



HS-203 & HS-303 Installation Instructions

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All holes in the hinge 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.

Do not install Snap-On cover until installation is 100% complete, and all aspects of the assembly are correctly fastened and properly fitted. The Universal Screw Pack contains sheet metal, machine, and self-drilling Tek screws. This allows three different installation options for the frame. If mounting a wood or unreinforced hollow metal frame, follow option (A) in the instructions, otherwise 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 frames), follow option (C). If the grout is hard, drilling a pilot hole can help.

- Zinc plated screws are provided with model HS-203 (plain steel), while stainless steel and nickel-plated screws accompany model HS-303 (stainless steel).
 - Perform each step of these instructions unless specifically labeled (A), (B) or (C).
- (1) Place hinge on frame as shown in Figure 1 on the other side of these instructions.
 - Allow 1/8" between top of hinge and underside of header.
 - Allow 1/16" between stop and edge of hinge.
 - (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) (A)&(B) Drill all the holes using a #25 bit.
 - (5) (A) Attach the hinge to the frame with #10 x 1 1/4" flat head undercut sheet metal screws.
OR
 - (5) (B) Tap the holes for a 10-24 thread. Attach the hinge to the frame with 10-24 x 3/4" flat head undercut machine screws. OR
 - (5) (C) Attach the hinge to the frame with #10 x 1/2" flat head undercut self-drill Tek screws.

- (6) Fold the door leaf back over the frame and place the door in the door frame.
 - Place the shims under the door to provide 1/8" clearance between the header and the top of the door.
 - Add shims at both the hinge and latch side of the door so that 1/8" clearance will be maintained on the lock side of the door.
- (7) With the door held firmly in place, return the door leaf to the face of the door.
 - Molly Jacknuts and aluminum sleeve bolts (Markar part numbers MP-20 and MP-23) are available from your hardware supplier as an optional means of attaching the door.
 - **Steel sleeve bolts (part #MP-23) must be used on mineral core wood fire doors.**
- (8) Mark the position of the top and bottom holes with a center punch, then drill and fasten with self-drilling Tek screws.
- (9) Attach the hinge to the door using 1/4-20 x 3/4" pan head self-drilling Tek screws.
- (10) After the top and bottom screws are installed, permanently install the door leaf with the self-drilling Tek screws.
- (11) Install at least five cover clips by passing a screw through the clip, hinge leaf and door. (See Figure 2.)
 - Markar recommends that clips be positioned in the top, center, and bottom holes, with the remaining clips spaced equally along the length of the hinge.
 - When installation is complete install the Snap-On cover.
- (12) Engage the side of the cover next to the hinge pin first.
- (13) Insert a large screwdriver between the hinge knuckle and the cover. Using the screwdriver as a lever, twist it and snap the opposite side of the cover onto the clip.
- (14) Start at the top and work downward until the entire length of the cover is firmly engaged.
- (15) With the cover firmly in place, secure it at both ends through the hinge and into the door with #8 x 3/4" self-drilling flat head Tek screws.

FIGURE 1: HINGE PLACEMENT & CLEARANCE TEMPLATE

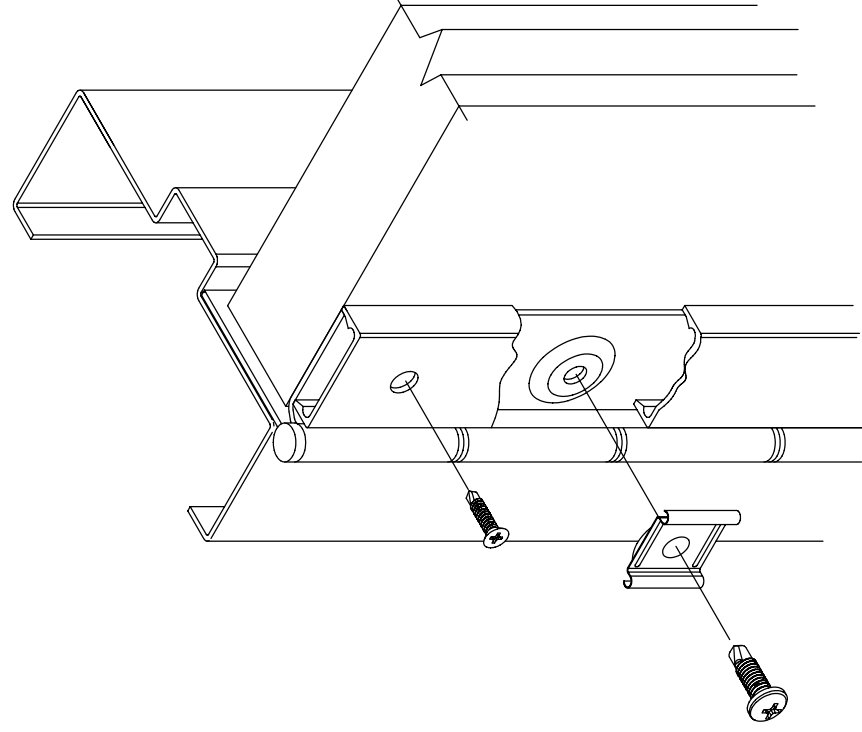
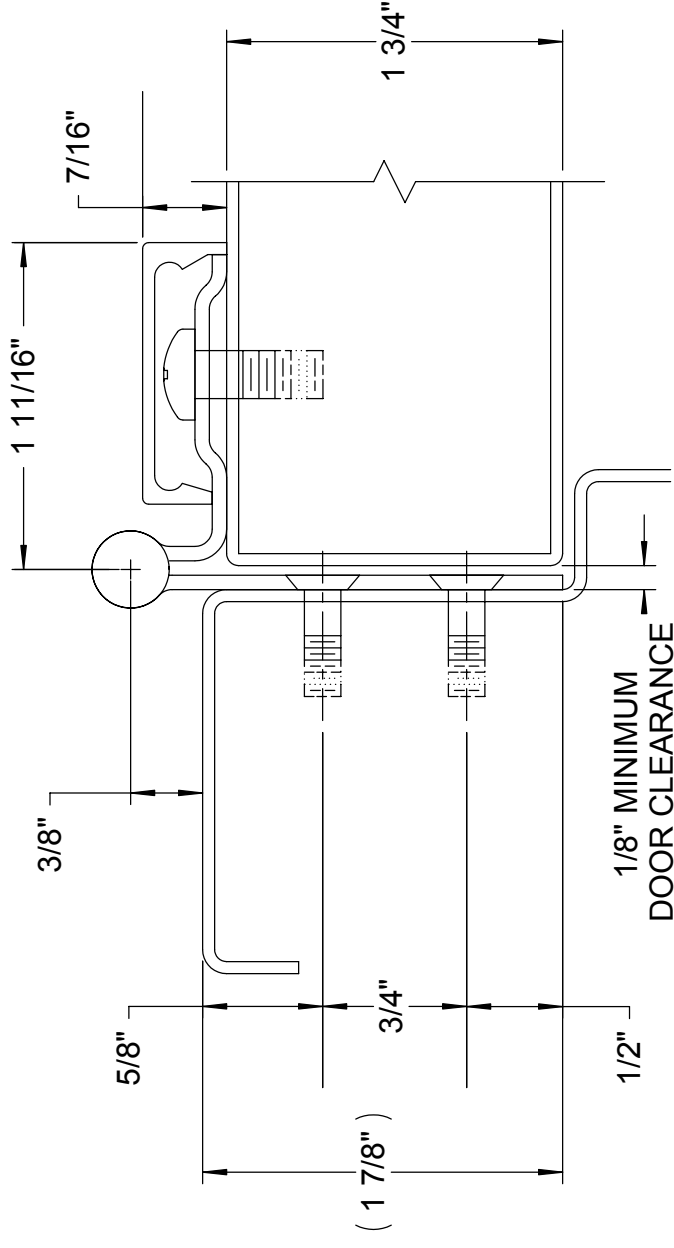
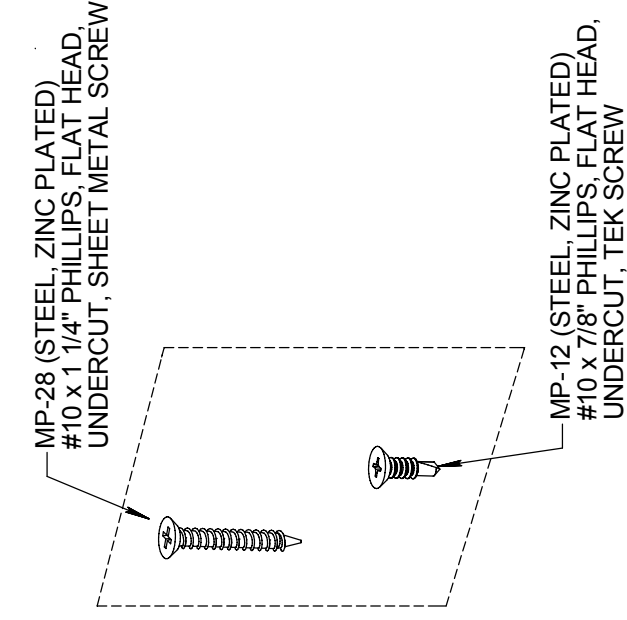
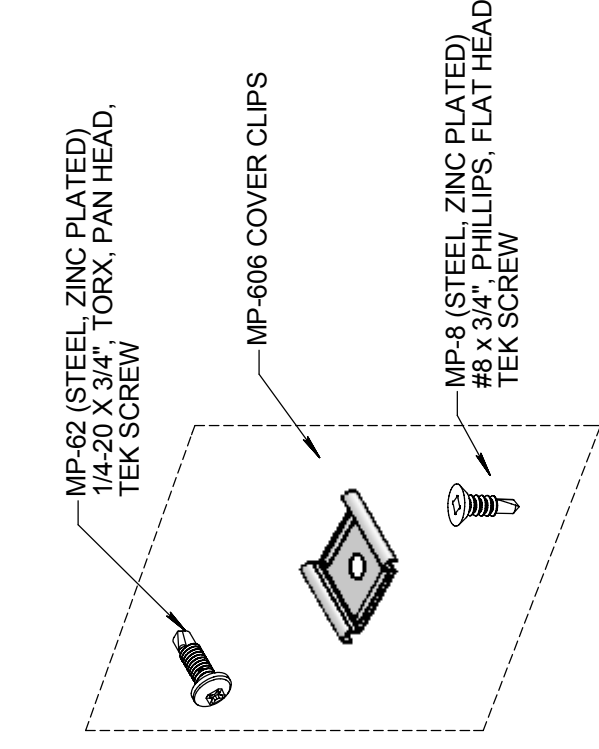


FIGURE 2: INSTALLATION (EXPLODED VIEW)

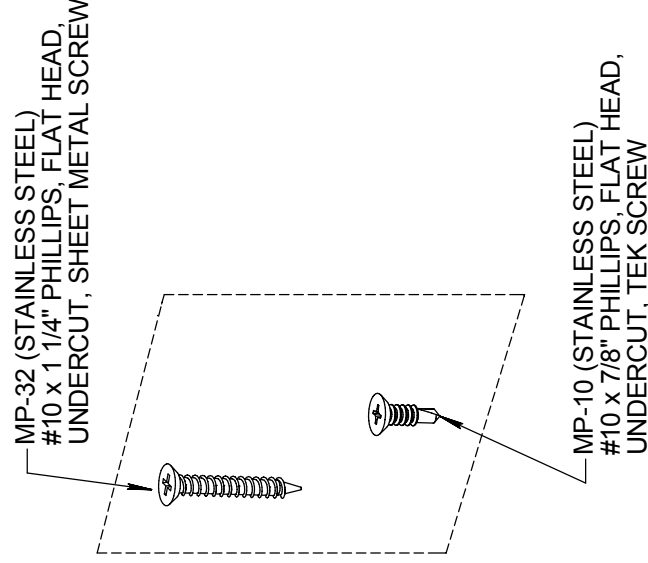


HS 203



HS 203

HS 303



HS 303