



**Trademark  
HARDWARE**

# MARKAR HM104 HINGE

## INSTALLATION

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**Note:** Do not install Snap-On cover until installation is 100% complete, and all aspects of the assembly are correctly fastened and properly fitted. The cover is impossible to remove without damage, and replacement may be necessary.

The Universal Screw Pack contains sheet metal, machine, and self-drilling Tek screws. This allows three different installations options for the door. If mounting a wood door or unreinforced hollow metal door, follow option (A) in the instructions. Follow option (B) if the door is reinforced or at least 1/8" thick. If you use the self-drilling Tek screws follow option (C).

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

- (1) Place the hinge on the edge of the door as shown in Figure 1 on the other side of these instructions. Carefully line up the hinge with the top and back edges of the door.
  - (2) Mark all the hole locations on the door 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 door 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 door with 10-24 x 3/4" flat head undercut machine screws. OR  
(5) (C) Attach the hinge to the door with #10 x 1/2" flat head undercut self-drilling Tek screws.
  - (6) Place the hinge on the frame and shim.
    - Allow 1/8" between top of hinge and underside of header.
    - Allow 1/8" between the frame and the lock side of the door.
  - (7) Mark the position of the top and bottom holes with a center punch, then drill and fasten with self-drilling Tek screws.
  - (8) After the top and bottom screws are installed, permanently install the frame leaf with 1/4-20 pan head self-drilling Tek screws.
- Note** that the stress on the hinge is much greater at the top. Markar recommends that all holes at the top of the hinge be drilled and fasteners be installed. At the bottom, only three of the last five holes require fasteners unless the door weighs over 200lbs.
- Molly Jacknuts (Markar part #MP-20) are available from your hardware supplier as an optional means of attaching the frame leaf.
  - (9) Open the door and check for proper swing and alignment.
    - If the door requires adjustment for proper fit, make this adjustment by loosening screws on the frame leaf and shimming where needed.
  - (10) When installation is complete (see **Note** at the start of these instructions), hold the Snap-On cover squarely on the hinge leaf.
  - (11) Starting at the top and working downward until the entire length of the cover is firmly engaged, tap the cover firmly using a softwood block to protect the finish from hammer blows.
  - (12) With the cover firmly in place, secure it using the #8 sheet metal screw. The screw will be either at the top or bottom of the cover, depending on the hand of the door. (See Figure 2.)

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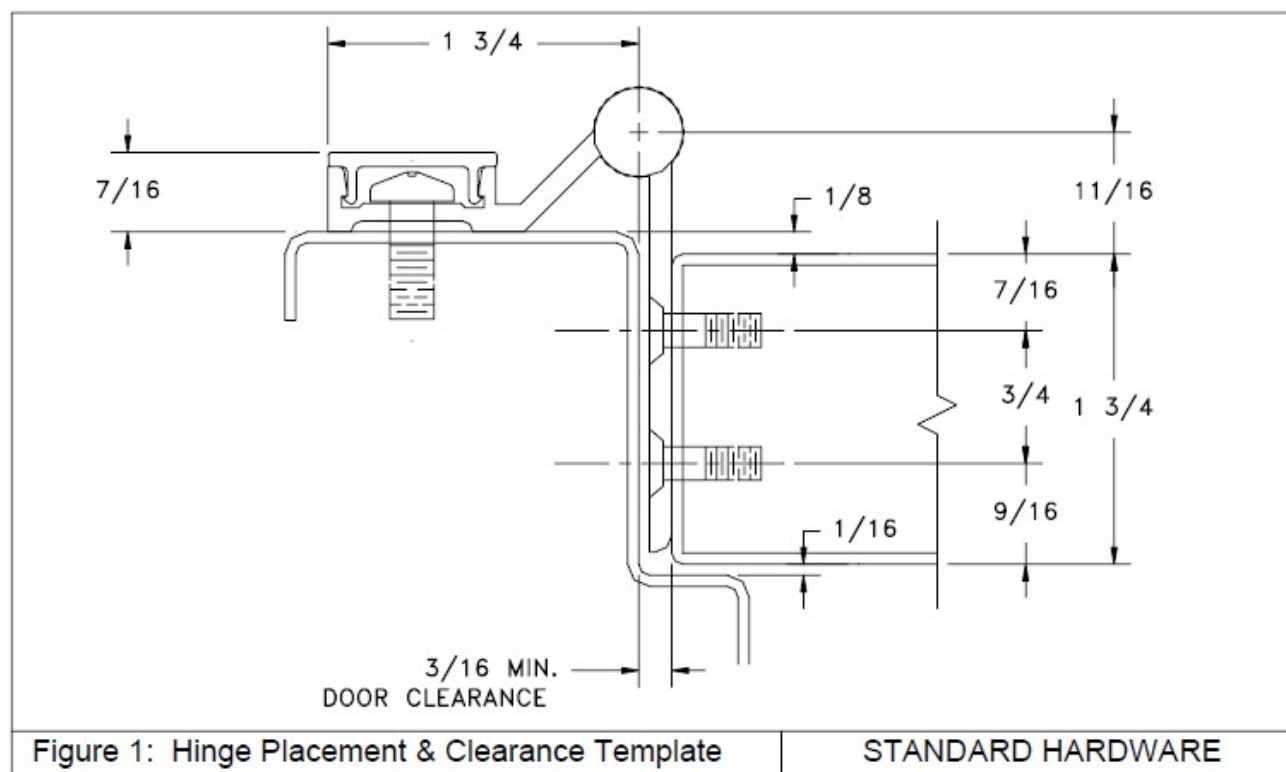
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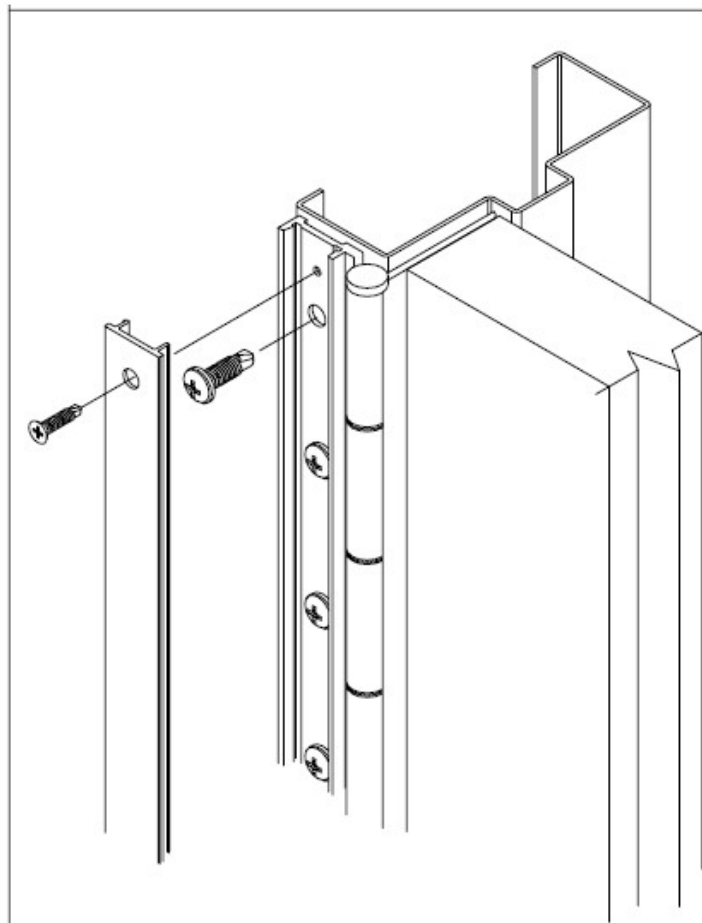


Figure 2: Installation (Exploded View)



MP-13 (Alum.) MP-13 (Bronze)  
1/4 - 20 x 3/4" PHILLIPS PAN  
HEAD SELF-DRILLING TEK SCREW  
6'8"; 7'; 7'2": 14; 8': 16; 10': 20



MP-8 (Alum.) MP-9 (Bronze)  
#8 3/4" PHILLIPS FLAT HEAD  
SHEET METAL SCREW  
6'8"; 7'; 7'2": 2; 8': 2; 10': 2



MP-30 (Alum.) MP-31 (Bronze)  
#10-24 x 1/2" PHILLIPS FLAT HEAD  
UNDERCUT SELF-DRILLING TEK SCREW  
6'8"; 7'; 7'2": 21; 8': 23; 10': 27



MP-28 (Alum.) MP-29 (Bronze)  
#10-24 x 1 1/4" PHILLIPS FLAT HEAD  
UNDERCUT SHEET METAL SCREW  
6'8"; 7'; 7'2": 21; 8': 23; 10': 27



MP-26 (Alum.) MP-27 (Bronze)  
#10-24 x 1/2" PHILLIPS FLAT HEAD  
UNDERCUT MACHINE SCREW  
6'8"; 7'; 7'2": 21; 8': 23; 10': 27

## Universal Screw Pack

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