

3200 SERIES FIRE DOOR INSTALLATION INSTRUCTIONS

SOUTHWESTERN STEEL ROLLING DOORS 9525 WHITE ROCK TRAIL DALLAS, TEXAS

PLEASE READ COMPLETELY BEFORE INSTALLING DOOR.

Specific installation techniques necessarily vary with job conditions, size of door, lifting methods available and installation crew preferences. These instructions are intended to inform an experienced installation crew about the general order of installation tasks. We recommend Southwestern Rolling Doors be installed by experienced, professional installers. For installation questions call 800-527-1355 or 214-348-7240. Hours are 7:30 a.m. to 4:00 p.m. Central time zone, weekdays.

NOTE: Door parts are not interchangeable. Part numbers must match for each door.

NOTE: Fasteners referred to generically in these instructions, as well as roller chain and chain sprockets, will have sizes and quantities listed on the accompanying packing list.

GUIDES

Note: Model 3200 Series fire door guides are allowed to set on the floor, unlike the Southwestern Model 2200 Series. In a fire the 3200 Series guides expand upwards; therefore nothing should interfere with upward guide expansion for a distance equal to the slot length of the top mounting bolts.

Inspect guide channels and correct any handling damage to channels before installing. Refer to supplied guide layout when positioning guides. Horizontal guide separation should be within 3/32 inch of specified dimension. The guides should end up level with each other, plumb, and the curtain channels must be oriented accurately towards each other so the installed curtain will not bind. If floor is not level the low-side guide must be raised above floor to compensate. Mark full shape of mounting holes. Near the top of each marked shape, drill a hole of appropriate size for the anchor. Bolt guides in place using a steel washer - fusible washer - steel washer sandwich under each bolt head. Note: Bolts are located at the top of the mounting slots to allow upward expansion of guide angles in a fire.

BARREL AND BRACKETS

Position barrel assembly at bottom of opening with barrel ends oriented correctly. Drive side shaft is solidly fixed to pipe, while tension shaft can rotate. Remove tension wheel from tension shaft and key from drive shaft, leaving the spacer on each shaft. Place tension bracket on tension shaft. Bolt Grifco Chain Hoist and its bracket to drive bracket. Place drive bracket on drive shaft. Raise barrel and brackets into position and bolt brackets to guides. Bolt through all pre-drilled mounting holes. Include angle clip under top bracket bolt for later attachment of upper hood angle.

FUSE LINKS AND SASH CHAIN

The Grifco Hoist release lever is pushed to the "released" position by an internal spring. After rigging, the sash chain and fuse links will hold the Grifco Hoist release lever depressed against this spring force, and then hand chain movement will be transmitted to the output shaft, allowing normal use of the hoist during the rest of the installation process. Rigging should be such that the melting of any fuse link will allow the release lever to spring back to its "released" position.

Two fuse links are shipped with every door, three for doors greater than 15 feet wide. Common requirements for fuse link placement are: one link near the Grifco Hoist release lever, one link near the ceiling, and one link near the opposite (tension) door bracket if the door width is greater than 15 feet. (Note: Local Fire Authority may have special requirements.) Any rigging of sash chain which will freely release the Grifco Hoist upon the melting of any one of the fuse links is acceptable. To aid in unusual sash chain routing requirements small pulleys may be used. Also, the Grifco Hoist may have the orientation of its actuation lever changed.

Suggested minimum simple rigging: Attach "S" hook, fuse link, "S" hook, sash chain at the Grifco Hoist release lever. Run the sash chain to the ceiling above the opposite (tension) door bracket and anchor it using "S" hook, fuse link, "S" hook, and eye bolt. For a door greater than 15 feet wide extend the above scheme by attaching additional sash chain to the final "S" hook (instead of anchoring the "S" hook to the ceiling eye bolt), running the additional sash chain through the eye bolt and anchoring it to the anchor point on the door bracket below using "S" hook, fuse link, "S" hook. Enough sash chain is supplied to allow the suggested minimum simple rigging for ceilings as much as four feet above the top of the door brackets. If floor level manual actuation is desired the above scheme may be extended by running additional sash chain through the ceiling eye bolt (as mentioned above for doors greater than 15 feet wide) and continuing the chain downward to a convenient anchor point nearer the floor, where the chain may be manually released for testing purposes. In this case a splice consisting of "S" hook, fuse link, "S" hook may be inserted near the tension bracket to satisfy the location requirement of a third fuse link for doors greater than 15 feet wide.

Note: The Grifco Hoist engagement lever will only engage at certain relative positions of the main gear and output shaft. Therefore successful engagement may require pulling on the hand chain (while applying pressure to the engagement lever) to move the position of the main gear inside the hoist.

TENSION WHEEL AND DRIVE TRAIN

Install tension wheel. Connect Grifco Hoist output shaft to door drive shaft, except if double-reduction is used then connect small sprocket on idler shaft to door drive shaft. Use the supplied roller chain and sprockets. Mount the supplied pocket wheel, hand chain and guard on the Grifco Hoist input shaft using circlip retainers. Note that some pre-assembly may have been done at the factory.

CURTAIN

On each guide install the one curtain stop that does not interfere with curtain insertion. Position rolled curtain (as shipped) at bottom of opening so that it will uncoil correctly. Using a fork lift or other lifting device, raise rolled curtain up near barrel. Pull top of curtain up between wall and barrel, center curtain between brackets and attach to barrel. Use chain hoist or wind tension wheel (or both) and roll curtain onto barrel. CAUTION: LIMIT PULL ON HAND CHAIN TO 125 POUNDS. When curtain has been completely rolled around barrel apply enough tension on tension wheel to maintain curtain wrapped around barrel. Continue to control curtain after applying tension because curtain will tend to roll either up or down with no stable resting point. CAUTION: SECURE A PAIR OF VISE-GRIPS OR OTHER SUITABLE CLAMPS A FEW INCHES BELOW TOP OF EACH GUIDE TO PREVENT CURTAIN FROM ACCIDENTALLY FALLING. Feed curtain into guides just past top of guides and install remaining two curtain stops.

TENSION ADJUSTMENT

Note: Model 3200 Series fire doors are balanced to be slightly heavy at all curtain positions, unlike Southwestern Model 2200 Series.

Adjust tension to just hold door in full-open position; then release a notch or so of tension so that friction is overcome and the curtain tends to drop. CAUTION: THIS DOOR WILL TEND TO CLOSE FROM ANY POSITION. While someone holds the hand chain, remove vise-grips from guides. Roll curtain down to check door balance. The door should tend to close from any position, with the least tendency to close being at both full-open and full-closed positions.

CAUTION: ALWAYS PLACE CURTAIN IN FULL OPEN POSITION WHEN ADJUSTING TENSION. Release an additional amount (no more than a few notches total) of tension if necessary to achieve the tendency to close from any position. To adjust tension, raise curtain to full-open position and replace vise-grips near top of guides for safety. Increase or decrease turns on tension wheel as needed. CAUTION: LOSS OF CONTROL OF TENSION WHEEL WILL ALLOW CURTAIN TO FALL, WHICH MAY CAUSE INJURY TO PERSONS OR DAMAGE TO PROPERTY. ALWAYS INSTALL SAFETY CLAMPS ON GUIDES DURING ADJUSTMENT.

HOOD

Uncrate hood and identify the two hood angles. The longer angle is the upper hood angle. Using a fork lift or other lifting device, lift hood into position. Bolt slots on upper hood angle to slots in bracket mounting clips. Push upper hood angle up against wall. Use sheet metal screws to secure hood to hood bands.

GENERAL INSPECTION

Observe overall operation of door. If curtain binds in guides verify that guide separation and curtain channel orientation are correct; check curtain cut length. If curtain drifts to one side check if barrel is level. Also, there should be no more than 1/4 inch total play between brackets and barrel. If curtain stops scratch curtain bend stops away from curtain. Nothing should protrude and scratch curtain from

door header or from inside hood. Inspect the sash chain rigging to make sure "S" hooks and fuse links will not jam against eye bolts or pulleys, preventing sash chain movement necessary for actuation.

TESTING FOR FIRE CLOSING

With the door fully opened, simulate the melting of a fusible link by manually releasing the sash chain. Door should reliably start downward and completely close in a controlled manner. With the door only slightly open perform this test again. If door fails to fully close in either test then release a notch of tension and test again. Average closing speed should be between 0.5 and 2.0 feet per second, and may be adjusted by varying the placement of the two round weights on the centrifugal governor.

OPTIONAL ADJUSTMENT

The purpose of this door is to close automatically in a fire. Therefore it is balanced "heavy" throughout its travel and will not hold itself at any position without securing the operating hand chain. If it is desired for the door to hold a position while the hand chain is not secured, then the large nut on the back of the Grifco Hoist input shaft may be tightened. In this way enough friction can be added for the door to hold its position. This adjustment will not affect the automatic closing of the door, but it will add to the effort required for manual operation.