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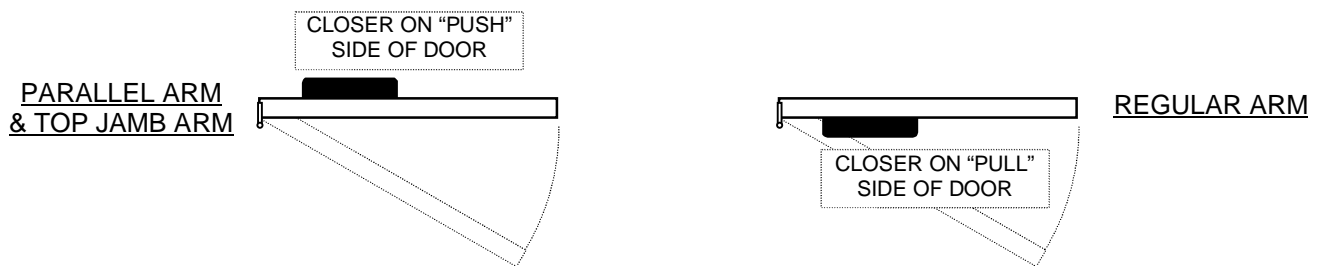
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**DOOR CLOSER INSTALLATION INSTRUCTIONS**

**DETERMINE TYPE OF CLOSER APPLICATION**— Closers are furnished with a template drawing that depicts the three types of applications—regular, parallel or top jamb arm. All closer or closer arm attachments to doors must be made with through bolts.

**DETERMINE DEGREE OF OPENING**— Decide how far you want the door to open. The closer location determines this—the farther from the hinge edge of the door, the less the degree of maximum opening. You should consider: 1) the location of any obstacles that the door may strike if opened too far, 2) the size of any concrete pad or walkway that the door may open onto, 3) traffic that the door may swing into and 4) the necessity to swing the door as far out of the opening as possible to move equipment in and out. *Remember that the greater the degree of opening, the less power the closer can exert on the door.*

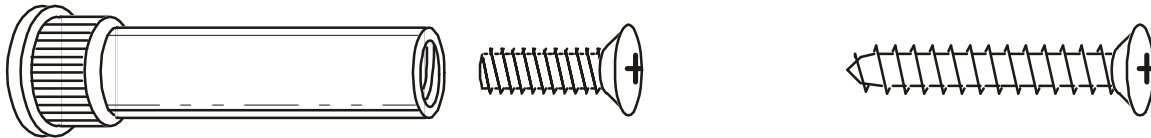
**LAYOUT MOUNTING HOLES** using the dimensions from the closer template drawing, or the full size paper template included with some brands. Note that the horizontal location is often given from the *hinge centerline*, which is  $\frac{1}{16}$ " beyond the edge of the door. The vertical dimension is given from either the top edge of the door or the bottom face of the frame header doorstop. In the second case, you must generally add  $\frac{1}{2}$ " to the given dimension (for a  $\frac{5}{8}$ " thick stop, minus  $\frac{1}{8}$ " clearance above door) to yield the proper measurement from the top edge of the door. *Always layout your hole locations on the "closer side" of the door, per the following chart.* Normally, regular arm closers are only used on interior doors, while parallel and top jamb arms are used on exterior openings to place the closer on the inside face, out of the weather.



TOP VIEW OF CLOSER MOUNTING TYPES

**RECHECK HOLE LOCATIONS PRIOR TO DRILLING.** Use the closer and soffit bracket to mark and verify your hole locations. *MIS-DRILLED HOLES CANNOT BE PROPERLY FIELD REPAIRED.*

**DRILL MOUNTING HOLES**– Using a  $\frac{13}{64}$ " diameter bit, drill the frame header for the soffit bracket mounting holes to a minimum depth of  $\frac{3}{4}$ ". *Use the sheet metal screws furnished for all attachments to the frame header.* Using a  $\frac{1}{4}$ " diameter bit, drill the closer mounting holes completely through the door, taking care to drill as straight as possible. Then use a  $\frac{3}{8}$ " diameter bit *from the opposite side of the door* to enlarge the holes completely through the  $1\frac{3}{4}$ " door thickness. (NOTE: Hole diameter and depth may differ from one brand to the next.) *Use  $\frac{1}{4}$ " diameter machine screws and sex-bolt nuts furnished for all attachments to door.*



1/4-20 x 3/4" MACHINE SCREW &  
'SEXBOLT' NUT THROUGH DOOR

#14 x 1-3/8" SHEET METAL  
SCREW INTO FRAME

### FASTENER TYPES USED FOR DOOR CLOSER INSTALLATION

**INSTALL CLOSER & ADJUST**– After hanging door, connect arm to closer and bracket and refer to closer template for correct procedure to adjust sweep speed, latch speed, and any other applicable features for proper door operation. For closers with adjustable spring power, set the closing force for exterior doors one size larger than the door width (as a starting point). For instance, set the spring power to a "size 4" closer for a three foot wide door. Extremely windy locations will require even higher spring pressure to insure proper closing. For interior openings set the closing force equal to the door width. Recheck closer operation after one week.

**FOLLOW-UP ADJUSTMENTS**– Recheck door operation every six months, re-adjusting sweep speed, latch speed, and any other applicable features. Note that closers often require seasonal fine-tuning due to changes in ambient temperature and wind patterns. Check all mounting screws and re-tighten as necessary.

05/31/05