

Installation Instructions Mid Roll Gym Divider

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Caution

- ① Locate and identify all parts using the hardware list and the drawings. "As built" drawings and hardware list are packed in hardware carton. Do not discard with packing material.
 - ② DO NOT touch divider curtain while it is in motion.
 - ③ Key switch is packed in winch crate, do not discard.
 - ④ **Key switch or controls to be in full view of both sides of curtain during operation.**
 - ⑤ Divider operates on 110-120V, 60 Hz current (unless noted otherwise).
 - ⑥ Wiring diagram can be found inside winch limit cover panel.
 - ⑦ Instructions for attaching and wiring winch are packed in winch carton.
- NOTE:** Winch has been tested at the factory and found to be operating correctly prior to shipment.

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

Required tools and equipment

- Scissor lift or Scaffolding
- Impact driver c/w 15/16", 3/4", 9/16", 7/16" sockets
- Power Drill
- Rivet gun
- Square Head Screwdriver
- Wire stripper and crimper
- Wrenches, 15/16", 3/4", 9/16", 7/16"
- 3/16" drill bit
- Hex Key Set
- Measuring tape
- Plumb bob or Laser plumb
- Distance measurer
- Level
- Chalk line
- Speed square
- Grinder c/w cutting disc
- Safety glasses
- Fish tape
- Chain hoists or electric winches
(3-4 required, depending on curtain size)
- Utility knife
- Hammer
- Polytarp or Plastic floor cover
- Tape
- Broom
- Temporary power controller
- Silicone based lubricant

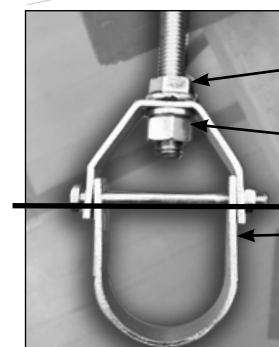
Layout and Site Preparations

- ① Begin by taking an inventory of all parts and checking quantities against the supplied parts list for the project. Report any shortages or damaged parts within 24 hours of receiving shipment.
- ② Clear an area of all obstructions and debris on one side of the curtain centreline. Area should be at least the full length of the curtain and a few feet wider than the height of one curtain panel. See parts list, drawings for panel sizes.
- ③ Mark the curtain centreline on the floor (typically the center of the gym) and chalk a line from wall to wall. Next, mark the end of the curtain from each wall. Refer to shop drawings for opening sizes.
- ④ Mark the location of the cable reel, torque arm strap and optional safety strap support(s). This support should be 7" out towards the wall from the end of curtain mark made in step ③. It is very important that the torque arm strap attachment point be plum and in line with the strap roller on the motor torque arm. There is some lateral adjustment available with the torque arm strap support clamp should site conditions not allow precise placement of this first support. If curtain requires two motors, mark both ends of the curtain.

Overhead support structure and components

- ① Installing the top support pipe hangers level and at the correct height is very important. Setup a Level marking the height to the top of the top support pipe (1 1/2" pipe). Refer to shop drawings for this dimension.
- ② Project specific shop drawings will detail how the curtain is going to attach to the building structure. Typically, the curtain is either attached directly to a truss/beam or additional spanning supports must be installed between two trusses to attach the curtain to.
- ③ Use a plumb at the floor and plumb up a line from the first support mark made in "Layout and Site Preparations" Step ④. Ensure the mark is plumbed up from the centerline mark made with the chalkline. Install the first support here. This will pick up the cable reels, autoloc, torque strap and sometimes the curtain. **Refer to shop drawings for specific job support layouts.**
- ④ Set the threaded rod and pipe hangers to the correct height by using the level line setup in step ① (see Fig 1 - Attachment may vary, see shop drawings).

Figure 1



Whiz Nut

Lock Washer & Nut

Level Line set to Top Pipe Height

Remove Bottom Half, Nut & Bolt. Set Aside.

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411 S. Pearl St., Spiceland, IN 47385 USA ■ 765-987-7999
www.draperinc.com ■ fax 765-987-7142

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If you encounter any difficulties installing or servicing your Mid-Roll Gym Divider, call your dealer or Draper, Inc., Spiceland, Ind., (765) 987-7999, or fax (765) 987-7142.

- Install the cable reel attachment bracket to the first support. Install the safety strap bracket and torque arm strap bracket. It is best to leave these clamps loose for now so their exact placement can be adjusted after the curtain is raised. If the curtain requires two motors, repeat this step at the last support.
- Mount the two cable reels to the bracket with the supplied $\frac{1}{2}$ " bolts, flange and lock nuts and Insert the two cable reel leads (24" long) into the cord grips on the bottom of the 2" x 4" junction box attached to the cable reel support.

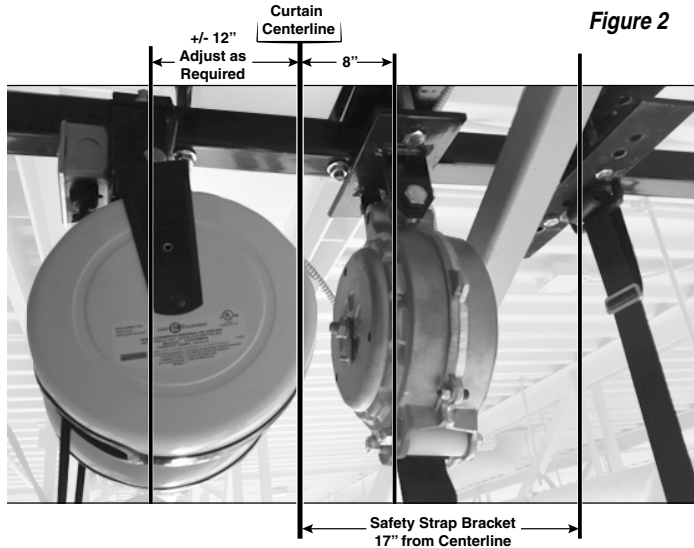
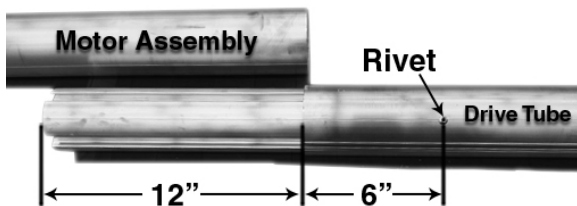


Figure 2

- If the curtain requires one motor, make connections to power and switch per diagram on page 4. Install the 6ft lead prewired with a male 4 prong plug into the junction box. An additional cord grip and wire twist connectors are located inside the junction box. Connect the wires with corresponding colors together and attach all ground wires with ring terminals to the junction box.
- If the curtain requires dual motors, make connections to power and switch per diagram on page 4 install the provided cabtire wiring into the junction box. An additional cord grip and wire twist connectors are located inside the junction box. Connect the wires with corresponding colors together and attach all ground wires with ring terminals to the junction box. An additional ring terminal for the cabtire wire ground can be found in the synchronizer box hardware package. The cabtire must be run to the center of the curtain and connect to the synchronizer box.
- Continue installing the required curtain supports and pipe hangers. Refer to shop drawings for support spacing. Typical hanger spacing is kept at a maximum of 10ft c/c. As you install supports, also mount the chain hoists or electric winches you will use to raise the curtain. For curtains under 55ft, use two hoists/winches at the ends and one in the middle. For curtains over 55ft, install a total of 4 equally spaced hoists/winches. **Curtains over 85ft may require more than 4 hoists/winches.**

Assemble Drive Tube and Install Vinyl/Mesh

- Lay out polytarp or plastic floor cover for the entire length of the curtain and a few feet wider than the height of one curtain panel. You will only need polytarp or plastic floor cover to one side of the curtain centerline.
- Assemble the drive tube using the provided splicers and rivets. Always put



Drive Tube Splicing - Figure 3

shorter pieces of drive tube near the middle of the curtain. Do not connect the motor and arm assembly until the drive tube is assembled, this will allow you to turn the drive tube freely and make riveting easier. Each drive tube connection uses 4 rivets per side, for a total of 8 rivets per connection. Insert the splicer half way into the tube and mark a spot on the drive tube 6" from the end. Use a 3/16" drill bit to drill the holes through the drive tube and splicer. There are 4 drill mark lines on the drive tube.

- Connect the motor assembly to the drive tube. If the curtain requires two motors, only connect one motor at this point. The other motor will be installed after the vinyl/mesh are inserted into the drive tube. A total of 8 rivets are required to connect the motor to the drive tube. Match the spacing

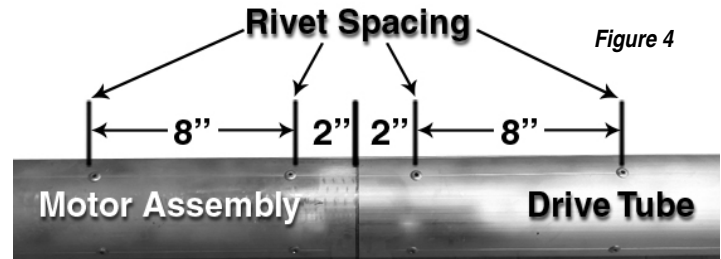


Figure 4

of the rivets to the ones already pre-installed on the motor tube and splicer assembly as shown below. First rivet should be 2" from the end of the tube. Next rivet is 8" from the first rivet (see Fig. 4).

- Start by unrolling the top panel vinyl/mesh. It will be necessary to cut off the excess clear poly cord from the end of the curtain before sliding it into the groove in the drive tube. Spraying a clear silicone based dry lubricant into the groove for the curtain along the entire length of the drive tube will make installing the curtain much easier. Insert the vinyl cord into the drive tube groove at the end without the motor. Have one person pull the vinyl along the floor and another person guide the vinyl into the tube at the end.
- Install an end cap and then Insert the top pipe ($1\frac{1}{2}$ " into the top panel pocket. Install splicers with set screws as shown below and connect all top

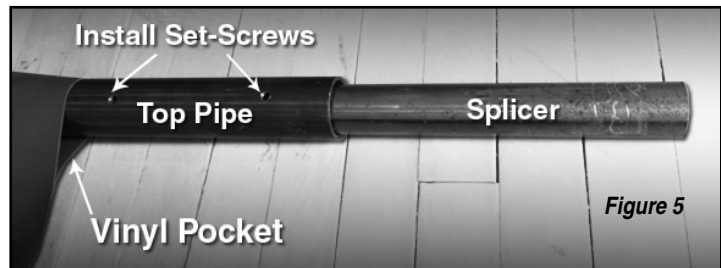


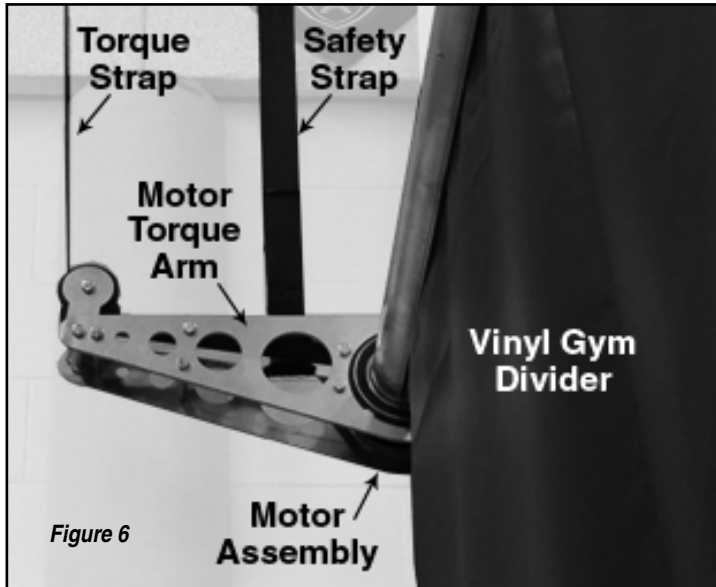
Figure 5

pipe lengths together. After the top pipe is inserted, evenly space the amount of protruding pipe at each end of the curtain. Stretch the vinyl along the pipe to remove as many wrinkles as possible. Install the remaining end cap.

- Stretch the vinyl panel on the drive tube to remove any wrinkles. Install a rivet in the drive tube slot through the flap that protrudes from the end of the vinyl. This will secure the vinyl in place and allow you to further stretch it from the opposite end. Once stretched, install another rivet through the flap on the opposite side.
- Ensure the ends of the curtain panel are lined up with the end of curtain marks made on the floor in "**Layout and Site Preparations**" Step 3. Hook up the hoists/winches to the top pipe. It will be necessary to make a small hole in the vinyl just below the top pipe to secure the hoist/winch cable.
- Raise the top panel with the hoists/winches so that it is up and out of the way. Ensure you do not raise the drive pipe off the floor yet.
- Repeat steps 4 to 6 to install the bottom panel and bottom pipe ($1\frac{3}{8}$ "
- If two motors are required, install 2nd motor per instructions in Step 3. The torque strap will need to be rerouted to the opposite side of the roller (see diagram on page 3). Ensure both torque arms face the same direction.
- Continue to raise the curtain all the way up to the pipe hangers with the hoists/winches.

Final Connections and Leveling

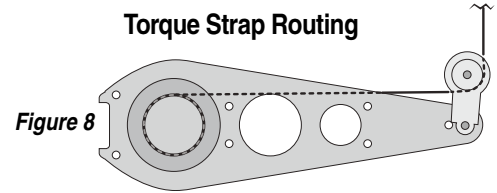
- Start at one end of the curtain. Connect the top pipe to the pipe hangers by making a small slit in the vinyl below the top pipe and sliding the bottom half of the pipe hanger (set aside previously) under the pipe. Use the supplied nut and bolt to connect the bottom half of the hanger to the top half. As you connect the pipe hangers, stretch the vinyl along the top pipe so it is taught and free of wrinkles. Also check that the top panel is parallel to the wall and adjust the vinyl as required. Take a measurement at the top of the panel to the wall and at the bottom of the panel to the wall to check this. Continue connecting all pipe hangers.
- Hook up temporary power to the motor(s) and jog them into a horizontal position. A slight upward angle from horizontal is a desirable starting position.



- Use a plumb to align the torque strap bracket with the roller on the motor torque arm. It is very important that the strap is perfectly straight and does not angle left or right when viewed from the front, facing the curtain. If the strap is installed on an angle, it will fold over and not roll up properly onto the drive pipe and roller, causing premature wear to the strap.
- Fasten the torque strap bracket to the end support once a final position is determined. Fasten the torque strap using the 2" buckle as shown in Fig. 7 below. The supplied strap is 35ft long and will need to be trimmed in most cases. Always leave extra strap for adjustment. Keep a light amount of tension on the torque strap.
- If using the optional safety strap, fasten it to the torque arm as shown in Fig. 6. Ensure the plastic protection is installed between the strap and the aluminum arm. If required, the plastic protection can be moved to the opposite side (this needs to be done with two motor curtains). Secure the safety strap support clamp to the first support, ensuring the strap is straight and in line with the attachment point on the arm.

- Install the two cable reel leads into the 2"x4" junction box on the torque arm. Use the supplied (inside the junction box) cord grips. Make all connections inside the box by matching wire colors and connecting ground terminal rings to the junction box.
- For two motor curtains, repeat Steps 3 to 7. Note the 2nd motor will need the torque strap rerouted since the motor will be flipped over and safety strap plastic protection moved to the opposite side. Refer to the Fig. 8 below for proper strap routing.

Torque Strap Routing



Always ensure both torque arms are facing the same direction.

- For two motor curtains, install the sync controller in the middle of the curtain. Connect the other ends of the cable to the sync controller box using the supplied (in the box) cord grips and twist wire connectors. Wire the 6ft cord with 3 prong plug into the box. Refer to the wiring diagram included in the box.
- Ensure the curtain is hanging approximately 2" above the finished floor and level. Check that the drive pipe is level. Use the level and ensure the aluminum drive pipe is perfectly leveled. Make adjustments at the pipe hanger threaded rods as required.

Testing and Setting Limits

- Hook up temporary power if required. Two motor curtains will require power hooked up to the synchronizer box and a separate keyswitch to activate the low voltage relay controls. Refer to the wiring diagram provided for the controller.
- Set the lower limit with the curtain in the down position. Limits are set by pressing the buttons on the end of the motor when the curtain is in the position you would like it to stop. The top button sets the lower limit, the bottom button sets the upper limit. When the push button is out, the limit is set. When the button is in the limit is disabled. Note, motors come shipped with limit buttons pushed in and set, you must push buttons out to operate curtain. Run the curtain all the way up. Ensure it stops clear of the safety strap and cable reels. Do not set the upper limit too close to any obstruction.

Keep at least 4" of clearance from any obstruction. If the curtain is a two motor system, make sure the upper and lower limits are set on both motors to prevent damaging the motors. **Continued on the next page.**

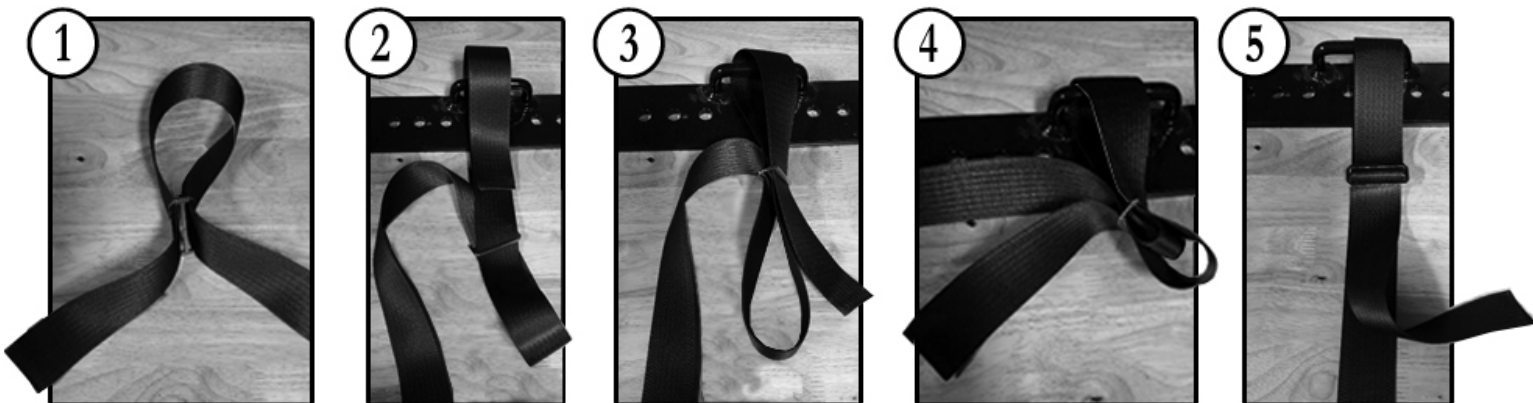


Figure 7

Final inspection

- ① Double check that all nuts and bolts are secure and tight. Ensure all electrical panels/boxes are closed and connections are tight.
- ② Wipe curtain material with a clean rag and water to remove any dust or dirt.
- ③ Keep curtain in lowered position for at least 72 hours after installation to allow the vinyl and mesh to settle and remove any creases from packaging.
- ④ Leave all receptacle(s), keyswitch(es) and wiring diagrams for the electrician to perform the final hookup of the curtain.

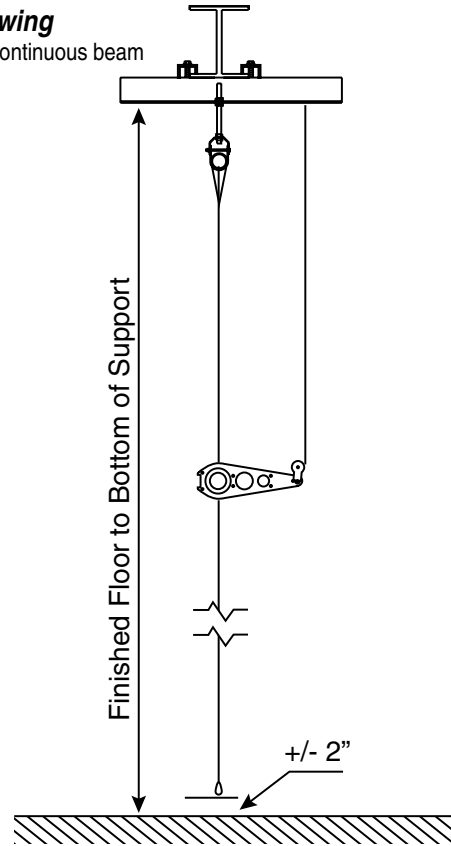
Please contact Draper directly should you have any questions or concerns about installing the Mid Roll Divider Curtain.

Caution

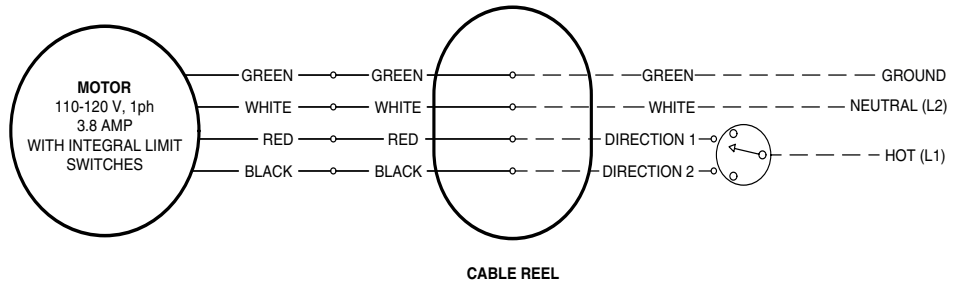
Operating the curtain too far in either direction could cause severe damage to the divider.

Section Drawing

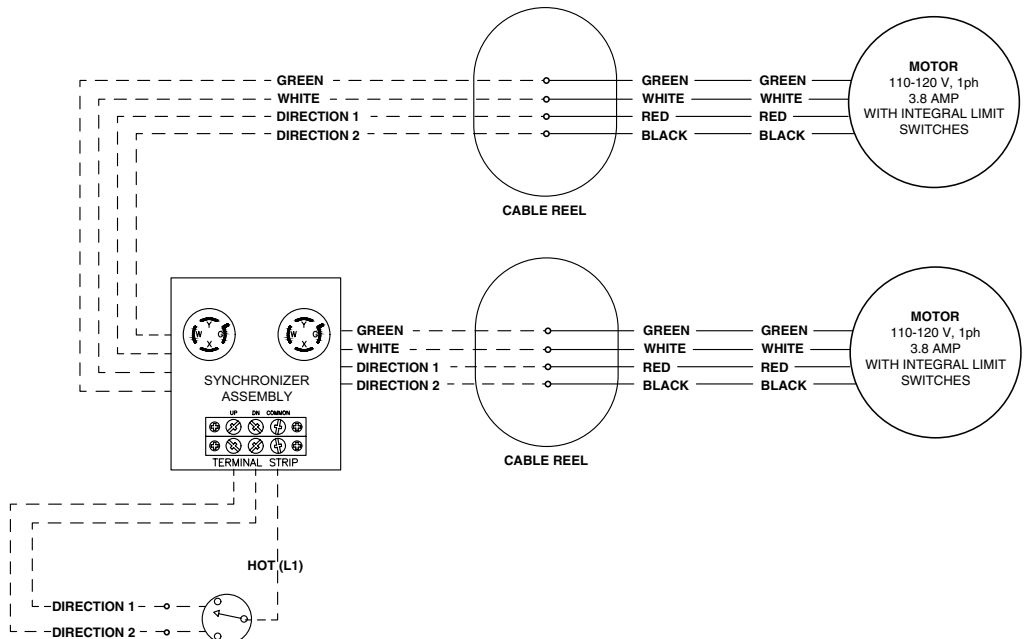
Directly under continuous beam



Single Motor Wiring Diagram



Dual Motor Wiring Diagram



Key Switch

