WINSAFE Corp.

OPERATING INSTRUCTIONS

SUPERMOD MODULAR PLATFORMS

CUSTOM LARGE AREA PLATFORMS

SUPER DECK MODULAR PLATFORMS

BOILERMOD MODULAR PLATFORMS

THESE INSTRUCTIONS MUST BE READ AND UNDERSTOOD BY ANYONE INSTALLING OR SUSPENDING EQUIPMENT FROM WINSAFE MODULAR PLATFORMS OR SUPER DECK LARGE AREA PLATFORMS AND ACCESSORIES. ANY QUESTIONS MUST BE DIRECTED TO THE WINSAFE DEALER OR DIRECTLY TO THE ADDRESS BELOW.

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WARNING

1. Serious injury or death can result from improper use of this equipment. Understand all instructions for all components of your system before using them.
2. A complete modular powered platform (scaffold) is composed of three sub-systems. Ensure that you have operating instructions for each of the following sub-systems:
   - Modular platform (SuperMod, BoilerMod or Super Deck)
   - Hoist (Suspension) system and suspension cables
   - Fall arrest system for each person on the modular platform
3. All suspension lines, life lines, hangers, platforms and other supporting parts must be inspected prior to each / daily usage.
4. Do not use equipment which has been damaged or which displays excessive wear. For replacement parts contact your local dealer or Winsafe Corp.
5. Install and use Winsafe modular platforms according to the platform arrangement and load ratings indicated on the MODULAR PLATFORM ARRANGEMENT LABELS.
6. Do not use modular platforms at places with risk of electrical contact.
7. Do not use modular platforms in conditions of high winds, inclement weather, or extreme temperatures where such conditions impair safe use.
8. Read the Code of Safe Practices before installation and use of Winsafe Modular Platforms.

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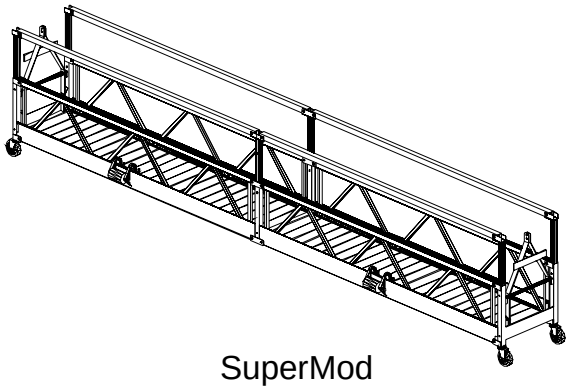
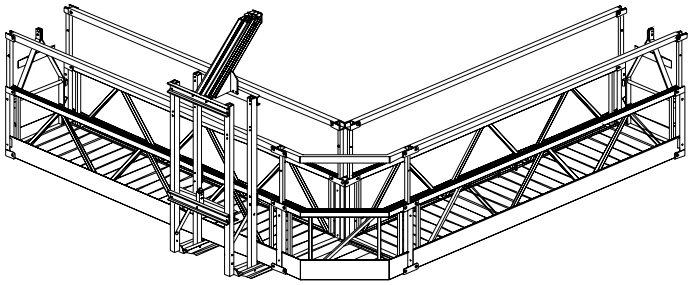
1. WINSAFE MODULAR PLATFORMS

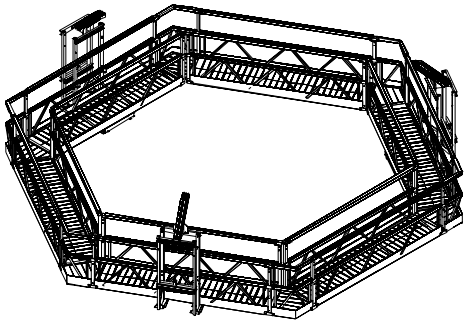
A modular platform (scaffold) is a temporarily or a permanently suspended powered platform system used for the maintenance of buildings or structures (bridges, boilers, etc.) Winsafe Corp. provides various accessories and configurations for suspended modular platforms.



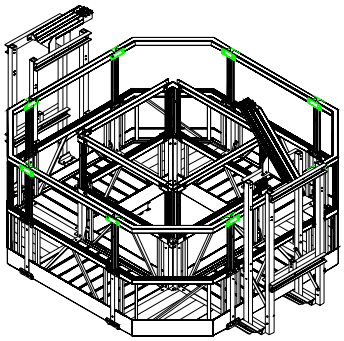
SuperMod



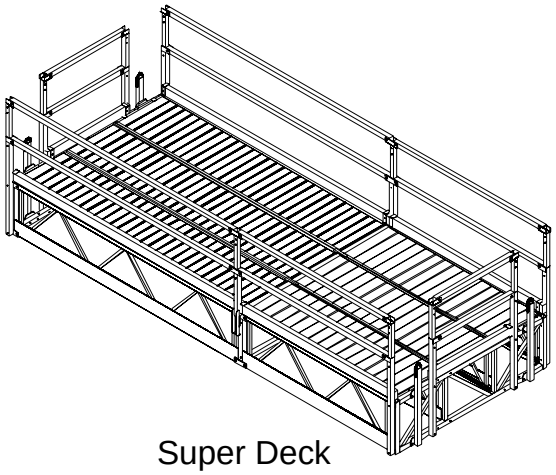
Corner Platforms



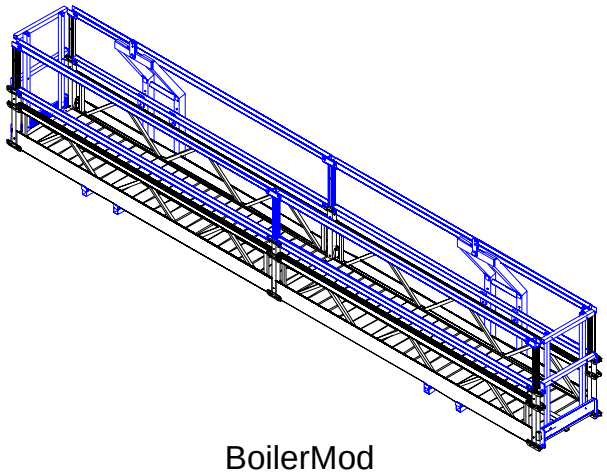
Circular Platforms



Custom Large Area Platforms



Super Deck

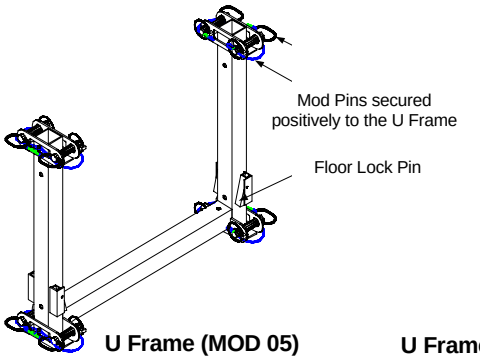


BoilerMod

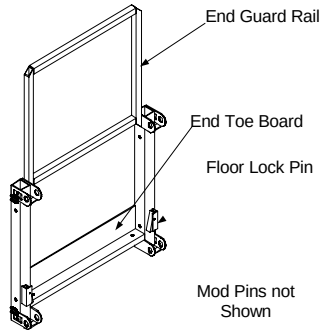
2. COMPONENTS

This section presents the components required for the installation of Winsafe SuperMod, Custom Large Area Platforms and Super Deck.

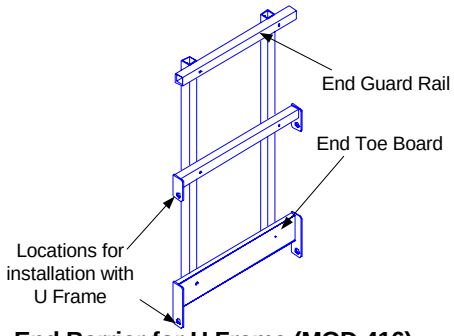
2.1. U Frames



U Frame (MOD 05)



U Frame with End Guard Rail (MOD 26)



End Barrier for U Frame (MOD 416)

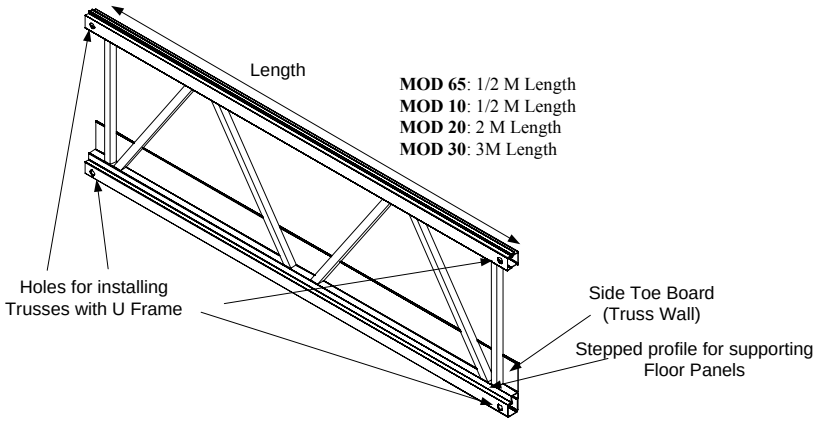
U Frames are used to construct the framework of the modular platform. U Frame supports and connects the Trusses through Mod Pins, locks the Floor Panels through the Floor Lock Pins, holds the Hand Rail Post, and holds the Swivel Caster.

End U Frame - MOD 26 is similar to the U Frame (MOD 05) except that it has an end guard rail (end hand rail) and an end toe board. End U Frame supports Trusses, Floor Panels, Swivel Casters and Hand Rails Posts in only one direction and hence installed at the ends of the modular platforms.

The End Barrier for U Frame (MOD 416) is installed with the U Frame (MOD 05) at the ends of the modular platform. The End Barrier consists of an end guard rail and an end toe board.

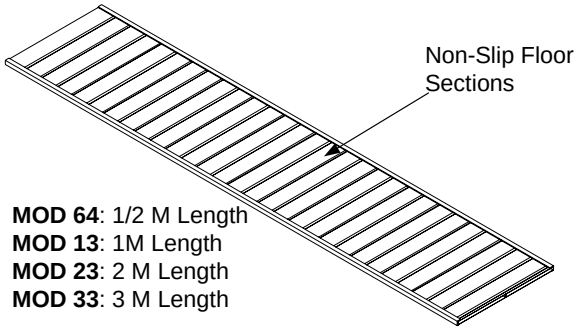
2.2. Trusses

Winsafe Trusses are light weight and designed for use with Winsafe U Frames. Trusses are 21 5/8" high and vary in length from ½ M to 3 M. Owing to the height of the Truss; a mid Hand Rail is not required in the modular platform. The side wall of the Truss extends more than 4" from the floor level; serving a toe board for the sides of the modular platform. Inner side of the Truss is stepped to support Floor Panels.



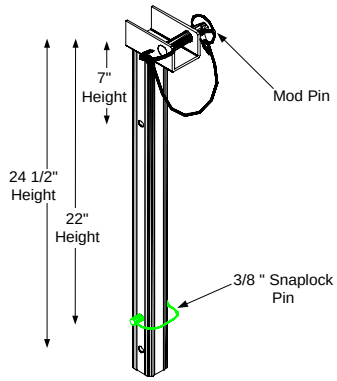
2.3. Floor Panels

Winsafe provides light weight, custom extruded, non-slip flush Floor Panels designed for use with Winsafe U Frames and Winsafe Trusses. Floor Panels are 25” wide and vary in length from ½ M to 3 M.



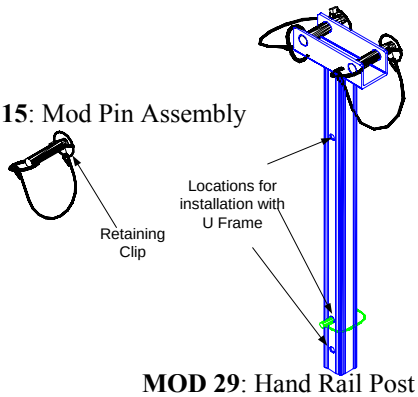
MOD 64: 1/2 M Length
MOD 13: 1M Length
MOD 23: 2 M Length
MOD 33: 3 M Length

2.4. Hand Rail Posts and Hand Rails



MOD 85: End or Inner Corner Hand Rail Post

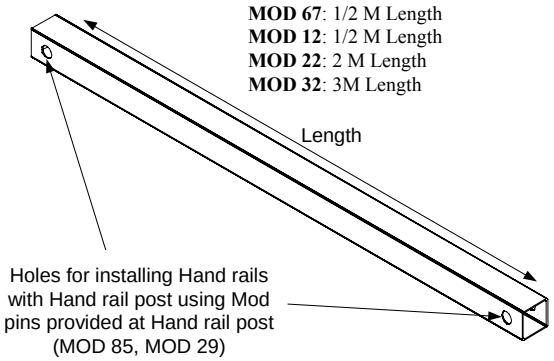
MOD 15: Mod Pin Assembly



MOD 29: Hand Rail Post

Winsafe provides two types of hand rails posts: End or Inner Corner Hand Rail Post (MOD 85); and Hand Rail Post (MOD 29). End Hand Rail Post (MOD 85) is installed at the end corners of the modular platform with the End U Frame (MOD 26) or End stirrup (MOD 08) since it can secure only one Hand Rail. Hand Rail Post (MOD 29) can secure the ends of two Hand Rails and is installed with the U Frames (MOD 05). MOD 85 and MOD 29 can be installed at a height of 3 1/2”, 18 1/2” or 21” from the U Frame (MOD 05), End U Frame (MOD 26) or End Stirrup (MOD 08) using 3/8” snaplock pin.

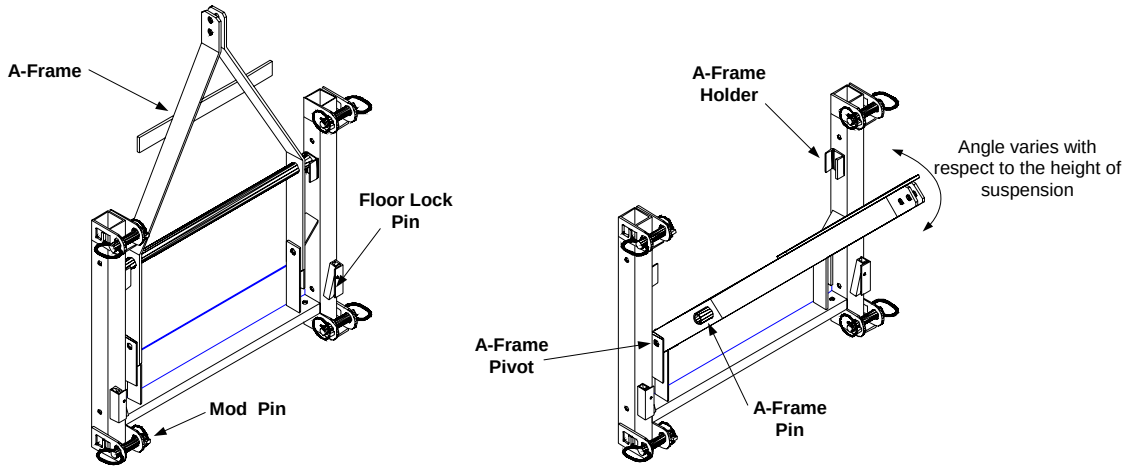
Hand Rails



2.5. Stirrups

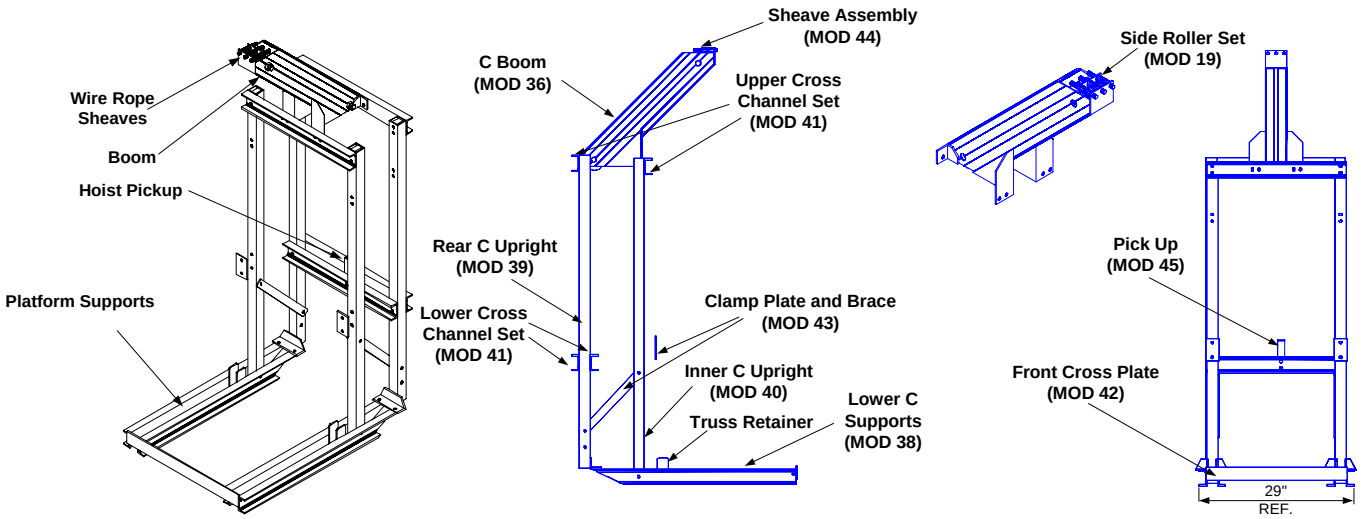
Stirrups support the ends of the modular platform and transfer the loads of to the suspension cables / hoist system. Winsafe provides two types of stirrups: End Stirrup (MOD 08) and C Stirrup (MOD 35).

End Stirrup (MOD 08)



End Stirrup (MOD 08) is installed at both ends of the modular platform whose length is less than 48’ 9”. End stirrup contains an A-Frame and a U Frame. U Frame supports the end of the modular platform similar to the End U Frame (MOD 26). The A-Frame is pivoted on the U Frame and holds the suspension cable / hoist system. During installation the A-Frame is removed from the A-Frame Holder and is allowed to pivot about the A-Frame Pivot so that the A-Frame can vary its angular position with respect to the height stabilizing the modular platform and the hoist system. Restriction of the pivot movement of the A-Frame will develop bending stresses on the platform and damage the modular platform.

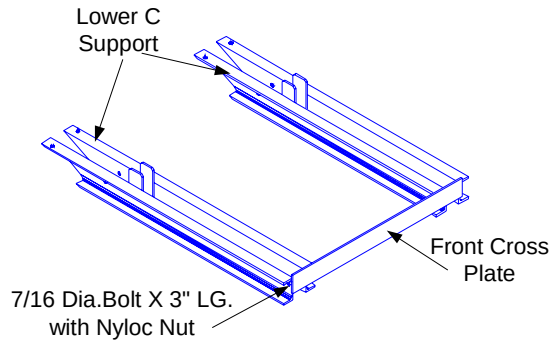
C Stirrup (MOD 35)



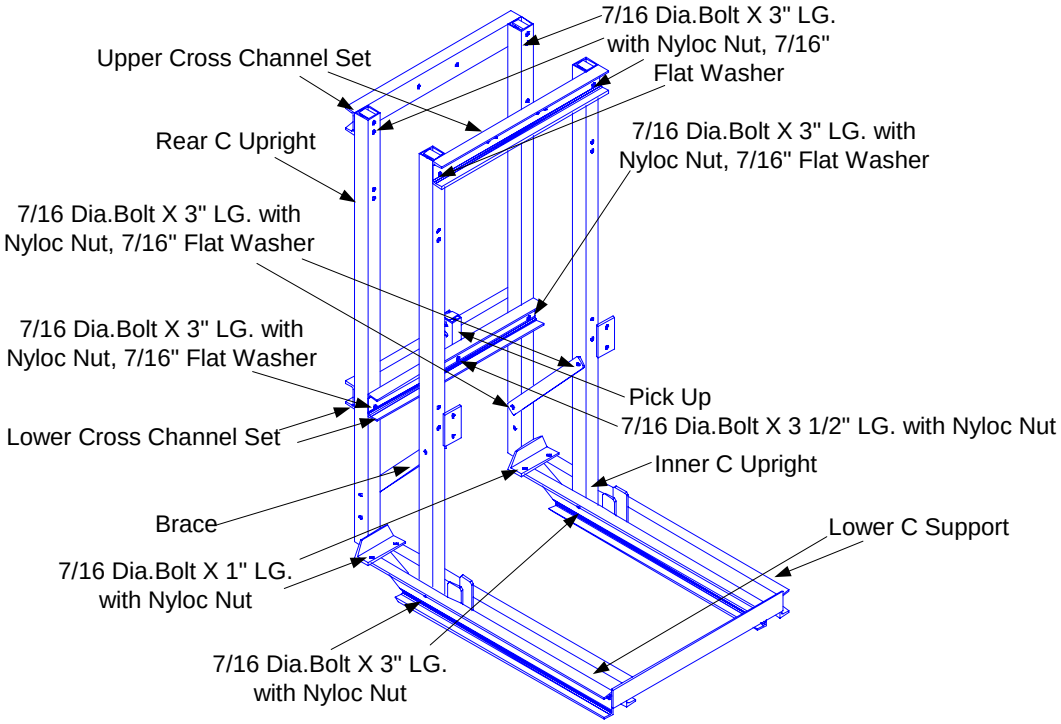
C Stirrups are used on SuperMod’s that need to keep the ends of the platform workable or to allow greater variation in the suspension locations. C Stirrups are also used for support when platforms are configured to make corner stages or other platform shapes such as circular platforms and work cages.

Assembly Procedure for C Stirrups

Your shipment would contain: 1 C Boom (MOD 36), 4 Lower C Supports (MOD 38), 2 Rear C Uprights (MOD 39),1 Cross Channel Set (MOD 41 - 2 Upper Cross Channels and 2 Lower Cross Channels), 2 Inner C Uprights (MOD 40), 1 Front Cross Plate (MOD 42), 2 Clamp Plate & Brace(MOD 43), 6 - 4" Dia. Sheave Assemblies (MOD 44), 1 Pick Up (MOD 45) and 1 Side Roller Set (MOD 98) with fasteners.

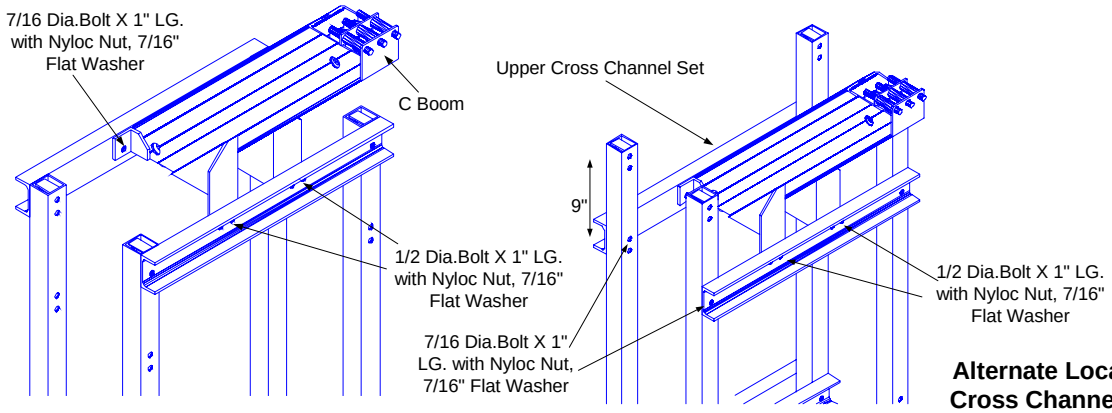


1. Place the Lower C Supports (MOD 38) on a level surface spaced at approximately 29 inches.
2. Install Front Cross Plate (MOD 42) with Lower C Supports using 7/16 Dia. Bolt X 3" LG. with nyloc nuts. The Front Cross Plate should be positioned so that the lip of the Front Cross Plate extends up beyond the Lower C Supports.



3. Install the Inner C Uprights (MOD 40) with the Lower C Supports using 7/16 Dia. Bolt X 3" LG. with nyloc nuts.

4. Install the Rear C Uprights (MOD 39) with the Lower C Supports using 7/16 Dia. Bolt X 1” LG. with nyloc nuts.
5. Install Braces to uprights using 7/16 Dia. Bolt X 3” LG. with nyloc nuts and 7/16 Dia. Flat washer.
6. Install Suspension Pick Up (MOD 45) using 1/2 Dia. Bolt X 3 1/2” LG. with nyloc nuts.
7. Install the Lower Cross Channels (MOD 41) with Inner C Uprights and Rear C Uprights using 7/16 Dia. Bolt X 3” LG. with nyloc nuts and 7/16 Dia. Flat washer.



Alternate Location for Upper Cross Channels and C Boom

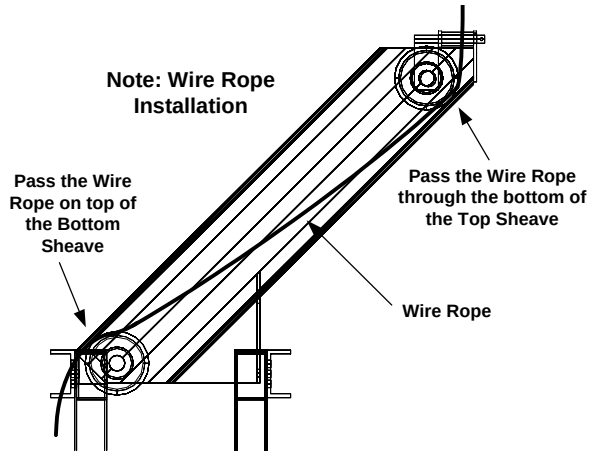
8. Install the Upper Cross Channels (MOD 41) with the Inner C Uprights and Rear C Uprights using 7/16 Dia. Bolt X 3” LG. with nyloc nuts and 7/16 Dia. Flat washer. Note the Upper Cross Channel Set can be installed in the high position or in the low position. The low position would be used when workers need to gain access to a ceiling or other conditions requiring access above the stirrup.
9. Install the lower back end of the C Boom (MOD 36) with the upper cross channel sets using 1/2 Dia. Bolt X 1” LG. with nyloc nuts and 7/16” Flat washer as shown.

Notes:-

1. Ensure that all fasteners are tightly secured.
2. Ensure that the C boom is installed at the proper location so that the sheave assembly is inline with the centre of the C stirrup.

Traction Hoist Installation Note:-

Always install Powered Hoist with Pickup (MOD 45) with the controls (and electrical motors) facing the centre of the modular platform for better access to controls. Install Hoist to the left or right side of MOD 45 so that the suspension cable is inline with the wire rope sheaves. If not inline, ensure that the offset is minimum. Install **AstroHoist** at the left side of the Pickup (MOD 45). Install **Power Climber** hoist at the right side of the Pickup (MOD 45).



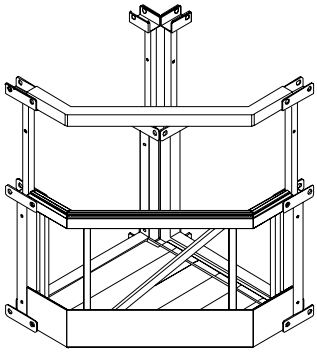
2.6. Corner Sets

Winsafe Corner Sets are used to install angular platforms and circular platforms. Winsafe provides modular Corner Sets for 30, 45, 60 and 90 degree corners. Note that Winsafe Corner Sets are designed for use with Winsafe modular platforms only.

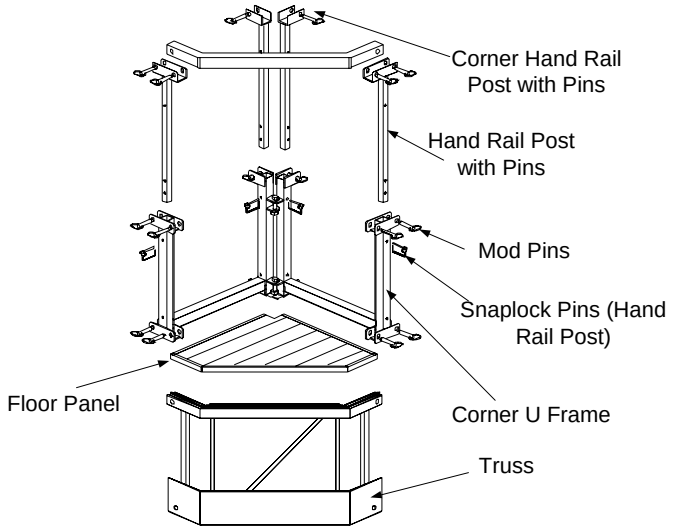
Assembly Procedure for Corner Sets

Your shipment of Winsafe Corner Set would contain: 1 Pair of Corner U Frame, 1 Corner Truss, 1 Corner Floor Panel, 1 Corner Hand Rail and 1 Pair of Hand Rail Posts.

MOD 81: 90 Degree Corner Set
MOD 82: 60 Degree Corner Set
MOD 83: 45 Degree Corner Set
MOD 84: 30 Degree Corner Set



90 Degree Corner Set



Corner Set Components

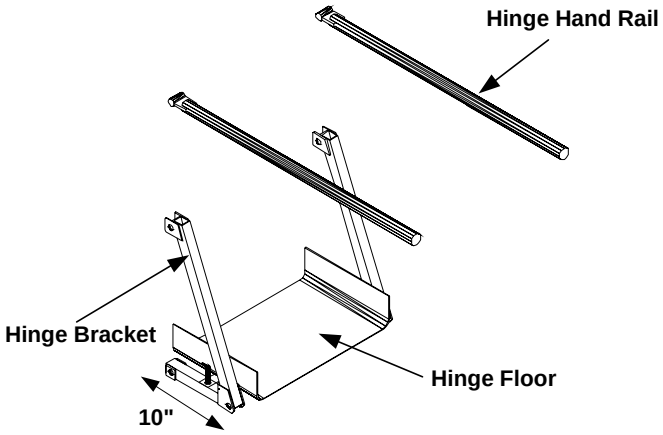
1. Select the Corner Set with respect to the corner angle.
2. Set apart the Corner U Frames at the appropriate angle.
3. Install the Truss with the Corner U Frames by inserting the Truss in between the brackets that hold the Mod Pins. Insert the Mod Pin through the Truss and U Frame pinning the Truss with the U Frame. Insert the Mod Pin completely and secure using retaining clip.
4. Insert the floor panel as shown until the Floor Panel rests on the Trusses and locked by the Floor Lock Pin of the Corner U Frames.
5. Install Hand Rail Posts by inserting the Hand Rail Posts into the Corner U Frame. Secure the Hand Rail Post with the U Frame at the required height using 3/8” snaplock pin. Secure the snaplock pin with the retaining clip.
6. Install Corner Hand Rail with Hand Rail Post by pinning the Corner Hand Rail with Hand Rail Post using the Mod Pins. Ensure to insert the Mod Pins completely and secure with retaining clip.

Note:-

1. Ensure that all Mod Pins are inserted fully and secured by retaining clips. Do not substitute standard parts (U Frames, Trusses etc.) for components used in Corner Sets.

2.7. 10” Reach Hinge Set (MOD 90)

Modular platforms having three or more suspension locations experience uneven movement on each suspension hoists. Due to this uneven movement, the modular platform often teeter-totters about the suspensions. To avoid such a situation, a Hinge Set is used to connect the Modular Platforms containing more than 3 suspension locations. Winsafe Hinge Set consists of 1 Hinge Bracket, 1 Hinge Floor and 2 Hinge Hand Rails.

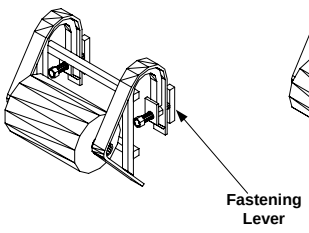


2.8. Accessories

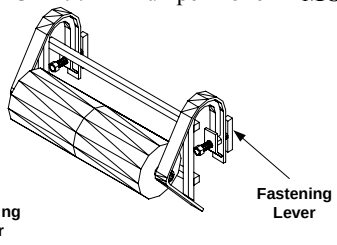
Bumper Rollers

Winsafe provides three types of Bumper Rollers for its modular platforms. The 6” MOD 46 and 12” MOD 49 are designed for use with Winsafe Trusses. MOD 125 can be used with Trusses of other manufacturers since the height of MOD 125 can be varied.

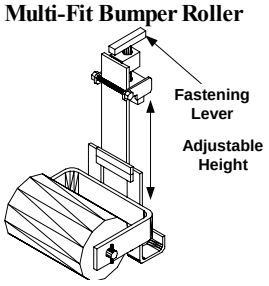
MOD 46: 6" Bumper Roller



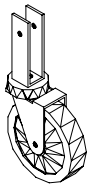
MOD 49: 12" Bumper Roller



MOD 125: Multi-Fit Bumper Roller



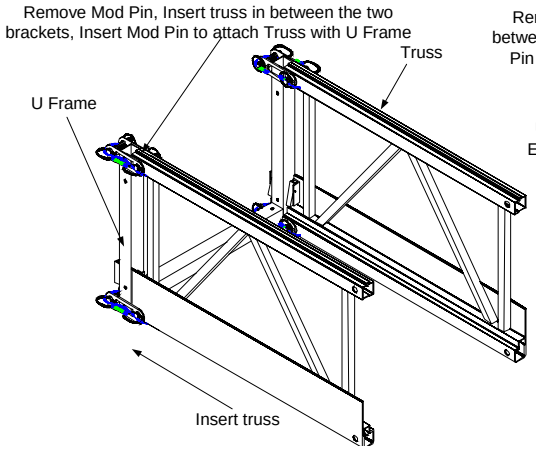
MOD 18: Swivel Caster



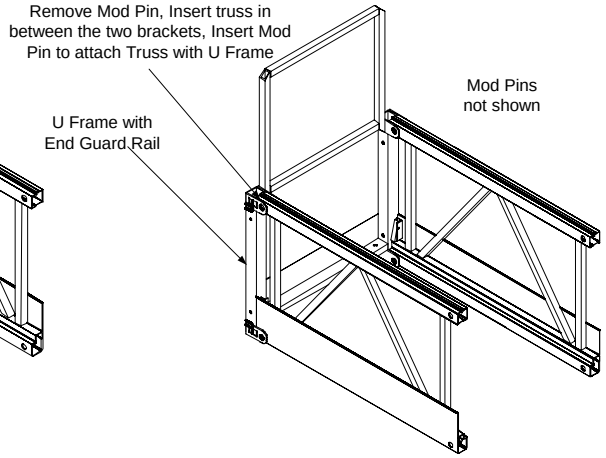
Winsafe Swivel Caster consists of a 6 inch Dia. 1 ¼ “wide delrin wheel capable of withstanding heavy loads. The Swivel Caster can be installed at the bottom of the U Frames (MOD 05), End U Frame (MOD 26) and End Stirrup (MOD 08).

3. INSTALLATION PROCEDURES

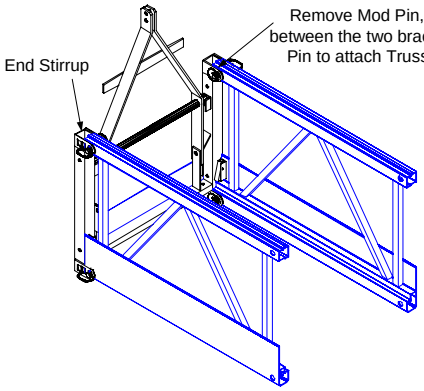
3.1. Installation of Trusses with U Frames



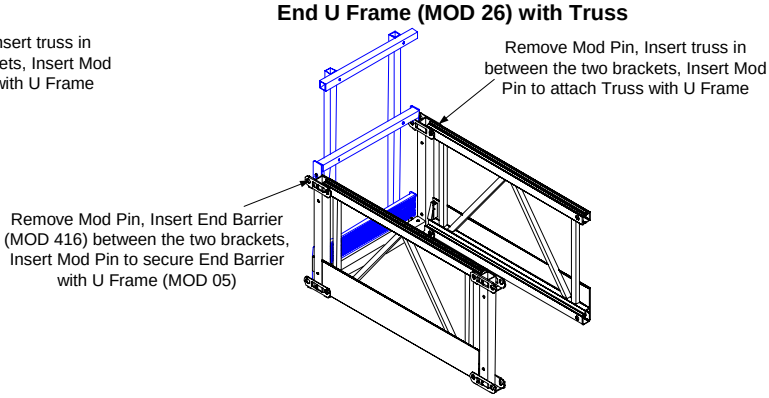
U Frame (MOD 05) with Truss



End U Frame (MOD 26) with Truss



End Stirrup (MOD 08) with Truss



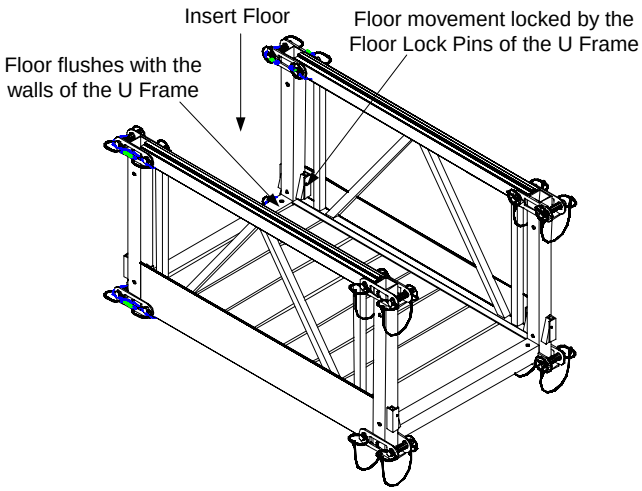
U Frame with End Barrier (MOD 416) and Truss

1. Remove Mod Pins from the U Frame. Insert the Truss in between the brackets that hold the Mod Pin so that the stepped portion of the Truss is inward. The stepped portion of the Truss holds the Floor Panel.
2. Insert Mod Pins through the Truss and U Frame pinning the Truss with U Frame. Insert Mod Pins completely and secure Mod Pin with the retaining clip.

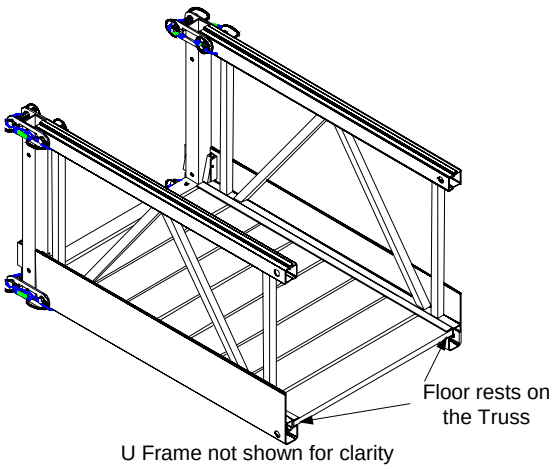
Note:-

1. Installation procedure similar for End U Frame (MOD 26), and End Stirrup (MOD 08).
2. To install End Barrier (MOD 416) with U Frame (MOD 05), remove Mod Pin, insert End Barrier between the two brackets and insert Mod Pin to secure End Barrier with U Frame.

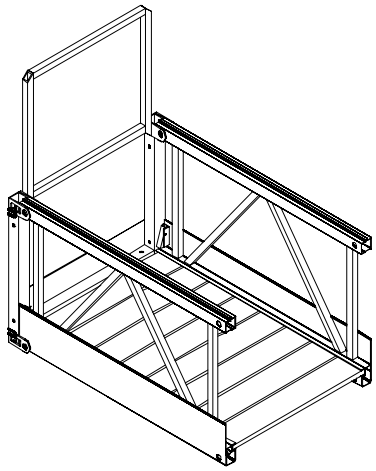
1.2. Installation of Floor Panels



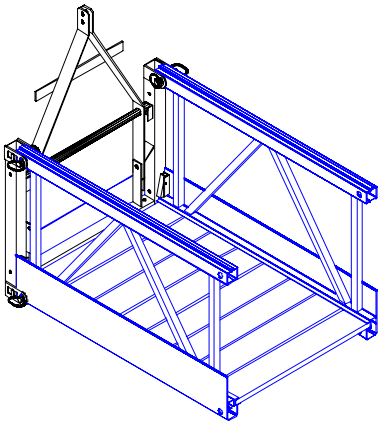
U Frame (MOD 05) with Floor Panel



U Frame not shown for clarity



End U Frame (MOD 26) with Floor Panel



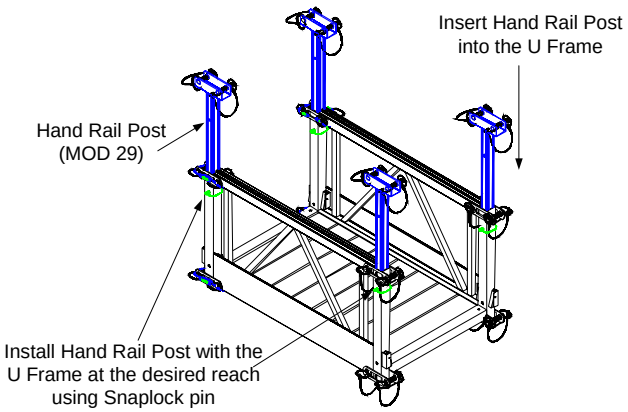
End Stirrup (MOD 08) with Floor Panel

1. Ensure that U Frames are installed on both ends of the Trusses.
2. Insert the Floor Panel as shown from above until the Floor Panel rests on the stepped portion of the Trusses and the Floor Lock Pins of the U Frame lock the Floor Panels arresting its movement. Ensure that the Floor Panels flush with the inner walls of the U Frame.

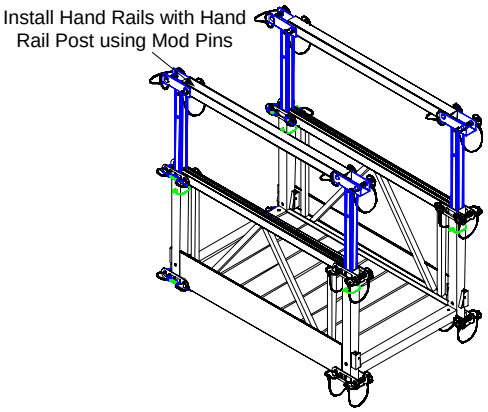
Note:-

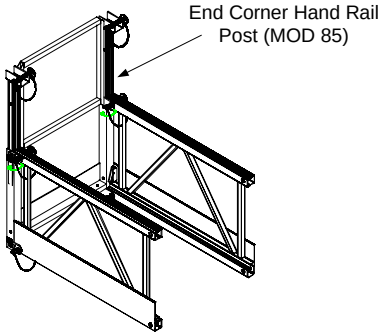
1. Insert the Floor Panels completely until it flushes with U Frame.
2. Ensure that the Floor Panel is locked by the Floor Pock Pin.
3. Installation procedure is similar for End U Frame (MOD 26) and End Stirrup (MOD 08).

3.3. Installation of Hand Rail Post and Hand Rails

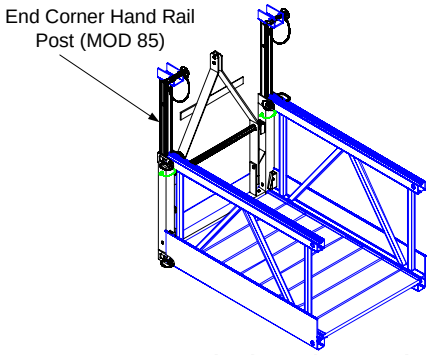


U Frame (MOD 05) with Hand Rail Post





End U Frame (MOD 26) with End Hand Rail Post (MOD 85)



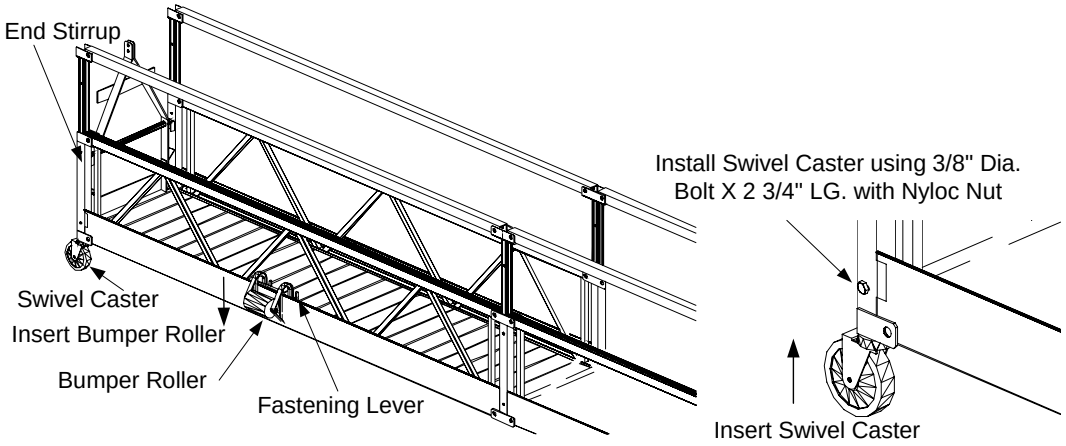
End Stirrup (MOD 08) with End Hand Rail Post (MOD 85)

1. Ensure that all U Frames, End U Frames and End Stirrups are installed on the Modular Platform.
2. Install the End Hand Rail Post (MOD 85) with the End Stirrup (MOD 08) or End U Frame (MOD 26) by inserting the End Hand Rail Post into the End Stirrup or End U Frame. Secure the End Hand Rail Post at the desired height with the U Frame or End Stirrup using 3/8" snaplock pin as shown.
3. Install the Hand Rail Post (MOD 29) with U Frame (MOD 05) by inserting the Hand Rail Post into the U Frame. Secure the Hand Rail Post at the desired height with the U Frame using 3/8" snaplock pin as shown.
4. Remove the Mod Pins from the Hand Rail Post. Select the appropriate Hand Rail (with respect to length) and secure the Hand Rail with Hand Rail Post by inserting the Mod Pins completely through the Hand Rail Post and Hand Rail. Secure the Mod Pins by the retaining clip.

Note:-

1. Secure the snaplock pin by the retaining clip.
2. Install Hand Rail Posts on all U Frames, End Stirrups or End U Frames.
3. Install Hand Rails along the perimeter of the Modular Platform.

3.4. Installation of Accessories



Installation of Bumper Roller (MOD 46, MOD 49)

1. Select the bumper roller (MOD 46, MOD 49) and locations on the Truss for installation.
2. Insert the bumper roller on the Truss and secure by tightening the fastening lever.

Installation of Bumper Roller (MOD 125)

1. Place the lower bracket of the bumper roller on the bottom side of the Truss. Adjust the height of the bumper roller to fit the height of the Truss.
2. Secure bumper roller to Truss by tightening the Fastening Lever.

Note:-

1. Select proper location of Bumper Rollers so that they are always in contact with the wall or building surface.

Installation of Swivel Caster (MOD 18)

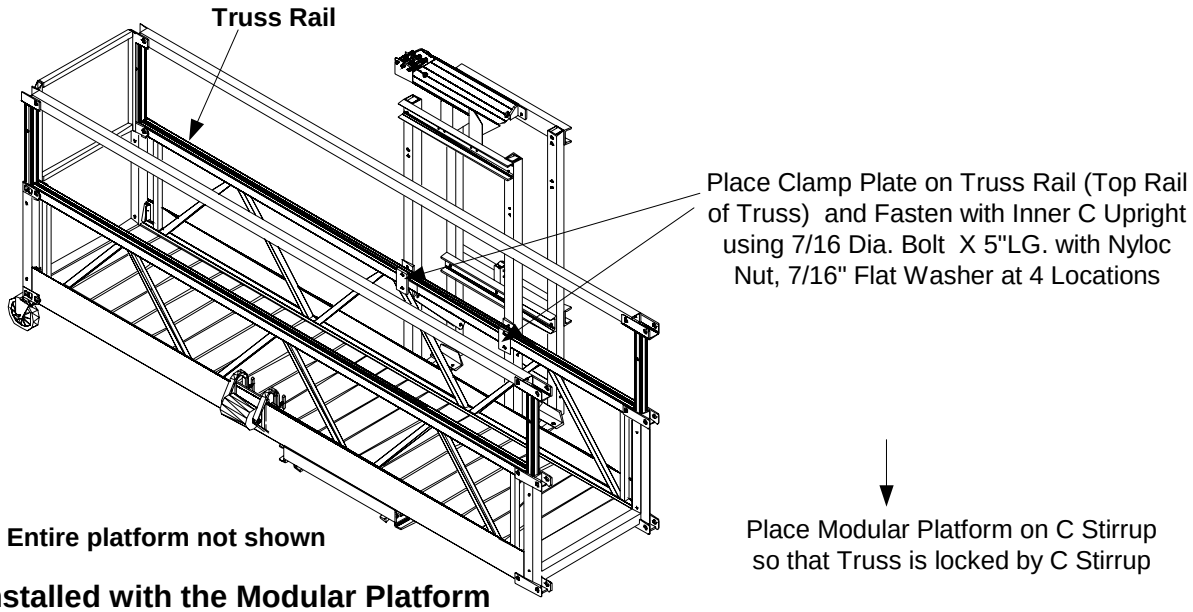
1. Insert the swivel caster into the base of the End Stirrup or U Frame as shown.
2. Install the swivel caster with the U Frame using the provided 3/8”DIA X 2 ¾ “LG Bolt as shown.

3.5. Installation of C Stirrup with Modular Platform

General Instructions

The stirrups must be positioned so that there will be a stabilizing moment of 1 ½ times the overturning moment caused by any possible concentration of the rated load on the overhang. As a safe practice, install C Stirrup according to the Modular Platform Arrangement provided by Winsafe Corp. (see LABEL: **Arrangement of SuperMod Platforms to be Used with SuperMod Walk through Stirrups**). Overhang must not exceed 1M on platforms less than 14M and must not exceed 2M on platforms between 14 ~ 17M length.

Installation Procedure



C Stirrup Installed with the Modular Platform

1. Determine the locations of the C Stirrups from the platform arrangement label.
2. Place the modular platform on the C Stirrup so that the U Frame lies in between the Lower C Supports and the Truss (at the back) is locked by the Truss Retainer. The other Truss is locked by the Front Cross Plate. Adjust the C Stirrup to position the Modular Platform accordingly.
3. Place the Clamp Plate (MOD 43) on the inner side of Truss Rail (Top Rail of the Truss) and fasten with the Inner C Post using 7/16” Dia. Bolt X 5” LG. with nyloc nut and 7/16” Flat washer. Do not over tighten the Clamp plate as it may deform the Truss.

4. SUPERMOD

SuperMod (modular platform) is characterized by strong trusses, strong connectors that facilitate a smooth riding, and a long lasting platform. Not only is the SuperMod the strongest modular platform system on the market, it is the only system designed for use both as conventional swing stage and as a large area work deck. SuperMod platforms can be assembled in two configurations: SuperMod with End Stirrups (6'9" ~ 48' 9" length); and SuperMod with Walk Thru Stirrups (30' ~ 62' 3" length). Winsafe strongly recommends installation and use of SupreMod according to the platform arrangements indicated on the LABELS. Arrangements presented on the LABEL are based on several critical design criteria and safety standards.

4.1. Installation of SuperMod with End Stirrups

LABEL: ARRANGEMENT OF SUPERMOD PLATFORMS WITH END STIRRUPS

TOTAL LENGTH FT./INCH	M	PLATFORM ARRANGEMENT ↑ = END STIRRUP - = CROSS FRAME	TOTAL PLATFORM WEIGHT LBS.	KG.	MAX RATED WORKING LOAD LBS.	KG.
6'9"	2	↑ 2 ↑	240	110	1500	680
9'9"	3	↑ 3 ↑	282	129	1500	680
13'6"	4	↑ 2 – 2 ↑	358	163	1500	680
16'6"	5	↑ 3 – 2 ↑	400	182	1500	680
19'6"	6	↑ 3 – 3 ↑	440	201	1500	680
23'3"	7	↑ 2 – 3 – 2 ↑	518	236	1500	680
26'3"	8	↑ 3 – 2 – 3 ↑	560	255	1500	680
29'3"	9	↑ 3 – 3 – 3 –↑	602	274	1000	450
33'	10	↑ 3 – 2 – 2 – 3 ↑	678	309	1000	450
36'	11	↑ 3 – 3 – 2 – 3 ↑	720	328	1000	450
39'	12	↑ 3 – 3 – 3 – 3 ↑	762	347	1000	450
42'9"	13	↑ 3 – 3 – 2 – 2 – 3 ↑	838	381	750	340
45'9"	14	↑ 3 – 3 – 2 – 3 – 3 ↑	880	400	750	340
48'9"	15	↑ 3 – 3 – 3 – 3 – 3 ↑	922	420	750	340

Total Length: Distance between the hoist (suspension cables) ~ total length of the platform

Total Platform Weight: Dead weight of the SuperMod for the specific arrangement

Max Rated Working Load: Maximum live load

Platform Arrangement: Framework (arrangement of U Frames, Trusses)

↑ : End Stirrup (MOD 08)

- : U Frame (Connection)

2,3 : Length in meters of Truss, Hand Rail, and Floor Panel

2-3 : 2 M Truss is connected to 3 M Truss by a U Frame

Note:-

1. End stirrups are installed only at the ends of the SuperMod.
2. Intermediate sections of the SuperMod are connected using U Frame (MOD 05).
3. Hand Rails and Floor Panels are selected according to the length of the Truss (2,3 M).

Installation Procedure

1. Select the platform arrangement for the desired platform length and prepare a list of components required for installation. Ensure that you have all the necessary components.
2. Set up the framework of the SuperMod by installing U Frames and End Stirrups with Trusses.
3. Install Floor Panels.
4. Install Hand Rail Posts and Hand Rails.
5. Install Bumper Rollers, Swivel Casters and other accessories if used.
6. Install hoist system on the End Stirrups.

Note:-

1. Refer to Section 3 for detailed installation procedures.
2. Do not substitute Winsafe modular platform components with components of other manufacturers.
3. Any change in platform arrangement must be approved by a professional engineer.
4. Live loads must be distributed. Do not concentrate live load at one end of the modular platform.
5. Ensure to secure all Mod Pins, snaplock pins and tighten all nuts.

Example:- SuperMod Platform arrangement: ↑ 3 - 3 ↑

List of components for installation

End Stirrups

No. of Stirrups = Number of ↑'s = **2 X MOD 08**

U Frames (Intermediate)

Each pair of Truss is connected by 1 U Frame.

No. of U Frames = **1 X MOD 05**

Trusses

Trusses / Side = 3 M + 3M = 2 X 3M Truss

Each U Frame / End Stirrup requires 2 Frames.

Total Truss = 2 X 3M / Side X 2 = 4 X 3M Truss = **4 X MOD 30**

Floor Panels

No. of Floor Panels = 3M + 3M = 2 X 3M Floors = **2 X MOD 33**

Hand RailPosts

Each End Stirrup (MOD 08) requires 2 End or Inner Corner Hand RailPost (MOD 85)

No. of End Stirrups = 2. No. of End Hand RailPost = 2 X 2 = **4 X MOD 85**

Each U Frame (MOD 05) requires 2 Hand RailPosts (MOD 29)

No. of U Frames = 1. No. of Hand RailPost = 1 X 2 = **2 X MOD 29**

Hand Rails

Length of Hand Rail= Length of Truss since Hand Rails run parallel to Truss.

Hand Rails / Side = 3M + 3M = 2 X 3 M Hand Rails.

Each U Frame / End Stirrup requires 2 Hand Rails.

Total Hand Rails = 2 X 3M / Side X 2 = 4 X 3M Hand Rail= **4 X MOD 32**

Swivel Caster

Each End Stirrup requires 2 Swivel Caters.

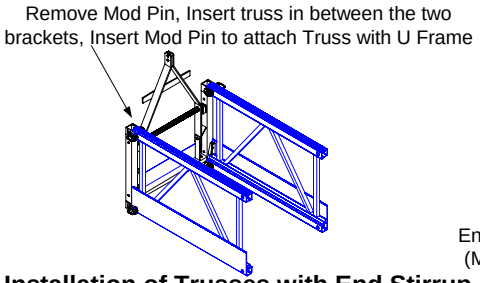
No. of swivel caster = No. of End Stirrups X 2 = 2 X Swivel Caster X 2 = **4 X MOD 18**

Bumper Roller

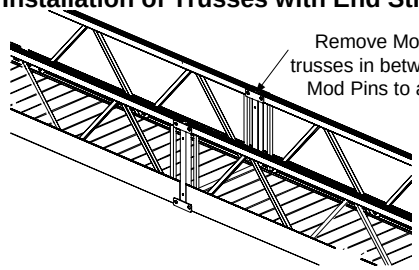
Select bumper roller to suit. Usually 1 bumper roller / Truss. Note that Bumper Rollers are installed on only one side of SuperMod.

Total Bumper Rollers = 2 X 6" Bumper Roller = **2 X MOD 46**

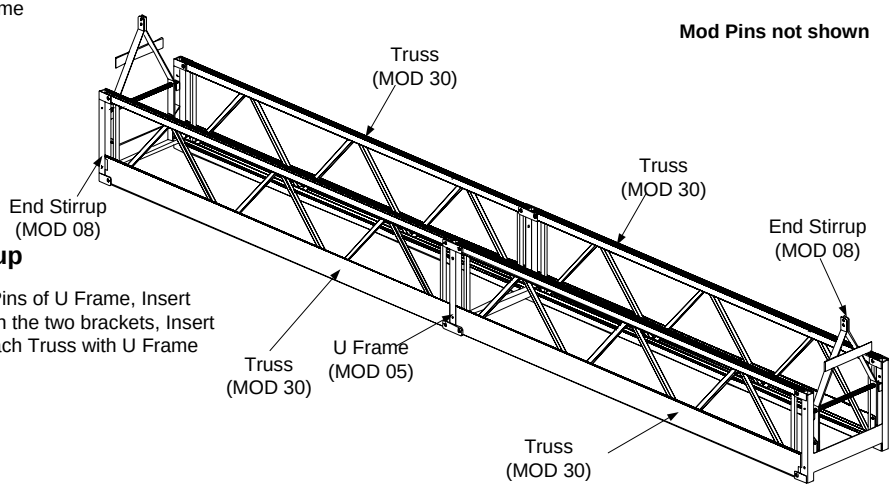
SuperMod Installation



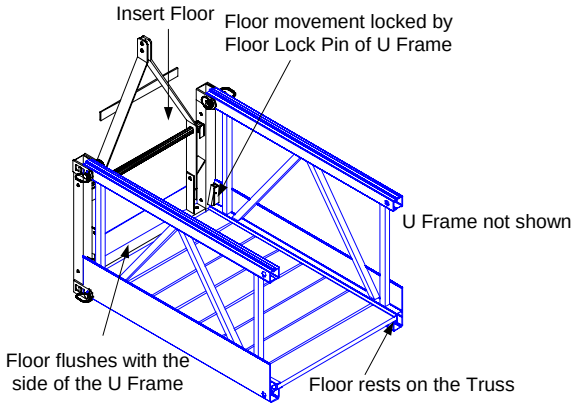
Installation of Trusses with End Stirrup



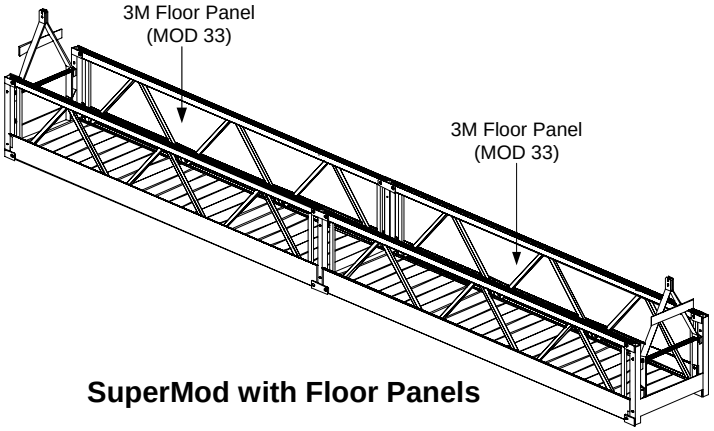
Installation of Trusses with U Frame



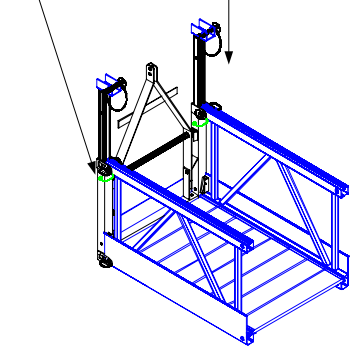
SuperMod Framework



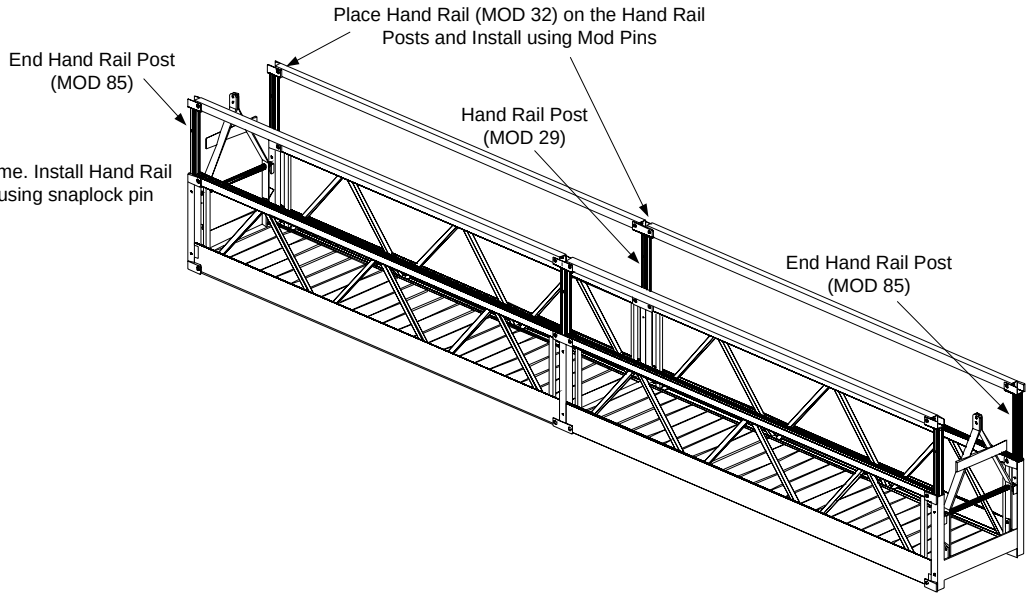
Floor Panel Installation



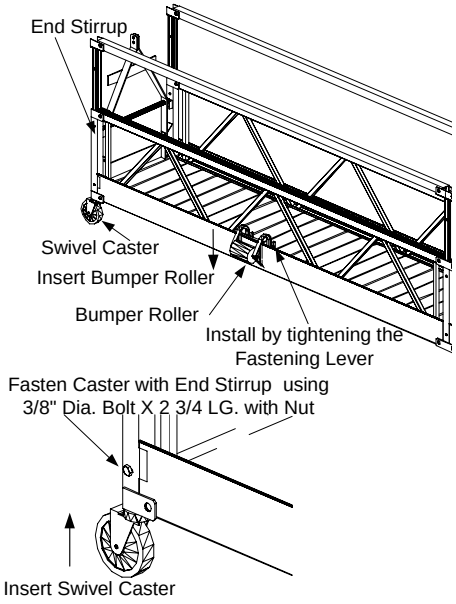
SuperMod with Floor Panels



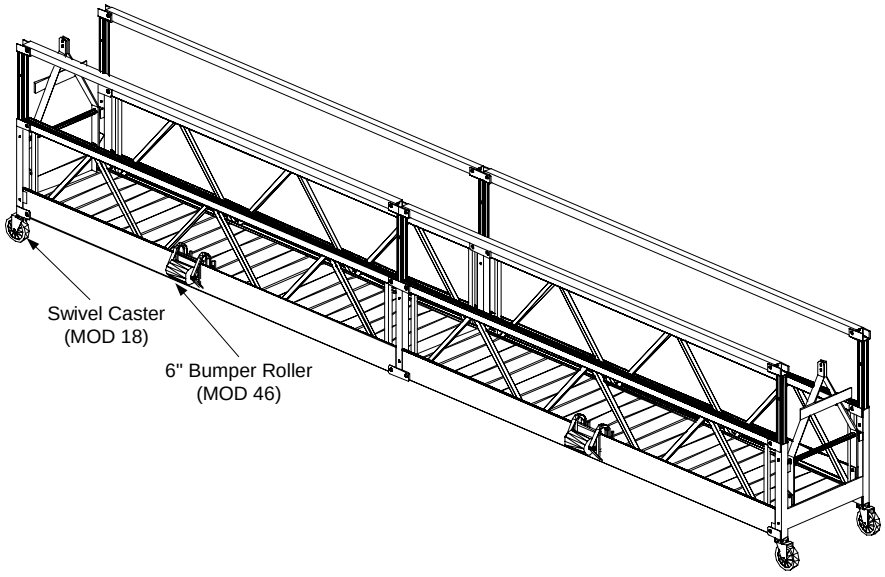
Hand Rail Post Installation



SuperMod with Hand Rail Posts and Hand Rails



Bumper Roller, Swivel Caster Installation



SuperMod Platform

4.2. Installation of SuperMod with Walk Thru Stirrup

LABEL: ARRANGEMENT OF SUPERMOD PLATFORMS WITH WALK THRU STIRRUPS

TOTAL LENGTH		TOTAL DISTANCE		PLATFORM ARRANGEMENT ↑ = WALK THRU STIRRUP - = CROSS FRAME	TOTAL PLATFORM WEIGHT – SEE NOTE		MAX RATED WORKING LOAD	
FT/INCH	M	FT./INCH	M		LBS	KG	LBS	KG
30’0”	9	23’3”	7	1 ↑ 2 -3-2 ↑ 1	602	274	1000	450
33’9”	10	26’3”	8	1 ↑ 3-2-3 ↑ 1	644	293	1000	450
36’9”	11	29’3”	9	1 ↑ 3-3-3 ↑ 1	686	312	1000	450
40’6”	12	33’	10	1 ↑ 3-2-2-3 ↑ 1	762	347	1000	450
43’6”	13	36’	11	1 ↑ 3-3-3-2 ↑ 1	804	366	1000	450
46’6”	14	39’	12	1 ↑ 3-3-3-3 ↑ 1	846	385	1000	450
50’3”	15	42’9”	13	1 ↑ 3-3-2-2-3 ↑ 1	922	420	750	340
53’3”	16	45’9”	14	1 ↑ 3-3-2-3-3 ↑ 1	964	439	750	340
56’3”	17	48’9”	15	1 ↑ 3-3-3-3-3 ↑ 1	1006	458	750	340
46’6”	14	33’	10	2 ↑ 3-2-2-3 ↑ 2	796	362	750	340
49’6”	15	36’	11	2 ↑ 3-3-3-2 ↑ 2	862	392	750	340
52’6”	16	39’	12	2 ↑ 3-3-3-3 ↑ 2	904	411	750	340
56’3”	17	42’9”	13	2 ↑ 3-3-2-2-3 ↑ 2	1082	492	750	340
59’3”	18	45’9”	14	2 ↑ 3-3-2-3-3 ↑ 2	1124	511	750	340
62’3”	19	48’9”	15	2 ↑ 3-3-3-3-3 ↑ 2	1166	530	750	340

Total Length: Total length of the SuperMod platform

Total Distance: Distance between the hoists (suspension cable) = distance between centers of C Stirrup

Total Platform Weight: Dead weight of the SuperMod for the specific arrangement

Max Rated Working Load: Maximum live load

Platform Arrangement: Framework (arrangement of U Frames, Trusses, C Stirrups)

↑ : C Stirrup (MOD 35)

- : U Frame (Connection)

1,2,3 : Length in meters of Truss, Hand Rail, and Floor Panel

1 ↑ 2 - : Modular platform has 1 M left side overhang from C Stirrup. Distance between the U Frames is 2 M.

- 2 ↑ 1 : Modular platform has 1 M right side overhang from C Stirrup. Distance between U Frames is 2M.

2-3 : 2 M Truss is connected to 3 M Truss by a U Frame (MOD 05)

1. U Frame with End Guard Rails (MOD 26) is installed at the ends of the SuperMod.
2. Intermediate sections of the SuperMod are connected using U Frame (MOD 05).
3. Hand Rails and Floor Panels are selected according to the length of the Truss (1,2,3 M).

Installation Procedure

1. Select the platform arrangement for the desired platform length and prepare a list of components required for installation. Ensure that you have all the necessary components.
2. Set up the framework of the SuperMod by installing U Frames with Trusses.
3. Install Floor Panels.
4. Install Hand Rail Posts and Hand Rails.
5. Install Bumper Rollers, Swivel Casters and other accessories if used.
6. Place the C Stirrup (MOD 35) at specified locations on the SuperMod and install the C Stirrups with the SuperMod (see Section 3.5 for detailed installation procedure).
7. Install hoist system on the C Stirrup.

Note:-

1. The stirrups must be positioned so that there will be a stabilizing moment of 1 ½ times the overturning moment caused by any possible concentration of the rated load on the overhang. As a safe practice, install C Stirrup according to the platform arrangement provided by Winsafe Corp. on the Modular Platform. Any change in the platform arrangement must be approved by a professional engineer.
2. Refer to Section 3 for detailed installation procedures.
3. Do not substitute Winsafe modular platform components with components of other manufacturers.
4. Live loads must be distributed. Do not concentrate live load at one end of the modular platform.
5. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.
6. On SuperMod requiring more than 3 Walk Thru Stirrups, install the 3rd Walk Thru Stirrup to the section that is installed with the rest of the Super Mod by a Hinge Set. A Hinge Set is used to stabilize the platform. Uneven displacement is compensated by the movement of the Hinge Set. See Section 5.4 for Installation of Hinge Sets.

Example:- Platform arrangement: 1 ↑ 2 - 3 - 2 ↑ 1

List of components for installation

C Stirrups

No. of Stirrups = No. of ↑ 's = **2 X MOD 35**

U Frames

Arrangement: 1 ↑ 2 - 3 - 2 ↑ 1

No. of U frames = **3 X MOD 05**

Trusses

Trusses / Side = 1M + 2M + 3M + 2M + 1M = 2 X 1M, 2 X 2M, 1 X 3M

Each U Frame requires 2 Trusses

Total Trusses = 2 X 1M /Side X 2, 2 X 2M/Side X 2, 1 X 3M/Side X 2

i.e. 4 X1M, 4 X 2M, 2 X 3M = **4 X MOD 10, 4 X MOD 20, 2 X MOD 30**

Floor Panels

No. of Floor Panels = 1M+2M+3M+2M+1M

= **2 X MOD 13, 2 X MOD 23, 1 X MOD 33**

Hand Rail Posts

Each U Frame with End Guard Rail (MOD 26) requires 2 End Hand Rail Post (MOD 85)

No. of U Frame with End Guard Rail = 2. Hence, No. of End Hand Rail Post = 2 X 2 = **4 X MOD 85**

Each U Frame (MOD 05) requires 2 Hand Rail Posts (MOD 29)

No. of U Frames = 3. Hence, No. of Hand Rail Post = 3 X 2 = **6 X MOD 29**

Hand Rails

Length of Hand Rail= Length of Truss, since Hand Rails run parallel to Truss.

Hand Rails / Side = 1M + 2M + 3M + 2M + 1M = 2 X 1M, 2 X 2M, 1 X 3M Hand Rails.

Each U Frame / End Stirrup requires 2 Hand Rails.

Hence total Hand Rails = 2 X 1M/Side X 2, 2 X 2M/Side X 2, 1 X 3M/Side X 2

= **4 X MOD 12**, **4 X MOD 22, 1 X MOD 33**

Swivel Caster

Each U Frame with End Guard Rail (MOD 26) requires 2 Swivel Caters.

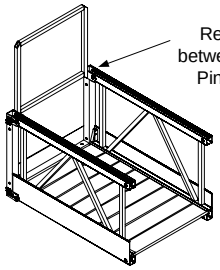
No. of swivel caster = No. of End Stirrups X 2 = 2 X Swivel Caster X 2 = **4 X MOD 18**

Bumper Roller

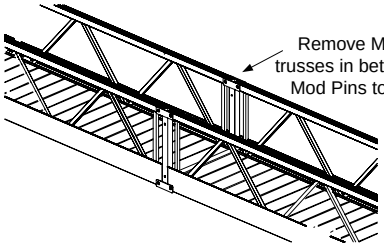
Select bumper roller to suit. Usually 1 bumper roller / Truss. Note that Bumper Rollers are installed on only one side of SuperMod.

Total Bumper Rollers = 4 X 12" Bumper Roller = **4 X MOD 49**

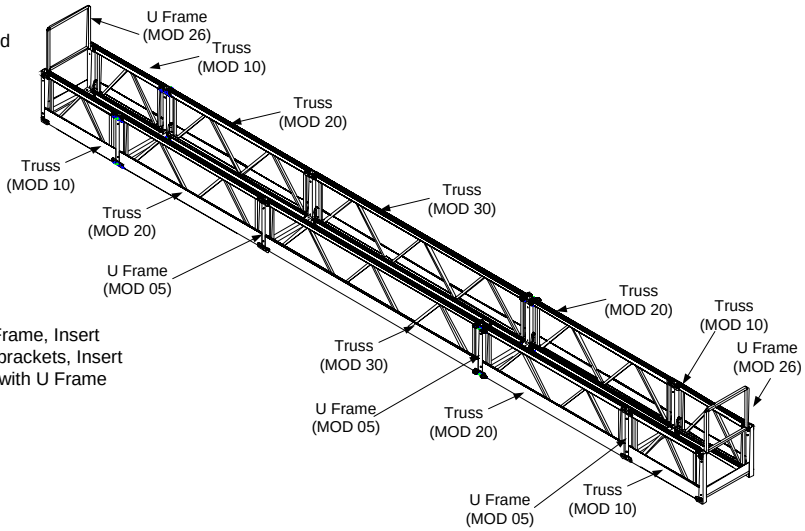
3. SuperMod Installation



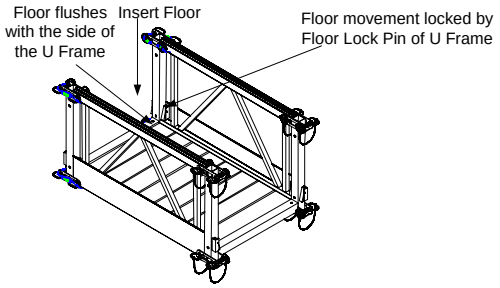
Installation of Trusses with End U Frame



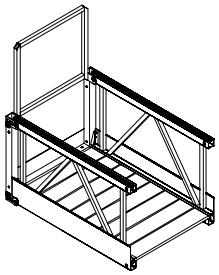
Installation of Trusses with U Frame



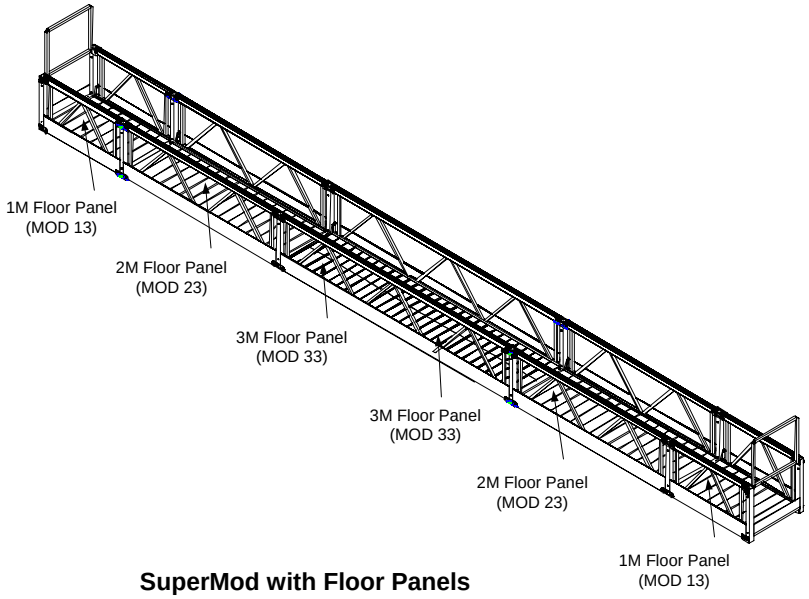
SuperMod Framework



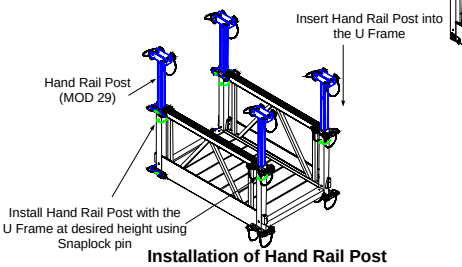
Floor Panel Installation



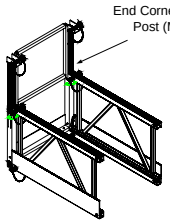
Floor Panel Installation



SuperMod with Floor Panels

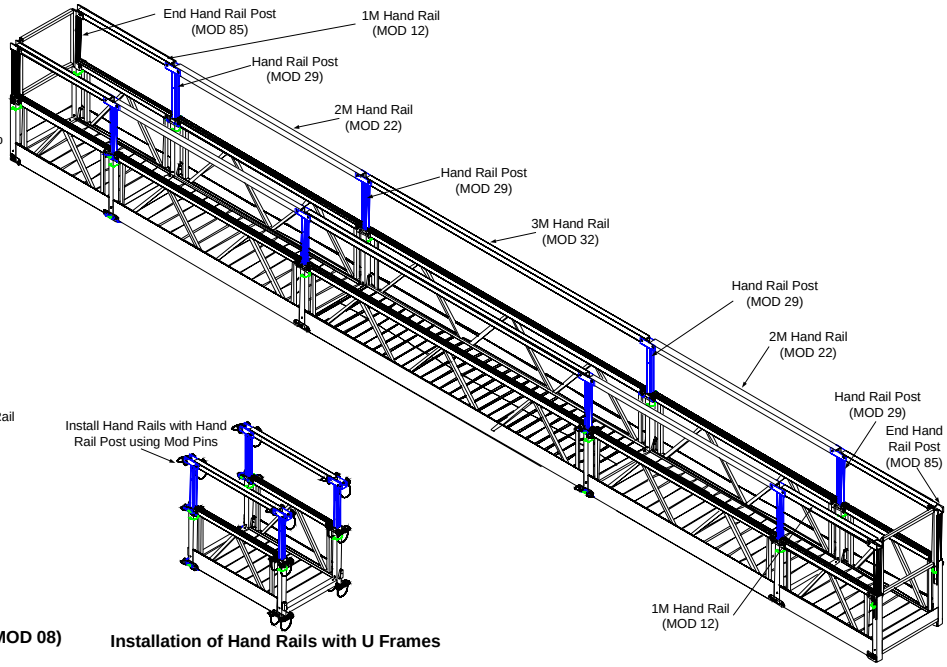


Installation of Hand Rail Post

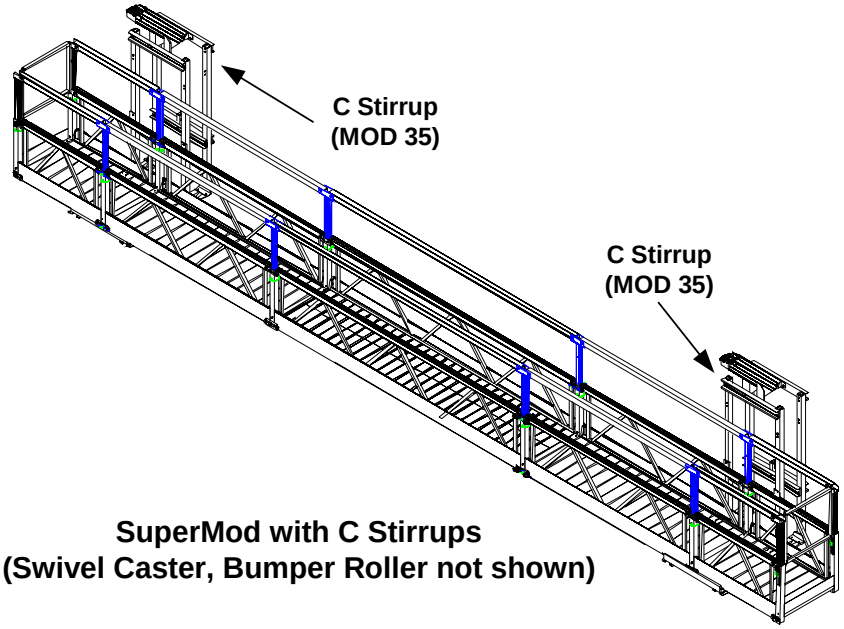


Installation of Hand Rail Post with U Frame (MOD 08)

Installation of Hand Rails with U Frames



SuperMod with Hand Rail Post and Hand Rails



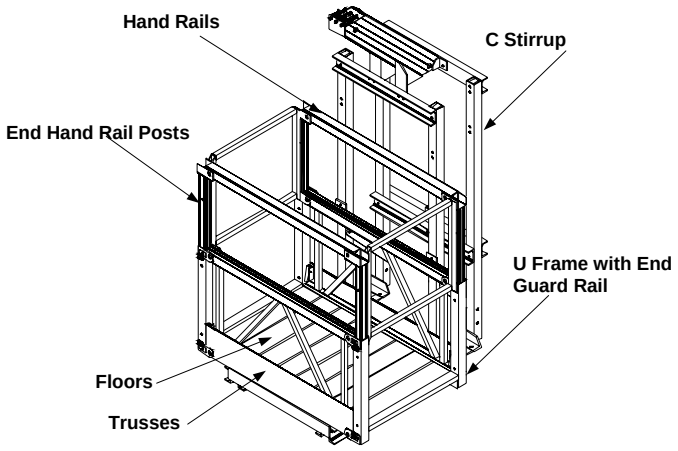
SuperMod with C Stirrups
(Swivel Caster, Bumper Roller not shown)

5. CUSTOM LARGE AREA PLATFORMS

Winsafe custom large area platforms are characterized by: longer life (aluminum and galvanized steel components), Non-skid aluminum decking, Complete guard rails and toe boards for perimeter safety, Lightning masts and dual electric receptacles on each platform, Optional step down transformers and ground fault receptacles, Optional air manifolds for air powered tools. This section presents the installation procedures of commonly used custom modular platforms: Work Cages; Corner Platforms; Circular Platforms and Hinged Platforms.

5.1. Work Cages

Work Cages are small independent 1M or 2M modular platforms capable of carrying loads up to 750 lbs. For custom work cages contact Winsafe Corp.



Installation Procedure

1. Select the platform length and components.

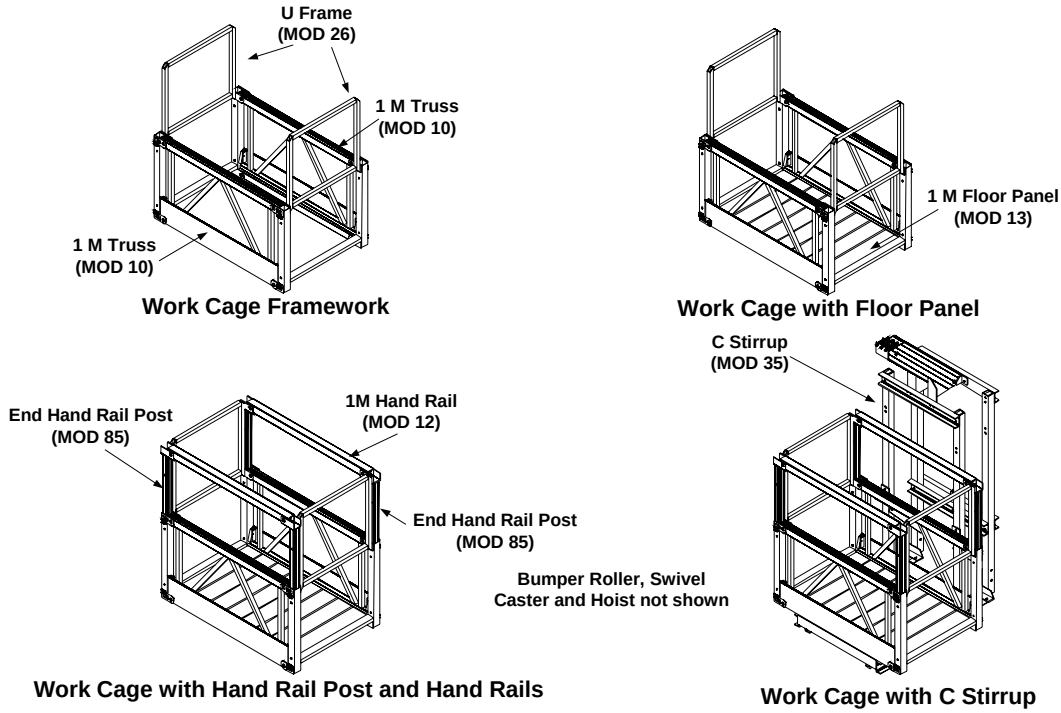
Component	1 M Work Cage	2 M Work Cage
U Frame with End Guard Rail (MOD 26)	2	2
1 M Truss (MOD 10)	2	
2 M Truss (MOD 20)		2
1M Floor Panel (MOD 13)	1	
2M Floor Panel (MOD 23)		1
1M Hand Rail(MOD 12)	2	
2M Hand Rail(MOD 22)		2
C Stirrup (MOD 35)	1	1

2. Set up the framework of the Work Cage by installing U Frames with Trusses.
3. Install Floor Panels, Hand Rail Posts and Hand Rails.
4. Install Bumper Rollers and Swivel Casters if used.

Note:-

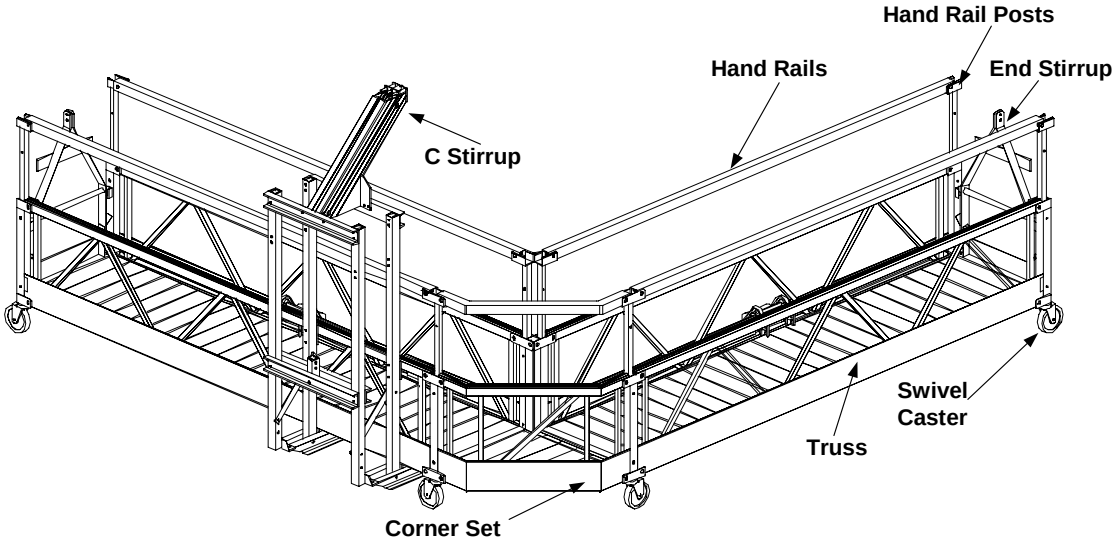
1. Refer to Section 3 for detailed installation procedures.
2. Do not substitute Winsafe modular platform components with components of other manufacturers.
3. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.

Example:- Installation of 1 M Work Cage



5.2. Corner Platforms

Winsafe Corner Platforms are used for working along the corners or angular work surfaces of buildings or structures. Corner platforms are constructed using the 30, 45, 60 and 90^{o} Winsafe Corner Sets (see Section 2.6) and Winsafe SuperMod components. For custom corner platform contact Winsafe Corp.



Installation Procedure

1. Select the platform arrangement and the Corner Set required based on the corner angles.
2. Set up the framework by installing U Frames, Trusses and Corner Sets sequentially.
3. Install Floor Panels, Hand Rail Posts and Hand Rails.
4. Install Bumper Rollers and Swivel Casters if used.

Note:-

1. Refer to Section 3 for detailed installation procedures.
2. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.
3. Do not substitute Winsafe modular platform components with components of other manufacturers.
4. Ensure to pass at least two suspension cables through the C Stirrups and End Stirrups to ensure safety. Should two suspension cables not be used, the platform has a risk of swinging towards one side and may cause serious injury to the workers on the platform.
5. Live loads must be distributed. Do not concentrate live load at one end of the modular platform.
6. Do not over load the Corner Sets.

Example:- 3M 90^{o} 3M Corner Platform

List of components

U Frames: 2 X U Frames with End Guard Rail = **2 X MOD 08**

Trusses: 4 X 3M Truss = **4 X MOD 30**

Floor Panel: 2 X 3M Floor Panel = **2 X MOD 33**

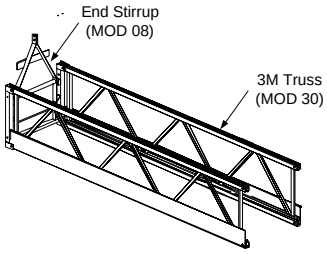
Hand Rail Posts: 4 X End Hand Rail Post = **4 X MOD 85**

Hand Rails: 4 X 3M Hand Rail= **4 X MOD 32**

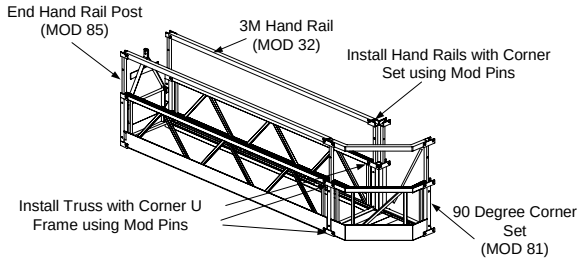
C Stirrups: 1 X C Stirrup = **1 X MOD 35**

Bumper Roller: 2 X 6" Bumper Roller = **2 X MOD 46**

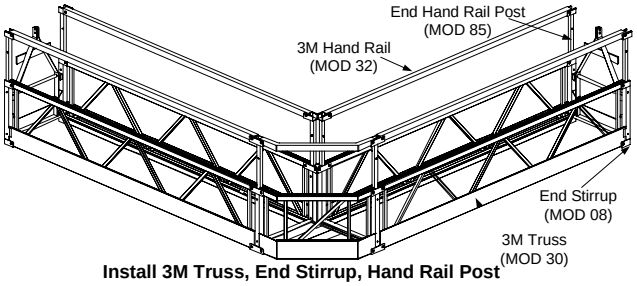
Swivel Caster: 4 X Swivel Caster = **4 X MOD 18**



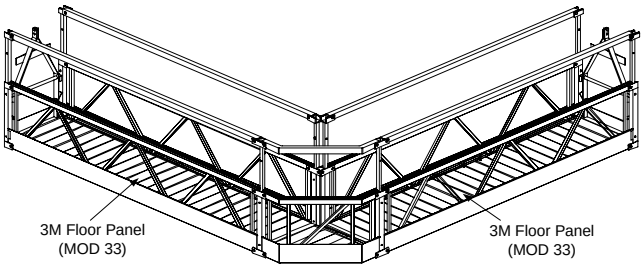
Install End Stirrup (MOD 08) with 3 M Trusses (MOD 30)



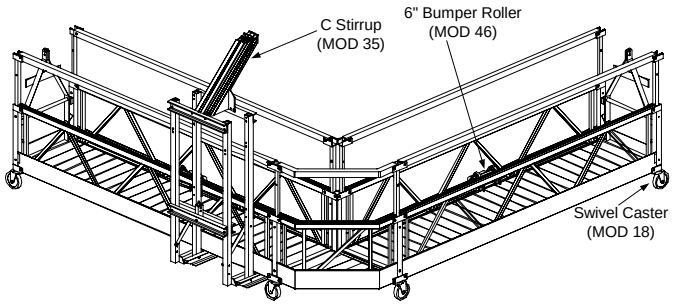
Install Hand Rail Post, Hand Rails and Install 90 Degree Corner Set



Install 3M Truss, End Stirrup, Hand Rail Post and Hand Rail with Corner Set



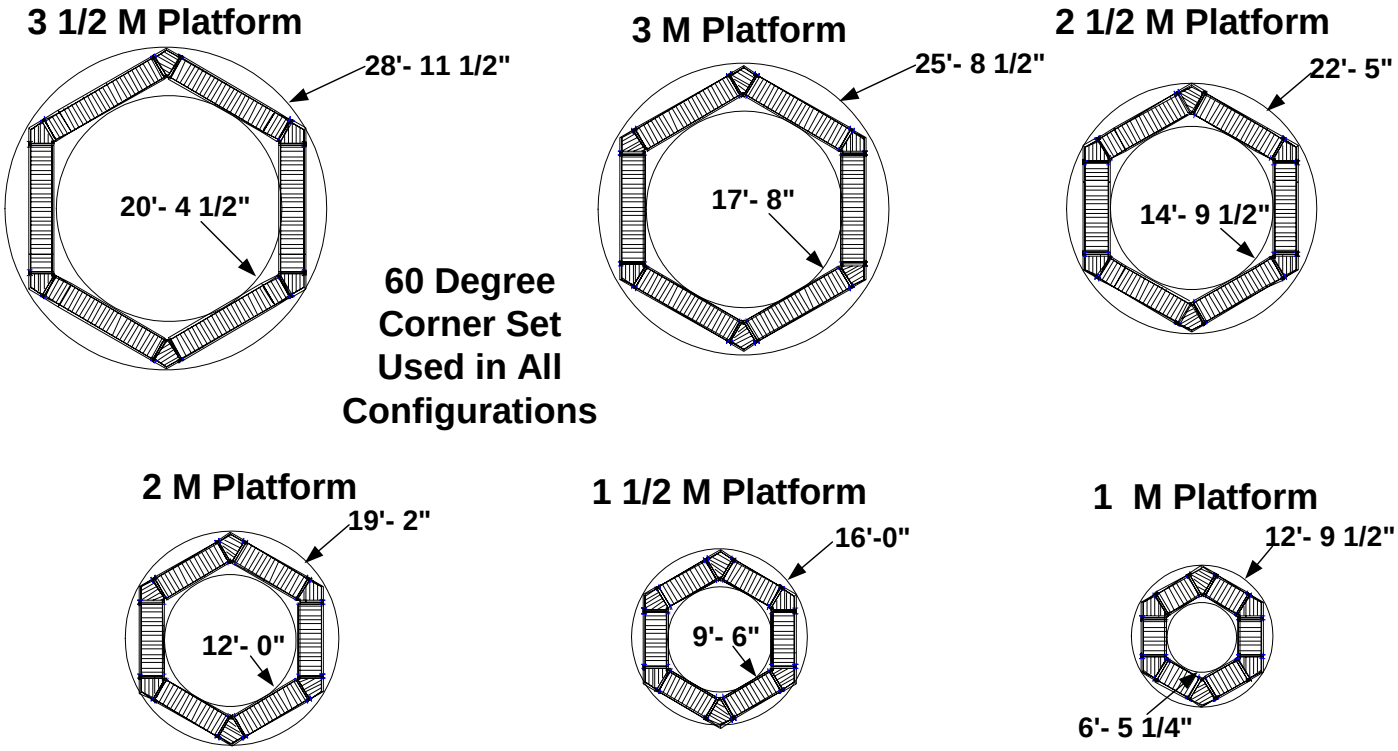
Install 3M Floor Panels



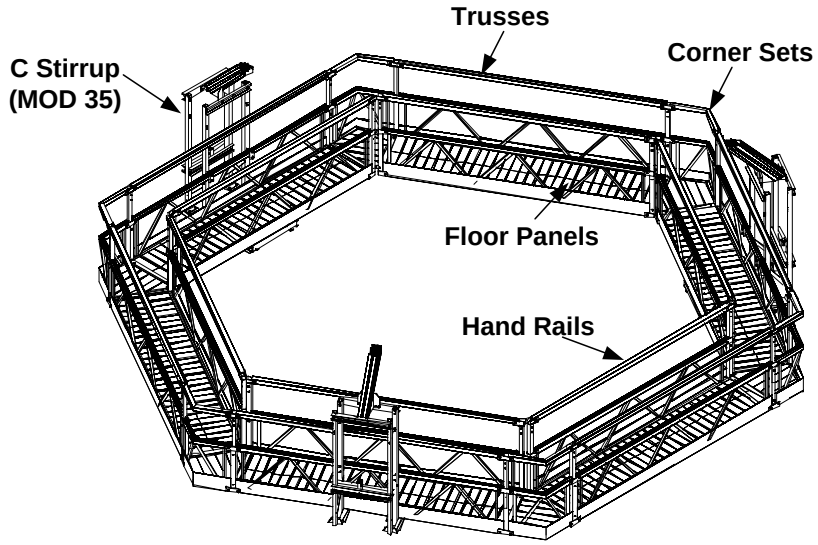
Install C Stirrup, Bumper Rollers and Swivel Casters

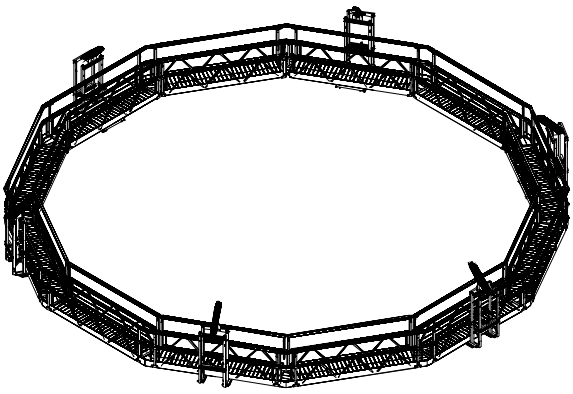
5.3. Circular Platforms

Circular platform are commonly used during the maintenance of smoke stacks (exterior and interior circular platforms) and large circular structures. Circular platforms are constructed using the components presented in Section 2 along with Corner Sets. Common configurations of circular platforms are:

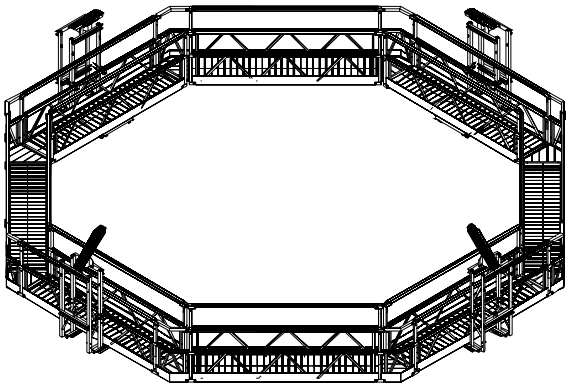


Platform Size	Outside Diameter	Inside Diameter
3 1/2 M	28’-11 ½”	20’- 4 ½”
3 M	25’- 8 ½”	17’- 8”
2 1/2 M	22’- 5”	14’-9 ½"
2 M	19’- 2”	12’-0”
1 1/2 M	16’	9’- 6”
1 M	12’-9 ½ ”	6’-5 ¼”

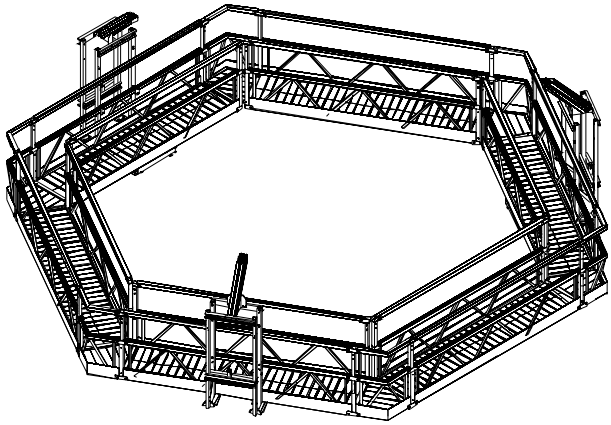




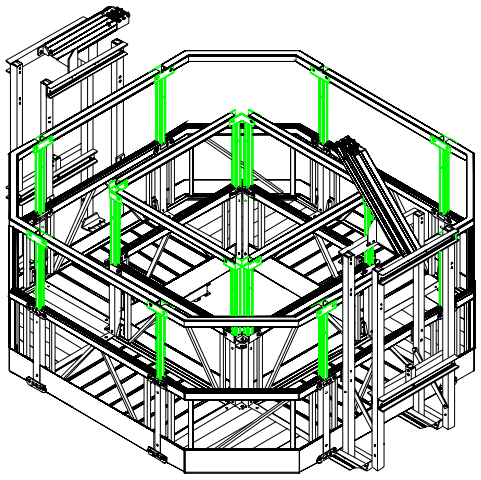
30 Degree Circular Platform



45 Degree Circular Platform



60 Degree Circular Platform



90 Degree Square or Rectangular Platform

Installation Procedure

1. Select the circular platform arrangement and the Corner Set required based on the corner angles and the circular structure.
2. Install the Corner Sets. Set up the framework by installing U Frames, Trusses and Corner Sets sequentially.
3. Install Floor Panels, Hand Rail Posts and Hand Rails.
4. Install Bumper Rollers and Swivel Casters if used.

Note:-

1. Provide safety harness for each worker on the platform.
2. Refer to Section 3 for detailed installation procedures.
3. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.
4. Do not substitute Winsafe modular platform components with components of other manufacturers.

5. Ensure to pass at least two suspension cables through the C Stirrups and End Stirrups to ensure safety. Should two suspension cables not be used, the platform has a risk of swinging towards one side and may cause serious injury to the workers on the platform.
6. Do not concentrate load on any location of the circular platform.

Example:- Installation of 45^{o} Circular Platform

List of Components

C Stirrups: 4 X C Stirrups = **4 X MOD 35**

45^{o} Corner Sets: 8 X Corner Sets = **8 X MOD 83**

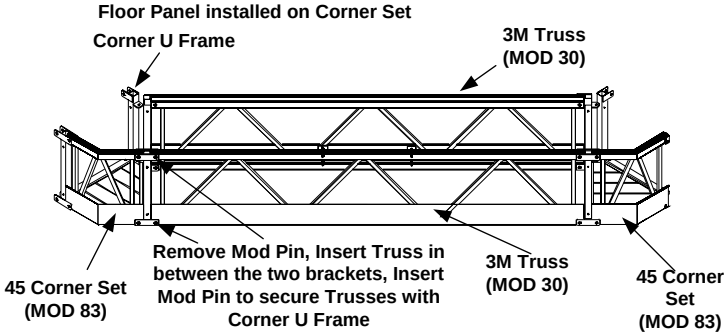
Trusses: 16 X 3M Truss = **16 X MOD 30**

Floor Panels: 8 X 3M Floor Panel = **8 X MOD 33**

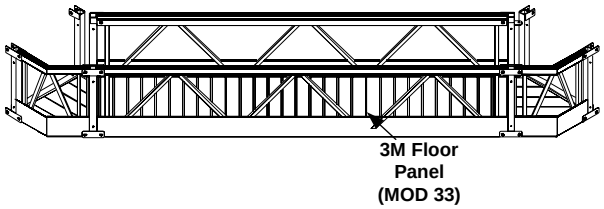
Hand Rails: 16 X 3M Hand Rails = **16 X MOD 32**

Hand Rail Post: 32 X End Hand Rail Post = **32 X MOD 85**

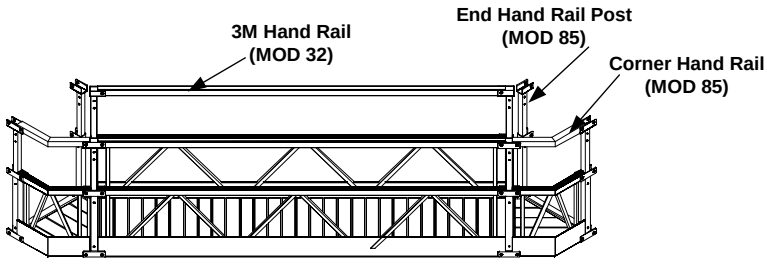
Installation Procedure



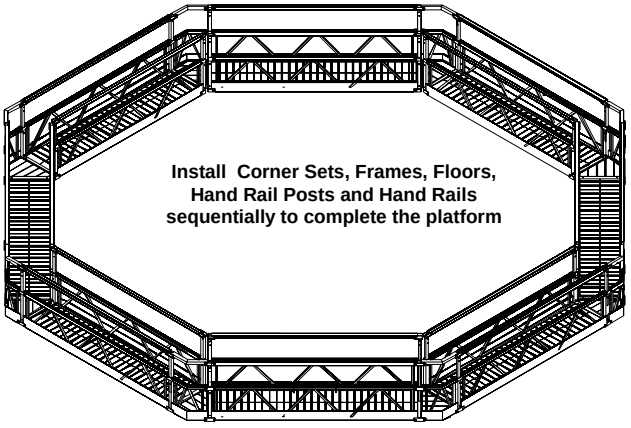
Install Trusses with Corner U Frames



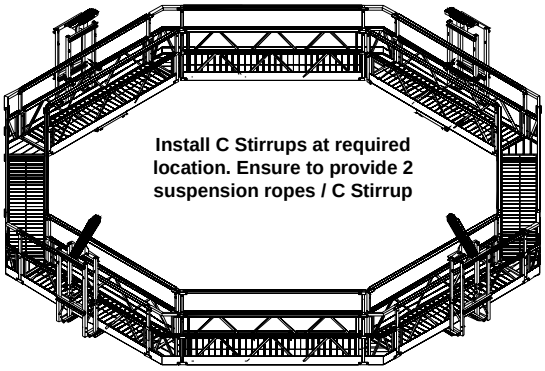
Install Floor Panels



Install Hand Rail Posts and Hand Rails



Framework of Circular Platform



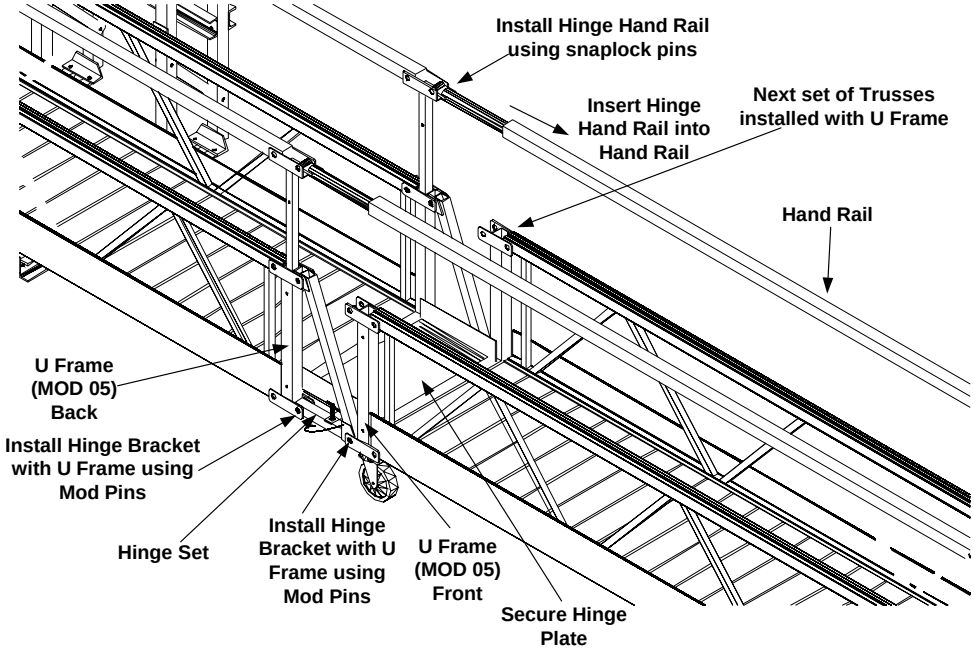
Circular Platform with C Stirrups

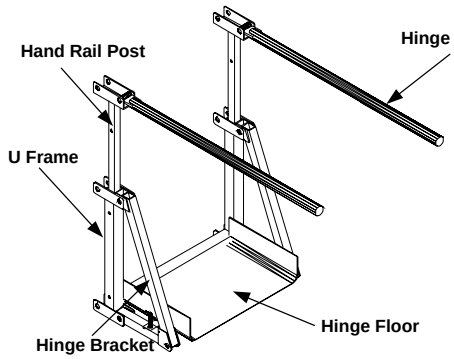
5.4. Hinged Platform

A Hinged Platform is a modular platform having more than 3 suspension locations. To stabilize the movement of such platforms, Hinge Sets are used as a part of the framework of the modular platform. Hinge Set can be installed to any U Frame of the modular platform except the End U Frames or End Stirrups.

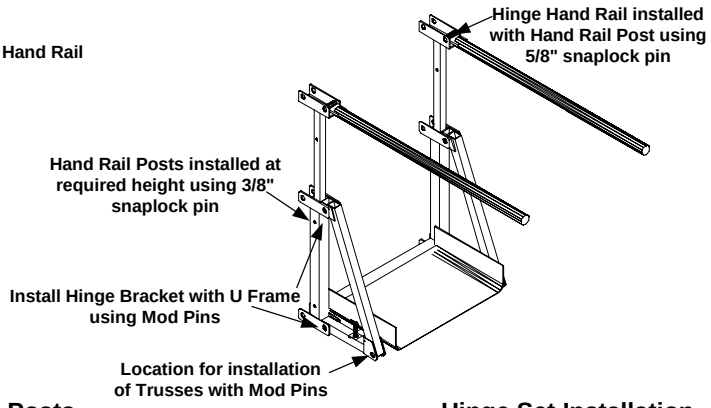
Installation Procedure:

Installation of Hinge Set with Modular Platform





Hinge Set with U Frame and Hand Rail Posts



Hinge Set Installation

1. Installation of Hinge Set with Modular Platform requires installation of Hinge Set with 2 consecutive U Frames.
2. Remove Mod Pins. Insert the Hinge Bracket into the brackets of the U Frame that hold the Mod Pins.
3. Install the Hinge Bracket with the U Frame by inserting the Mod Pins, securing the Hinge Bracket with the U Frame. Secure the Mod Pins by the retaining clip.
4. Remove the Mod Pins from the front U Frame. Insert the front portion of the Hinge Bracket into the U Frame brackets containing the Mod Pins. Install the Hinge Bracket with the U Frame by inserting the Mod Pins, securing the Hinge Bracket with the U Frame. Secure the Mod Pins by the retaining clip.
5. Install Hand Rail Post (MOD 29) to the back Frame at the desired height using a 3/8” snaplock pin.
6. Install Trusses to the front U Frame. Install U Frame at the other end of the Truss. Install Hand Rail Posts and Hand Rails at the other end so that Hand Rails at the Hinge end are free as shown.
7. Insert the Hinge Hand Rail into the Hand Rail as shown. When the suspension locations move relative to each other, the Hinge Set moves about the Mod Pins and the Hinge Hand Rail moves to-and fro inside the Hand Rail. Install Hinge Hand Rail with Hand Rail Post as shown using 5/8” snaplock pin.

Note:-

1. Ensure that Hinge Floor is properly secured to the Hinge Bracket.
2. Ensure that Mod Pins and snaplock pins are secured by their respective retaining clips.

Installation Procedure

1. Select the arrangement of modular platform from the Platform Arrangement Label.
2. Determine the locations of C Stirrups and determine the locations of Hinge Sets accordingly.
3. Set up the framework of the Modular Platform by installing End U Frames, Trusses, U Frames, Hinge Sets, Trusses, U Frames and End U Frames accordingly.

4. Install Hinge Sets to Modular Platform by the installation procedure presented above.
5. Install Floor Panels. Install Hand Rail Posts and Hand Rails.
6. Install C Stirrups. Install Bumper Rollers and Swivel Casters if used.
7. When using Hinge Sets, always use 2 Suspension cables per C Stirrup for safety.

Note:-

1. Provide safety harness for each worker on the platform.
2. Refer to Section 3 for detailed installation procedures.
3. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.
4. Do not substitute Winsafe modular platform components with components of other manufacturers.
5. Ensure to pass at least two suspension cables through the C Stirrups and End Stirrups to ensure safety. Should two suspension cables not be used, the platform has a risk of swinging towards one side and may cause serious injury to the workers on the platform.
6. Do not concentrate load on any location of the Hinged Platform.

Example:- Installation of I 3-3 I 3 I Hinge Platform

List of Components

C Stirrups: 1 X C Stirrups = **1 X MOD 35**

10" Hinge Sets: 1 X Hinge Set = **1 X MOD 90**

Trusses: 6 X 3M Truss = **6 X MOD 30**

Floor Panels: 3 X 3M Floor Panel = **3 X MOD 33**

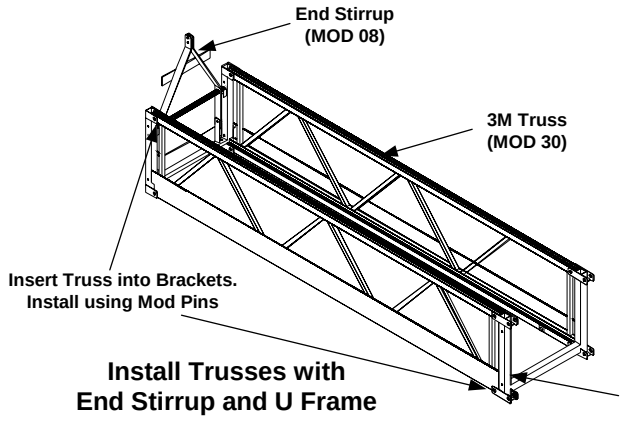
Hand Rails: 6 X 3M Hand Rails = **6 X MOD 32**

End Hand Rail Post: 4 X End Hand Rail Post = **4 X MOD 85**

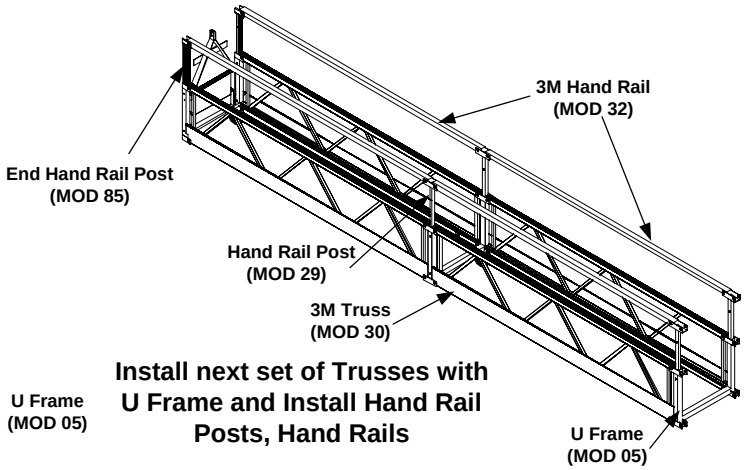
Hand Rail Post: 4 X Hand Rail Post = **4 X MOD 29**

End Stirrup: 2 X Stirrup = **2 X MOD 08**

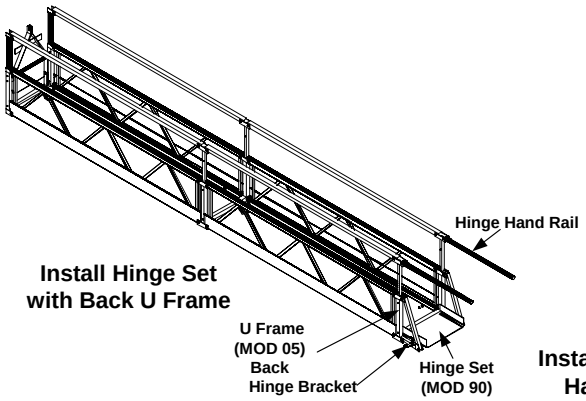
U Frame: 3 X U Frame = **3 X MOD 05**



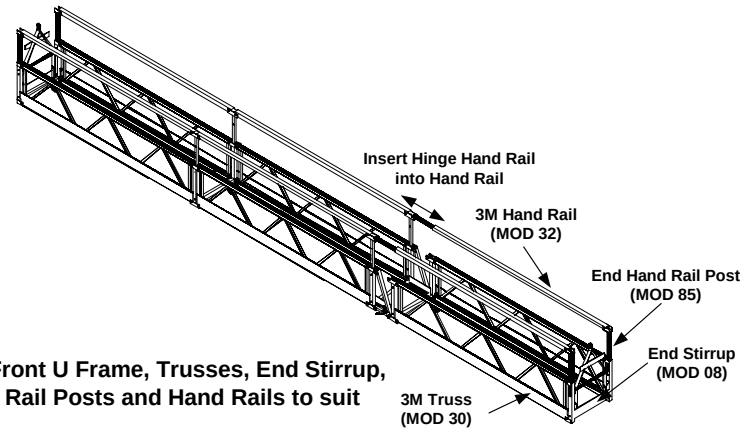
Install Trusses with End Stirrup and U Frame



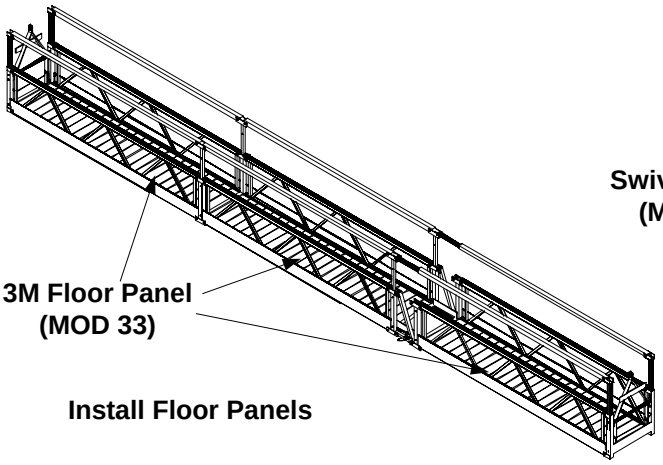
Install next set of Trusses with U Frame and Install Hand Rail Posts, Hand Rails



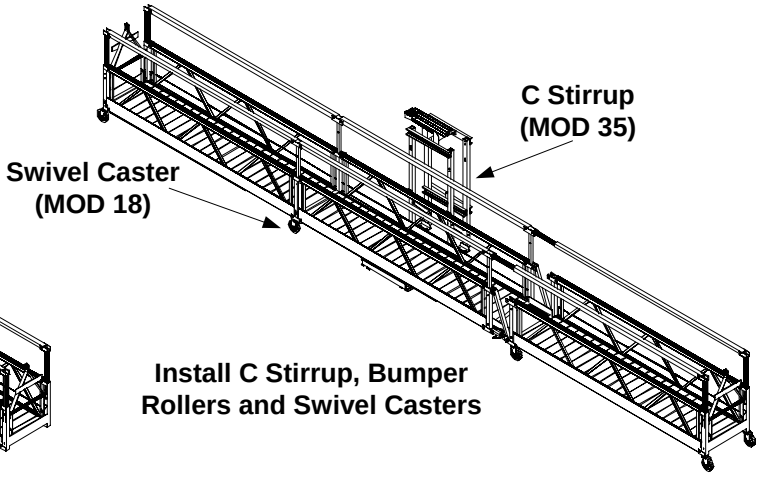
Install Hinge Set with Back U Frame



Install Front U Frame, Trusses, End Stirrup, Hand Rail Posts and Hand Rails to suit



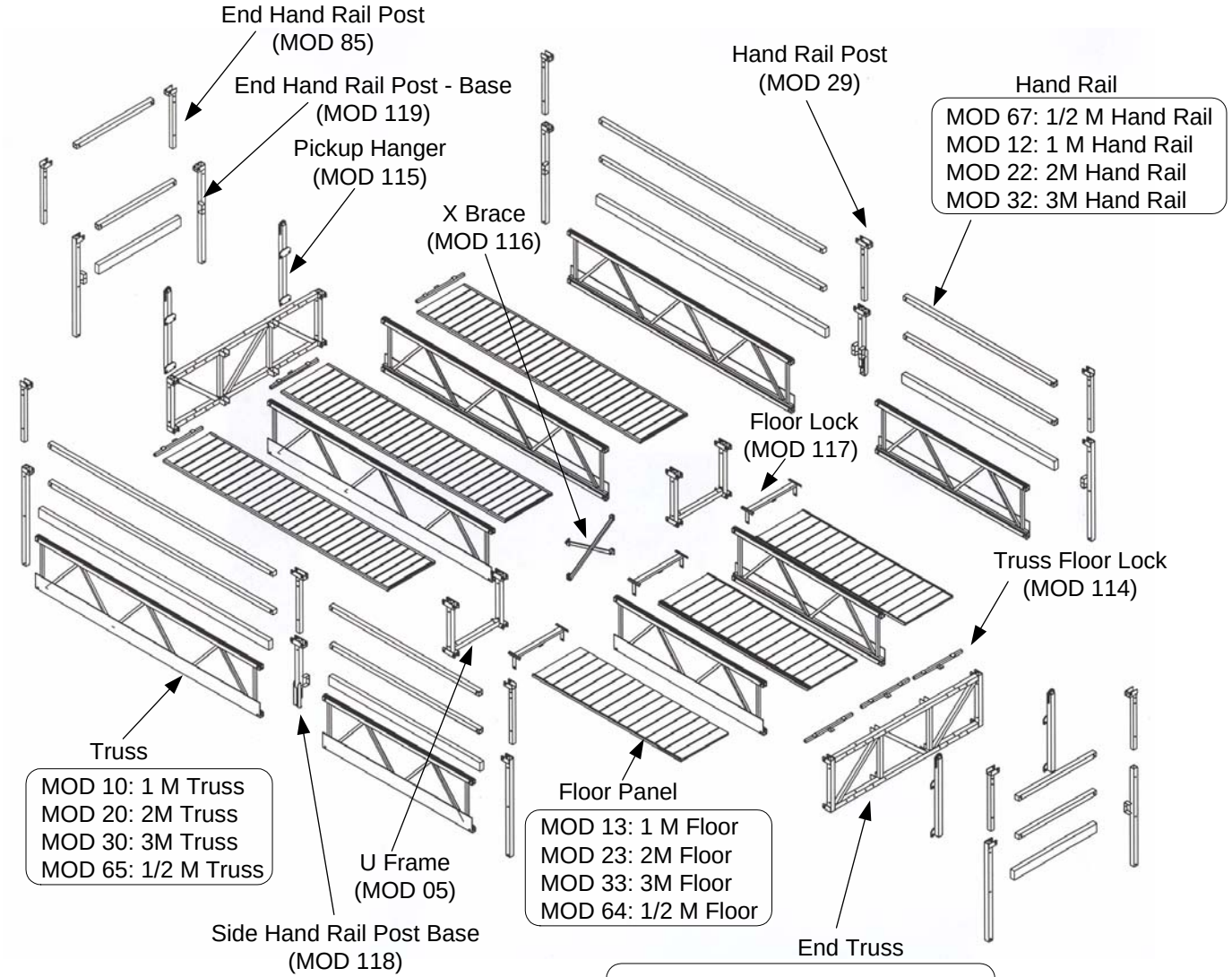
Install Floor Panels



Install C Stirrup, Bumper Rollers and Swivel Casters

6. SUPER DECK

Winsafe Super Deck's are large area suspended platforms used for the construction and maintenance of underside of bridges and buildings (dome, arch). Super Deck is constructed using the SuperMod components presented in Section 2 along Winsafe Super Deck components. Super Decks varies from 9 Ft. X 9 Ft. up to 30 Ft. X 28 Ft. For custom Super Decks contact Winsafe Corp.

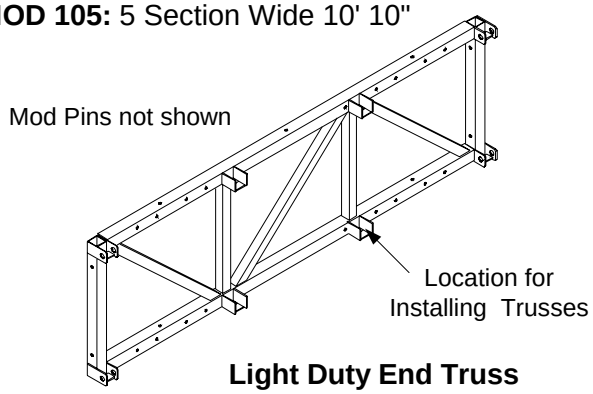


6.1. Components

End Truss

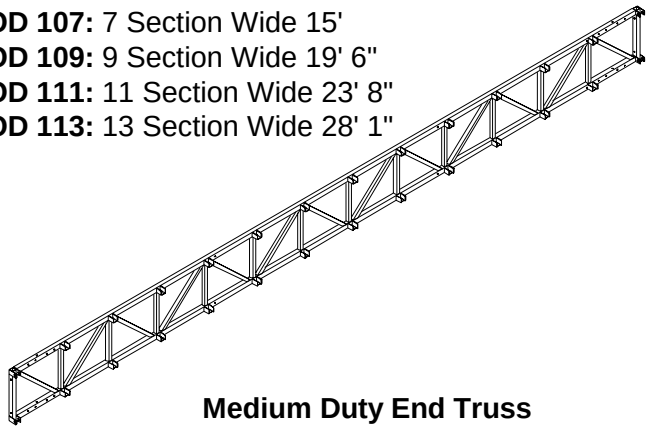
End Trusses are installed on the end sides of the Super Deck. End Trusses span the width of the Super Deck and support Trusses, Floor Panels, End Hand Rail Post Base, Pickup Hanger, End Hand Rail Posts and Hand Rails. End Trusses vary in length from 6’ 5” to 28’ 1”. For custom End Truss contact Winsafe Corp.

MOD 103: 3 Section Wide 6' 5"
MOD 105: 5 Section Wide 10' 10"



Light Duty End Truss

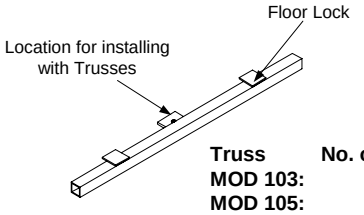
MOD 107: 7 Section Wide 15'
MOD 109: 9 Section Wide 19' 6"
MOD 111: 11 Section Wide 23' 8"
MOD 113: 13 Section Wide 28' 1"



Medium Duty End Truss

Truss Floor Lock (MOD 114)

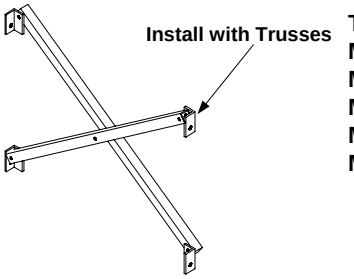
Truss Floor Lock locks the Floor Panels with the End Trusses.



Truss	No. of MOD 114 Reqd
MOD 103:	3
MOD 105:	5
MOD 107:	7
MOD 109:	9
MOD 111:	11
MOD 113:	13

X Brace (MOD 116)

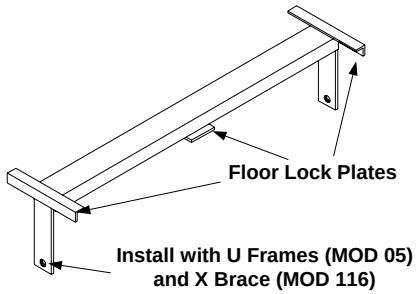
X Braces and U Frames are installed alternatively on Super Decks. X Braces are not installed at the ends of the Super Deck. X Braces are installed in the following arrangement:



Truss	No. of Sections	X Braces Reqd Per Length Joint
MOD 103:	3	1
MOD 105:	5	2
MOD 107:	7	3
MOD 109:	9	4
MOD 111:	11	5

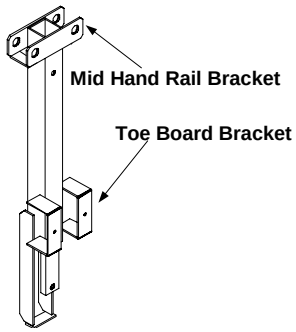
Floor Lock (MOD 117)

Floor Lock (MOD 117) locks the Floor Panels with the U Frames (MOD 05). Floor Lock Plates arrest the movement of Floor Panels in all directions.



Side Hand Rail Post Base (MOD 118)

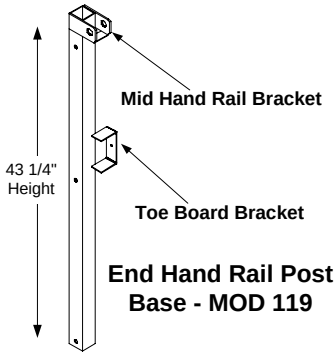
Side Hand Rail Post Base (MOD 118) is installed on the sides of the Super Deck. Side Hand Rail Post Base holds the Hand Rail Post (MOD 29), supports side toe boards (2 X 4 Wooden plank) on both sides, and holds mid Hand Rails at both sides. Side toe boards are held at platform level while the mid Hand Rails are held at 43 ¼" height. MOD 118 is installed on each side of the end U Frames of the Super Deck.



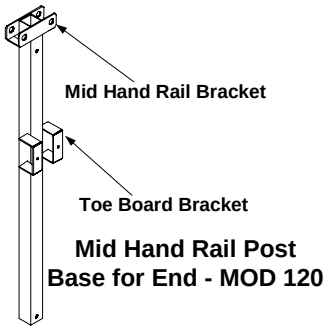
Hand Rails at End

End Hand Rail Post Base (MOD 119)

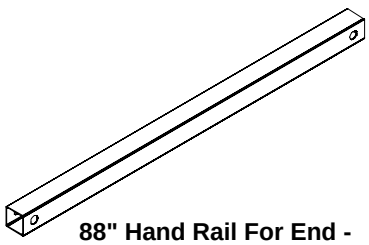
End Hand Rail Post Base (MOD 119) is installed at the corners of the Super Deck. End Hand Rail Post Base holds the End Hand Rail Post (MOD 85), supports the end toe boards (2 X 4 Wooden plank), and a mid Hand Rail. End toe boards are held at floor level and the mid Hand Rails are held at 43 ¼". Usually, 4 X MOD 119 are required per Super Deck. MOD 119 is available in pairs (left and right MOD 119)



End Hand Rail Post Base - MOD 119



Mid Hand Rail Post Base for End - MOD 120

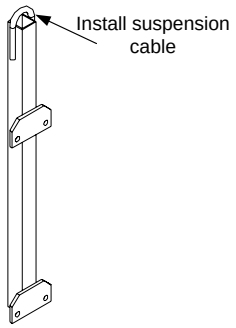


88" Hand Rail For End - MOD 121

Mid Hand Rail Post Base for End (MOD 120)

Mid Hand Rail Post Base for End (MOD 120) is installed on the End Truss along with the End Hand Rail Post Base (MOD 119) to hold the end Hand Rails of the Super Deck. MOD 120 holds the Hand Rail Post (MOD 29) and supports Hand Rails. The **88" Hand Rail (MOD 121)** is used exclusively with MOD 120 for guarding custom lengths not feasible by standard Hand Rails (1M, 2M, 3M).

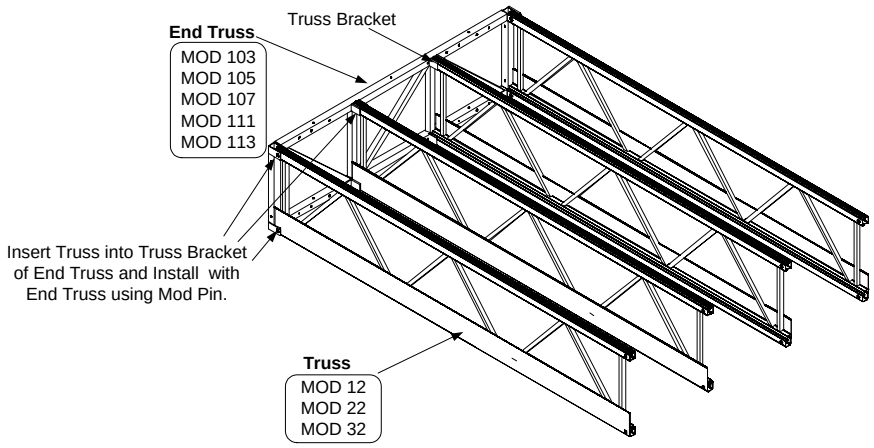
Pick Up Hanger (MOD 115)



SuperDecks are suspended using the Pick Up Hanger (MOD 115). Pick Up Hangers are installed in pairs on the End Truss. 8 Pick Up Hangers are required for each Super Deck.

6.2. Installation Procedures

Installation of Trusses with End Truss

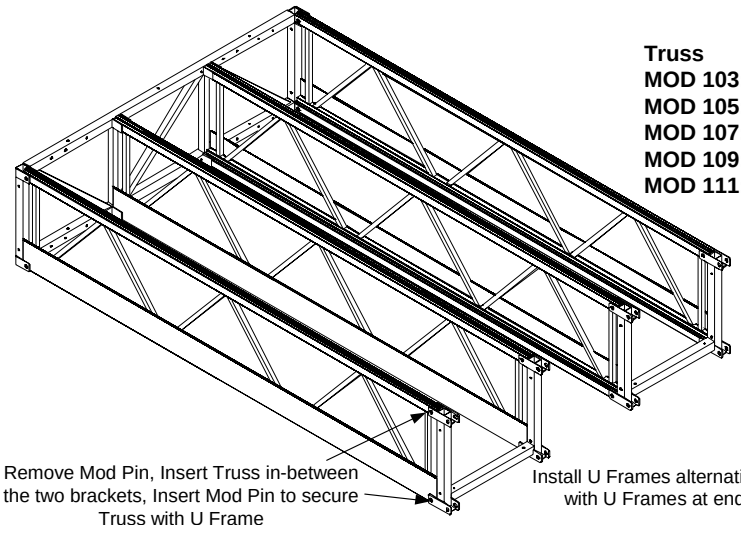


1. Select a suitable End Truss and the required number of Trusses.
2. Insert the Truss into the Truss Brackets of the End Truss and install by inserting the Mod Pin through the Truss Bracket and Truss.

Note:-

1. Insert the Mod Pin completely and ensure to secure the Mod Pin by the retaining clip.

Installation of U Frames with Trusses



Truss	No. of Sections	X Braces Reqd Per Length Joint
MOD 103:	3	1
MOD 105:	5	2
MOD 107:	7	3
MOD 109:	9	4
MOD 111:	11	5

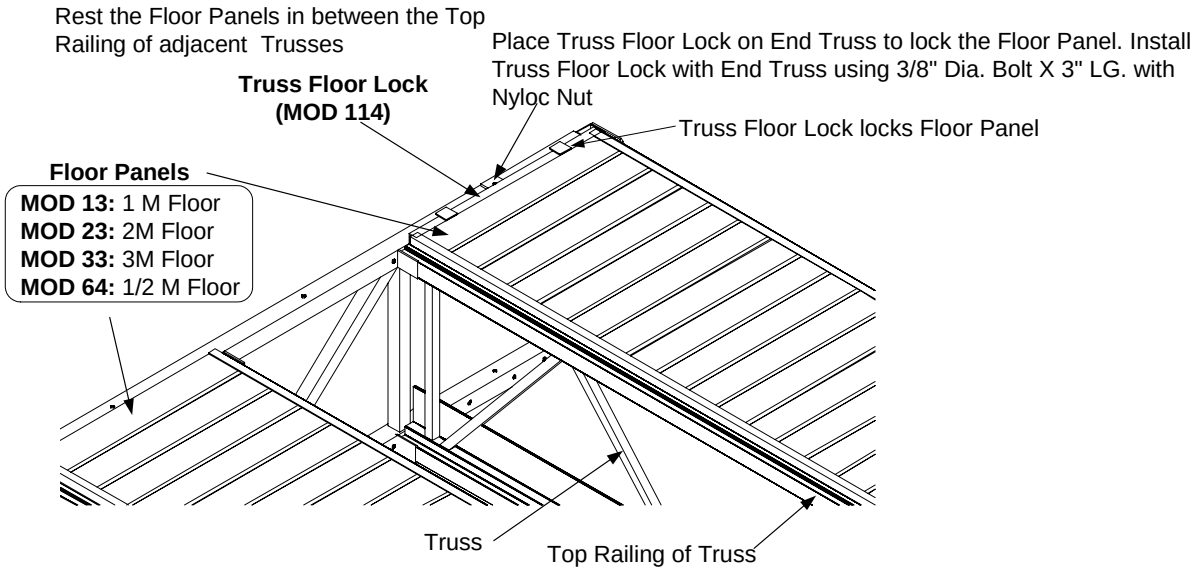
U Frames (MOD 05) are installed at the side ends of the Super Deck and alternatively along the inside of the Super Deck with X Braces. Intermediate U Frames are connected by the X Brace (MOD 116).

1. Remove Mod Pins from the U Frame. Insert the Truss in between the brackets that hold the Mod Pin.
2. Insert the Mod Pin through the Truss and U Frame pinning the Truss with the U Frame. Insert Mod Pins completely and secure with retaining clip.
3. Install U Frames at the sides. Install U Frames alternatively (as shown) along the inside.

Note:-

1. Ensure to install enough U Frames to hold the Floor Panels.

Installation of Floor Panels and Truss Floor Lock (MOD 114)



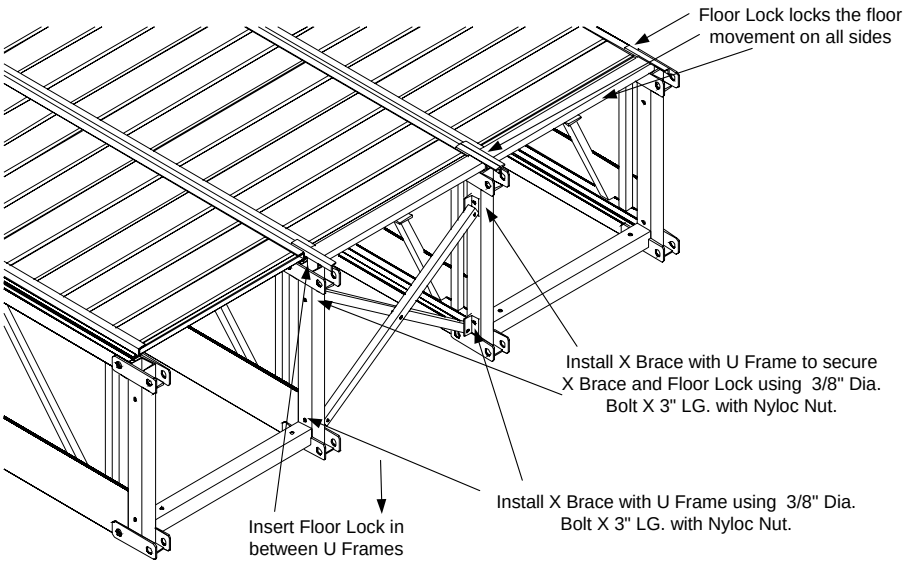
1. Select the Floor Panel with respect to the length of the Truss.
2. Place the Floor Panel in between the grooves on the Top Railing of the Truss.

3. Place the Truss Floor Lock (as shown) on the End Truss to lock the Floor Panel with the Trusses.
4. Secure the Truss Floor Lock with End Truss using 3/8” Dia. Bolt X 3” LG. with nyloc nut.

Note:-

1. Place the Floor Panels in between the grooves of the top railing of adjacent Trusses.
2. Ensure that the Truss Floor Lock locks the Floor Panels.
3. Use Truss Floor Locks to lock all Floor Panels with the End Truss. If not the Floor Panels may flip.

Installation of Floor Lock (MOD 117) and X Brace (MOD 116)

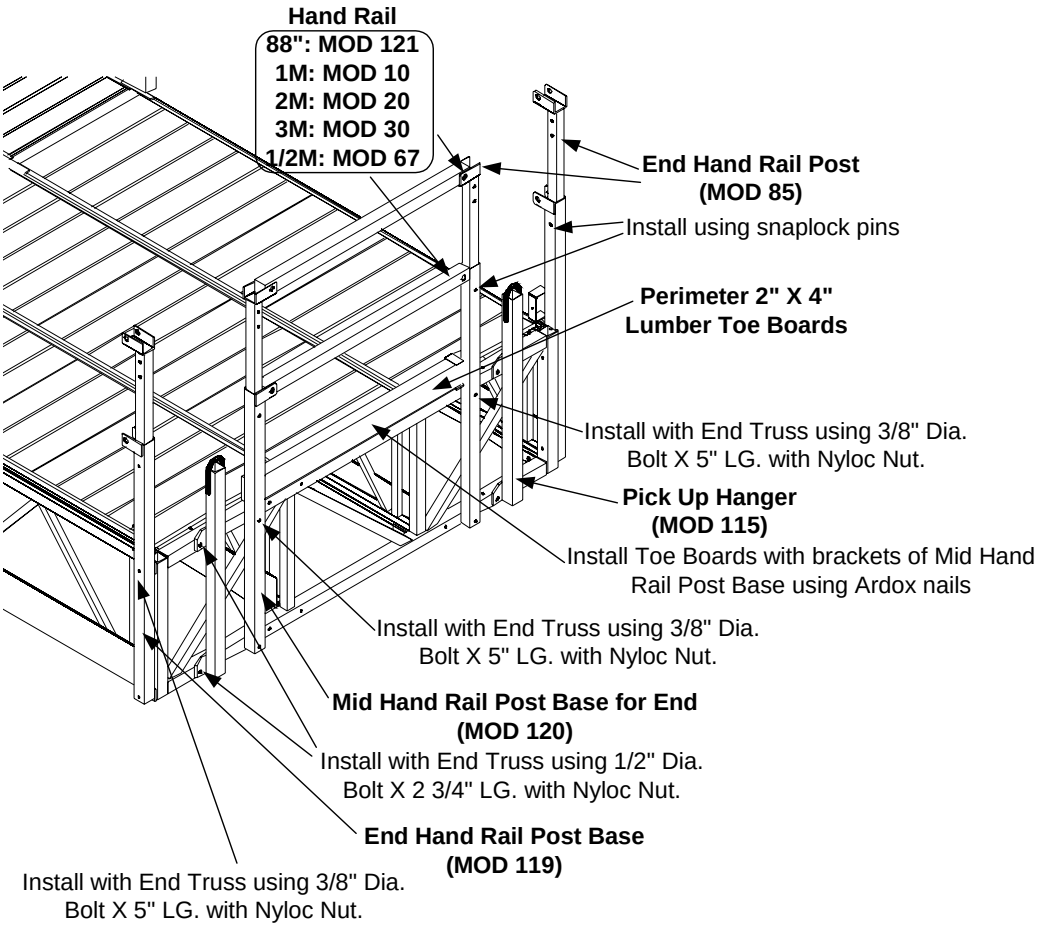


1. Insert the Floor Lock in between the U Frame as shown to arrest the movement of Floor Panels.
2. Install X Braces to connect intermediate U Frames and the Truss Floor Lock using 3/8” Dia. Bolt X 3” LG. with nyloc nut as shown.
3. Install X Braces with U Frames using 3/8” Dia. Bolt X 3” LG. with nyloc nut as shown.

Note:-

1. Insert Floor Panels into U Frames before installing X Brace.
2. Ensure that Floor Lock locks the Floor Panel properly.

Installation of End Guard Rail Posts, Guard Rails and Pick Up Hanger

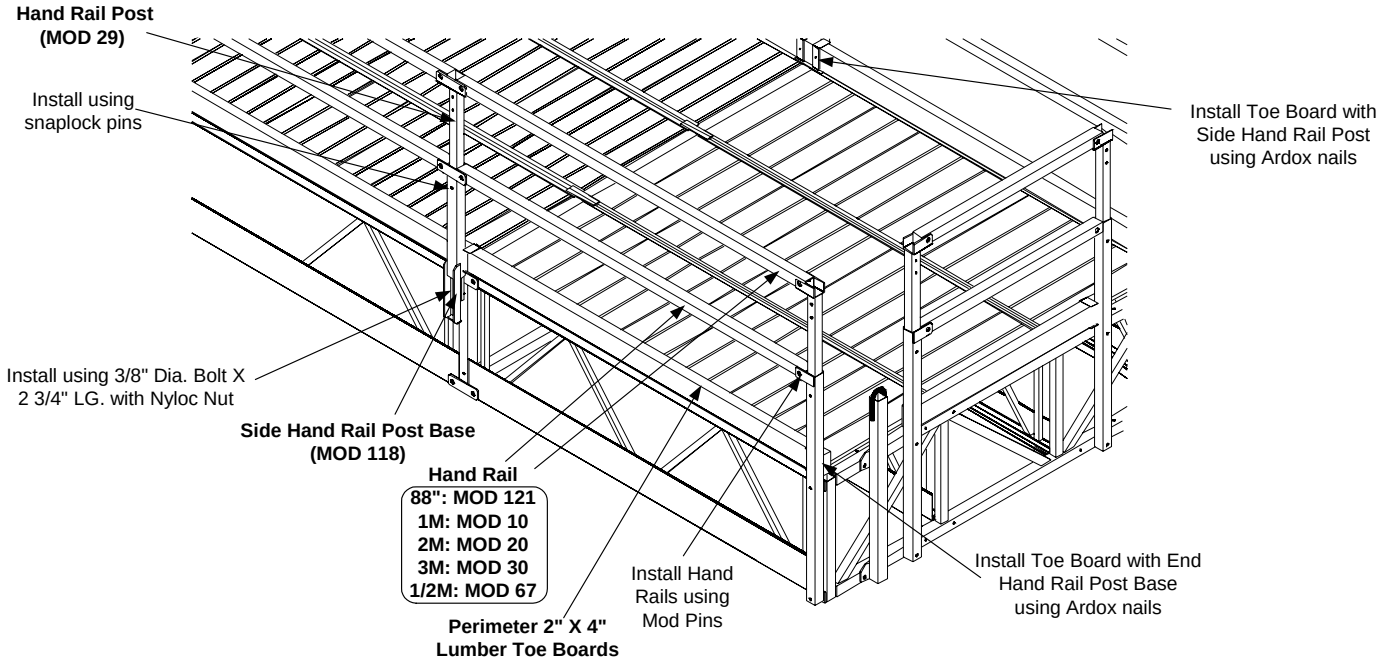


1. Install End Hand Rail Post Base (MOD 119) with End Truss using 3/8” Dia. Bolt X 5” LG. with nyloc nut.
2. Install Pick Up Hanger (MOD 115) (in pairs on larger Super Decks) as shown using ½” Dia. Bolt X 2 ¾” LG. with nyloc nut.
3. Install Mid Hand Rail Post Base for End (MOD 120) at suitable intervals using 3/8” Dia. Bolt X 5” LG. with nyloc nut.
4. Install End Hand Rail Post (MOD 85) on End Hand Rail Post Base (MOD 119) at the desired height using snaplock pins.
5. Install End Hand Rail Post (MOD 85) or Hand Rail Post (MOD 29) if required on Mid Hand Rail Post Base (MOD 120) using snaplock pins.
6. Install Hand Rails in between the Mid Hand Rail Post Base using Mod Pins. Hand rails can be 1M, 2M, 3M or custom 88” in length.
7. Cut 2” X 4” Lumber to form perimeter toe boards at the End. Cut lumber to place joints in line with handrail posts. Secure with Ardox nails through holes in the brackets of Mid Hand Rail Post for End (MOD 120).

Notes:-

1. Ensure to secure the snaplock pin by the retaining clip.
2. Install Pick Up Hanger symmetrically at the End of the Super Deck.
3. On larger platforms use MOD 120 and Hand Rails length as required.

Installation of Side Guard Rail Post and Guard Rails



1. Install Side Hand Rail Post Base (MOD 118) with the side of U Frame using 3/8” Dia. Bolt X 2 ¾” LG. with nyloc nut. Install Side Hand Rail Post Base at each U Frame.
2. Install Hand Rail Post (MOD 29) with Side Hand Rail Post Base (MOD 118) at the desired height using snaplock pins. Ensure to secure the snaplock pin with retaining clip.
3. Install Hand Rail Post (length to suit) with Hand Rail Post using Mod Pins.
4. Cut 2” X 4” Lumber to form perimeter toe boards at the Sides. Cut lumber to place joints in line with Side Handrail Post Base (MOD 118). Secure with Ardox nails through holes in the brackets of Side Hand Rail Post Base (MOD 118).

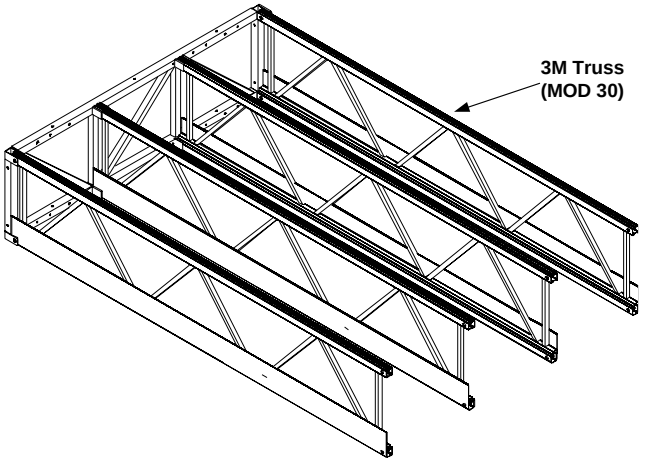
Note:-

1. Ensure to secure the snaplock pin by the retaining clip.

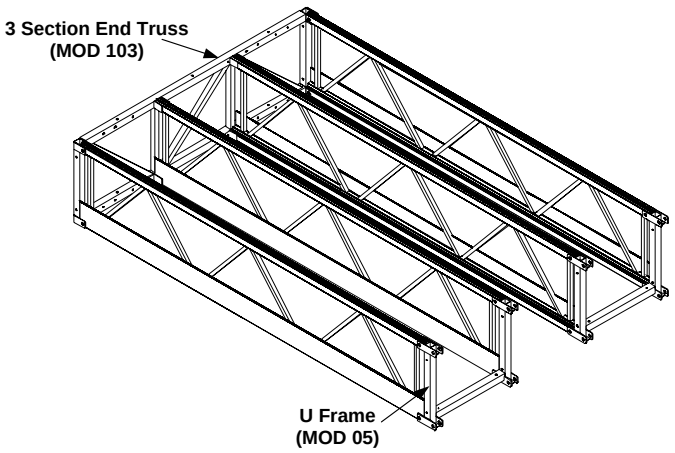
6.3. Installation of Winsafe Super Deck

1. Set up the base structure starting with the End Truss at one end. Install Trusses with the End Truss
2. Install U Frames with each pair of Truss.
3. Install next set of Trusses. Attach next set of U Frames. Continue until desired length of Super Deck. Install End Truss with the Trusses to obtain the base structure of Super Deck.
4. Install one row of Floor Panels. Install Truss Floor Locks to lock Floor Panels with End Truss. Secure Truss Floor Lock with the End Truss.
5. Install Floor Locks on the other end of the Floor Panels. Install X Brace between the U Frames to secure Floor Locks with the U Frames.
6. Continue laying the floors, installing Floor Locks and X Braces until the entire Super Deck is decked.
7. Install Hand Rail Posts, Hand Rails, Toe Boards and Pick Up Hangers at the Ends of the Super Deck.
8. Install Hand Rail Posts, Hand Rails and Toe Boards at the Sides of the Super Deck.

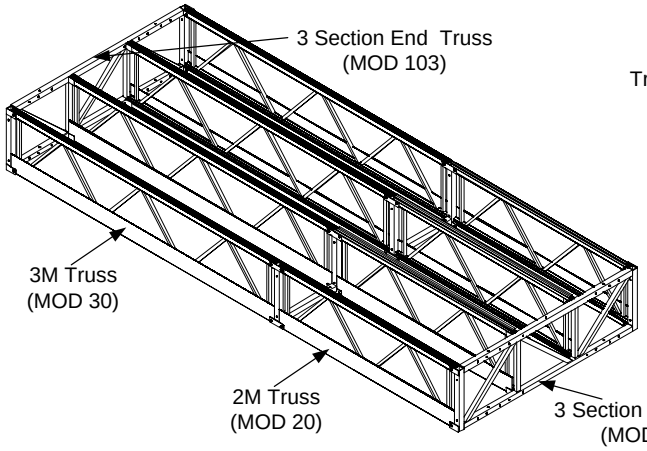
Example:- Installation of 2M X 5M Super Deck



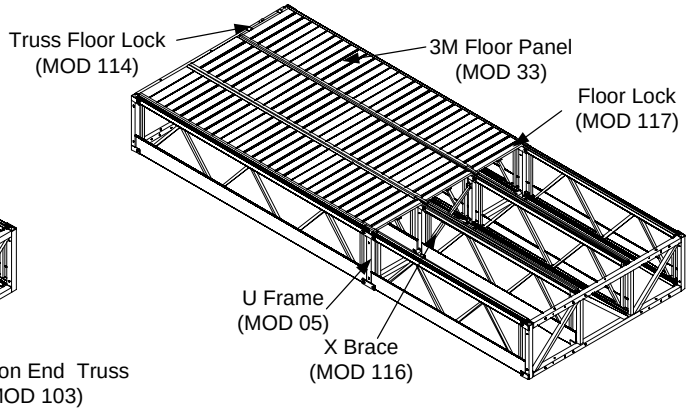
Install Trusses with End Truss



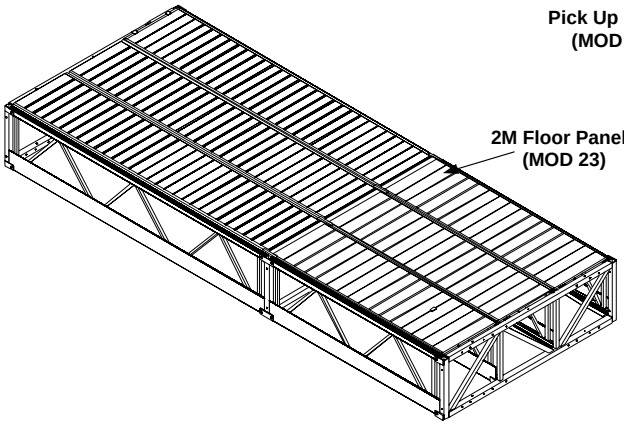
Install U Frames with each pair of Truss



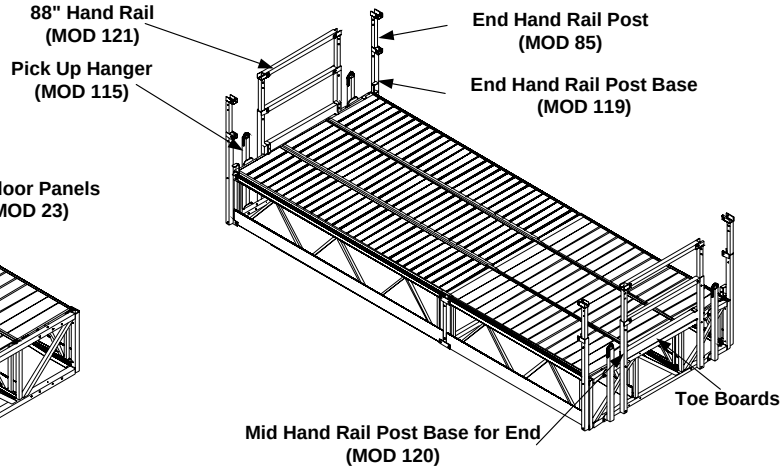
Base Frame of Super Deck



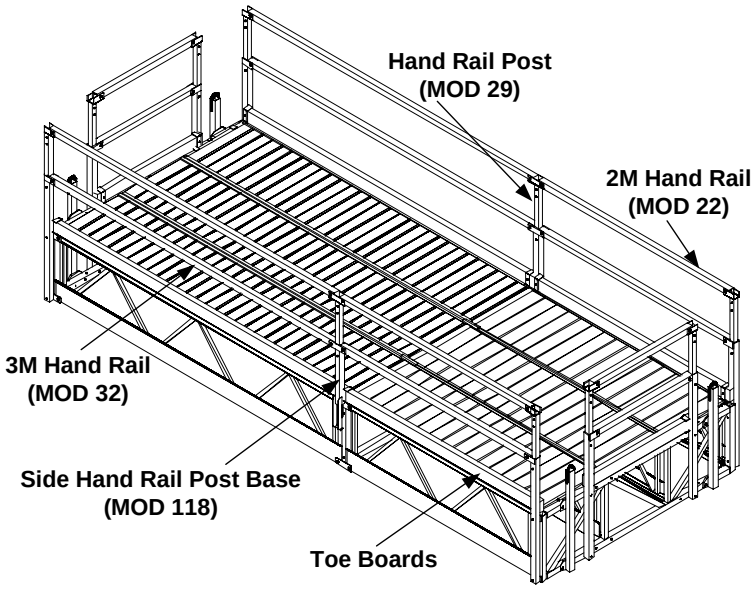
Install Floor Panels, Truss Floor Lock, Floor Locks and X Brace



Super Deck with Floor Panels



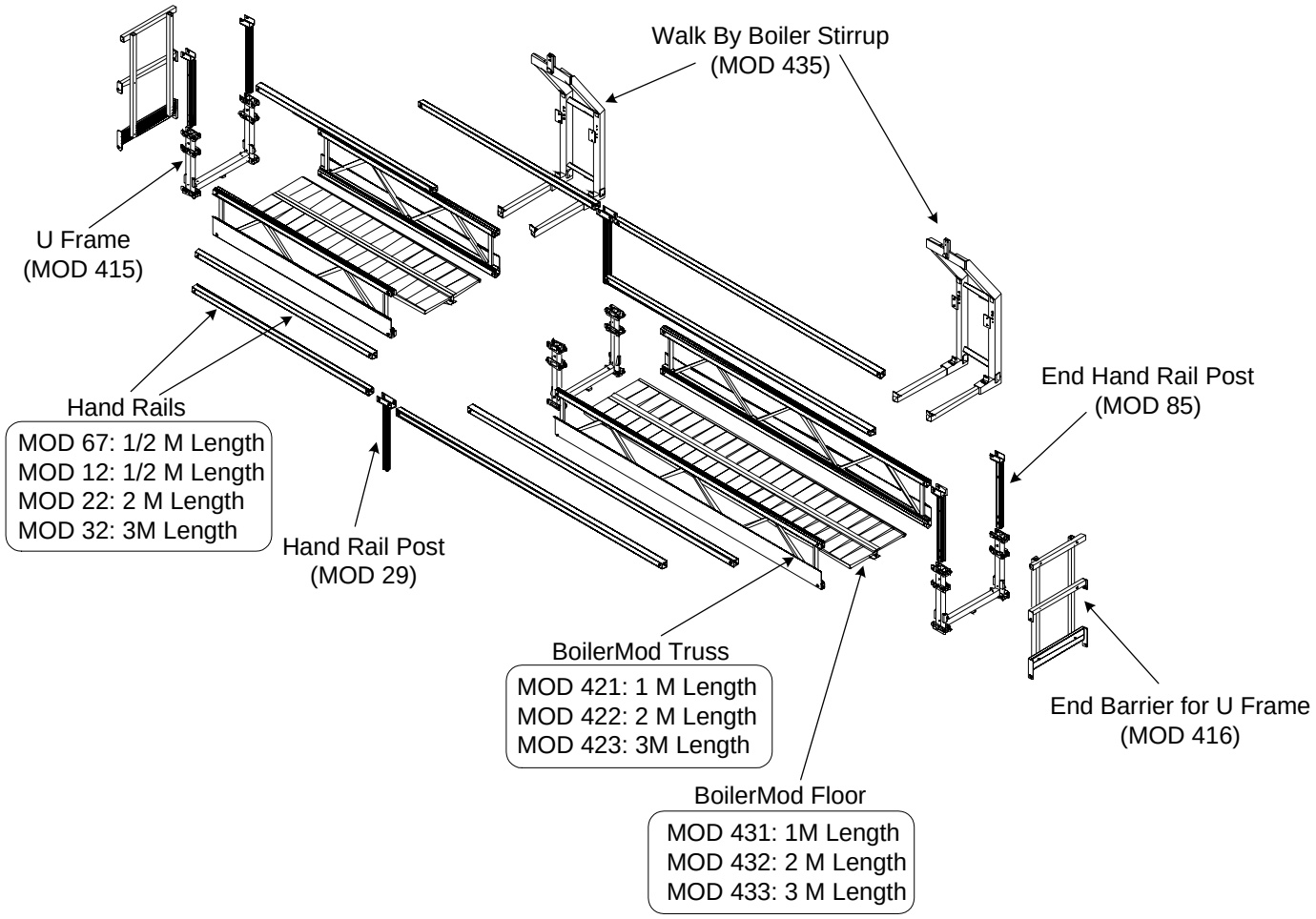
Install End Hand Rail Post Base, Hand Rail Posts, Hand Rails, Toe Boards and Pick Up Hanger



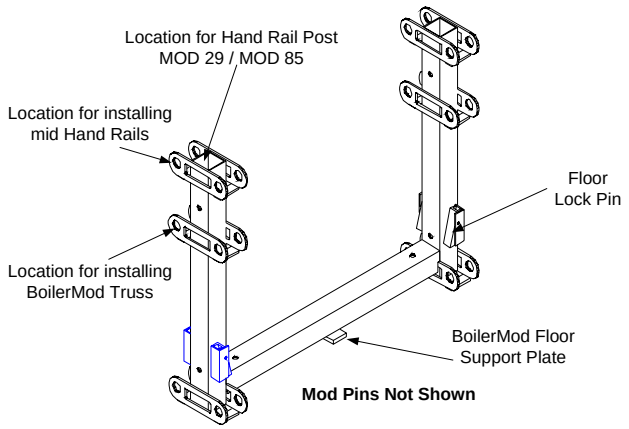
Install Side Hand Rail Post Base, Hand Rail Post, Hand Rails and Toe Boards

7. BOILER MOD

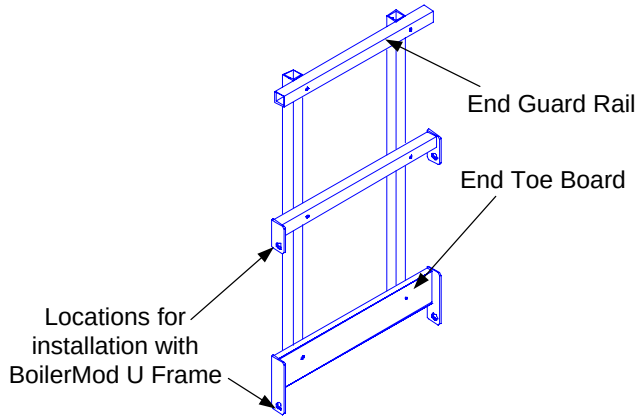
Winsafe BoilerMod's are modular platforms designed for use in Boilers or work places with passage way of less than 18" in width. BoilerMod's vary from 7'6" up to 40' in length. BoilerMod is constructed using SuperMod components presented in Section 2 along with custom components designed specifically for BoilerMod's.



7.1. Boiler Mod Components



U Frame - BoilerMod (MOD 415)



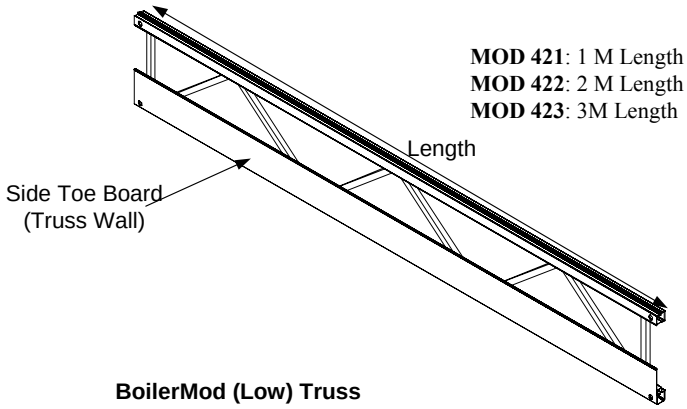
End Barrier for U Frame - BoilerMod (MOD 416)

U Frame for BoilerMod is designed for the shorter BoilerMod Truss and the foldable BoilerMod Floor. BoilerMod U Frame has: two sets of brackets for installing BoilerMod Truss, Hand Rails and a BoilerMod Floor Support Plate for supporting the BoilerMod Floor.

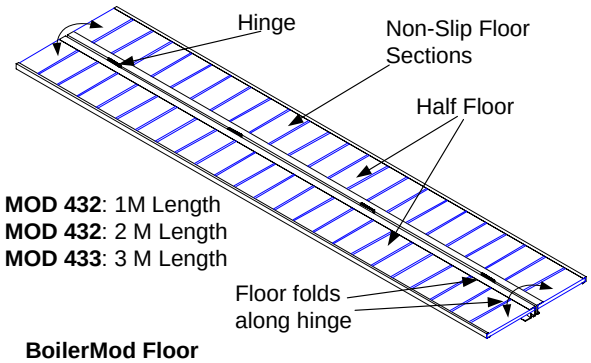
The End Barrier for U Frame (BoilerMod) is installed with the BoilerMod U Frames (MOD 415) at the ends of the BoilerMod platform. The End Barrier consists of an end guard rail and an end toe board.

BoilerMod Truss

Winsafe BoilerMod Trusses are light weight, short custom built to suit the design requirements of BoilerMod. Trusses are 18" high and vary in length from 1 M to 3 M. The side wall of the Truss extends more than 4" from the floor level acting as a toe board at the sides of the modular platform.



BoilerMod (Low) Truss

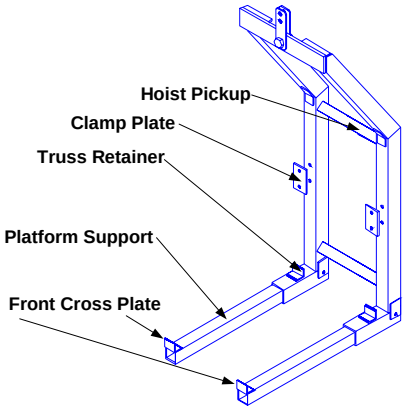


BoilerMod Floor

Boiler Mod Floor

The BoilerMod Floor contains two hinged 12 7/32" wide half floors. The two half floors can be folded along the hinge, reducing the overall width, enabling easier transportation across narrow spaces less than 18" in width. The overall width of the boiler mod floor is 25".

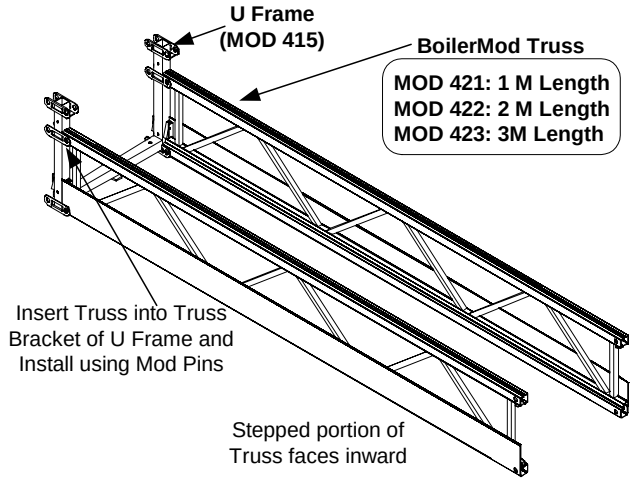
Walk By Boiler Mod Stirrup (MOD 435)



Boiler Mod's are suspended within the boiler by the Walk By Boiler Mod Stirrup (MOD 435). The BoilerMod is installed on the Walk By Boiler Mod Stirrup and the Stirrup transfers the BoilerMod load to the hoist system.

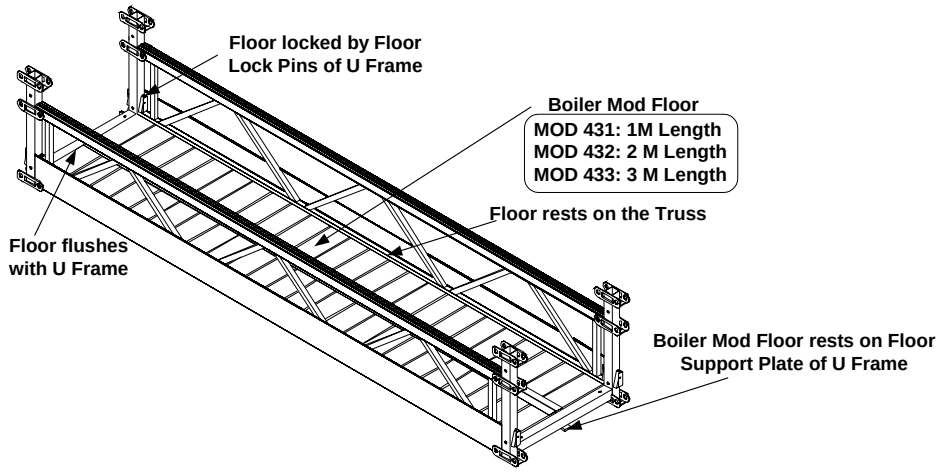
7.2. Installation Procedures

Installation of Boiler Mod Truss with Boiler Mod U Frame



1. Remove Mod Pins from the Boiler Mod U Frame (MOD 415). Insert the Truss in between the brackets the hold the Mod Pin so that the stepped portion of the Truss is inward as shown. The stepped portion of the Truss supports the Boiler Mod floor.
2. Insert the Mod Pins through the Truss and the U Frame pinning the Truss with the U Frame. Insert the Mod Pins completely and secure Mod Pin with the retaining clip.

Installation of Boiler Mod Floor

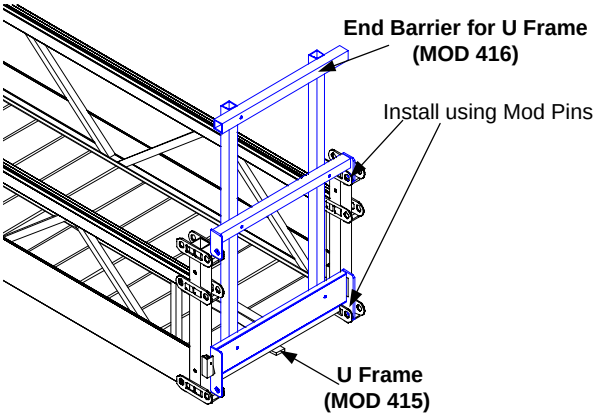


1. Ensure that U Frames are installed on both ends of the Truss.
2. Unfold the Boiler Mod Floor and insert the floor from above until the Floor Panel rests on the inner steps of the Truss and the Floor Lock Pin of the U Frame locks the Floor Panels with the Truss.
3. Ensure that the Floor Panels flush with the inner walls of the U Frames.

Note:-

1. Insert the Floor Panels completely until it flushes with U Frame.
2. Ensure that Floor Panel rests on the Support Plate of the U Frame.

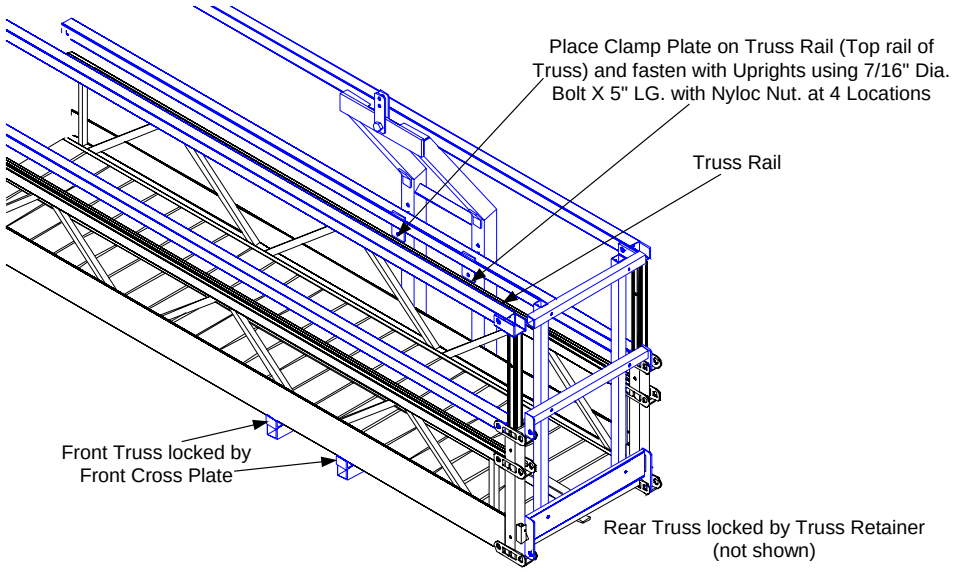
Installation of End Barrier for U Frame with U Frame



1. Install End Barrier for U Frame (MOD 416) with U Frame (MOD 415) as shown using Mod Pins.
2. Ensure to insert the Mod Pins completely and secure using retaining clips.

Installation of Walk By Boiler Mod Stirrup

The stirrups must be positioned so that there will be a stabilizing moment of 1 ½ times the overturning moment caused by any possible concentration of the rated load on the overhang. As a safe practice, install C Stirrup according to the platform arrangement provided by Winsafe Corp. on the BoilerMod Platform (see Label: **Arrangement of Winsafe BoilerMod Platforms**).



1. Determine the locations of the Walk By Stirrups from the Boiler Mod Platform Arrangement Label.
2. Place the modular platform on the C Stirrup so that the U Frame lies in between the Lower C Supports and the Truss (at the back) is locked by the Truss Retainer. The other Truss is locked by the Front Cross Plate. Adjust the C Stirrup to position the Modular Platform accordingly.
3. Place the Clamp Plate (MOD 43) on the inner side of Truss Rail (Top Rail of the Truss) and fasten with the Inner C Post using 7/16" Dia. Bolt X 5" LG. with nyloc nut and 7/16" Flat washer. Do not over tighten the Clamp plate as it may deform the Truss.

6.3. Installation of Winsafe BoilerMod

ARRANGEMENT OF WINSAFE BOILERMOD PLATFORMS										
TOTAL LENGTH		**SUSPENSION SPAN Minimum**		**SUSPENSION SPAN Maximum**		**PLATFORM ARRANGEMENT** ↑ = U FRAME WITH END BARRIER	**TOTAL PLATFORM** WEIGHT - SEE NOTE		**MAX. RATED** WORKING LOAD	
FT./IN.	M	FT./IN.	M	FT./IN.	M	-- = CROSS FRAME	LBS.	KGS.	LBS.	KGS.
7' 6"	2.3	5	1.5	5'	1.5	↑-2-↑	382	173	750	340
10' 9"	3.3	8	2.4	8'	2.4	↑-3-↑	417	189	750	340
14'	4.3	10	3.0	11' 6"	3.5	↑-2-2-↑	540	245	750	340
17' 3"	5.3	12	3.6	14' 3"	4.3	↑-3-2-↑	575	261	750	340
20' 6"	6.3	14	4.2	17' 6"	6.7	↑-3-3-↑	611	277	750	340
23' 9"	7.3	16	4.8	20' 9"	6.3	↑-2-3-2-↑	734	333	750	340
26' 3"	8.3	18	5.4	24'	7.3	↑-3-2-3-↑	768	349	750	340
30' 3"	9.3	20	6.0	27' 3"	8.3	↑-3-3-3-↑	803	365	750	340
33' 6"	10.3	22	6.7	30' 6"	9.2	↑-2-3-3-2-↑	927	421	750	340
36' 9"	11.3	24	7.3	35'	10.6	↑-2-3-1-3-2-↑	1030	468	750	340
40'	12.3	26	7.9	35'	10.6	↑-2-3-2-3-2-↑	1086	493	750	340

Total Length: Total length of the BoilerMod platform

Suspension Span: Distance between the centers of the Walk By Boiler Mod Stirrups. **Minimum** is the safest minimum separation and **Maximum** is the safest maximum separation the Stirrups.

Platform Arrangement: Framework configuration (arrangement of BoilerMod U Frames, BoilerMod Truss and Walk By Boiler Mod Stirrups)

Total Platform Weight: Dead weight of the BoilerMod

Max. Rated Working Load: Maximum permissible live load

↑ = U Frame with End Barrier

- : BoilerMod U Frame Connection

1,2,3 : Length in meters of BoilerMod Truss, BoilerMod Floor and Hand Rails

2-3 : 2 M Truss is connected to 3 M Truss by a BoilerMod U Frame

1. End Barrier for U Frame (MOD 416) is installed at the ends of the SuperMod.
2. Intermediate sections of the SuperMod are connected using BoilerMod U Frame (MOD 415).
3. Hand Rails and Floor Panels are selected according to the length of the Truss (1,2,3 M).

Installation of Winsafe BoilerMod is as follows:

1. Select the platform arrangement for the desired length and prepare a list of components required for installation. Ensure that you have all the necessary components.
2. Set up the framework of the BoilerMod by installing BoilerMod U Frames and Trusses.
3. Install Floor Panels. Do not install Hand Rails or Hand Rail Posts as the Stirrup will be inside the Hand Rail (see BoilerMod assembly).
4. Install Bumper Rollers or Swivel Casters if required.
5. Install the Walk By Boiler Mod Stirrup at specified locations with the BoilerMod. Install the hoist system on the Stirrup.
6. Install Hand Rail Posts and Hand Rails.

Note:-

1. Any change in the platform arrangement must be approved by a professional engineer.
2. Do not substitute Winsafe modular platform components with components of other manufacturers.
3. Do not substitute Winsafe BoilerMod components with Winsafe SuperMod components.
4. Live loads must be distributed. Do not concentrate live load at one end of the BoilerMod.
5. Ensure to secure all Mod Pins, snaplock pins and properly tighten all nuts.

Example:- Platform arrangement: I 3-3 I

List of components for installation

Walk By Boiler Mod Stirrups

No. of Stirrups = No. of I's = **2 X MOD 435**

Boiler Mod U Frames

No. of U frames = **3 X MOD 415**

End Barrier for U Frame

= 2 per Boiler Mod = **2 X MOD 416**

Trusses

Trusses / Side = 3M + 3M = 2 X 3M

Each U Frame requires 2 Trusses

Total Trusses = 2 X 3M /Side X 2 i.e. 4 X3M= **4 X MOD 423**

Floor Panels

No. of Floor Panels = 3M+3M = **2 X MOD 433**

Hand Rail Posts

BoilerMod U Frames installed at the Ends require 2 End Hand Rail Posts each

Total U Frames at End = 2. Total End Hand Rail Post = **4 X MOD 85**

Each U Frame installed inside the BoilerMod requires 2 Hand Rail Posts (MOD 29)

No. of inner U Frames = 1. Hence, No. of Hand Rail Post = 1 X 2 = **2 X MOD 29**

Hand Rails

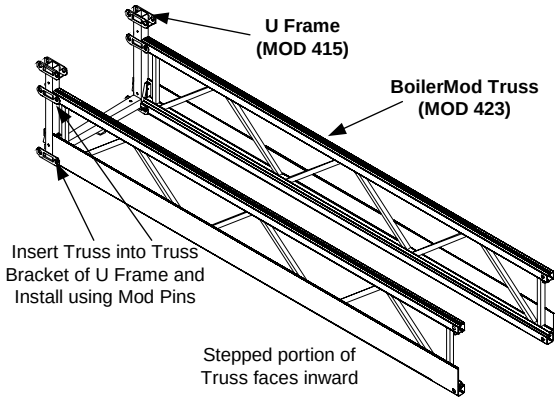
Length of Hand Rail= Length of Truss, since Hand Rails run parallel to Truss.

Hand Rails / Side = 3M + 3M = 2 X 3M

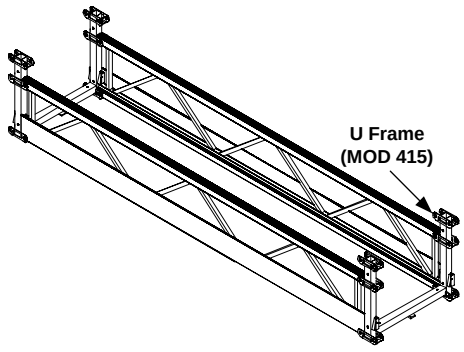
Each U Frame / End Stirrup requires 4 Hand Rails.

Hence total Hand Rails = 2 X 3 M/Side X 4 = **8 X MOD 33**

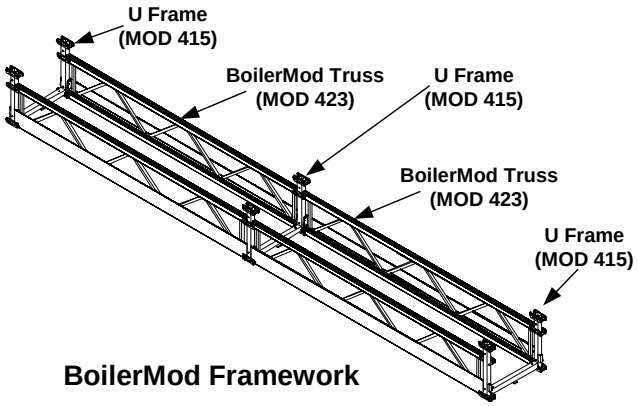
3. BoilerMod Installation



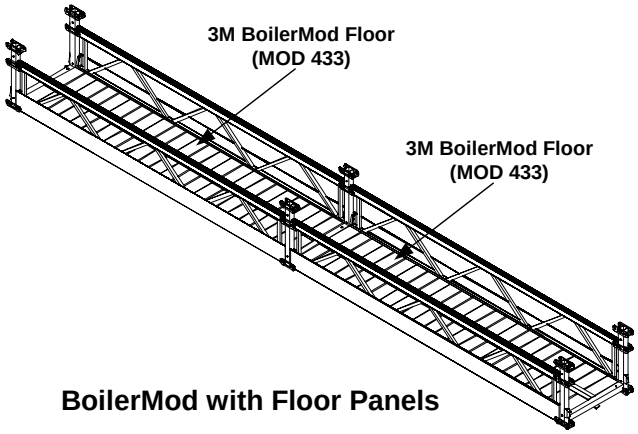
Install BoilerMod Truss with BoilerMod U Frame



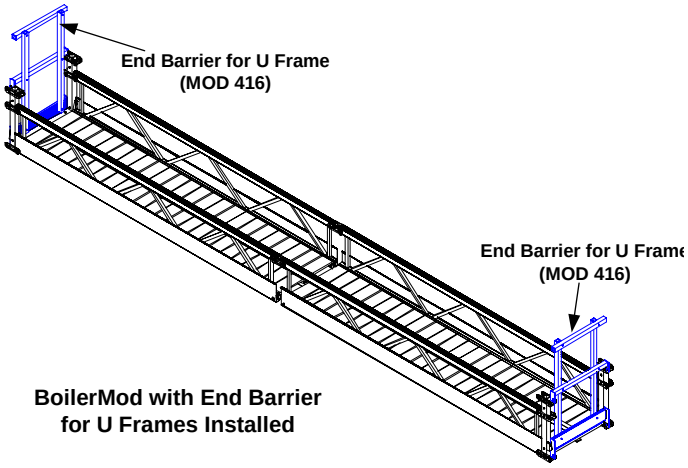
Install Subsequent U Frame with Trusses



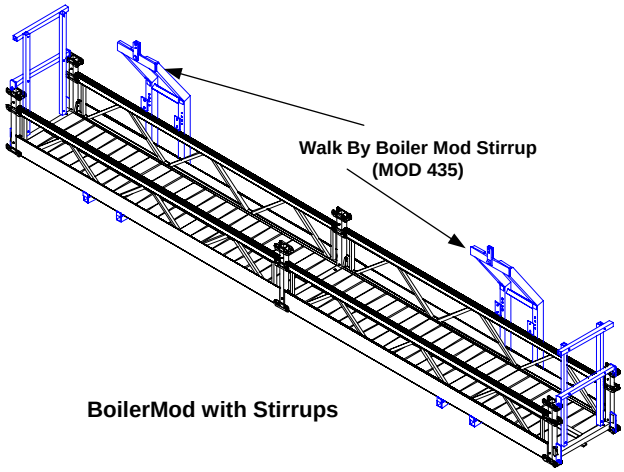
BoilerMod Framework



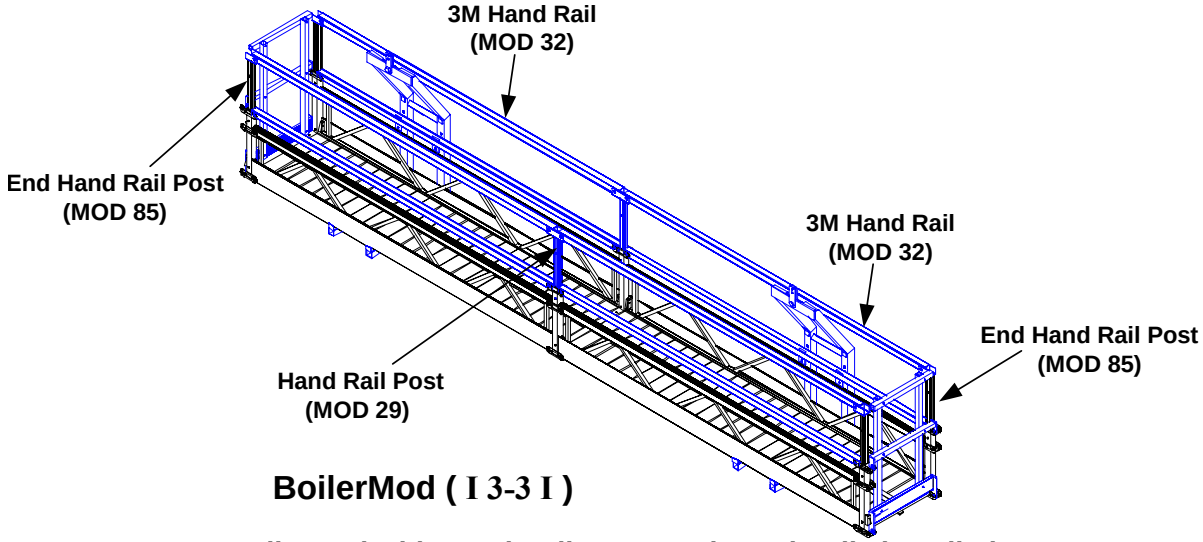
BoilerMod with Floor Panels



BoilerMod with End Barrier for U Frames Installed



BoilerMod with Stirrups



BoilerMod (I 3-3 I)

BoilerMod with Hand Rail Posts and Hand Rails installed

8. CODE OF SAFE PRACTICES FOR SUSPENDED POWERED SCAFFOLDS

It shall be the responsibility of all employers and users to read and comply with the following common sense guidelines which are designed to promote safety in the erection and use of suspended powered scaffolds. These guidelines are not all-inclusive nor do they supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines conflict in any way with any state, local or federal statute or government regulation, said statute or regulation shall supersede these guidelines and it shall be the responsibility of each employer and user to comply therewith and also to be knowledgeable and understand all state, local or federal statutes of governmental regulations pertaining to suspended powered scaffolding.

A. GENERAL GUIDELINES

1. Post these safety guidelines in a conspicuous place and be sure that all persons who erect, use, locate or dismantle suspended scaffold systems are fully aware of them.
2. NEVER TAKE CHANCES! If in doubt regarding safety or use of suspended scaffold, consult your scaffold supplier.
3. FOLLOW ALL EQUIPMENT MANUFACTURER'S RECOMMENDATIONS as well as all state local and federal codes, ordinances and regulations, pertaining to suspended scaffolding.
4. Survey the job site for hazards such as exposed electrical wires, obstructions that could overload or tip the suspended scaffold when it is raised or lowered, unguarded roof edges or openings inadequate or missing tieback anchorages, or the need for overhead protection where exposure to falling objects exist. These conditions must be corrected before installing or using suspended scaffold systems.
5. INSPECT ALL EQUIPMENT BEFORE EACH USE. Never use any equipment that is damaged or defective in any way. Tag damaged or defective equipment and remove it from the job site.
6. ALWAYS USE FALL ARREST EQUIPMENT when using suspended scaffolds. (See Section E for further details)
7. Erect, use, and dismantle suspended powered scaffold equipment in accordance with design and/or manufacturer's recommendations.
8. Do not erect, dismantle, or alter suspended scaffold systems unless under the supervision of a qualified person.
9. DO NOT ABUSE, MISUSE, OR USE SUSPENDED SCAFFOLD EQUIPMENT for purposes or in ways for which it was not intended.

10. USERS MUST BE TRAINED on how to safely operate equipment and how to handle emergency situations, if in doubt, consult a qualified person.

11. ERECTED SUSPENDED SCAFFOLDS SHOULD BE CONTINUOUSLY INSPECTED by the users to ensure that they are maintained in a safe condition. Report any unsafe condition to your supervisor.

12. CARE MUST BE TAKEN WHEN OPERATING AND STORING EQUIPMENT DURING WINDY CONDITIONS.

13. POWERED PLATFORMS MUST NEVER BE OPERATED NEAR LIVE POWER LINES unless proper precautions are taken. Consult the power service company for advice.

14. DO NOT WORK ON SCAFFOLDS if you feel dizzy, unsteady in any way or are impaired in any way by drugs or any other substance.

15. DO NOT WORK ON OR FROM SCAFFOLDS during storms or high wind, unless a competent person has determined that it is safe, and those employees are protected by Personal fall arrest systems or Wind screens (Modular Platforms must be secured against wind loads).

16. Do Not Work ON SCAFFOLDS covered with snow, ice, or other slippery materials, except as necessary for removal of such materials.

B. RIGGING GUIDELINES

1. WHEN RIGGING ON EXPOSED ROOFS OR FLOORS WEAR FALL PREVENTION EQUIPMENT. WHEN RIGGING FROM OVERHEAD SUPPORTS, SUCH AS BRIDGES, BEAMS, ETC. WEAR FALL ARREST EQUIPMENT.

2. Roof anchorages, parapet clamps, outrigger beams, or other supporting devices, including tiebacks and their anchorages, must be capable of supporting the rated load of the hoist with a safety factor of 4.

3. Verify that the building or structure will support the suspended loads with a safety factor of at least 4.

4. Overhead rigging, including counterweights, must be secured from unintentional movement in any direction.

5. Suspended scaffold outrigger beams must be stabilized either by counterweights or bolts (direct connections). Counterweights used to balance the Modular Platform must be capable of resisting at least 4 times the tipping moment imposed when the suspended scaffold is operating at the rated load of the hoist or a minimum of 1 ½ times the tipping moment imposed by the scaffold when its operating at the stall load of the hoist, whichever is greater. COUNTERWEIGHTS MUST NOT BE REMOVED form the scaffold system until the Modular Platform is disassembled.

6. Outrigger beams that do not use counterweights must be installed and secured on the roof structure with devices specifically designed for that purpose.

7. Tie back all transportable rigging devices with wire rope and hardware that has strength equal to the hoist rope.

8. Install tiebacks at right angles to the face of the building and secure without slack to a structurally sound portion of the structure. In the event tiebacks can not be installed at right angles, use two tiebacks at opposing angles to prevent movement.

9. RIG SO THAT SUSPENSION POINTS ARE DIRECTLY ABOVE THE HOISTING MACHINES.

10. The platform must be secured to prevent swaying. Do not tie it to window cleaning anchors.

C. WIRE ROPE AND HARDWARE GUIDELINES.

1. Scaffold components manufactured by different manufacturers must not be intermixed, unless they fit together without being forced, and the scaffold's structural integrity is maintained.

2. Scaffold components manufactured by different manufacturers are not allowed to be modified to make them fit together, unless a competent person determines that the resulting scaffold is structurally sound.

3. Use only wire rope and attachments as specified by the hoisting machine manufacturer. Do not use wire ripe that is kinked, birdcaged, corroded, undersized, or damaged in any way.

4. Suspension ropes supporting adjustable suspension scaffolds must have a diameter large enough to permit proper functioning of brake and hoist mechanisms. The load end of wire suspension ropes must be equipped with proper-size thimbles, and secured by eyesplicing or equivalent means.

5. The stall load of any scaffold hoist must not exceed 3 times its rated load.

6. When winding drum hoists are used and the scaffold is extended to its lowest point of travel, there must be enough rope to still wrap four times around the drum.

7. Clean, lubricate and handle wire rope in accordance with the wire rope or hoist manufacturer's instructions.

8. Coil and uncoil wire rope in accordance with the wire rope or hoist manufacturer's instructions in order to avoid kinks and damage.

9. Use thimbles at all wire rope suspension terminations.

10. Use J-type clamps or swaged fittings to fasten wire ropes. DO NOT USE U-CLAMPS.

11. Tighten wire rope clamps in accordance with the clamp manufacturers

12. Wire ropes used with traction hoists must have prepared ends in accordance with the manufacturer's recommendations

13. INSPECT WIRE ROPE DURING EACH ASCENT AND DECENT. Do not expose wire rope to fire, undue heat, corrosive atmosphere, chemicals, or to passage of electrical currents or to damage by tools or handling.

D. POWERED SUPPLY GUIDELINES

1. BE SURE YOUR POWER SUPPLY CONFORMS TO HOIST MANUFACTURERS RECOMMENDATIONS.

2. GROUND ALL ELECTRICAL POWER SOURCES, POWER CORD CONNECTIONS and protect with circuit breakers.

3. Use power cords or air hoses of proper size that are long enough for the job.

4. Power cord or air hose connections must be restrained to prevent their separation.

5. Tie off power cords or air hose to the suspended scaffold to prevent them from falling.

6. Protect power cords or air hoses at sharp edges.

7. Remember, air hoists require clean, lubricated air.

E. FALL ARREST EQUIPMENT GUIDELINES

1. Each person on a suspended powered scaffold must be attached to a fall arrest system at all times.

2. Each lifeline must be fastened to a separate anchorage.

3. When wrapping lifelines around structural members the lines must be protected and a suitable anchorage system must be used.

4. Protect lifelines at sharp corners to prevent chafing.

5. Rig fall arrest systems to prevent free fall in excess of six feet.

6. Lifelines must be suspended freely without contact with structural members or building facade.

7. Use a lifeline size and construction that is compatible with fall arrester and complies with applicable safety codes.

8. BE SURE FALL ARRESTER IS INSTALLED ON THE LIFELINE IN THE PROPER DIRECTION ABOVE YOUR HEAD and in accordance with the manufacturers' recommendations.

9. Use a body support device that is properly sized and fitted.

10. Be sure body support device has a lanyard attached to the D-ring at the center of the back.

11. Guardrail systems must be installed along all open sides and ends of platforms, and must be in place before the scaffold is released for use by employees other than erection/dismantling crews.

12. When screens and mesh are used, they must extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.

F. ACCESS

1. Employees must be able to safely access any level of a scaffold that is 2 feet above or below an access point.

2. Direct access to or from another surface is permitted only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.

3. For two-point adjustable suspension scaffolds (SuperMod or BoilerMod), access to one platform from another may only take place when the platforms are at the same height, or are abutting or the platforms have walk-through stirrups specifically designed for that purpose.

4. For most activities, there must be no more than a 14-inch gap between the scaffold platform and the structure being worked on. For lathing and plastering, a gap of 18 inches is permitted.

G. STABILITY

1. Suspended scaffolds must be tied or otherwise secured to prevent them from swaying, as determined to be necessary by a competent person. Window cleaning anchors may be used for this purpose. Angulated roping and static lines may be used.

2. No more than two employees should occupy suspension scaffolds designed for a working load of 500 pounds (non-mandatory).

3. No more than three employees should occupy suspension scaffolds designed for a working load of 750 pounds (non-mandatory).

4. Scaffolds and Modular Platforms shall be altered only under the supervision and direction of a competent person.

H. SOME ADDITIONAL GUIDELINES.

1. USE ALL EQUIPMENT AND ALL DEVICES IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

2. Do not overload, modify, or substitute equipment.

3. Before commencing work operations pre-load wire rope and equipment with the maximum working load, then retighten rigging clamps to manufacturer's recommendations.

4. Be sure platform and cages have a proper guardrail system.

5. Secure stirrups no less than six inches from the end of the platform.

6. All components must be securely fastened to prevent them from falling off the platform.

7. Use bumper rollers or buffers to prevent damage to the structure or equipment.

8. Use care to prevent damage to equipment by corrosive or other damaging substances.

9. Clean and service equipment regularly.

10. ALWAYS MAINTAIN AT LEAST (4) FOUR WRAPS OF WIRE ROPE ON DRUM TYPE HOISTS.

11. Traction hoists must have wire rope that is long enough to reach from the highest point of support to the lowest possible landing, plus reeving lengths.

12. Do not join platforms unless the installation was designed for that purpose.

13. DO NOT MOVE SUSPENDED SCAFFOLDS HORIZONTALLY WHEN OCCUPIED.

14. When re-rigging for another drop be sure sufficient wire rope is available before moving the suspended scaffold system horizontally.

15. WHEN WELDING FROM SUSPENDED SCAFFOLDS:

a) Be sure platform is grounded to structure.

b) Insulate wire rope above and below the platform to protect from damage by the welding torch or electrode.

c) Insulate wire rope at suspension point and be sure wire rope does not contact structure along its entire length.

These Safety Guidelines (Code of Safe Practices) set forth some common sense procedures for safely erecting, dismantling and using suspended scaffolding equipment. Since equipment and scaffolding systems differ, reference must always be made to the instructions and procedures of the supplier and/or manufacturer of the equipment.

Since field conditions vary, and are beyond the control of the Scaffold Industry Association and the Scaffolding, Shoring & Forming Institute, safe and proper use of scaffolding is the sole responsibility of the employer and user.