and therefore is subject to section 5.4. Section 5.4.1 states that: "Fabricated platforms shall be capable of supporting the applicable person-loading requirements of 5.1.2.2 or equivalent uniform loading." In the test situation, the FRS600HD platform was uniformly loaded with and supported a 4,000 lbs test load.

Section 11.1.8 states that: "Guardrail systems and toeboards shall be installed as specified in 4.7 and 4.7.8." Section 4.7 states: "Guardrail systems shall be installed on all open sides and ends of platforms more than 10 feet above the ground or floor . . ." The FRS600HD has, as an option (where required), a fully enclosed guardrail system complete with toeboards

and doors at each end. The manufacturer recommends that a guardrail be used when the platform height exceeds 48 inches.

Section 11.1.9 states that: "Access to work levels shall be provided as specified in 4.20." Section 4.20 states: "Access shall be provided to work platforms of all types of scaffolds by one of the following, except during erection or dismantling. 1) Portable wood, metal or glass-reinforced plastic ladders . . . 2) Scaffold frame when the maximum spacing between the rungs of the frame does not exceed 16-3/4". The length of the rungs shall not be less than 8 inches . . . " The FRS600HD scaffold enables platform access via the end frame / access ladder which has a 26-1/2" clear inside width and a rung spacing of 13 inches.

Section 11.2.1 states that: "Casters shall be designed for strength and dimensions to support four times the design work load." In the test situation, the FRS600HD casters were uniformly loaded with and supported a 4,000 lbs test load.

Section 11.2.2 states that: "Casters shall have rubber or similar resilient tires with wheels having minimum diameter of 5 inches. The FRS600HD Rolling Tower Scaffold uses 5" x 1.5" rubber casters.

Section 11.2.3 states that: "All casters shall be provided with a positive wheel and swivel lock . . ." The casters used on the FRS600HD have both a wheel and swivel lock.

Section 11.2.4 states that: "Caster stems shall be secured in the scaffold leg . . . to prevent the casters from accidentally falling out." All FRS600HD casters come complete with a "U-shaped" locking pin used to secure the casters to the end frame / access ladder.

INSPECTION AND MAINTENANCE CHECKLIST

All users must thoroughly inspect their scaffold prior to use and when returned from the job-site. All components must be complete, functioning properly and correctly assembled. Any incomplete part, missing part, worn or damaged part or ill-fitting part should be tagged "Do Not Use" and taken out of service. Never use a scaffold without first inspecting the unit.

Model:

Serial No:

Date:

Comments

Platforms: Must be checked for loose or missing edge banding, bent or broken truss supports (on the underside), or holes or thin spots where plywood has been worn. Ensure that it is free from grease, ice or other slippery material which may reduce traction.

Trusses: Must be inspected to make sure that they are straight and show no signs of damage. Ensure that the platform index pins are straight and upright. The platform should fit squarely on the truss supports and engage the index pins.

Locks (on Trusses): Pins, spring and daisy wheel must be lightly lubricated whenever equipment is returned from use. Do not hammer lock pins. If lock sticks, clean, then grease lightly. Move the pin back and forth to free movement.









End Frames: Must be inspected to make sure that they are straight and free from damage. Inspect the horizontal ladder rungs to check if they have been damaged. Inspect the stacking pins to ensure that they are straight and upright. Check the index holes to ensure they do not show any excessive wear.

Casters: Must be checked for worn or damaged wheels. Wheels should spin freely and bearing races should turn freely and smoothly. Brake should be able to engage locking both the wheel and the swivel. Each caster should have a "U-Pin" to affix the caster to the end frame. Do not use the scaffold if the caster is not affixed to the end frame with a "U-Pin".

Guardrail: Must be straight and free from damage. Gates, at each end, should open freely. Toe-board should be intact.

Outriggers (Optional): Ensure that the outriggers are free from damage and that each outrigger can be securely affixed to the end frame.

Accessories and Replacement Parts

Model #	Description	Weight (Lbs)	Shipping Dimension	
FRS600HD	Kit	153	9"x29"x6'	
-The FRS600HD comes complete with: 1-hatch platform deck; 2 end frames; 2 trusses; 4-5" casters				
FRS600-01	End Frame	26	2"x29"x6'	
FRS600-02	Guardrail	87	2"x49"x6'	
FRS600-03	Outrigger	7	2"x18"x19"	
FRS600-05	5" Caster	5	3"x7"x11"	
FRS600-14	Hatch Plydeck	35	3"x29"x6'	
FRS600-08	Truss	24	2"x18"x6'	
FRS600-10	L-Pin	.14		
FRS600-12	U-Pin	.13		