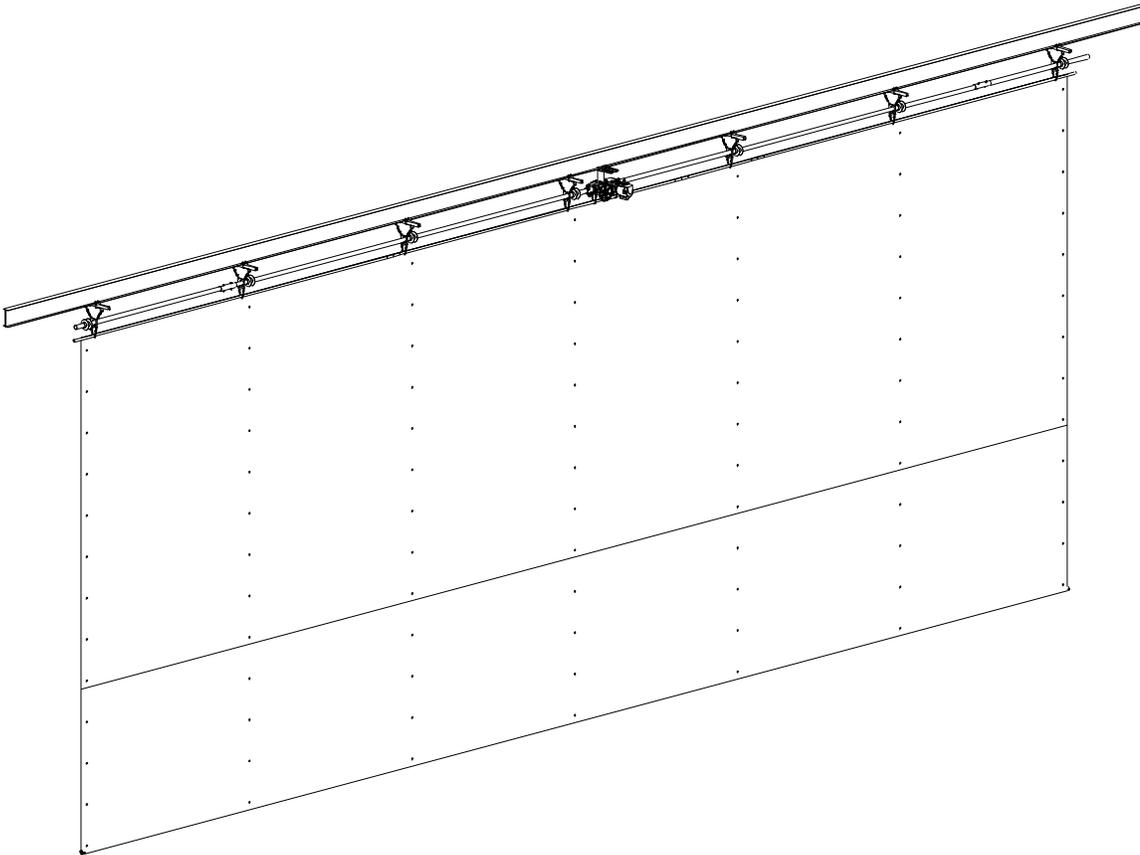


ROLL FOLD DIVIDER CURTAIN

No.'s 670 AND 690



Porter[®]

Installation, Operation, and Maintenance

SAVE THESE INSTRUCTIONS FOR FUTURE USE



INSTRUCTIONS: Dealer and/or Installation Supervisor,
Please give this book to the Owner/Customer

GUARANTEE

All materials and workmanship of basic materials are guaranteed to be free and clear of defects. Defective material will be repaired or replaced, at our option, subsequent to complete information being received by us concerning the nature of the defect for a period of one year from the date established by the certificate of occupancy or certificate of substantial completion, whichever shall occur first or otherwise documented and signed by an officer of Porter Athletic, Inc.

NAME OF PROJECT:	

NAME OF DEALER:	NAME OF INSTALLATION COMPANY:
PHONE #:	PHONE #:

Porter Order Number _____

Date of Scheduled Shipment _____

Date of Substantial Completion _____

The gymnasium equipment for this project has been custom fabricated according to the Owner's/Architect's specification. Care has been taken to fabricate and install this equipment to provide years of safe, satisfactory use and trouble free service.

The key to satisfactory service is proper operation and care. Should any malfunctions occur, please notify your supervisor and call your local Porter Dealer or Representative.

LIABILITY

Liability is not only an issue with the installation and maintenance of this product, but it also extends to the proper operation by the end user. The operational instructions must be read and understood before operating this equipment!

This manual for the model No. 670-1 & 670-2 Roll-Fold® Divider Curtains, which provides explicit examples of a variation of overhead attachments, is meant to serve as a general guideline only, for the safe installation of this product. Variables must be taken into consideration which are outside of Porter's control, including, but not limited to, steel joist variations which include splice plate interference, web panel point attachments if specified by the architect, conduit interference, HVAC and sprinkler interference, non-grouted cells of block walls, spacing and frequency of wall ties, appropriate selection of wall anchors for the given wall composition, proper installation of said anchors, embed depth of the anchors, etc. It is Porter's explicit requirement that this product be installed in a safe and secure manner. Any structural deviation from Porter installation drawings without written authorization will void all warranties. Contact the factory immediately should such a condition exist, necessitating a design revision. All anchor and fastening methodology is to comply with the International Conference of Building Officials (ICBO), the Uniform Building Code (UBC), the Industrial Fastener Institute (IFI), and all state regulatory agencies, such as The Division of the State Architect (DSA) in California.

General Hardware Guidelines

- Do not substitute hardware without written authorization from the factory.
- Minimum Grade 5 hardware is to be utilized at all attachments, unless specified otherwise. Refer to the specific part drawing in this manual for the proper grade of hardware.
- On eyebolt applications, a turned eye is not acceptable. Utilize forged eyebolts or, if necessary, a turned eye that is welded closed.
- Do not substitute for the factory-supplied cable and cable clamps. The quality of the 1/8" cable and clamps can vary widely from different manufacturers, and are not all suited for curtain applications.
- Any "S" hook connections must be crimped closed.
- All Nicopress® clamps must be installed utilizing the proper tool and technique listed in this manual, ensuring a "worn" tool is **NOT** used. Nicopress® clamps must be copper. Never use aluminum clamps.



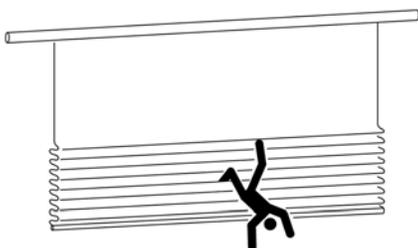
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SAFETY INSTRUCTIONS

- Read all instructions thoroughly before attempting to operate this equipment.
- Improper use of the product, operation by untrained individuals, or failure to comply with the following instructions may result in serious injury and/or property damage.
- Read all product safety labels.
- All electrical work shall be performed by a licensed electrician in accordance with state and local codes and ordinances. Any structural and/or electrical deviation from the Porter installation manuals and drawings, without written authorization, will void all warranties.
- This manual is meant to serve as a general guideline for the safe installation and use of this product. Variables outside the control of Porter must be taken into consideration, with the explicit requirement that installation and maintenance are performed in a safe and secure manner. Any deviation from Porter provided installation documents without written consent will void all warranties. Contact a Porter representative immediately should a conflict necessitating a design revision exist.
- For ease of administering your maintenance program, we suggest that your equipment be numbered, and a file maintained on its location, name of manufacturer, original item number, date of purchase, and maintenance performed. This will be useful when ordering replacement parts and keeping track of maintenance. Defective equipment must be marked "DO NOT USE", and the circuit breaker must be turned off and also tagged "DO NOT USE", until replacement or repairs are completed.
- Inspections should be performed periodically, depending upon the nature of the equipment and its use. When the equipment is exposed to heavy use, special inspections should be made in addition to the normal maintenance program. At the minimum, a yearly inspection of the system is recommended.
- Keep this instruction manual for future reference.
- Provide copies of this manual to all persons responsible for the maintenance and/or operation of the equipment. Contact Porter or your local Porter dealer if additional copies of this manual are needed.

WARNING



Entrapment is possible when divider curtain is raising or lowering, resulting in equipment damage or personal injury.

Before operating curtain, clear area around curtain of people and equipment.

Read Operation and Maintenance Manual before use. Only trained personnel should operate divider curtains.

ZMAT 4E900 010

MODEL NO. 670 AND 690 ROLL- FOLD[®] DIVIDER CURTAIN OPERATIONAL INSTRUCTIONS

The 670 and 690 Divider Curtain is powered by an electric winch, which develops tremendous forces. This equipment is to be operated **only** by qualified personnel to avoid structural damage or possible injury to the operator and other individuals in the gymnasium.

Caution should be exerted at all times for safety reasons, keeping the following guidelines in mind:

- **ONLY** authorized, **TRAINED** personnel are to operate the 670 and 690 Divider Curtain. Authorized personnel is defined as an individual (or individuals) who is at least 21 years of age, has witnessed the proper operation of the unit, and is sanctioned by the facility as being responsible for the operation of the divider curtain.
- The key switch or Powr-Touch[®] pad, which controls the divider curtain, must be flush mounted on the wall, located in full view of the operator, and not directly beneath the equipment.
- Always make sure the area below the divider curtain and in the path of travel is clear of all individuals when raising and lowering the unit.
- The divider curtain may be raised or lowered by placing the "UP" OR "DOWN" key into the key switch, and turning as indicated on the switch cover plate. Refer to the separate Powr-Touch[®] manual for the key pad type operation.
- The key that operates the unit should be retained at all times by a designated authorized person, or kept in a lock box. **Make sure that the key is never left in the key switch unattended!**
- It is critical the operator visually monitor the area around the curtain through the entire raising and lowering travel cycles, making certain no one is at or near the curtain travel. Pay particular attention to the unit as it nears a limit switch cut-off juncture. If the limits are not stopping the curtain at the "**DOWN**" position with minimal cable slack, or allowing the curtain to raise higher than the top of the curtain fabric, contact your Porter representative immediately.

Again the safest equipment can be damaged when used by the untrained. It is imperative the procedures set forth in this manual are strictly observed.

Note: The key switch must be labeled with the following operational instructions, as shown. If your key switch is not labeled properly, contact your Porter dealer immediately.

 **CAUTION**

Improper use of key switch can result in personal injury, electrical failure or unit failure.
Before operating this equipment, clear the floor area around and beneath the equipment.
Units must be operated by experienced personnel only.
Proper Maintenance will promote longevity and reduce possibility of accidents.
Please Refer to Instruction Manual for further information.

OPERATOR NOTE

To raise equipment, insert UP key and turn to LEFT. To lower equipment, insert DOWN key and turn to RIGHT. Watch equipment until it comes to a complete stop.



MODEL NO. 670 AND 690 MAINTENANCE CHECK LIST

The 670 and 690 Divider Curtains are designed to operate for many years without any significant service performed. Depending upon the usage of the unit, it is recommended that at least an annual inspection be made, at which time the following steps should be taken:

1. GENERAL

Before inspecting, be certain to follow all OSHA guidelines concerning the use of scaffolds and lifts. The proximity of the scaffold or lift to the curtain must be of adequate distance to provide working clearance, so as not to have the curtain contact the lift during operational checks.

Make certain the Porter key switch or Powr-Touch[®] pad are not substituted and is located within full view (but not beneath) the divider curtain. Check the walls in close proximity to the curtain for any type of protrusion that may interfere with the raising or lowering of the unit (i.e., new scoreboard, chinning bars, etc.).

2. ELECTRIC WINCH

Although virtually maintenance-free, the electric winch should also be periodically inspected for proper operation of the limit switch assembly and key switch. Refer to the key switch/limit switch instructions that come with the winch for adjustment procedure.

Inspect the 1/2" "U"-bolt connections of the frame weldment support to the support tube, ensuring all hardware is tight. The hardware at the building connection is also to be inspected for tightness.

3. LINE SHAFT

Inspect the line shaft for proper rotation on the two (2) roller bearing wheels at each roller bracket location. If the line shaft is not seated symmetrically on the two roller bearings, adjust the turnbuckles accordingly.

Inspect the entire line shaft length for concentricity during rotation. If any part of the line shaft rotates with a cam effect (wobble), replace that length of line shaft. Make certain the cause of deflected shaft is identified and remedied, such as a roller support assembly being greater than 3'-0" from a cable drum.

Inspect all hardware at line shaft splices and the winch output shafts, tightening as necessary.

4. LINE SHAFT SUPPORTS

All support fittings, shaft and pipe splices, support rods, etc. should be inspected for fatigue cracks, loose bolts or set screws, and corrosion, on an annual basis. Replace defective parts as required.

5. ROLLER BRACKET SUPPORTS AND TOP CURTAIN CONNECTIONS

Inspect all turnbuckles and link connections, making certain the hardware is all "closed". Alignment of the roller assembly is to be inspected for a smooth rotation of the line shaft.

6. HOISTING CABLES

Inspect all 1/8" galvanized hoisting cables for kinking or fraying, replacing as necessary. Inspect both factory installed ball ends and field-crimped ends for damage.

7. CABLE DRUMS

Make certain all cable drums are secured with two (2) 5/16" x 7/16" lg. rivets, and **not** just a set screw. All cable must be within the side drum plates. If any cable is winding outside the drum on the line shaft, this is an indication of an incorrect up or down limit switch adjustment. Refer to the limit switch section of this manual for adjustment procedure.

8. TOP AND BOTTOM CURTAIN POCKET CONCEALED PIPES

Inspect both the top and bottom pockets, ensuring the concealed pipe is not separating. At the bottom hem, the cable shall go through the grommet holes and be secured through the bottom tube.

9. FABRIC

Inspect the curtain for any tears or holes in the fabric. Additional fabric is supplied with the curtain, to be used for patching. Industrial vinyl cement will easily bond the vinyl patch to the curtain. Also, check the fabric for signs of tearing or loosening at the seams. Check grommets at all pull-up lines. The fabric may be cleaned with a mild solution of soap cleaner and water, or Power Foam sold by Ricmar Industries of Elk Grove Village, Illinois (1-800-323-0779).

10. CONTRACT MAINTENANCE ALTERNATE

In many facilities, it is possible that the maintenance personnel either do not have the ability or the scaffold to work at the heights required to perform the inspection and maintenance program outlined in this manual. Should your maintenance program be so limited that this program cannot be properly performed, it is highly recommended that a contract-type inspection/maintenance service program be initiated with a qualified and trained establishment in this type of equipment.

670 AND 690 CURTAIN INSPECTION CHECKLIST

Please refer to page 7-8 for details on inspections.
 This checklist is to assist you in your inspection program.
 As you are making the inspection, enter "S" for satisfactory, or "R" for repair and replace.

INSPECT ALL ITEMS FOR EACH CURTAIN					
ELECTRIC WINCHES					
#1	#2	#3	#4	#5	#6
LINE SHAFT					
#1	#2	#3	#4	#5	#6
LINE SHAFT SUPPORTS					
#1	#2	#3	#4	#5	#6
ROLLER BRACKET SUPPORTS AND TOP CURTAIN CONNECTIONS					
#1	#2	#3	#4	#5	#6
HOISTING CABLES					
#1	#2	#3	#4	#5	#6
CABLE DRUMS					
#1	#2	#3	#4	#5	#6
TOP AND BOTTOM CURTAIN POCKET CONCEALED PIPES					
#1	#2	#3	#4	#5	#6
FABRIC					
#1	#2	#3	#4	#5	#6

INVENTORY AND INSPECTION

Inventory parts listed on the packing list to ensure parts required are accounted for. Inspect all components for possible shipping damage. Report any shortages to Porter's Customer Service Department immediately. On visible freight damage, sign as damaged, and file a freight damage claim with the carrier immediately. Failure to report shortages or hidden freight damage directly to Porter's Customer Service Department within three working days will place the financial burden for the missing or replacement parts with the installer or general contractor.

PREPARATION OF ASSEMBLY AREA

Moving the curtain after assembly is both difficult and awkward. For that reason, the assembly of the curtain should take place below or near the curtain overhead support location. The floor should be protected with a suitable material, covering the entire length of the curtain in the assembly area to prevent damage to the floor or curtain. In addition, the floor and the covering must be free of any debris generated from assembly procedures prior to fabric installation.

TOOLS / EQUIPMENT REQUIRED

To Be Provided by the Installer:

- Scaffold or Lift
- Hand tools, electric drill, drop cord, vise grip pliers, etc.
- Bolt Cutter
- Cable Cutter
- Measuring tape, Laser Measuring Device
- Level, Plumb Bob, Laser Plumb
- Nico-Press Crimper "VM" Size
- Electronic Test Box (02080-PWR)
- "U" Type 1/8" Cable Clamps
- Nico-Press Checking Gauge — "Oval M" Size
- Ropes & Pulleys
- OPTIONAL: ELEC00201000— "cheater box" for powering equipment with extension chord

690 LAYOUT INSTRUCTIONS
NOTE: FOR RADIUS CURTAINS ONLY

The layout of the 690 curtain is one of the most challenging and most important steps during the install of the curtain.

Start by locating the center radius and reference points. Porter tries to locate everything from this point, so check its location using striping and other references.

If possible, take a string to the radius point and measure on the string the exact radius. With one person holding the string at the center point, another can mark out the curtain profile. The cable pickup points correspond with grommets in the fabric, so it is important to locate these first. Mark the cable pickup points along the line.

Next, determine the winch locations and mark that on the floor. Locate the line shaft supports. These should be close to the radius but may not be exactly on. Check to make sure the provided line shaft lengths will allow these support fittings. The more you are able to make the line shaft curve the better the operation. The line shaft supports can be moved slightly to make this work but the cable pick up points should stay above the grommets.

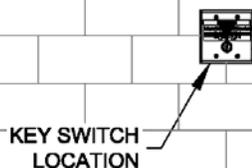
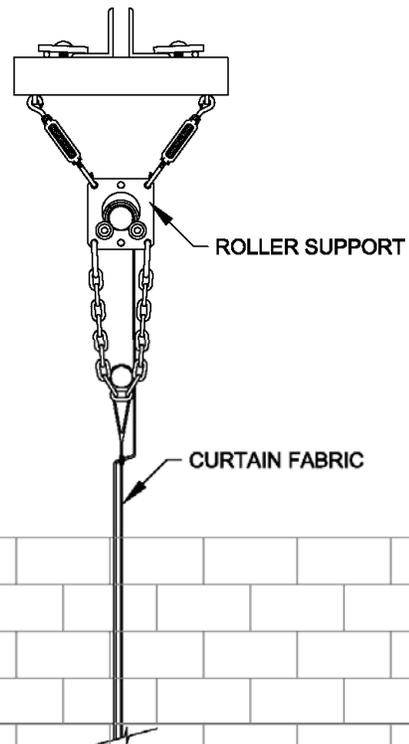
INSTALLATION OF WINCH AND LINE SHAFT

1. Unpack and check all parts and verify quantities with packing list. After unfolding fabric to check size, graphics and if there is damage; re-fold fabric as it will be in the installed, up position (see Detail "M"). Keep the fabric folded neatly to "train" the curtain. Verify the location of the curtain with the architectural prints. If the winch location needs to be relocated from the installation prints, the line shaft lengths may not work. Contact the factory immediately for additional splices or line shaft lengths. If the curtain is to be located on a court centerline, be sure to consult with the architect's "court striping plan." Notify the owner, project superintendent or architect if conflicting situations arise. Do not proceed with installation until all conditions are clarified and settled. Failure to do so may result in relocating the curtain at the **installer's expense! This step is critical!**
2. Locate centerline of curtain on gymnasium floor. Study curtain installation drawings and all details of roller bracket assemblies, drum cable assemblies and winch mounting assembly before proceeding with installation. Make certain the curtain will clear all potential obstacles (HVAC, backstops in the up **AND** down position, etc.).

Detail "A"

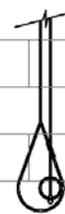
CAUTION

THE CURTAIN MUST BE WITHIN FULL VIEW OF THE KEY SWITCH (OR OTHER OPERATING DEVICE) IN ORDER THAT THE INDIVIDUAL OPERATING THE SYSTEM WILL BE VISUALLY AWARE OF ENTRAPMENT OR EQUIPMENT FAILURE IN THE UP & DOWN OPERATION OF THE CURTAIN. IF THE KEY SWITCH IS NOT YET INSTALLED, ASK THE GENERAL CONTRACTOR FOR THE PROPOSED INSTALLATION LOCATION OF THE KEY SWITCH, AND MAKE THEM AWARE OF THIS CAUTION.



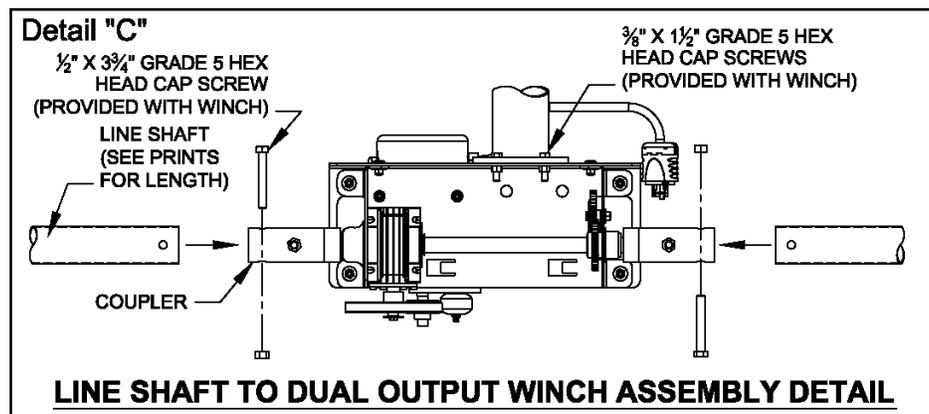
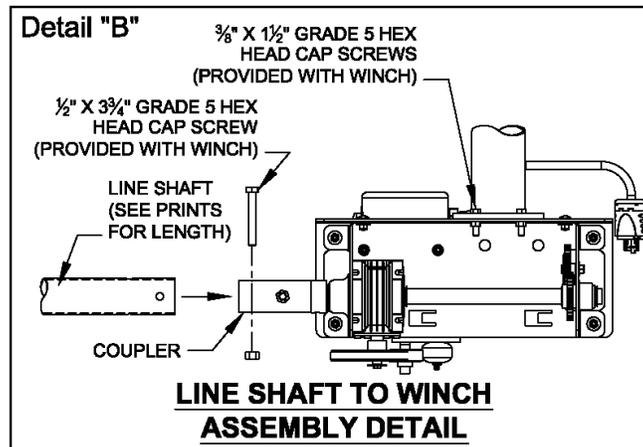
THE CURTAIN MUST BE IN FULL VIEW OF THE OPERATOR. IF THE KEY SWITCH IS NOT INSTALLED, ASK THE GENERAL CONTRACTOR FOR THE PROPOSED INSTALLATION LOCATION.

FINISHED FLOOR



INSTALLATION OF WINCH AND LINE SHAFT

3. With the winch sitting on the floor, and the floor area protected, slide the 2-3/8" O.D. line shaft completely into the winch coupler(s). The installation prints will call out the proper sequence lengths of the line shaft. Support the opposite end of the line shaft before drilling. Utilizing the two existing holes in the winch coupler as guides, drill one 17/32" diameter hole through both walls of the line shaft. Secure the line shaft to the coupler by inserting one 1/2" x 3-3/4" lg. grade 5 cap screw provided, **before** drilling the second hole (See Details "B" or "C"). This will keep the line shaft in place and provide proper alignment for the second hole. Now drill the second hole, utilizing the additional hole in the line shaft coupler. Insert a second 1/2" cap screw to ensure a proper fit. Now remove the two 1/2" cap screws, and remove the line shaft section from the winch assembly.



XCUR winch shown, refer to job
installation prints for exact detail

4. On the opposite end of the line shaft in which the two 17/32" diameter holes were drilled, scribe a line 6" from the end (opposite of the holes). Now slide the line shaft coupler on to the shaft, and drill a 5/16" diameter hole at the pilot hole, through one wall of the shaft. Secure the coupler to the shaft with a 5/16" x 7/16" lg. drive rivet. (See Detail "D") This will now allow you to drill a 17/32" diameter hole through the line shaft at the pilot hole for this size, without the shaft turning. Insert the 1/2" x 3-1/2" lg. grade 5 cap screw, and secure with a 1/2" grade C convex locknut, again to a minimum 20 ft/lb setting.
5. You may now prepare the additional sections of the line shafts in the same manner, pre-drilling each section on the ground, before raising into the air. Make note that the coupler is fastened to

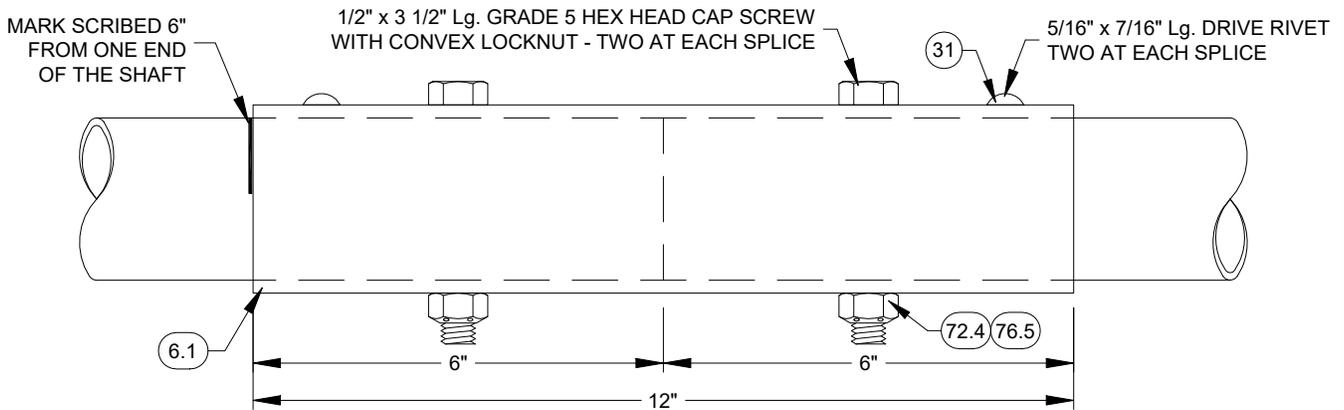
INSTALLATION OF WINCH AND LINE SHAFT

one end of the line shaft only on the ground, so each section may be sleeved together and secured in the air. **Do not secure a coupler to each end of a line shaft section at this time.** It will be necessary to slide the drum assemblies onto each section of shaft!

Detail "D"

CAUTION

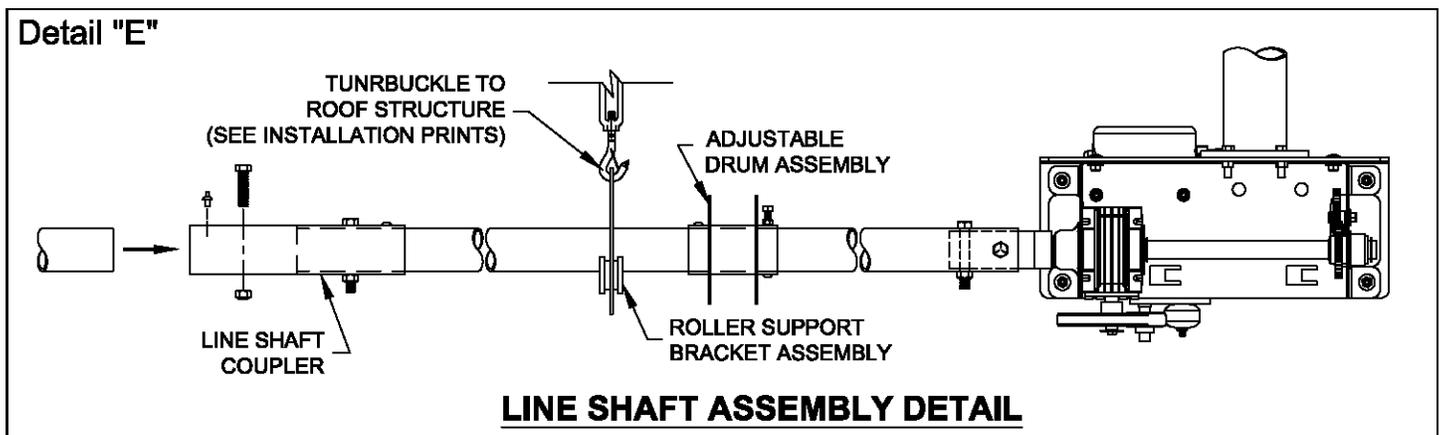
ALL LINE SHAFT CONNECTIONS TO BE MADE WITH 1/2" x 3 1/2" GRADE 5 SCREWS PROVIDED, AND TO HAVE THE GRADE "C" CONVEX LOCKNUTS TIGHTENED WITH A TORQUE WRENCH, TO A MINIMUM 20 ft/lb SETTING.



TYPICAL LINE SHAFT SPLICE

INSTALLATION OF WINCH AND LINE SHAFT

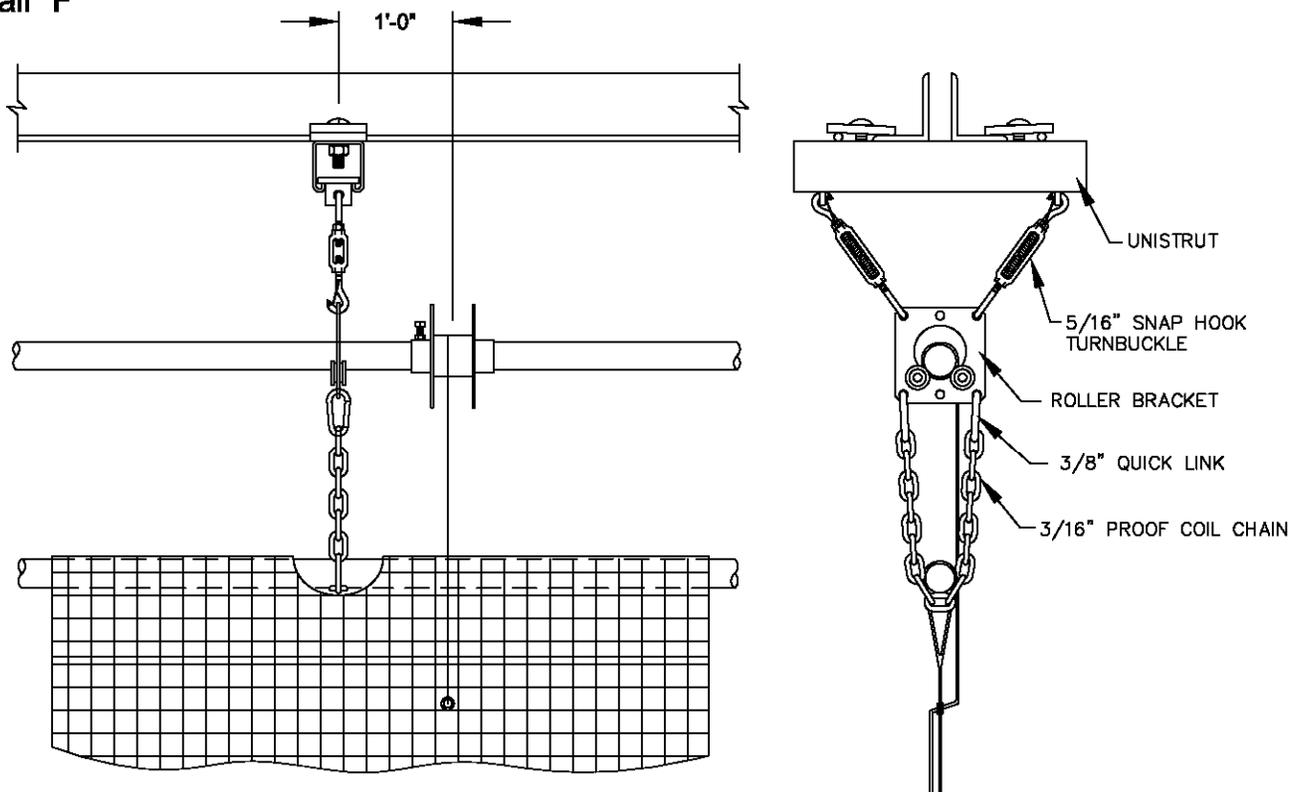
6. Locate the winch support adapter, and mount as detailed on the project-specific installation prints.
7. Now secure the winch to the winch support adapter, and attach with the four (4) 3/8" x 1-1/2" grade 5 cap screws, lockwashers, and grade "C" convex lock nuts. The winch coupler (output shaft) now determines the elevation for the line shaft. Sight down the length of the curtain area to determine if there is any interference with the shaft location. If interference exists, contact the factory. A longer winch adapter and drop brackets may be required.
8. Now mount the first and second roller support attachments to the support structure as detailed and dimensioned on the installation print. The brackets are provided with vertical adjustments to level the line shaft. See Details on pages 14 or 28 for typical line shaft support attachments. See installation drawings for job-specific details.
9. Referring to the installation drawing, determine how many drums must be slid onto each section of line shaft before proceeding. Just before securing the line shafts to the winch and to the coupler, it will be necessary to slide the proper amount of drums onto each section.
10. Slide the pre-drilled line shaft assembly from step no. 3 into the winch coupler output shaft (15), and support the opposite end from the roller bracket. Is the drum slid onto the shaft? Secure the shaft to the winch coupler, utilizing two (2) 1/2" x 3-3/4" lg. grade 5 cap screws, and secure with 1/2" grade "C" convex locknuts, tightened to a minimum 20 ft/lb setting (See Detail "D").
11. After the first line shaft section is in place, secure the next section (from Step No. 5) to it. Slide the next section into the line shaft coupler until it bottoms out on the previous section. Drill for and install the 5/16" x 7/16" lg. drive rivet. Then drill for and install the 1/2" x 3-1/2" lg. grade 5 cap screw, and secure with a 1/2" grade "C" convex locknut, to a minimum 20 ft/lb setting. Repeat for all remaining line shaft sections. (See Detail "D").
12. Make certain the line shaft is level. This is critical to the proper operation of the unit. Adjust as necessary at each roller support attachment. **DO NOT PROCEED UNTIL THE LINESHAFT IS LEVEL!**



LINE SHAFT SUPPORT

1. Ideally, the roller support brackets are to be 1'-0" offset from the take-up cable lines (again, refer to the installation print). If an obstruction occurs at the dimensioned support location, the offset may be increased, but never more than 3'-0" from the take-up cable line. Refer to Detail "F" for a typical roller support attachment.
2. Attach the turnbuckles and roller support brackets as shown. Be certain the turnbuckle hooks snap closed. Attach the 3/8" links to each end of the 3/16" chain, and hook on to the roller support bracket. The chain will secure the top pipe in the curtain hem to the structure.

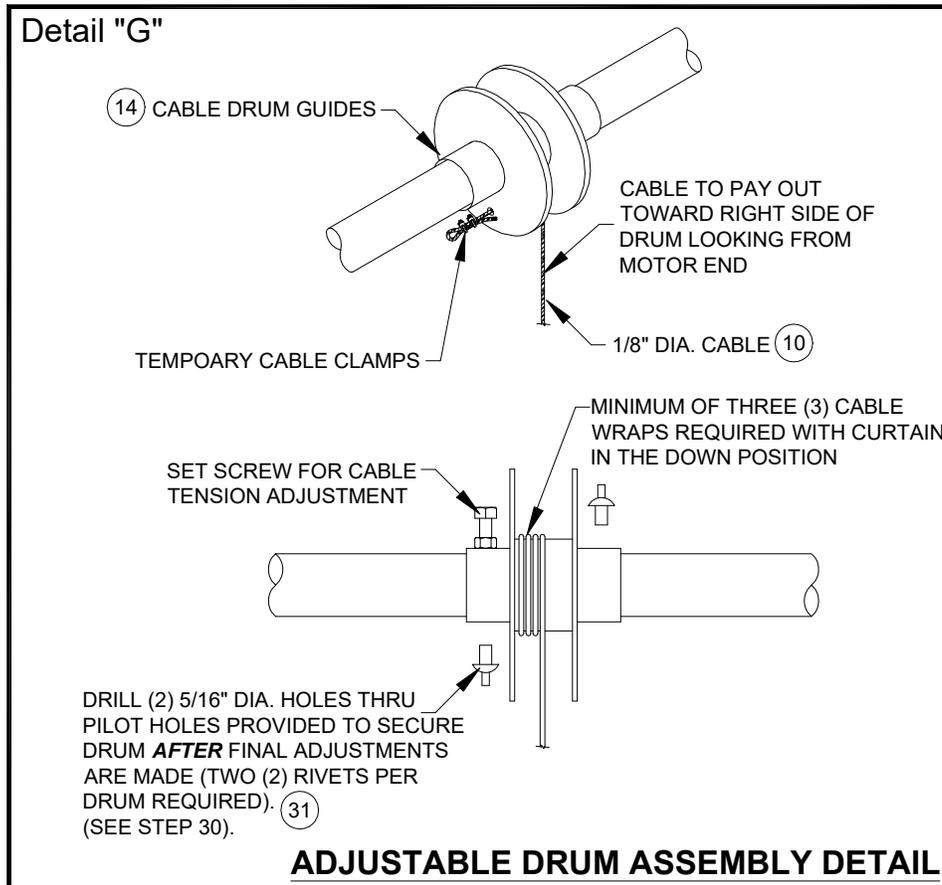
Detail "F"



TYPICAL ROLLER SUPPORT ATTACHMENT

ASSEMBLY AND ADJUSTMENT OF CABLE DRUMS

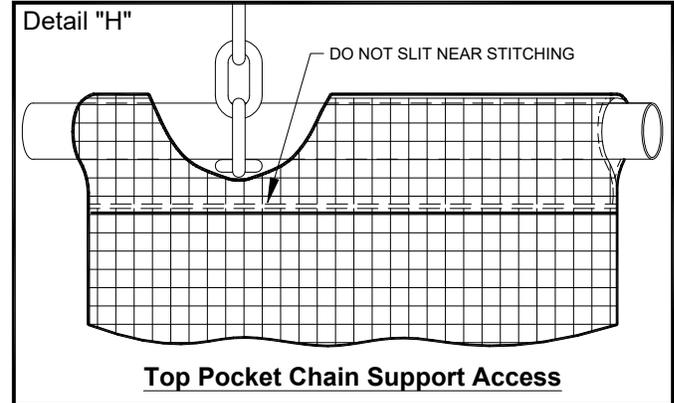
Center the cable drum assemblies (as installed in step 9) on the shaft per the dimensions given on the installation print. Check the centerline of each cable drum to ensure the location is correct. The cable drum location can be marked on the floor with tape, and transferred up to the line shaft by a plumb bob or laser. The cable drums are **not** to be secured with rivets to the line shaft until the curtain fabric is in position. Spin the drums so that **all** the cable holes in the side plates are facing directly toward the floor (this will help with the adjustment of the drums). Once this is done secure the drums in place temporarily with the set screw located on the drum (See Detail "G").



PREPARING THE FABRIC FOR INSTALLATION

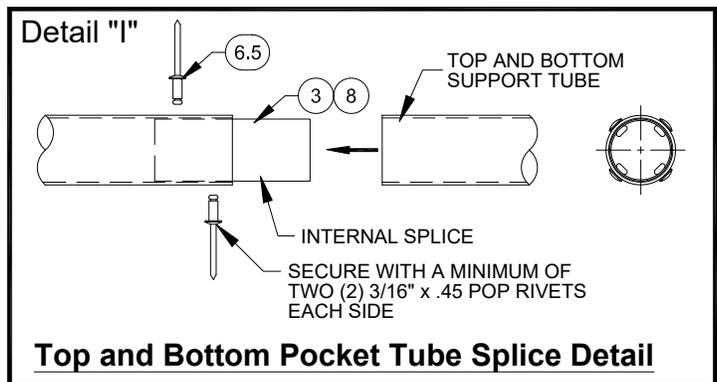
1. Clean the floor area (with broom and dust mop) and unfold curtain fabric. If working over an unfinished floor, lay out a tarp to keep the fabric from picking up dust and dirt.
2. When laying out the curtain, have the grommets in the bottom pocket facing up. Position the bottom of the curtain close to the centerline of the drive shaft so that the initial folding leaves the top on top.

3. Once the support chain locations are properly transferred to the fabric, the next step would be to cut out semi-circles with a utility knife in the top pocket. Be certain to protect the finished floor before commencing. A roll of tape or 3 1/2" pipe cap can be used as a template to provide a neat cut (See Detail "H"). The material at the top pocket can also be slit **after** the fabric is hoisted in the air to secure the chain support around the top 1 5/16" tube.

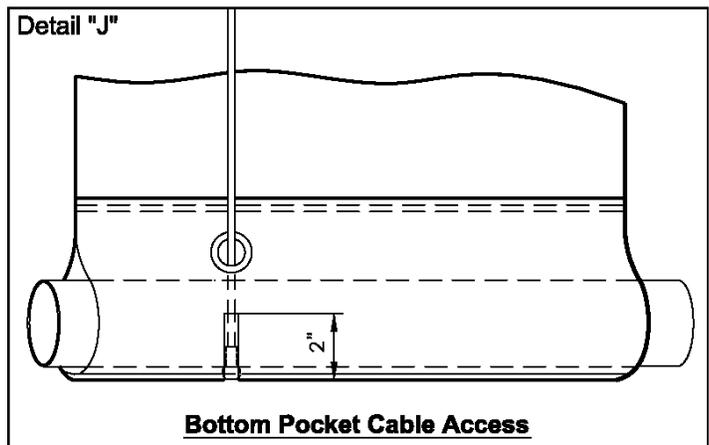


4. Sleeve the 1 5/16" O.D. tubing in the top pocket of the curtain, taking care that the sleeves are fully engaged. Note that the tubing will be longer than the curtain fabric. Each splice must be secured with a minimum of four (4) 3/16" x .45 Lg. rivets. (See Detail "I"). (Installers may want to wrap splices with duct tape so that heads of rivets do not cut or hang up on the mesh when sliding the top tube through the top pocket.)

5. Taking care to protect the finished floor, slit the bottom pocket below each grommet line, 2" up from the bottom, through both vinyl walls (See Detail "J"). For padded bottom tube curtains, sleeve the padding into the bottom pocket first, then sleeve the 1 5/16" O.D. tubing in the bottom pocket, ensuring the weighted tubing with a hole drilled at one end is at each end of the curtain. Again, each splice must be secured with a minimum of four (4) 3/16" x .45 Lg. rivets. Install a plastic cap at each end, making certain the cap is fully engaged on the tubing.

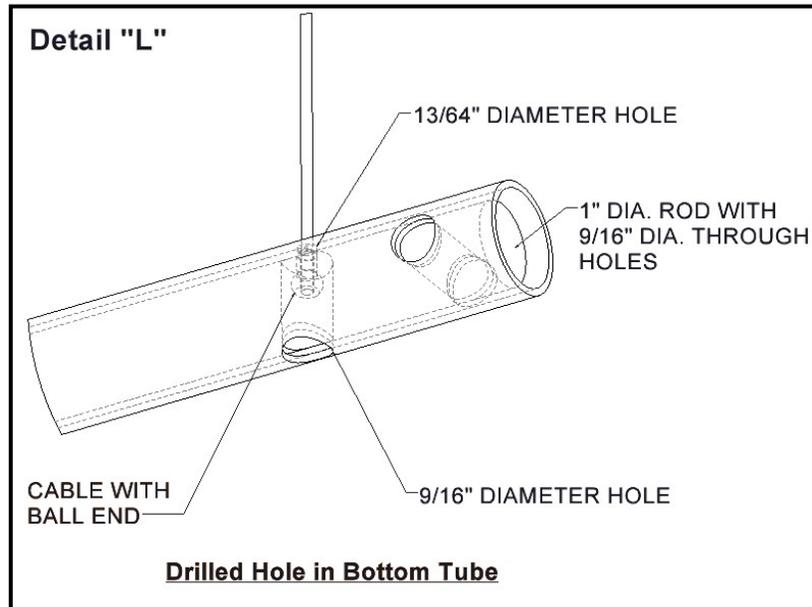


6. Once the bottom tube is secure you must then route the cable through the vertical grommet lines, it may be advantageous to insert a 3/8" hollow tube through the grommet lines, with the fabric folded in an accordion manner, but is not necessary (See Detail "M").



INSTALLATION OF THE PICK UP CABLES

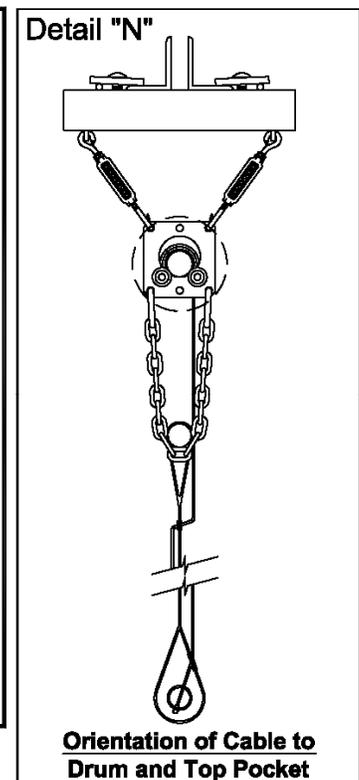
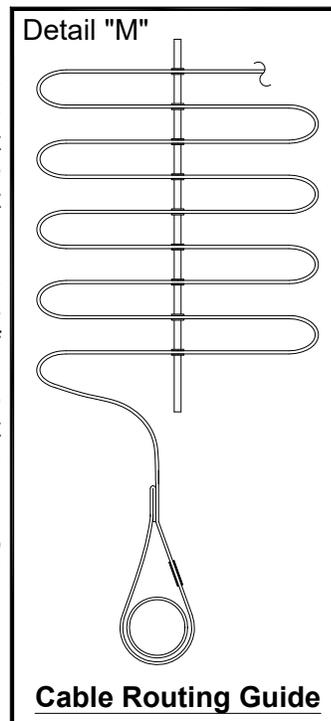
1. The cables are sent pre-cut with a ball end on one end. The ball end will terminate in the bottom pocket.
2. Insert the straight end of cable into the slit in the bottom pocket.
3. Work the cable through the hole in the bottom tube. At the ends of the curtain, ensure the cable passes through the hole in the weighted rod also.



4. Pass the straight end of the cable up through the grommet in the bottom pocket.
5. The next step in the installation of the pick up cables is to feed the plain end of the cable through all remaining grommets, using either the 3/8" hollow tube method (Detail "M"), or aligning all of the grommets and threading the cable through. The side of the fabric on which the cable exits the last grommet, is the side the cable must attach to the cable drum assembly (See Detail "N").
6. Once the cables are all fed through all of the grommets in the fabric you must secure the cables to the drum assemblies. Use a 1/8" U-bolt type cable clamp for the initial attachment of the cable ends to the drum assemblies. Do not cut excess cable at this point! (See Detail "G")

Optional: For installers experienced with the Model 670-1 & 670-2, feed the cable through the hole in the drum and pull tight. Leave 24" of cable and cut. Install Nicopress® clamp over a looped end. Rotate the drum (be certain to rotate in proper direction so cable is not underslung (See Detail "M") until the cable is taught.

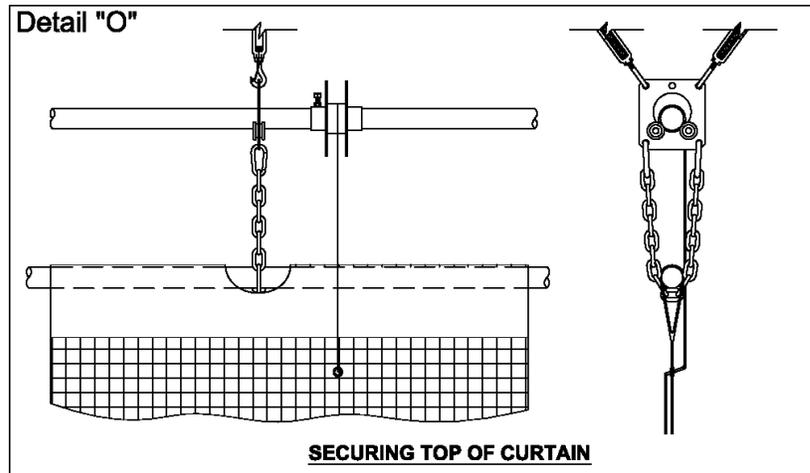
Important: Three (3) initial wraps of cable are to be on each drum with the curtain in the "Down" position, 1" off of the finished floor.



HOISTING CURTAIN AND FINAL ADJUSTMENTS

1. The next step is hoisting the curtain up and securing the top pocket of the curtain to the roller support attachments with the 3/16" chain (See Detail "O").

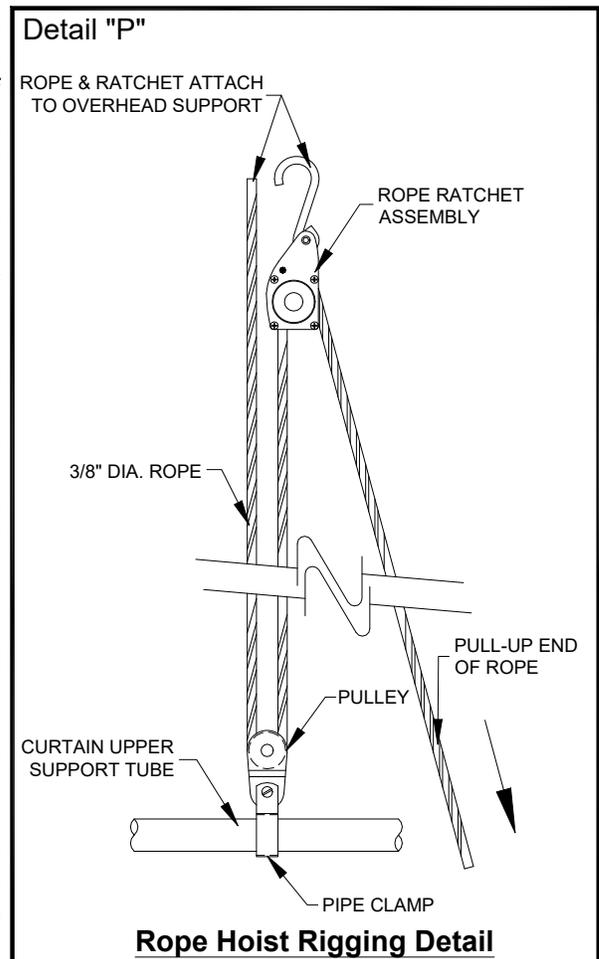
If electric has not been put in place at time of install then utilize the "Cheater" Box Assembly with plug (Porter part no. ELEC00201000 or equal) for drop cord operation. Should the winch not lift the curtain in place, plug the extension cord in as close to the circuit panel as possible.



If no electric is available at the time of installation, the method of raising the curtain fabric to the support assemblies is by utilizing a 02080-INS installation kit (See Detail "P"). The kit consists of a set of ropes, pulleys, clamps and rope ratchet mechanisms. The Kit provides a block and tackle type mechanical advantage, along with a ratchet type lock to prevent the curtain from falling while being raised. Start raising the curtain slowly and evenly, continue raising the curtain until the upper support tube can be attached to the support assemblies. Feed 3/16" proof coil chain through the slit in the top pocket, under the 1 5/16" tube and secure to support assembly with quick links. Make adjustments as required to maintain a consistent distance between the support assemblies and top of curtain. Curtain fabric must also maintain an equal distance of one inch above the finished floor along its entire length.

Make certain the top of the curtain is level, with a 1" gap between the bottom pocket and the finished floor.

2. With the curtain in the "down" position, adjust the cable tension by rotating each drum manually, ensuring each cable on the line shaft has even tension. Once this is done, the drum ends of the cable will require two (2) clamps to secure the cable. Cut the excess cable and secure the loop with two (2) 1/8" cable clamps, referring to Detail "Q".

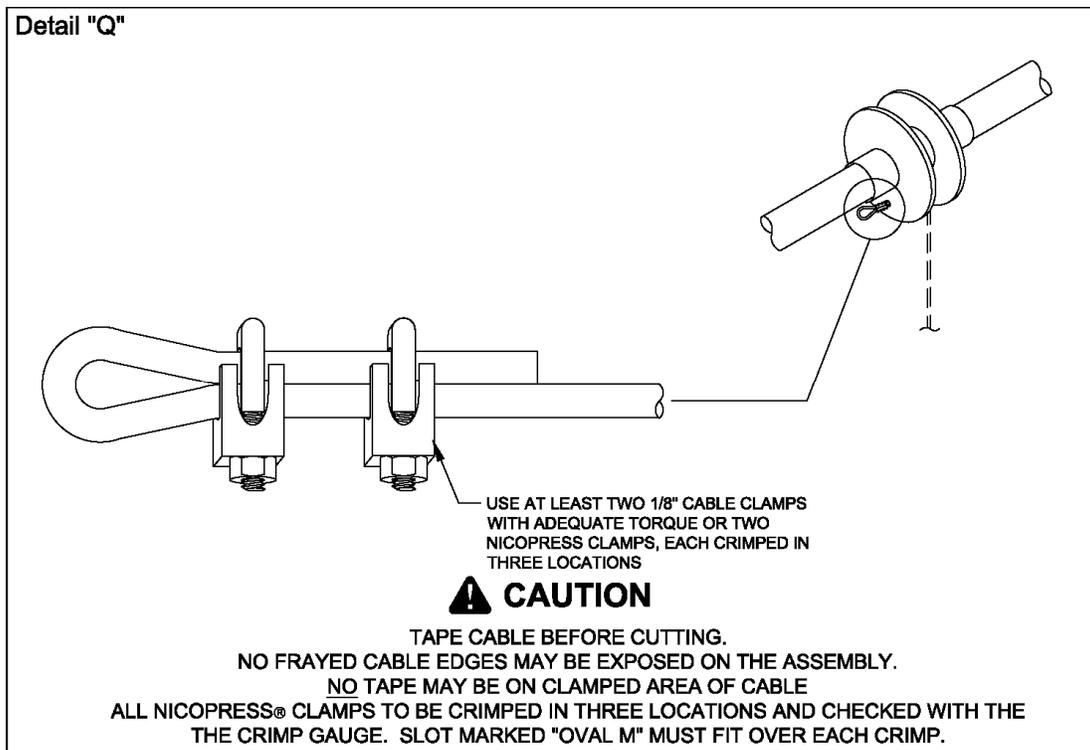


- Remove all tape from area of cable to be secured with clamp
- Slide two clamps over two widths of cable, forming a loop, and insert cable thimble.

HOISTING CURTAIN AND FINAL ADJUSTMENTS

3. Energize winch (either by the key switch or "Cheater" Box), to raise the curtain no more than two feet off the ground. Inspect each take up drum to ensure the cable is aligned and that all slack is out of cable pull up lines. Adjust the drum(s) horizontally on the line shaft. Now check that the curtain is plumb, and level to the floor. Leveling and relieving any slack in any of the cable pull up lines can be done by adjusting the cable drum assemblies (spinning the drum on the line shaft to achieve proper tension). After adjustments are made, cycle the curtain up and down to ensure proper adjustments have been made. Once the curtain is plumb and level, lower the curtain close to but not directly in the full down position, and start your final adjustments. The final adjustment stage consists of the following:

- Ensure a **minimum** of three wraps of cable are on each drum with the curtain 1" above the finished floor.
- Drill for and install two (2) drive rivets (31) to each of the adjustable drum assemblies (14) on the line shaft. (See Detail "G")



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