



*SentryGate*TM 3

INSTALLATION INSTRUCTIONS

ES 10-254

SentryGate™ 3

Patent Pending

Step 1: Check the opening size. The SentryGate™3 is made to very close tolerances because of its unique way of “locking” in the guides. It is critical that the distance between guides (DBG) be held within 1/8” to assure proper operation.

Step 2: Install bracket mounting flats; refer to Figure 1. Two G340P bracket mounting flats are supplied with each unit; their length equal to coil dimension. Flats are oriented such that the double holes are toward the top. Slide flats into channel of mounting member from top (top of mounting member has mounting hole which is 1-1/2” down from end). Holding top of flat flush with top of mounting member, install 5/16-18 x 5/8” set screw in third hole down of flat and tighten snugly.

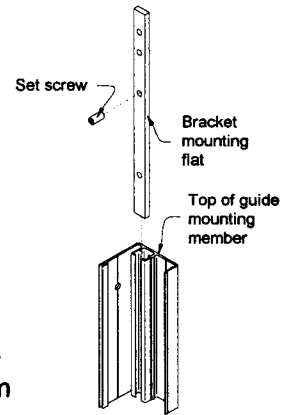


Figure 1

Step 3: Install mounting members; refer to Figure 2. Two mounting members are supplied, one right hand and one left hand. Figure 2 shows the three standard types of mounting, starting from the left: face of wall (FOW), between jambs (BJ) and between jambs (BJ) with back-up tube. Place left mounting member at desired location on the jamb, plumb and mark jamb at fastener locations. Remove member; drill and prepare holes for wall fasteners. Place member back on jamb, lining up holes in member to those in the jamb, and install wall fasteners tightening them snugly. Measure the DBG from a point on left mounting member as shown in Figure 2 to the same point at which right mounting member will be located and make a reference mark. Placing right member on jamb at reference mark, plumb and mark at fastener locations. Placing member aside, drill and prepare holes

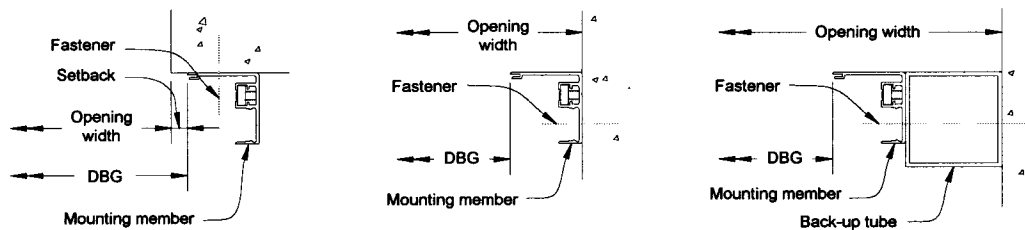


Figure 2

for wall fasteners. Line up right member with holes in jamb and install wall fasteners tightening them snugly.

Step 4: Install brackets; refer to Figure 3. Two brackets are supplied with each unit, one adjuster and one operator. The operator bracket will have one of the following attached at the center: cast iron U-shaped lug with cotter pin (push-up), gearbox with extended eye (hand crank) or flange bearing (motor). The adjuster bracket will have a tubular cast iron lug mounted at center. The brackets are oriented such that the mounting holes line up with those in the bracket mounting flat, clip angle toward bottom and bent returns toward opening. Three 5/16-18 x 5/8” button head socket cap screws are used to attach brackets to bracket mounting flats as shown in Figure 3.

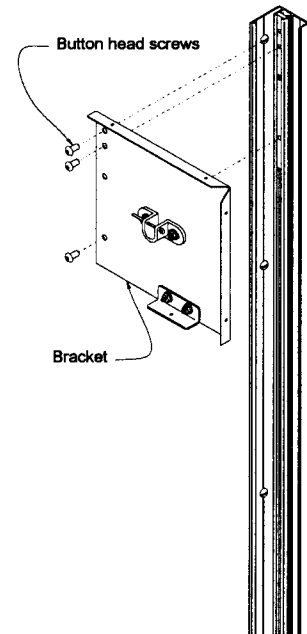


Figure 3

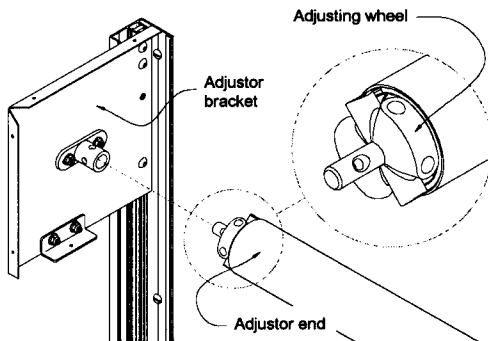


Figure 4

Step 5: Install shaft. Shaft installation will vary slightly based on operation of unit. Shaft installation for each type of operation will be described below. Common to all shafts, regardless of unit operation, is the adjuster. Each shaft has a circular cast iron adjusting wheel with six pockets for use when charging the springs; this end of the shaft will be referred to as the adjuster end of the shaft; refer to Figure 4. If unit is supplied with S114A rings, they

must be placed on shaft prior to shaft installation. Lay shaft on ground in front of opening with adjustor end toward mounting member having adjustor bracket and weld studs on top. Slide rings onto shaft as illustrated in Figure 5, with "hump" of ring away from opening. *NOTE: Rings must be placed on shaft as shown in Figure 5 for curtain to roll properly.* Remove #10-24 x 5/8" truss head screws from weld studs, locate rings over weld studs and replace truss head screws. Do not tighten screws down, they must be removed for curtain attachment.

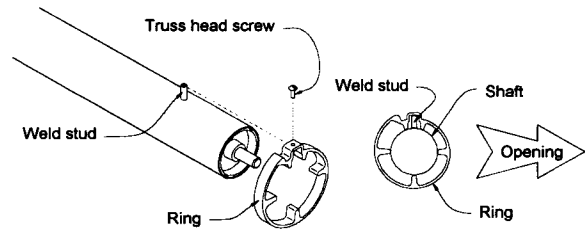


Figure 5

Push-up: Remove cotter pin from cast iron U-shaped lug on operator bracket. Raise shaft and hold just under brackets. Raise adjustor end further and line up with inside hole of tubular cast iron lug on adjustor bracket and insert as far as possible. Raise operator end of shaft up along inside of bracket, while at the same time pushing shaft toward adjustor bracket, and lay operator end in U-shaped lug. Replace cotter pin and bend slightly to retain in place.

Hand crank: Raise shaft and hold just under brackets. Raise operator end further and line up with inside hole of gearbox on operator bracket and insert as far as possible. Raise adjustor end of shaft up along inside of bracket, while at the same time pushing shaft toward operator bracket. Line up adjustor end of shaft with inside hole of tubular cast iron lug on adjustor bracket and slide shaft inside. Line up hole in operator end of shaft with that of gearbox and pin in place with 1/8 x 1" grooved pin. If there is not sufficient clearance to slide the operator end of shaft through gearbox and line up adjustor end with lug, it will be necessary to remove operator bracket from mounting member. Once operator bracket is removed, it is slid onto operator end of shaft. Raise shaft and bracket and line up adjustor end with inside hole of tubular cast iron lug on adjustor bracket and insert as far as possible. Line up hole in adjustor end of shaft with one in tubular cast iron lug and use 1/4-20 x 1-1/2" grade 8 hex bolt and nut to pin in place. Align mounting holes of operator bracket with those of the bracket mounting flat and reattach bracket. Remove hex bolt and nut, line up hole in operator end of shaft with that of gearbox and pin in place with 1/8 x 1" grooved pin. If there is still not enough clearance to install the shaft by removing the operator bracket, it will be necessary to also remove adjustor bracket from mounting member. Once adjustor bracket is removed, the tubular cast iron lug is slid over the adjustor end of shaft; line up hole in adjustor end of shaft with one in tubular cast iron lug and use 1/4-20 x 1-1/2" grade 8 hex bolt and nut to pin in place. Raise shaft and brackets, align mounting holes of brackets with those of the bracket mounting flats and reattach brackets. Remove hex bolt and nut, line up hole in operator end of shaft with that of gearbox and pin in place with 1/8 x 1" grooved pin.

Motor: Raise shaft and hold just under brackets. Raise operator end further and line up with bore of the bearing on operator bracket and insert as far as possible. Raise adjustor end of shaft up along inside of bracket, while at the same time pushing shaft toward operator bracket. Line up adjustor end of shaft with inside hole of tubular cast iron lug on adjustor bracket and slide shaft inside. If there is not sufficient clearance to slide the operator end of shaft through bearing and line up adjustor end with lug, it will be necessary to remove operator bracket from mounting member. Once operator bracket is removed, it is slid onto operator end of shaft. Raise shaft and bracket and line up adjustor end with inside hole of tubular cast iron lug on adjustor bracket and insert as far as possible. Line up hole in adjustor end of shaft with one in tubular cast iron lug and use 1/4-20 x 1-1/2" grade 8 hex bolt and nut to pin in place. Align mounting holes of operator bracket with those of the bracket mounting flat and reattach bracket. Remove hex bolt and nut. If there is still not enough clearance to install the shaft by removing the operator bracket, it will be necessary to also remove adjustor bracket from mounting member. Once adjustor bracket is removed, the tubular cast iron lug is slid over the adjustor end of shaft; line up hole in adjustor end of shaft with one in tubular cast iron lug and use 1/4-20 x 1-1/2" grade 8 hex bolt and nut to pin in place. Raise shaft and brackets, align mounting holes of brackets with those of the bracket mounting flats and reattach brackets. Remove hex bolt and nut.

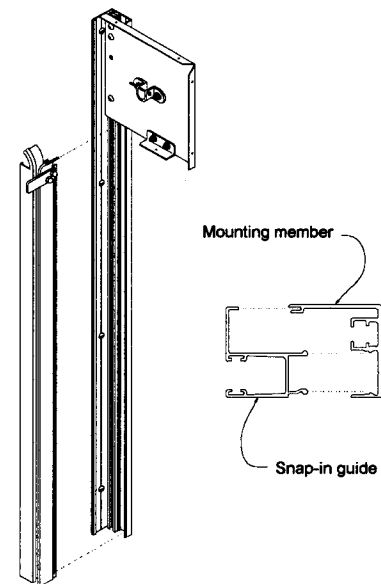


Figure 6

Step 6: Install guide. Taking snap-in guide for left jamb, orient it in front of mounting member as illustrated in Figure 6. To "snap" the guide together on face of wall units, C-clamps with blocks of wood are used. Placing a block of wood on back of

mounting member and gap of snap-in guide, slowly tighten down on C-clamp watching until outer face corners contact. Leaving that C-clamp in place, repeat the same process 12" +/- higher. Remove first clamp and repeat process 12" +/- higher and so on. For Between jamb units a block of wood is placed over guide gap and a hammer is used to "tap" snap-in guide in place. **CAUTION: Using a hammer to install snap-in guide on a face of wall unit may loosen mounting member fasteners and is not advisable on smaller units.** #8 x 1-1/2" self-drilling screws and screw caps are installed at all marks on mounting member groove; refer to Figure 7. This process is repeated with guide at right jamb.

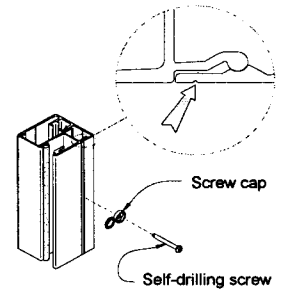


Figure 7

Step 7: Install curtain. On smaller units curtain attachment is by means of 1/4-20 x 3/8" pan head screws; retainer weld nuts are provided on shaft. As mentioned earlier, larger units will be supplied with S114A rings and #10-24 x 5/8" truss head screws; weld studs are provided on shaft. Follow the respective instructions below for curtains with openings of 65 ft² or less or for those with openings greater than 65 ft².

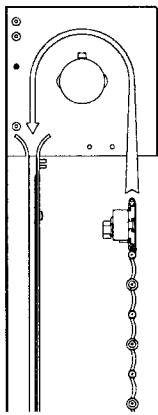


Figure 8

Shafts with retainer weld nuts: Remove stoppers from both guides and bottom clip angle from both brackets. Place curtain flat on ground between guides with exterior face up (arched side of molded links up). Pick curtain up by bottom bar, feed between brackets over shaft and then down between lintel and shaft into guides; refer to figure 8. Line up slots in fastening sections with retainer weld nuts on shaft. Install 1/4-20 x 3/8" pan head screws into retainer weld nuts; refer to Figure 9. Prior to tightening down screws be sure curtain is spaced evenly between mounting members. Replace stoppers and clip angles.

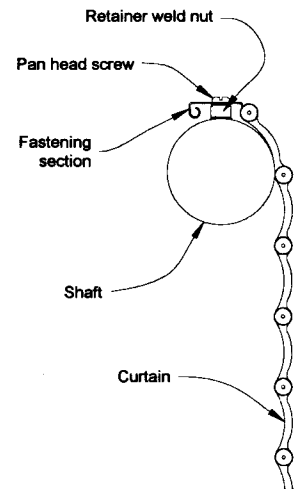


Figure 9

Shafts with S114A rings: Remove stoppers from both guides and bottom clip angle from both brackets. Remove #10-24 x 5/8" truss head screws from weld studs. Place curtain flat on ground between guides with exterior face up (arched side of molded links up). Pick curtain up by bottom bar, feed between brackets over shaft and then down between lintel and shaft into guides; refer to figure 8. Line up slots in fastening sections with hole in rings and weld studs. Install truss head screws into weld studs; refer to Figure 10. Prior to tightening down screws be sure curtain is spaced evenly between mounting members. Replace stoppers and clip angles.

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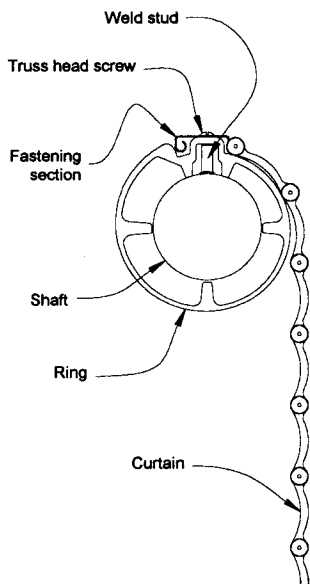


Figure 10

Step 8: Charging springs. **CAUTION: Do not stand directly in front of adjusting wheel while charging springs; stand off to side on firm footing, severe injury can result should a rod slip during the spring charging process.** Have 1/4-20 x 1-1/2" grade 8 hex bolt and nut readily available and two 3/8" diameter rods are needed. Number of turns will be labeled on shaft at adjustor side; this is how many turns springs must be wound with curtain. Springs are wound by turning adjusting wheel number of turns labeled on shaft. Using a marker, place a mark on edge of adjusting wheel where it is visible. Place one of the 3/8" rods in a pocket of adjusting wheel toward top, pull down toward floor. Insert second 3/8" rod in pocket near top, remove first rod and pull second rod down toward floor. Continue this process while counting number of turns adjusting wheel makes; see

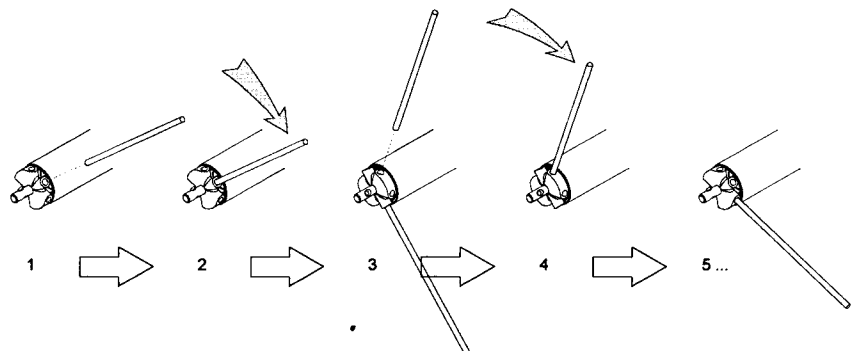


Figure 11

floor. Continue this process while counting number of turns adjusting wheel makes; see

Figure 11. *NOTE: Adjusting wheel should always be wound in direction of opening the curtain regardless of whether the unit is left hand or right hand adjust. As number of turns on adjusting wheel become greater, turning it will become harder and the curtain will have a tendency to lift up. Once proper number of turns have been added to adjusting wheel, continue to hold pressure on rod remaining in adjusting wheel and rotate it such that hole in shaft end aligns with top hole in tubular cast iron lug on adjustor bracket. Place 1/4-20 x 1-1/2" grade 8 hex bolt down through top hole of lug until head of bolt is sitting flush on lug (bolt should project through bottom of lug). The bracket may have to be pulled in or pushed out slightly to get bolt to drop through both lug and shaft. At this time pressure may be let off rod and it can be removed; install hex nut on bolt. Operate curtain up and down several times to check operation and readjust spring charge, if necessary, before installing hood.*

Step 9: Install hood; refer to Figure 13. Place hood between brackets with end over lapping bracket returns and clip angles. Using #10 x 1/2" self-drilling screws attach hood to bracket returns and clip angles as necessary; refer to Figure 14.

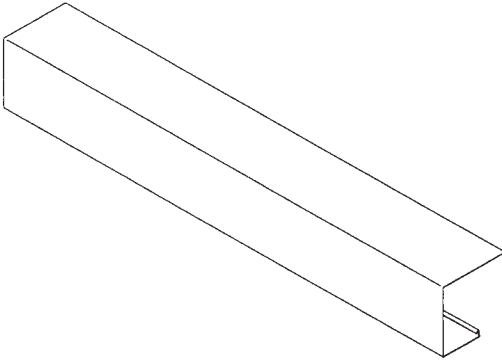


Figure 13

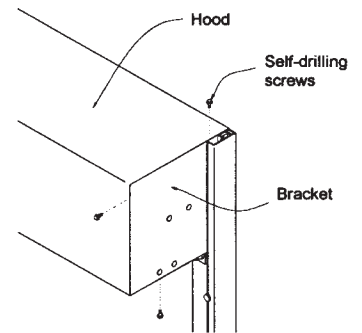


Figure 14

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