



All holes in the door and frame must be drilled correctly and fasteners properly installed. Failure to use the fasteners supplied by Markar Architectural Products, Inc. will void the UL or WHI fire rated listing.

The Universal Screw Pack contains sheet metal, machine and self-drilling screws. This allows various installation options. If mounting to a wood frame or an unreinforced hollow metal door and frame, follow option (A) in the instructions. Follow option (B) if the frame is reinforced or at least 1/8" thick. If you use the self-drilling Tek screws (recommended for grout-filled frame and unreinforced hollow metal doors), follow option (C). If using the AdjustaScrews to mount to a wood door, follow option (D) in the instructions, otherwise follow option (E) if the door is reinforced or at least 1/8" thick.

- Perform each step of these instructions unless specifically labeled (A), (B), (C), (D) or (E).

- (1) Place the hinge on the frame as shown in Figure 1 on the other side of these instructions.
 - Allow 1/8" between the top of the hinge and the underside of the header.
 - Place the hinge tightly against the stop of the frame. (Clearance is built into the hinge). Hospital tips on hinges should be placed on the top of the door.
- (2) Mark all the hole locations on the door jamb with the hinge held firmly in place.
- (3) Center punch each hole. The use of the Markar MT-806 center punch can help center the hole so that the fasteners will enter straight. The taper on the tool sits in the countersunk hole on the hinge.

- (4) Using a #25 bit,
 - (A)&(B) drill all the frame holes.
 - (C) drill only the top and bottom holes in the frame.
- (5) (B) Tap the holes for a 10-24 thread. **Do not** install the hinge to the frame at this time.
- (6) Place the hinge on the edge of the door. Carefully line up the hinge with the top of the door. Check handing.
- (7) Mark all the hole locations on the door with the hinge held firmly in place.
- (8) Center punch each hole. A drill may be used to spot these holes while the hinge is in place.

Note that accurate location is important for proper hinge installation.

- (9) Remove the hinge and
 - (A)&(B) drill each hole with a #25 bit. OR
 - (C) drill only the top and bottom holes with a #25 bit. OR
 - (D)&(E) drill each hole with a 5/16" bit to a minimum depth of 1 3/8". Make sure that the door is properly reinforced to accept the AdjustaScrew. This option can not be used on inadequately reinforced doors. AND
 - (E) then tap the holes for a 3/8-16 thread.
- (10)(D)&(E) Insert AdjustaScrews into every hole. Place a 3/16" Allen wrench in the opening of the AdjustaScrew and simply turn the AdjustaScrew into the hole while keeping the screw properly aligned. Drive all AdjustaScrews in until it is approximately flush with the edge of the door.

Note that it is not necessary to tap the holes in wood doors since AdjustaScrews cut their own threads.

- Do not be concerned with the tight fit. AdjustaScrews are designed for a tight friction fit in the tapped holes so they will not turn when the attachment screw is being tightened. If the AdjustaScrews turn too freely, apply Loctite™ for threaded joints to the screw threads during installation.
- A screw gun or variable speed electric drill with a Markar MT-AD hex driver bit provides a faster means of installing the AdjustaScrews.

- (11) Place the hinge on the door.
- (12) Attach the hinge to the door using
 - (A) #10 x 1 1/4" flat head undercut sheet metal screws. OR
 - (B) Tap the holes for a 10-24 thread. Attach the hinge to the door with 10-24 flat head machine screws. OR
 - (C) Attach the hinge to the door using the self-drilling Tek screws. OR
 - (D)&(E) Install only the top two and bottom two 10-32 x 3/4" machine screws. Fully tighten the screws.

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- (13) Attach the door and hinge to the frame
 - (A) using #10 x 1 1/4" flat head undercut sheet metal screws. OR
 - (B) using 10-24 x 3/4" flat head undercut machine screws. OR
 - (C) using self-drilling Tek screws
- (14)(D)&(E) Close the door and check alignment.
 - If the door requires alignment for proper fit, make this adjustment with the four screws already installed without removing the door:
- (1) Remove one screw and insert the Allen wrench through the hole into the AdjustaScrew.
- (2) Loosen the other machine screw at the same end and turn the AdjustaScrew in the direction of the desired adjustment. Adjust the other AdjustaScrews in the same manner until a perfect fit is achieved, then tighten all four machine screws.
- (3) The balance of the AdjustaScrews should be adjusted in the same manner until all are resting firmly against the inside face of the hinge/guard.
- (4) Install and tighten the remaining machine screws. Be sure the adjustable angle is pressed firmly against the face of the door as the screws are tightened.

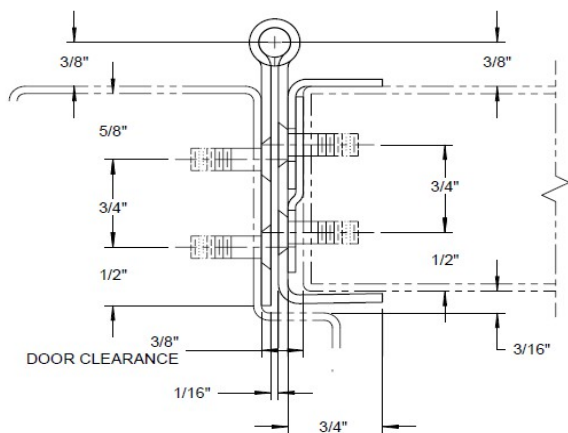


FIGURE 1: HINGE PLACEMENT & CLEARANCE TEMPLATE

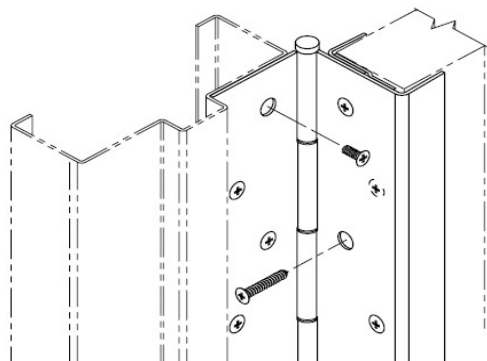
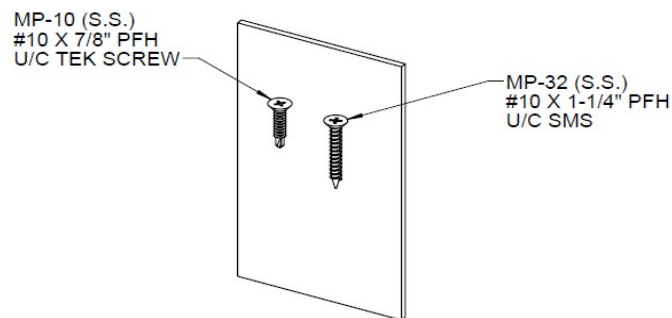
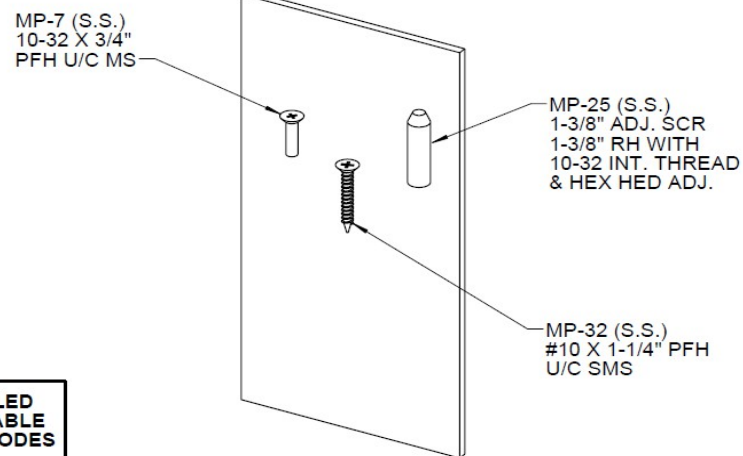


FIGURE 2: INSTALLATION (EXPLODED VIEW)

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MORTISE SCREW PACK



GUARD SCREW PACK