

# ALUMINUM CONTINUOUS GEARED HINGES

## Full Mortise Aluminum Continuous Geared Hinges / Heavy Weight

### SCHHD224 / Full Mortise Hinges

The SCHHD224 is an aluminum continuous geared concealed leaf hinge designed for durability and smooth operation. This model features a  $\frac{1}{16}$ " (1.57 mm) door inset and is compatible with standard frames without the need for hinge preps. It can be installed with or without reinforcements, depending on the door's weight. A minimum clearance of  $\frac{5}{16}$ " (7.95 mm) is required between the hinge edge of the door and the frame rabbet. The "HD" models include additional bearings for enhanced performance in heavy-duty applications.

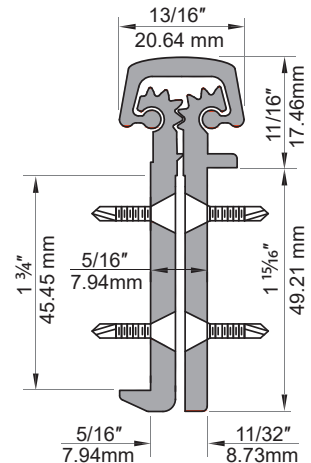


Fig. 1

### Hinge Length

All SCH hinges are manufactured approximately 1" (25.4 mm) to  $1\frac{5}{16}$ " (33.34 mm) shorter than the nominal door height to prevent clearance issues with thresholds or carpets. If resizing is necessary, first determine the correct handing of the door and the hinge orientation. Mark and trim only from the bottom of the hinge — do not cut from the top.

Door Height	Hinge Length
7' - 0"	83" (2108 mm)
8' - 0"	95" (2413 mm)

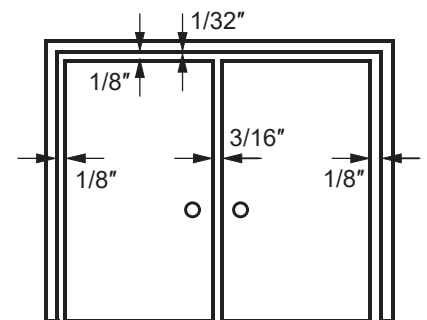
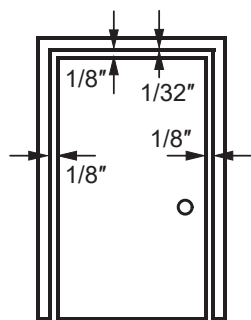
### Door Clearance Required

#### SINGLE DOOR

Hinge thickness	$\frac{5}{16}$ " (7.95 mm)
Allowance for frame irregularities	$\frac{1}{32}$ " (0.79 mm)
Typical latch side clearance	$\frac{1}{8}$ " (3.18 mm)
<b>TOTAL</b>	$\frac{15}{32}$ " (11.90 mm)

#### DOUBLE DOORS

First hinge thickness	$\frac{5}{16}$ " (7.95 mm)
First allowance for frame irregularities	$\frac{1}{32}$ " (0.79 mm)
Typical clearance between doors	$\frac{3}{16}$ " (4.78 mm)
Second hinge thickness	$\frac{5}{16}$ " (7.95 mm)
Second allowance for frame irregularities	$\frac{1}{32}$ " (0.79 mm)
<b>TOTAL</b>	$\frac{7}{8}$ " (22.23 mm)



### Cut the Hinge to Fit

- Keep the hinge in the closed position and remove door leaf caps if necessary.
- Determine the handing, if applicable.
- Cut the hinge at one end only. After cutting, the hinge must be installed according to the template hole pattern aligns at the top.
- Use a metal cutting saw, starting with the gear cap.
- A minimum clearance of  $\frac{5}{16}$ " (7.95 mm) is required between the hinge edge and the frame.
- To prevent grout interference with hinge fasteners, use mortar guards made of styrofoam or wood for the frames.
- For new site-hung wood doors, if trimming is necessary, scribe and cut from the latch edge to maintain sufficient hinge stile thickness for secure fastening.
- For remodeling existing wood or laminate doors, if trimming is needed, scribe and cut from the hinge edge of the door and plane it smooth.

Note: If the cut length interferes with a set screw bearing, remove the set screw bearing and replace it with a plain bearing positioned above the cut location.

# INSTALLATION

## SCHHD224 Installation Instruction

### Attach Hinge to Frame (See Fig. 2)

1. The frame face must provide a flat surface of at least  $1\frac{5}{8}$ " (41.28 mm) in width to properly support the hinge. Mark a reference line on the frame face  $1\frac{3}{4}$ " (44.45 mm) away from the center of the gap between the door and the jamb. For a standard  $1/8$ " hinge-side gap, this line will be positioned  $1\frac{3}{4}$ " from the gap's center.
2. Align the outer edge of the hinge frame leaf along the marked line, ensuring the top of the hinge is set  $1/16$ " (maximum  $1/8$ ") below the header rabbet level.
3. Swing the door hinge leaf aside to allow access for marking and center punching the screw hole locations. Precise positioning is crucial for a proper installation.
4. For 16-gauge metal frames, pre-drilling pilot holes is not required when using the provided self-drilling screws. For metal frames thicker than 16 gauge, drill and tap all mounting holes for #12-24 threads before installing the screws. For wood frames, pre-drill pilot holes with a  $5/32$ " (.156") bit for optional #12 wood screws.
5. Secure the hinge to the frame face. For metal frames, install the provided #12 self-drilling screws, ensuring a recommended driver speed of 1,900-2,500 RPM. For wood frames, use optional #12 wood screws.

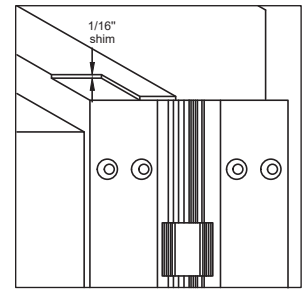


Fig. 2

### Prepare Door

6. Move the hinge leaf aside and position the door within the frame, using shims or wedges to achieve the desired clearance on all sides.
  7. Provide an additional  $5/32$ " (3.97 mm) of clearance at the top of the door's latch edge to accommodate potential settling or frame twisting after removing the shims and transferring the door's full weight to the frame.
  8. Secure the door in place, then rotate the hinge leaf into position against the door's surface.
  9. Standard Sexbolt Mounting: Mark and center punch the locations for the larger  $3/8$ " (9.53 mm) diameter holes. Precise positioning is crucial for proper installation.
    - Rotate the hinge leaf away.
    - Drill completely through the door at each marked location using a  $3/8$ " (9.53 mm) bit.
- Optional Mounting Without Sexbolts: Mark and center punch the locations for the smaller  $7/32$ " (5.56 mm) diameter holes.
- For metal doors, use the optional #12 self-drilling screws.
  - For wood doors, pre-drill pilot holes with a  $5/32$ " bit and use optional #12 wood screws.

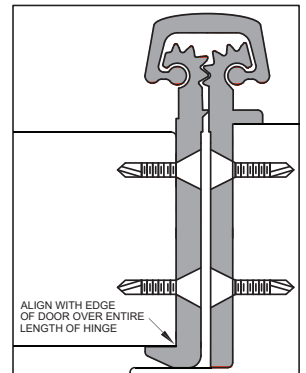


Fig. 3

### Attach Door to Hinge (See Fig. 3)

10. Secure hinge to the door as illustrated. If additional security is required on the push face, the sexbolts can be installed in reverse. However, once the molding is in place, reversed sexbolts will no longer be accessible for maintenance or removal.
11. Take out all shims and wedges, then gently swing the door to test its movement. Carefully inspect for proper alignment and adequate clearance.

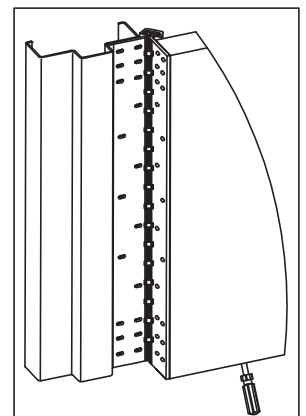


Fig. 4

### Install Leaf Cover on Door Leaf (See Fig. 4)

For the door leaf: Using the provided  $5/64$ " (1.98 mm) hex key, locate and loosen the retaining setscrew on the molding's edge. Position the longer leg of the molding beneath the outer edge of the door leaf, ensuring full-length alignment with the hinge. Starting from the top and moving downward, press or gently tap the short leg of the molding into place using a rubber mallet or a hammer with a wood block for protection.

Finally, securely tighten the retaining setscrew.

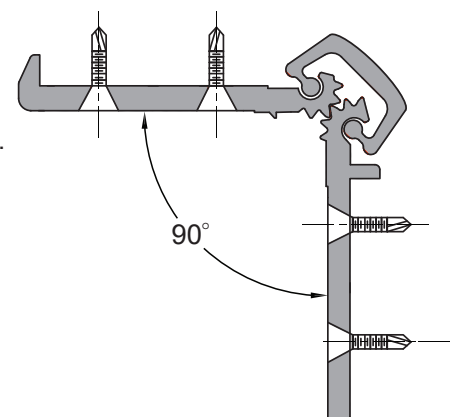
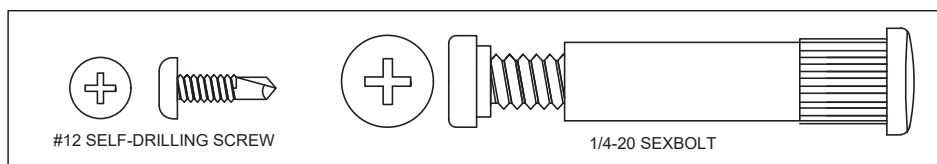


Fig. 5

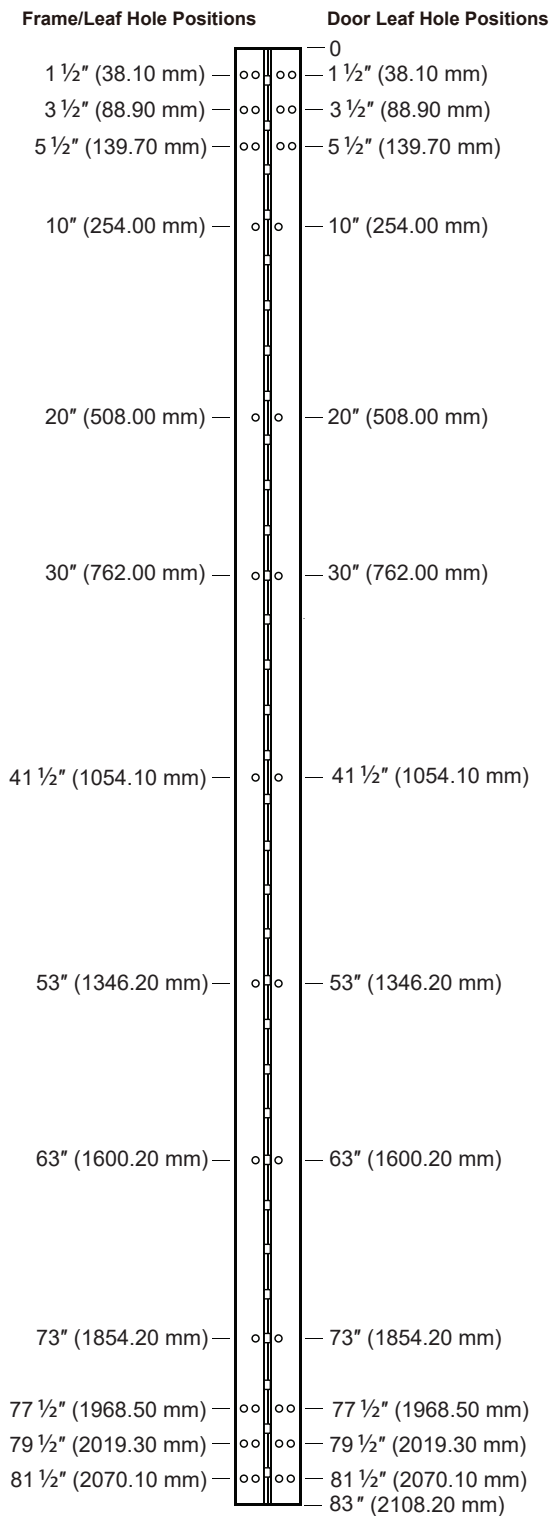


# TEMPLATES & CROSS REFERENCES

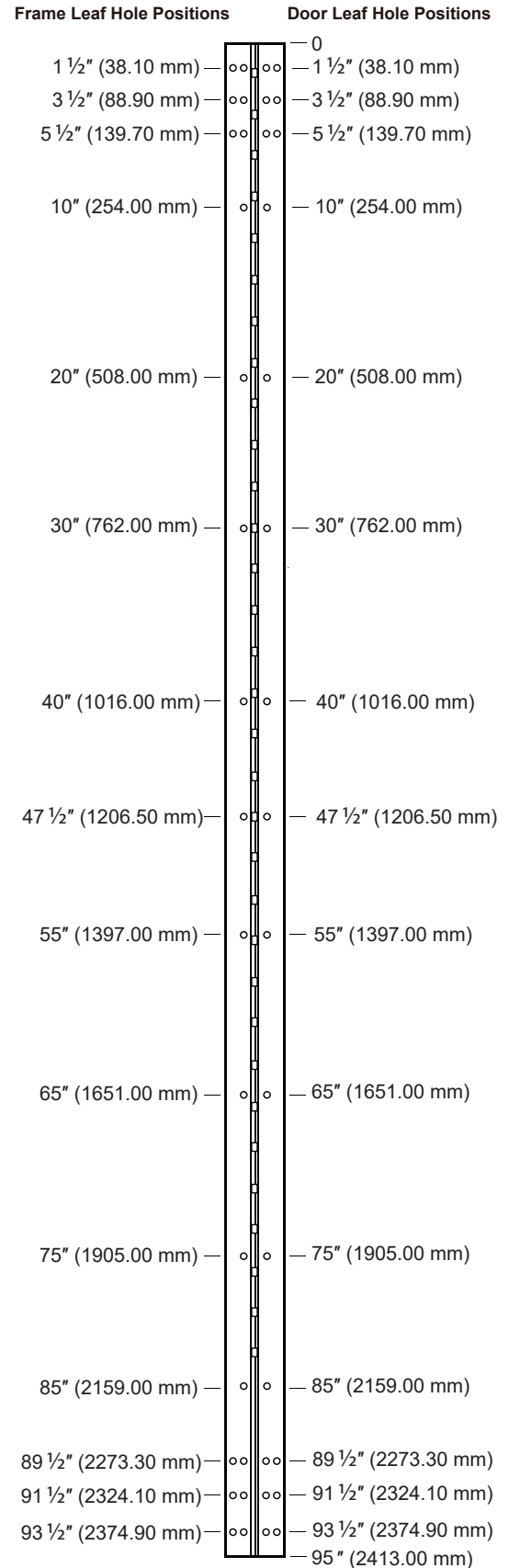
## SCHHD224 Templates

(See Fig. 1–5) Frame/door leaf hole positions are the same.

**83":** 38 fasteners and 32 bearings



**95":** 26 fasteners and 36 bearings



## Cross References

SCH	SELECT	NGP	ROTON	PEMKO	MARKAR	MCKINNEY	ZERO	STANLEY	ABH	PBB	IVES
SCHHD224	SL24 HD600	HD2400	780-224HD	FMHD	FM2011	MCK25HD	914DB	662HD	A240HD	CH31	224HD