

TECHNICAL DATA SERIES

SDI
110-18

**Standard Steel Doors
and Frames**
for
Modular Masonry Construction



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STEEL DOOR INSTITUTE
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Standard Steel Doors and Frames for Modular Masonry Construction

The Module

Definition:

The size of any individual part, taken as a unit of measure for regular proportion. A basic unit of measure adopted by the building industry as 4 inches.

Concept:

The use of a standard modular dimension common to building products such as masonry improves finished buildings and structures in the following ways:

- Increased accuracy, legibility, and simplicity of contract documents.
- Added aesthetic flexibility induced by small unit standardization, allowing freedom of architectural design.
- Increased flexibility of finished structure through lower modification, addition, and renovation costs.
- Reduced overall material and labor costs by facilitating the use of standard practices and definable operating procedures.
- Interchangeability of materials is facilitated by the ability to substitute modular components.
- Estimating and takeoff simplified.
- Detailing and drawing coordination between trades and specialties simplified by small size standard grid.

Dimensions:

Concrete masonry units (CMU) have been standardized to a nominal 8" high and 16" long module.

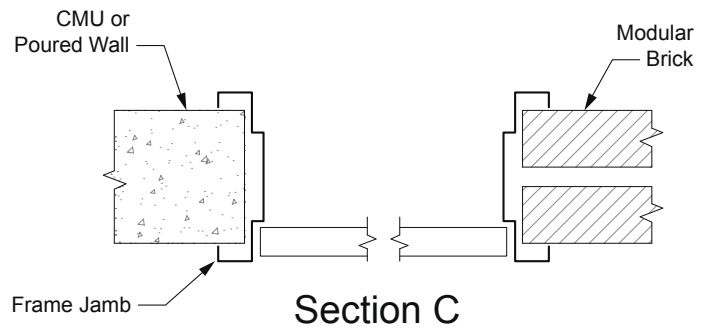
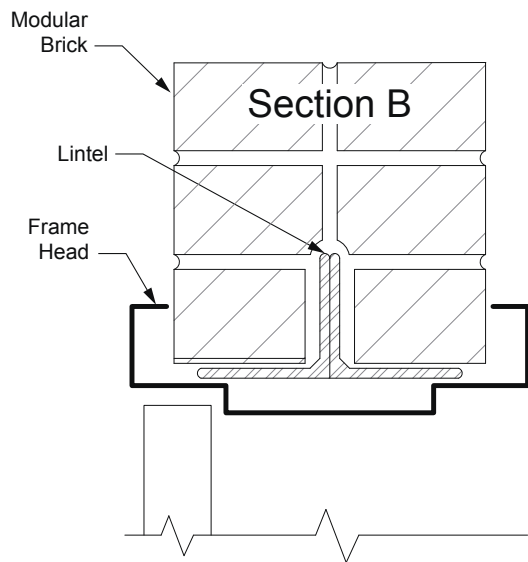
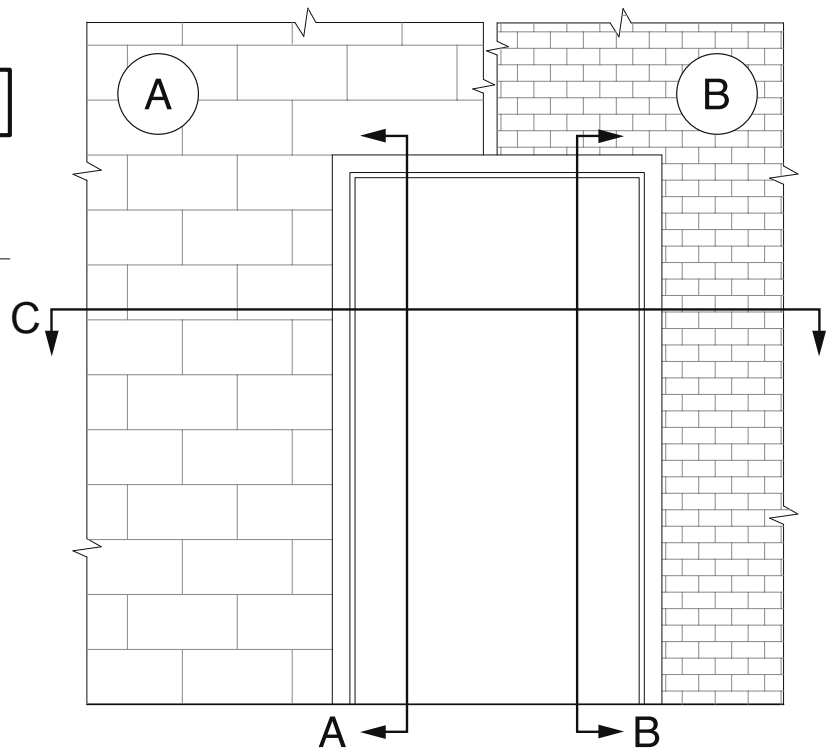
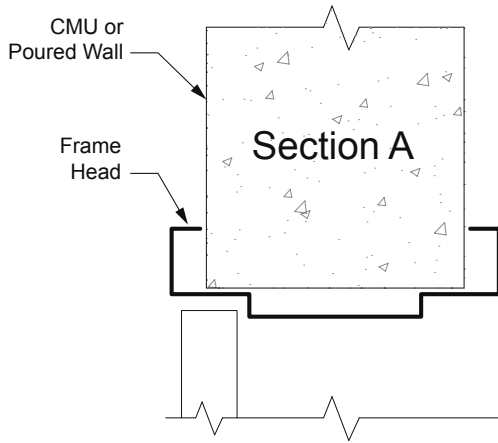
Modular bricks have been standardized to a nominal 2 ²/₃" high and 8" long module, therefore 6 bricks correspond to the modular size of CMU. This relationship is clearly shown on the following pages.

Frame Installation in Cast-In-Place Concrete Walls

While the use of hollow metal frames in cast-in-place concrete walls is a common construction practice, the SDI does not recommend the inclusion of the frame as part of the process of pouring the wall. Instead, a rough-opening should be blocked out no less than ³/₁₆" (4.8 mm) larger than the frame on all three sides. For example the opening for a 3'0" x 7' 0" standard frame with 2" faces would be 3' 4 ³/₈" x 7' 2 ³/₁₆" minimum. The installer is responsible for anchoring the frame per the manufacturer's installation instructions, shimming and aligning as necessary.

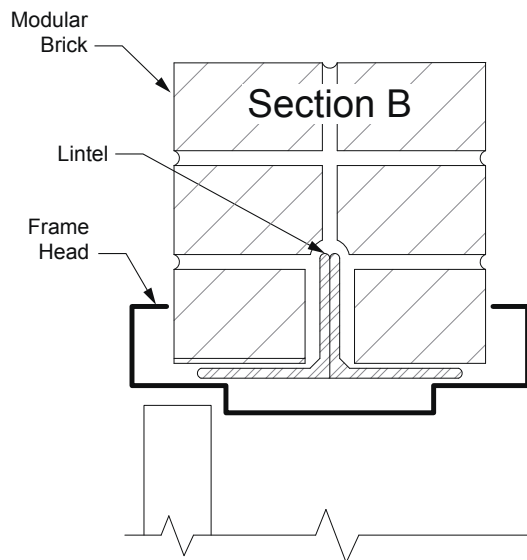
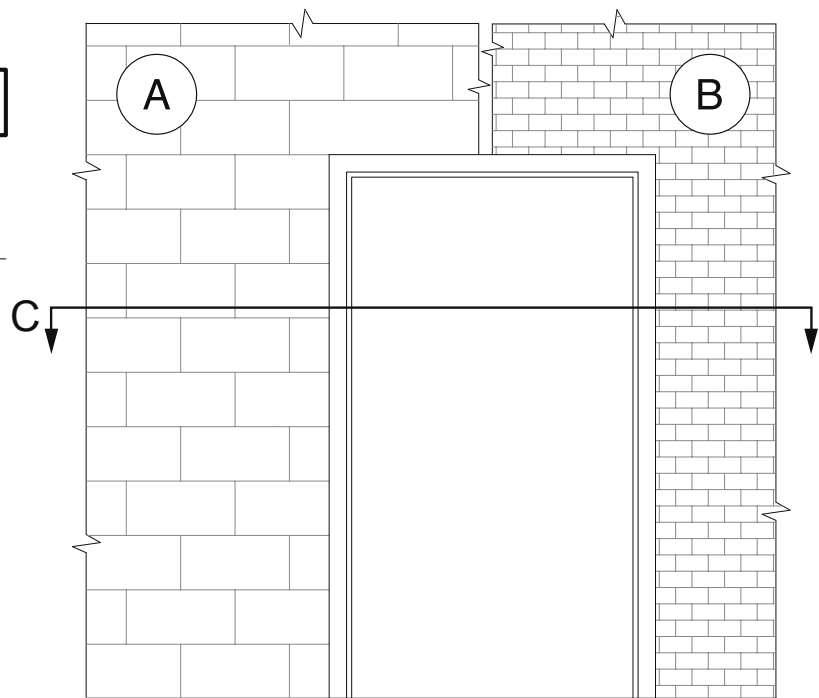
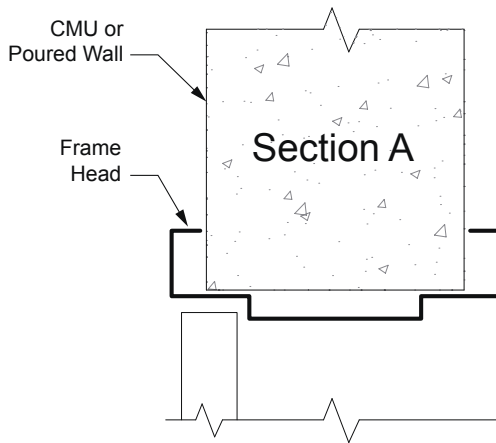
Wrap Around Frame

6' 8" or 8' 0" Door

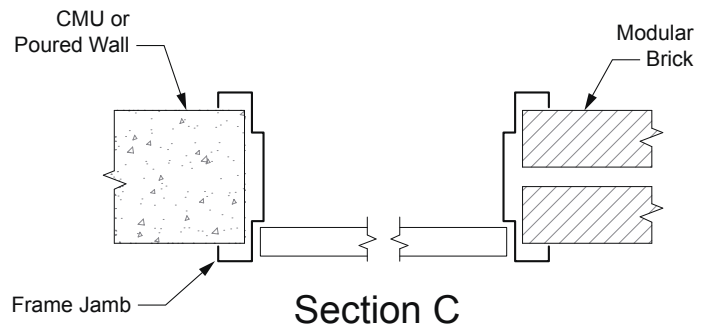


Wrap Around Frame

7' 0" Door

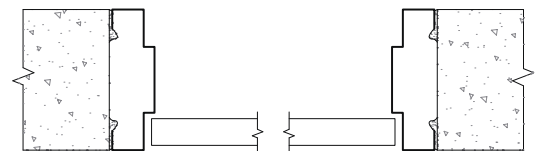
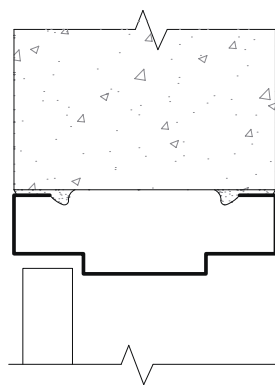
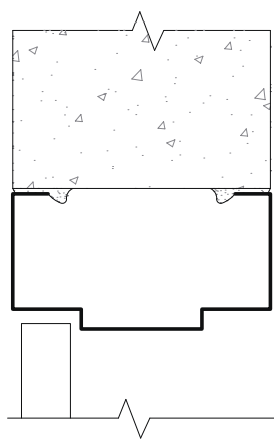
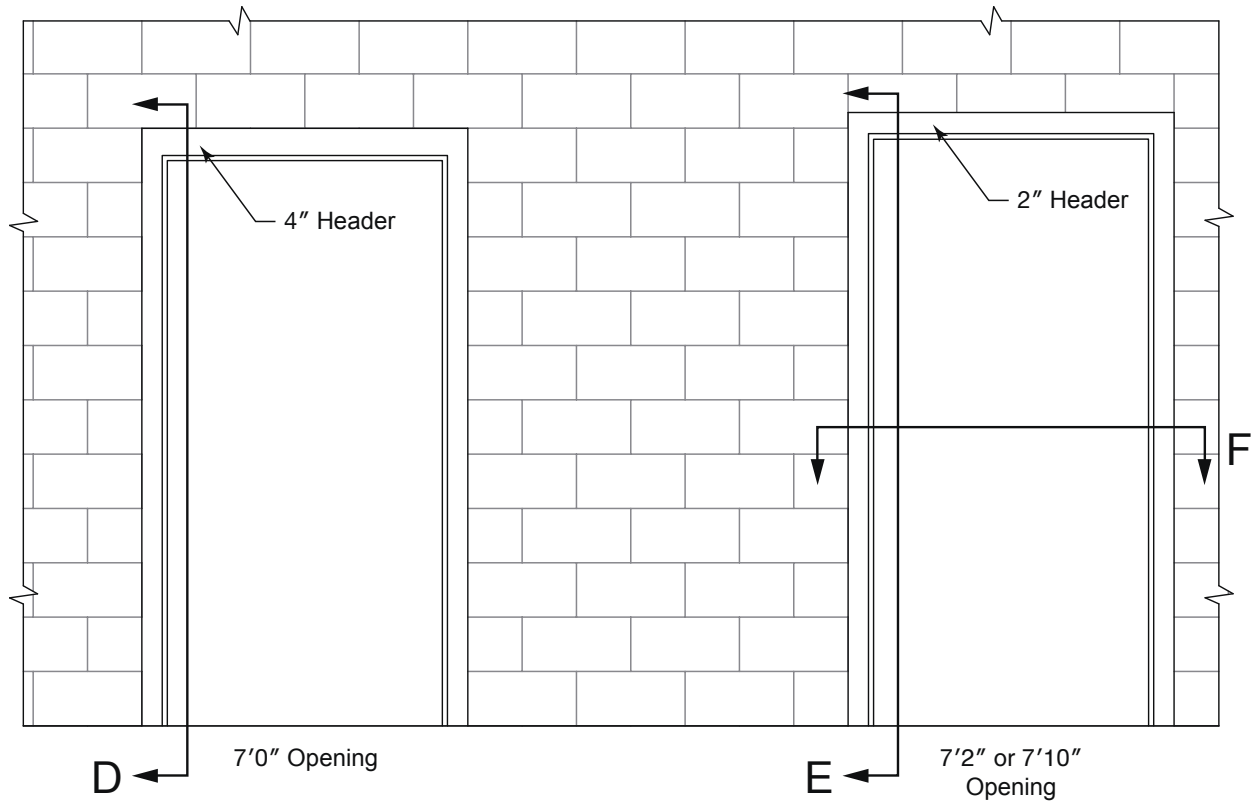


Note: A starter course of 4" modular masonry may be used to create alignment of the frame head with the masonry joints.



Butt Type Frame

7' 0" Door with 4" Header or
7' 2" and 7' 10" Doors with 2" Header



AVAILABLE PUBLICATIONS

Specifications

- ANSI/SDI A250.6** Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames
- ANSI/SDI A250.8** Specifications for Standard Steel Doors and Frames (SDI-100)
- SDI-108** Recommended Selection & Usage Guide for Standard Steel Doors
- SDI-118** Basic Fire Door, Fire Door Frame, Transom/Sidelight Frame, and Window Frame Requirements
- SDI-128** Guidelines for Acoustical Performance of Standard Steel Doors and Frames
- SDI-129** Hinge and Strike Spacing
- SDI-133** Guideline for Specifying Steel Doors & Frames for Blast Resistance
- SDI-136** Guideline for Specifying Windstorm Products

Test Procedures

- ANSI/SDI A250.3** Test Procedure & Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames
- ANSI/SDI A250.4** Test Procedure & Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors
- ANSI/SDI A250.10** Test Procedure & Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames
- ANSI/SDI A250.13** Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies for Protection of Building Envelopes (Not applicable for FEMA 320/361 or ICC-500 Shelters)
- SDI-113** Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door and Frame Assemblies
- SDI-131** Accelerated Physical Endurance Test Procedure for Steel Doors

Construction Details

- ANSI/SDI A250.11** Recommended Erection Instructions for Steel Frames
- SDI-110** Standard Steel Doors & Frames for Modular Masonry Construction
- SDI-111** Recommended Details for Standard Steel Doors, Frames, Accessories and Related Components
- SDI-122** Installation Troubleshooting Guide for Standard Steel Doors & Frames

Miscellaneous Documents

- SDI-112** Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames
- SDI-117** Manufacturing Tolerances for Standard Steel Doors and Frames
- SDI-124** Maintenance of Standard Steel Doors & Frames
- SDI-127** Industry Alert Series (A-L)
- SDI-130** Electronic Hinge Preparations
- SDI-134** Glossary of Terms for Hollow Metal Doors and Frames
- SDI-135** Guidelines to Measure for Replacement Doors in Existing Frame Openings

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