



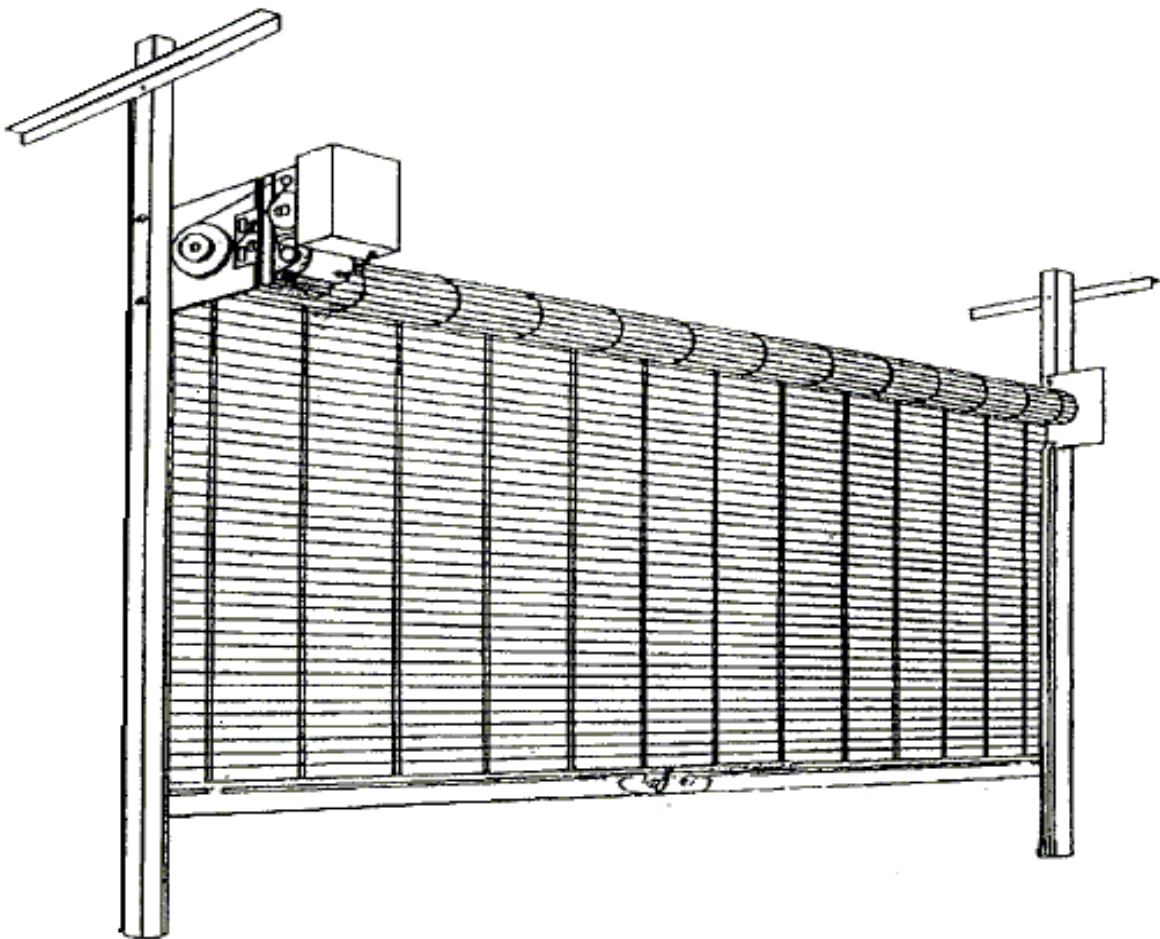
Alumatec Pacific Products®

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INSTALLATION INSTRUCTIONS FOR MODELS

RETAIL APPLICATIONS

**Included models: AT-9 grilles, LXR, PFR,
& S2 Shutters**



Safety Procedures

Rolling doors are heavy, moving objects and must be handled and installed carefully. With the assistance of electric motors or manually operated (chain, crank, push up, etc.), and most come with counter-balance spring loaded under high tension. These items and their components can cause injury. In order to avoid injury to yourself and others, please follow the instructions in this manual.

- **Review the potential hazards and preventative measures listed below:**

Potential Hazard		Preventative Measure
	⚠ DANGER Pinned or crushed by closing door.	• Keep yourself and others clear of opening while door is in motion. • Do not allow children to play near or operate door. • Do not operate if door becomes jammed or broken.
	⚠ WARNING Struck by adjusting wheel bar while applying spring turns.	• Be sure bar is adequate in strength and long enough to allow installer to apply the necessary torque. • Make sure bar is fully seated into the adjusting wheel slot before applying pressure. • Use two bars while applying turns to the adjusting wheel.
	⚠ WARNING Electrical shock.	• Make sure electrical operator is properly grounded. • Turn off source power completely prior to servicing the motor. • Make sure wires are clear of any moving or potentially moving parts. • Avoid pinched wires when installing or setting limits
	⚠ WARNING Pinched by moving components.	• Make sure the motor is turned off at the main panel before working with moving parts such as drive chain and sprockets, drop-out mechanisms, adjusting wheels, etc. • Locate the possible pinch-points of the unit (Drive chain, coil area, bottom bar, etc.) Do not operate the door while someone is near the operating area.

Table 2.1 - Potential hazards and Preventative Measures

- **Check the following during installation and before leaving the job site:**
 - If the unit has spring tension, be sure that the proper amount of tension is applied to the torsion spring, in order to properly counter-balance the weight of the curtain.
 - Securely fasten the tension adjusting wheel in place with the appropriate hardware provided.
 - Check that the square key and/or cotter pin have been set in place and fit properly at all sprockets and/or gears.
 - Check that the set screws in each sprocket or gear (one over the key and one offset from the key) have been tightened properly in order to remain set and in place.
 - Check all fasteners holding the unit to the building structure.
 - Check all fasteners used to assemble the components of the unit together.
 - Instruct owner or representative in the proper method of operating the door.

IMPORTANT:

1. These instructions are to be read in conjunction with the accompanying drawing(s) for the specific grille to be installed.
2. Before commencing installation of any Alumatec Pacific product, it is necessary to take final site measurements to insure and verify that the grille can be installed properly. Check the opening height and width and compare those measurements to the drawing(s) provided with the gate to confirm that they are identical. Check height clearances for any obstructions to the coil and/or the mounting tubes. If conditions provided do not allow for the installation, STOP, and notify Alumatec Pacific Products immediately to determine course of action. Do not proceed without direction.
3. In mall installations, check with the general contractor for lease lines. These will be your reference points. Verify finish floor line to insure proper operation should carpet or tile be installed at a later date.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE CENTERLINES FOR GRILLE LAYOUT. If these dimensions are not available. DO NOT PROCEED. Misplacement of grille(s) is not the responsibility of Alumatec Pacific Products.

GENERAL TERMS

- A. Right Hand(R/H) and Left Hand (L/H) are to be read looking at the grille/opening from the inside(hood or coil side.)
- B. The "Drive" side of the door, regardless of interior or exterior installation, determines hand of operation and is always figured from the standing on the side the door is coiling
- C. Manual operation is to be considered as Push Up, Manual Hand Chain is simply hand Chain Operation, and Motor Operation is as stated. Crank Operation is assumed to be Awning Crank unless otherwise noted.
- D. The barrel is the complete drum assembly upon which the curtain coils; the shaft is the solid steel protrusion that carries the barrel assembly.
- E. Head Plates are to be referred to as Bracket Plates.(this is what holds the barrel in place)
- F. The foot-piece is identified as the Bottom Bar
- G. The adjusting wheel is to be referred to as the Tension Wheel

Study all drawings and familiarize yourself with the various arts and names involved (see details provided on the following page.) All grille parts are to be inspected prior to installation to insure that none of the components have been damaged in shipment. Damages are to be reported immediately and damaged components are not to be used to install grille(s).

During installation, all guides, tubes, brackets and barrels are to be installed plum and level. Alumatec Pacific Products cannot warranty the use of any grille where these components have been installed out of level, not plum, or not set to the proper distance apart. Most grilles consist of two (2) mounting tubes, two (2) guides, two (2) bracket plates, one (1) barrel assembly, and one (1) curtain.

INSTALLATION

As most grilles are installed on steel tubes, these instructions will assume that conditions. If steel angle or jamb-mounting conditions apply, it will be necessary to adjust instructions.

- STEP 1** Layout grille opening. Once the centerline of grille is established, snap a chalk-line to insure proper setting. You will also need either the center of the opening or the finish opening of one side. Once the finish opening is determined, measure back 2½" for your guide dimension. If given center line, divide your between tube dimension in half and set your tube to tube dimension accordingly. Once established, use a square to scribe a line so that tubes can be set parallel to one another. THESE DIMENSIONS ARE CRITICAL.
- STEP 2** Support tubes are normally furnished in stock 20'-0" lengths, and are to be fit or cut down if necessary at the time of installation. Tubes are marked L/H and R/H. Proper erection is critical. After checking with the general contractor for bottom "clip" placement, either bolt or weld the clips to the mounting tubes provided. Turn the tube so that the guide mounting holes are facing up and scribe a line to the bottom of the tube in direct alignment of the guide holes. This line represents the center of guides, and is used to set the tubes properly. When the guide holes are to the tube facing up, align scribed lines on tube to the chalk line snapped on the floor, square to the scribed lines on tube to the chalk line snapped on the floor, square to the scribed lines drawn to the chalk-line, and fasten to slab with expansion anchors provided. Plumb tubes and brace to load bearing structure above (angle braces are not provided by Alumatec Pacific Products) Re-check to ensure tubes are plumb then bolt or weld for permanent attachment. Extreme care should be exercised in selecting the bracing method for the top of the steel tubes.(See attached detail drawing).
- STEP 3** Check the floor level. DO NOT ASSUME THE FLOOR IS LEVEL! Using a water or laser level for wide openings is recommended. Another method is to assemble the barrel assembly and place both brackets between the tubes on the floor. By placing a level on the barrel, you will be able to determine how level the floor is. If the floor is found to be out of level, it may be necessary to re-drill the bracket mounting holes provided on the tubes.
- STEP 4** Assemble the barrel assembly. Slide the tension bracket (no bearing) onto the tension side of the barrel (heavy side or side of barrel with bearing), then place the spacer piece provided between the bracket and the tension wheel. Using the 5/16" bolt to pin the tension wheel. The drive bracket (with bearing) slides onto the drive side on the bracket and the tension side on the barrel. Pay close attention to the markings on the barrel. The arrows marked on the barrel should be facing DOWNWARD toward the coil side. The barrel is also marked R/H and L/H as are the brackets. Be sure to assemble the R/H bracket on the R/H side of the barrel, and likewise for L/H side.

- STEP 5** Hoist the barrel and brackets together and thru bolt the brackets to the inside face of the mounting tubes using the bolts provided. As illustrated on the enclosed detail sheet, the hex head bolt is for the top-mounting hole, and the carriage bolt is for the bottom-mounting hole. After bolting the brackets into place, check to make sure there is approximately 1" clearance between the end of the barrel and the inside face of the bracket plate in each end. It is extremely important to have the barrel level, centered and rotating freely to insure proper operation.
- Step 6** Using two (2) or more ropes, make sling of equal lengths to hang off of the barrel. These rope slings will be used to install the curtain. With the curtain rolled up (As shipped from the factory, Place it into position on the floor below the barrel. Lift the curtain with the top and starter slats pointing away from the opening and suspend curtain in the rope slings, approximately two (2) feet beneath the barrel, (See illustration).
- STEP 7** Raise the top slat up between the barrel and the opposite side of the coil and attach it to the barrel with the machine bolts and fender washers provided. Use only those bolts and washers provided, if another type or length of machine bolt is used, it might impede the operation of the internal torsion spring. The curtain is to be centered between the brackets, and should be even with the ends of the barrel. Slide out starter slat to the ends of the barrel toward each bracket before tightening. (This is important to make sure grille is stacking correctly when it rolls up and prevent torpedoeing).
- STEP 8** With the curtain attached to the barrel and suspended in the rope slings, start adding tension to the barrel. Inset a round bar approximately two (2) feet long into to top most hole of the tension wheel. Pull the bar DOWNWARD away from the wall and insert tension pin through the angle welded to the bracket and into the tension wheel to hold the spring tension applied. Repeat this procedure until the amount of tension applied pulls the curtain around the barrel. When the curtain is wrapped around the barrel and the bottom bar is hanging on the rope slings, stop. The rest of the installation must be completed prior to applying final tension.
- STEP 9** Leaving the ropes in place. Attach the guides to the inside face of the mounting tubes. The grille guides are reversible, except in motor operated applications where external interlocks are required. In such a case, the guide with the external interlock box is to be mounted to the drive side of the opening. Either thread the guide bell mouth up into the bottom of the curtain on each side, or mount the guides then lift and drop the bottom bar into the bell mouths of the guides from the top. Let guides sit on floor and tighten machine mounting screws provided. Install stops as indicated on the erection drawing.
- STEP 10** Now, using extreme caution, continue to add tension until the bottom bar rises to the stops. Grille(s) with internal tension are tensioned with the grille in the closed position. Test the reveal of the curtain. Grilles must travel freely through the guides without binding. The guides must be plumb and mounted to the correct clear opening

dimension. Add or remove tension as necessary to allow ease of operation without excessive effort to open or close the curtain.

STEP 11 Check and verify all locking devices provided operate as required. Install or attach all other accessories/ options and insure proper function. If the grille is motor operated, adjust the limit switches in the operator to engage when the grill is approximately one (1) foot off the floor, and approximately one (1) foot from the stops.(It will be necessary to return to the jobsite once electrical connections are established to properly set limits). Double check all gears, roller chains and test panic release to insure proper operation.

STEP 12 The installation is now complete, Have the general contractor verify all operations, turn over the keys, switches, accessories, etc., and have your sign-off sheet signed and dated.

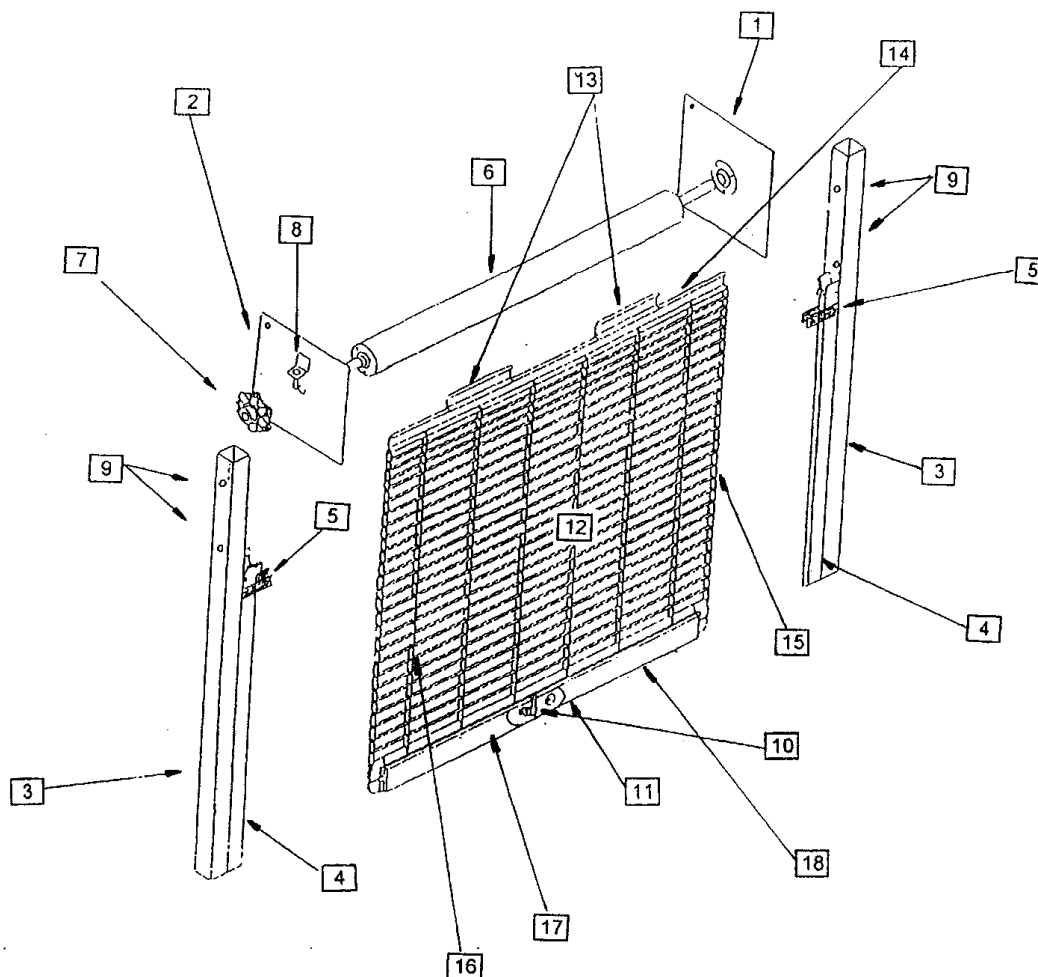
GRILLE OPERATIONS

Manual grilles are operating properly when:

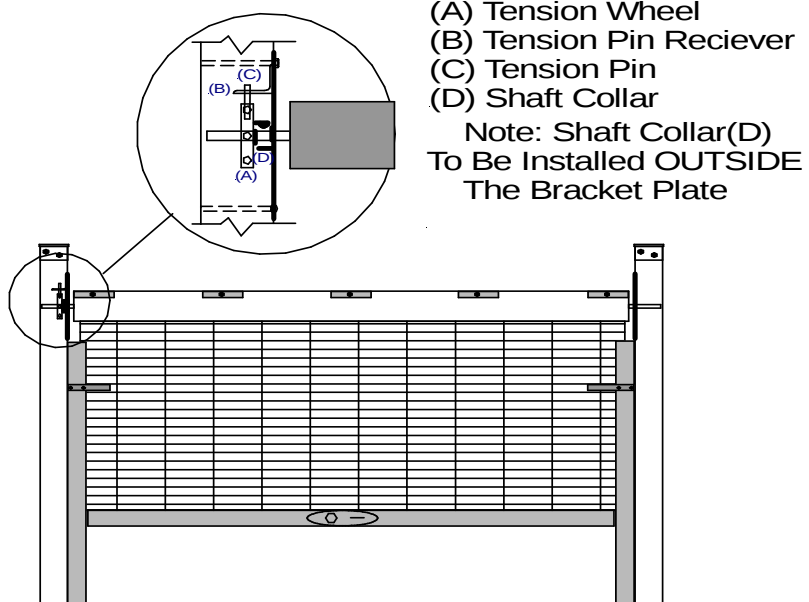
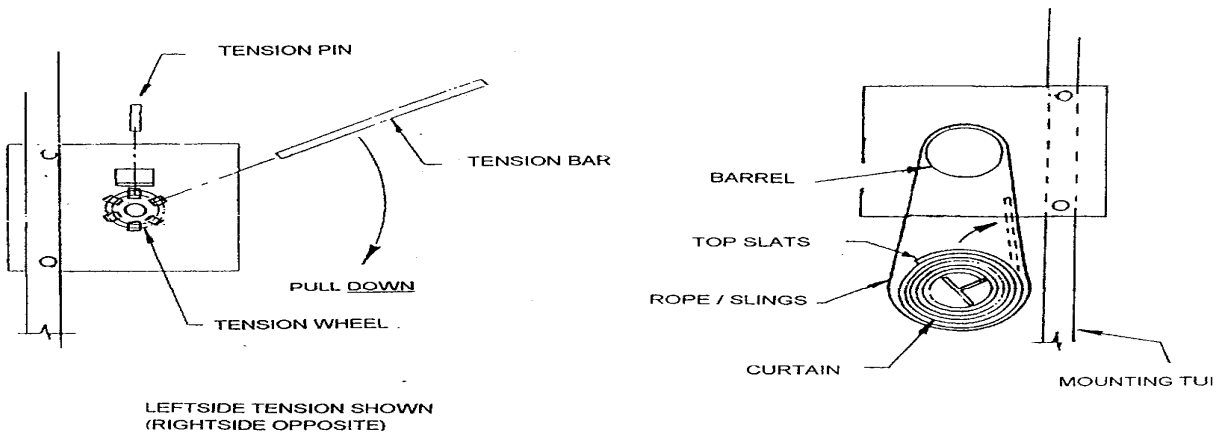
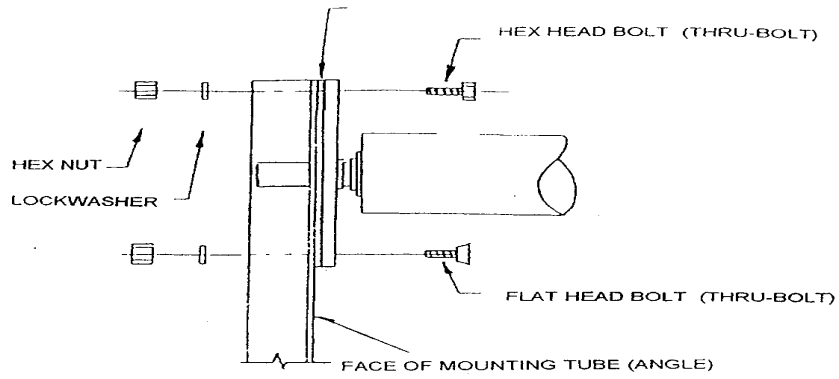
- A) Grille stays open without drifting down
- B) Grille has slight lift in closed position
- C) Grille operates without excessive force
- D) Grille opens and closes without catching/binding
- E) Grille is level in full open and full closed position

Motor operated grilles are operating properly when:

- A) Grille opens without slamming stops
- B) Grille closes without buckling curtain
- C) All switches operate properly
- D) Panic Release allows curtain to rise off floor
- E) All manual operations apply



1	Drive Bracket (bearing)	7	Tension Wheel	13	Starter Slats
2	Tension Bracket (no bearing)	8	Tension Clip	14	Top Slat
3	Mounting Tube	9	Bracket Mounting Holes	15	Endlinks
4	Guide	10	Lock Lever	16	Link Chain
5	Stop bar	11	Lock Cylinder (Thumb Turn)	17	Bottom Bar
6	Barrel	12	Curtain	18	Bottom Bar Cap



Tube Steel top attachment Recommendation

