

**STEP
one****1****MATERIAL**

Check the material received against the packing list to be certain all parts are correct and there is no shortage before starting to install the door.

INSTRUCTIONS

The Installation Instructions should be studied carefully to become familiar with the names of the various components and their relation to each other.

It is important that the installer determines the following:

- The type of operation for the door (push-up, hoist, motor, crank).
- The hand of operation (right or left) when hoist, crank, or motor operated.
- The type of jamb and fasteners on which the door guides are mounted.
- The dimensions which are important (i.e. "C" dimension, headroom, sideroom required) for proper installation and operation of the door.
- The procedure and tools required for applying and adjusting the counterbalance spring tension.

TOOLS

The tools recommended for proper installation of the door will vary with the size and type of door and the opening conditions, but the tools normally required are:

- Electric drill ($\frac{3}{8}$ or $\frac{1}{2}$ drill size).
- Impact hammer may be useful for mounting guides to masonry wall. A masonry drill bit may also be needed.
- Block and tackle or similar chain fall for raising the barrels on the large size doors.
- Ladders or scaffold.
- Miscellaneous small tools such as wrenches, hammer, screwdrivers, level, centerpunch, chalk line, line level, drills, etc.
- Two $\frac{1}{2}$ " dia. steel rods — 2'-6" Lg. for applying the initial turns to the counterbalance springs.

CLEARANCES

The installation instructions contain charts and information on the bracket sizes and the required headroom, and sideroom for the various sizes of doors. **BE SURE THE REQUIRED CLEARANCES ARE AVAILABLE PRIOR TO STARTING INSTALLATION.**

**STEP
two****2**

Check the door width "A" and door height "B" to be sure the opening is the proper size for the door.

Any variations in the actual opening width and height, or plumbness of the jambs is to be disregarded when installing the guides. The guides must be spaced horizontally by the given "C" dimension (See Fig. 15) and must be set plumb. The "C" dimension is also given on the front cover for each size door.

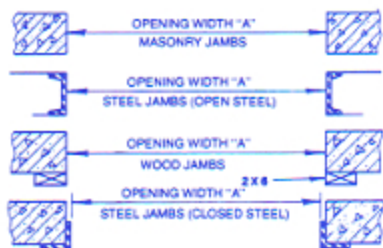


Fig. 12

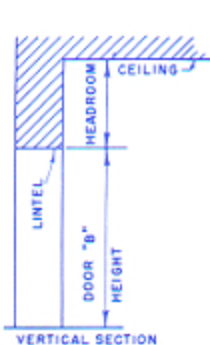


Fig. 11

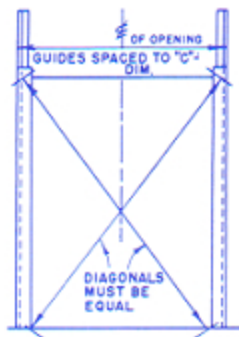


Fig. 10

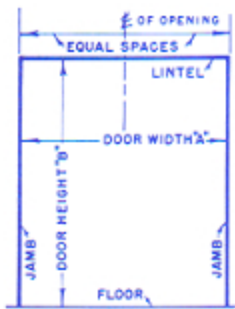


Fig. 9

STEP three 3

GUIDES

It is **IMPORTANT** that the guides be installed plumb and level with respect to each other and spaced horizontally by the given "C" dimension (See Fig. 15).

MOUNTING GUIDES TO STEEL OR WOOD JAMBS (OR MASONRY GUIDES - GRILLES)

Stand and temporarily clamp or hold guides in position against the jambs. After determining that the guides are plumb, level and properly spaced, then mark the location of the mounting holes that are in the guide angles onto the jambs. Remove the guides and drill the jamb for the appropriate mounting bolts.

MOUNTING GUIDES TO MASONRY JAMBS (DOORS ONLY)

Guides to be mounted to masonry jambs are held in place by mounting clips which are bolted to the guide angles and the masonry wall. After determining that the guides are plumb, level and properly spaced, then the mounting clips may be located for fastening to the guides and wall. The vertical spacing of the clips should be in line with the mounting slots but may be varied slightly to facilitate hitting a mortar joint in block walls. The number of clips to be used on each guide is shown on the table. **DO NOT** use less clips than called for on each guide.

Recheck the guides to be certain they are level, plumb and correctly spaced by the "C" dimension. Check all mounting bolts and clips and tighten fully.

BACKHOODS

If doors are furnished with backhoods, install the backhoods in position on the wall, level with top of guides. Attach the backhood to the wall with fasteners provided at about 2'-6" on centers.

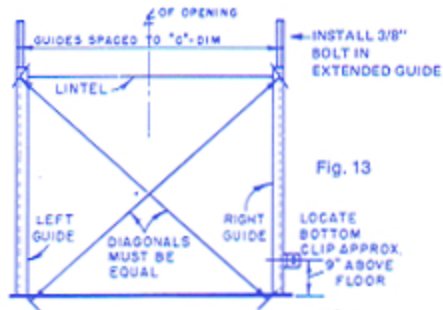


Fig. 13



Fig. 14

CLIPS FOR MASONRY MOUNTED GUIDES	
DOOR HEIGHT	CLIPS-EACH GUIDES
TO 8'-0"	5
8'-0" TO 10'-0"	6
10'-0" TO 12'-0"	6
12'-0" TO 14'-0"	7

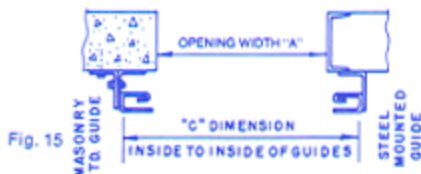


Fig. 15

STEP four 4

BRACKETS

Install the adjusting wheel bracket to the **DOOR OPENING SIDE** of the guide mounting angle with (2) 1/2 x 7/8 Lg. hexhd. bolts. The *head* of the bolt is placed *against the bracket*. Assemble the other bracket (operating bracket) to the drive shaft end of the barrel (the end opposite the spring adjusting shaft). This bracket

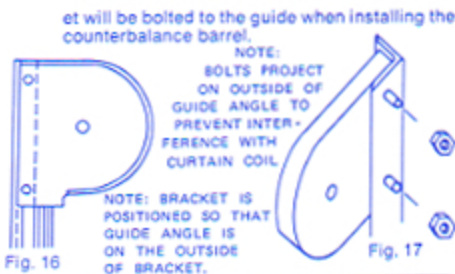


Fig. 16

et will be bolted to the guide when installing the counterbalance barrel.

NOTE: BOLTS PROJECT ON OUTSIDE OF GUIDE ANGLE TO PREVENT INTERFERENCE WITH CURTAIN COIL

NOTE: BRACKET IS POSITIONED SO THAT GUIDE ANGLE IS ON THE OUTSIDE OF BRACKET.

Fig. 17

STEP five 5

BARREL

Raise the barrel with the operating bracket on the drive shaft and insert the spring adjusting

shaft through the adjusting wheel bracket. Bolt the bracket to the guide angle. See Fig. 17.

Check brackets at front and back. Brackets should be parallel with each other and at right angle to the barrel. **CENTER THE BARREL BETWEEN BRACKETS** so that end clearance of barrel to inside of brackets is the same at both ends.

STEP
six **6**

OPERATORS

Install operating mechanism. See additional instructions enclosed for particular type operating mechanism furnished.

STEP
seven **7** - DOORS

GUIDE MOUTHS

Remove guide mouths on each guide as in Fig. 8.

BOTTOM BAR

Attach bottom bar to the bottom slat of the door curtain. Rotate the barrel until the bottom of the bottom bar clears the top of the guides. Then feed the bottom bar into guides and uncoil curtain until bottom bar is below top of guides.

CAUTION --- The barrel *must not* be allowed to rotate and allow the curtain to fall. The curtain may be held in place temporarily by blocking under the bottom bar at both ends or by placing a rope sling around the curtain to prevent uncoiling of the curtain off the barrel.

Reinstall guide mouths on each guide at this time. See Fig. 8

STEP
eight **8**

ADJUSTING TENSION

Raise the curtain until bottom bar contacts the side mouths. Install the adjusting wheel onto the spring tension shaft. By hand, rotate the adjusting wheel slightly in both directions to determine the neutral point or no tension on the springs. Mark the hole on adjusting wheel which is nearest to the lug on the tension bracket and place hole directly under the lug. Insert the rods (1/2" dia. x 2'-6" Lg) into the adjusting wheel and turn wheel in a downward direction. See Fig. 18.

INITIAL TURNS

Note initial turns (the number of turns required

to balance the door when in the open position) required for each door is shown on a colored sticker on the barrel. **INCREASE TENSION** and also noted on the front page of the instructions.

WARNING: Always seat the 1/2 dia. x 2'-6" Lg rods firmly when applying tension and never allow the springs to "spin off"

Failure to exercise proper care could result in personal injury or damage to the equipment. ALL adjustments to the counterbalance should be made with door in full OPEN position. Insert the adjusting wheel pin to full depth through the aw strap on the bracket and in to the adjusting wheel. When certain the pin is fully seated, remove the adjusting rods.

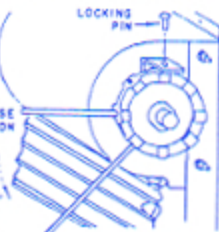


Fig. 18

STEP
nine **9**

FRONT HOOD

The front hood is the last item to be erected. Raise the front hood and fit over the brackets. The ends of the hood should be approximately 16" in from the outside edge of the brackets.

Set the top flange tight against the wall. Drill 3 holes around circumference of the bracket rim. Use #1 drill. Assemble hood to brackets with self-tapping screws provided. Fasten top flange to wall with fasteners provided. Where two (2) piece hoods are furnished, hood straps are provided for support of the hood. Straps are positioned and fastened to the wall where the hood is spliced together and hood is then fastened to the strap(s).