

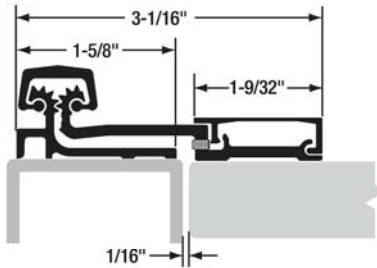


# INSTALLATION INSTRUCTIONS

CG33C-CG33N



**CG33C**

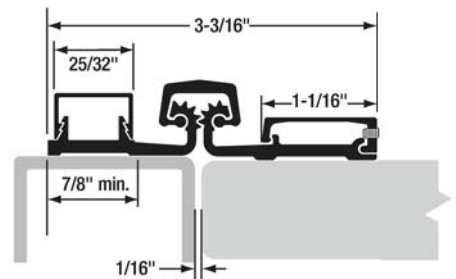


**NOTE:** Model CG33C requires repositioning of existing overhead closer(s) to match the swing clear pivot point of the hinge. Failure to do so will prevent the door from opening more than 70 degrees. Attach hinge leaf cover before reinstalling closer(s).

**NOTE:** Model CH33N requires a minimum 7/8" frame face width for mounting. On wider frames, mark a line at 1" to 1-5/16" from center of clearance between frame and closed door. Align the edge of the hinge frame leaf with mark.



**CG33N**



## Calculating Required Door Clearances

### For Square and Beveled-Edge Doors

**IMPORTANT:** All standard length PBB hinges are supplied slightly shorter than nominal door height to avoid threshold or flooring clearance problems.

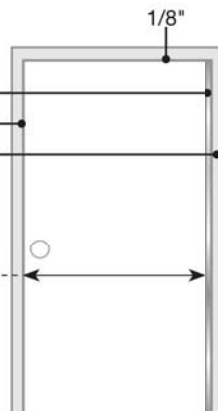
**IMPORTANT:** GC33C and CG33N are non-handed and templated, and remain non-handed aftercutting. Use the same hinge model for either right-hand or left-hand openings.

**IMPORTANT:** Refer to NFPA 80 manual for clearance requirements on fire-rated entrances.

#### SINGLE DOOR:

Hinge side clearance	0"
Latch side clearance	1/8"
Frame variance clearance	1/16"
<b>Total Width Clearance</b>	<b>3/16"</b>

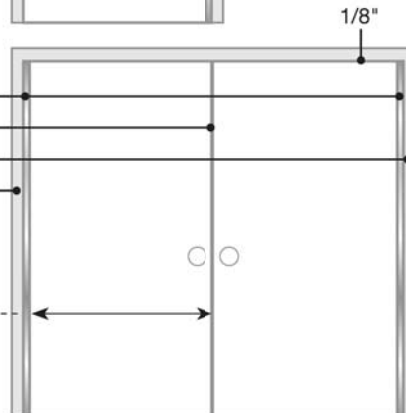
**To determine door width:** -----  
 Subtract the Total Width Clearance from the width of the frame opening.



#### DOUBLE DOORS (PAIR):

Hinge side clearance (2x)	0"
Latch side clearance	3/16"
Frame variance clearance	1/16"
Frame variance clearance	1/16"
<b>Total Width Clearance</b>	<b>5/16"</b>

**To determine door width:** -----  
 Subtract the Total Width Clearance from the width of the frame opening; divide the result by 2.



### Important Warranty Information:

The following actions will void any warranty, expressed or implied:

- Failure to install the hinge according to the Installation Instructions supplied with every PBB hinge.
- Use of fasteners other than those supplied with the hinge.
- Unauthorized field modifications, including alteration or removal of the factory-applied lubricant, altering the original finish or painting the hinge.

**NOTE:** For double-door entrances with a mullion between the pair of doors, calculate each door width using the Single Door clearances.

For double-door entrances with a mullion behind the pair of doors, calculate each door width using the Double Doors clearances.



# INSTALLATION INSTRUCTIONS

CG33C-CG33N

## Tools Needed

- Metal-cutting saw
- #13 or 3/16" drill bit
- 3/8" drill bit
- 5/32" drill bit (wood frames only)
- #3 Phillips drive
- 5/64" Allen wrench
- Hammer
- Shims

## Parts Supplied

- #12-24x1/2" 410 SS thread-forming Phillips undercut flathead screws
- 1-1/2" barrel nuts (sexnuts)
- 1/4-20x1-1/16" shoulder screws
- Striker pins

## Optional Parts

- #12x1-1/2" 410 SS Phillips undercut flathead wood screws
- 1-3/4" barrel nuts for 2" to 2-1/4" thick doors

## How to Cut the Hinge to Fit

- A. Keep hinge in the "door closed" position (Fig. 1).
- B. Using a metal-cutting saw, begin the cut through the hinge cap first.
- C. Remove leaf covers by sliding off from uncut end of hinge.
- D. Reinstall any set screw bearing that may have been cut off.

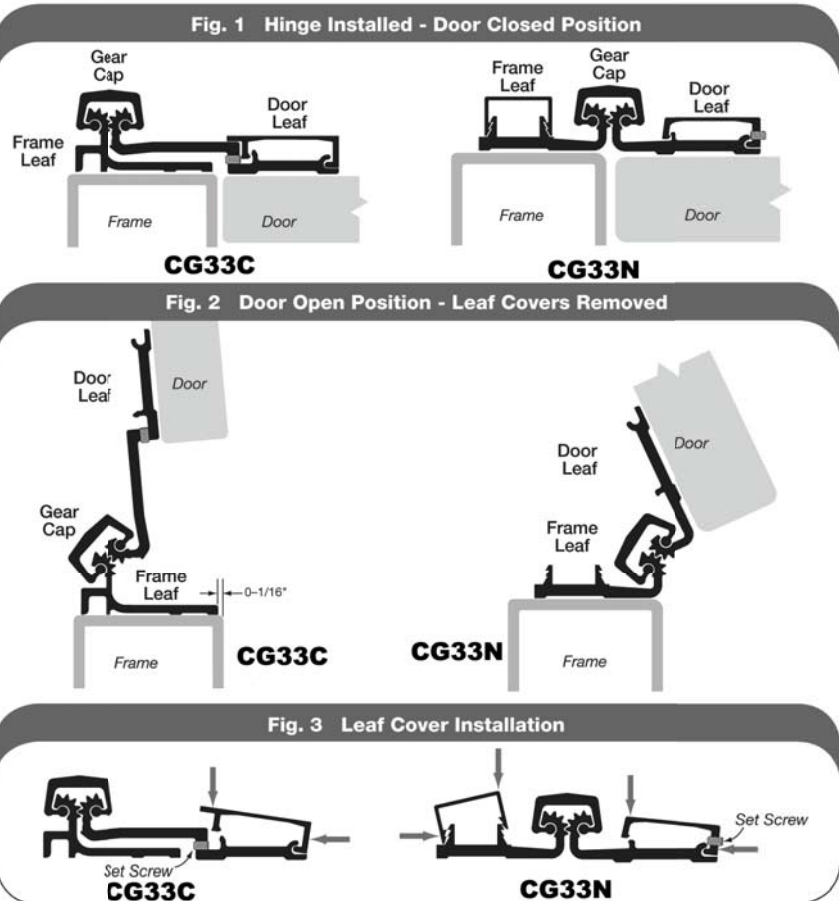
## A. Attach Hinge to Frame

1. Use shims to position the hinge 1/8" below the header to allow for door clearance.
2. Hold hinge in the "door open" position (Fig. 2) and align the frame leaf with the inner edge of door frame or your alignment mark.
3. Mark (or center punch) one hole at top and one hole at bottom of frame leaf. Drill holes at marked locations.
  - Metal door frame: Use a #13 (.185") or 3/16" (.188") drill bit.
  - Wood door frame: Use a 5/32" (.156") drill bit.
4. Fasten frame leaf to door frame.
  - Metal door frame: Use #12-24 flat head screws provided.
  - Wood door frame: Use #12x1-1/2 flat head wood screws (provided upon request).

## B. Prepare Door

5. Shim door into opening to provide required clearances.
6. With #3 Phillips drive, temporarily fasten the door to door leaf through at least two of the four locator holes with the pan head Tek (self-drilling) screws provided.
7. Remove shims and check door clearances.

**NOTE:** Door may sag slightly when shims are removed. Note the amount of adjustment needed to bring door back into alignment.



8. Mark locations for top and bottom barrel nuts on the door using 3/8" striker pin.
9. Remove the door; drill two holes for barrel nuts with a 3/8" drill bit.

## C. Attach Door to Hinge

10. Fasten the door to the door leaf with the top and bottom barrel nuts and two 1/4-20 shoulder screws.
11. Adjust frame leaf as needed to correct door alignment and assure proper door operation.
12. Mark (or center punch) remaining frame leaf hole locations. Drill holes in frame through the frame leaf and secure with flat head screws.
13. Mark remaining 3/8" holes on door through the door leaf. It is recommended that the door be removed and laid on horizontal surface to be sure holes are drilled squarely through both door faces.
14. Secure door to door leaf with barrel nuts and 1/4-20 shoulder screws.

## D. Install Leaf Covers

15. Back out the set screws from side of door leaf cover with 5/64" Allen wrench (Fig. 3).

**NOTE:** For added security, construction adhesive may be applied to inside of leaf cover before installing.

16. Align the end of the leaf cover with the top end of the hinge.

17. Starting from the top, apply pressure along the length of the cover, snapping it into place as you move downward (Fig. 3).

**NOTE:** CG33N frame leaf cover is a press fit. Use a hammer to tap cover into place, being sure to protect the surface of the cover from damage.

18. Tighten set screws using 5/64" Allen wrench.

## Reinforcing & Rivnuts®

No hinge reinforcement is necessary except on extremely high-frequency, extremely heavy or extra-wide doors. Rivnuts are recommended for use in the frame when the door exceeds 450 lb. (max. 600 lb.)

**NOTE:** Only PBB steel Rivnuts are to be used with fire-rated PBB hinges.

## Grouted/Slushed-in Frames

For ease of installation, it is recommended some sort of mudguard be installed behind the frame. Do not use self-drilling, thread-forming screws to drill into grouted frames. If mudguards have not been used, carefully drill pilot holes through frame and remove grout for screw clearance. Do not oversize holes in frame.

## Fire-Rated Hinges

All stock PBB hinges are 90 minute UL-rated, without pins. Please contact PBB for complete information about its fire-rated hinges.