ATTENTION: This guide describes the assembly and installation of roll-up curtains. The design flexibility of these curtain systems allow for a variety of possible component and curtain combinations. The examples shown in this guide are presented to give the reader basic assembly and installation information. The actual curtain tube system may resemble what is presented, but differ in details. Manual gearbox and electric motor assembly steps are similar.

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Single and Double Output
READ THIS DOCUMENT BEFORE YOU BEGIN
Thank you for purchasing this ClearSpan™ Curtain Tube Support System. These instructions include helpful hints and important information needed to safely assemble and properly maintain the curtain and related components. Please read these instructions before you begin. If you have any questions during the assembly, contact customer service.

SAFETY PRECAUTIONS
- Wear eye protection.
- Wear head protection.
- Wear gloves when handling the pipe and brackets.
- Use a portable GFCI when working with power tools and cords.

WARNING: Exercise caution during installation. Strong winds can lift and blow the curtain during and after installation. Do not install the curtain during windy conditions or when such conditions are expected.

REQUIRED TOOLS
The following list identifies the main tools needed to assemble the curtain tube system. Additional tools and supports may be needed depending on the structure, location, and application. We recommend at least two (2) people for assembly and more if curtain exceeds 50' in length.
- Tape measures or measuring devices.
- Variable speed drill (cordless with extra batteries works best) and drill bits (1/8" or smaller for pilot holes)
- Saw to cut metal pipe.
- Wrench and/or socket set.
- Hammer and gloves.
- Additional hand tools as needed.

ASSEMBLY PROCEDURE
Following the instructions as presented will help ensure the proper assembly of the curtain and related components. Failing to follow these steps can result in an improperly assembled curtain tube system. The steps outlining the assembly process are as follows:
1. Verify that all parts are included in the shipment. Notify Customer Service for questions or concerns.
2. Read these instructions and all additional documentation included with the shipment before you begin.
3. Gather the tools and assistance needed to assemble the curtain tube support system.
4. Assemble the curtain components in the order they are presented in these instructions.
5. Read the Care and Maintenance information.
6. Complete and return all warranty information as instructed if included.

UNPACK AND IDENTIFY PARTS
The following steps will ensure you have all the necessary parts before you begin.
1. Unpack the contents of the box or boxes and place them where you can easily inventory the shipment. Refer to the Bill of Materials/Spec Sheets.
2. Verify that all parts listed on the Bill of Materials/Spec Sheets are present. If you have questions or parts are missing, contact customer service.
Important Information

PICTORIAL GUIDE

The following graphics and photos will help you identify the different parts of the curtain tube support system. Consult the Quick Start Guide for additional details and diagrams. (Some parts are not shown.)

ATTENTION: ALL WIRING TO BE COMPLETED BY AN ELECTRICAL CONTRACTOR EXPERIENCED WITH THE INSTALLATION AND SETUP OF SIMILAR AUTOMATED CURTAIN SYSTEMS AND MOTORS WITH LIMIT SWITCHES. FOLLOW ALL LOCAL AND REGIONAL CODES.

ATTENTION: Install and store with motor up. Otherwise, oil from grease can get into motor. Photo below left shows correct mounted position.

ATTENTION: Mounting orientation is important! Always mount and store with electric motor above knobs as shown. Otherwise, oil will leach into motor brushes.

ATTENTION: Slide wire protector over main power supply chord before connecting chord to power.

116642 Curtain Motor Specs

- Rated Output torque: 140 NM
- Rated Watts: 120 Watt
- Voltage: 24v dc
- Rated RPM: 3
- Max rotations: 38
- Weight without creeper: 14 lbs
- Output shaft size: 0.787

Auto Vent Recommendations

- Max circuit breaker size: 7.5 amps
- Normal max amps load: 6 amps
- Nominal max size of curtain with 2" keder pipe: 8' x 200'

Installation Notes:

Install and store with motor up. Otherwise, oil from grease can get into motor. Photo below left shows correct mounted position.
**ADDITIONAL PARTS**
The parts shown below are specific to a particular curtain design. Some parts may not apply to your curtain tube system. **All parts shown below require an additional purchase.** This information is provided to help you identify the various curtain tube system parts.

![Images of additional parts]

**CARE AND MAINTENANCE**
Proper care and maintenance of your curtain tube support system will help to ensure reliable service. The following items identify areas that must be periodically checked to ensure that the components are maintained properly:

- Frequently check the curtain mount and mount support structure to verify all components are tight and in good condition.
- Check all fasteners to verify that they remain tight.
- Inspect the electric motor and related mounting components regularly. Tighten all bolts and mounts as needed.
- Verify all connections and connectors are secure. Tighten these if necessary. Replace all broken or missing components immediately.
- Check the curtain to verify that it is in good condition.
- Verify nothing rubs against the curtain or prevents it from opening and closing as designed.
- When cleaning the panel, use tools that will not damage the material. Clean dirt and debris using mild soap and water. **Do not use solvents.**
- For replacement or missing parts, call 1-800-245-9881 for assistance.
**General Information**

The information within this guide describes different ways to attach the curtain support system to the outside of a typical building. The examples may not resemble the actual installation of your curtain.

It is the customer’s/installer’s responsibility to use these diagrams as needed to help with the installation of the actual curtain tube support system. If you are not familiar with the installation and assembly of similar curtain systems, consult the services of a qualified contractor.

Use the following diagrams, photos, and procedures to help assemble and install the curtain tube support system.

**STEPS 1-2:** Attach curtain(s) and anti-billow straps/ropes to the side of the building and install curtain axle(s).

**STEP 3:** Attach the curtain tube adapter (if equipped) to the motor.

**STEP 4:** Assemble roller pipe components, mount brackets, slide roller and electric motor assembly onto roller pipe, and attach roller pipe assembly to the building.

**ATTENTION:** This example shows the parts needed to mount an electric motor to a building.

**STEP 5:** Connect motor to power and adjust limit switches.

**ATTENTION:** All wiring to be completed by a licensed electrical contractor. Review all information in Step 5.
ATTACH ROLL-UP CURTAIN

Determine curtain position on the building and create a level line to mark the upper edge where the curtain will be secured. **Curtain must hang evenly from the mounting surface to ensure that it rolls evenly onto the curtain axle.**

**STORM STRAPS:** After marking where the curtain will be mounted, determine the locations of the storm straps and secure the 109332 brackets (if equipped) to the upper mount and the ratchets or winches to the lower mount. (Additional purchase required.) Customer supplies the fasteners to secure these items to the building. Space storm straps evenly along the side for best results. Consult diagrams for suggestions.

Once the storm strap positions are determined and the brackets and ratchets (or winches) are attached, hang the curtain or curtains. **Depending on the curtain length and height, additional assistants will be needed.** After hanging the curtain(s), install the storm straps to prevent damage or injury and to keep the curtain from blowing. **Consult the diagrams on this page and the next for examples.**

**DO NOT INSTALL CURTAINS DURING WINDY OR STORMY CONDITIONS.**

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Double curtain secured using flat stock running along upper edges.

**NOTE:** For some curtain designs with two panels, the lower edge of the upper panel and the upper edge of the lower panel are joined using the curtain channel roll bar. See the diagram (2 Panels: 1 Roll-Up – Center Mount) in the Quick Start section for additional details.

Single curtain secured using flat stock running along upper edge.
ATTACH ROLL-UP CURTAIN (continued)

Unfold the curtain on a clean surface and verify that it is the correct dimension and design. Curtain design differs and depends on how the curtain is mounted to the building and how it is opened and closed. In some instances, two curtains (upper and lower) may cover a single side. Curtains may also differ in height. Verify that each curtain is the desired size and secure these to the building as needed.

**ATTENTION:** The example on the previous page shows the upper edge of the curtain secured to the mounting surface using flat stock and fasteners. *Fastening materials are not included with the electric motor and kits. (Additional purchase is required.)*

**110831 Keder Channel:** For those applications where the 110831 keder channel is used to secure the top edge of the curtain, use the level chalk line as a guide to secure the keder channel to the building. *Fasteners to secure the keder channel in place are not included. (Additional purchase is required.)*
INSTALL ROLL-UP CURTAIN AXLE

The roll-up curtain axle depends on the design of the curtain. Curtains with a pocket along the lower edge typically include a 1.315” or 1.66” pipe conduit, which is assembled, securing joints using Tek screws, and slid into the pocket. This curtain axle is then attached to the adapter and motor. Finally, the curtain is secured to the roll-up curtain axle using evenly spaced fabric clips.

ATTENTION: Install fabric clips after attaching the curtain axle to the tube adapter and electric motor. See additional diagrams in the Quick Start section.
Another curtain axle design consists of the curtain channel roll bar. This aluminum axle includes a groove that accepts the keder rope present along at least one edge of the curtain. After hanging the curtain, the roll bar axle is assembled and slid onto the keder curtain edge. Once in place, the axle is attached to the adapter, which is attached to the motor.

Secure coupler to roll bar on each side using the screws (FA4405) supplied with curtain and axle components.

Use 4 screws per coupler.
ATTACH TUBE ADAPTER

The tube adapter connects the electric motor to the curtain axle. Its design depends on the design of the curtain axle: 1.315" pipe, 1.66" pipe, or curtain channel roll bar. The tube adapter is not included with the electric motor assembly; additional purchase is required.

The tube adapter shown in this example is designed to connect the electric motor to the curtain channel roll bar. Curtain is not shown. Adapters are shown on the Important Information pages near the beginning of this guide.

NOTE: In some instances and for some curtain designs, it may be easier to slide the adapter into the curtain axle and then attach the adapter to the motor shaft once the motor and roller assembly is attached to the building. This example is not shown.

Adapter is attached to curtain axle later in these instructions.

When the motor is mounted between adjacent panels, an adapter for each shaft end is required.

ATTENTION: Actual adapter may differ in design. See Page 4 for actual photo.
ATTACH ROLLER PIPE

Complete these steps:

1. Move to the curtain panel or panels and determine the position of the electric motor and roller assembly. Consult the diagrams in the Quick Start section of this guide for additional details.

2. Attach the lower 109394 top/bottom insert bracket to the building using customer-supplied fasteners. This bracket is typically installed lower than the bottom edge of each curtain, which allows the curtains to close completely. See the diagram.

3. Determine the required pipe length needed so the curtain(s) open/roll up to the desired height and cut the roller pipe to length.

   **NOTE:** Remove the swaged/tapered end of the pipe assembly so that the end fits over the adjustable insert of the 109394 brackets.

4. Using the photos and diagrams in this manual as guides, slide the motor assembly onto the roller pipe and set the lower end of the roller pipe onto the 109394 bracket insert (Step 2).

5. With assistance, carefully tip the upper end of the roller pipe toward the building, add the upper 109394 bracket with insert to the pipe assembly, verify that the assembly is plumb, and secure the bracket to the building using customer-supplied fasteners. Verify that the insert of the bracket slides freely in the bracket slot.

6. Connect the curtain axle to the adapter. (See the circled area in the diagram at the right.) Use the bolts and nuts supplied with the adapters. Drill mounting holes through pipes as needed. Use the self-tapping screws for the keder adapter. (These are the same screws (FA4405) used to secure the splices of the curtain channel roll bar.)

7. Secure curtain axle to the curtain using fabric clips (1.315” or 1.66” curtain axle pipe only) if this has not been completed yet.

8. Adjust the insert of each 109394 bracket as needed and test the operation of the curtain.
5 CONNECT TO POWER AND SET LIMIT SWITCHES

LIMIT SWITCH OPERATION OVERVIEW

Cams slowly rotate as the gearbox shaft turns once motor is running. When a cam engages a switch, the motor will stop. See photos.

After motor is installed and connected to power and to the curtain, follow the general steps below to set the limit switches.

**ATTENTION:** Position an assistant at the breaker panel to control the power to the motor to more easily adjust the limit switches. Adjust switches in small increments for the best results.

1. First, determine which knob to adjust.

   **NOTE:** RUN THE MOTOR TO FIGURE OUT WHICH KNOB IS FOR UP AND WHICH KNOB IS FOR DOWN.

2. To adjust each knob, loosen the center stainless Phillips head screw. Tighten the center screw to maintain the desired adjustment on the first knob; then adjust the second knob.

3. Run the motor to test curtain position. Repeat until motor and curtain are in the desired positions both up and down.

   **NOTE:** Allow approximately 2” to 4” of curtain to remain unrolled at the top. In other words, do not allow motor to completely roll curtain up to where it is anchored to the building. This prevents damage to motor and curtain should environmental conditions cause the curtain to roll up “bulkier” than expected.
Quick Start Guide

The diagrams shown in this section describe typical curtain applications. These examples are presented to give the customer additional details regarding the installation and use of the curtain tube components. The examples may or may not apply directly to the customer's application.

The customer is responsible to use the diagrams to the extent that they help with the assembly of the actual curtain system that has been purchased.

The photo above shows two (2) panels with a single roll-up assembly and single-output shaft. The center tube is a curtain channel roll bar. (Additional purchase is required for the keder channel and connecting hardware.) Actual system may differ from example shown.
ATTENTION: Secure all 1.315" and 1.66" curtain axle tubes to the curtain using evenly spaced fabric clips after connecting the axle to the tube adapter and electric motor. (Additional purchase is required for fabric clips.)
ATTENTION: Secure all 1.315” and 1.66” curtain axle tubes to the curtain using evenly spaced fabric clips after connecting the axle to the tube adapter and electric motor. (Additional purchase is required for fabric clips.)
2 Panels: 1 Roll-Up (109900) – End Mount

Curtain Anchor (additional purchase required)

Upper Curtain (additional purchase required)

Keder Channel (additional purchase required)

Lower Curtain (additional purchase required)

Options: 1.315 Pipe - 1.66 Pipe (additional purchase required)

Symbol Key

109394 Bracket

109394 Top/Bottom Insert Bracket

116642 Electric Motor

Adapter (additional purchase required)
2 Panels: 1 Roll-Up (109900) – Center Mount

**ATTENTION:** Secure all 1.315" and 1.66" curtain axle tubes to the curtain using evenly spaced fabric clips after connecting the axle to the tube adapter and electric motor. (Additional purchase is required for fabric clips.)
**ATTENTION:** Secure all 1.315” and 1.66” curtain axle tubes to the curtain using evenly spaced fabric clips after connecting the axle to the tube adapter and electric motor. (Additional purchase is required for fabric clips.)
4 Panels: 1 Roll-Up (109900) – Center Mount (Keder only)

ATTENTION: For best results, Keder channel is recommended between the upper and lower panels on each side.

ATTENTION: Secure all 1.315" and 1.66" curtain axle tubes to the curtain using evenly spaced fabric clips after connecting the axle to the tube adapter and electric motor. (Additional purchase is required for fabric clips.)

Symbol Key

- 109394 Top/Bottom Insert Bracket
- 116642 Electric Motor
- Adapter (additional purchase required)

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