



Door Frame & Hardware Installation

A Pre Installation Meeting provides the opportunity for installers to be prepared to accurately follow the specifications and ensure that the referenced standards are satisfied. For example, *NFPA 80 Standard for Fire Doors and Other Opening Protectives* has articles defining required clearance dimensions that could only result from proper installation of doors, frames and hardware.

The Door and Hardware Supplier, Architect and Contractor should attend the Pre Installation Meeting. All types of openings should be addressed with particular attention given to fire-rated openings. The following documents cross-reference each other and will serve as a guide for arranging the agenda and ensure all parties have adequate information for correct installation.

- **Division 8 specification sections** will list the referenced publications and define the procedures for submitting shop drawings, approved hardware schedules and manufacturers templates.

Issues that can be addressed in these documents include wall reinforcement for wall mounted stops, protection of hardware and fasteners affected by frames filled with grout and identifying which openings are fire rated. The installer needs to be aware so as to not inadvertently void the label by improper drilling or cutting fire-rated doors. Warranties are also dependent on correct installation.

- **ANSI A250.11 Recommended Erection Instructions for Steel Frames** describes recommended methods for the installation of steel frames for swinging doors in a variety of wall conditions commonly used in commercial buildings.

Article 2.1 Storage of frames at the job site states that "All frames shall be stored under cover. Assembled frames shall be stored vertically. The units shall be placed on at least 4" (102 mm) high wood sills or in a manner that will prevent rust or damage. The use of non-vented plastic or canvas shelters that can create a humidity chamber shall be avoided."

Article 3.1 Plumbing the frame reads "The contractor should be equipped with a carpenter level, square and **wood spreaders**. Where welded frames are provided with spreader bars, they shall be removed before setting frames. Set the frame in the desired location and level the header. Square jambs to header. Shim under jambs if necessary. With frame on line, set wood spreader and fasten jambs to floor through floor anchors. The spreader bars shipped with welded frames are also called shipping bars. This article is accompanied by illustrations.

Article 7 Steel stud wall construction describes the procedure for installing frames in steel stud walls with drywall. This article includes a note that drywall must extend ½" into the frame at fire-rated openings.

- **SDI 122 Installation and Troubleshooting Guide for Standard Steel Doors and Frames** describes many post installation techniques for making adjustments to steel doors and frames, including illustrated instructions for shimming hinges. Cross referencing with NFPA 80 will further clarify the acceptability of these procedures.
- **NFPA 80 Standard for Fire Doors and Other Opening Protectives** sets national standards for the installation and maintenance of fire-rated assemblies.



Article 6.4.3.4 Shimming allows hinges to be shimmed in order for the opening to meet clearances stated in **6.3.1.7** provided the shims are made of steel. **6.4.3.2.1** states that “Hinges shall be secured in accordance to the listing and the manufacturer’s installation instructions.” Then, **6.4.3.2.2** requires mortise hinges to be fastened with steel machine screws.

Fasteners are mentioned again in **6.4.1.3** pertaining to closers by requiring the use of steel screws or through-bolts. The use of correct fasteners not only allows fire ratings to remain intact but also results in optimum holding power and correct product performance.

Referenced standards are tied together to help ensure the result is correct hardware properly installed.

To acquire CEP points, answer the following questions:

1. List two reasons for using the correct fasteners for surface mounted closers

2. Problems relating to door and hardware installation can be avoided by

3. Name three standards that should be referenced in the specification.

4. Where is information regarding hinge shimming for fire rated doors located?

You will earn 3 CEP points by reading the article and answering the problems. Upon completion, copy or detach this page, fill in the form below, and submit your answers by mailing or faxing the page to DHI.



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To acquire CEP points, answer the following questions:

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|---|--|
| <p>1. List two reasons for using the correct fasteners for surface mounted closers
Required for fire rating, maximum holding power</p> | <p>3. Name three standards that should be referenced in the specification.
NFPA 80, ANSI/SDI A250.11, SDI 122</p> |
| <p>2. Problems relating to door and hardware installation can be avoided by
The Pre Installation meeting</p> | <p>4. Where is information regarding hinge shimming for fire rated doors located?
SDI 122 and NFPA 80 6.3.1.7</p> |
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