

OWNER'S MANUAL

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UNIVERSAL MODULAR PLATFORM SYSTEM

 **WARNING! READ CAREFULLY AND UNDERSTAND ALL INSTRUCTIONS BEFORE STARTING INSTALLATION. FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN DEATH OR SERIOUS PERSONAL INJURY.**

IMPORTANT

- Equipment should not be altered or modified from its original design without consultation with the manufacturer.
- Equipment which is damaged or becomes damaged during use, handling, or shipping should be set aside and not used.

 • **WARNING! Failure to anchor unit properly with the correct layout dimensions can result in product damage not covered under warranty – product is not designed to be self supported without anchor bolts. Failure to secure all fasteners may result in death or serious personal injury.**

- Do not assemble unit off of anchor bolts and then lift onto them. System should only be assembled in its final location. Never move an assembled system.

 • **WARNING! Backing plates must be used where designated in the instruction manual. Failure to use backing plates where designated may cause equipment to fail and may result in death or serious personal injury.**

TORQUE DATA:

All ½” bolted connections = 678 in-lbs. (56 ft-lbs.) lubricated or 904 in-lbs. (75 ft-lbs.) dry +/-10%.

For 5/8” anchor bolts = 900 in-lbs. (75 ft-lbs.) lubricated or 1080 in-lbs. (90 ft-lbs.) dry +/-10%.

Use of impact wrenches NOT sanctioned.



 • **WARNING! After a usage period of 60-90 days, check all fasteners to ensure connections are secure. Periodic inspection is recommended to insure all fasteners are secured. Failure to secure all fasteners may result in death or serious personal injury.**



UNIVERSAL MODULAR PLATFORM SYSTEM

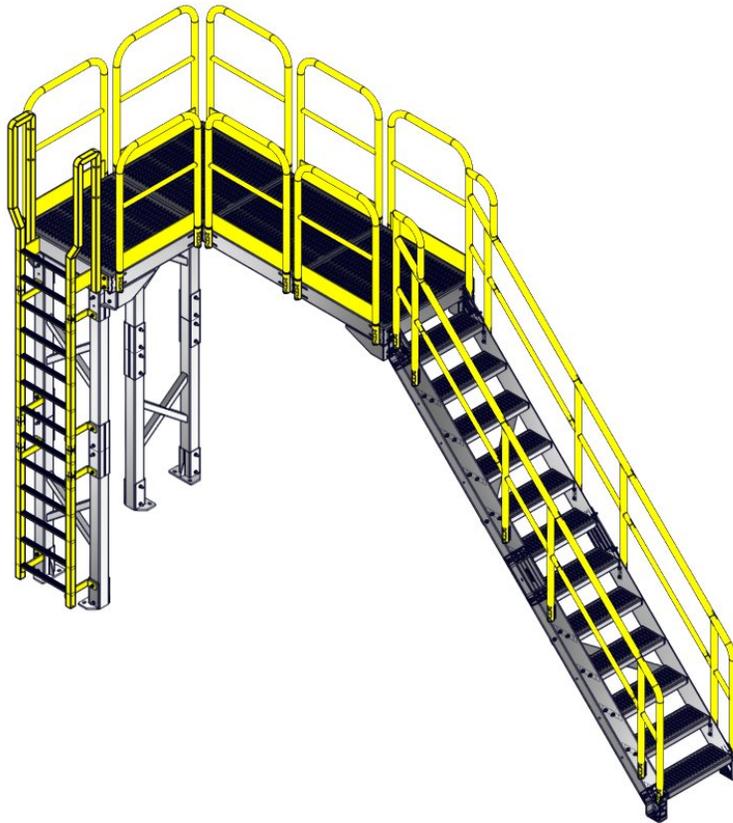
ASSEMBLY CRITERIA

Verify proper installation according to ErectASStep installation manual. In addition, make sure to check the following specifically.

- Ensure all anchor bolts are installed properly at the stair base and tower.
- Ensure leading edge of platform and stair gusset are flush.
- Ensure tower is vertically plumb.
- Ensure all bolts are properly tightened according to ErectASStep installation manual.
 - No impact wrenches are to be used – tighten all bolts by hand.
- Ensure that stair guardrail posts are vertically plumb.



UNIVERSAL MODULAR PLATFORM SYSTEM



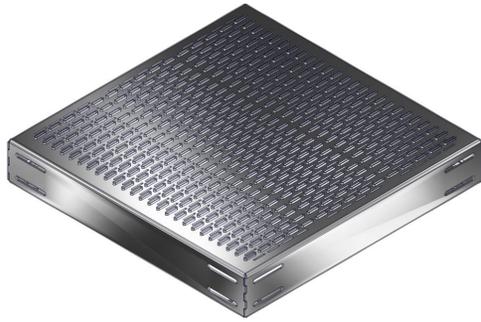
INTRODUCTION:

ErectASStep modular platform and stair systems are pre-engineered and designed for unlimited configurations. This universal design allows for optimum flexibility to gain access and egress over and/or around obstructions, equipment, walls, etc.

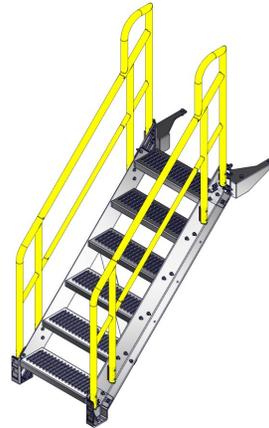
ErectASStep uses only the highest quality material in the construction of its modular system to ensure the quality, strength, and dependability for years. It is very important to follow configuration guidelines and installation instructions for your ErectASStep system. Design limitations can exist with respect to required supports, adequate footings, and prescribed application.

 **ERECTASTEP®**

COMPONENTS



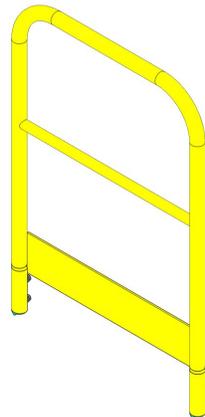
PLATFORMS



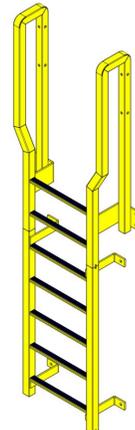
STAIR UNITS



TOWER SUPPORTS



HANDRAILS

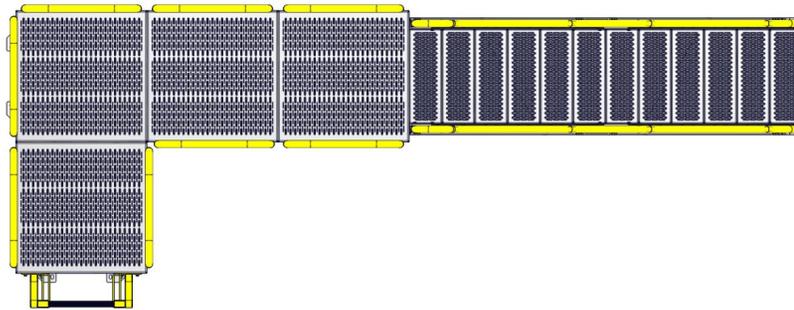


LADDERS

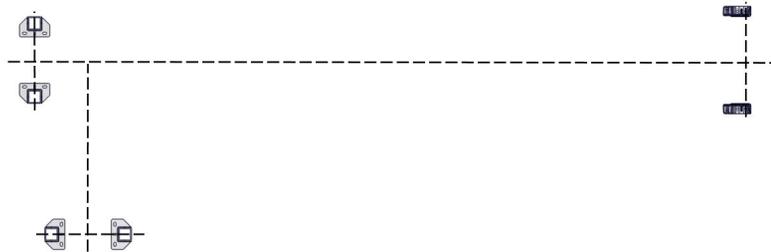
- Complimentary tool kit included in shipment.
- Min 2 people are recommended for assembly.
- Forklifts or cranes may be required based on height and complexity of assembly configuration.



SYSTEM ANCHOR LAYOUT



PLAN VIEW



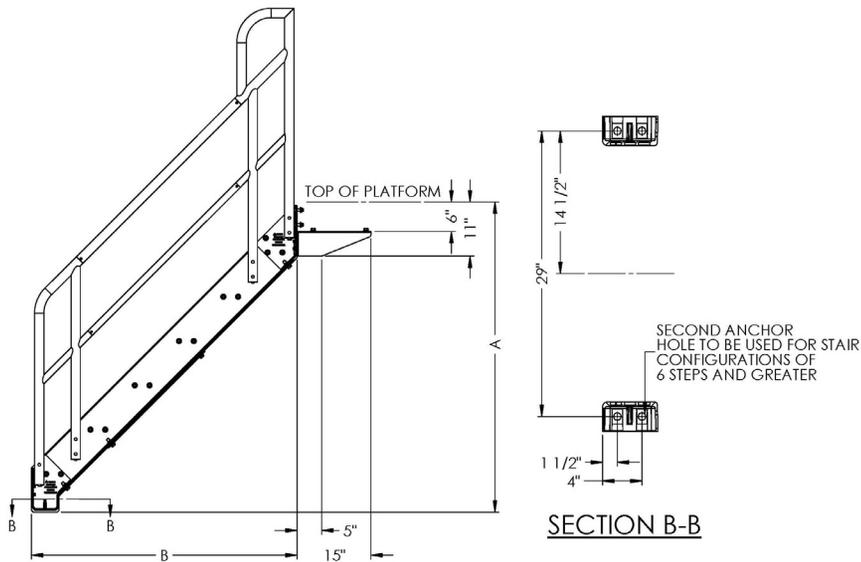
PAD LAYOUT

ANCHOR BOLT POSITION

- Anchor bolt positions should be laid out by mathematically calculating positions of anchors. (see component anchor layout or ErectASStep configurator pad layout for your system)
- **NOTICE - Four anchor bolts required for stair unit when six step or greater.**
- Layout area for location of your ErectASStep system using measuring tape and chalk lines, keeping anchor lines square and parallel.
- Drill or wet set anchor bolts in the mathematically correct location prior to assembly. Follow any curing procedures recommended by your concrete/anchor bolt supplier.
- Using a level slab/foundation is recommended for anchoring the ErectASStep unit to achieve a good contact point between the bottom of the stairs/supports and the concrete in lieu of utilizing leveling anchors and shims.
- Once pad layout is complete and you are ready to assemble unit, continue with instructions. Assemble unit on anchor bolts starting with supports, stairs and then connecting platforms, handrails, gussets, etc.
- **NOTICE - Do not assemble unit off of anchor bolts and then lift onto them. System should only be assembled in its final location. Never move an assembled system.**



COMPONENT ANCHOR LAYOUT



Stair Unit

5/8" diameter anchor bolts required for 3/4" diameter holes in base plate.

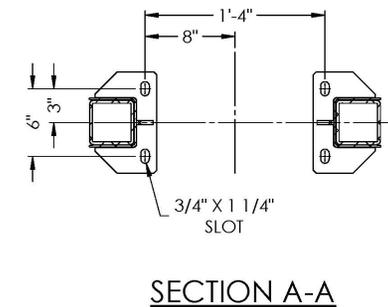
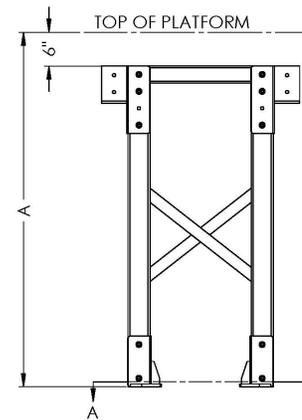
Two (2) anchor bolts required for units less than 6 step.

Four (4) anchor bolts required per stair unit for 6 step stair units and greater.

Dimensions:

$$A = B + 9"$$

$$B = \# \text{ of step} \times 9"$$



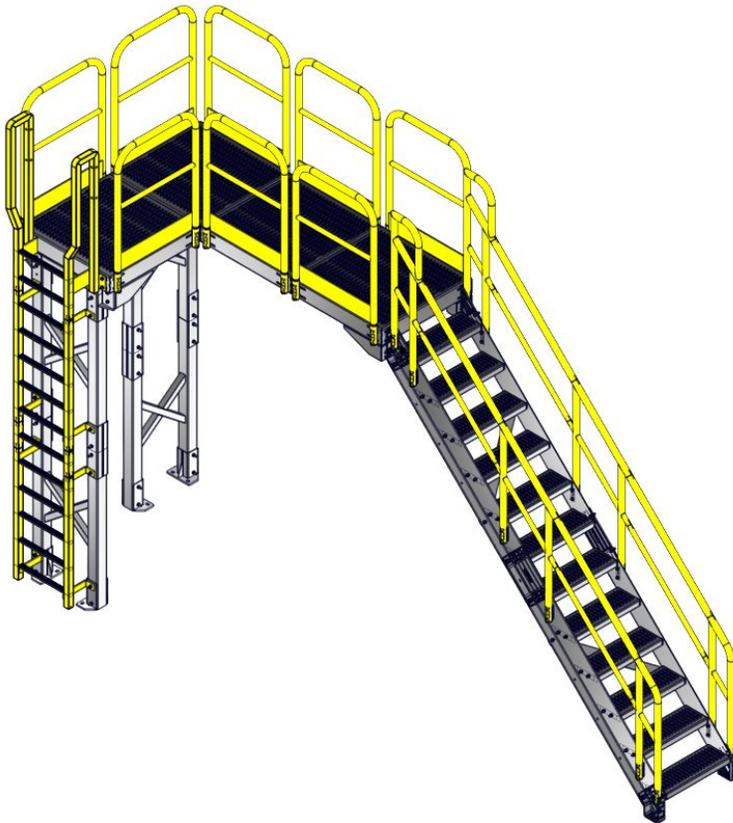
Tower Supports

5/8" diameter anchor bolts required for 3/4" x 1 1/4" slots in base plate.

Four (4) anchors required per tower.



STACKING COMBINATIONS



STACKING

Three thru six step towers, ladders and stairs can be stacked to create systems taller than six steps. See samples below:

7 step = 4 step + 3 step

8 step = 5 step + 3 step
= 4 step + 4 step

9 step = 5 step + 4 step

.....

12 step = 6 step + 6 step
= 4 step + 4 step + 4 step

Recommended larger step sections positioned at bottom of stacked sections.



WARNING!

15 step is maximum size without special stair rules. For 16 step thru 20 step, see ErectAStep configurator or sales representative. Failure to adhere to special stair rules may result in death or serious injury.

NOTICE:

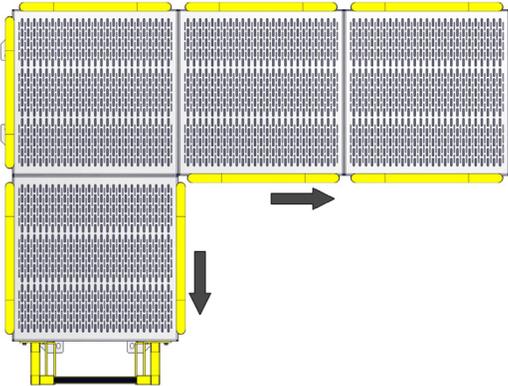
One and two step towers, ladders and stairs are not used in stacking.

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PLATFORM SLOT USAGE



Platforms are designed with slots to allow for adjusting positions of handrails and stair units.



CAUTION!
Certain configurations can create pinch points.

Platform slot design allows for mounting adjustments to deter pinch points.

Handrails or stair units can make use of these slots in order to avoid pinch points.

NOTICE: Be sure to account for dimensional change in anchor bolt layout when sliding stair unit over.



TOWER COMPONENTS

1 AND 2 STEP



Tower order part numbers

1 Step – Part #90011

2 Step – Part #90012

Hardware kit for 1 or 2 Step

Part #55996

NOTICE: 1 and 2 steps can not be used
when stacking towers.

 **ERECTA STEP**[®]

TOWER COMPONENTS

3 THRU 6 STEP

ES-TOWER-HARDWARE KIT-3 THRU 6
55997

ES-TOWER-PLT-BRACKET-RIGHT
54302

ES-TOWER-U-BRACKET-UPPER
54276

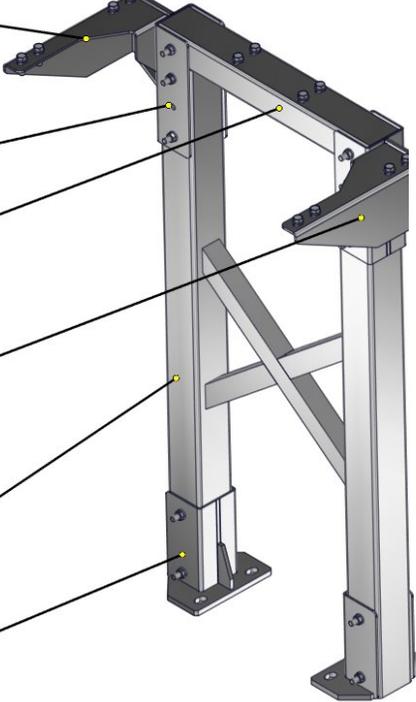
ES-TOWER-TOP-HORZ-TUBE
52557

ES-TOWER-PLT-BRACKET-LEFT
54303

ES-TOWER-VERTICAL-TUBE-6-STEP
54289

ES-TOWER-BASE WELDMENT
52559

ES-TOWER-MID-U-BRACKET
52556
ONLY USED IN STACKED
CONFIGURATIONS



TOWER ORDER NUMBERS

- 3 Step – Part #90013
- 4 Step – Part #90014
- 5 Step – Part #90015
- 6 Step – Part #90016

Some components may ship pre-assembled.



TOWER INSTRUCTIONS

SINGLE / STACKED



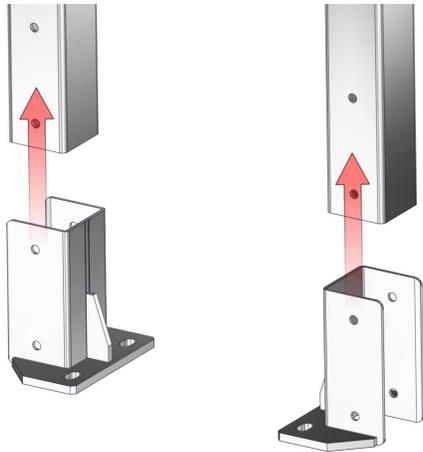
SINGLE
CONFIGURATION



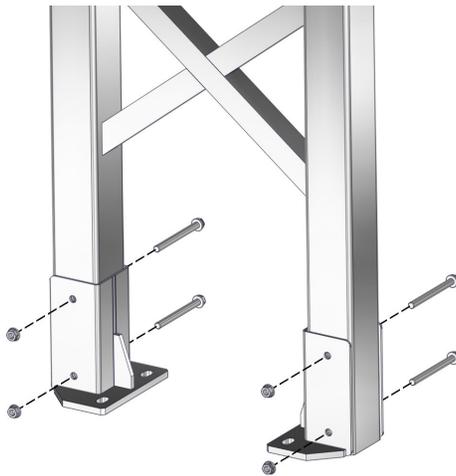
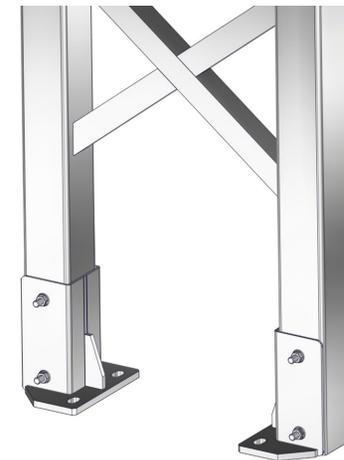
STACKED
CONFIGURATION



TOWER INSTRUCTIONS - BASE



STEP 1: Orient components as shown.

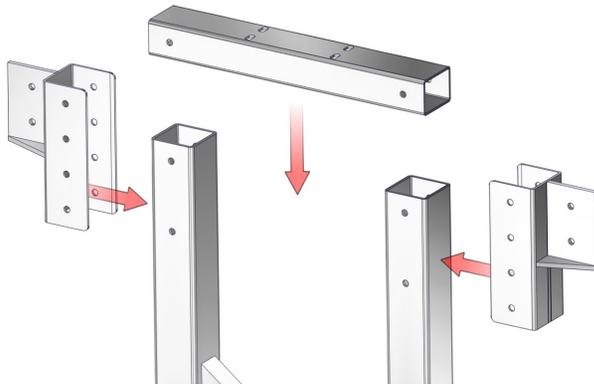


STEP 2: Attach hardware as shown and tighten hardware.

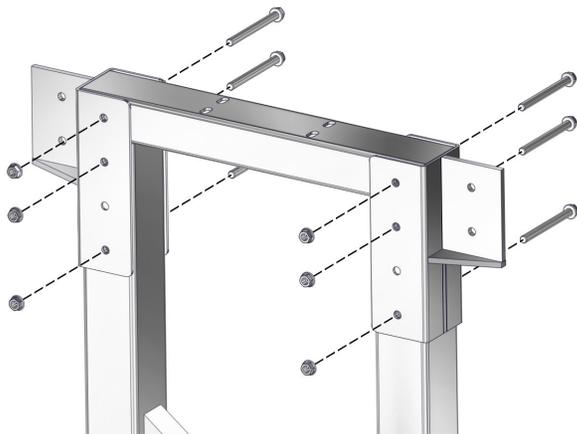
NOTICE: Some components may ship pre-assembled. Disassemble base from tower if used as middle or upper section when stacking.

 ERECTA STEP®

TOWER INSTRUCTIONS – TOP MEMBER



STEP 3: Orient components as shown.

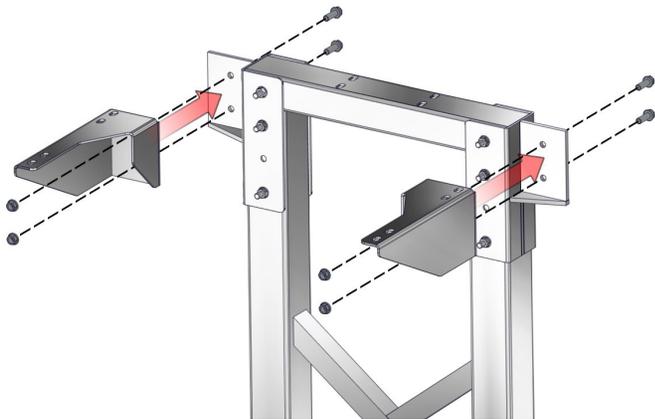


STEP 4: Attach hardware and tighten as shown.

NOTICE: Some components may ship pre-assembled. Disassemble top member from tower if used as middle or lower section of stacking.

ERECTA STEP®

TOWER INSTRUCTIONS – TOP BRACKETS



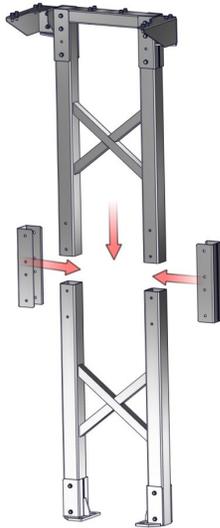
STEP 5: Orient components and add hardware as shown.

STEP 6: Tighten hardware.

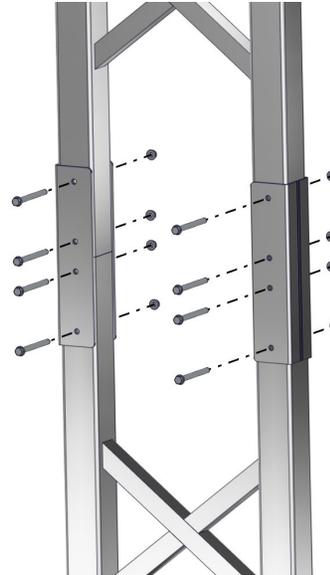


 **ERECTA STEP**[®]

TOWER INSTRUCTIONS – STACKED SECTION



STEP 1: Orient components as needed for the desired tower height.



STEP 2: At each stacked section joint, attach brackets and add hardware as shown and tighten hardware.



See previous sheets for instruction on base, top member, and top bracket connections.

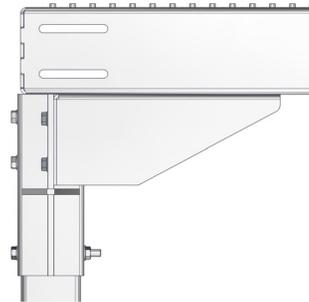
NOTICE: If ladder assembly is to be attached to the tower, this should be done at this time prior to installation at final anchor location (for ease of installation).

E ERECTA STEP®

TOWER/PLATFORM CONNECTIONS

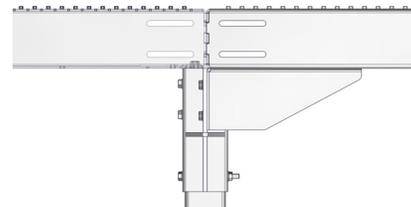
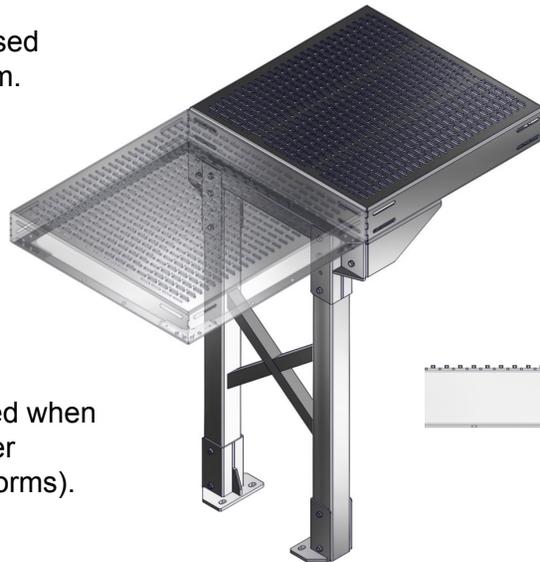


Flush bolting arrangement used when supporting one platform.



Bolting diagram
Flush bolting (shown) uses outside set of holes in tower.

Split bolting arrangement used when supporting two platform (tower located at joint between platforms).

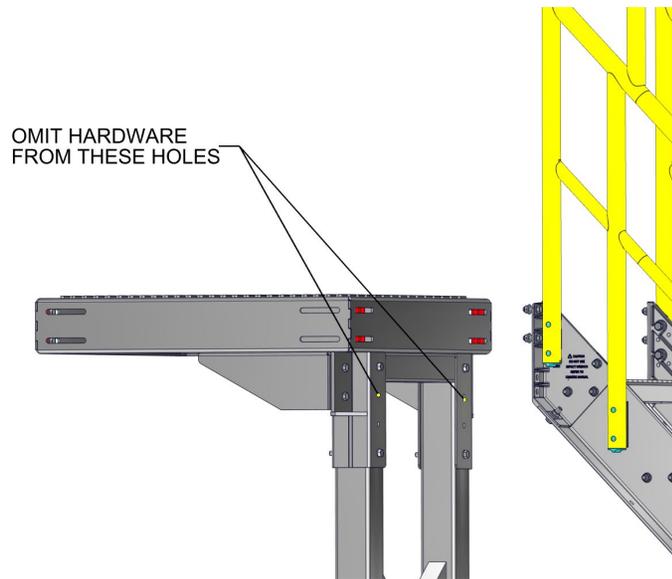


Split bolting uses inside set of holes in tower.

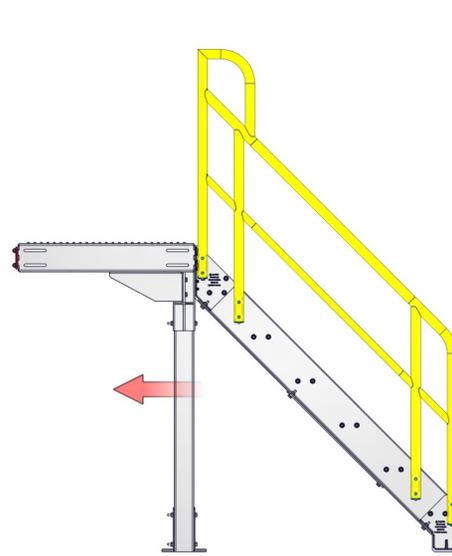
NOTICE: Bolt orientation should be with bolt head up.



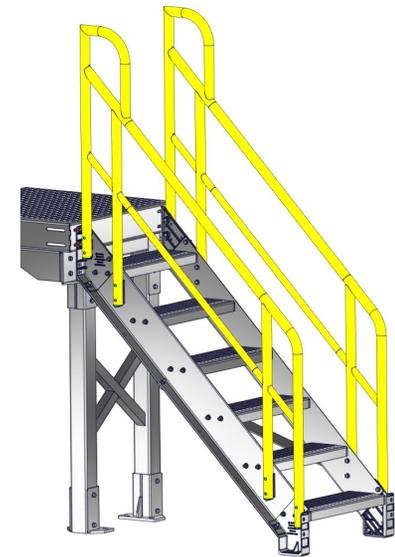
TOWER/PLATFORM CONNECTIONS



When tower and stairs are both used at the end of a platform, omit indicated hardware from tower assembly. These bolts will interfere with top step of stair unit.



Tower base plate and top cross member are slotted. Slide the tower as indicated to allow for flush mount of the stair unit to the platform.

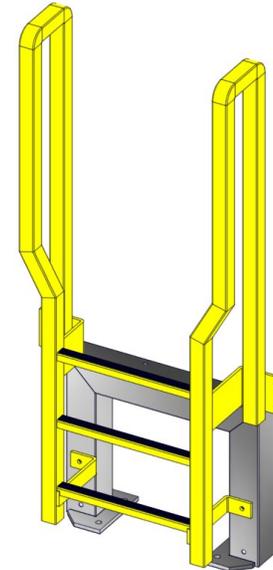
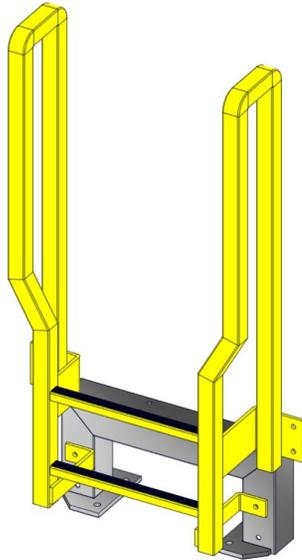


Notice: Stair unit brackets will not be used in this configuration.

ERECTA STEP®

LADDER/TOWER COMPONENTS

1 AND 2 STEP



Ladder/tower order part numbers

1 Step – Part #90031

2 Step – Part #90032

Hardware kit for 1 or 2 Step

Part #55988

**NOTICE: 1 and 2 steps can not be used
when stacking ladders.**

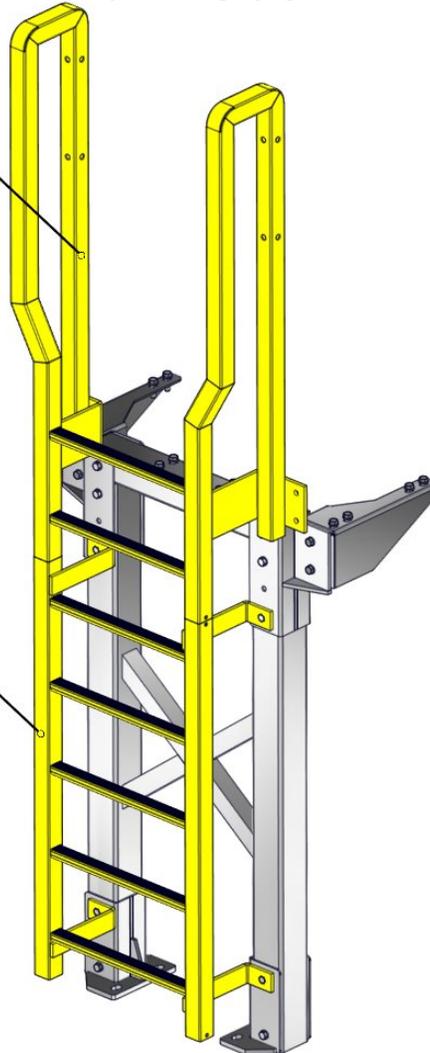
 **ERECTA STEP®**

LADDER/TOWER COMPONENTS

3 THRU 6 STEP

ES-LADDER-UPPER SECTION-WELD

ES-LADDER-SECT-6-STEP-WELD



Ladder/tower order part numbers

3 Step – Part #90033

4 Step – Part #90034

5 Step – Part #90035

6 Step – Part #90036

Hardware kit for 3 thru 6 step

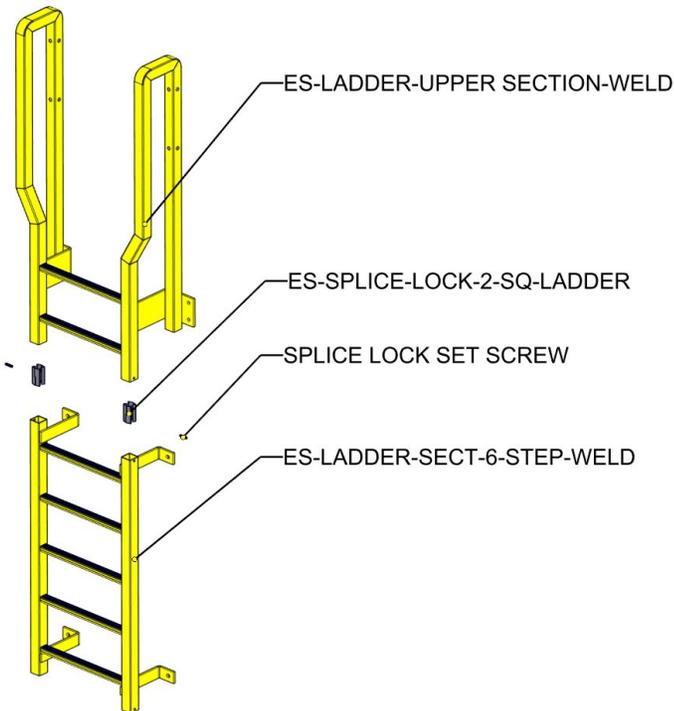
Part #55995

See tower instructions for
tower section of ladder/tower
unit.

ERECTA STEP®

LADDER INSTRUCTIONS

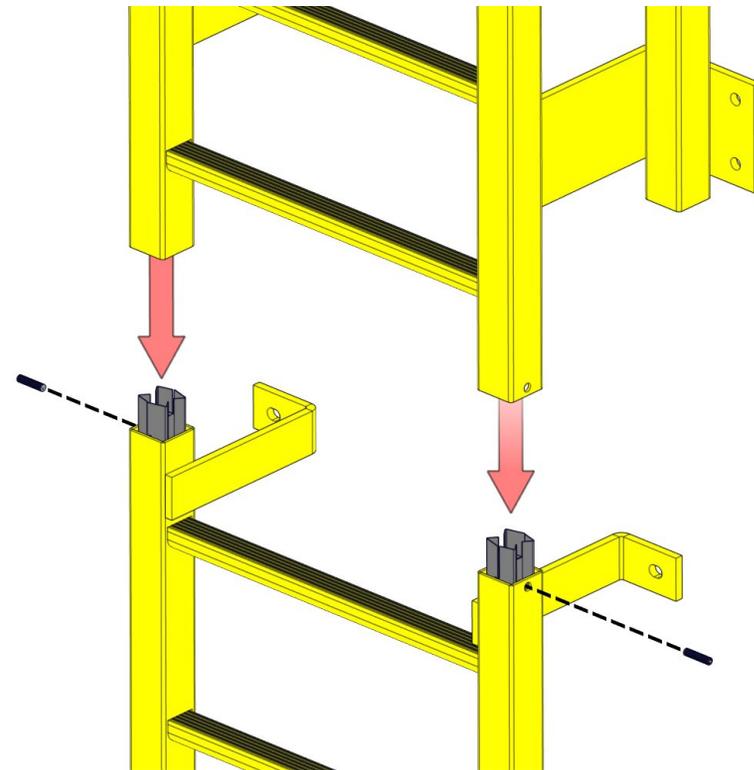
LADDER CONFIGURATION 3 STEP THRU 6 STEP ASSEMBLY



NOTICE: May ease erection by mounting ladder to tower during tower assembly prior to setting towers.

STEP 1

Orient components as shown for non-stacked sections (3 thru 6 step).



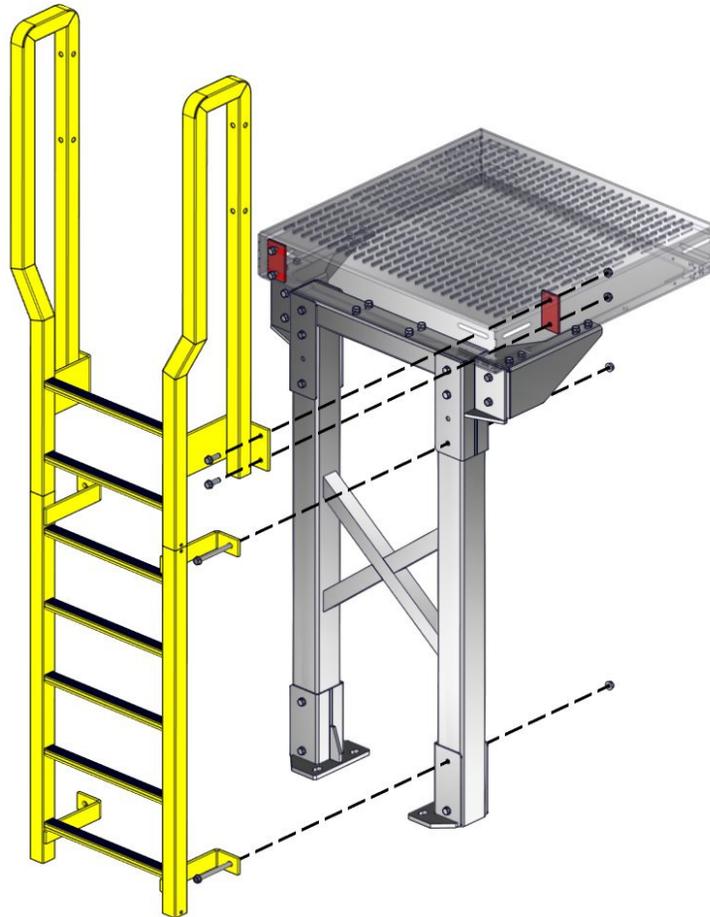
STEP 2

With set screw removed, slide couplers into lower section, insert set screw thru hole of lower section and loosely secure. Then slide upper section over couplers and secure by tightening both set screws.

ERECTA STEP®

LADDER/TOWER INSTRUCTIONS

LADDER CONFIGURATION 3 STEP THRU 6 STEP ASSEMBLY



STEP 3:

Attach assembled ladder to tower as shown. Upper hardware will attach to platform. Tighten hardware both sides of ladder (only one side shown).

NOTICE: Ladder step size must match tower size in order for mounting holes to line up.

NOTICE: Backing plates supplied with platform

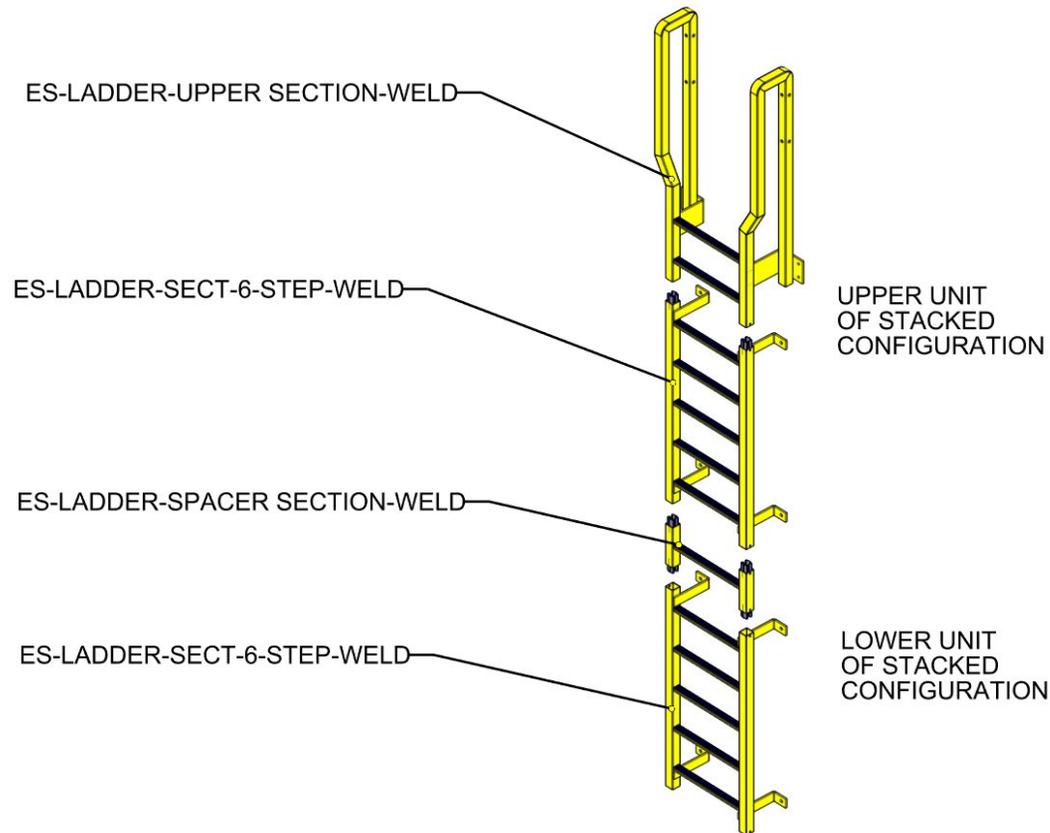


WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

ERECTA STEP®

LADDER INSTRUCTIONS

LADDER CONFIGURATION STACKED ASSEMBLIES (GREATER THAN 6 STEP)



STEP 1:

Orient components as shown for stacked assemblies. (See instructions for connecting ladder sections.)

NOTICE: Ladder step size configuration must match tower size configuration in order for mounting holes to line up.

Example: If tower is configured as 6 step on bottom and 4 step on top, then lower unit of ladder must be 6 step and upper unit of ladder must be a 4 step.

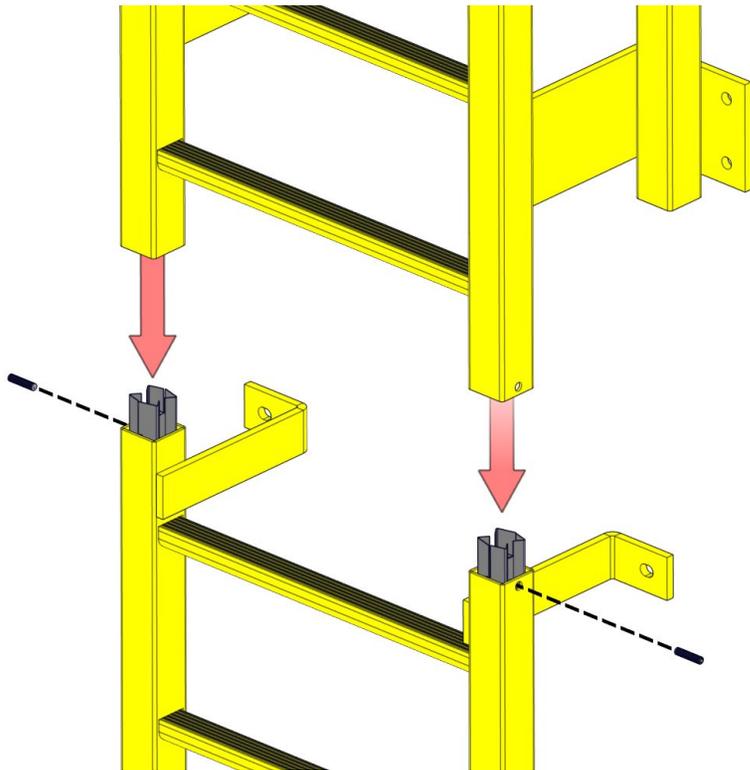
NOTICE: Ladder spacer section is only used between stacked units.

NOTICE: May ease erection by mounting ladder to tower during tower assembly prior to setting towers.



LADDER INSTRUCTIONS

LADDER CONFIGURATION STACKED ASSEMBLIES (GREATER THAN 6 STEP)



STEP 2

With set screw removed, slide couplers into lower section, insert set screw thru hole of lower section and loosely secure. Then slide upper section over couplers and secure by tightening set screw.

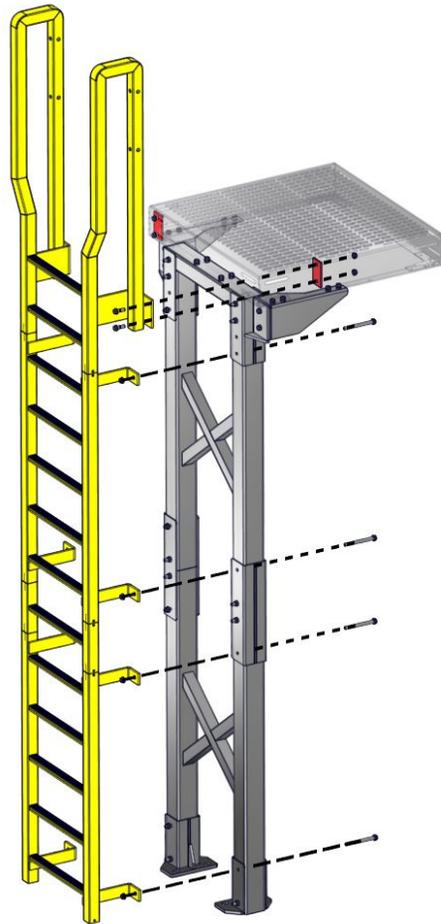
NOTICE:

Repeat procedure for every ladder joint.

 ERECTA STEP®

LADDER/TOWER INSTRUCTIONS

LADDER CONFIGURATION STACKED ASSEMBLIES (GREATER THAN 6 STEP)



STEP 3:

Attach assembled ladder to tower as shown. Upper hardware will attach to platform. Tighten hardware both sides of ladder (only one side shown).

NOTICE: Ladder step size configuration must match tower size configuration in order for mounting holes to line up.

Example: If tower is configured as 6 step on bottom and 4 step on top, then lower unit of ladder must be 6 step and upper unit of ladder must be a 4 step.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

ERECTA STEP®

STAIR COMPONENTS

1 AND 2 STEP



Stair order part numbers

1 Step – Part #90001

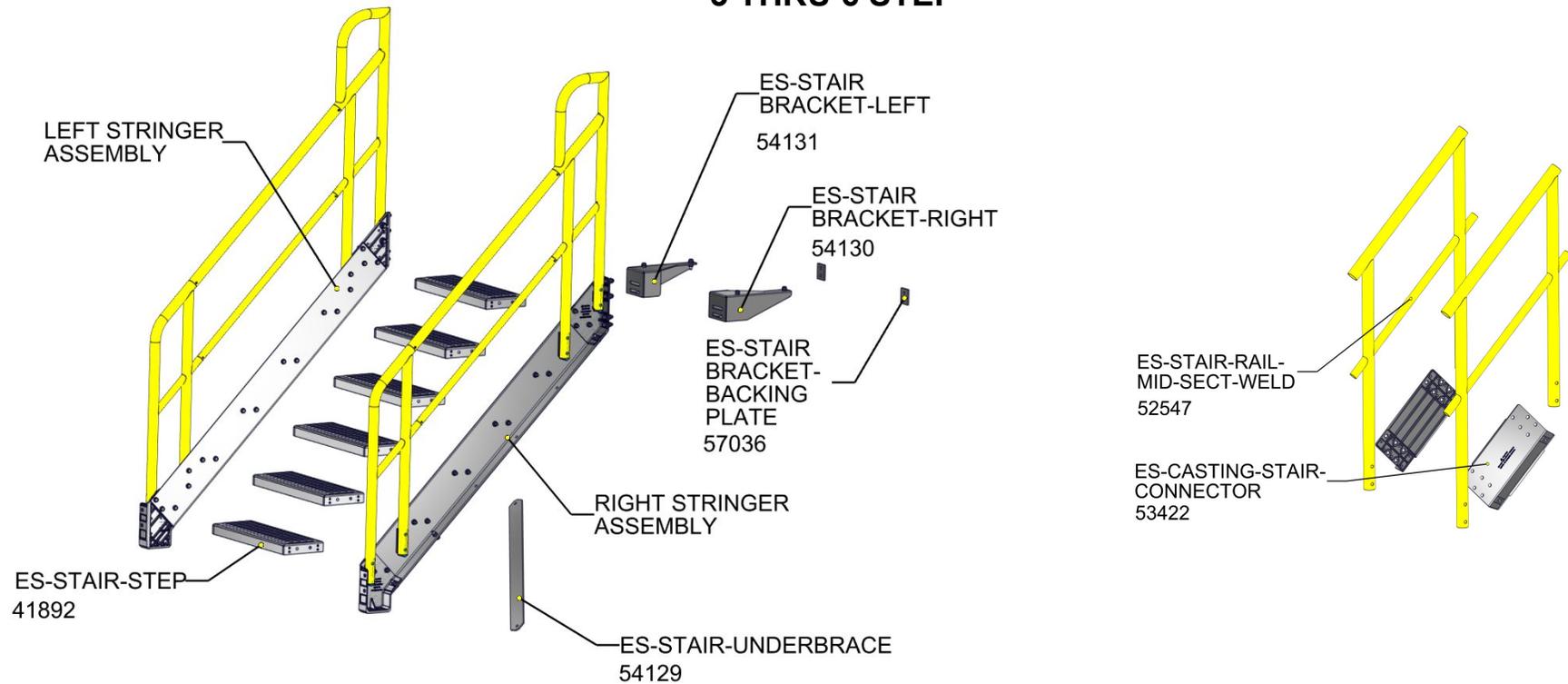
2 Step – Part #90002

NOTICE: 1 and 2 steps not used when stacking stairs.

 **ERECTA STEP**[®]

STAIR COMPONENTS

3 THRU 6 STEP



Stair order part numbers

3 Step – Part #90003

4 Step – Part #90004

5 Step – Part #90005

6 Step – Part #90006

Hardware kit for 3 thru 6 step - Part #56000

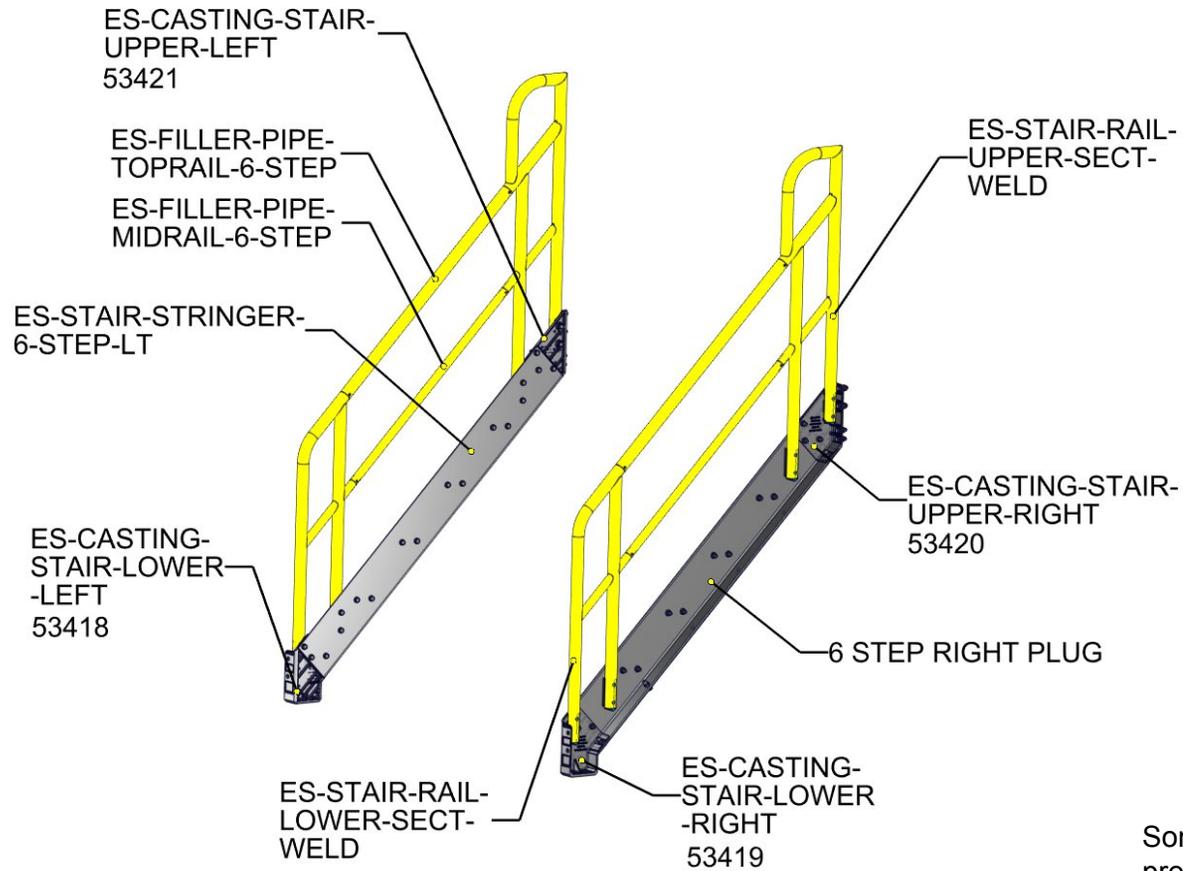
Some components may ship pre-assembled.

NOTICE: Stair rail mid section and casting stair connectors are only used in stacking configurations.

ERECTA STEP®

STAIR COMPONENTS

3 THRU 6 STEP (CON'T)

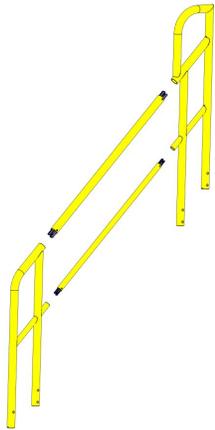


Some components may ship pre-assembled.

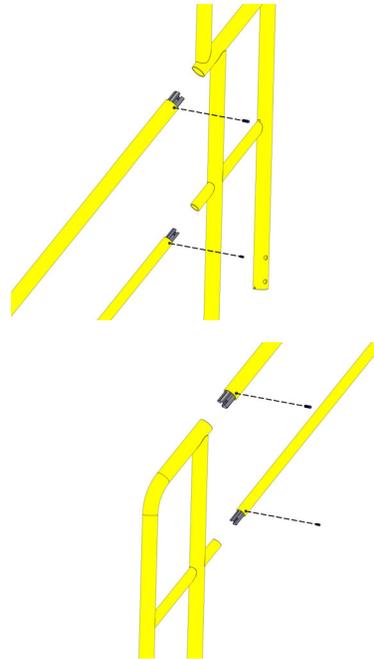


STAIR RAIL INSTRUCTIONS

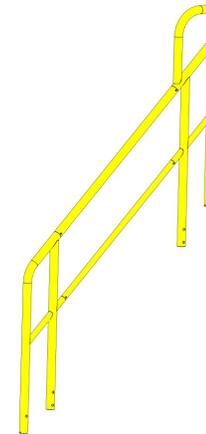
3 THRU 6 STEP



STEP 1
Orient components as shown.



STEP 2
Insert pipe couplers into the filler pipes.
Insert coupler set screw and loosely tighten.

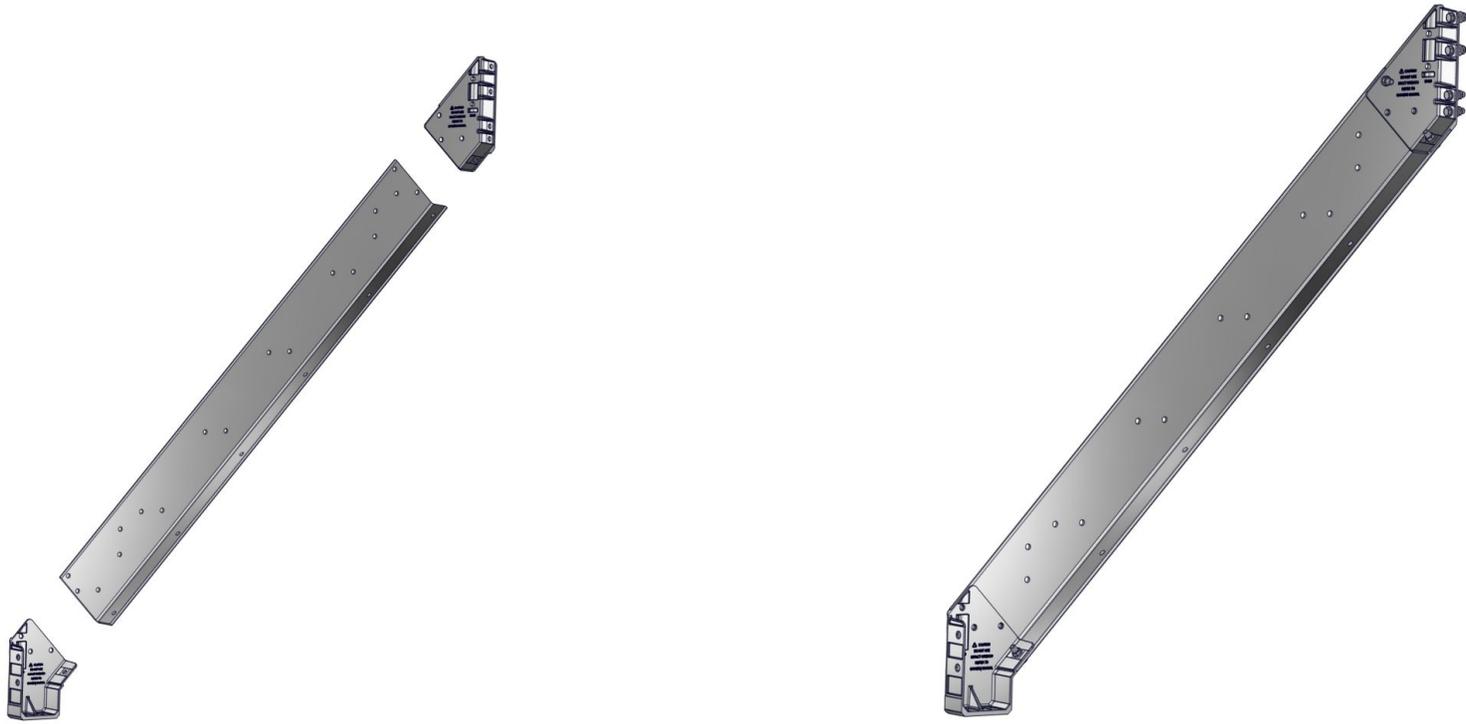


STEP 3
Slide all components together, then securely tighten coupler set screw.

 **ERECTA STEP**[®]

STAIR STRINGER INSTRUCTIONS

3 THRU 6 STEP



Orient components as shown.

Insert and securely tighten hardware (see next sheet for detailed views).



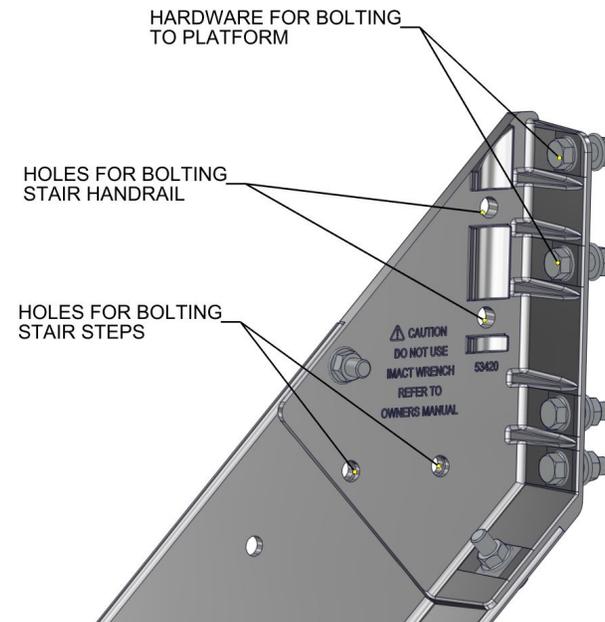
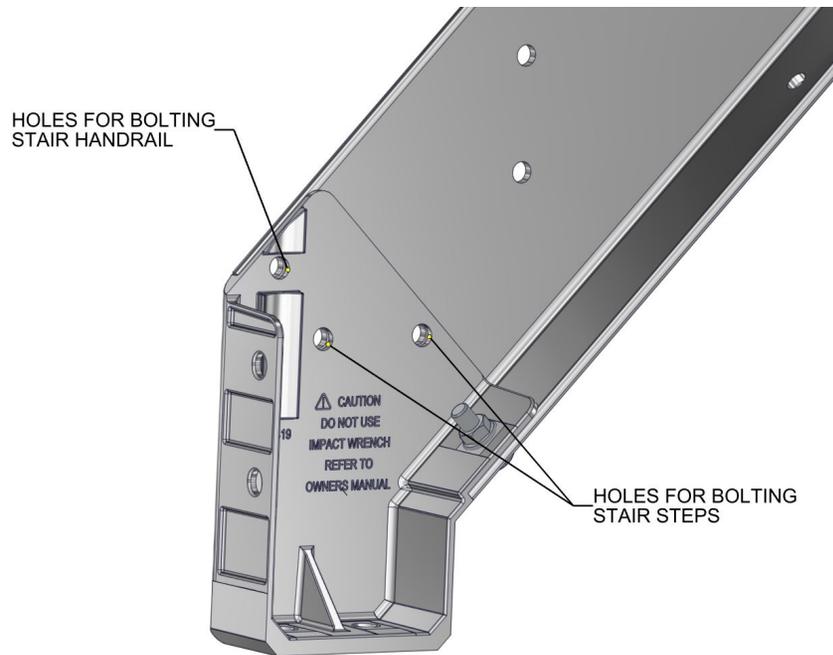
WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

Some components may ship pre-assembled.



STAIR STRINGER INSTRUCTIONS

3 THRU 6 STEP



NOTICE:

Some holes are used to connect both casting to stringer as well as connect stair steps and/or handrails.

Hardware to bolt to platform must be inserted prior to installing stair handrails.

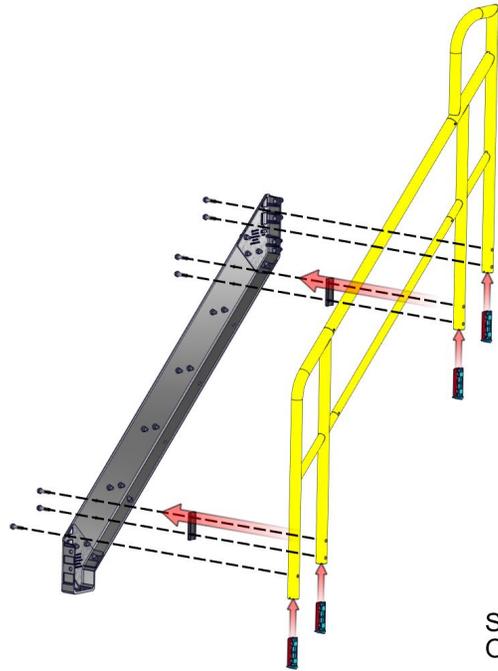


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

ERECTA STEP®

STRINGER/STAIR RAIL INSTRUCTIONS

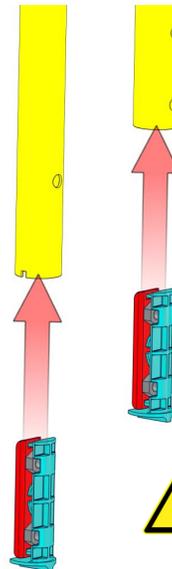
3 THRU 6 STEP



Some components may ship pre-assembled.

STRINGER SIDE OF HANDRAIL

STEEL SIDE OF INSERT FACE TOWARDS STRINGER



STEP 1

Slide rail insert into stair handrails.

Orient steel side towards stringer.

(May require tape to hold in place while assembling).

STEP 2

Position stair handrails on to stringer with handrail spacers (spacers only needed at stringer connection – castings have spacer incorporated).

STEP 3

Insert hardware and tighten hardware.

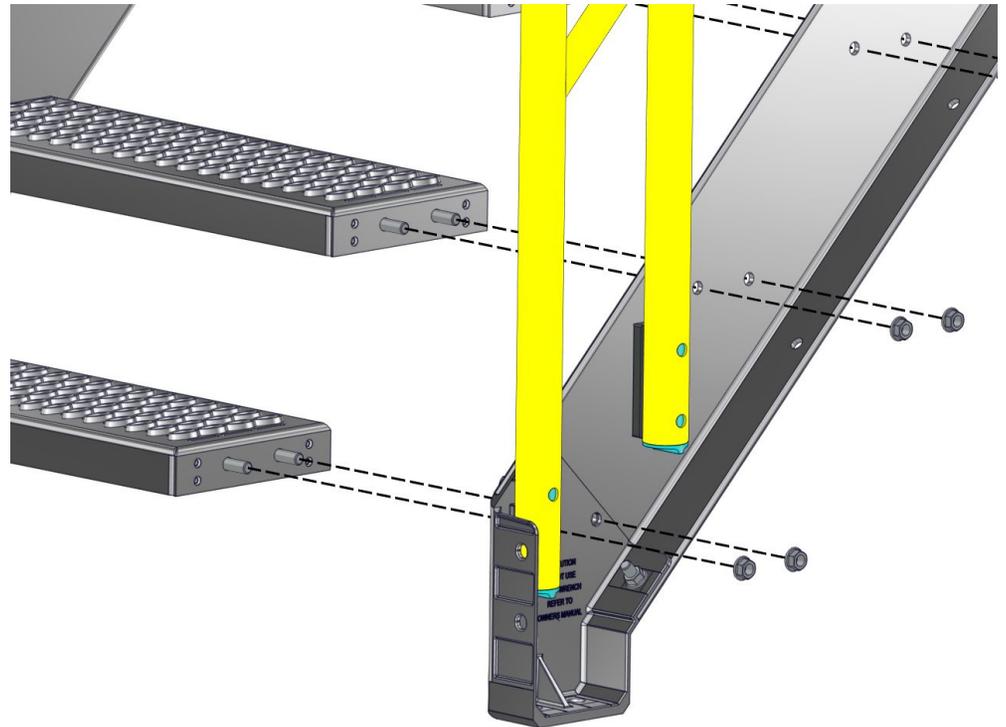
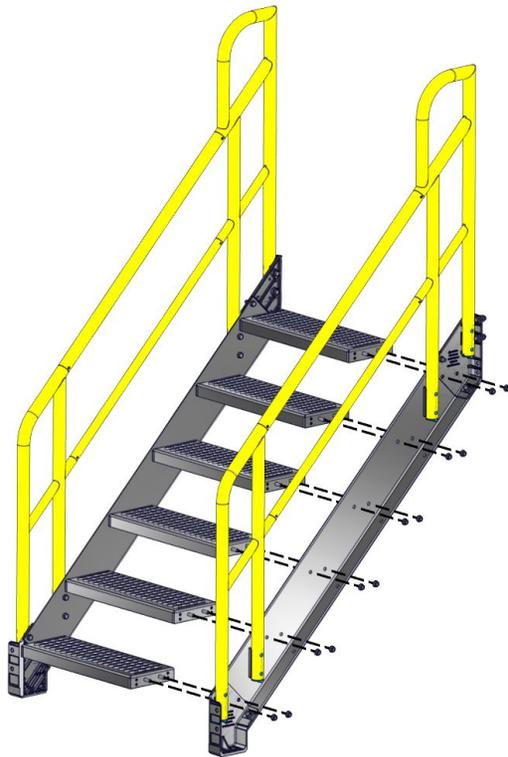


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

ERECTA STEP®

STAIR UNIT INSTRUCTIONS

3 THRU 6 STEP



STEP 1

Orient left and right stringer assembly sections as shown and bolt in all steps.

STEP 2

Securely tighten all step hardware.

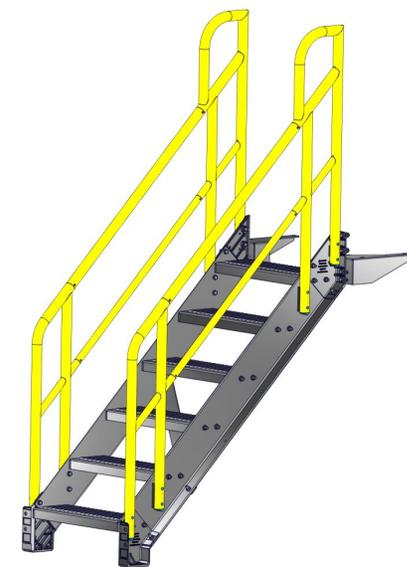
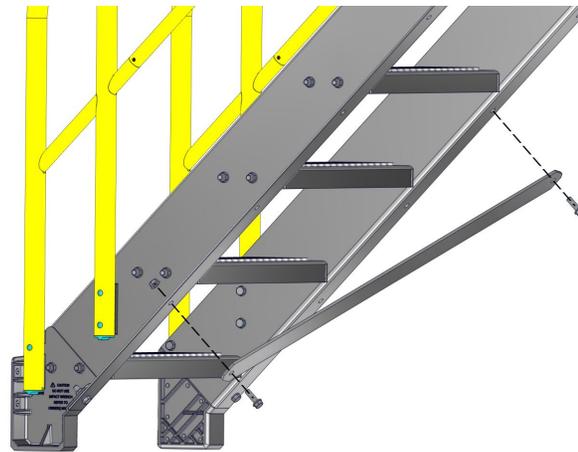
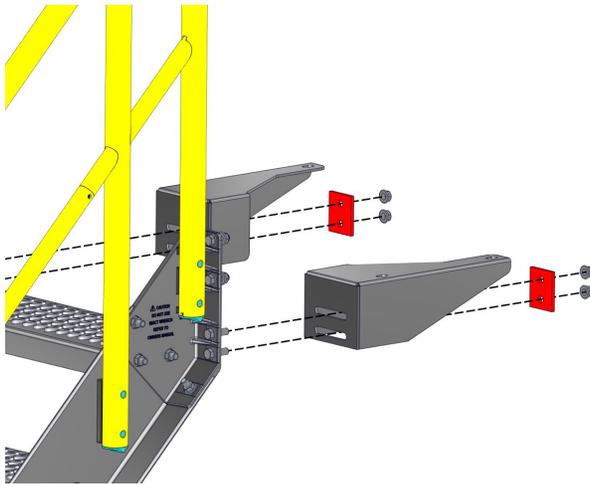


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

ERECTA STEP®

STAIR UNIT INSTRUCTIONS

3 THRU 6 STEP



STEP 3

Attach both left and right brackets with backing plate as shown and securely tighten hardware.

STEP 4

Attach cross brace under stairs as shown and securely tighten hardware. Position of cross brace should be in middle of stringer.



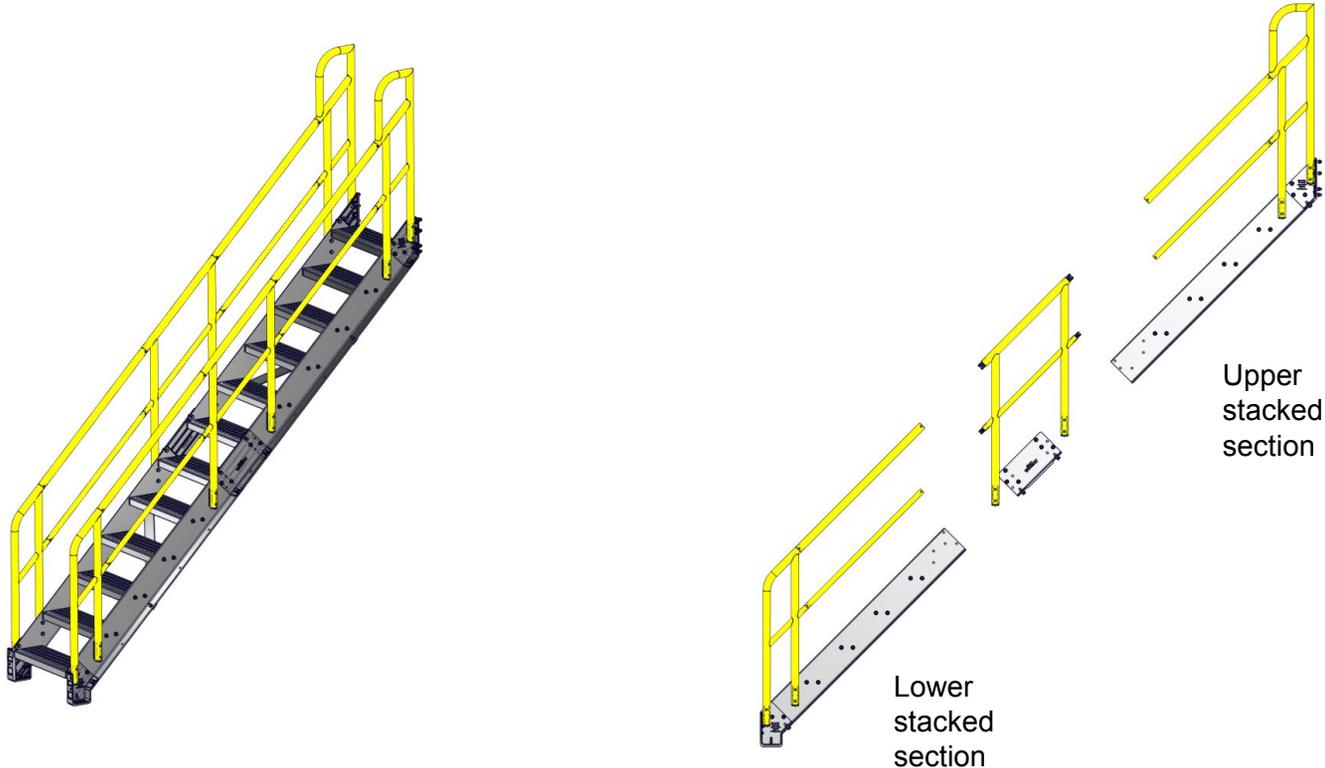
WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

NOTICE: The hardware orientation for stair cross braces should be installed with bolt head down to avoid injury when accessing under stair unit.

ERECTA STEP®

STAIR UNIT INSTRUCTIONS

STAIR CONFIGURATION STACKED ASSEMBLIES (GREATER THAN 6 STEP)



NOTICE:

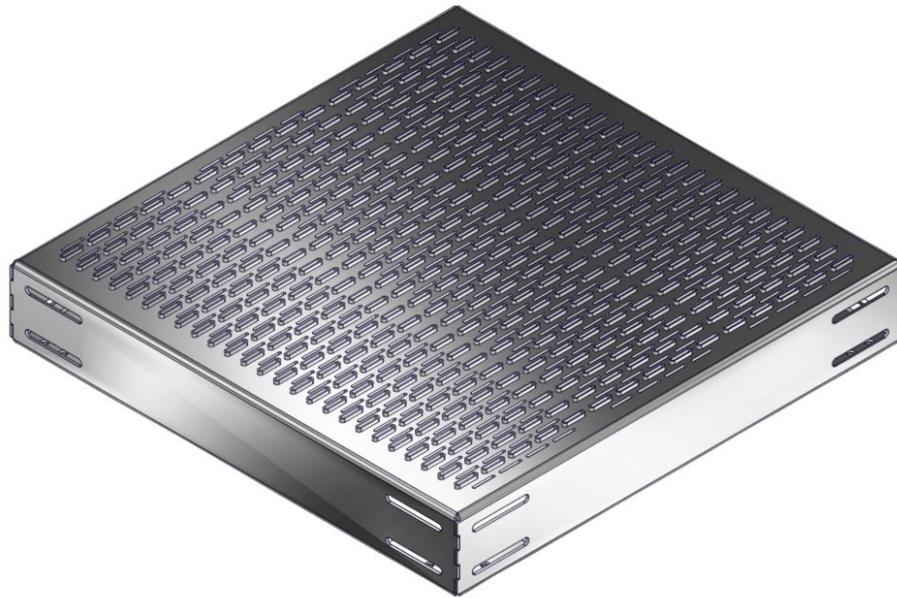
Follow all instructions for the 3 thru 6 step units.

However when stacking stair units, stinger and stair handrails are connected using the stair rail mid section and the casting stair connector between each stacked section.

Crossbrace under stairs should alternate direction from one stacked section to another.



PLATFORM COMPONENTS



PLATFORM

Platform order part number
Platform – Part #11394

Hardware kit for platform – Part #56003



PLATFORM
BACKING
PLATE



PLATFORM CONNECTIONS

PLATFORM TO PLATFORM

STEP 1

Align platforms as shown.

STEP 2

Insert hardware and tighten securely as shown.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

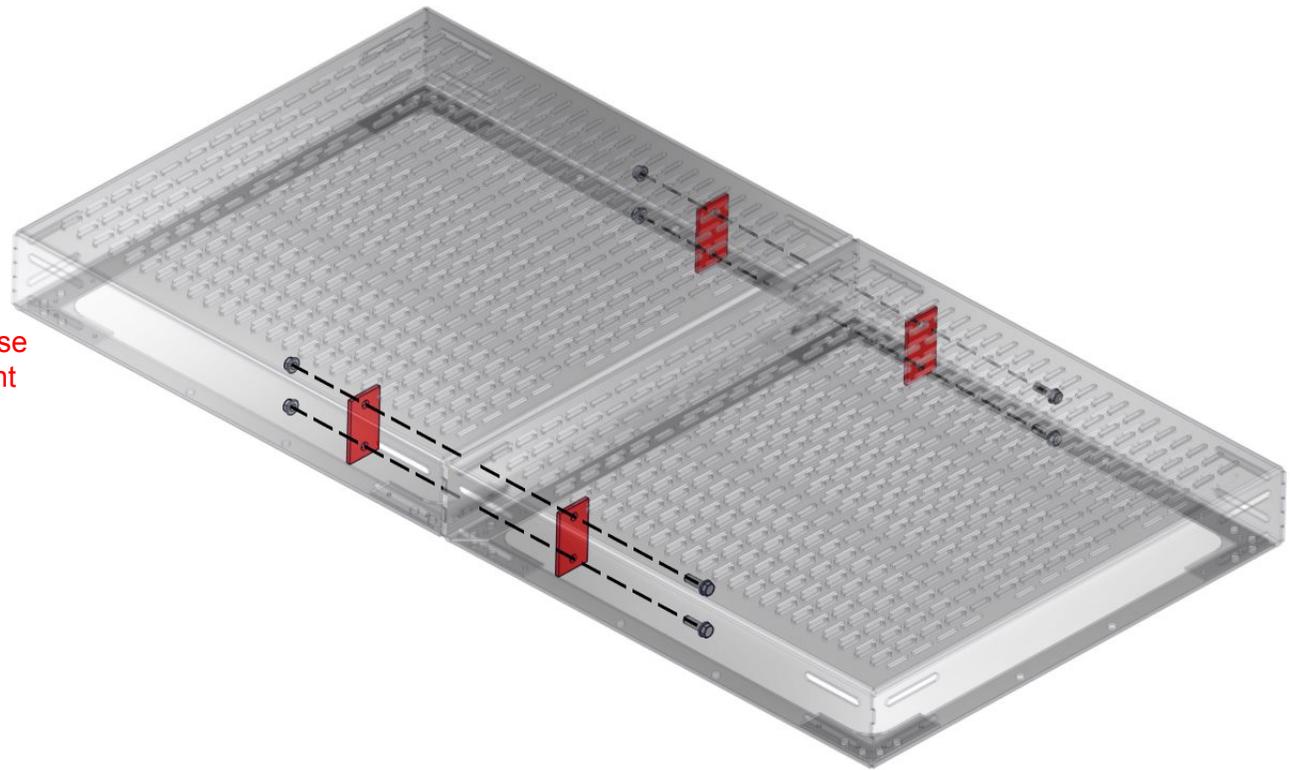
Position backing plates as close to platform corners as possible .

NOTICE:

No more than 3 platforms can be connected without supports.



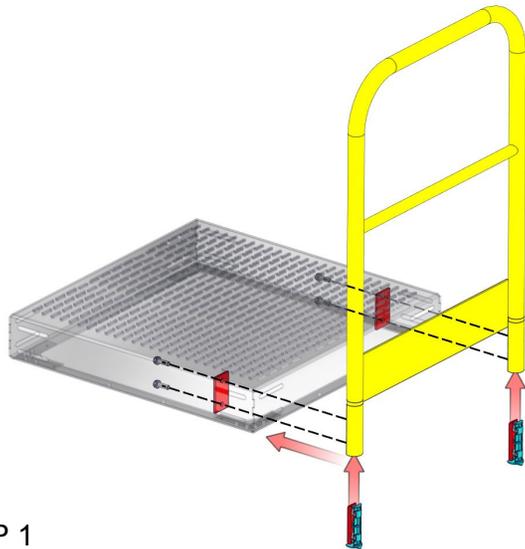
WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.



 **ERECTASTEP**[®]

PLATFORM CONNECTIONS

HANDRAIL TO PLATFORM



STEP 1

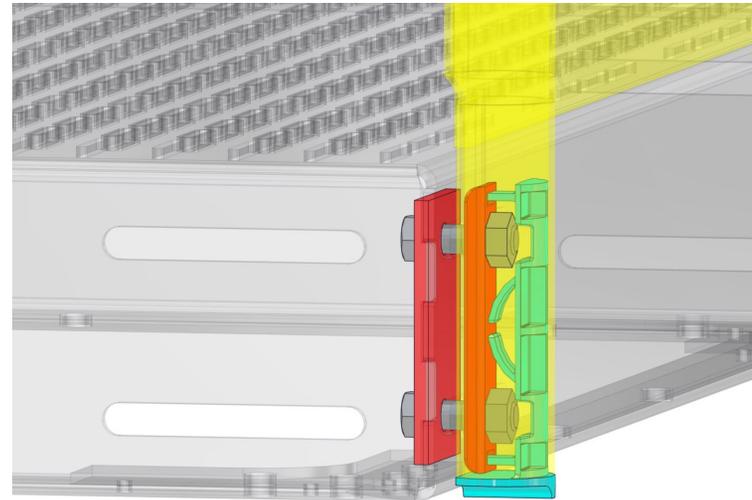
Slide rail insert into handrails. Orient steel side towards platform. May require tape to hold in place while assembling.

STEP 2

Position handrails on to platform as shown.

STEP 3

Insert hardware and tighten hardware.



NOTICE: Metal piece should be oriented so that nuts are facing plastic.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

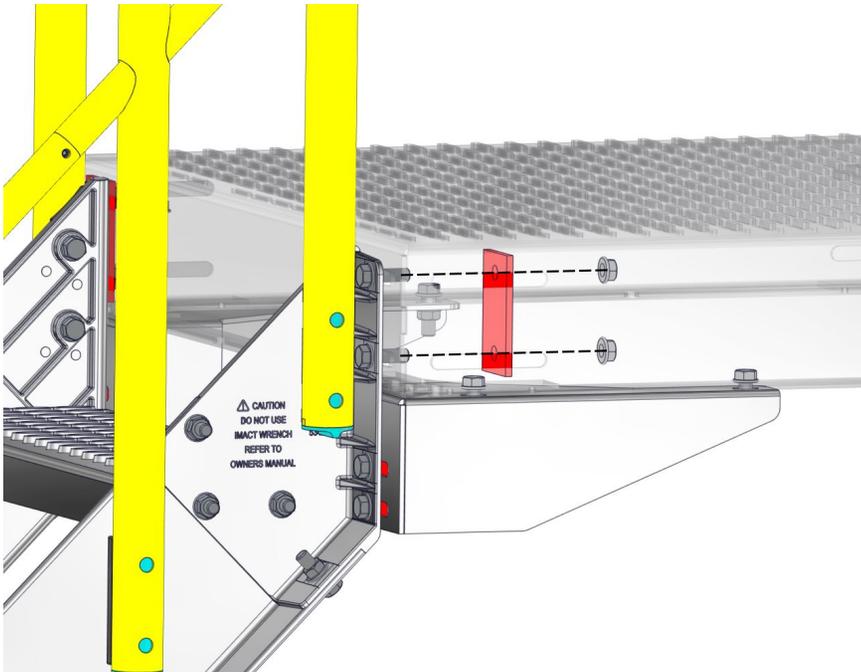


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

ERECTA STEP®

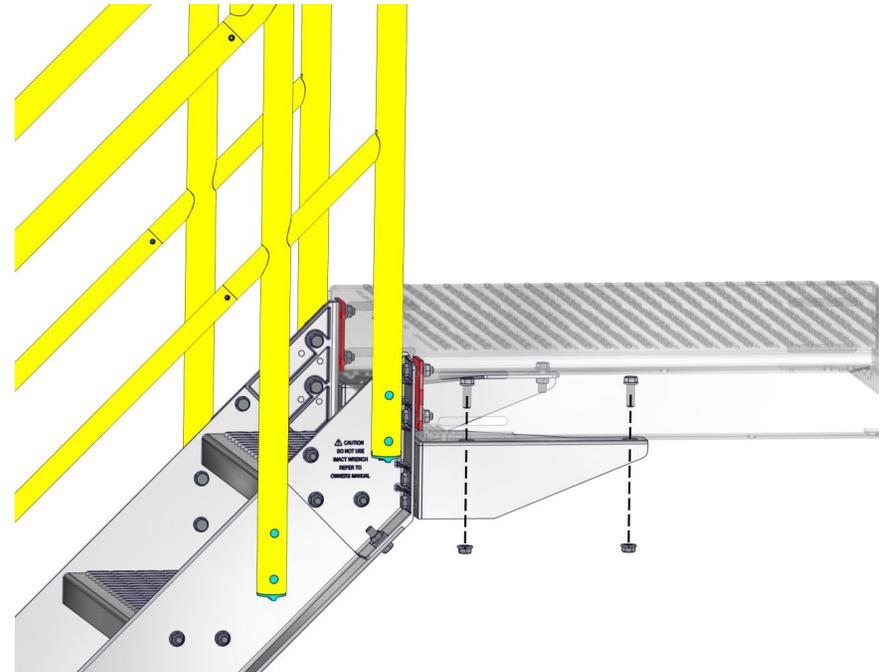
PLATFORM CONNECTIONS

STAIRS TO PLATFORM



STEP 1

Position platform and stairs as shown . Connect vertical face of stairs to vertical face of platform using bolt inserted during stair stringer instructions. Securely tighten hardware.



STEP 2

Connect platform to stair bracket with hardware as shown and securely tighten.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

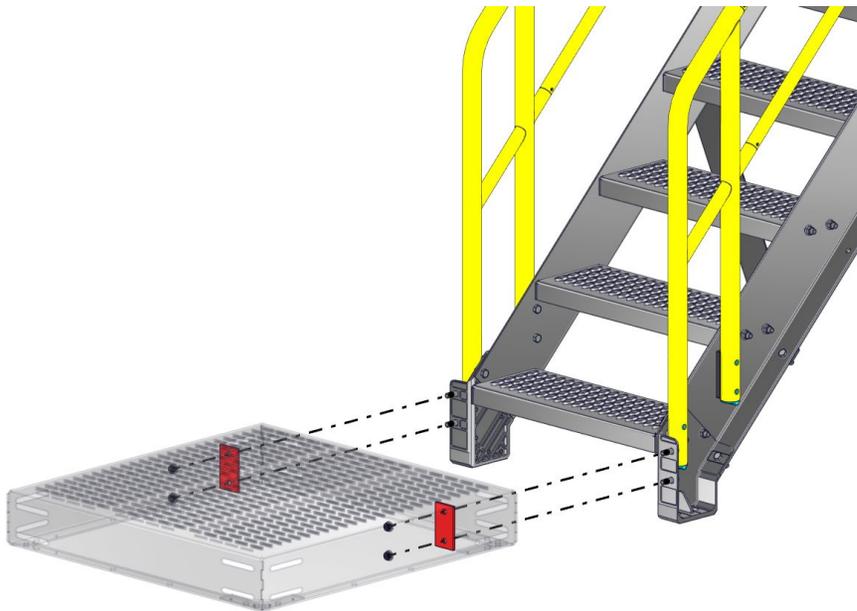


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.



PLATFORM CONNECTIONS

PLATFORM TO BOTTOM OF STAIRS



STEP 1

Position platform and stairs as shown. Connect using hardware and backing plates as shown. Securely tighten hardware.

NOTICE: When using this configuration, bolts used to attach platform to stair must be installed before attaching stair handrails.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.

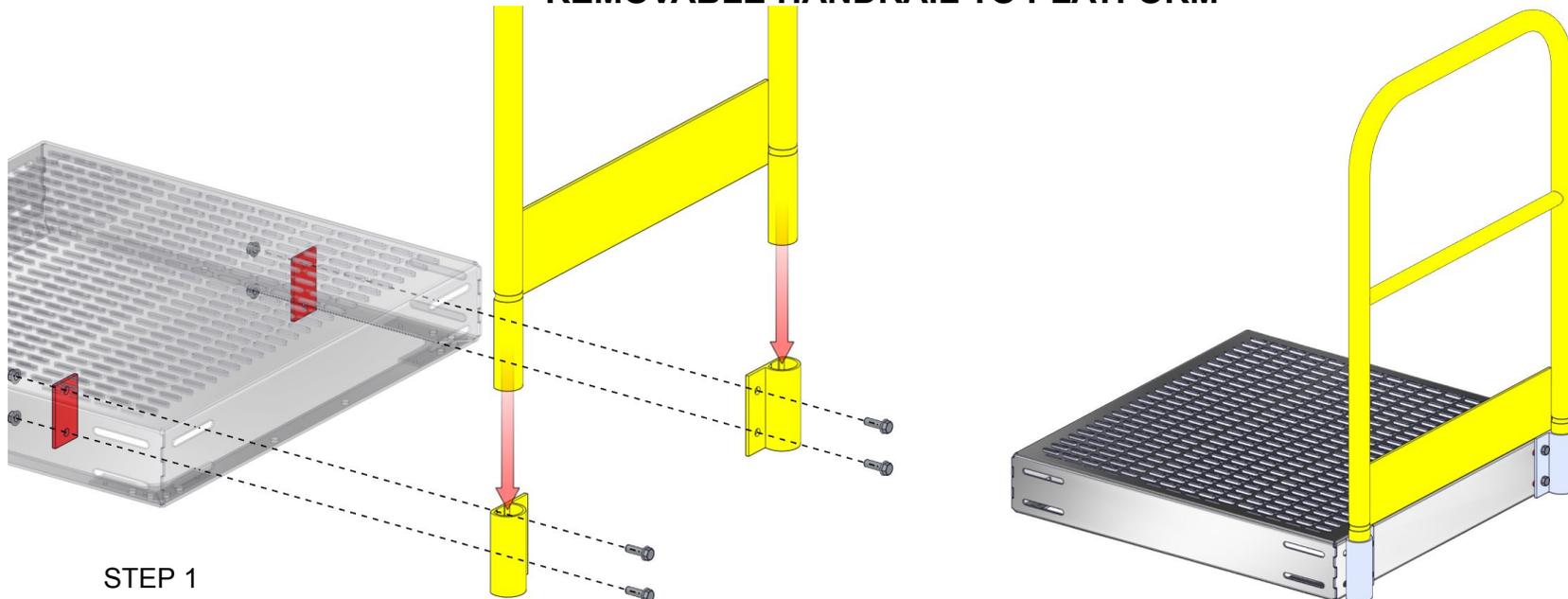


WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.



PLATFORM CONNECTIONS

REMOVABLE HANDRAIL TO PLATFORM



STEP 1

Loosely attach handrail sockets using hardware and backing plates.

STEP 2

Slide handrails into sockets for fit and alignment, then tighten hardware.

NOTICE:

Sockets should be plumb and square to allow handrails to slide in and out.



WARNING! Backing plate must be used at this connection. Failure to use backing plates may cause equipment to fail and may result in death or serious personal injury.



WARNING! Do not use impact wrench. May cause damage to unit which could result in serious personal injury or death. See torque data.

ERECTA STEP®

HARDWARE CONNECTIONS

Ladder hardware kit

1 & 2 step: Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Bolt $\frac{1}{2}$ " x $5\frac{1}{2}$ " , Nut $\frac{1}{2}$ "

3 step thru 6 step: Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ " , 2" Square Coupling (set screw $\frac{3}{8}$ " x $1\frac{5}{8}$ " Long – $\frac{3}{16}$ allen wrench)

Stair hardware kit

1 & 2 step:

3 step thru 6 step: Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ " , stair bracket backing plate

Step hardware kit

Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ "

Stair preassembled hardware

Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ " , Bolt $\frac{1}{2}$ " x 2" (stair rail to stringer), $1\frac{1}{2}$ " pipe coupling (set screw $\frac{3}{8}$ " x $1\frac{3}{8}$ " Long – $\frac{3}{16}$ allen wrench),
1" pipe coupling (set screw $\frac{5}{16}$ " x $\frac{7}{8}$ " Long – $\frac{5}{32}$ allen wrench),

Tower hardware kit

1 & 2 step: Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ "

3 step thru 6 step: Bolt $\frac{1}{2}$ " x $1\frac{1}{2}$ " , Nut $\frac{1}{2}$ "

Tower preassembled hardware

Bolt $\frac{1}{2}$ " x $5\frac{1}{2}$ " , Nut $\frac{1}{2}$ "



SYSTEM DESIGN

APPLICABLE OSHA REGULATIONS DESIGNED TO:

OSHA 1910.23(e)(1) A standard railing shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth surfaced throughout the length of the railing. The intermediate rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.

OSHA 1910.23(e)(5)(iv) The mounting of handrails shall be such that the completed structure is capable of withstanding a load of at least 200 pounds applied in any direction at any point on the rail.

OSHA 1910.23(e)(6) All handrails and railings shall be provided with a clearance of not less than 3 inches between the handrail or railing and any other object.

OSHA 1910.23(e)(3)(ii) For pipe railings, posts and top and intermediate railings shall be at least 1-1/2 inches nominal diameter with posts spaced not more than 8 feet on centers.

OSHA 1910.23(e)(2) A stair railing shall be of construction similar to a standard railing but the vertical height shall be not more than 34 inches nor less than 30 inches from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.

OSHA 1910.24(c) "Stair strength." Fixed stairways shall be designed and constructed to carry a load of five times the normal live load anticipated but never of less strength than to carry safely a moving concentrated load of 1,000 pounds.

OSHA 1910.24(d) "Stair width." Fixed stairways shall have a minimum width of 22 inches.

OSHA 1910.24(e) "Angle of stairway rise." Fixed stairs shall be installed at angles to the horizontal of between 30 deg. and 50 deg. Any uniform combination of rise/tread dimensions may be used that will result in a stairway at an angle to the horizontal within the permissible range. Table D-1 gives rise/tread dimensions which will produce a stairway within the permissible range, stating the angle to the horizontal produced by each combination. However, the rise/tread combinations are not limited to those given in Table D-1.

Angle to horizontal	Rise (in inches) Table D-1	Tread run (in inches)
30 deg. 35'	6-1/2	11
32 deg. 08'	6-3/4	10-3/4
33 deg. 41'	7	10-1/2
35 deg. 16'	7-1/4	10-1/4
36 deg. 52'	7-1/2	10
38 deg. 29'	7-3/4	9-3/4
40 deg. 08'	8	9-1/2
41 deg. 44'	8-1/4	9-1/4
43 deg. 22'	8-1/2	9
45 deg. 00'	8-3/4	8-3/4
46 deg. 38'	9	8-1/2
48 deg. 16'	9-1/4	8-1/4
49 deg. 54'	9-1/2	8

OSHA 1910.24(f) "Stair treads." All treads shall be reasonably slip-resistant and the nosings shall be of nonslip finish. Welded bar grating treads without nosings are acceptable providing the leading edge can be readily identified by personnel descending the stairway and provided the tread is serrated or is of definite nonslip design. Rise height and tread width shall be uniform throughout any flight of stairs including any foundation structure used as one or more treads of the stairs.

OSHA 1910.144(a)(3) Yellow. Yellow shall be the basic color for designating caution and for marking physical hazards such as: Striking against, stumbling, falling, tripping, and "caught in between."

OSHA 1926.451(f)(16) Platforms shall not deflect more than 1/60 of the span when loaded.

