

Installation Instructions

Overhead Volleyball System by Draper

Caution

- ① Overtightening top cable can damage equipment and possibly cause injury.
- ② The center of the net will sag slightly. This is natural. Do not try to compensate by over-tightening top cable. (See "Net Height" information below.)
- ③ Make sure proper parts and accessories have been shipped. Do not attempt to install any accessories that are not recommended for your Overhead Volleyball System.
- ④ Do not attempt to operate the winch by using an electric drill; hand crank only.

These instructions are meant as a guide only. They do not imply any responsibility on the part of Draper, Inc. for improper installation or faulty workmanship at the jobsite.

Prior to Floor Installation

- ① Install overhead support structure and two vertical mast assemblies at locations shown on project specific drawings and using Draper's Ceiling Suspended Basketball Backstop Installation Instructions for details on fittings, clamps and hardware.
- ② Install folding jackknife braces and attach cables as indicated on project specific drawings and referring to Draper's Ceiling Suspended Basketball Backstop Installation Instructions proper cable routing attachment and details on adjustment.
- ③ Install Safety Strap on each vertical mast assemblies.
- ④ Winch in location shown project drawings. Attach cable end from each end upright to cable ring securing with two wire rope clamps on each cable. Attach a third cable to the cable pull ring at approximately 180° from cables running from the mast assemblies. Attach end of third cable to winch drum and set limit switches per winch instructions.
- ⑤ Trim each vertical mast assembly so that it ends at 31" above the playing surface.
- ⑥ Measure up 7½" from the bottom of end of each vertical mast assembly and mark to drill a 17/32" hole through the vertical mast. Hole should run parallel to the volleyball court side line (perpendicular to the net) and needs to be drilled level through both sides of mast tube.

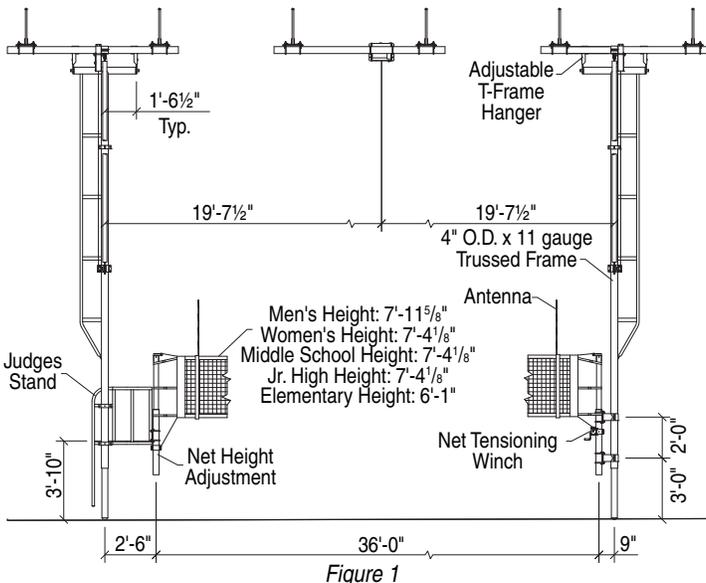


Figure 1

After Floor Installation

Attach Stabilizing Foot Assemblies

- ① Attach a stabilizing foot assembly to the bottom of each mast assembly. To do this you will slide the foot assembly inside the vertical mast assembly and is drilled through bolted. Make sure that foot assembly is retracted at least 3" prior to inserting into vertical mast assembly and drilling holes. Use the holes drilled in the vertical mast tube as a guide to drill the outer tube of the foot assembly with the foot just barely resting on playing surface. Foot assembly is secured using ½"-13 x 5" bolt and nylon lock nut.

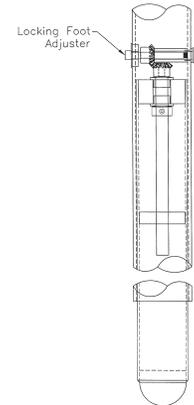


Figure 2

Attach Judges Stand and Net Post Assemblies

- ① Attach Optional Judges Stand if included. The judges stand will attach to the vertical mast that is furthest from the volleyball court lines (should be 66" from the court line.) Judges stand attaches using 2" x 4" Half Clamps, ½"-13 x 2" Bolts and Flange Lock Nuts. Judges Stand should be installed with platform at 46" above the playing surface.
- ② Attach one of the telescopic volleyball post assemblies to the front side of the Judges Stand using ½"-13 x 3½" I.D. U-bolts and flange lock nuts. Tighten the bolts just enough to hold the post and keep it from falling and orient the post so the pulley faces the court (away from vertical mast assembly.)
- ③ Set the height by collapsing the post so that the inner tube is to the recessed groove marked 6'0" Tighten the pressure locking hand knob so that it is squarely in the recessed groove on the inner post section marked accordingly. Inner tube is moved by loosening the locking hand knob and turning threaded rod that protrudes from bottom of outer tube. It will be necessary to keep pressure on the upper tube section so it does not rotate at the threaded rod is turned.
- ④ Slide volleyball post assembly in the u-bolts until the top of the pulley is at 6'0-¾" above the playing surface. (Volleyball nets will sag approximately ¾" from sideline to the net center which is acceptable by rule.) Tighten nuts so the post is secure.
- ⑤ Attach lower net attachment collar to volleyball post assembly approximately 23" from the top of the outer tube.
- ⑥ Attach the other volleyball post assembly to the other vertical mast assembly using two C414.025WA- 4" to 3½" extension clamps, 4" x 4" half clamp, ½"-13 x 2" bolts and flange lock nuts. Tighten the bolts just enough to hold the post and keep it from falling and orient the post so the pulley faces the court.
- ⑦ Set post at correct height following steps 4 and 5 from above.
- ⑧ Attach net tightening winch to volleyball post assembly approximately 23" from top of outer tube. Net handle should be toward the volleyball court (see drawing on page 2).

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If you encounter any difficulties installing or servicing your Overhead Volleyball System, call your dealer or Draper, Inc., Spiceland, Ind., (765) 987-7999 or fax (765) 987-7142.

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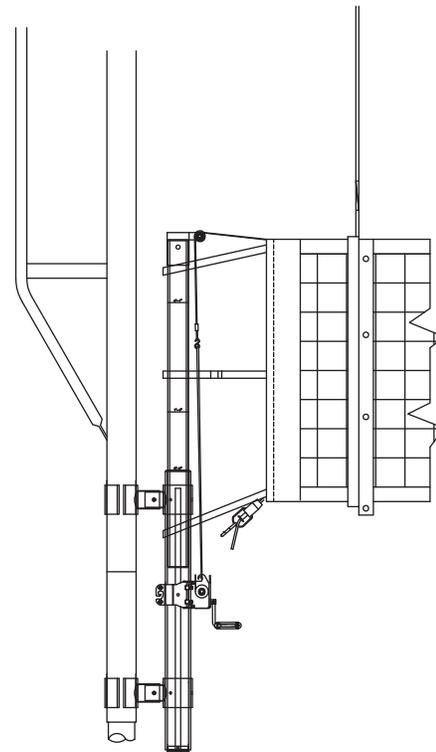
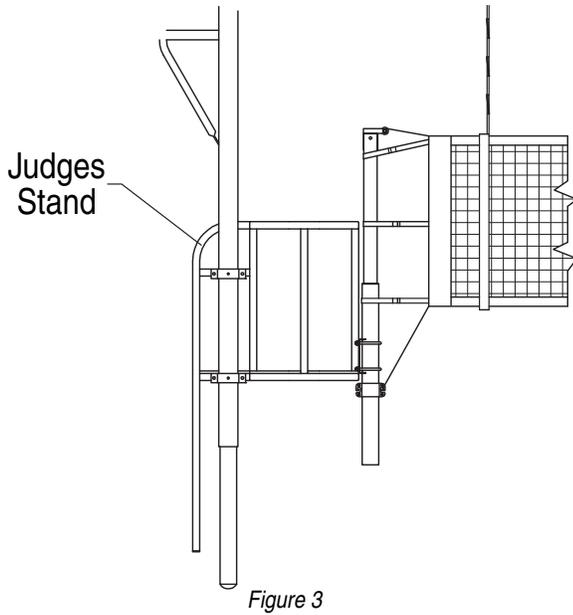


Figure 3

Figure 4

Attach Net

- ① Unroll net on floor between standards.
- ② Install ½" fiberglass rods in ends of net.
- ③ String net between posts by sliding looped cable end over pulley on sliding adjustment collar.
- ④ Unspool the 2" nylon strap from winch. Hook one end of the top net cable in hook on belt. Hook opposite end of top net cable to cable anchor collar on the other standard

NOTE: Make sure the cable is running cleanly through sheaves.

- ⑤ Tighten net by turning winch handle clock wise. Measure distance from top of net to finished floor at the center of the net.
- ⑥ Install tensioner to non-winch end of bottom net rope by inserting rope through beveled end of tensioner. Tie a loop in other end of rope. Attach rope tensioner to cable anchor collar and tied loop to winch. Tighten by pulling on rope while holding tensioner.
- ⑦ Wrap 1" wide net tension straps once around standards and tighten using buckles.
- ⑧ Attach combination Antennas/Boundary Markets.

NOTE: Winch incorporates a worm gear type mechanism. To loosen top cable, turn winch handle counterclockwise.

Net Height

Regulation net heights are measured and set at the center of the net. The ends as they cross the boundary line cannot exceed regulation height by more than ¾" which allows for natural net sag. Below are official heights recommended by USA Volleyball:

Age Groups	Girls/Women	Boys/Men
10-under	6'0" (1.83 M)	6'0" (1.83 M)
12-under	6'6" (1.98 M)	6'6" (1.98 M)
14-under	7'4 1/8" (2.24 M)	7'4 1/8" (2.43 M)
16-under	7'4 1/8" (2.24 M)*	7'11 5/8" (2.43 M)*
Older	7'4 1/8" (2.24 M)*	7'11 5/8" (2.32 M)*

*Official net heights for High School, Collegiate and International Competition. Heights etched in post are shown in nominal dimensions, but should equal these heights if system is properly installed.