

PEMKO

PEMKOHINGE®

FULL SURFACE HINGE

Experience a safer
and more open world

Applies to the following product:

FS - Heavy Duty Full Surface,
Continuous Geared Hinge

Attributes:

PemkoHinge® Attributes:

- With a continuous hinge, typical alignment problems, such as door sag and binding, are eliminated. Unlike conventional hinges, the continuous hinge distributes load stress uniformly along the full length of the door and frame.
- The gear design of the continuous hinge ensures identical operation of each leaf; therefore, very little effort is required to open heavy commercial doors.
- Continuous hinge installation screws are located along the full length of the hinge, thereby preventing warping of the door along the hinge jamb.
- The continuous hinge acts as reinforcement for both door and frame.
- A high degree of security can be achieved for exterior openings or restricted spaces by using a continuous hinge. With the geared construction and the full-length channel cap, the common gap between the door and frame is sealed, which provides security against prying.
- In addition, the closing of this gap protects against pinching fingers in doors in public areas, particularly those where children are present.
- Sightproof design of the continuous hinge provides privacy for lavatories, executive offices, or file rooms.
- PemkoHinge® products are GUARANTEED FOR THE LIFE OF THE OPENING against defects in material or workmanship with the exception of residential and Standard duty aluminum hinges which carry a 10 year warranty.

Full Surface:

- Designed mainly for retrofit doors and frames.
- HD1 Hinges conform to Grade 2-150 and Grade 1-300.
- Applied to the exposed surfaces of the door and frame.

Why PemkoHinge®?

- Tested and certified with the best warranty in the industry.
- No restrictions on frame gauge and wall conditions.
- No restriction on cutting hinges in field.
- No special cutting instructions or voided warranties.
- No special door and frame preps up to and including 90 minute doors.

Product/Available Finishes:

CFS Clear Anodized Aluminum

BSPFS Black Suede Powder Coat

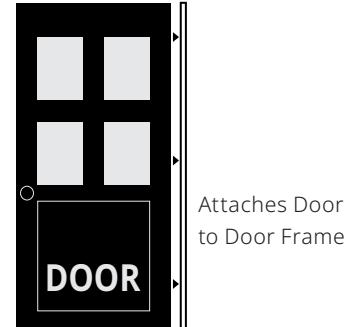
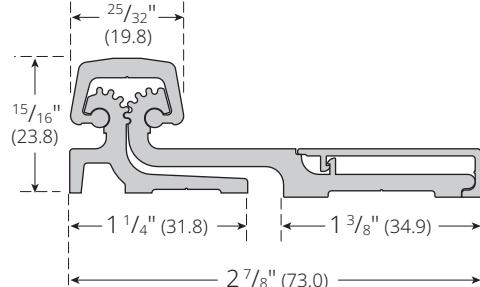
SNFS Satin Nickel Powder Coat

10BEFS Satin Bronze Powder Coat

DFS Dark Bronze Anodized Aluminum

WSPFS White Suede Powder Coat

GFS Gold Powder Coat

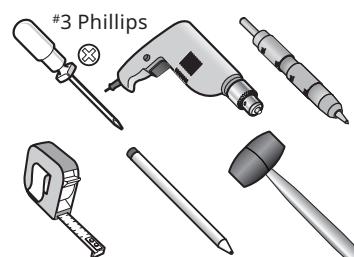


Testing/Ratings:

Aluminum continuous hinge for use on swinging type fire doors of the hollow metal, tin-clad, sheet metal and steel covered composite type rated up to 3 hours, wood covered composite type rated up to and including 1 1/2 hours. Also wood core rated up to and including 20 minutes without hose stream. Meet criteria of UBC 7.2 for positive pressure.



Tools Required:



Installation Instructions:

Full Surface units are designed mainly for retrofit work, and are applied to the exposed surface of the door and frame, with clearances as shown in **Figures A & B**.

1. Open the PemkoHinge® leafs and position the frame leaf portion on the face of the frame. Allow $\frac{1}{8}$ " clearance between top of PemkoHinge® and frame header for proper door head clearance.
2. Mark and center punch each hole on frame with hinge held firmly in place. Remove hinge. (A center punch can help center hole, so that fasteners will enter straight.)
3. Drill for #12-24 screws, per **Drill Size Chart** (below), and attach frame leaf to frame with #3 Phillips drive. (Use wax or soap on screws to aid installation.)
4. Position the door in the opening; shim to adjust for proper clearance (See **Figures A** and **B**).
5. Install the six (6) #12-24 x $\frac{3}{4}$ " self drill/tapping screws in the six (6) $\frac{7}{32}$ " holes located in the door leaf portion of the hinge.
6. Remove shims and open the door. Check for proper swing and clearances. Adjust if required.
7. Close the door. Mark the centers of the remaining holes. Drill holes all the way through the door using a $\frac{1}{4}$ " diameter drill.
8. Open the door. Enlarge the $\frac{1}{4}$ " holes on the inside face of the door using a $\frac{3}{8}$ " dia. drill. Finish attaching door leaf portion of PemkoHinge® to the face of the door using the four (4) thru-bolts and shoulder bolts. Thru-bolts attach from inside face; shoulder bolts attach from the outside of face.
9. To complete the installation, secure the cover by hooking the edge away from hinge gears under the door leaf and then snap the other edge over using a rubber mallet on far side, working from top to bottom. Adjust so top of cover is flush with top of hinge (**Figure 1**).
10. **Firepins** are required on 3 hour (A-Label) assemblies.

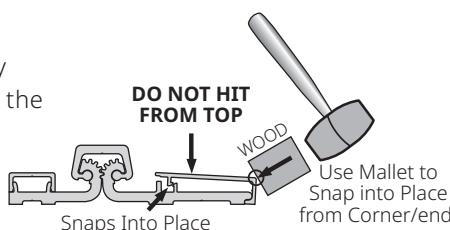


FIGURE 1

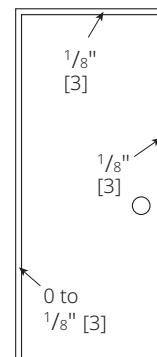


FIGURE A

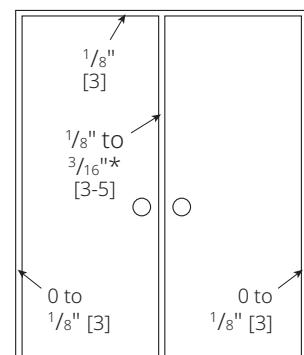


FIGURE B

*Allow extra clearance as required per astragal manufacturer. Certain door and frame conditions may require an extra $\frac{1}{32}$ "- $\frac{1}{16}$ " clearance. Excessive clearance on fire rated assemblies may violate the requirements of NFPA 80.

Shortening the Hinge

If the PemkoHinge® must be shortened, cut the bottom only using a chop saw. This will allow metal chips to work out after the installation. Although the PemkoHinge® is not handed, the hinge becomes handed after cutting and the cut edge must be installed at the bottom of the opening.



Drill Size Chart:

MATERIAL	THICKNESS	DRILL SIZE
ALUMINUM	.090 - .140	13
METAL	20 GAUGE	17
METAL	16-18 GAUGE	15
METAL	12-14 GAUGE	13
WOOD	N/A	$\frac{5}{32}$ "

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Every day, we help billions of people experience a more open world.

ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, businesses and institutions. Our offering includes doors, frames, door and window hardware, mechanical and smart locks, access control and service.

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FIREPINS:

FIREPINS ARE REQUIRED ON 3 HOUR RATED DOORS ONLY.

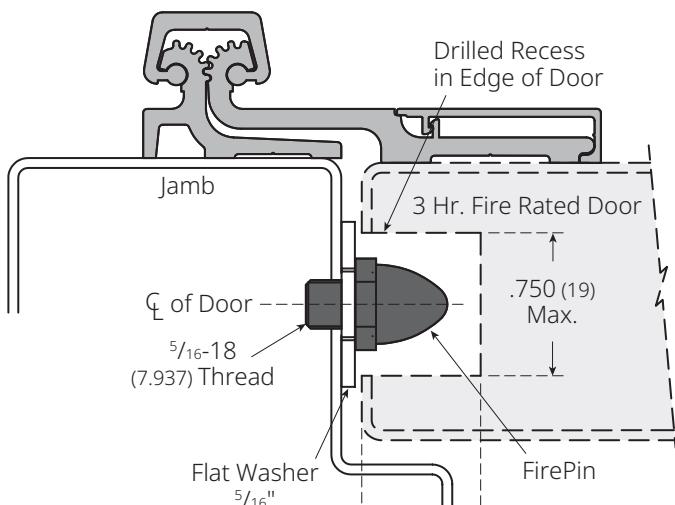
Pin Installation:

Full Surface Hinge:

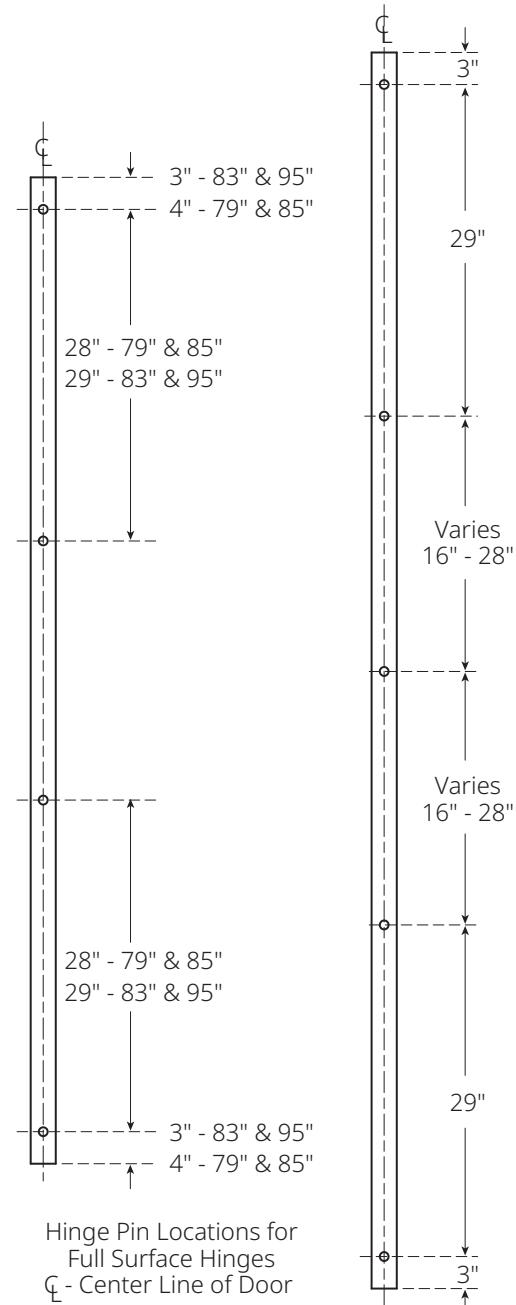
Install PemkoHinge® on door and frame prior to locating pins.

1. Drill and tap for $5/16$ -18 threads in frame as indicated on the template.
2. Insert **FirePin** in threaded hole.
3. Drill $3/4$ " hole $5/8$ " to $3/4$ " deep in edge of door where indicated on the template.

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NOTE: **FirePin** must be ordered with hinge, as hinge prep & UL180 stamp is required.



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