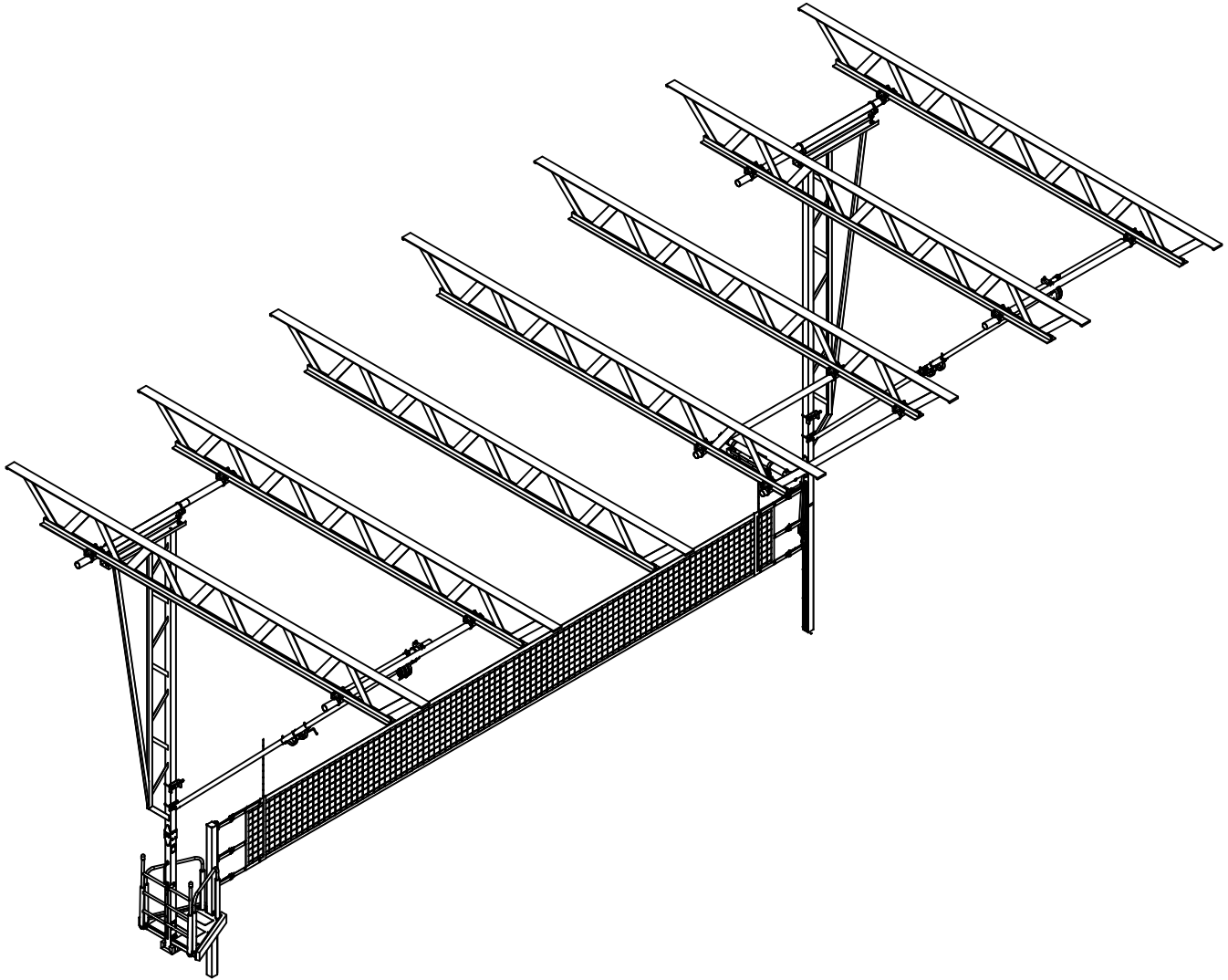


Skymaster® Volleyball System

models 8001, 8001R



Please read & understand all instructions before attempting installation or operation of these units.

Installation and Assembly Instructions



Gared Holdings, LLC
9200 E. 146th St.
Noblesville, IN 46060

Model: 8001 and 8001R
Skymaster Volleyball System

FILE LOC. Q:\Inventor Files\Installation Instructions\Installation Manual
Views\Volleyball\Skymaster III

DATE	SHT. NO.	PART NO.	REV
3/1/2020	1 OF 27	601756161	E

Ceiling Suspended Volleyball System

Table of Contents

<u>Section</u>	<u>Page No.</u>
Introduction	2
Tools Required	3
Parts Checklist	4-6
Installation and Setup	6-13
Referee Stand Pad Installation	14-15
Net Installation Detail	16-19
Electrical & Wiring Information	20-22
Operating Instructions	23-24
Maintenance	25-27

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Introduction

Thank you for your purchase of a Skymaster® Volleyball System. To ensure that our equipment will provide years of use to you, we are including this installation, operation, and maintenance guide. This guide will provide information on the proper assembly and installation methods, operating procedures, and preventative maintenance of your ceiling suspended volleyball system.

Please note that a Bill of Materials is being included with this guide. Please check that all of the parts called out on the Bill of Materials are present prior to beginning assembly and setup.

Please do not substitute for factory parts. Please contact the manufacturer's customer service department and allow them to determine if substitute parts are acceptable.

It is recommended that an individual who has been properly trained perform assembly and set up of the volleyball system. No one under the age of 18 should attempt assembly or set up of the unit, unless properly supervised.

To prevent normal wear and tear from shortening the life of the unit, preventative maintenance inspections and repairs should be performed at least once per year. If the units are subject to high or unusual usage, inspections should be scheduled to occur more frequently. If items are found to be nonconforming, replacements can be ordered from the manufacturer or one of its authorized dealers. When contacting the manufacturer or dealer, please have information regarding the dealer/installer who sold the unit, the name of the project, and any applicable warranty information.

Before proceeding with assembly, read all instructions and assembly procedures. Make sure all parts have been received and are not damaged.

Ceiling Suspended Volleyball System

Tools Required:

Hammer
 3/8" Hand Drill
 Drill Bits - 3/16" and 1/2" with 3/8" Shank
 3/8" Ratchet Wrench with 1/2" and 9/16" Sockets
 1/2" Ratchet Wrench with 9/16", 11/16" and 3/4" Sockets
 Wrenches - 1/2", 9/16", 11/16", 3/4" and 1-5/16"
 Torque Wrenchs 5-75 Ft-Lbs. and 31-150 Ft-Lbs.
 3/16" Allen Wrench
 4" C-Clamps (2)
 4' Level
 File (half round)
 25' Tape Measure
 Cable Cutters
 Utility Knives
 Wire Stripper
 Screwdrivers (assorted sizes)
 Ratcheting Pulleys
 75' Ropes
 Wire Nuts
 Duct Tape
 Block of Wood (for tapping)
 Broom
 Shop Vac
 Protective Covering for Floor

RECOMMENDED BOLT TORQUE				
Bolt Size	Wrench Size	In-Lbs	Ft-Lbs	Nm
1/4"	7/16"	66 to 90	5.5 to 7.5	8 to 10
5/16"	1/2"	132 to 180	11 to 15	15 to 20
3/8"	9/16"	234 to 318	19.5 to 26.5	27 to 36
7/16"	11/16"		31 to 42.5	43 to 58
1/2"	3/4"		47 to 65	64 to 88
9/16"	7/8"		68 to 90	93 to 122
5/8"	15/16"		94 to 130	128 to 176
3/4"	1-1/8"		166 to 230	226 to 312
7/8"	1-5/16"		269 to 372	365 to 504
1"	1-1/2"		402 to 566	546 to 767

Ceiling Suspended Volleyball System

The following parts list are inclusive of all hardware and components to assemble the Skymaster unit. NOT included in these parts lists are the hardware and components required to attach the unit to the overhead building structure (i.e beam clamps, structural pipe, etc.) Please refer to your packing list enclosed with the shipment for those parts.

Below is a list of the hardware and quantities are per unit. When multiple units are to be installed, refer to the packing list enclosed with the shipment for total quantities of these items shipped.

Major components list is on the following page.

Hardware List				
Item	Part Number	Description	QTY	
			8001	8001R
46	1115-30-00	3/8" QUICK LINK	2	2
47	1282-30-00	5/16" UNIVERSALSNAPE LINK	1	1
48	223-4-20-16Z	SCREW, MACH PAN HD PHIL 1/4-20 UNC X 1	24	24
49	3125-30-00	1/4" CABLE THIMBLE	2	2
50	3225-30-00	1/4" CABLE CLAMP (FORGED CLIP)	4	4
51	501-5-18-16	BOLT, CARRIAGE 5/16-18 UNC X 1		4
52	501-5-18-52	BOLT, CARRIAGE 5/16-18 UNC X 3.25		8
53	502-4-20-14	HEX BOLT, 1/4-20 UNC X 0.875		12
54	502-5-18-12Z	HEX BOLT, 5/16-18 UNC X 0.75		8
55	502-5-18-16	HEX BOLT, 5/16-18 UNC X 1		3
56	502-5-18-24Z	HEX BOLT, 5/16-18 UNC X 1.5	2	2
57	502-5-18-44	HEX BOLT, 5/16-18 UNC X 2.75	2	2
58	502-6-16-40	HEX BOLT, 3/8-16 UNC X 2.5		2
59	502-6-16-80	HEX BOLT, 3/8-16 UNC X 5		5
60	502-8-13-16	HEX BOLT, 1/2-13 UNC X 1	12	12
61	502-8-13-64	HEX BOLT, 1/2-13 UNC X 4	2	2
62	545-5-18Z	HEX NUT, NYLON LOCK 5/16-18	4	5
63	545-6-16Z	HEX NUT, NYLON LOCK 3/8-16		3
64	545-8-13	HEX NUT, NYLON LOCK 1/2-13	2	2
65	548-5-18Z	HEX NUT, SERRATED FLANGE 5/16-18		20
66	548-6-16	HEX NUT, SERRATED FLANGE 3/8-16		4
67	548-8-13	HEX NUT, SERRATED FLANGE 1/2-13	20	20
68	561-4	FLAT WASHER 1/4		12
69	561-5	FLAT WASHER 5/16		2
70	561-6	FLAT WASHER 3/8		7
71	562-4Z	SPLIT LOCK WASHER 1/4	24	36
72	562-5	SPLIT LOCK WASHER 5/16		2
73	571-6-16-16	SELF TAPPING SCREW, 3/8-16 UNC X 1	16	16
74	921041000	ABRASIVE ANTISLIP TAPE (12")		3
75	921041000	ABRASIVE ANTISLIP TAPE (20")		1

Ceiling Suspended Volleyball System

Major Components				
Item	Part Number	Description	QTY	
			8001	8001R
1	601756161	MANUAL - 8001-8001R SKYMASTER III	1	1
2	604401462	8001 VB BRIDGE MAST-ANY HEIGHT	2	2
3	161655628	SWING HANGER ASS'Y, 3.5" EXTENDED	4	4
4	1448-11-08	EYEBOLT ASSEMBLY, 7/8"-9 X 6"	4	4
5	604406160	BRKT, OHVB LIFT	2	2
5a	604406158	HINGE WELDMENT, OHVB BRACE	2	2
6	101051043	U-BOLT, 1/2-13 X 4 X 4.0 SQ	6	4
7	161655633	CLAMP ASS'Y, 3.5 X 2.38 SWING HINGE	2	2
8	161655636	PULLEY HANGER ASSEMBLY, 3.5"	2	2
9	1005-07-00	#5 SWIVEL EYE BLOCK (3-1/2" PULLEY)	2	2
10	2375-04-00PC	TUBE,RND,2.375 OD X 0.083 WALL	See Packing List	
11	503955559	2.38" ADJ BRACE HINGE ASS'Y W/BRKR	2	2
12	604401471	POST WELDMENT, SKYIII NET	2	1
13	604401800	POST WELDMENT, 8000 REF STAND		1
14	604401473	POST COVER PLATE	4	4
15				
17	604401284	SKYMASTER HAND RAIL RH WELDED		1
18	604401316	GUIDE RAIL, OVERHEAD VB (92.0)	2	2
19	604401475	REF STAND FLOOR FRAME WELDMENT		2
20	604401478	SKYMASTER HAND RAIL LH WELDED		1
21	604401479	FLOOR PLATE - 8001R REF STAND		1
22	604401746	LADDER WELDMENT, 8000/8100 SKYMASTER		1
22a	601651422	RUBBER FOOT 1.5" OD TUBE		2
23	604406167	BRKT WELDMENT, LADDER HINGE		2
24	604552249	RAIL ASSY, 7200 END POST	1	1
25	604553795	RAIL ASSY, 7200 WINCH , 8' STRAP	1	1
26	3025-30-00	1/4" GALVANIZED AIRCRAFT CABLE-7X19	See Packing List	
27	1100	SAFESTOP SAFETY LOCKING STRAP	2	2
28	8194	ELEC HOIST,DBL DRUM 115V 1PH 60HZ W/KE	1	1
30	101131065	1/2 X 7/8 X 14GA MACHINE BUSHING ZN	12	12
31	604406188	SPACER, SAFSTOP BRKT	2	2
32	701501117	SIDE PLATE, SAFE STRAP BRACKET	4	4
33	101651035	4" PLUG FOR SQUARE TUBE		2
34	604401167	PULL HANDLE		1
35	604406170	LATCH, LADDER		1
36	604401692	STRAP, FOLDING LADDER PULL		1

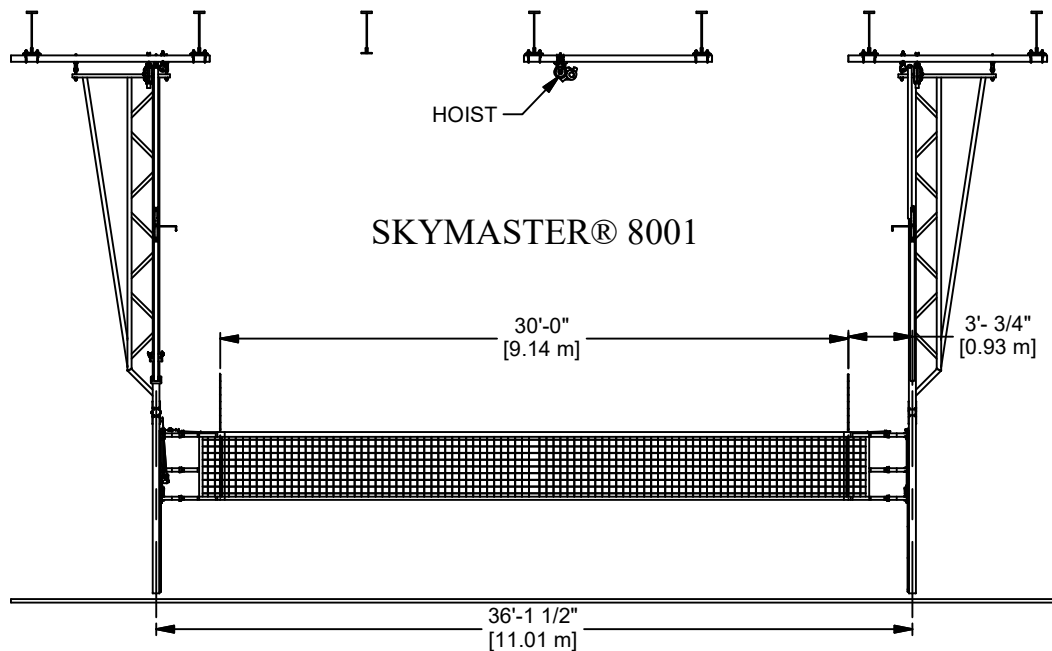
The list of Pads and Accessories are on the next page.

Ceiling Suspended Volleyball System

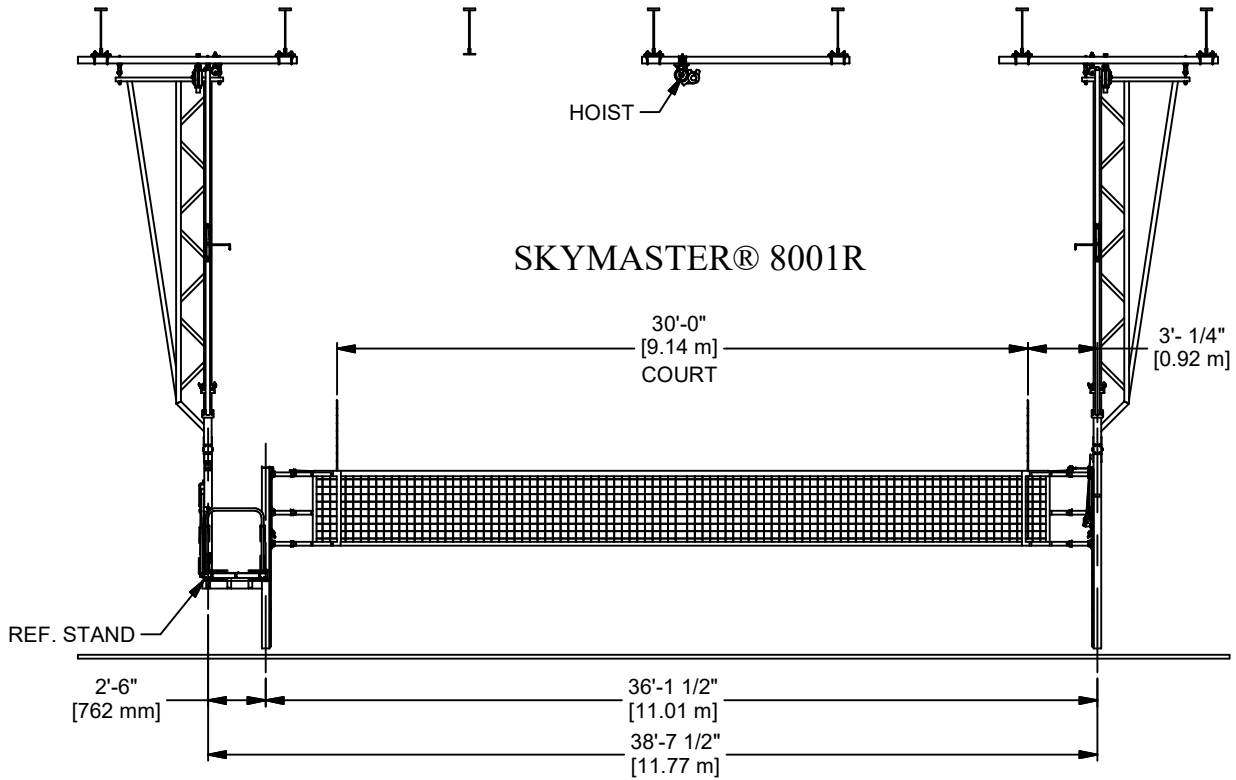
Net and Pads				
Item	Part Number	Description	QTY	
			8001	8001R
80	601651165	VB NET 7000 SERIES	1	1
81	7607-22-00	NET SIDELINE MARKER	2	2
82	1028-22-00	NET ANTENNA	2	2
83	121971504	LABEL, "MANUFACTURED BY PSS"	1	1
84				
85	6251	BUCKLE COVERS SET OF (6)	1	1
86	124651582	WARNING LABEL - WINCH TIGHTENING	1	1
		PAD KIT	604406171	604401801
90	884404074	PAD, UPRIGHT WINCH POST	2	1
91	884404087	PAD, 8100R REF POST LOWER	-	1
92	884404080	PAD, UPRIGHT 8000R/8100R REF POST	-	1
93	884404086	PAD, 8100R REF CROSS TUBE	-	1
94	884403588	PAD, SKYMASTER REF STAND RH	-	2
95	884404069	PAD, HAND RAIL SKYMASTER	-	4
96	883804078	PAD, FOLDING LADDER (3) RUNG	-	2
97	571-4-16	1/4" X 1" SELF DRILLING (TEK #3)	4	6

Installation Instructions

The following illustrations show an overview of the 8001 Ceiling Suspended Volleyball System and the 8001R Ceiling Suspended System with Referee Stand. See installation prints provided for all overhead structure details.

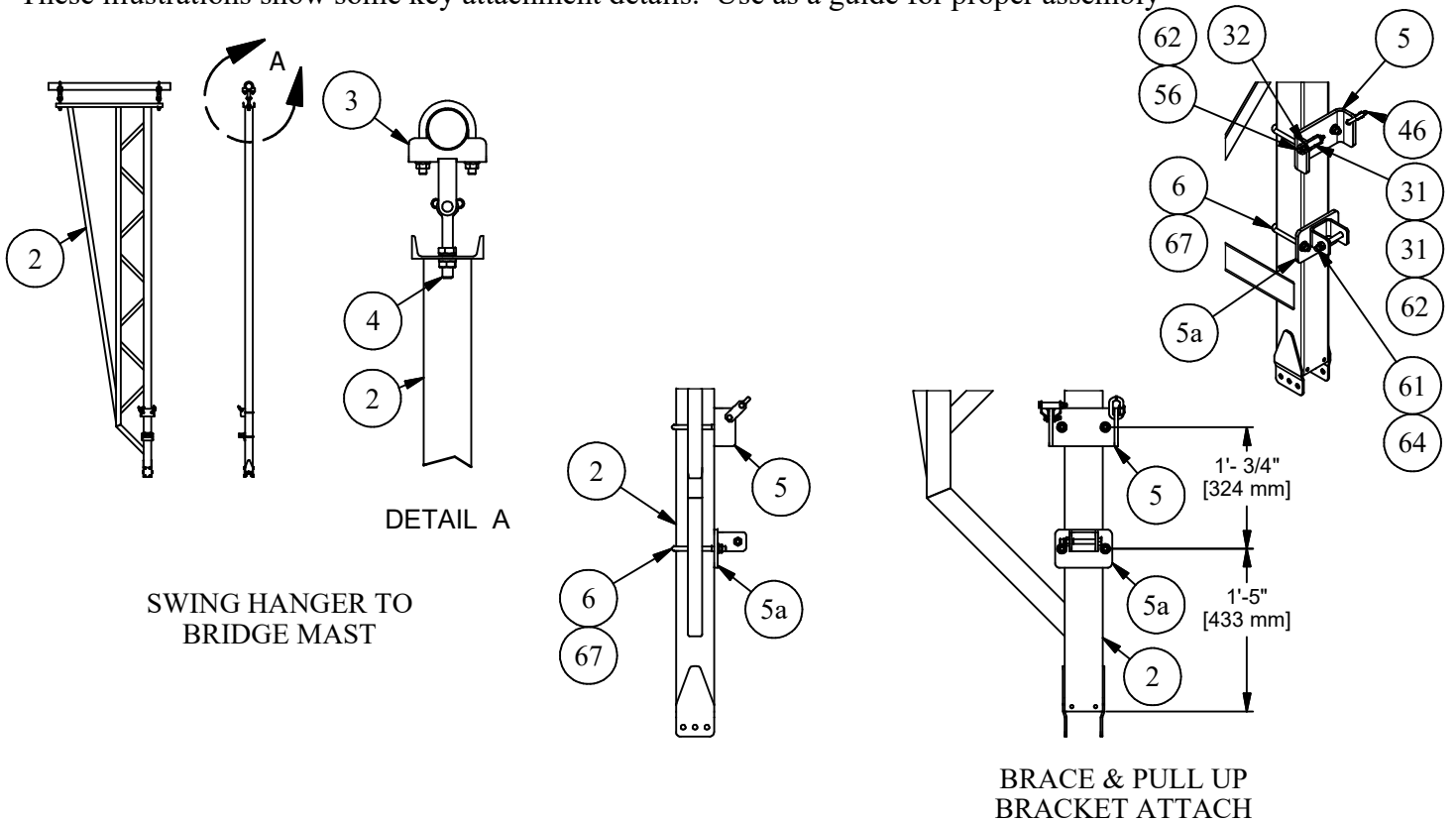


Ceiling Suspended Volleyball System

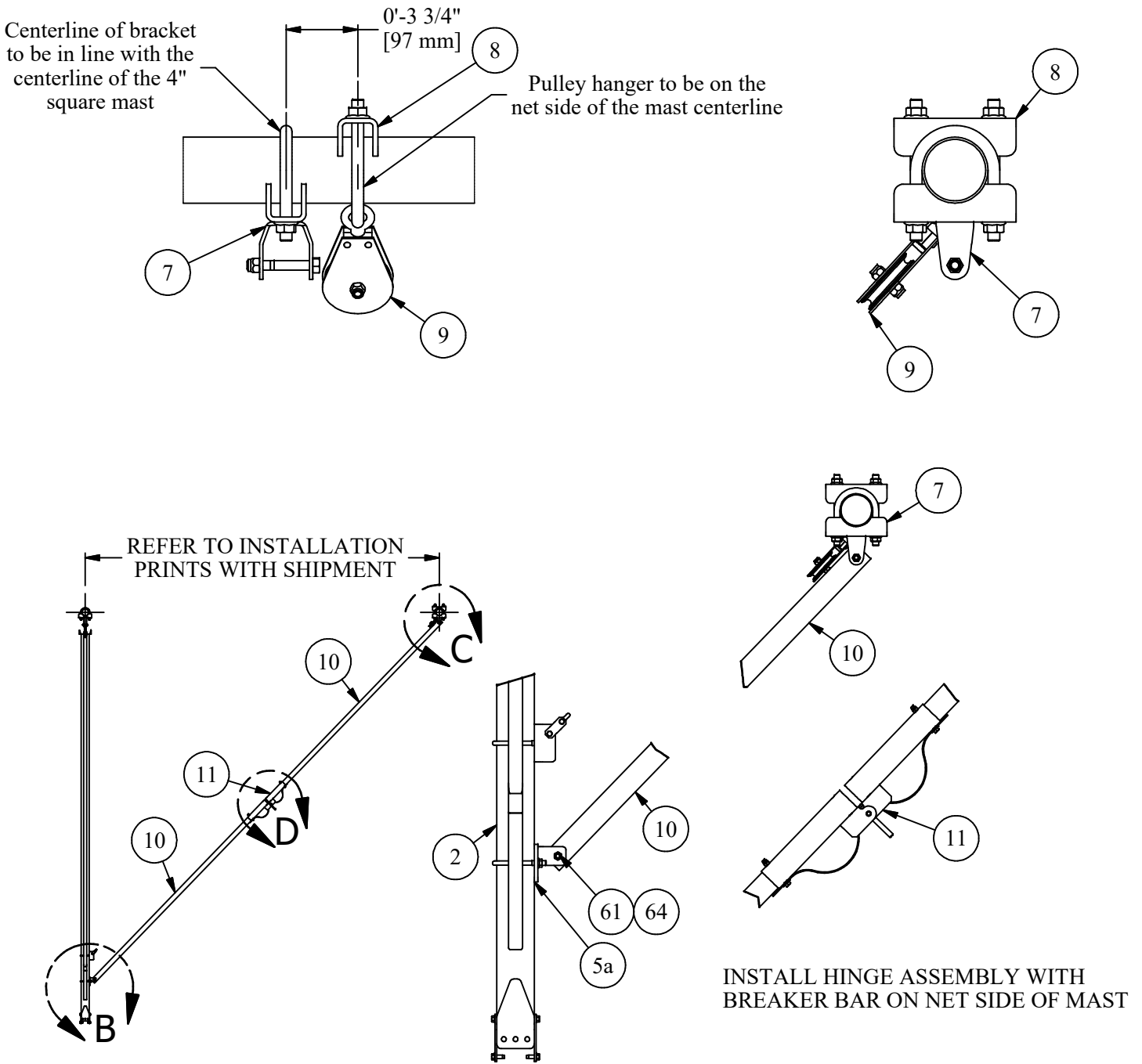


Attachment Details

These illustrations show some key attachment details. Use as a guide for proper assembly



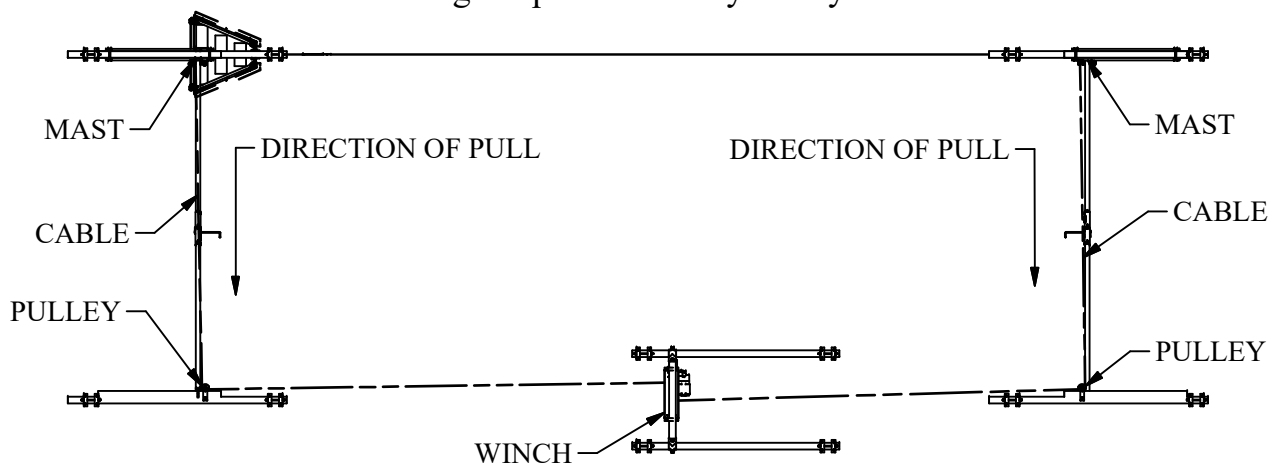
Ceiling Suspended Volleyball System



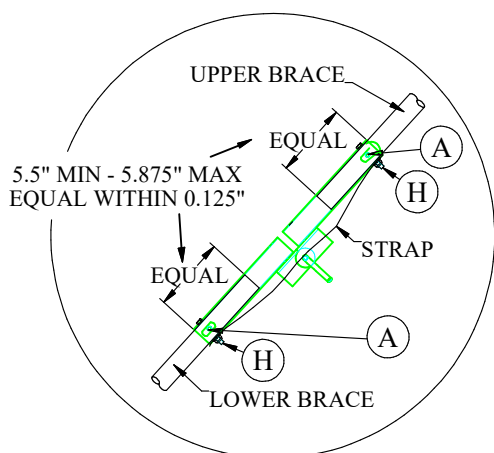
AFTER THE BRACE PIPES ARE BOLTED TO THE MAST AND THE CLAMP, SLIDE THE HINGE ASSEMBLY ONTO THE FREE ENDS OF THE BRACE PIPES. PLUMB THE MAST AND TIGHTEN THE SET SCREWS ON THE HINGE ASSEMBLY.

FOLDING BRACE INSTALLATION

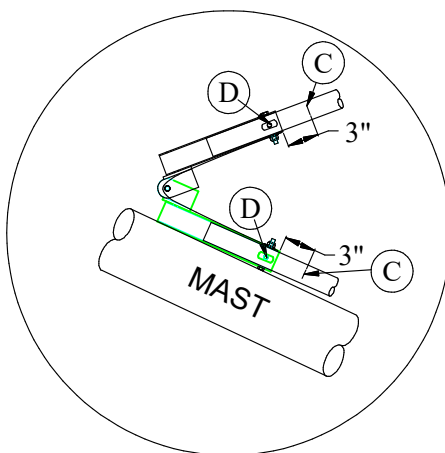
Ceiling Suspended Volleyball System



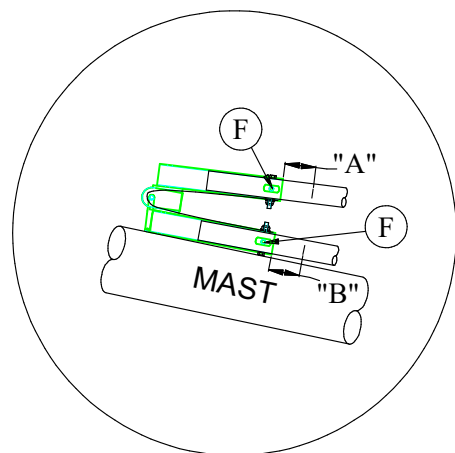
CABLE ROUTING DIAGRAM - PLAN VIEW



DETAIL 1



DETAIL 2



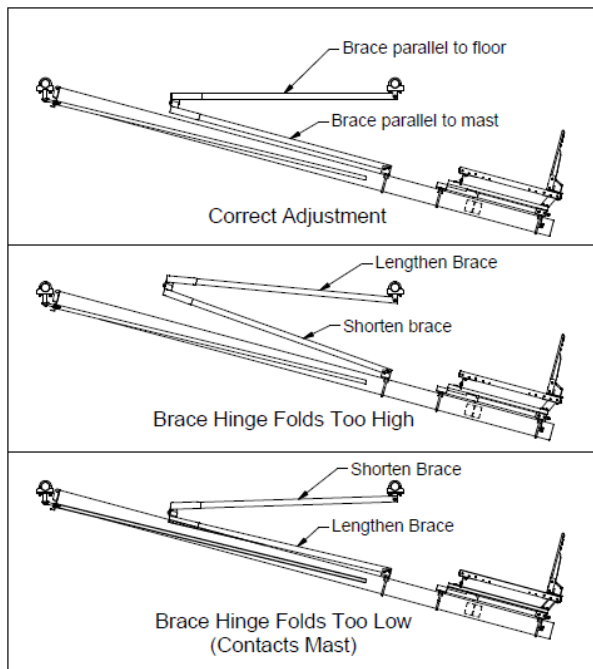
DETAIL 3

ADJUSTABLE BRACE HINGE INTALLATION INSTRUCTIONS.

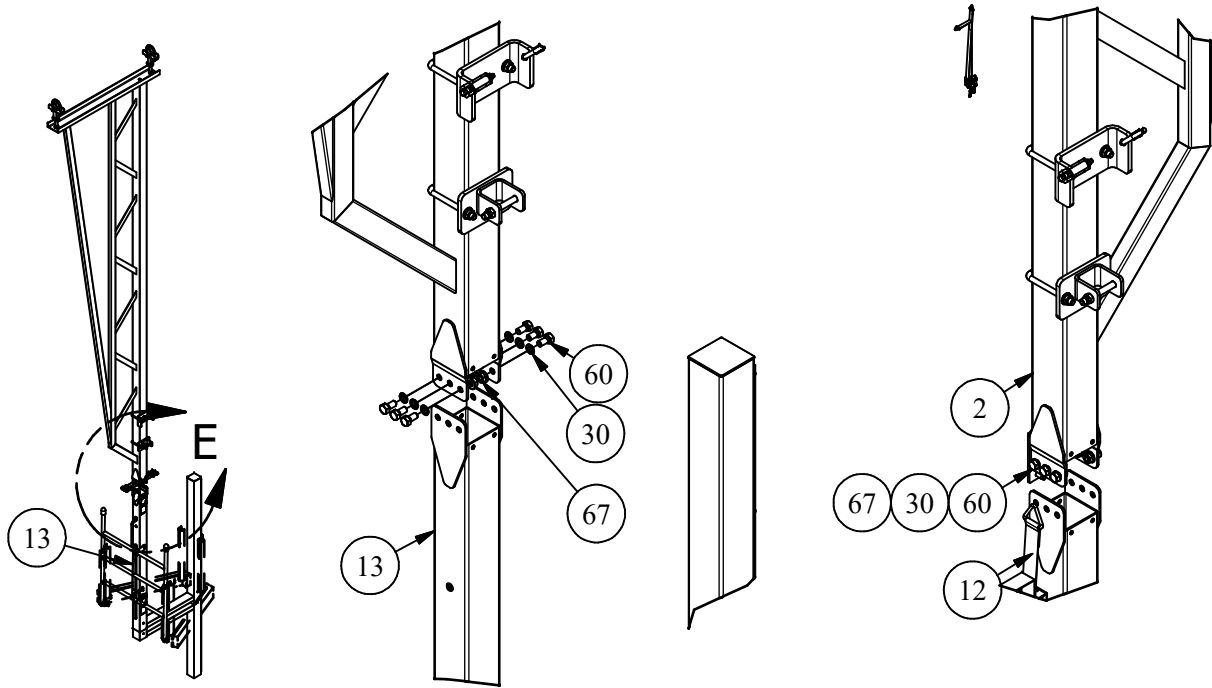
- A.) ASSEMBLE BRACE PER PRINT AND TIGHTEN SET SCREWS. (SEE DETAIL 1)
- B.) FOLLOW CABLE INSTALLATION INSTRUCTIONS ABOVE

DO NOT ATTACH CABLE TO HINGE.

- C.) FOLD MAST UNTIL HINGE CONTACTS THE MAST AND STOP. MARK THE BRACE PIPES 3" ABOVE AND 3" BELOW THE HINGE. (SEE DETAIL 2)
- D.) LOOSEN SET SCREWS AND RAISE THE MAST TO THE MAXIMUM HEIGHT POSSIBLE.
- E.) ADJUST HINGE SO THAT THE "A" + "B" = 6" EXACTLY. (SEE DETAIL 3)
- F.) TIGHTEN SET SCREWS AND LOWER THE MAST
- G.) CYCLE MAST A FEW ADDITIONAL TIMES TO ENSURE PROPER FOLDING.
- H.) AS THE FINAL STEP, SECURE THE HINGE BY DRILLING THROUGH THE BRACE PIPES AND INSTALL THE SAFETY STRAP WITH THE PROVIDED HEX HEAD BOLTS AND NYLOCK NUTS. (SEE DETAIL 1)



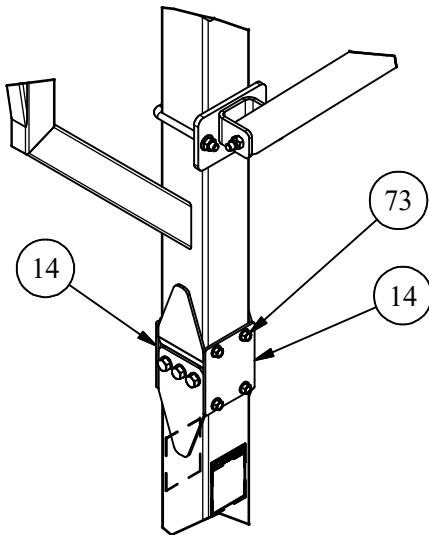
Ceiling Suspended Volleyball System



REF STAND POST

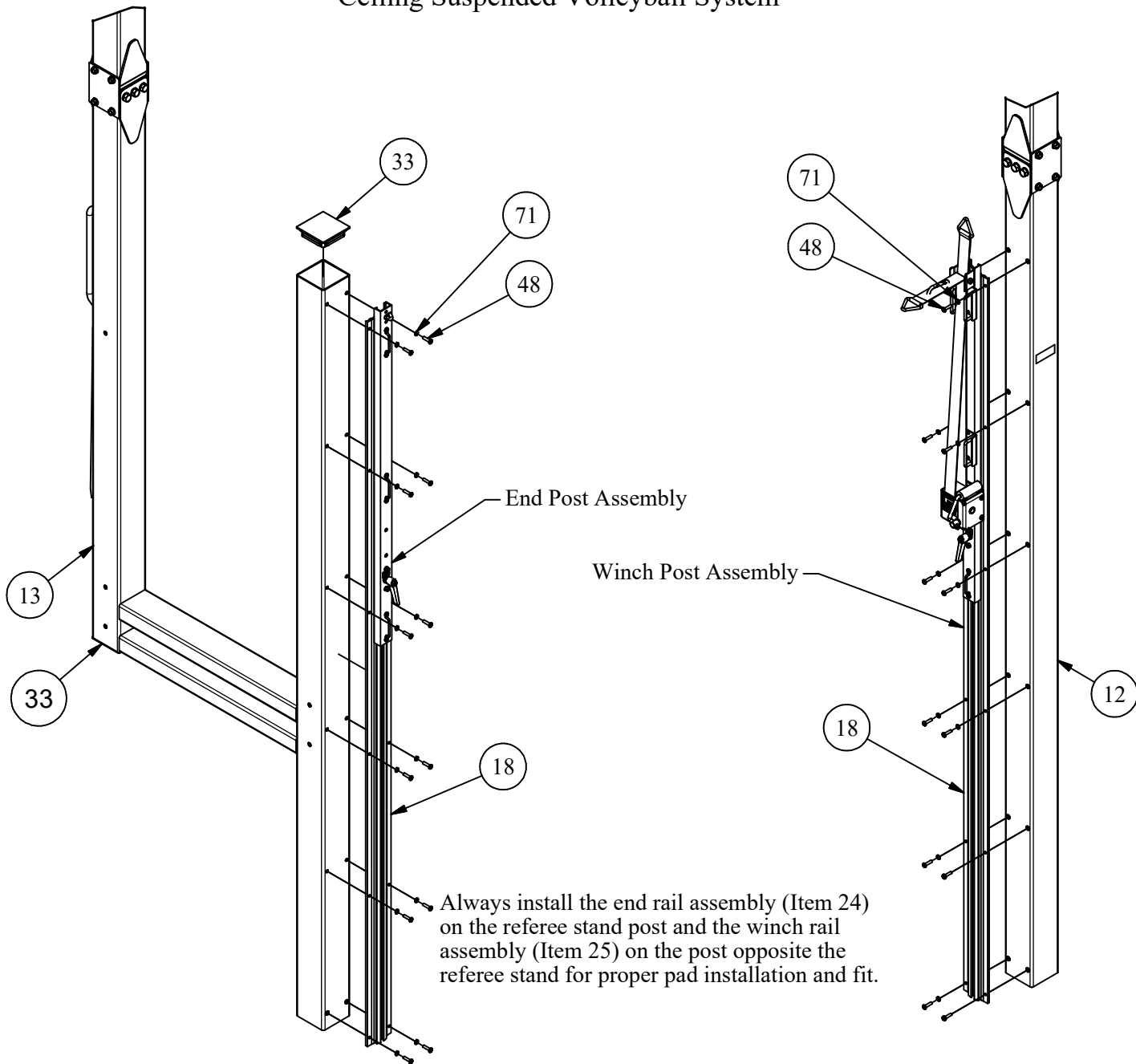
NET END POST

Install the ref stand post and net end post onto the bridge truss mast as shown above. Make sure all bolts are securely torqued.



Install the cover plates on both sides of the mast as shown above using (4) 3/8 x 1 self-tapping screws.

Ceiling Suspended Volleyball System

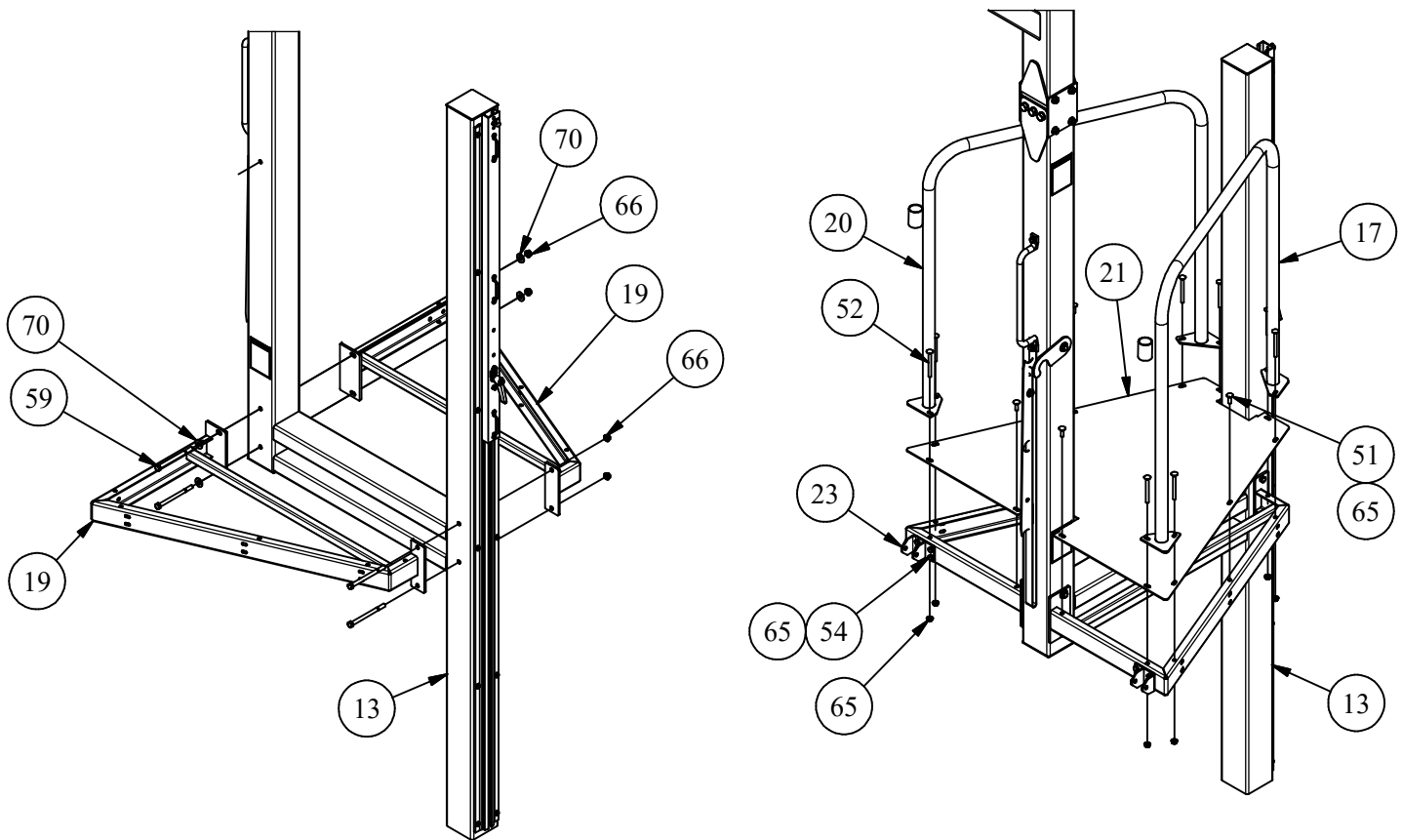


8001R Referee Stand to Mast Assembly Details

See views on the following page

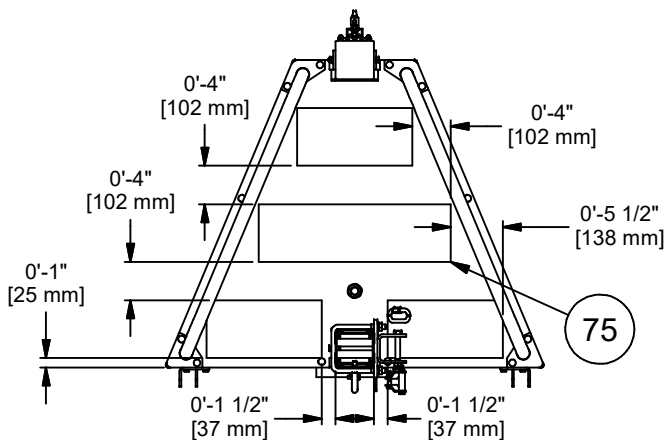
Install the two referee stand floor frames (Item 19) onto each side of the referee stand frame. Note that only the rear of the frames (slotted hole end) require flat washers under the bolt head and under the nuts.

Ceiling Suspended Volleyball System



Install the floor plate (Item 21) and hand rails (Items 17 and 20). The 5/16" carriage bolts (Item 52) for the hand rail attachments are 3 1/4" long and go all the way through the frame. The 5/16" carriage bolts (Item 51) are 1" long and only go through the top flange of the frame.

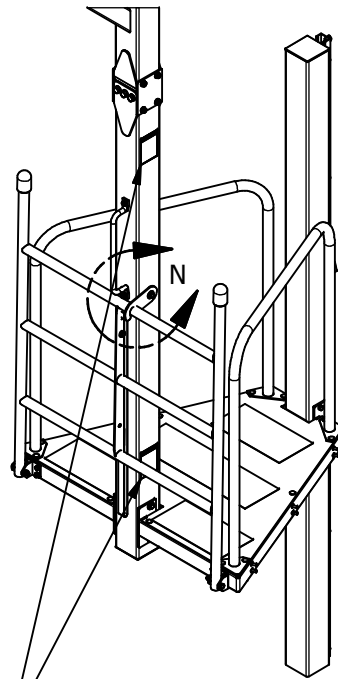
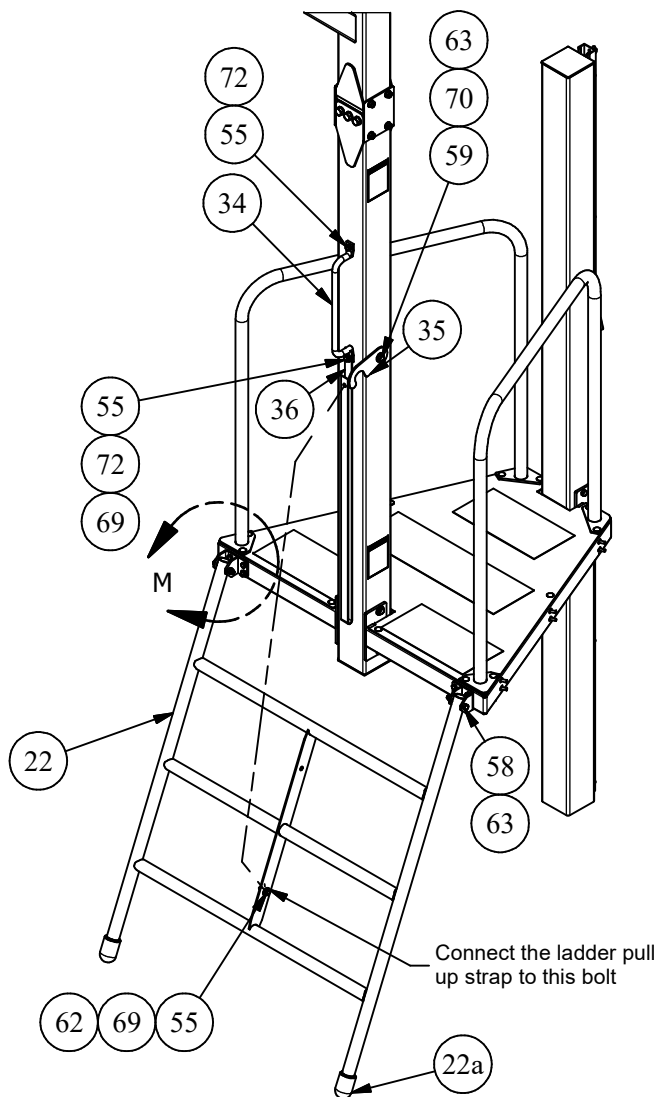
Use the 5/16" whizlock nuts on all bolts and tighten securely.



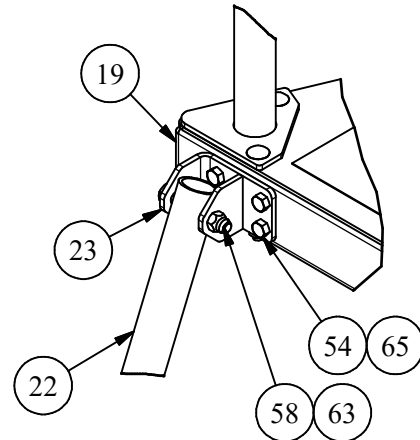
Cut the anti-slip tape (Item 73) into 4 pieces. 3 pieces 12" long and 1 piece 20" long.

Place the pieces onto the top surface of the floor plate as shown in the diagram on the left.

Remove the backing strip from the tape and press the tape firmly onto the floor plate making sure there are no air bubbles or wrinkles



LADDER FOLDED AND LATCHED



DETAIL M

WARNING

- ALWAYS LATCH LADDER UP WHEN PLATFORM IS OCCUPIED.
- ALWAYS CHECK THAT AREA BELOW LADDER IS CLEAR BEFORE LOWERING LADDER TO DISMOUNT PLATFORM.
- ALWAYS LATCH LADDER UP BEFORE FOLDING MAST AND WHEN NOT IN USE.
- FAILURE TO FOLLOW WARNING COULD LEAD TO SERIOUS INJURY.

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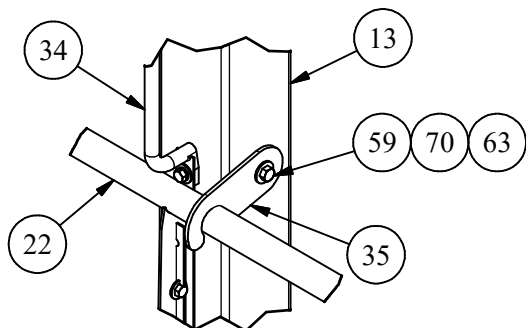
Attach Ladder Brackets (item 23) to platform frame with 5/16-18 x 3/4" hex head screws and 5/16" flange nuts.

Attach Ladder Weldment (item 22) to Ladder Brackets with 5/16-18 x 2 1/2" bolts and 5/16" lock nuts.

Attach the top of the Handle (item 34) to mast post using 5/16-18 x 1 bolt and lockwasher. The lower Handle bolt will also anchor the ladder pull up Strap (item 36) using a 5/16-18 x 1 bolt, lock washer and flat washer.

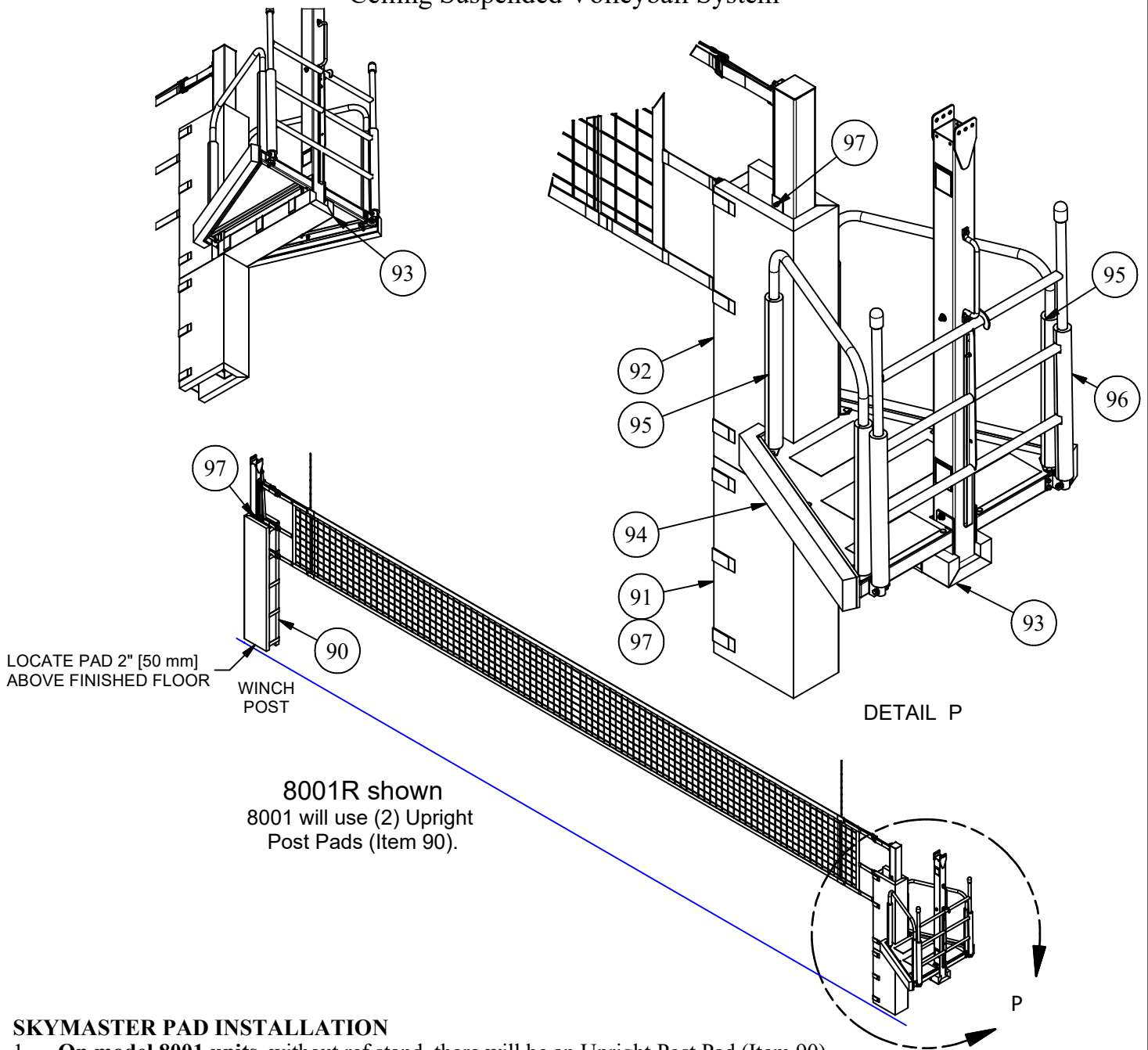
The opposite end of the pull up Strap should be attached to the Ladder with a 5/16-18 x 1" hex bolt, flat washer and locknut.

Attach the Ladder Locking Bracket (item 35) to the Mast post using 3/8-16 x 5" hex bolt, flat washer and locking nut. The Locking Bracket bolt should only be snugged so that Bracket swings freely.



DETAIL N
LADDER LATCHED

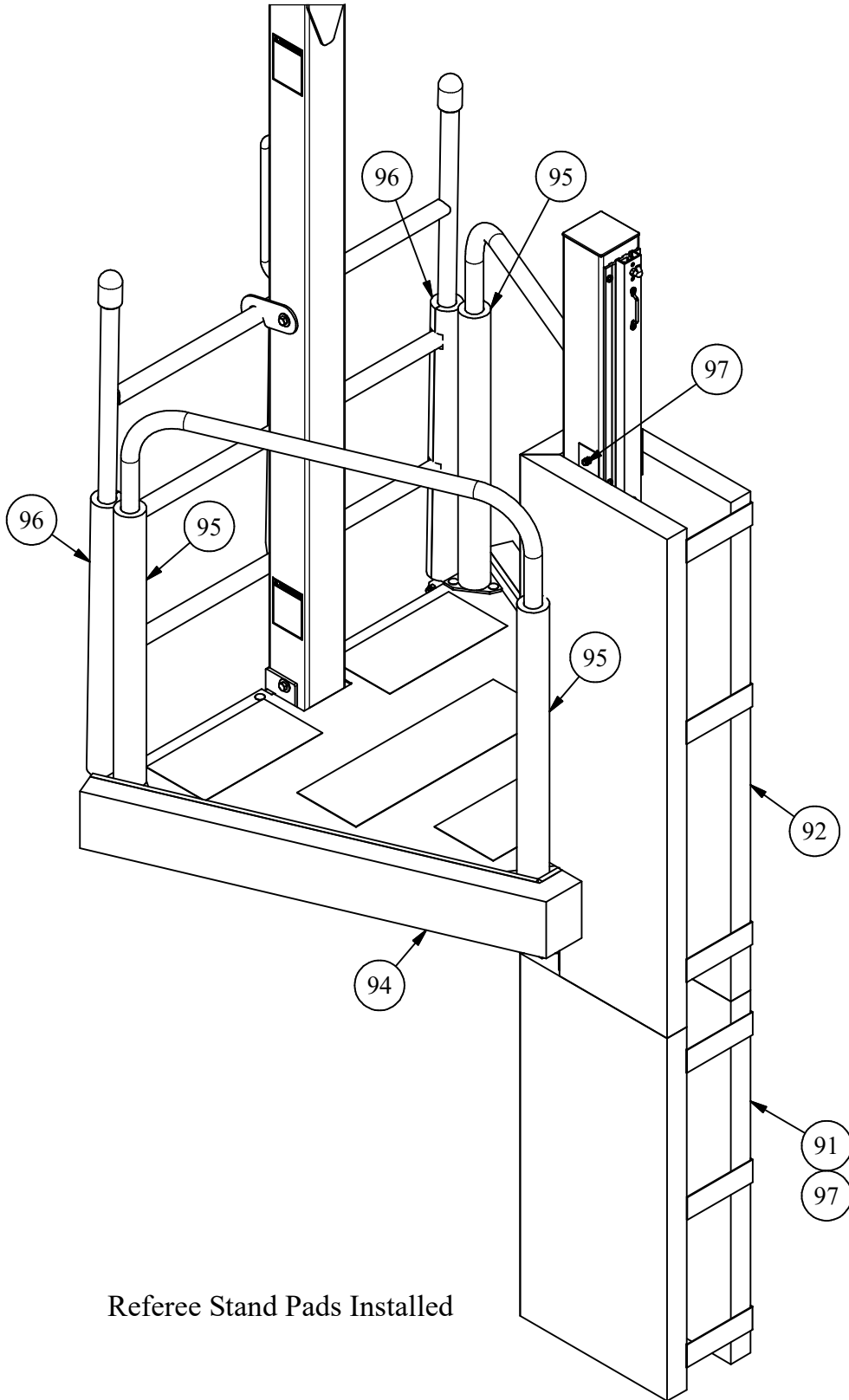
Ceiling Suspended Volleyball System



SKYMASTER PAD INSTALLATION

1. **On model 8001 units**, without ref stand, there will be an Upright Post Pad (Item 90) to install on both the winch post and the end post. Pad should be approximately 2" above finished floor and attached with (2) self drilling screws 1/4 x 1".
2. **On model 8001R units**, install the (2) frame pads (Item 94) to the ref. frame rails using the 1/4" x 7/8" hex bolts (Item 53), 1/4" flat washer (Item 68) and 1/4" lockwasher (Item 71). A quantity of (6) are required for each pad.
3. Install the hand rail pads (Item 95) to the (4) vertical hand tubes.
4. Install the ladder rail pad (Item 96) to the vertical ladder tubes.
5. Install the crossover tube pad (Item 93) to the lower horizontal rectangular tube of the referee stand frame and secure with the velcro straps.
6. Install ref stand net post pads (Item 91 & 92) to the net post. Lower pad should be approximately 2" above finished floor and attached with self drilling screw 1/4 x 1".
7. Install the winch post pad (Item 90) to the winch post. Pad should be approximately 2" above finished floor and attached with self drilling screw 1/4 x 1".

Ceiling Suspended Volleyball System



Referee Stand Pads Installed

Ceiling Suspended Volleyball System

Net Installation Instructions

1. Unfold the net and lay it out between the two posts.
2. The height of the net is set by adjusting the height of the slide rails on the end post and winch post. Rotate the rail lock levers on the rails and set the net cable attachment points approximately 3/4" higher than the desired playing height (which is measured at the center of the court). Tighten the rail locks.
3. Attach one end of the tension cable to the hook at the top of the end post rail as shown. Next rotate the crank handle of the winch to extend the belt. Attach the other end of the cable to the belt of the winch post rail with a snap link. Turn the winch handle to tighten the belt.
4. Center the net so there is equal space between the ends of the net and the posts. Undo the Velcro net straps as they come shipped with the net. Wrap the straps through the footman's loops as shown in the illustration on the next page. Pull the straps tight and press the Velcro surfaces together. These straps are responsible for maintaining the net tension and may need to be re-tightened periodically. Expect stretch in the net. Install the buckle pads.
5. The height of the net will vary slightly with the tightness of the cable. If the net height needs to be adjusted, loosen net straps and loosen the cable to take pressure off of the side rails. Loosen the rail locks and move the rails to the desired height. Tighten the rail locks and re-tighten the net. Refer to the illustrations on the following pages for proper net strap installation and position.

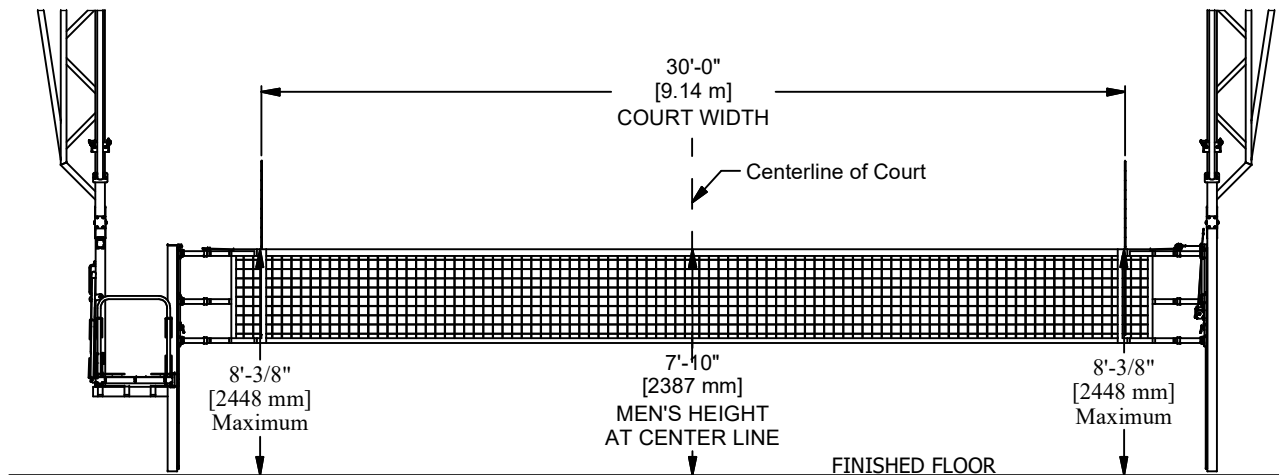
▲ WARNING

DO NOT OVERTIGHTEN WINCH
Overtightening may result in damage to equipment and/or serious injury.

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IMPORTANT:

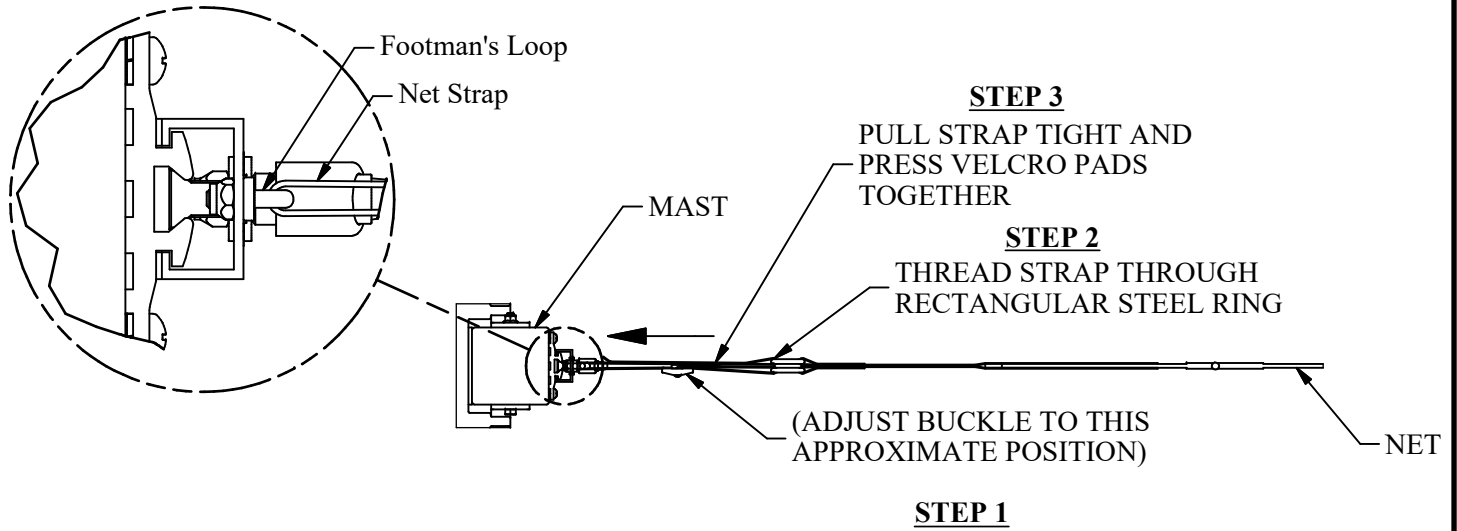
DO NOT OVERTIGHTEN THE NET CABLE.



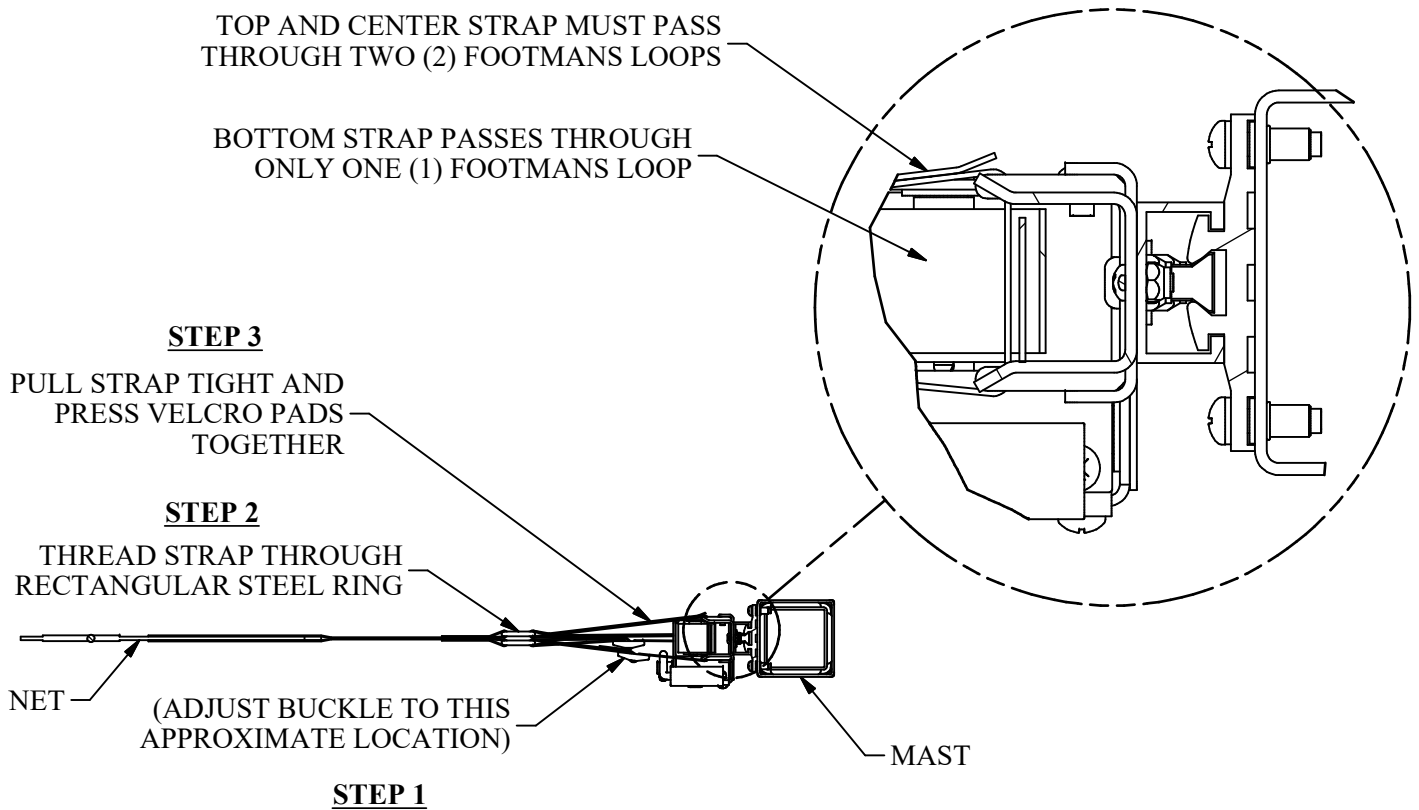
TABLE

VB Type	US Dims	Metric Dims
Men's VB	95 5/8"	[2.429 m]
Women's VB	88 1/8"	[2.238 m]
Youth VB	84"	[2.134 m]
Girl's VB	78"	[1.981 m]

**Ceiling Suspended Volleyball System
TOP VIEWS OF NET STRAP PLACEMENT**



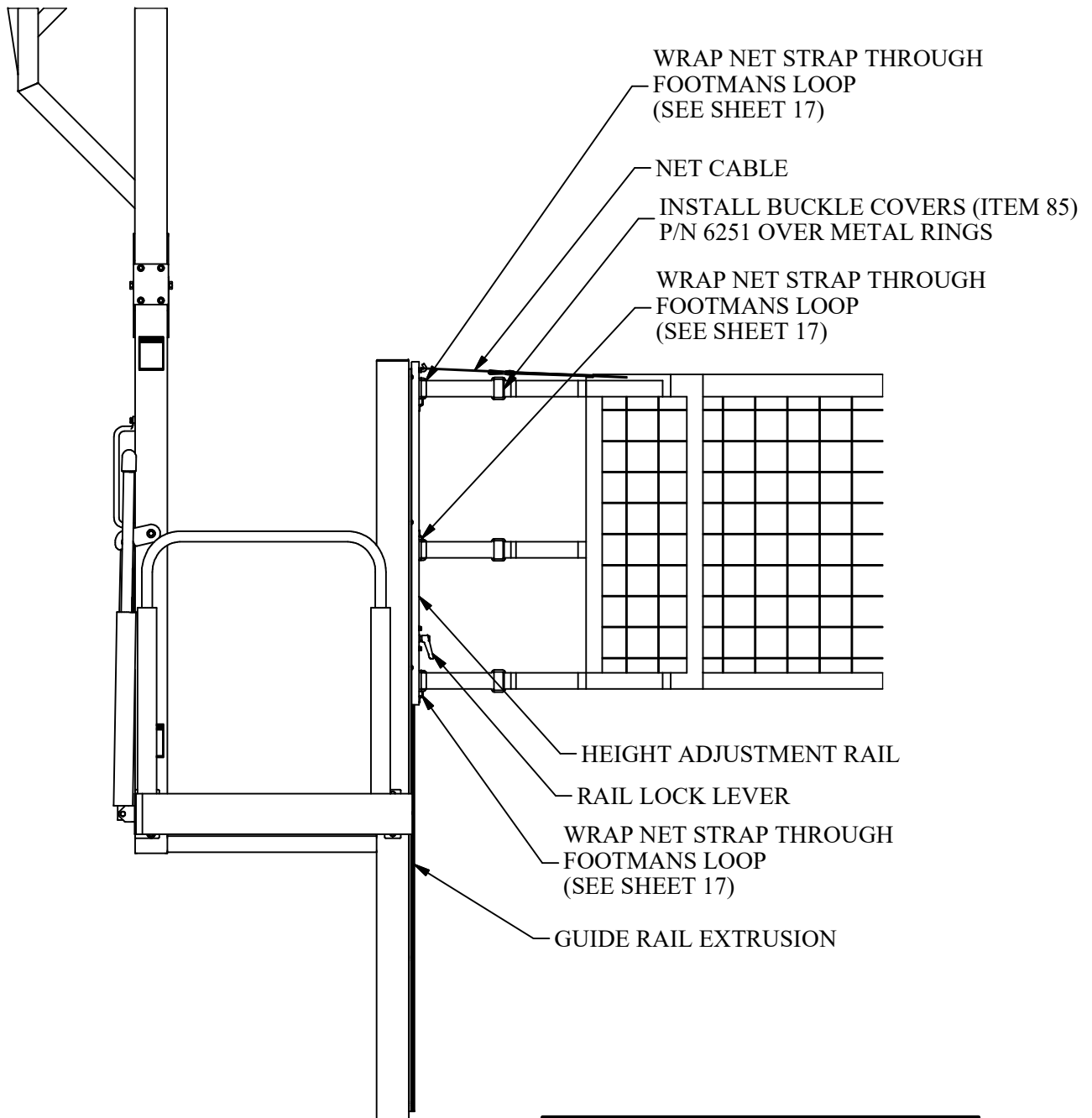
CONNECTION AT END POST (REFEREE STAND END) OF THE NET°



CONNECTION AT WINCH POST END OF THE NET

Ceiling Suspended Volleyball System

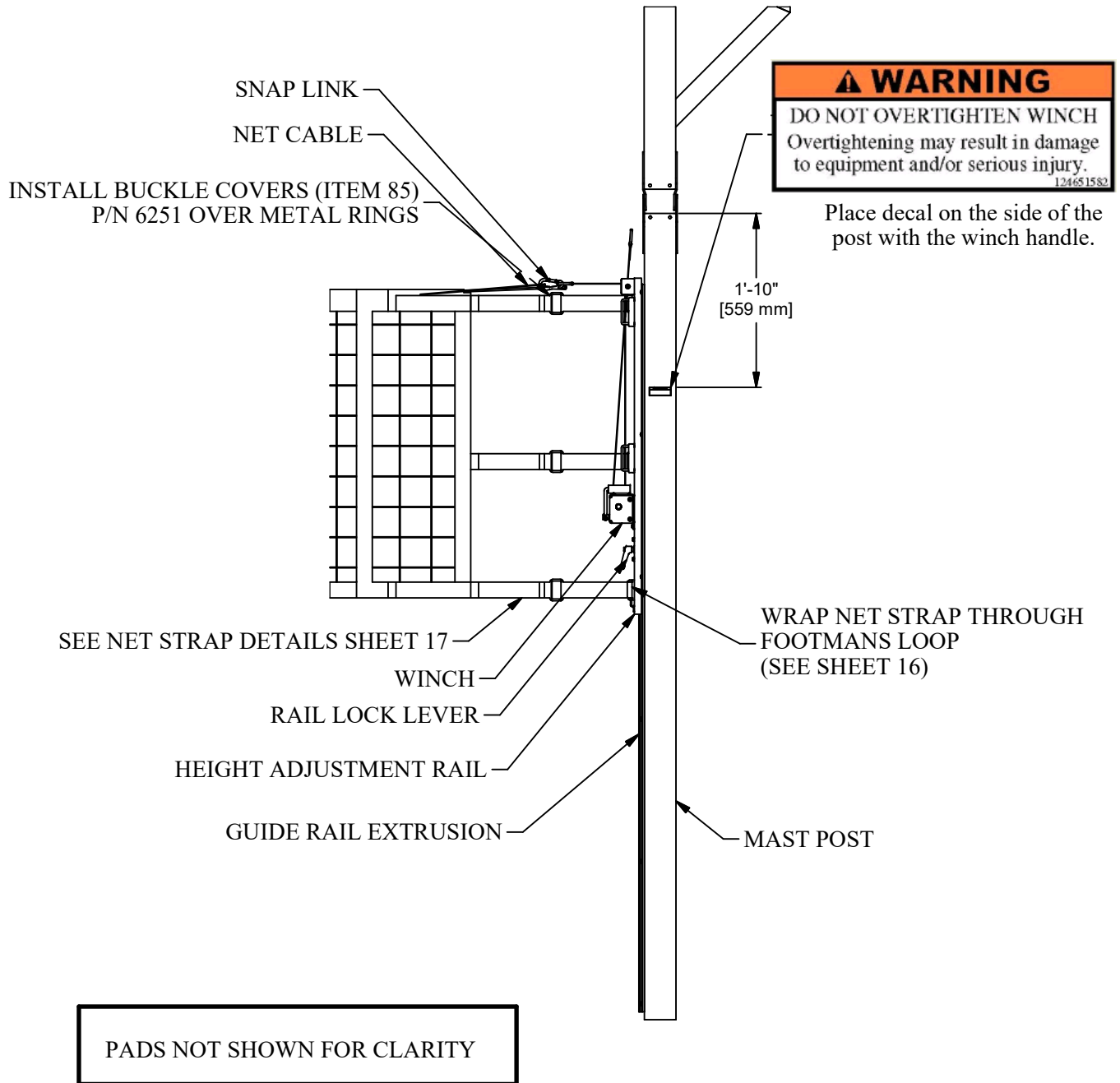
Net Installation - End Post Details



NET ATTACHMENT SAME WITH
OR WITHOUT REFEREE STAND
PADS NOT SHOWN FOR CLARITY

Ceiling Suspended Volleyball System

Net Installation - Winch Post Details



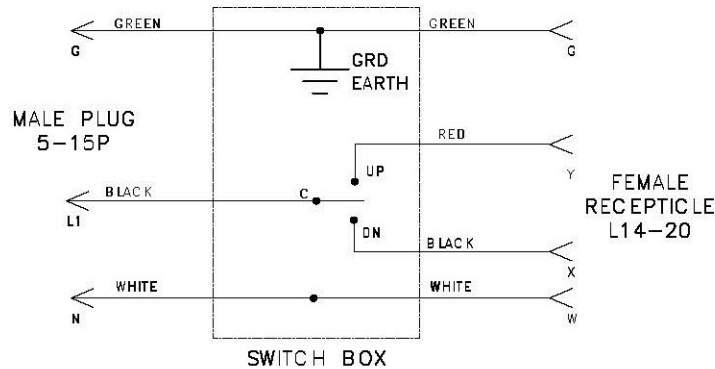
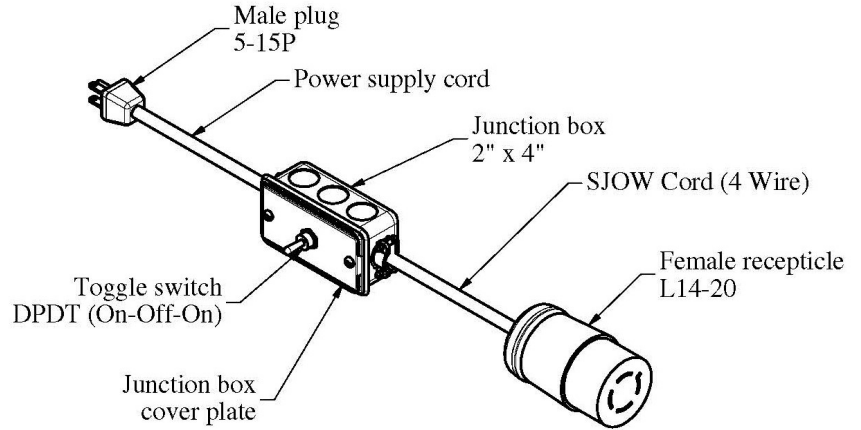
Ceiling Suspended Volleyball System

Electrical Wiring and Limit Switches

Most installations will require temporary wiring to be connected for power to set the motor limits and test the curtain. Permanent wiring will be installed later by the electrical contractor.

For temporary power to the motor, a test cord as shown can be manufactured locally or purchased from the factory. In order to provide the required voltage and amperage to the motor, the cord must meet the required wire sizes for the specified distance.

Extension cord for testing must be 16-3 or heavier up to 25 feet run, 14-3 or heavier for 25 to 50 feet run, 12-3 or heavier for 50 to 90 feet run, and 10-3 or heavier for 90 to 140 feet runs.



Test Cord Schematic

⚠ CAUTION

Operating the motor with insufficient voltage and/or amperage will damage the motor control box.

Damage caused due to inadequate electrical supply will not be covered under warranty.

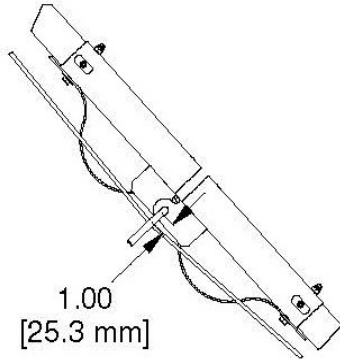
Before connecting the temporary power and attempting to set the limit switches, make sure there are no obstructions in the way of the masts or net when folding.

Make sure there are no personnel near or under the masts when folding.

Ceiling Suspended Volleyball System

Setting Limit Switches

1. With the volleyball system in the down position, the post should be plumb and the net should line up with the court lines.
2. When setting the hoist limit switches, make sure the folding brace is locked in in the full down position. Adjust the lower limit to allow for slack between the 1/4" cable and the breaker bar. DO NOT allow more than 1" [250mm] slack. Before making limit switch adjustment, be sure that the hoist is unplugged.



WARNING

DO NOT allow more than 1" [25 mm] slack between the 1/4" cable and the breaker bar when the unit is in the full down position and the hoist has reached the lower limit.

When the slack exceeds 1" [25 mm], the cable could jump over the breaker bar resulting in severe damage to the equipment and severe injury or death.

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3. Make sure the hoist motor is UNPLUGGED from the test cord.
4. Loosen the retaining screw on the limit box cover and remove the cover.
5. Press the black index locking bar away from the down direction index wheel so it can rotate freely. Rotate the wheel until the switch "clicks" indicating that the switch is active.
6. Connect the power by plugging the motor into the test cord and raise the volleyball system to the up position. Check that the volleyball system is folding correctly and not binding the braces.

WARNING

The motor and electrical circuit is now HOT.

Do not handle any wires, use only the key switch to operate the curtain.

7. The volleyball system should be raised no higher than necessary for storage. Then disconnect the power plug.
8. Press the black index locking bar away from the up direction index wheel so it can rotate freely. Rotate the wheel until the switch "clicks" indicating that the switch is active.
9. Reconnect the power.
10. The volleyball system should be raised and lowered several times to make sure that the cables are tracking properly and the limit switches are set correctly. Make sure that the masts of the volleyball system are parallel and perpendicular to the floor when fully down..
11. Replace the cover on the limit box and securely tighten the screw.
12. Determine whether to leave the volleyball system in the up or down position.
13. Disconnect the temporary wiring and leave these instructions with the electrician or general contractor.
14. **Make sure Facility Electrician or Facility Manager has a copy of the wiring schematic that was furnished with the installation drawings.**

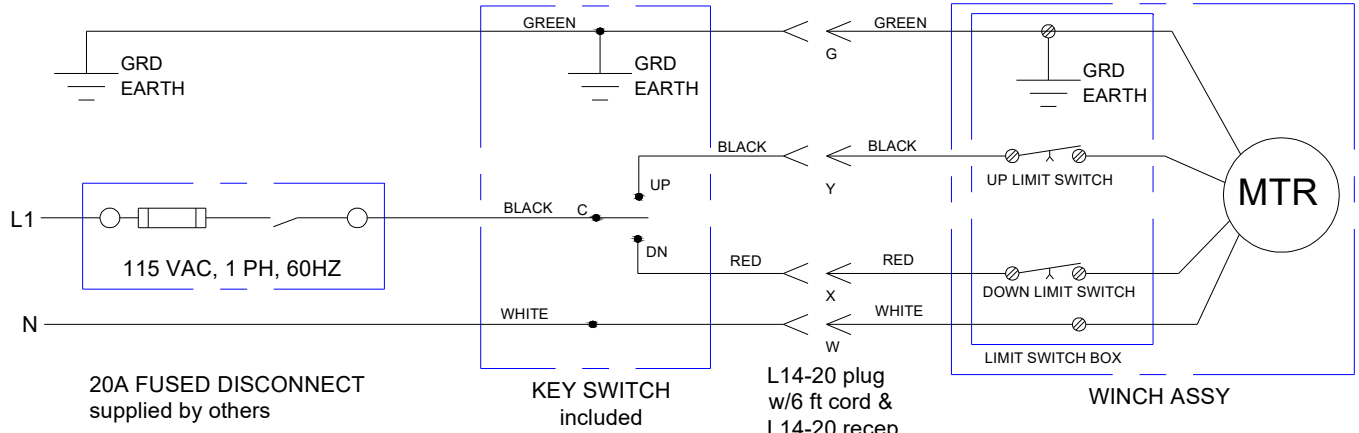
Permanent Wiring Motors for Installation

A qualified electrician should complete all permanent wiring.

Always refer to the electrical schematic furnished with the installation drawings at time of deliver of the product.

The following electrical schematics and information is for reference only.

Ceiling Suspended Volleyball System 3/4 HP 115VAC, 1PH, 60Hz, 20Amp Service



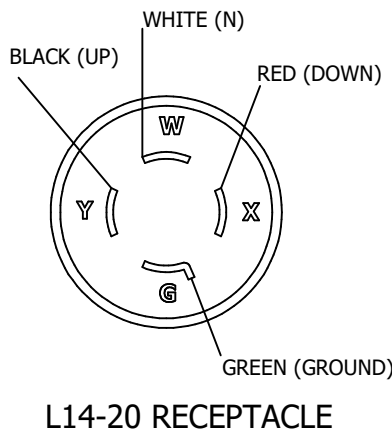
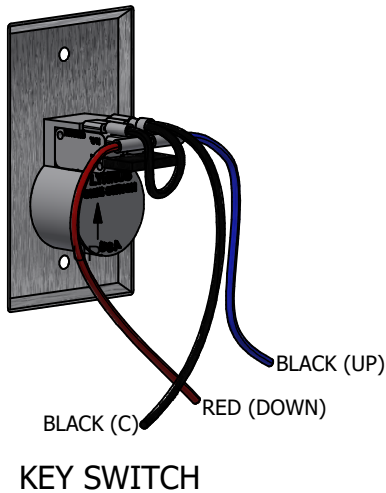
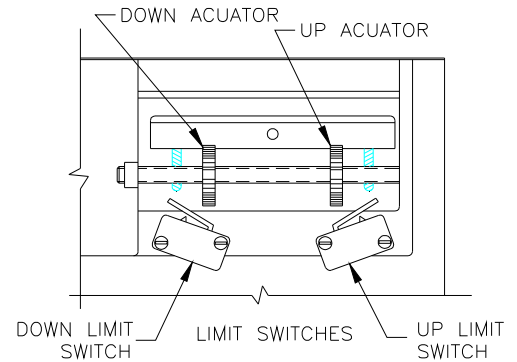
20A FUSED DISCONNECT
supplied by others

KEY SWITCH
included

L14-20 plug
w/6 ft cord &
L14-20 recep
included,
4" jct box not
included

WINCH ASSY

← WIRING SUPPLIED BY OTHERS →



ELECTRICAL REQUIREMENTS HOIST MODEL 8194

MINIMUM CIRCUIT REQUIREMENTS
-DEDICATED 115VAC, 1PH, 60HZ,
20 AMP SERVICE

MOTOR SPECIFICATION
-3/4HP 115V, 1PH, 60HZ, 9.5 FLA
INSTANT REVERSING, THERMAL O/L

MINIMUM WIRE SIZE
(copper wire, 3% max voltage drop)
0-90 ft.....12 ga.
90-140 ft.....10 ga.
140-240 ft.....8 ga.
240-380 ft.....6 ga.

Key switch should be located in full view of the Skymaster system, but NOT directly under the Skymaster system.

See other hoist specification sheets for wire size, wiring diagrams, and circuit breaker sizing.

Ceiling Suspended Volleyball System

Operating Instructions

▲ CAUTION

Only trained and authorized personnel should operate this equipment. Operation by untrained or unauthorized personnel may result in damage to the equipment and/or injury to anyone near the system.

Please read these instructions to familiarize yourself with the type of equipment you have purchased. Unauthorized or untrained users can damage even the safest equipment. We strongly recommend that only qualified and authorized personnel be designated as the operators of this equipment.

Authorized personnel is defined as an individual who has been trained for the proper operation of the unit and is sanctioned by the facility as being responsible for the operation of the equipment. The authorized person should be of sufficient age and experience to fully understand and comprehend operation of the equipment.

Even though great care has been taken to ensure the safety of these units, mechanical problems or failures can occur. It is VERY important that the authorized operator keep the moving overhead volleyball system in FULL VIEW AT ALL TIMES. Should the limit switches ever fail to stop the unit in the up or down position, the operator must be prepared to manually halt the unit by releasing the key switch, wireless remote button or keypad button to avoid damage to the facility structure. If a limit switch fails, contact the manufacturer or the responsible installation company. Do NOT continue to operate unit until limit switch problem has been corrected. If, at any time during operation, any component of the unit fails (such as cables, clamps, pulleys, fittings, attachment points or pipe) STOP THE OPERATION IMMEDIATELY. Contact the manufacturer or the responsible installation company.

The volleyball net should already be installed; however, if it is not installed, please refer to the section on net installation in the installation instructions portion of this manual.

Raising and Lowering the System:

To raise or lower your overhead volleyball system - make sure unit is in full view of authorized operator at all times and area directly below and around backstop is free and clear of people and obstructions. Referee ladder should be folded up and latched.

1. Key Switch Operation:

Note: The key switch should be located in full view of the Skymaster system, but not directly under the system.

Turn key in appropriate direction (right=up, left=down) and hold key in position until unit is completely raised or lowered based on preset limit switch stops. The motor will automatically stop when the limit switch engages, even if the key is still turned in the up or down position. The electric hoist provided by the manufacturer is equipped with an instant reverse feature. This feature allows the user to instantly reverse the direction of the backstop with a simple change of key position. HOWEVER, never purposely or quickly reverse the operation without momentarily stopping in the "neutral" position, as this may cause gear damage, circuit overload or damage to the limit switches.

1. Keypad Operation:

Enter access code; select preprogrammed setups or individual unit to be operated. Push in and hold "up" or "down" button until the unit is in desired position. Repeat procedure for remaining units to be operated. Keypad will automatically shut off after 30 seconds of non-use.

Ceiling Suspended Volleyball System

Adjusting the net height:

The net height is set by raising or lowering the slide rails on the guide rails of the posts. To adjust the net height, rotate the rail lock lever and slide the rail up or down to the desired net height.

It may be necessary to remove some of the net tension in order to slide the rails. Loosen the Velcro net straps at each end of the net. Turn the winch handle to loosen the net cable.

Slide the rails to the desired position and lock the rail lock lever. Tighten the net cable until the center of the net is about $\frac{3}{4}$ " lower than the ends of the net. **DO NOT OVERTIGHTEN** the net cable.

Important Note: The net cable **DOES NOT** apply tension to the net. Only the Velcro net straps apply net tension.

Make sure the net is centered between the end posts, and retighten the Velcro net straps.

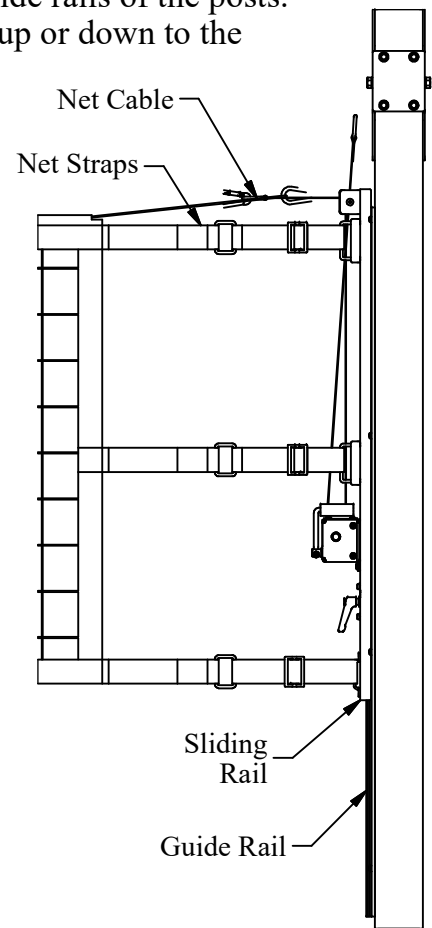
Make sure all the pads are secure and are covering any exposed metal.

Storing the Overhead volleyball system:

When play is completed and the unit is to be stored, follow the procedures for raising the unit.

Be sure the ladder is locked in the up position.

It is not necessary to remove any tension from the net when storing the unit.



⚠ WARNING

DO NOT OVERTIGHTEN WINCH
Overtightening may result in damage to equipment and/or serious injury.

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DO NOT OVERTIGHTEN THE NET CABLE.

NEVER jump, hang, swing from or pull on the overhead volleyball structure. This can cause structural damage and/or personal injury.

NEVER place foreign objects on or around the unit.

NEVER use the unit for anything other than its intended purpose.

⚠ WARNING

-ALWAYS LATCH LADDER UP WHEN PLATFORM IS OCCUPIED.

-ALWAYS CHECK THAT AREA BELOW LADDER IS CLEAR BEFORE LOWERING LADDER TO DISMOUNT PLATFORM.

-ALWAYS LATCH LADDER UP BEFORE FOLDING MAST AND WHEN NOT IN USE.

-FAILURE TO FOLLOW WARNING COULD LEAD TO SERIOUS INJURY.

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Ceiling Suspended Volleyball System

MAINTENANCE INFORMATION – PLEASE RETAIN FOR FUTURE REFERENCE!!!

MAINTENANCE OVERVIEW

!!!ALWAYS DISCONNECT POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE CHECK OR OPERATION ON THIS EQUIPMENT!!!

The manufacturer recommends an annual maintenance inspection of this equipment by an authorized and trained individual. Inspections should occur more frequently depending upon the usage of the equipment.

It is recommended to use the “Maintenance Checklist” on the following pages as a guide to assist with the inspection. Any item that is not satisfactory should be repaired or replaced immediately.

1. Inspect all bolted connections for proper tightness. Use the bolt torque chart at the right as a guideline for proper torques.

The bolts that secure hinged joints have nylon locking nuts and these should NOT be torqued to the value in the chart. These nuts should only be tightened until the nut just engages the hinge bracket. Do not overtighten the nut as this will cause binding and excessive wear on the joint.

RECOMMENDED BOLT TORQUE				
Bolt Size	Wrench Size	In-Lbs	Ft-Lbs	Nm
1/4"	7/16"	66 to 90	5.5 to 7.5	8 to 10
5/16"	1/2"	132 to 180	11 to 15	15 to 20
3/8"	9/16"	234 to 318	19.5 to 26.5	27 to 36
7/16"	11/16"		31 to 42.5	43 to 58
1/2"	3/4"		47 to 65	64 to 88
9/16"	7/8"		68 to 90	93 to 122
5/8"	15/16"		94 to 130	128 to 176
3/4"	1-1/8"		166 to 230	226 to 312
7/8"	1-5/16"		269 to 372	365 to 504
1"	1-1/2"		402 to 566	546 to 767

2. Inspect all mast fittings for cracks, corrosion, and tightness.
3. Inspect hinge fittings and lubricate as required.
4. Check hoist cable for wear and fraying and pulleys for signs of wear. A noisy pulley should be replaced..
5. Inspect the winch for proper operation and make sure limit switches are working and set correctly. Lower the backstop and check the cable droop below the folding hinge breaker bar. If the droop is more than 1” [25 mm], adjust the lower limit switch.
6. Check the SafeStop for signs of wear. If a yellow or red flag is appearing at the bottom of the strap, SafeStop should be replaced.
7. Inspect pads, net cable, and net for wear.

▲WARNING

When servicing the electric hoist that requires removing the, first lower the Skymaster system to the full down position. If the system cannot be lowered to the full down position, tie the ends of the masts to the overhead or building structure to prevent movement.

Failure to lower the system or secure the masts to the building structure could result in the system dropping when the motor is removed resulting in damage to the system and/or serious injury to anyone near or under the system.

Ceiling Suspended Volleyball System

ATTENTION: MAINTENANCE DEPARTMENT

To confirm that you have received maintenance and warranty information, and to better serve you if you contact us, please fill out the following information and fax or mail to the address below.

Please refer to the facility name and/or the installation company below when you contact the manufacturer, and include it on any correspondence.

I have received the maintenance and warranty information provided by the manufacturer on the ceiling suspended backstop.

Facility/School Name: _____

Installation Date: _____

Installed by: _____

Maintenance Dept. Contact: _____

Signature: _____

Date: _____

Fax to: 1-317-774-9841

Attn: Customer Service

Or

Mail to:

Customer Service

9200 E. 146th St., Ste. A

Noblesville, IN 46060

800-848-8034

Ceiling Suspended Volleyball System

Maintenance Check Sheet

Refer to the Maintenance Overview section (page 25) for recommended frequency of inspections.

Date: _____

Unit: _____

Overhead Structure

-Overhead pipes: dents, stress spots, etc. OK Repair Replace

-Beam clamps OK Repair Replace

Unit Supports / Brackets / Hinges

-Tubes; dents, stress spots, etc. OK Repair Replace

-Bolts; loose, deformed, etc. OK Repair Replace

-Brackets/Hinges; bent, not rotating, etc. OK Repair Replace

-Mast clamps for brace connections
(torqued properly) OK Repair Replace

-Mast clamps for pull up cable points
(torqued properly) OK Repair Replace

Elec. Net Adjuster (If Equipped)

-Lubrication OK Repair

Electric Winch

-Cable wrap smooth and even OK Repair

-Limits set correctly and operate OK Repair

-Operates smoothly no abnormal noise OK Repair

Volleyball Net

-Nets not frayed or torn OK Repair Replace

-Hardware tight OK Repair Replace

Pads

-Pads in good condition
Not torn, faded or loose OK Repair Replace