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INTRODUCTION

This Technical Data Manual is designed as a support and informational tool for Mesker Door™ Products used by Architects, Distributors, Specification Consultants / Writers and Engineers.

Mesker Door™ is the oldest hollow metal door and frame manufacturer in America. In fact, we invented the hollow metal door over 145 years ago. Visit [http://www.oldestmetaldoor.com](http://www.oldestmetaldoor.com) for more information and a detailed timeline on our company history.

If you want superior quality and great value, you’ve come to the right place. At Mesker Door™, our uncompromising dedication to value is backed by an international network of distributors and exceptional customer service that makes us the choice of contractors and architects throughout the world.

With the best in class fit and finish, our doors and frames are the most rugged and durable in the commercial construction industry. We frequently exceed architectural design specifications as well as the specifications of the Steel Door Institute (SDI), of which we’re the oldest member.

Our mantra is simple. We cut metal, not corners. We bend steel, not rules. And we shine as the oldest hollow metal door and frame fabricator in America.

LITERATURE

Standards referenced in this Technical Manual can be obtained directly from the publisher of that literature. Refer to the organization listed below to obtain more information on the standards published.

- **ANSI** American National Standards Institute [www.ansi.org](http://www.ansi.org)
- **ASTM** American Society for Testing and Materials [www.astm.org](http://www.astm.org)
- **CSI** Construction Specifications Institute [www.csinet.org](http://www.csinet.org)
- **DHI** Door and Hardware Institute [www.dhi.org](http://www.dhi.org)
- **NFPA** National Fire Protection Association [www.nfpa.org](http://www.nfpa.org)
- **SDI** Steel Door Institute [www.steeldoor.org](http://www.steeldoor.org)
- **UL** Underwriters Laboratories, Inc. [www.ul.com](http://www.ul.com)
- **WH** Warnock Hersey (Intertek) [www.intertek-etlsemko.com](http://www.intertek-etlsemko.com)
- **FM** FM Global [www.fmglobal.com](http://www.fmglobal.com)

ERRORS AND OMISSIONS

Every effort has been made to ensure the completeness and accuracy of the Mesker Door™ Technical Manual. The data sheets will be updated whenever it is deemed necessary, as new products are introduced, new tests are completed and new technologies are developed. For these reasons and because of the nature and scope of the subject, Mesker Door™ and its employees can assume no responsibility or liability for the absolute accuracy of the material contained herein or its use. The information in this Technical Manual is subject to change without notice.

Please contact the Mesker Door™ Customer Service Department at [www.meskerdoor.com](http://www.meskerdoor.com) if you identify any errors or omissions.
GENERAL INFORMATION

DOOR LEVELS AND MODELS

Standard steel doors are classified in four levels: Level 1—1 3/4” standard duty, Level 2 1 3/4” heavy duty, Level 3—1 3/4” extra heavy duty and Level 4—1 3/4” maximum duty.

Each of the four levels noted above offer a range of construction models and designs to meet architectural requirements for preference and appearance. The standard steel door construction models are full flush or full flush with seamless edge.

Recommended minimum gauge requirements for the various levels and models of standard steel doors are indicated in the table below.

Selection of standard steel doors for general usage is made by analyzing criteria such as frequency of use, including subjection to and degree of possible abuse. Other criteria to be considered in door selection are: conformance to local building codes and fire code regulations; sound attenuation and/or insulation requirements; and architectural design and appearance.

The suggested door levels and model chart below is a reference aid matching standard duty, heavy duty and maximum duty doors with general usage requirements within the classification of buildings. Where optional door levels and models are indicated, further analysis on an individual job basis is recommended.

<table>
<thead>
<tr>
<th>Level</th>
<th>Model</th>
<th>Full Flush or Seamless</th>
<th>Construction</th>
<th>Mesker Series</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MSG No.</td>
<td>IP in</td>
<td>SI mm</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Standard</td>
<td>20</td>
<td>0.032</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Duty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Heavy</td>
<td>18</td>
<td>0.042</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Duty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Extra</td>
<td>16</td>
<td>0.053</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Heavy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Maximum</td>
<td>14</td>
<td>0.067</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Duty</td>
<td></td>
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</tr>
</tbody>
</table>

This chart and chart on page G-3 taken from SDI-108, Recommended selection and usage guide for standard steel doors.
## Suggested Usage Guide

<table>
<thead>
<tr>
<th>Building Types</th>
<th>Standard Steel Door Levels</th>
<th>Door Design Nomenclature</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>Standard Duty</td>
<td>Heavy Duty</td>
</tr>
<tr>
<td></td>
<td>1-3/4&quot;</td>
<td>1-3/4&quot;</td>
</tr>
</tbody>
</table>

### Apartment
- Main Entrance: X X X X X X X
- Unit Entrance: X X X
- Bedroom: X X X
- Bathroom: X X
- Closet: X
- Stairwell: X X X

### Dormitory
- Main Entrance: X X X X X X X
- Unit Entrance: X X
- Bedroom: X X X
- Bathroom: X X X
- Closet: X
- Stairwell: X X
- Storage/Utility: X

### Hotel - Motel
- Main Entrance: X X X
- Bathroom: X
- Closet: X
- Stairwell: X X X
- Storage/Utility: X

### Hospital - Nursing Home
- Main Entrance: X X X X X X
- Patient Room: X
- Stairwell: X X X
- Operating/Exam: X X
- Bathroom: X X X
- Closet: X X X
- Recreation: X X
- Kitchen: X

### Industrial
- Entrance/Exit: X X X X X X
- Office: X X X
- Production: X
- Toilet: X X X
- Tool: X X X
- Trucking: X X X
- Monorail: X X X

### Office
- Entrance: X X X X X
- Individual Office: X X
- Closet: X
- Toilet: X X X
- Stairwell: X X X
- Equipment: X X X
- Boiler: X X X

### School
- Entrance/Exit: X X X X X X
- Classroom: X X X
- Toilet: X X X X X
- Gymnasium: X X X X X
- Cafeteria: X X X
- Stairwell: X X X
- Closet: X X X X

---

Note: This is only a guide. Compliance with the local and national codes is the responsibility of the specifier.
GENERAL INFORMATION

DOOR STYLES

<table>
<thead>
<tr>
<th>F</th>
<th>V</th>
<th>G</th>
<th>FG</th>
<th>G2</th>
<th>FL</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>N3</td>
<td>N6</td>
<td>L</td>
<td>LT</td>
<td>M</td>
<td>R</td>
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NOMENCLATURE FOR DOOR STYLES

<table>
<thead>
<tr>
<th>F</th>
<th>FLUSH</th>
<th>N6</th>
<th>5”x60” EXPOSED GLASS</th>
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</thead>
<tbody>
<tr>
<td>V</td>
<td>VISION LITE</td>
<td>L</td>
<td>LOUVERED</td>
</tr>
<tr>
<td>G</td>
<td>HALF GLASS</td>
<td>LT</td>
<td>LOUVERED TOP</td>
</tr>
<tr>
<td>FG</td>
<td>FULL GLASS</td>
<td>M</td>
<td>DIAMOND LITE</td>
</tr>
<tr>
<td>G2</td>
<td>TWO EQUAL LITES</td>
<td>R</td>
<td>ROUND LITE</td>
</tr>
<tr>
<td>FL</td>
<td>FULL LOUVER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>DUTCH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N1</td>
<td>3”x33” EXPOSED GLASS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N3</td>
<td>5”x20” EXPOSED GLASS</td>
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</table>
# GENERAL INFORMATION

## DOOR STYLes

<table>
<thead>
<tr>
<th>SP SERIES</th>
<th>P4 SERIES</th>
<th>P2B SERIES</th>
<th>P2S SERIES</th>
<th>P2A SERIES</th>
<th>NW SERIES</th>
<th>SPW SERIES</th>
</tr>
</thead>
</table>

## NOMENCLATURE FOR DOOR STYLES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SP</td>
<td>6 PANEL</td>
</tr>
<tr>
<td>P4</td>
<td>4 PANEL W/LONG TOP</td>
</tr>
<tr>
<td>P2B</td>
<td>2 PANEL BOTTOM</td>
</tr>
<tr>
<td>P2S</td>
<td>2 PANEL W/ SQUARE TOP</td>
</tr>
<tr>
<td>P2A</td>
<td>2 PANEL W/ARCH TOP</td>
</tr>
<tr>
<td>NW</td>
<td>FLUSH WOOD GRAIN</td>
</tr>
<tr>
<td>SPW</td>
<td>6 PANEL WOOD GRAIN</td>
</tr>
</tbody>
</table>

* Other panel options available for orders of 100 doors or more. Please consult with the factory for details.
GENERAL INFORMATION

HANDING

To determine the hand of a door, view the door from the Secure Side (the side the hinges are on is the hand of the door).

- If the door swings away from the viewer, the hand is regular hand, i.e., right or left hand.
- If the door swings to the viewer, the door is reverse swing, i.e., right hand reverse swing or left hand reverse swing.

<table>
<thead>
<tr>
<th>Right Hand Door (swing in) Right Hand Frame</th>
<th>Left Hand Door (swing in) Left Hand Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Right Hand Door Diagram]</td>
<td>![Left Hand Door Diagram]</td>
</tr>
<tr>
<td>RH Lock</td>
<td>LH Lock</td>
</tr>
<tr>
<td>Secure Side</td>
<td>Secure Side</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Right Hand Reverse Door (swing out) Left Hand Frame</th>
<th>Left Hand Reverse Door (swing out) Right Hand Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Right Hand Reverse Door Diagram]</td>
<td>![Left Hand Reverse Door Diagram]</td>
</tr>
<tr>
<td>RHR Lock</td>
<td>LHR Lock</td>
</tr>
<tr>
<td>Secure Side</td>
<td>Secure Side</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pair of Doors - LH Active (swing in) Double Door Frame - LH Active</th>
<th>Pair of Doors - RH Active (swing in) Double Door Frame - RH Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Pair of Doors - LH Active Diagram]</td>
<td>![Pair of Doors - RH Active Diagram]</td>
</tr>
<tr>
<td>LH Lock</td>
<td>RH Lock</td>
</tr>
<tr>
<td>Secure Side</td>
<td>Secure Side</td>
</tr>
<tr>
<td>Z Astragal</td>
<td>Z Astragal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pair of Doors - LHR Active (swing out) Double Door Frame - RH Active</th>
<th>Pair of Doors - RHR Active (swing out) Double Door Frame - LH Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Pair of Doors - LHR Active Diagram]</td>
<td>![Pair of Doors - RHR Active Diagram]</td>
</tr>
<tr>
<td>LHR Lock</td>
<td>RHR Lock</td>
</tr>
<tr>
<td>Secure Side</td>
<td>Secure Side</td>
</tr>
<tr>
<td>Flat Astragal</td>
<td>Flat Astragal</td>
</tr>
</tbody>
</table>

MESKER™
The newest innovations in hollow metal from the oldest hollow metal door company in America
METAL GAUGES

This document is for reference to the common gauges of steel frequently used in the Steel Door Industry.

Manufacturers no longer order sheet and coil to a specific gage, but rather to a minimum decimal thickness. This thickness is the lowest of the range for a specific gage. The steel supplier is therefore permitted to exceed, but not be less than the specific decimal thickness. These minimum values meet the stringent requirements of both Underwriters Laboratories Inc. and ITS / Warnock Hersey. Examples of minimum allowable steel thickness are listed below.

For zinc coated (galvannealed) steel sheets, the coating thickness only slightly increases steel thickness. One ounce of zinc per square foot corresponds to an average thickness of 0.0017” (total of both sides). A60 material has an average coating thickness of 1 mil (0.001") or .0005” per side which is 50% greater protection than A40 coating.

Gauge, Minimum - Uncoated Flat Rolled Steel

<table>
<thead>
<tr>
<th>Level</th>
<th>Model</th>
<th>Minimum Thickness</th>
<th>MSG No. (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0.032</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.032</td>
<td>0.8</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0.042</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.042</td>
<td>1.0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>0.053</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
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<td>1.3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>1</td>
<td>0.067</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.067</td>
<td>1.7</td>
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</table>

This chart is taken from SDI – A250.8.
### GENERAL INFORMATION

#### COMPARISON FOR FRAMES
4-1/2" HINGE

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Height</th>
<th>Strike</th>
<th>1st Hinge</th>
<th>2nd Hinge</th>
<th>3rd Hinge</th>
<th>4th Hinge</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
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<td>AMWELD</td>
<td>6'-8&quot;</td>
<td>40-5/16&quot;</td>
<td>7-1/2&quot;</td>
<td>37-7/16&quot;</td>
<td>67-3/8&quot;</td>
<td>X</td>
<td>5/16&quot;</td>
<td>3/16&quot;</td>
<td>1/16&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td></td>
<td>7'-0&quot;</td>
<td></td>
<td></td>
<td>39-7/16&quot;</td>
<td>71-3/8&quot;</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7'-2&quot;</td>
<td></td>
<td></td>
<td>39-7/16&quot;</td>
<td>71-3/8&quot;</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7'-10&quot;</td>
<td></td>
<td></td>
<td>32-13/16&quot;</td>
<td>58-1/8&quot;</td>
<td>83-7/16&quot;</td>
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<td>83-7/16&quot;</td>
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<td>BENCHMARK</td>
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<td>5&quot;</td>
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<td>69-1/2&quot;</td>
<td>X</td>
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<td>7'-2&quot;</td>
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<td>37-1/4&quot;</td>
<td>69-1/2&quot;</td>
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<td>CURRIES</td>
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<td>5&quot;</td>
<td>35-1/4&quot;</td>
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GENERAL INFORMATION

PRODUCT COMPLIANCE PER ANSI / ASTM TEST METHODS

ASTM A366/A366M  Standard Specification for Commercial Steel (CS) Sheet, Carbon (0.15 Maximum Percent) Cold-Rolled
Replaced by A1008

ASTM A653/A653M  Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-coated (Galvannealed) by the Hot-Dip Process

ASTM A1008    Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
Replaces A366

ASTM A1011    Standard Specification for Steel Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability

ASTM A568    Standard Specification for Steel Sheet, Carbon, High-Strength Low-Alloy, Hot-rolled and Cold-rolled

ASTM A591    Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process
Replaced by A879

ASTM A924    Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

ASTM B117    Standard Practice for Operating Salt Spray (Fog) Apparatus

ASTM C578    Specification for Rigid, Cellular Polystyrene Thermal Insulation

ASTM D1654    Standard Test Method for Evaluation of Painted or Coated Specimens


ASTM D3359    Standard Test Methods for Measuring Adhesion by Tape Test


ASTM D610    Standard Test Method for Evaluation Degree of Rusting on Painted Steel Surfaces

ASTM D714    Standard Test Method for Evaluation Degree of Blistering of Paints


HMMA 801    Glossary of Terms for Hollow Metal Doors and Frames

HMMA 802    Manufacturing of Hollow Metal Doors and Frames

HMMA 810    Hollow Metal Doors
GENERAL INFORMATION

SURFACE PREPARATION AND PAINTING

Mesker Door’s™ recommended guidelines for preparation and painting of doors and frames.

Maintenance of Steel Doors and Frames should be done in accordance with SDI 124-98 “Maintenance of Standard Steel Doors and Frames”.

Priming and painting of steel doors and frames should be done in accordance with SDI A250.8, sections 2.1.3, 2.1.4, and 2.1.5. We also recommend following ANSI A250 recommendations, including but not limited to A250.8 4.1-4.6, and appendix “B” listed below

A250.8-2003 “Recommended Specifications for Standard Steel Doors and Frames”

Appendix B, General Considerations, Aesthetics

“The production of steel doors and frames relies on a variety of manufacturing processes including spot welding, projection welding, arc welding ground smooth, grinding, filling, etc. These processes may result in a show-through after application of finished paint. These characteristics are inherent in production and are not to be considered as manufacturing defects.

The show-through characteristics increase as the paint gloss increases. This standard recommends a maximum paint gloss rating of 20% reflectance, measured using a 60° gloss meter, which should be suitable for most applications. Translucent paints may emphasize show-through characteristics and their use is not recommended.”

Mesker Door™ does not recommend the use of gloss paints. Sprayed on gloss paints are particularly difficult to use. If gloss paints are used, a considerable amount of cleaning, sanding and painting will be required and may still emphasize show through characteristics. Mesker Door™ does not recommend using black or dark colored paint on exterior doors, without allowing for additional expansion and contraction.

Mesker Door™ does not recommend the use of water based paints as final top coats. If water based paints are used as a finish coat, you should first prime the door or frame with a primer with rust inhibitors recommended by the paint manufacturer for bare steel. If the door is not primed in this way, all scratches and nicks that expose bare steel will develop rust. It is also extremely important to clean any and all metal particles that may be on the prime coat prior to painting. These may include small metal shavings from sanding or other jobsite operations and will cling to the door or frame with static electricity. These particles will show rust through the finish paint but are not rust of the actual frame or door.
GENERAL INFORMATION

PRODUCT COMPLIANCE PER ANSI / ASTM TEST METHODS

ANSI/DHI A115      Hardware Preparation in Steel Doors and Steel Frames
ANSI/DHI A115.IG   Installation Guide for Doors and Hardware
ANSI A250.10       Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames
ANSI A250.11       Recommended Erection Instructions for Steel Frames
ANSI A250.13       Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies
ANSI A250.3        Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames
ANSI A250.4        Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcing
ANSI A250.6        Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames
ANSI A250.7        Nomenclature for Standard Steel Doors and Steel Frames
ANSI A250.8        Recommended Specifications for Standard Steel Doors and Frames (SDI-100)
ANSI/BHMA A156.1   Butts and Hinges
ANSI/BHMA A156.3   Exit Devices
ANSI/BHMA A156.4   Door Controls – Closers
ANSI/BHMA A156.7   Template Hinge Dimensions
ANSI/NFPA 105      Standard for the Installation of Smoke Door Assemblies
ANSI/NFPA 252      Standard Methods of Fire Tests for Door Assemblies
ANSI/NFPA 257      Standard on Fire Test for Window and Glass Block Assemblies
ANSI/NFPA 80       Standard for Fire Doors and Windows
ANSI/UL 10B        Standard for Fire Tests of Door Assemblies (neutral pressure)
ANSI/UL 10C        Standard for Fire Tests of Door Assemblies (positive pressure)
ANSI/UL 1784       Air Leakage Test of Door Assemblies
ANSI/UL 9          Fire Test of Window Assemblies
GENERAL INFORMATION

PRODUCT COMPLIANCE PER ANSI / ASTM TEST METHODS

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Replaced by A1008

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ASTM B117 Standard Practice for Operating Salt Spray (Fog) Apparatus

ASTM C578 Specification for Rigid, Cellular Polystyrene Thermal Insulation

ASTM D1654 Standard Test Method for Evaluation of Painted or Coated Specimens


ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test


ASTM D610 Standard Test method for Evaluation Degree of Rusting on Painted Steel Surfaces

ASTM D714 Standard Test Method for Evaluation Degree of Blistering of Paints

ASTM E-90 Standard Test method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

HMMA 801 Glossary of Terms for Hollow Metal Doors and Frames

HMMA 802 Manufacturing of Hollow Metal Doors and Frames

HMMA 810 Hollow Metal Doors
GENERAL INFORMATION

PRODUCT COMPLIANCE PER ANSI / ASTM TEST METHODS

HMMA 810    TN-01-03 Defining Undercuts
HMMA 820    Hollow Metal Frames
HMMA 820    TN 01-03 Grouting Hollow Metal Frames
HMMA 830    Hardware Selection for Hollow Metal Doors and Frames
HMMA 840    Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames
HMMA 850    Fire Rated Hollow Metal Doors and Frames
HMMA 861    Commercial Hollow Metal Doors & Frames
HMMA 865    Guide Specifications for Swinging Sound Control Hollow Metal Doors and Frames
HMMA 867    Guide Specifications for Commercial Laminated Core Hollow Metal Doors and Frames
HMMA 890    Hollow Metal
SDI-106    Recommended Standard Door Type Nomenclature
SDI-108    Recommended Selection and Usage Guide for Standard Steel Doors
SDI-109    Hardware for Standard Steel Doors and Frames
SDI-110    Standard Steel Doors and Frames for Modular Masonry Construction
SDI-111    Recommended Details and Guidelines for Standard Steel Doors, Frames and Accessories (A-H)
SDI-111-A    Recommended Standard Steel Door Details
SDI-111-B    Recommended Standard Details for Dutch Doors
SDI-111-C    Recommended Louver Details for Standard Steel Doors
SDI-111-D    Recommended Door, Frame and hardware Schedule for Standard Steel Doors and Frames
SDI-111-E    Recommended Weatherstripping for Standard Steel Doors and Frames
SDI-111-F    Recommended Existing Wall Anchors for Standard Steel Doors and Frames
SDI-111-G    Recommended Standard Preparation for Double Type (Interconnected) Locks on Standard Steel Doors and Frames
GENERAL INFORMATION

PRODUCT COMPLIANCE PER ANSI / ASTM TEST METHODS

SDI-111-H  High Frequency Hinge Preparations for Frames
SDI-112     Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames
SDI-113     Standard Practice for Determining the Steady State Thermal Transmittance of Steel Door and Frame Assemblies
SDI-117     Manufacturing Tolerances Standard Steel Doors and Frames
SDI-118     Basic Fire Door Requirements
SDI-122     Installation and Troubleshooting Guide for Standard Steel Doors and Frames
SDI-124     Maintenance of Standard Steel Doors and Frames
SDI-127     Series - Industry Alerts (A through J)
SDI-127-A   End Closure
SDI-127-B   Door Edge Cutouts
SDI-127-C   Frame Cutout Limits
SDI-127-D   Electric Strikes in Stud Walls
SDI-127-E   Prime Painted Materials Alert
SDI-127-F   Butted Frames Rough Opening Sizes
SDI-127-G   Environmental Considerations Relating to Factory Painted Steel Doors and Frames
SDI-127-H   Water Penetration
SDI-127-I   Grouting Frames in Drywall
SDI-127-J   Bituminous Back-Coating of Frames
SDI-128     Guidelines for Acoustical Performance of Standard Steel Doors and Frames
SDI-129     Hinge and Strike Spacing
SDI-130     Electrified Hinge Preparations
SDI-131     Accelerated Physical Endurance Test Procedure for Steel Doors, Frames and Frame Anchors
UBC 7-2     Fire Tests of Door Assemblies
UBC 7-4     Fire Tests of Window Assemblies
GENERAL INFORMATION

NOMENCLATURE FOR DOORS AND FRAMES

DOORS:

SERIES

N = Standard Non Handed
NF = Temperature Rise
ST = Steel Stiffened
BR = Bullet Resistant
FE316 = FEMA 316

DOOR CORE:

P = Polystyrene
H = Honeycomb (cardboard)
U = Urethane
F = Fiberboard

STEEL TYPE:

- = Cold Rolled Steel
Z = A60 Galvannealed
G90 = G 90 Galvanized

EDGE CONSTRUCTION:

- = Standard Seamed Edge
NVS = Continuously welded seamless vertical edges, with no putty or filler.
S = Seamless (putty or stitch weld and putty)
GENERAL INFORMATION

NOMENCLATURE FOR DOORS AND FRAMES

FACE:
F = Flush
V = Vision Lite
N = Narrow Lite (specify size)
N1 = Narrow Lite 3" x 33" Exposed Glass
N3 = Narrow Lite 5" x 20" Exposed Glass
N6 = Narrow Lite 5" x 60" Exposed Glass
G = ½ Glass Lite
FG = Full Glass Lite
G2 = 2 Lites
R = Round Lite
M = Diamond Lite
L = Louver at Bottom
FL = Full Louver
D = Dutch door
VP = Viewer
CO = Cutout Only
SP = Six Panel
P4 = Four Panel
P2B = Two Panel Bottom
P2S = Two Panel Square Top
P2A = Two Panel Arch Top
NW = Wood Grain
SPW = Six Panel Wood Grain
GENERAL INFORMATION

NOMENCLATURE FOR DOORS AND FRAMES

STILES:
- = 4.5” Standard weight hinges
4H = 4.5” Heavy Weight Hinges
5 = 5” Standard Weight Hinges
5H = 5” Heavy Weight Hinges
C4 = 161 2 ¾” Backset
C4T = 161 2 ¾” Backset with Thru Bolts
C4 Turtle = 161 2 ¾” Backset with Turtle Prep
MB = 86 Edge No Face Preps
MB+Template = Mortise 86 w/ function holes
RP = Rim Panic Reinforcement
RP+Template = Rim Panic Reinforcement with Function Holes
VR = Vertical Rod Panic Reinforcement
MBN = Mortise Box Reinforcement No Edge Prep
BV = Beveled Edge

FRAMES:

SERIES:
F = Masonry / Drywall Standard Frame
FDJ = KD Drywall with Compression Anchor
RF = Remodeling Frame
FF = Flush Face Frame
S = Stick
M = Mullion
GENERAL INFORMATION

NOMENCLATURE FOR DOORS AND FRAMES

HARDWARE PREPARATIONS CONTINUED:

RA = Regular Arm Closer Reinforcement
PA = Parallel Arm Closer Reinforcement
BR = Continuous Hinge Reinforcement
H = Interconnected Lock Strikes
VRM = Concealed Vertical Rod Panic Strike
ELS = Electric Strike Preparation
EH = Electric Hinge Preparation

Miscellaneous:
W4F = 4” Face
GENERAL INFORMATION

MESKER LEED PROGRAM COMPLIANCE


Material and Resources Credits 4.1 and 4.2

Recycled Content: Mesker’s doors and frames contribute credits under Material and Resources Credit 4

Intent: To increase demand for building products that incorporate recycled content materials, thereby reducing impacts from extraction and processing of virgin materials.

Requirements: Use materials with recycled content* such that the sum of postconsumer** recycled content plus ½ of the pre-consumer*** content constitutes at least 10% or 20% based on cost, of the total value of the materials in the project.

Credits:
MR 4.1: 1 point - recycled content is at least 10% of the total value of the materials in the entire project.
MR 4.2: 1 additional point added to the MR 4.1 point – recycle content is at least 20% (MR 4.1 percentage plus an additional amount to equal a minimum of 20%) of the total value of the materials in the entire project.

Mesker’s postconsumer recycled content is 59%, our pre-consumer recycled content 9% thus qualifying for the maximum credit.

*Recycled content is defined in accordance with the International Organization of Standards document, ISO 14021 – Environmental labels and declarations – Self-declared environmental claims (Type II environmental labeling).

**Postconsumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

***Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Reutilization of materials (i.e. rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it) is excluded.

For further information regarding these credits visit the U. S. Green Building Council at www.usgbc.org or call Mesker Door (256) 851-6670
GENERAL INFORMATION

MESKER LEED PROGRAM COMPLIANCE


Material and Resources Credits 5.1 and 5.2

Regional Material: Mesker doors and frames are manufactured in Huntsville, AL 35811-9021

Intent: To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements: Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 (five hundred) miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value. If only a fraction of a product of material is extracted, harvested or recovered and manufactured locally, then only that percentage (by weight) may contribute to the regional value.

Credits:

MR 5.1: 1 point – At least 10% of the materials are extracted, processed and manufactured regionally.
MR 5.2: 1 additional point added to the MR 5.1 point – At least 20% (MR 5.1 percentage plus an additional amount to equal a minimum of 20%) of materials are extracted, processed and manufactured regionally.

For further information regarding these credits visit the U. S. Green Building Council at www.usgbc.org or call Mesker Door™ (256) 851-6670
GENERAL INFORMATION

BUY AMERICAN

As the oldest manufacturer of Hollow Metal Doors and Frames in the United States of America, Mesker Door™ shines as a founding member of the Steel Door Institute, and the inventors of the Hollow Metal Door.

Mesker Door™ is proud to manufacture innovative products in the United States of America, utilizing American Steel in the construction of our doors and frames.

Mesker Door™ is a company owned by Americans, run by Americans, and employs American families in Huntsville, Alabama, and across the United States of America.

As a result, Mesker Door™ meets the following qualifications as an American Manufacturer:

THE BUY AMERICAN ACT

MADE IN THE USA

ASSEMBLED AND MANUFACTURED IN THE USA

THE AMERICAN RECOVERY AND REINVESTMENT ACT’S BUY AMERICAN RULE

We're glad that you have chosen our products for your project. Please see below for some common questions that you may have about the above requirements.

All information provided in this document is provided for the use of Mesker Door™ and its partners, as an introduction to Mesker Door™, and our compliance with the Buy American statutes. The information below should be used as a guide, and in no way addresses all of the complexity found in the complete versions of these documents. As the information found in the complete versions of these documents is much more detailed, and may change over time, please consult your legal council to find the most current information on the Buy American statutes.

Please specify with your Mesker Door™ distributor that you want American made products on your project!

Thank you for your support.
GENERAL INFORMATION

BUY AMERICAN

THE BUY AMERICAN ACT

Mesker Door™ meets these qualifications.

A. Requirements

1. The end product must be manufactured in the U.S.
   a. Test to determine whether a product is a valid "domestic end product" under the Buy American Act: the end product, articles, materials, and supplies must be Manufactured in the U.S. That is, the product must have transformed into a new and different article of commerce, with a name, character, or use distinct from the original article.
2. The costs of its components which are mined, produced, or manufactured in the U.S. must exceed 50 percent.
   a. The cost of the components of the end products that are produced or manufactured domestically which are incorporated directly in the end product must exceed the cost of the foreign produced component parts.

B. Benefits

1. A qualifying Buy American Act product creates a preference for suppliers of domestic source end products by government contractors.
2. The act restricts the government's ability to purchase supplies that are not domestic end products. The act also essentially requires the use of only domestic construction materials in the contracts for construction in the United States.

C. Compliance

1. Even a minor violation generally requires imposition of some kind of penalty, although an isolated instance of noncompliance may be insufficient to establish a violation.
   a. For minor violations, penalties range from substituting domestic items to recovering the cost difference between domestic and foreign items.
   b. For serious violations, the agency may cancel the contract.
2. Decisions applying the Buy American Act are subject to judicial review under a highly deferential standard, requiring the court to uphold the decision unless it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.

MESKER DOOR™ MEETS THE REQUIREMENTS OF THE BUY AMERICAN ACT.
BUY AMERICAN

MADE IN THE USA

Mesker Door™ meets these qualifications.

A. Requirements
   1. Unqualified claim
      a. "All or virtually all" of the components making a product must be of U.S. origin; i.e., all significant parts and processing that go into the product must be of U.S. origin.
         i. A negligible amount of foreign parts in the end product is permitted.
         ii. The product's final assembly or processing must take place in the U.S.
      b. When a manufacturer or marketer makes an unqualified claim that a product is "Made in U.S.A", it should have a "reasonable basis" to support the claim at the time it is made.
   2. Qualified claim
      a. A qualified claim describes the extent, amount or type of a product's domestic content or processing; it indicates that the product is not entirely of domestic origin.
      b. This label is appropriate for products that include U.S. content or processing but fail to meet the criteria for making an unqualified claim, e.g., "60% U.S. content", "Made in U.S.A. of U.S. and imported parts", or "Couch assembled in U.S.A from Italian Leather and Mexican Frame."

B. Benefits
   1. Permits either unqualified or qualified "Made in the U.S.A. Made in America" labeling or advertising claims.

C. Compliance
   1. Compliance is governed by the FTC, which enforces actions against false or misleading claims that a product is of U.S. origin.
   2. The FTC does not pre-approve advertising or labeling claims. A manufacturer or marketer may make any claim as long as it is truthful and substantiated.

MESKER DOOR™ MEETS THE REQUIREMENTS OF THE MADE IN THE USA MARK.
BUY AMERICAN

ASSEMBLED AND / OR MANUFACTURED IN THE U.S.A.

Mesker Door™ meets these qualifications.

A. Requirements
   1. A product that includes foreign components may be called "Assembled in U.S.A." Without qualification when its principal assembly takes place in the U.S. and the assembly is substantial.
   2. The product's last "substantial transformation" must occur in the U.S. In other words, a "screwdriver" assembly in the US. of foreign components into a final product at the end of the manufacturing process would not qualify for the "Assembled in U.S.A." claim.
      a. "Substantial transformation" requires that a manufacturing process result in a new and different product with a new name, character, and use that is different from that which existed before the change.

B. Benefits
   1. Since this label is essentially a modification of the "Made in USA. America" claim, the benefits are the same; i.e., the FTC permits an "Assembled/Manufacture in America" label for advertising and labeling claims for qualifying products.

C. Compliance
   1. Compliance is the same as the "Made in U.S.A./America" claim; i.e., compliance is governed by the FTC, which enforces actions against false or misleading claims that a product is of U.S. origin.

MESKER DOOR™ MEETS THE REQUIREMENTS OF THE ASSEMBLED AND / OR MANUFACTURED IN THE U.S.A. MARK.
THE AMERICAN RECOVERY AND REINVESTMENT ACT'S BUY AMERICAN RULE

Mesker Door™ meets these qualifications.

The American Recovery and Reinvestment Act's Buy American rule requires that all iron, steel, and manufactured goods on construction projects of public buildings or public works projects must be produced in the United States.

A. What projects are subject to the Buy American requirement?

The scope of the requirement can be thought of as a three-part test: A project is subject to the requirement if:

1. Funds appropriated or otherwise made available by this Act are;
2. Used for the construction, alteration, maintenance, or repair of;
3. A public building or public work.

Under the first part, most projects that receive funds or a loan guaranteed under the new law are subject to the requirement. The second part of the test—"construction, alteration, maintenance, or repair"—includes an extremely broad range of work, but the third part—"public building or public work"—almost certainly excludes work done with respect to any privately owned facility.

B. What does it mean to be subject to this requirement?

It means that "all of the iron, steel, and manufactured goods" used in the project must have been produced in the U.S. In other words, if any of the iron, steel, or manufactured goods used in the project is produced outside the U.S., the project cannot receive stimulus funding. Depending on how "project" is defined, the use of any foreign iron, steel, or manufactured goods with respect to a small component of a large project could prevent the use of stimulus funds for the entire project.

C. Does the nationality of the company producing the iron, steel, or manufactured goods matter?

No. The only thing that matters is whether production occurs within the U.S.

D. Isn't there already a Buy American requirement in federal law?

Yes, the Buy American Act was originally enacted in 1933. But there are two important differences between that law and the provision in the stimulus legislation. The Buy American Act applies only to procurement by the federal government, and only requires that the cost of domestic components exceeds 50 percent of the cost of all the components.
E. What circumstances qualify for a waiver under the stimulus law?

A waiver under the stimulus legislation may be granted for "any case or category of cases" where the head of the relevant federal department or agency finds that: (1) applying the prohibition would be "inconsistent with the public interest"; (2) iron, steel, and the relevant manufactured goods are not produced in the U.S. "in sufficient and reasonably available quantities and of a satisfactory quality"; or (3) inclusion of iron, steel and manufactured goods produced in the U.S. will increase the cost of the "overall project" by more than 25 percent. If the agency or department head makes such a finding, he or she must publish in the Federal Register a detailed justification as to why the provision is being waived. Perhaps more importantly, the prohibition is also to be applied "in a manner consistent with U.S. obligations under international agreements." This language was added by the Senate in response to strong objections expressed by key trading partners of the U.S., including Canada and the European Union.

F. What does it mean to be consistent with U.S. obligations under international trade agreements?

It's not entirely clear, but the legislative history (discussed in more detail below) suggests that Congress intends that the Obama Administration will use its existing authority under the 1979 Trade Agreements Act to waive the Buy American requirement where it would otherwise violate a free trade agreement or the WTO. There is also an indication that it should be waived for so-called "least developed countries," where they agree to assume the obligations of the WTO and are willing to provide similar opportunities for U.S. products.

G. How soon will all this be resolved?

It depends on how soon the Obama Administration begins issuing waivers, and the breadth of those waivers. At one end of the spectrum, federal departments or agencies could issue one or more very broad waivers on public interest grounds, or based on a finding that iron and steel are not produced in the U.S. in sufficient and reasonably available quantities of satisfactory quality. At the other extreme, departments and agencies could take a narrow, project-by-project approach, issuing a waiver only where there is a showing that the cost of the entire project would otherwise be increased by more than 25 percent.

Based on its obligation to remain consistent with international trade agreements, and concerns about triggering more protectionism, it seems likely that the Obama Administration will move relatively quickly to issue waivers as to countries that are members of either WTO or a free trade agreement. Waivers with respect to the least developed countries would presumably be a lower priority, and waivers with respect to developed countries that are not parties to a free trade agreement or WTO would presumably be lower still.
GENERAL INFORMATION

BUY AMERICAN

From those seeking stimulus dollars, there will be enormous pressure on the administration to quickly remove the cloud of uncertainty created by this provision, and to minimize its effect on projects that would otherwise qualify. Supporters of the prohibition, on the other hand, are not going to give ground without a fight.

MESKER DOOR™ MEETS THE REQUIREMENTS OF THE AMERICAN RECOVERY AND REINVESTMENT ACT’S BUY AMERICAN RULE.
Standard Warranty

Mesker Door™ Inc. warrants for a period of one (1) year from date of shipment, all material manufactured by us to be free from defects in material and workmanship under normal use and service. All such material is supplied subject to this warranty. The company’s obligation there under is limited to repairing or replacing at its option any such material which, upon examination is found to have been defective. This warranty is expressly in lieu of all other warranties expressed or implied, and of all obligations or liabilities on its part for damages, including but not limited to consequential damages. No agent is authorized to assume for it any liability except as set forth above. Nor does Mesker Door™ Company assume any liability for modifications performed on materials after said materials leave Mesker’s factory.
Receiving, Storage and Handling

Receiving Material

Upon receipt all material shall be inspected for damage caused in shipping. If damaged material is found it should be noted on the freight bill before signing. Claims will be refused by the carrier if not noted on the freight bill at the time of delivery. The contractor must notify the carrier and request an inspection of the damaged material. The contractor must also notify the distributor immediately of the damage which will help expedite the repair or replacement of the damaged material.

Should the Contractor find any errors in the material the distributor must be notified so that the distributor and the factory can participate in solving the problem. Unauthorized modifications to the material could result in voiding the warranty and or any labels attached to the material.

On Site Storage

Proper storage of hollow metal material at the construction site will help prevent damage.

1. Store all materials in a dry area. All hollow metal material should be stored so that it does not come in contact with water or moisture.

2. Do not use non-vented plastic or canvas. These products retain moisture and will damage hollow metal products.

3. Place doors and frames vertically on wood blocking at least 4” off the ground.

4. Place not more than 5 doors or frames per vertical stack.

5. Provide at least ¼” air space between each door or frame to permit air circulation.
## Frame/Door Opening Width

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**General Information**

**Metric Conversion Guide**

All metric dimensions are in millimeters unless noted otherwise. All numbers used have been calculated using a "soft" conversion method.

---

**Mesker**

The innovative leader in hollow metal from the oldest hollow metal door company in America.
### GENERAL INFORMATION

**METRIC CONVERSION GUIDE**

ALL METRIC DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. ALL NUMBERS USED HAVE BEEN CALCULATED USING A "SOFT" CONVERSION METHOD.

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GENERAL INFORMATION

MESKER ADHESION SYSTEM

Hot Melt PUR (HMPUR) has advantages over conventional adhesives such as contact cements and thermoplastic hot melts.

Technical name: Moisture Cure Polyurethane Hot Melt

HMPUR Adhesives "CURE" completely, meaning once set, it cannot be re-melted and will not soften or freeze and lose its adhesion. It will not absorb moisture once cured. Mesker’s HMPUR system has enhanced resistance to flame spread in its cured state and is designed to pass the Underwriters Laboratories Inc. 10C, Positive Pressure Fire Tests of Door Assemblies.

FEATURES & BENEFITS

☐ Flame Retardant
   Designed to pass UL 10C. Patent pending.

☐ Excellent heat resistance
   Bonded assemblies withstand prolonged exposure to 200°F temperatures without exhibiting any signs of bond failure.

☐ Excellent cold resistance
   Adheres to many substrates at temperatures as low as -35°F without exhibiting any signs of bond failure.

☐ Excellent creep resistance
   Cured adhesive film is extremely tough yet flexible. This allows for differences in thermal expansion and contraction of various substrates without sacrificing bond performance.

☐ Patented Fully Reactive Technology
   In addition to the many other benefits of this technology, bonded assemblies, including darkly colored materials, posses exceptional heat resistance.

☐ Versatility
   Adheres to a wide variety of core stocks and skins.
GENERAL INFORMATION
ADA CLEARANCE

32 15/16"

36"

DOOR CLEARANCE

32 15/16"
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DOORS
HOW TO ORDER

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<td>MB+TEMPLATE-SECTIONAL TRIM PREP</td>
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<td>RP-RIM PANIC REINFORCEMENT</td>
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<tr>
<td>RP+TEMPLATE-RIM REINF. W/ FNC HOLES</td>
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<td>VR-VERTICAL ROD REINFORCEMENT</td>
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<tr>
<td>MBN-MOTISE BOX REINF. NO HOLES</td>
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USE THE APPROPRIATE SYMBOL AS DESIGNATED ABOVE FOR POSITIONS 1 THRU 6.
EXAMPLE

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<tr>
<th>N</th>
<th>P</th>
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<td>4</td>
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<td>6</td>
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</tbody>
</table>
DOOR CONSTRUCTION

14, 16, 18, 20 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.11S mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
NF-TEMPERATURE RISE DOOR (250 °F)

DOOR CONSTRUCTION

14, 16, 18, 20 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Doors are rated for 250 ° F maximum temperature rise for the first 30 minutes of fire test. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be one piece, UL listed, solid mineral fiberboard core.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
ST-STEEL STIFFENED FLUSH DOOR

DOOR CONSTRUCTION

14 or 16 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be expanded polystrene core. Optional non fire rated cores: Urethane and Honeycomb.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult page G-11 through G-14.
NEP - EMBOSSED PANEL DOOR

Inverted Channel and Closer Assembly (Standard)
7 Gauge Extra Long High Frequency Top Hinge Reinforcement
HMPUR Glue System
7 Gauge Hinge Reinforcement
18 Gauge Standard (16 Gauge - Call for Availability)
Inverted Bottom Channel
Polystrene Core (Standard)

DOOR CONSTRUCTION

16 or 18 gauge gavannealed A60 panel embossed stamped steel face sheets to be securely bonded to the core. Face sheets shall be embossed for the design indicated. Panel design available in Two Panel Arched (P2A) (Grooves or no grooves), Two Panel Square (P2S), Two Panel Bottom (P2B), Four Panel (P4), and Six Panel (SP). Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28. Standard Sizes: 2'8" to 3'6" width and 6'8" to 8'0". (Special sizes and panel configurations available upon request)

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional core: Polyurethane.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult page G-11 through G-14.
EMBOSSED PANEL DOORS
SIX PANEL (SP)

SP
(HIGH DEFINITION)
EMBOSSED PANEL DOORS
FOUR PANEL (P4)

D-7  SEPT 2012

P4
(STANDARD DEFINITION)
EMBOSSED PANEL DOORS
TWO PANEL BOTTOM (P2B)

P2B
(HIGH DEFINITION)
EMBOSSSED PANEL DOORS
SQUARE TWO PANEL (P2S)

P2S
(HIGH DEFINITION)
EMBOSSED PANEL DOORS
ARCHED TWO PANEL (P2A)

P2A
(HIGH DEFINITION)
EMBOSSED PANEL DOORS
SIX PANEL WOODGRAIN (SPW)

SPW
(HIGH DEFINITION)
DOOR CONSTRUCTION

14, 16, 18, 20 gauge, cold-rolled, gavannealed A60, or Galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be expanded polyurethane core.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water-based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCs).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
SLIDE LOCK DOOR

Continuous Hinge
HMPUR Glue System
Polystyrene Core (Standard)
Adjustable Lock Height from 38 1/2" to 41 1/2"
14, 16, 18, 20 Gauge Face Sheets
Inverted Bottom Channel

DOOR CONSTRUCTION

14, 16, 18, or 20 gauge, cold-rolled, gavanneled A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with a steel continuous hinge reinforcement providing additional strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult page G-11 through G-14.
DOOR CONSTRUCTION

14, 16, 18, 20 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) (Patented Technology) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-24 and D-28. Optional dutch door shelves.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
ASTRAGAL REQUIRED FOR FIRE RATED SHELF NOT ALLOWED

THIS LOCK CAN LATCH TO BOTTOM LEAF OR FRAME
NDD - DUTCH DOORS

CUSTOM SIZES AVAILABLE UPON REQUEST

<table>
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<th>DOOR HEIGHT</th>
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<td>6' 8&quot;</td>
<td>3' 1 11/16&quot;</td>
<td>12 7/8&quot;</td>
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<tr>
<td>7' 0&quot;</td>
<td>3' 5 11/16&quot;</td>
<td>16 7/8&quot;</td>
</tr>
<tr>
<td>7' 2&quot;</td>
<td>3' 7 11/16&quot;</td>
<td>18 7/8&quot;</td>
</tr>
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</table>
SHELF LENGTHS
6", 8", 10"
STANDARD CLEARANCES

1/8"  1/8"  1/8"

3/4" TO FRAME BOTTOM

1/8"  1/8"  1/16"
HINGE AND LOCK LOCATIONS

7 1/8"

EQUAL

EQUAL

11 1/2"

39 9/16"
ON C LOCK
39 3/16"
ON M LOCK
BEVELED EDGE

Lock Edge Beveled (BV1)

Lock and Hinge Edge Beveled (BV2)

All inactive leaves of pairs will be manufactured as square edge.

DOOR CONSTRUCTION

14, 16, 18, or 20 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extended top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water-based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOC).

COMPLIANCE

All Mesker Door units comply with ANSI A 250.8 (R2008). Hardware Preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek) and Underwriters Laboratories. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
INTERLOCKING TAB SYSTEM

SIDE VIEW

ISOMETRIC VIEW
DOOR CONSTRUCTION

14, 16, 18, 20 gauge, cold-rolled or gavannealed A60 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. In addition to the requirements for full flush doors, no visible seams are permitted along the vertical edges. When a seamless door is specified, the vertical door seams will be continuously welded, and dressed smooth, with no bondo, putty, or filler. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

NVS requires a 6” minimum from all cutouts to door edge for louvers and glazing.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
NP - STANDARD SERIES FLUSH DOOR SEAMLESS

Spot Welded and Filled Edge Ground and Primed for a Seamless Finished Edge

DOOR CONSTRUCTION

14, 16, 18, or 20 gauge, cold-rolled or gavannealed A60 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request. Square edge standard. Optional beveled lock edge (BV-1) or beveled hinge and lock edge (BV-2). See beveled detail pages D-27 and D-28.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extra long high frequency top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water- based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

COMPLIANCE

As the oldest member of the Steel Door Institute, all Mesker Door units comply with ANSI A 250.8 (R2008). Hardware preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek), Underwriters Laboratories, and FM Global. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
BEVELED EDGE

DOOR CONSTRUCTION

14, 16, 18, or 20 gauge, cold-rolled, gavannealed A60, or galvanized G90 steel face sheets to be securely bonded to the core. Doors shall have hemmed vertical edge seams, mechanically interlocked for maximum structural integrity. Optional seamless (NVS) edge available upon request. Top and bottom of doors shall be closed and reinforced with an inverted continuous channel and welded to both faces. Optional flush top available upon request.

CORE CONSTRUCTION

Standard core material to be expanded polystyrene core. Optional cores: Honeycomb, Polyurethane, Fiberboard.

HARDWARE

All doors are furnished with 7 gauge steel hinge reinforcements with three projection welds on each end. Extended top hinge reinforcement provides additional welds for added strength and extra protection against sagging. Doors have a factory installed 14 gauge box type closer reinforcement securely welded to top channel. Doors shall be mortised and adequately reinforced for all hardware. Required mortise hardware reinforcements shall be drilled and tapped at the factory. Surface applied hardware shall be field drilled by others. Lockset preparation shall provide for field installation of locksets manufactured in accordance with ANSI A156.115 mortise or cylindrical (bored) locks. Additional hardware preparations available.

FINISH

Exposed door surfaces to be cleaned, treated, and coated with rust inhibitive primer. Color painted doors receive a durable, electrostatic, baked on finish. Water-based primer and color paint finishes are free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOC).

COMPLIANCE

All Mesker Door units comply with ANSI A 250.8 (R2008). Hardware Preparations comply with ANSI A 250.6. Primer and color compliant with ANSI A250.10 and ANSI A250.3. Fire labeling in accordance with NFPA-8015 FM (standard), WHI (Intertek) and Underwriters Laboratories. For a complete list of product compliance per ANSI/ASTM test methods, please consult pages G-11 through G-14.
All inactive leaves of pairs will be manufactured as square edge.
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OPTIONAL FLUSH TOP CHANNEL

INVERTED
(STANDARD)

FLUSH
DOORS
FLUSH SEALED TOP CHANNEL

INVERTED 16 GAUGE TOP CHANNEL FILLED AND GROUND SMOOTH.

INVERTED TOP CHANNEL FOR FLUSH TOP SPOT WELDED TO FACES EVERY 2". FILLED AND GROUND SMOOTH.
MONORAIL CUTOUT

CUTOUT PER TEMPLATE
ANSI/BHMA A156.115 FLUSHBOLT PREPARATION WITH ASTRAGAL

PREPARATION IN ASTRAGAL

**Table: Door Height vs. Dim X**

<table>
<thead>
<tr>
<th>Door Height</th>
<th>Dim X</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; &amp; 7' 0&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>9' 0&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>10' 0&quot;</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

PREPARATION IN DOOR EDGE

7" X

1 1/4"

PREPARATION IN ASTRAGAL

6 3/4"

1"

DRILLED AND TAPPED FOR #8 32 SCREWS

LOCK EDGE BLANK DOOR LEAF

TOP EDGE OF ASTRAGAL ANGLED TO CLEAR STOP

CORE MATERIAL MUST BE CLEARED OUT BEFORE APPLICATION OF FLUSH BOLT
ANSI 115.4 FLUSH BOLT PREPARATION
WITHOUT ASTRAGAL

<table>
<thead>
<tr>
<th>DOOR HEIGHT</th>
<th>DIM X</th>
</tr>
</thead>
<tbody>
<tr>
<td>6' 8&quot; &amp; 7' 0&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>9' 0&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>10' 0&quot;</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

CORE MATERIAL MUST BE CLEARED OUT BEFORE APPLICATION OF FLUSH BOLT

DRILLED AND TAPPED FOR #8-32 SCREWS
DOOR EDGE PREPARED FOR ASTRAGAL

PREPARED FOR FLUSHBOLT

ANGLED CUT TO CLEAR FRAME STOP

BLANK

BEVELED ASTRAGAL

SQUARE ASTRAGAL
Z - ASTRAGAL HANDELING

RH ACTIVE

LHR ACTIVE

RHR ACTIVE

LH ACTIVE
V
EXPOSED GLASS
10" X 10"

N2
EXPOSED GLASS
5" X 20"

NVS requires a 6" minimum from all cutouts to door edge for louvers and glazing.
NVS requires a 6" minimum from all cutouts to door edge for louvers and glazing.
NVS requires a 6" minimum from all cutouts to door edge for louvers and glazing.
NVS requires a 6" minimum from all cutouts to door edge for louvers and glazing.
Fire rated fusible link louvers available. Max size 24" x 24".
Consult factory for pricing.
HINGE PREPARATION

4 1/2" OR 5" TEMPLATED HINGE PREPARED DRILLED AND TAPPED FOR 12-24 MACHINE SCREWS.

4" OR 6" HINGE PREPARED "BLANK". MUST BE DRILLED AND TAPPED BY OTHERS.
STANDARD HINGE REINFORCEMENTS

STANDARD HINGE REINFORCEMENT FOR MIDDLE AND BOTTOM HINGES

EXTRA LONG HIGH FREQUENCY TOP HINGE REINFORCEMENT

7 GAUGE HINGE REINFORCEMENT EXTENDED TO TOP OF DOOR FOR EXTRA RIGIDITY WITH 3 EXTRA PROJECTION WELDS TO PREVENT DOOR SAG.

FOR HEAVY WEIGHT HINGES, A THINNER HANDING PLATE IS AVAILABLE.
4" AND 6" HINGE REINFORCEMENT TO BE DRILLED AND TAPPED BY OTHERS.
INSTALLING HINGES IN A BLANK DOOR EDGE

LAY OUT THE DESIRED HINGE LOCATION ON THE DOOR EDGE. USE AN ACTUAL HINGE TO ENSURE PROPER CLEARANCE.

MAKE THE CUT-OUTS WITH A "JIG" SAW. GRIND OR FILE AS REQUIRED. ALL EDGES MUST BE FINISHED: ALSO ALLOW FOR HINGE FILLER PLATE AT PROPER DEPTH (.180" FOR STANDARD WEIGHT HINGE AND FILLER)

DRILL TWO 3/8" DIAMETER HOLES ABOVE AND BELOW EACH CUT-OUT, AS SHOWN.

ATTACH A HINGE LEAF AND HINGE FILLER PLATE TO THE REINFORCEMENT WITH ONE SCREW. TIGHTEN ONLY TWO THREADS SO THE REINFORCEMENT CAN BE PLACED INSIDE THE DOOR AND MOVED UP AND DOWN UNTIL POSITIONED.

NOTE: IF USING A MESKER HINGE REINFORCEMENT, YOU MUST FIRST REMOVE THE WELD PROJECTIONS. (GRIND OR FILE) THE HINGE REINFORCEMENT MUST BE CENTERED IN BETWEEN DOOR FACES.

CONTINUOUS HINGE REINFORCEMENT

14 GAUGE REINFORCEMENT ON HINGE EDGE

DOOR UNDERSIZED PER TEMPLATE
TOP AND BOTTOM PIVOT PREPARATION

7 GAUGE REINFORCEMENT

SIZE AND TAP PER TEMPLATE

7 GAUGE REINFORCEMENT

PER TEMPLATE

PER TEMPLATE

PER TEMPLATE

PER TEMPLATE

PER TEMPLATE

PER TEMPLATE
DOOR POCKET PIVOT

12 GAUGE CONTINUOUS CHANNEL

MOUNTING HOLES DRILLED AND TAPPED BY OTHERS
SIZE, DRILL, AND TAP PER TEMPLATE
STANDARD LOCK PREPARATIONS
STANDARD CLOSER PREPARATION

161 CYLINDRICAL LOCK
(C4) REINFORCEMENT

TOP CHANNEL

GOV'T 86 EDGE
MORTISE LOCK (MBN)
REINFORCEMENT

GOV'T 86 EDGE
MORTISE LOCK (M) (MB)
REINFORCEMENT

~14 GAUGE
CLOSER REINFORCEMENT

POLYSTYRENE
GOVT NO. 161
CYLINDRICAL (C4) LOCK PREPARATION 1 3/4" DOOR

2 3/4"  
BACKSET

39 9/16"  
TO BOTTOM 
OF DOOR

2 1/4"  
2 3/4"  
BACKSET

1 1/8"
GOVT NO. 161
CYLINDRICAL TURTLE (C4 TURTLE) LOCK PREPARATION 1 3/4" DOOR

39 9/16" TO BOTTOM OF DOOR
2 3/4" BACKSET
1 1/8"

φ 0.31"
φ 0.43"
φ 2 1/8"
INTERCONNECTED LOCK

1 1/2" OR 2 1/8"
PER TEMPLATE

2 1/8"
STANDARD

4" MIN

1 1/8"

16 GAUGE REINFORCEMENT
GOVT NO. 86
MORTISE LOCK (M) PREPARATION 1 3/4" DOOR

39 3/16" TO BOTTOM OF DOOR

8"

4 1/8"

2 3/4" BACKSET

39 3/16" TO BOTTOM OF DOOR

1 1/4"
GOVT NO. 86
MORTISE LOCK BLANK FACE (MB) PREPARATION 1 3/4" DOOR

39 3/16" TO BOTTOM OF DOOR

1 1/4"
GOVT NO. 86
MORTISE LOCK BLANK FACE AND BLANK EDGE (MBN) PREPARATION 1 3/4" DOOR
STRIKE PREPARATIONS, "U-STRIKE", "T-STRIKE"

A 14 GAUGE STRIKE REINFORCEMENT. THE STRIKE MORTISE CONFORMS TO ANSI A156.115.

"U" STRIKE MORTISE (ASA STRIKE)

NON HANDED "U" STRIKE MORTISE (ASA STRIKE) LIP NOTCH CUT BY OTHERS

"C" STRIKE MORTISE (T STRIKE)
ELECTRIC STRIKE PREPARATION WITH RACEWAY

POLYSTYRENE

ELECTRIC RACEWAY

12 GAUGE TAB

PER TEMPLATE

SIZE AND TAP PER TEMPLATE

HEIGHT OF STRIKE PER TEMPLATE
RIM PANIC (RP) DOOR REINFORCEMENTS

SECTION A
SURFACE VERTICAL ROD DOOR REINFORCEMENTS (SVR)

SECTION A

A

A

5 3/64" 9" 9" 5 3/64" 5 7/32" 18" 6 1/4" 5 7/32" 5 3/64"
CONCEALED VERTICAL ROD

REINFORCE, DRILL, TAP PER TEMPLATE

TOP AND BOTTOM ROD PREPARATION PER TEMPLATE.

OPEN SPACE FOR VERTICAL ROD (NO CORE) FOR 4"

BLANK LOCK EDGE

14 GAUGE REINFORCEMENT

BLANK FACE
DRILL 2 1/8" DIAMETER HOLE AT 2 3/4" BACKSET 39 9/16" FROM BOTTOM OF DOOR (FACE SHEETS ONLY). REINFORCEMENT HAS CLEARANCE TO CLEAR HOLE SAW.
END CHANNEL IS MODIFIED FOR CORRECT DEPTH (DIMENSIONS VARY AS PER TEMPLATE)

MOUNTING HOLES SHALL BE DRILLED AND TAPPED IN THE FIELD FOR DESIRED HOLD OPEN ANGLE.
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DOOR HINGE FILLER PLATE

PART # PD401

.135

4 1/2"
OR
5"

PD-1 SEPT 2012
PARTS - DOOR
TEMPLATE HINGE SHIM 4 1/2"

PART # PD425

.036
PARTS - DOOR
SHORT DOOR HINGE (HR450) AND (HR500)

4 1/2" PART # PDNHR450
5" PART # PDNHR500
DRILLED AND TAPPED FOR TEMPLATE HINGE
PARTS - DOOR
EXTRA LONG HIGH FREQUENCY DOOR HINGE (LHR450)

PART # PDNLHR450
DRILLED AND TAPPED FOR 4 1/2" TEMPLATE HINGE
HIGH FREQUENCY

7 GAUGE
PARTS - DOOR
NON-STANDARD HINGE REINFORCEMENT

4" PART # PDNHR400
6" PART # PDNHR600
MUST BE DRILLED AND TAPPED BY OTHERS

7 GAUGE
PARTS - DOOR
HINGE FILLER (HANDING PLATE)

4 1/2" PART # PDHF4
4 1/2" HEAVY WEIGHT PART # PDHF4H
5" PART # PDHF5
5" HEAVY WEIGHT PART # PDHF5H
PARTS - DOOR STRIKE ADAPTER

PART # PD86SA
MB TO ASA CONVERSION
PARTS - DOOR
CYLINDRICAL LOCK BOX (C4)

PART # PDCLB
161 LOCK REINFORCEMENT
### MESKER PART # | DESCRIPTION | USES
--- | --- | ---
PDRC | DRILLED AND TAPPED 8-32 | C STRIKE OR DEADLOCK
PDMR | DRILLED AND TAPPED 12-24 | ASA STRIKE
PARTS - DOOR
CYLINDRICAL LOCK EDGE FILLER (CLE161)

PART # PDLEC
TO FILL C-4 EDGE PREP
1 1/8” X 2 1/4”
PARTS - DOOR
CYLINDRICAL LOCK FACE FILLER (CLF161)

PART # PDLFC

∅ 2 5/8"
PARTS - DOOR
MORTISE LOCK FILLER (MLE086)

PART # PDLEM
TO FILL MB (86 EDGE)  
1 1/4" X 8"

PD-12  SEPT 2012
PARTS - DOOR
FILLER CHANGE MB TO C4 EDGE

PART # PDLMC
PARTS - DOOR
FLUSH BOLT REINFORCEMENT TAB (MBR001)

PART # PDFBA
PARTS - DOOR
FLUSH BOLT GUIDE (MBR401)

PART # PDFBG
PARTS - DOOR
FLAT ASTRAGAL (68, 70, 72, 80, 100)

PART # PDFA (68, 70, 72, 80, 100)
PARTS - DOOR
Z ASTRAGALS

16 Gauge Galvanized

Z ASTRAGAL BLANK
6'8" PART # PDZAB68
7' PART # PDZAB70
8' PART # PDAB
10' PART # PDZABT

Z ASTRAGAL U STRIKE
6'8" RH PART # PDZAU68R
6'8" LH PART # PDZAU68L
7' RH PART # PDZAU70R
7' LH PART # PDZAU70L
8' RH PART # PDZAU80R
8' LH PART # PDZAU80L
10' PART # PDZAUT

Z ASTRAGAL U STRIKE + FB PREP
6'8" RH PART # PDZAU68RFB
6'8" LH PART # PDZAU68LFB
7' RH PART # PDZAU70RFB
7' LH PART # PDZAU70LFB
8' RH PART # PDZAU80RFB
8' LH PART # PDZAU80LFB

MESKER®
The world's innovators in hollow metal, from the oldest hollow metal door company in America.
PARTS - DOOR
TOP AND BOTTOM CHANNEL 3' (TC-430), 4' (TC-440) AND 10'

3' PART # PDTC3
4' PART # PDTC4
10' PART # PDC10
(10' IS NOT NOTCHED AT ENDS)
PARTS - DOOR
6' CHANNEL REINFORCEMENT FOR CUTOUTS

PART # PDCOC

1 5/8"
23/32"
PARTS - DOOR
DOOR CONVERSION STYLE (DCS)

PART # PDDCS

1 3/4"
3/4"
5/8"
PARTS - DOOR
DOOR CAPS

30 PART # PDSICAP30
40 PART # PDSICAP40
30 W/ HOLES PART # PDSICAP30HW
40 W/ HOLES PART # PDSICAP40HW
PARTS - DOOR
FCS CAP TO FLUSH DOOR TOP (30)

PART # PDCAP30
PARTS - DOOR
8" DUTCH SELF (30)

NET DOOR WIDTH

8"

9 3/4"

PART # DS0830
h ASTRAGAL

CALL FOR LEAD TIME AND AVAILABILITY
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UL 752 - BULLET RESISTANT UP TO LEVEL 3
GLASS LITE AVAILABLE: 10" X 10" MIN. 28" X 58" MAX
WITH APPROPRIATE GLAZING (BY OTHERS)

14 GAUGE SKIN
14 GAUGE REINFORCEMENT
POLYSTYRENE

12 GAUGE FRAME
(WELDED IN MASONRY FRAMES)

4 1/2" - 12 3/4"

2"
3070NP X 1 3/4" X 16 GAUGE X 14 GAUGE INNER SKIN ON IMPACT FACE X 14 GAUGE REINFORCING DOOR EDGES @2" ON CENTER X MARKAR CONTINUOUS HINGE #HG3057S X SECURITECH 3 POINT LOCKING SYSTEM #8444SBO HARDWARE BY OTHERS.

LOCK STYLE PREPARED AND REINFORCED FOR SECURITECH MODEL 8440580

14 GAUGE INNER SKIN

1 9/16" POLYSTYRENE

14 GAUGE CHANNEL WELDED 6" ON CENTER SEE DETAIL C

FLUSH TOP

SEE SECTION A

HINGE STYLE REINFORCED FOR MARKAR MODEL HG305 CONTINUOUS HINGE

14 GAUGE CHANNEL WELDED 6" ON CENTER SEE DETAIL C

FLUSH BOTTOM

MESKER

The metal innovation in hollow metal from the oldest hollow metal door company in America
STITCH WELDED SEAM
MECHANICALLY INERLOKED HEMMED SQUARE EDGE.

SECTION A
14 GAUGE INNER SKIN

16 GAUGE FLUSH CHANNEL

14 GAUGE INNER SKIN

14 GAUGE BOX TYPE CLOSER REINFORCEMENT

SECTION B

SECTION C
WELD 6" ON CENTER

S-3 SEPT 2012
SPECIALTY
SAFE ROOM DOOR

S-4 
SEPT 2012
STC ASSEMBLY
(SOUND TRANSMISSION CONTROL)

COMING SOON
COMING SOON
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FRAMES
HOW TO ORDER

1
FRAME SERIES
F - MASONRY
FDJ - DRYWALL
FF - FLUSH FACE
RF - REMODELING

2
METAL TYPE
LEAVE BLANK - COLD ROLLED
Z - GALVENNEALED (A60)
G90 - GALVaNIZED (G90)

3
PREP SIDE AND GAUGE
4 - PREP ON 400 SIDE
8 - PREP ON 800 SIDE
THEN DESIGNATE GAUGE

4
JAMB DEPTH

5
FRAME TYPE
FH - FRAME HEADER
SJU - STRIKE JAMB U - STRIKE PREP
SJC - STRIKE JAMB C - STRIKE PREP
HJ - HINGE JAMB
BJ - BLANK JAMB
WJ - WINDOW JAMB

6
LENGTH
20 - 2'0"
26 - 2'6"
30 - 3'0"
...
68 - 6'8"
70 - 7'0"
80 - 8'0"
...

7
HAND
R - RIGHT
L - LEFT

8
FACE
W4F - 4"
W6F - 6"
W1 1/2F - 1 1/2"
LEAVE BLANK - 2"

9
PROFILE
DE - DOUBLE EGRESS
ER - EQUAL RABBIT
SR - SINGLE RABBIT
COS - CASED OPEN
LEAVE BLANK - UNEQUAL RABBIT

USE THE APPROPRIATE SYMBOL AS DESIGNATED
ABOVE FOR POSITIONS 1 THRU 9.
EXAMPLE
F Z 416 5 3/4 HJC 70 R W4F DE
1 2 3 4 5 6 7 8 9
Frame Construction

12, 14, or 16 gage, cold-rolled, galvannealed A60, or galvanized G90 steel to be break-formed to the design specifications required. (See pages F-3 TO F-9 for sizes and profiles available). Frames shall be furnished knocked-down or welded, ground smooth upon request. Mitered corners shall have a strong, secure, four tab interlocking system to maintain neat mitered joints and corners. Standard frame to have 1/2” returns; Standard stop heights to be 5/8” high. Soffit dimensions can vary. Frames can be single or double rabbeted. Frames will be supplied with welded on sill anchors. (Note: Bending tabs in on the jamb rabbets will increase door opening dimension).

Installation & Applications

Frames to be installed in accordance with ANSI A250.11-2001. Standard series frames to be used in a number of applications including masonry, wood stud and steel stud construction.

Hardware Reinforcements

Frames to be furnished with 4-1/2” or 5” standard or heavy weight 7 gage steel hinge reinforcements and shall be adequately reinforced for all hardware. Standard arm or parallel closer reinforcements available upon request. Strike and hinge reinforcements shall be protected by mortar guards. Single frames shall be prepared to receive (3) rubber mutes.

Finish

Exposed frame surfaces to be cleaned and treated then coated with rust inhibitive primer. Color painted frames to receive a durable, flow coated, baked on finish. Water-based primer and color paint finishes to be free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCs).

Compliance

All Mesker frame components comply with ANSI A250.8(R2008). Fire labeling in accordance NFPA and available in FM (standard), WHI (Intertek) and Underwriters Laboratories. For a complete list of product compliance per ANSI/ASTM test methods, consult the labeling section.
F SERIES
PROFILES - DOUBLE RABBET AND CASED OPENING

DOUBLE RABBET
(DR)
ALSO AVAILABLE IN EQUAL RABBET

CASED OPENING
(CO)
F SERIES FRAME
PROFILES - SINGLE RABBET

SINGLE RABBET (SR)

3 3/4" - 14 3/4"
1 15/16"
5/8"
2" 
2 5/8"
1/2"

SINGLE RABBET (3") (SR)

3"
1 15/16"
5/8"
2"
13/32"
F SERIES FRAME
PROFILE - KERFED FOR WEATHERSTRIPPING

AVAILABLE IN 14 OR 16 GAUGE

PHYSICAL ENDURANCE LEVEL: MEETS ANSI A250.4
PERFORMANCE TEST--16 GAUGE STEEL: LEVEL A (1,000,000 CYCLES)
FIRE RATED UP TO 90 MINUTES.
F SERIES
THERMAL BREAK

RESERVED
F SERIES
PROFILES - DOUBLE EGRESS

(7/16" ON 5 3/4" DEPTH)

2 5/8"

1/2"

(7/16" ON 5 3/4" DEPTH)

4 1/2" - 14 3/4"

EQUAL

15/16"

EQUAL

5/8"

1 3/8"

 HEADER
JUNCTION

LHR (RH) SWING

RHR (LH) SWING
F SERIES
PROFILES - COMMUNICATING FRAME

JAMB DEPTH
4 3/4" - 12 3/4"

VARIES
1 15/16"

EQUAL RABBET
1 15/16" FOR 1 3/4"
DOORS (COM)

1/2"
F SERIES
DETAILS - HOSPITAL STOP

45° ANGLE

4", 6" OR 8"
MUST SPECIFY
WITH ORDER
F SERIES
CORNER ASSEMBLY - DOUBLE RABBET - KD

ASSEMBLY OF K.D. CORNER
SLIDE JAMB TABS INTO HEADER AND PUSH HEADER AND JAMB MITERS TOGETHER. ALWAYS BEND INNER TABS OUT WITH HAMMER. BENDING TABS IN WILL INCREASE THE DOOR OPENING DIMENSION.

3 ANCHORS ON EACH JAMB UP TO 7'0" AND 1 ADDITIONAL ANCHOR FOR EVERY 26" OR FRACTION THEREOF ABOVE 7'0".
TAB IS OFFSET TO OBTAIN SMOOTH BEND ALONG TOP OF FRAME HEAD.

SECTION THRU TAB
F SERIES
CORNER DETAIL - 4 INCH FACE HEADER - DOUBLE RABBET

4 INCH FACE HEADER

DOUBLE RABBET ONLY

STANDARD JAMB
F SERIES FRAME
CORNER DETAIL - SINGLE RABBET - KD

HEAD

JAMB

TAB IS OFFSET TO OBTAIN SMOOTH BEND ALONG TOP OF FRAME HEAD.

SECTION THRU TAB
F SERIES
CORNER DETAILS - DOUBLE RABBET - FACE WELD

CONTINUOUS WELD FACE SEAM
GRIND, SMOOTH, PRIME, AND PAINT
F SERIES
CORNER DETAILS - DOUBLE RABBET - FULL WELD
F SERIES
FRAME INSTALLATION - BLOCK WALL (NEW CONSTRUCTION)

TYPICAL WOOD SPREADER MUST BE SQUARE AND FABRICATED FROM LUMBER NO LESS THAN 1" THICK. CORRECT LENGTH IS THE DOOR OPENING WIDTH BETWEEN JAMBS AND HEADER. CUT CLEARANCE NOTCHES FOR THE FRAME STOPS. AT FRAME STOPS SPREADER MUST BE NEARLY AS WIDE AS FRAME DEPTH FOR PROPER INSTALLATION.
I.E. SINGLE DOOR 3'0" = 36"
DOUBLE DOOR 6'0" = 72"

(1) ASSEMBLE AND WELD FRAME.
(2) SET AND PLUMB FRAME.
(3) FASTEN FLOOR ANCHORS WITH APPROPRIATE FASTENERS.
(4) AN ANCHOR SHALL BE USED FOR EACH 26" OF JAMB HEIGHT OR FRACTION THEREOF. EACH ANCHOR SHALL BE INSTALLED AS WALL IS LAID UP. GROUT FRAME IN THE AREA OF ANCHOR.
(5) A SECOND SPREADER IS RECOMMENDED AT THE MID-POINT OF THE DOOR OPENING TO MAINTAIN THE DOOR OPENING DIMENSION.
(6) CONTINUALLY CHECK PLUMB AND SQUARE AS THE WALL PROGRESSES.

OVER SPREAD ANCHOR BEFORE INSTALLATION TO ENSURE PROPER FIT.

WIRE MASONRY ANCHOR
MASONRY FLOOR ANCHOR
MASONRY T ANCHOR
STEEL STUD WALL CONSTRUCTION

ROUGH STUD OPENING
WIDTH: NOMINAL FRAME WIDTH
+4 3/8" MIN. TO 4 3/4" MAX.
(I.E. 3'0" = 40 3/8" MIN TO 40 3/4" MAX.)
HEIGHT: NOMINAL FRAME HEIGHT
+2 1/8" MIN.
(I.E. 6'8" = 82 1/8" MIN.)

1) INSTALL MINIMUM OF THREE ANCHORS PER JAMB (BOTH HINGE AND STRIKE). POSITION ANCHORS IN FRAME THROUGH THE THROAT AND TAP ON WITH A HAMMER OR USE WELDED IN Z ANCHOR. FOUR ANCHORS PER JAMB LEG OVER 7'0" HEIGHT.

2) SQUARE, BRACE, AND PLUMB FRAME AS SHOWN.

3) SET SPREADER. ATTACH JAMBS TO FLOOR THROUGH FLOOR ANCHOR OR FLOOR EXTENSION. INSTALL JAMB STUDS TO FLOOR AND CEILING RUNNERS AND TIGHTLY AGAINST FRAME ANCHORS.

4) ATTACH STUDS TO FRAME ANCHORS AS SHOWN.

WHEN ATTACHING HEADER STUDS TO JAMB STUDS, BE SURE THE STUD IS ABOVE FRAME HEADER. THIS WILL ASSURE AMPLE ROOM FOR ATTACHING PLASTER LATH OR DRYWALL AND WILL NOT INTERFERE WITH INSTALLATION OF HARDWARE ATTACHED TO FRAME HEADER.
F SERIES
FRAME INSTALLATION - WOOD STUD WALL (NEW CONSTRUCTION)

WOOD STUD CONSTRUCTION

ROUGH STUD OPENING
WIDTH: NOMINAL FRAME WIDTH
+4 3/8" MIN, TO 4 3/4" MAX.
(I.E. 3'0" = 40 3/8" MIN TO 40 3/4" MAX.)
HEIGHT: NOMINAL FRAME HEIGHT
+2 1/8" MIN.
(I.E. 6'8" = 82 1/8" MIN.)

(1) INSERT THREE ANCHORS PER JAMB UP TO AND INCLUDING 7' 2" HEIGHT (FOUR OVER 7' 2" HIGH). POSITION ANCHORS IN FRAME THROAT AND TAP IN WITH A HAMMER. BASE ANCHORS MAY ALSO BE USED.

(2) PLACE FRAME IN STUD OPENING.

(3) BEND ANCHOR TABS AROUND STUD LEAVING DESIRED CLEARANCE BETWEEN FRAME RETURN AND STUD FOR INSERTING FINISHED WALL MATERIAL.

(4) SET SPREADER AND LEVEL FRAME. SHIM JAMBS IF NECESSARY.

(5) SQUARE AND NAIL OR SCREW TOP ANCHORS TO STUDS ON ONE JAMB ONLY, CHECK PLUMB AND SQUARE AND CONTINUE TO NAIL OR SCREW BALANCE OF ANCHORS TO STUDS. REPEAT FOR OPPOSITE JAMB.
F SERIES
FRAME ANCHOR - WIRE MASONRY ANCHOR

7 GAUGE WIRE
16 GAUGE STEEL

1 7/8"

12 1/4"
F SERIES
FRAME ANCHOR - PUNCH & DIMPLE WITH TUBE

PREPARED FOR 3/8" DIAMETER EXPANSION ANCHOR OR #24 WOOD SCREW

COUNTERSINK

9/16" CLEARANCE HOLE
F SERIES
FRAME ANCHOR - AEW (ANCHOR EXISTING WALL)

INSTALLATION PROCEDURE

1. DRILL 1/4" DIAMETER HOLE IN SOFFIT AS AN AID TO LOCATE ANCHOR.
2. ALIGN 1/4" HOLE IN ANCHOR WITH THE HOLE DRILLED IN STEP 1 AND WELD THE ANCHOR TO THE FRAME.
3. DRILL 7/16" HOLE THROUGH FRAME AND ANCHOR.
4. COUNTERSINK FOR 3/8" DIAMETER FLAT HEAD MACHINE BOLT OR #24 WOOD SCREW.

SEE STEP 4 FOR COUNTERSINK DETAIL

TACK WELD SEE STEP 2

1/4" PILOT HOLE

9/16" CLEARANCE HOLE

2 9/16"

2"

1"
F SERIES
FRAME ANCHOR - UNIVERSAL ANCHOR (UNA)

18 GAUGE STEEL

<table>
<thead>
<tr>
<th>ANCHOR SERIES</th>
<th>FRAME DEPTH</th>
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<tbody>
<tr>
<td>UNA-475</td>
<td>4 3/4&quot;</td>
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<tr>
<td>UNA-575</td>
<td>6 3/4&quot;</td>
</tr>
<tr>
<td>UNA-675</td>
<td>7 3/4&quot;</td>
</tr>
<tr>
<td>UNA-775</td>
<td>8 3/4&quot;</td>
</tr>
</tbody>
</table>
1. DRILL 3/4" HOLE IN SOFFIT.
2. LOCATE ANCHOR AT HOLE.
3. INSERT ANCHOR INTO WALL - 3/8" DIAMETER MACHINE ANCHOR OR #24 WOOD SCREW.
4. INSERT PLUG INTO HOLE IN SOFFIT.
F SERIES
FRAME ANCHOR - SILL ANCHOR DOUBLE RABBET FRAME

16 GAUGE GALV.
F SERIES
FRAME ANCHOR - OPTIONAL ADJUSTABLE SILL ANCHOR

ADJUSTABLE SILL ANCHOR
REQUIRED WHERE FLOOR IS UNLEVEL

<table>
<thead>
<tr>
<th>ANCHOR NUMBER</th>
<th>FRAME DEPTH</th>
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<tbody>
<tr>
<td>ASI-475</td>
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<td>ASI-575</td>
<td>5 3/4&quot;</td>
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<td>ASI-675</td>
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<td>ASI-875</td>
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F SERIES
FRAME ANCHOR - SILL ANCHOR SINGLE  RABBET FRAME

<table>
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<tr>
<th>ANCHOR NUMBER</th>
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<tbody>
<tr>
<td>ASI-300</td>
<td>3”</td>
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<tr>
<td>ASI-375</td>
<td>3 3/4&quot;</td>
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</table>

16 GAUGE STEEL
3/8" DIA HOLES

1 3/4" ASI 300
2 1/2" ASI 375
F SERIES
DOUBLE EGRESS ANCHORS- MULTI PURPOSE

F-30    SEPT 2012
F SERIES
FRAME ANCHOR - METAL STUD "Z" ANCHOR

PER JAMB DEPTH

16 GAUGE STEEL
F SERIES
FRAME ANCHOR - ADJUSTABLE STUD ANCHOR

16 GAUGE GALV

ADJUSTS TO FRAME DEPTH

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<tr>
<th>PART #</th>
<th>SIZES COVERED</th>
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<tbody>
<tr>
<td>PFA 110</td>
<td>4 3/4&quot; - 6 3/4&quot;</td>
</tr>
<tr>
<td>PFA 380</td>
<td>5 3/4&quot; - 8 3/4&quot;</td>
</tr>
<tr>
<td>PFA 380A</td>
<td>7&quot; - 12&quot;</td>
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Hospital Stop ....................................................................... FDJ- 8
Corner Detail ....................................................................... FDJ- 9
Frame Installation ................................................................. FDJ- 10
Frame Installation Cased Open ............................................ FDJ- 11
FDJ Anchors ....................................................................... FDJ- 12
Frame Construction

Formed from 14 or 16 gage, cold-rolled, A60 galvannealed steel, galvanized G90. Frames manufactured with die-mitered corner, and furnished with corner tabs for reinforcement and proper alignment. Furnished with pressure fitted top anchors ensuring durability with less torsion and sagging.

Installation & Applications

FDJ series frames are supplied standard with adjustable jamb lock anchor for secure installation. Sill anchors as indicated on page FDJ-12. The jamb lock anchor is adjusted with a screwdriver or power drill providing a pressure fit. The optional DFA base anchor system is provided for attachment directly to sill when using wall baseboards. Drywall / FDJ series frames are designed for installation in interior applications after construction of wood or metal stud and drywall applications.

Hardware Reinforcements

Frames to be furnished with 4-1/2” or 5” standard or heavy weight 7 gauge steel hinge reinforcements and shall be adequately reinforced for all hardware. Regular arm or parallel closer reinforcements available upon request. Strike and hinge reinforcements shall be protected by plaster guards.

Finish

Exposed frame surfaces to be cleaned, treated, and then coated with rust inhibitive primer. Color painted frames to receive a durable, flow coated, baked on finish. Water-based primer and color paint finishes to be free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

Compliance

These products are in full compliance with ANSI/SDI A250.8-2003 (R2008). This document is commonly referred to as SDI-100 (Steel Door Institute 100).
FDJ SERIES
PROFILES - DOUBLE RABBET AND CASED OPEN

DOUBLE RABBET (DR)

CASED OPENING (CO)

JAMB DEPTH VARIES

4 1/2" - 14 3/4"

1 15/16" - 1 9/16"

5/8"

3/8"

1/2"

2"

3" - 14 3/4"

2"
FDJ SERIES
PROFILES - SINGLE RABBET

SINGLE RABBET (SR)

3 3/4" - 14 3/4"
1 15/16"
5/8"

2"
1/2"
3/8"

SINGLE RABBET (3") (SR)

3"
1 15/16"
2"
2 5/8"

13/32"
RESERVED
FDJ SERIES - DRYWALL FRAMES
PROFILES - DOUBLE EGRESS

HEADER JUNCTION

LHR (RH) SWING
RHR (LH) SWING
FDJ SERIES
PROFILE - KERFED FOR WEATHERSTRIPPING

AVAILABLE IN 14 OR 16 GAUGE

PHYSICAL ENDURANCE LEVEL: MEETS ANSI A250.4
PERFORMANCE TEST--16 GAUGE STEEL: LEVEL A (1,000,000 CYCLES)
FIRE RATED UP TO 90 MINUTES.
EQUAL RABBET 1 15/16" FOR 1 3/4" DOORS (COM)

JAMB DEPTH
4 3/4" - 14 3/4"
VARIES

1 15/16"
5/8"
2"
3/8"
1/2"
FDJ SERIES
DETAILS - HOSPITAL STOP

45° ANGLE

4", 6" OR 8"
MUST SPECIFY
WITH ORDER
FDJ SERIES
FRAME CORNER - DOUBLE RABBET - KD

HEADER

JAMB

TAB IS OFFSET TO OBTAIN SMOOTH BEND ALONG TOP OF FRAME HEAD.

SECTION THRU TAB
FDJ SERIES
FRAME INSTALLATION

1. NOMINAL DOOR HEIGHT +1”
   NOMINAL DOOR WIDTH +2”

   ADD TO DOOR OPENING DIMENSIONS: 2” TO WIDTH AND 1” TO HEIGHT. FOR A 3070 DOOR FRAME, THE ROUGH OPENING IS 38” x 85”.

2. INSTALL HEADER INTO POSITION APPROX. 1” FROM THE TOP AND THE CENTER OF THE ROUGH OPENING.

3. INSTALL STRIKE JAMB BY SLIDING OVER WALL AT TOP AND ENGAGING CORNER TABS INTO HEADER. PIVOT JAMB INTO PLACE.

4. REPEAT STEP #3 WITH HINGE JAMB. PULL HEADER DOWN TIGHTLY ONTO JAMBS. LOCK HEADER AND JAMBS TOGETHER BY BENDING OVER EXPOSED TABS.

5. BEND CORNER TABS TOWARD INSIDE OF FRAME.

6. TURN ADJUSTING SCREWS IN BOTH JAMBS COUNTERCLOCKWISE UNTIL ANCHOR IS RESTING AGAINST THE WALL.

7. IF FEASIBLE, HANG DOOR NOW AND ADJUST FRAME ON WALL TO ALLOW PROPER DOOR / FRAME CLEARANCES OR PLUMB FRAME WITH CARPENTER SQUARE AND/OR LEVEL. (ADJUST HEADER LEVELNESS BY SHIMMING UNDER JAMBS).

8. PUNCHED AND DIMPLED FOR A #10 DRYWALL SCREW
   CHECK DOOR OPENING DIMENSION AT BASE OF FRAME (SAME DIMENSION AS BETWEEN JAMBS AT HEADER). SECURE JAMBS WITH DRYWALL SCREW (NOT FURNISHED) THOUGH PUNCHED AND DIMPLED HOLE AT THE BASE OF FRAME. BE SURE TO ATTACH SCREWS TO BOTH SIDES OF BOTH JAMB LEGS (4 PLACES).
ANCHOR ADJUSTING SCREW (TYPICAL BOTH JAMBS)

ADD TO DOOR OPENING DIMENSIONS: 2 3/4" TO WIDTH AND 1" TO HEIGHT. FOR A 3070 DOOR FRAME, THE ROUGH OPENING IS 38 3/4" x 85".

INSTALL HEADER INTO POSITION APPROX. 1" FROM THE TOP AND THE CENTER OF THE ROUGH OPENING.

INSTALL STRIKE JAMB BY SLIDING OVER WALL AT TOP AND ENGAGING CORNER TABS INTO HEADER. PIVOT JAMB INTO PLACE.

REPEAT STEP #3 WITH HINGE JAMB. PULL HEADER DOWN TIGHTLY ONTO JAMBS. LOCK HEADER AND JAMBS TOGETHER BY BENDING OVER EXPOSED TABS.

CHECK DOOR OPENING DIMENSION AT BASE OF FRAME (SAME DIMENSION AS BETWEEN JAMBS AT HEADER). SECURE JAMBS WITH DRYWALL SCREW (NOT FURNISHED) THROUGH PUNCHED AND DIMPLED HOLE AT THE BASE OF FRAME. BE SURE TO ATTACH SCREWS TO BOTH SIDES OF BOTH JAMB LEGS (4 PLACES).

LEVELNESS BY SHIMMING UNDER JAMBS.)
FDJ SERIES
FRAME ANCHOR - FDJ COMPRESSION ANCHOR

5/8" MAX TRAVEL

SPOT WELD BOTH ENDS

3/4" 3/4"

STANDARD BASE ANCHOR HOLES

OPTIONAL

FDJ-12 SEPT 2012
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- FF Series Profile and Specifications ..................................... FS-2
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- Prohung Frame ................................................................. FS-10
Frame Construction

14 or 16 gage, cold-rolled, galvannealed A60, or galvanized G90 steel to be break-formed to the design specifications required. Frames shall be furnished knocked-down or welded, ground smooth upon request. Frames will have no returns; Standard stop heights to be 5/8” high. Soffit dimensions can vary. Faces will be drilled for multiple fastening options.

Installation & Applications

Frames to be installed in accordance with ANSI A250.11-2001. Standard series frames to be used in a number of applications including masonry, wood stud and steel stud construction.

Hardware Reinforcements

Frames to be furnished with 4 1/2” or 5” standard or heavy weight 7 gage steel hinge reinforcements and shall be adequately reinforced for all hardware. Standard arm or parallel closer reinforcements available upon request. Strike and hinge reinforcements shall be protected by plaster guards. Single frames shall be prepared to receive (3) rubber mutes.

Finish

Exposed frame surfaces to be cleaned and treated then coated with rust inhibitive primer. Color painted frames to receive a durable, flow coated, baked on finish. Water-based primer and color paint finishes to be free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

Compliance

All Mesker frame components comply with ANSI A250.8(R2008). Fire labeling in accordance NFPA and available in FM (standard), WHI (Intertek) and Underwriters Laboratories. For a complete list of product compliance per ANSI/ASTM test methods, consult the labeling section.
FF SERIES
FLUSH FACE FRAME

SLOT SIZE MAY VARY FROM
7/16" X 7/8" TO 1/2" X 1 1/2"
NUMBER AND LOCATION OF
SLOTS MAY VARY

JAMB DEPTH
MAX 14 1/2"
**Flush Face Frame Frame Installation**

1. **Nominal Door Height**
   
   Nominal Door Height +1”
   
   Add to door opening dimensions: 2” to width and 1” to height. For a 3070 door frame, the rough opening is 38” x 85”.

2. **Header**
   
   Install header into position approx. 1” from the top and the center of the rough opening.

3. **Strike Jamb**
   
   Install strike jamb by sliding over wall at top and engaging corner tabs into header. Pivot jamb into place.

4. **Repeat Step #3 with Hinge Jamb. Pull Header Down Tightly Onto Jambs.**

5. **Adjust Frame on Wall to Allow Frame Clearances and Plumb Frame with Carpenter Square and/or Level. (Adjust Header Levelness by Shimming Under Jambs).**

6. **Anchor Though Face with Anchors Appropriate for Wall Construction.**

7. **Apply Trim or Casing (Provided by Others) as Desired.**
RF SERIES - REMODELING FRAMES

Frame Construction

14 or 16 gage, cold-rolled, galvannealed A60, or galvanized G90 steel to be break-formed to the design specifications required. Frames shall be furnished knocked-down for welding by others or welded, ground smooth upon request. Standard frame to have 1/2” returns; Standard stop heights to be 5/8” high. Soffit dimensions can vary. Frames will be double rabbeted.

Installation & Applications

Frames to be installed in accordance with ANSI A250.11-2001. Standard series frames to be used in a number of applications including masonry, wood stud and steel stud construction.

Hardware Reinforcements

Frames to be furnished with 4 1/2” or 5” standard or heavy weight 7 gage steel hinge reinforcements and shall be adequately reinforced for all hardware. Standard arm or parallel closer reinforcements available upon request.

Strike and hinge reinforcements shall be protected by plaster guards. Single frames shall be prepared to receive (3) rubber mutes.

Finish

Exposed frame surfaces to be cleaned and treated then coated with rust inhibitive primer. Color painted frames to receive a durable, flow coated, baked on finish. Water-based primer and color paint finishes to be free of Hazardous Air Pollutants (HAPS) and Volatile Organic Compounds (VOCS).

Compliance

All Mesker frame components comply with ANSI A250.8(R2008). Fire labeling in accordance NFPA and available in FM (standard), WHI (Intertek) and Underwriters Laboratories. For a complete list of product compliance per ANSI/ASTM test methods, consult the labeling section.
RF SERIES
REMODELING FRAME

FOUR COUNTERSUNK HOLES FOR #12 X 2 1/4" PHILLIPS FLAT HEAD SCREWS (BY OTHERS)

TRIM SIZE AVAILABLE IN
2 1/4", 3 1/4", 4 1/4", 5 1/4", 7 1/4"

TRIM SIZE FOR WALL THICKNESS

<table>
<thead>
<tr>
<th>TRIM SIZE</th>
<th>FOR WALL THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 1/4&quot;</td>
<td>3 1/4&quot; THRU 4 1/16&quot;</td>
</tr>
<tr>
<td>3 1/4&quot;</td>
<td>4 1/8&quot; THRU 5 11/16&quot;</td>
</tr>
<tr>
<td>4 1/4&quot;</td>
<td>5 3/8&quot; THRU 6 13/16&quot;</td>
</tr>
<tr>
<td>5 1/4&quot;</td>
<td>7&quot; THRU 8 3/16&quot;</td>
</tr>
<tr>
<td>7 1/4&quot;</td>
<td>8 1/4&quot; THRU 9 7/16&quot;</td>
</tr>
</tbody>
</table>

1 15/16" FOR 1 3/4" DOOR
1 9/16" FOR 1 3/8" DOOR

3 1/2" FOR 1 3/4" DOOR
3 1/8" FOR 1 3/8" DOOR
1. Verify proper rough opening. Opening should be nominal door size plus 1 1/2" to plumb and shim.

2. Insert trim section into opening. Adjust for plumb and shim as required. Fasten with appropriate screws.

3. Insert hardware section from opposite side of the trim section. Plumb and fasten through stop with appropriate screws.
ADJUSTABLE FRAME

COMING SOON
PROHUNG FRAME

COMING SOON
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## Frame Preps

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<td>FP-28</td>
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<tr>
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<td>Pivots</td>
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<td>Offset Pivots</td>
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<td>Removable Hardware Mullion Prep</td>
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</table>
FRAME DETAILS
1 3/4" FRAMES - HINGE AND LOCK LOCATIONS

6'8", 7'0", 7'2"
1 1/2 PAIR OF HINGES

<table>
<thead>
<tr>
<th>FRAME HEIGHT</th>
<th>DIM A</th>
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<tbody>
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<td>6'8&quot;</td>
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<tr>
<td>7'0&quot;</td>
<td>32 1/4&quot;</td>
</tr>
<tr>
<td>7'2&quot;</td>
<td>33 1/4&quot;</td>
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</table>

7'10", 8'0"
2 PAIR OF HINGES

<table>
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<tr>
<th>FRAME HEIGHT</th>
<th>DIM A</th>
<th>DIM B</th>
</tr>
</thead>
<tbody>
<tr>
<td>7'10&quot;</td>
<td>25 1/2&quot;</td>
<td>10 1/4&quot;</td>
</tr>
<tr>
<td>8'0&quot;</td>
<td>25 1/2&quot;</td>
<td>12 1/4&quot;</td>
</tr>
</tbody>
</table>
FRAME DETAILS
1 3/8" FRAMES - HINGE AND LOCK LOCATIONS

6'8"
1 PAIR OF HINGES

7'0", 7'2"
1 1/2 PAIR OF HINGES

<table>
<thead>
<tr>
<th>FRAME HEIGHT</th>
<th>DIM A</th>
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</thead>
<tbody>
<tr>
<td>7'0&quot;</td>
<td>32 3/4&quot;</td>
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<tr>
<td>7'2&quot;</td>
<td>33 3/4&quot;</td>
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</tbody>
</table>
FRAME DETAILS
1 3/4" FRAMES - HINGE AND LOCK LOCATIONS FOR DUTCH DOORS

6'8", 7'0", 7'2"
2 PAIR OF HINGES

<table>
<thead>
<tr>
<th>FRAME HEIGHT</th>
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<tr>
<td>6'8&quot;</td>
<td>12 7/8&quot;</td>
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<tr>
<td>7'0&quot;</td>
<td>16 7/8&quot;</td>
</tr>
<tr>
<td>7'2&quot;</td>
<td>18 7/8&quot;</td>
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35" STRIKE PREP

NOMINAL DOOR HEIGHT

25"
FRAME DETAILS
FRAME TOLERANCES

HINGE PREPARATION

OPENING HEIGHT
±1/16"

STRIKE HEIGHT
±1/32"

OPENING WIDTH
+1/16"
-1/32"

FACE
±1/32"

THROAT OPENING
±1/16" (F SERIES)

FRAME DEPTH
±1/32"

* TOLERANCES BETWEEN HINGE CENTERLINES ARE NON-ACCUMULATIVE
** BASED ON NOMINAL HINGE HEIGHT ±1/32"

*THROAT OPENING—FDJ DRYWALL
±1/16"
FRAME DETAILS
HINGE PREP 3 1/2", 4 1/2", AND 5"

- GRIND OFF ALL PROJECTIONS FOR HEAVY WEIGHT HINGES

5/16" BACKSET

5"
FRAME DETAILS
STANDARD CLOSER REINFORCEMENT BAR

16” 2 5/8” 16” 2 5/8”

SINGLE OPENING

HINGE JAMB

2 5/8” 16” 2 5/8”

DOUBLE OPENING

HINGE JAMB

REGULAR ARM CLOSER (RAC)

CLOSER REINFORCEMENT BAR - CRF 14 GAUGE

PARALLEL ARM CLOSER (PAC)

CLOSER REINFORCEMENT BAR - CRF 14 GAUGE
FRAME DETAILS
STANDARD CLOSER REINFORCEMENT SLEEVE

SINGLE OPENING

DOUBLE OPENING

INSERT CLOSER SLEEVE REINFORCEMENT BEFORE ASSEMBLING FRAME.

STANDARD 14 GAUGE CLOSER REINFORCEMENT SLEEVE CSR-014 VARIES ACCORDING TO FRAME DEPTH

TACK WELD BOTH ENDS TO FRAME
FRAME DETAILS
CORNER BRACKET MOUNTED CLOSER REINFORCEMENT

SINGLE OPENING

8"
8"
8"

HINGE JAMB

DOUBLE OPENING

8"
8"
8"

HINGE JAMB

VARIES IN WIDTH
ACCORDING TO FRAME DEPTH

TACK WELD
BOTH ENDS

14 GAUGE STEEL
FRAME DETAILS
STANDARD STRIKE PREPARATIONS

A 16 GAUGE STRIKE REINFORCEMENT PROJECTION IS WELDED TO FRAME.
STRIKE MORTISE CONFORMS TO ANSI A156.115.

A 20 GAUGE STEEL PLASTER GUARD PROJECTION IS WELDED TO STRIKE REINFORCEMENT.

"U" STRIKE MORTISE (ASA STRIKE)

BACK VIEW
A 16 GAUGE STRIKE REINFORCEMENT IS WELDED TO FRAME. STRIKE MORTISE CONFORMS TO ANSI A156.115.

A 16 GAUGE STRIKE REINFORCEMENT WITH PLASTER GUARD.

"C" STRIKE MORTISE (T STRIKE)
7 GAUGE
REINFORCED PER TEMPLATE
FOR DRILL AND TAP BY OTHERS
FRAME DETAILS
DOUBLE ACTING HINGE REINFORCEMENT

REINFORCEMENT SIZED AND PLACED PER MANUFACTURING LOCATION

14 GAUGE REINFORCEMENT
FRAME DETAILS
HIGH FREQUENCY HINGE REINFORCEMENT

7 GAUGE HINGE REINFORCEMENT DRILLED AND TAPPED FOR 12-24 UNC (STANDARD) (1/4-20 UNC OPTIONAL)

HOLE FOR ABUSE RESISTANT STUD (OPTIONAL)

COVER BOX

WELD AS SHOWN
10" HINGE REINFORCEMENT

- DRILLED AND TAPPED FOR (OPTIONAL) 12/24 UNC (STANDARD)

- 7 GAUGE x JAMB DEPTH MINUS 1/2" x 10" HINGE REINFORCEMENT
  DRILLED AND TAPPED FOR 12/24 UNC (STANDARD)

- HOLE FOR ABUSE-RESISTANT STUD (OPTIONAL)

- ARC WELD FULL WIDTH ALONG EACH END IN RABBETS (ONLY WHERE SPECIFIED).
  STANDARD WELD INDICATED WITH A  at the end

- COVERBOX

FRAME DETAILS
FULL DEPTH REINFORCEMENT

FP-14  SEPT 2012
FRAME DETAILS
INVISIBLE HINGE PREPARATION
FRAME DETAILS
HINGE PREP 3 1/2", 4 1/2", AND 5"

Machine Screw Size:
10-24 x 1/2" F.H. with No. 9 Head

5/16" BACKSET

GRIND OFF ALL PROJECTIONS FOR HEAVY WEIGHT HINGES

Machine Screw Size:
12-24 x 1/2" F.H.

5/16" BACKSET
FRAME DETAILS
RESCUE HARDWARE - EMERGENCY STOP AND DOUBLE LIP STRIKE

PER TEMPLATE

PER TEMPLATE

7 3/4"
FRAME DETAILS
INTERCONNECTED LOCK STRIKE PREPARATION

4"
Screw holes are extruded to provide thread depth equal to 12 gauge plate.

Size and tap per ANSI 115.4

Frame details
Deadlock strikes
FRAME DETAILS
ELECTRIC STRIKE

VERTICAL LOCATION OF ELECTRIC STRIKE WILL VARY WITH THE HARDWARE MANUFACTURER, WHEN ORDERING FRAMES PREPARED FOR AN ELECTRIC STRIKE, SPECIFY THE TYPE OF LOCK BEING USED ALONG WITH CENTERLINE DIMENSION REQUIRED OF THE LOCK.
FRAME DETAILS
RIM EXIT DEVICE STRIKE REINFORCEMENT

8" MIN.

41" FROM FRAME BOTTOM TO C (STANDARD)
FRAME DETAILS
SVR EXIT DEVICE STRIKE REINFORCEMENT / PREPARATION

PREPARED FOR MORTISE STRIKES PER TEMPLATE OF HARDWARE MANUFACTURER

SPECIFY EXIT DEVICE AND STRIKE BEING USED WHEN ORDERING
FRAME DETAILS
CVR EXIT DEVICE STRIKE REINFORCEMENT / PREPARATION

PREPARED FOR MORTISE STRIKES PER
TEMPLATE OF HARDWARE MANUFACTURER

SPECIFY EXIT DEVICE AND STRIKE
BEING USED WHEN ORDERING
FRAME DETAILS
FLUSHBOLT STRIKE PREPARATION

OF DOOR
* LOCATION PER TEMPLATE. IF NO LOCATION ON TEMPLATE, THEN LOCATION MUST BE SPECIFIED WITH ORDER. THE QUANTITY OF HINGES MAY REQUIRE COORDINATION OF LOCATION WITH DOOR, (EX. 4 HINGES ON A 7'0") WOOD DOORS MAY REQUIRE OTHER LOCATIONS.
FRAME DETAILS
CONCEALED DOOR POSITION SWITCH

CUTOUT SIZE AND LOCATION
PER HARDWARE TEMPLATE

12 GAUGE
FRAME DETAILS
CONCEALED CLOSER PREPARATION

CUT OUT AND PREPARATION
PER TEMPLATE
FRAME DETAILS
CONCEALED STOP AND HOLDER

CUT OUT AND PREPARATION
PER TEMPLATE
FRAME DETAILS
PIVOTS- TOP AND BOTTOM

CENTER HUNG
SIZED, DRILLED, AND TAPPED
PER TEMPLATE

EDGE HUNG
SIZED, DRILLED, AND TAPPED
PER TEMPLATE
FRAME DETAILS
POCKET PIVOTS

CUTOUT PER TEMPLATE

SIZE, DRILL, AND TAP PER TEMPLATE
FRAME DETAILS
OFFSET PIVOTS, TOP, CENTER, AND BOTTOM

TOP PIVOT

CENTER PIVOT

BOTTOM PIVOT
FRAME DETAILS
REMOVABLE HARDWARE MULLION REINFORCEMENT

FILLER BLOCK NOT INCLUDED

12 GAUGE REINFORCING PLATE

HARDWARE MULLION ASSEMBLY

DOOR

HARDWARE MULLION ASSEMBLY

DOOR
<table>
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<td>Wire Anchor</td>
<td>PF-1</td>
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<tr>
<td>T Anchor</td>
<td>PF-2</td>
</tr>
<tr>
<td>Double Egress T Anchor</td>
<td>PF-3</td>
</tr>
<tr>
<td>Double Egress Multi-Purpose Anchor</td>
<td>PF-4</td>
</tr>
<tr>
<td>UNA Anchor</td>
<td>PF-5</td>
</tr>
<tr>
<td>5 ¾” UNA Anchor</td>
<td>PF-6</td>
</tr>
<tr>
<td>Wood Strap Anchor</td>
<td>PF-7</td>
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<tr>
<td>Steel Stud Anchor</td>
<td>PF-8</td>
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<tr>
<td>Z Anchor</td>
<td>PF-9</td>
</tr>
<tr>
<td>Tube Anchor</td>
<td>PF-10</td>
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<tr>
<td>AEW Anchor</td>
<td>PF-11</td>
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<tr>
<td>Floor Anchor</td>
<td>PF-12</td>
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<tr>
<td>Adjustable Floor Anchor</td>
<td>PF-13</td>
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<tr>
<td>Drywall Snap in Anchor</td>
<td>PF-14</td>
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<tr>
<td>Drywall Compression Anchor</td>
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<td>Adjustable Anchor</td>
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<td>Mullion Anchor</td>
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<tr>
<td>Closer Reinforcement Frame Face (CRF)</td>
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<td>Closer Reinforcement 4 ½” Frame</td>
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<td>Closer Reinforcement Sleeve</td>
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<tr>
<td>Hinge Reinforcement</td>
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<tr>
<td>Hinge Plaster Guard</td>
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<tr>
<td>Reversible Flush Bolt Strike and Reinforcement</td>
<td>PF-24</td>
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<tr>
<td>Strike Filler</td>
<td>PF-25</td>
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<tr>
<td>U Strike Reinforcement and Plaster Guard</td>
<td>PF-26</td>
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<tr>
<td>C Strike Reinforcement with Plaster Guard</td>
<td>PF-27</td>
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<tr>
<td>Spreader Bar</td>
<td>PF-28</td>
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<tr>
<td>Plastic Plug</td>
<td>PF-29</td>
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<tr>
<td>Mutes</td>
<td>PF-30</td>
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<tr>
<td>Corner Frame Tab</td>
<td>PF-31</td>
</tr>
<tr>
<td>Mullion Clip</td>
<td>PF-32</td>
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</table>
PARTS - FRAME
MASSORY WIRE ANCHOR

PART # PFWA
MASSORY WIRE ANCHOR
PARTS - FRAME
MASONRY "T" ANCHOR

T 4 3/4 PART # PFMT4
T 5 3/4 PART # PFMT5
T 6 3/4 PART # PFMT6
T 7 3/4 PART # PFMT7
T 8 3/4 PART # PFMT8
T 5 3/4 DOUBLE EGRESS PART # PFDE684
PARTS - FRAME
MULTI-PURPOSE EGRESS ANCHOR

PART # PFDE680
PARTS - FRAME
UNIVERSAL ANCHOR

4 3/4 PART # PFUA4
6 3/4 PART # PFUA6
7 1/4 PART # PFUA725
7 3/4 PART # PFUA7
8 1/4 PART # PFUA825
8 3/4 PART # PFUA8
PARTS-FRAME
5 3/4" UNIVERSAL ANCHOR

5 3/4" PART # PFUA5
PARTS - FRAME
WOOD STUD STRAP ANCHOR

PART # PFWSSA
PARTS - FRAME
STEEL STUD ANCHOR 5 3/4

PART # PFSSA5
PARTS - FRAME
ZEE ANCHOR

4 3/4" PART # PFZA475
5 3/4" PART # PFZA575
6 3/4" PART # PFZA675
7 3/4" PART # PFZA775
8 3/4" PART # PFZA875
PARTS - FRAME
TUBE

PART # PFMTA

CUT TO MATCH JAMB DEPTH BY OTHERS
PARTS - FRAME
AEW

PART # PFAEW
4 3/4" PART # PFSA4
5 3/4" PART # PFSA5
6 3/4" PART # PFSA6
7 3/4" PART # PFSA7
8 3/4" PART # PFSA8
PARTS - FRAME
ADJUSTABLE FLOOR ANCHOR (4 3/4 THRU 8 3/4)

SEE PAGE P-35

PART # PFAAF
PARTS - FRAME
DRYWALL SNAP IN ANCHOR (2 NEEDED PER JAMB)

PART # PFDSNA
PARTS - FRAME
ADJUSTABLE ANCHOR (110) (380) & (380A)

4 3/4" - 6 3/4" PART # PFA110
5 3/4" - 8 3/4" PART # PFA380
7" - 12" PART # PFA380A
4 3/4" PART # PFMUA4
5 3/4" PART # PFMUA5
6 3/4" PART # PFMUA6
7 3/4" PART # PFMUA7
8 3/4" PART # PFMUA8
PARTS - FRAME
CLOSER REINFORCEMENT FRAME FACE (CRF)

PART # PFFCR

14 GAUGE

16”

1 3/4”
PARTS - FRAME
CLOSER REINFORCEMENT 4 1/2" FRAME (CRB)
PARTS - FRAME
CLOSER SLEEVE (SPECIFY PROFILE)

4 3/4" PART # PFSCR47
5 3/4" PART # PFSCR57
5 5/8" PART # PFSCR56
5 7/8" PART # PFSCR58
6 3/4" PART # PFSCR67
8 1/4" PART # PFSCR82
8 3/4" PART # PFSCR87

TO MATCH JAMB DEPTH
16" 14 GAUGE
PARTS - FRAME
FRAME FILLER PLATE

PART # PF402

.135

4 1/2"
PARTS - FRAME
HINGE REINFORCEMENT

3 1/2" PART # PF3HR
4 1/2" PART # PF4HR
5" PART # PF5HR
4 1/2" HEAVY WEIGHT PART # PF4HHR
5" HEAVY WEIGHT PART # PF5HHR

GRIND OFF FOR HEAVY WEIGHT

7 GAUGE
PARTS - FRAME
HINGE PLASTER GUARD

3 1/2" PART # PF3PG
4 1/2" PART # PF4PG
PARTS - FRAME
REVERSIBLE FLUSH BOLT STRIKE AND REINFORCEMENT

PART # PFFBREV
PARTS - FRAME
STRIKE FILLER

2 3/4" PART # PFFCS

4 7/8" PART # PFFUS
PARTS - FRAME
U STRIKE (ASA) REINFORCEMENT AND PLASTER GUARD

PART # PFSRU

PART # PFUPG

16 GAUGE
PARTS - FRAME
C STRIKE (T) REINFORCEMENT WITH PLASTER GUARD

PART # PFSRC
16 GAUGE
PARTS - FRAME
SPREADER BAR

3' PART # PFSB3
6' PART # PFSB6
8' PART # PFSB8
PARTS - FRAME
PLASTIC PLUG FOR UNA 5 3/4"
PARTS - FRAME
MUTES

PUSH THROUGH PART # PFPTM
STICK ON PART # PFSOM

DOUBLE HEADERS AND MULLIONS ARE NOT DRILLED
THEREFORE STICK-ON MUTES ARE RECOMMENDED.
PARTS - FRAME
CORNER FRAME TAB

PART # PFTAB
PARTS - FRAME
MULLION CLIP

PART # PFMC
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Mullion and Stick

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STICK AND MULLION
HOW TO ORDER

1  2  3  4  5  6  7  8  9  10

STICK DESIGNATION
S - STICK
M - MULLION

METAL TYPE
LEAVE BLANK - COLD ROLLED
Z - GALVANNEALED (A60)
G90 - GALVANIZED (G90)

PREP SIDE AND GAUGE
4 - PREP ON 400 SIDE
8 - PREP ON 800 SIDE
THEN DESIGNATE GAUGE

JAMB DEPTH

STICK TYPE
BS - BLANK STICK
HS - HINGE STICK
SS - STRIKE STICK
CS - CASED OPEN
HA - HAT

HINGE PREP LAYOUT
68 - 6'8"
70 - 7'0"
80 - 8'0"
...

LENGTH
107 - 10' 7"

HAND
R - RIGHT
L - LEFT

FACE
W4F - 4"
W6F - 6"
W1 1/2F - 1 1/2"
LEAVE BLANK - 2"

PROFILE
DE - DOUBLE EGRESS
ER - EQUAL RABBET
SR - SINGLE RABBET
COS - CASED OPEN
LEAVE BLANK - UNEQUAL RABBET

USE THE APPROPRIATE SYMBOL AS DESIGNATED
ABOVE FOR POSITIONS 1 THRU 10.
EXAMPLE

S   Z   416   5 3/4   HS   70   107   R   W4F   SR
1   2   3   4   5   6   7   8   9   10
STICK PROFILES
BLANK AND HINGE STICK

BLANK 2"

BLANK 4"

HINGE 68, 70, 72

HINGE 710, 80

4 1/2" TO 14 3/4"

2"

4"

4 1/2" TO 14 3/4"

2"
STICK PROFILES
STRIKE AND CASED OPEN STICK

STRIKE

CASED OPEN 2"

CASED OPEN 4"

4 3/4" TO 14 3/4"

4 1/2" TO 14 3/4"

3" TO 14 3/4"
STICK PROFILES
HAT STICK

10' 7"

SIZE TO MATCH JAMB DEPTH

SIZE TO MATCH JAMB DEPTH
STICK PROFILES
BASE PANELS

BASE (SILL) PANEL 6"

BASE (SILL) PANEL 8"

BASE (SILL) PANEL 10"

BASE (SILL) PANEL 12"

4 3/4" TO 14 3/4"

6" TO 8"

10" TO 12"

M&S-5  SEPT 2012

BASE (SILL) PANEL 10"
STANDARD HARDWARE PREPS.
HINGES FOR 6' 8", 7'0"
OTHERS AVAILABLE BY SPECIAL ORDER
STRIKES U STRIKE
OTHERS AVAILABLE BY SPECIAL ORDER
OTHER FACES AVAILABLE 1" TO 12"
NO MUTE HOLES IN MULLIONS
CORNER POST

RABBETS AND DIMENSIONS CAN VARY.
PLEASE CONTACT FACTORY
GLAZING BEAD

120"

5/8"

5/8"

PREPARED FOR #10 X 1 1/4" SCREW
STICK AND MULLION
MULLION STANDARD PROFILES

STANDARD PROFILES


STANDARD PROFILES

3", 3 3/4"
STICK AND MULLION
MULLION CUSTOM PROFILES

CUSTOM PROFILES
4 1/2" - 14 3/4"
NOT SHOWN AS STANDARD

CUSTOM PROFILES
3" - 4 1/2"
NOT SHOWN AS STANDARD
STICK AND MULLION NOTCHES

MULLION NOTCH

STICK NOTCH

5/8"
MULLION CLIPS ARE LOCATED 6" - 8" OC STAGGERED FROM SIDE TO SIDE

MULLION CAP
(HARDWARE SECTION)

MULLION CLIP

MULLION BASE
(STOP SECTION)
S416 STANDARD FRAME COMPONENTS
TRANSOM HINGE JAMBS 6'8" & 7'0" HIGH DOORS

FOR 6'8" 54 1/4"
FOR 7'0" 54 1/4"

FOR 6'8" 30 1/4"
FOR 7'0" 30 1/4"

FOR 6'8" 30 1/4"
FOR 7'0" 30 1/4"

40 5/16"
12 1/4"

RH HINGE
LH HINGE
LH STRIKE
RH STRIKE

HINGE LOCATIONS
STRIKE LOCATION

M&S-13 SEPT 2012
**M416 STANDARD FRAME COMPONENTS**

**MULLION 6'8" & 7'0"**

- **FOR 6'8" 54 1/4"**
- **FOR 7'0" 50 1/4"**

- **FOR 6'8" 30 1/4"**
- **FOR 7'0" 32 1/4"**

- **HINGE LOCATIONS**
- **STRIKE LOCATION**

- **DOUBLE HINGE**
- **RH HINGE**
- **LH HINGE**

- **RH HINGE & STRIKE**
- **LH HINGE & STRIKE**

- **DOUBLE STRIKE**
- **RH STRIKE**
- **LH STRIKE**

**SEPT 2012 M&S - 14**

*MESKER*
TYPICAL SECTION

FRAME SECTION

HAT SECTION

TACK WELD EVERY 6" OR AS REQUIRED.
FILL SEAM AND GRIND SMOOTH.
STICK MODIFICATION DETAILS

TYPICAL SECTION

STANDARD BASE PANEL

FACE VARIES

ASP SIZED FOR JAMB DEPTH

BLANK MULLION

GLAZING BEAD

STEEL PANEL

BLANK STICK

AFL SIZED FOR JAMB DEPTH

ALTERNATE BASE PANEL ASSEMBLY

PSP SIZED FOR JAMB DEPTH

STICK MODIFICATION DETAILS

TYPICAL SECTION

STANDARD BASE PANEL

FACE VARIES

ASP SIZED FOR JAMB DEPTH

BLANK MULLION

GLAZING BEAD

STEEL PANEL

BLANK STICK

AFL SIZED FOR JAMB DEPTH

ALTERNATE BASE PANEL ASSEMBLY

PSP SIZED FOR JAMB DEPTH
UNDERWRITERS LABORATORIES
APPROVED TRANSOM FRAMES

SECTION A-A

SECTION B-B

MATERIAL: 16 GA C.R. STEEL
JAMB DEPTH: 4" MIN TO 9" MAX
PANEL: 20 GA MIN TO 16 GA MAX STEEL OR 1296 SQ

MATERIAL: 16 GA C.R. STEEL
JAMB DEPTH: 4 MIN - 12 3/4" MAX
PANEL: 20 GA x 1 3/4"

SEPT 2012
TRANSON / SIDE LITE PANEL

5/8" STD OR PER TEMPLATE

POLYSTYRENE (STANDARD)
POLYURETHANE (OPTION)

16 AND 18 GAUGE STANDARD

OTHER OPTIONS ON REQUEST
(12 OR 14 GAUGE, COLD ROLLED, A60, OR G90)

AVAILABLE COLD ROLLED OR GALVANIZED
UL TRANSMO / SIDE LITE PANEL

STEEL STIFFENED ONLY

1 3/4" STD

16 AND 18 GAUGE STANDARD

OTHER OPTIONS ON REQUEST (12 OR 14 GAUGE, COLD ROLLED, A60, OR G90)

AVAILABLE COLD ROLLED OR GALVANIZED

FOR SIZES AVIALIBLE SEE PAGE L-14, L-16, L23
KERFED MULLION

CONTACT FACTORY FOR AVAILABLE SIZES.
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Labeling

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U.L. FIRE WINDOW FRAMES

GENERAL NOTES:

1. Chart is intended for reference only. Changes to frames or glazing options are frequently occurring. Please check website or consult with factory for most current information.

2. Profiles are shown as double rabbet for illustration purposes only. Single rabbet frames are available with door side face sizes same as double rabbet.

3. Profiles are shown for basic information only. They are not intended for use as submittal drawings.

4. All frames are for use in positive pressure or neutral pressure conditions.

5. All frames are series F.

6. All stop heights are 5/8” based on using listed glass, glazing and glazing installation combinations.

7. All bars and mullions are welded (non-removable).

8. In the anchor column ** indicates that this anchor type is allowed up to 10’0” overall height.
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<th>ANCHOR TYPE</th>
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U.L. FIRE WINDOW FRAMES

W1 SINGLE LITE ABOVE FLOOR

W2 SINGLE LITE ABOVE FLOOR

WB SINGLE LITE ABOVE FLOOR

Fire Lite used with listed glazing material combinations. 4"-6" maximum width or height not to exceed 2,721 square inches of exposed.

1/4" wire glass used with listed glazing material combinations. 3'-3" maximum opening width or 4'-0" maximum opening height not to exceed 1,296 square inches exposed light.

Any listed glazing combinations. 9'-1 3/4" maximum exposed light width or height not to exceed 5,268 square inches exposed light.
Fire Lite used with listed glazing material combinations. 4’-6” maximum width or height not to exceed 2,721 square inches of exposed light.

1¼” wire glass used with listed glazing material combinations. 3’-3” maximum opening width or 4’-0” maximum opening height not to exceed 1,296 square inches exposed light.
Any listed glazing combinations. 9'-1 3/4" maximum exposed light width or height not to exceed 5,268 square inches exposed lite.

W7 = Fire Lite used with listed glazing material combinations. 4'-6" maximum width or height not to exceed 2,721 square inches of exposed lite.

W8 = 1/4" wire glass used with listed glazing material combinations. 3'-3" maximum opening width or 4'-0" maximum opening height not to exceed 1,296 square inches exposed lite.

W7 & W8-QUANTITY OF INDIVIDUAL LITES MAY VARY AS LONG AS OVERALL SIZE IS NOT EXCEEDED.
Any listed glazing combinations. 9'-1 3/4" maximum exposed light width or height not to exceed 5,268 square inches exposed light.

Quantity of individual lights may vary as long as overall size is not exceeded.
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**Note:** This chart above represents 3-sided Fire Door Frames in Mesker U.L. product lines of 2012. Frames are eligible to be UL Listed and certified under UL Standard (F-SERIES).
3 - SIDED U.L. FIRE DOOR FRAME

A

B1

B2

C

D

MESKER

The newest innovations in hollow metal from the oldest hollow metal door company in America
NOTE: TYPE G & H — DOORS SHALL NOT BE HINGED FROM MULLION.
GENERAL NOTES:

1. Chart is intended for reference only. Changes to frames or glazing options are frequently occurring.

2. Profiles are shown as double rabbet for illustration purposes only. Single rabbet frames are available with door side face sizes same as double rabbet.

3. Profiles are shown for basic information only. They are not intended for use as submittal drawings.

4. All frames are for use in positive pressure (UL-10C) or neutral pressure (UL-10B) conditions.

5. All frames are series F.

6. All stop height are 5/8” based on using listed glass, glazing, and glazing installation combinations.

7. Panels and glazing shown on door side for illustration purposes only. Panels and glazing may also be located opposite the door side to suit architectural details.

8. All transom bars and mullions are welded (non-removable).

9. ** In anchor column indicates that this anchor type is allowed up to 10’-0” overall height. Anchor must be welded to frame.
1 3/4” Steel Stiffened Hollow Metal Panel

3/8” Thick Laminate Panel.
3'-0” x 4'-0” Maximum Opening
Fire Lite used with listed glazing material combinations. 4'-6" maximum width or height not to exceed 2,721 square inches exposed light.

1/4" Wire glass used with listed glazing material combinations. 3'-0" maximum opening width or 4'-0" maximum opening height not to exceed 1,296 square inches exposed light.
1 3/4" Thick Composite Panel with steel faces, non-removable.

1 3/4" Thick Honeycomb Core Panel non-removable.
1 3/4" Wood Panel with spring bolts non-removable.

1 3/4" Wood Panel with spring bolts non-removable.
U.L. TRANSOM FRAMES

3/8” Cement Board Panel non-removable.

1/4” Wire glass. 4'-6" maximum opening not to exceed 1,296 square inches exposed light with conventional glazing systems and 3/4” high stops at transom.

See Elevation T4 for optional information in lieu of this design.
1/4" Listed glazing material combinations up to 9'-3" opening width or height not to exceed 5,268 square inches exposed light.
U.L. TRANSOM FRAMES

F SERIES

THROAT OPENING 3/4" MIN
TO SUIT DOOR 1" MIN

JAMBS 1 1/4" TO 4" OPNG.
HEADER 1 1/4" TO 4" SIZE

NOTE: DOUBLE RABBET PROFILE RECOMMENDED FOR AESTHETICS

F SERIES FIXED MULLION

EXPOSED LIGHT 3/4" MIN
TO SUIT DOOR 1" MIN

OPNG. 2" TO 4" SIZE

MULLION WELDED AT BOTH FACES

F SERIES TRAN. BAR

TO SUIT DOOR 1" MIN

OPNG. 2" TO 4" SIZE

5/8" AT PANEL OR AS REQ'D BY GLAZING

MESKER
The newest innovations in hollow metal from the oldest hollow metal door company in America
GENERAL NOTES:

1. Chart is intended for reference only. Changes to frames or glazing options are frequently occurring.

2. Profiles are shown as double rabbet for illustration purposes only. Single rabbet frames are available with door side face sizes same as double rabbet.

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7. Panels and glazing shown on door side for illustration purposes only. Panels and glazing may also be located opposite the door side to suit architectural details.

8. All transom bars and mullions are welded (non-removable).

9. ** In anchor column indicates that this anchor type is allowed up to 10’-0” overall height. Anchor must be welded to frame.
# U.L. Transom and Side Lite or Panels Above Floor

## Details and Measurements

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<td>TS7</td>
<td>4'-0&quot; x 10'-0&quot; SNG 8'-0&quot; x 10'-0&quot; DBL</td>
<td>13'-2&quot;</td>
<td>11'-7&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
</tr>
</tbody>
</table>

*Note: All measurements are in feet.*

---

**Mesker**

The leader in hollow metal since 1901 — the oldest hollow metal door company in America.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Material</th>
<th>Code</th>
<th>Grade</th>
<th>Finish</th>
<th>Fire Rating</th>
<th>Model</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5&quot; x 0.5&quot;</td>
<td>Steel</td>
<td>M20</td>
<td>10</td>
<td>Galvanised</td>
<td>120</td>
<td>L-24</td>
<td>MADE IN USA</td>
</tr>
<tr>
<td>1.0&quot; x 1.0&quot;</td>
<td>Steel</td>
<td>M20</td>
<td>10</td>
<td>Galvanised</td>
<td>120</td>
<td>L-24</td>
<td>MADE IN USA</td>
</tr>
<tr>
<td>1.5&quot; x 1.5&quot;</td>
<td>Steel</td>
<td>M20</td>
<td>10</td>
<td>Galvanised</td>
<td>120</td>
<td>L-24</td>
<td>MADE IN USA</td>
</tr>
</tbody>
</table>

These dimensions and materials are for U.L. Transom and Side Lights or Panels mounted on floor. The code M20 indicates the material grade and finish. The fire rating of 120 signifies the fire resistance capability. The note 'MADE IN USA' indicates the manufacturing location.
<table>
<thead>
<tr>
<th>DETAIL</th>
<th>DOOR OPENING</th>
<th>OVERALL WIDTH</th>
<th>OVERALL HEIGHT</th>
<th>TRANSOM WIDTH</th>
<th>TRANSOM HEIGHT</th>
<th>SIDE WIDTH</th>
<th>SIDE HEIGHT</th>
<th>MAX EXPOSED LIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS8</td>
<td>4080 SNG 8080 DBL</td>
<td>12'-0&quot;</td>
<td>11'-4&quot;</td>
<td>3'-0&quot;</td>
<td>4'-0&quot;</td>
<td>2'-9&quot;</td>
<td>4'-6&quot;</td>
<td>N/A</td>
</tr>
<tr>
<td>TS9</td>
<td>4080 SNG 8080 DBL</td>
<td>8'-0&quot;</td>
<td>10'-0&quot;</td>
<td>3'-0&quot;</td>
<td>4'-0&quot;</td>
<td>2'-9&quot;</td>
<td>4'-6&quot;</td>
<td>N/A</td>
</tr>
<tr>
<td>TS10</td>
<td>4080 SNG 8080 DBL</td>
<td>12'-0&quot;</td>
<td>11'-4&quot;</td>
<td>4'-6&quot;</td>
<td>6'-5 3/4&quot;</td>
<td>4'-6&quot;</td>
<td>6'-5 3/4&quot;</td>
<td>2,721 SQ. IN.</td>
</tr>
<tr>
<td>TS11</td>
<td>4080 SNG 8080 DBL</td>
<td>8'-0&quot;</td>
<td>10'-0&quot;</td>
<td>4'-6&quot;</td>
<td>6'-5 3/4&quot;</td>
<td>4'-6&quot;</td>
<td>6'-5 3/4&quot;</td>
<td>2,721 SQ. IN.</td>
</tr>
<tr>
<td>TS12</td>
<td>4080 SNG 8080 DBL</td>
<td>12'-0&quot;</td>
<td>11'-4&quot;</td>
<td>3'-0&quot;</td>
<td>4'-0&quot;</td>
<td>2'-9&quot;</td>
<td>4'-6&quot;</td>
<td>1,296 SQ. IN.</td>
</tr>
<tr>
<td>TS13</td>
<td>4080 SNG 8080 DBL</td>
<td>8'-0&quot;</td>
<td>11'-4&quot;</td>
<td>3'-0&quot;</td>
<td>4'-0&quot;</td>
<td>2'-9&quot;</td>
<td>4'-6&quot;</td>
<td>1,296 SQ. IN.</td>
</tr>
<tr>
<td>TS14</td>
<td>4'-0&quot; x 10'-0&quot; SNG 8'-0&quot; x 10'-0&quot; DBL</td>
<td>13'-2&quot;</td>
<td>11'-7&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
<td>9'-3&quot;</td>
<td>5,268 SQ. IN.</td>
</tr>
</tbody>
</table>
GENERAL NOTES:

1. All doors shall be prepared for swinging, closing and latching hardware. Generally types include:
   Swinging:
   - Butt hinges per NFPA 80
   - UL Listed continuous hinges
   - UL Listed pivots or pivot sets (single acting)

   Closing:
   - Surface closers
   - Concealed closers
   - Track type closers
   - Mortise (indoor) closers
   - UL Listed spring hinges (single acting)
   - UL Listed floor closers (single acting)

   Latching:
   - UL Listed single point latches (mortise, cylindrical, unit, hospital)
   - UL Listed mortise or rim fire exit devices (single doors)
   - UL Listed rim fire exit devices with mullion (double doors)
   - UL Listed mortise x vertical rod fire exit devices (double doors)
   - UL Listed vertical rod fire exit devices (2) (double doors)
   - UL Listed auxiliary-supplemental lock with primary latching
   - UL Listed flush or surface bolts (inactive doors)

2. All doors have been tested or evaluated for compliance with UL-10C (positive pressure) or UL-10B (neutral pressure) or NFPA-252.

3. All doors may bear smoke control marking (S-Labels) validated by installation (at jobsite) of listed gaskets.

4. All doors 1 3/4” thick unless noted.

5. Louvers cannot be used in doors rated over 1 1/2 hours or in doors having glazing, temperature rise rating or fire exit hardware. Where permitted, louvers cannot exceed 24” in width or height.

6. See page XX for glazing dimensions, rating, material, etc.

7. Chart is intended for reference only. Changes will frequently occur increasing capability or data noted.
<table>
<thead>
<tr>
<th>RATING</th>
<th>GLAZING</th>
<th>DOOR STYLES (EXAMPLES ONLY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL WITH 250 ° TEMP RISE</td>
<td>100 SQ. IN PER DOOR</td>
<td>V  N2  N1  M  R</td>
</tr>
<tr>
<td>3 HOUR</td>
<td>100 SQ. IN FIRE LITE</td>
<td>V  N2  N1  M  R</td>
</tr>
<tr>
<td>1 1/2 HOUR</td>
<td>100 SQ. IN</td>
<td>V  N2  N1  M  R</td>
</tr>
<tr>
<td>1 HOUR</td>
<td>100 SQ. IN</td>
<td>V  N2  N1  M  R</td>
</tr>
<tr>
<td>1 - 1 1/2 HOUR</td>
<td>PILKINGTON WIRE WITH FG 3000. 522 SQ. IN. EACH UP TO 4 LITE. 12” X 46” MAX.</td>
<td>V  N2  N1  M  R  G2  G3  N3  N4  N5  G</td>
</tr>
<tr>
<td>3/4 HOUR</td>
<td>1,296 SQ. IN. PER LITE. 54” MAX WIDTH OR HEIGHT.</td>
<td>V  N2  N1  M  R  G2  G3  N3  N4  N5  G</td>
</tr>
<tr>
<td>3/4 - 1/3 HOUR (20 MIN)</td>
<td>PILKINGTON WIRE WITH FG 3000. 2856 SQ. IN. PER LITE. 34” WIDE OR 84” HIGH</td>
<td>V  N2  N1  M  R  G2  G3  N3  N4  N5  G  FG</td>
</tr>
<tr>
<td>20 MIN</td>
<td>ANY GLAZING. 3,289 SQ.IN. PER LITE. MAX 35 3/4” WIDE OR 92” HIGH.</td>
<td>V  N2  N1  M  R  G2  G3  N3  N4  N5  G  FG</td>
</tr>
</tbody>
</table>

1. DOOR STYLE F IS PERMITTED FOR ALL HOURLY RATINGS.
2. STOP HEIGHT 5/8” UP TO 100 SQ. IN. EXPOSED OR WHERE LISTED GLASS IS USED IN COMBINATION WITH LISTED COMBINATIONS.
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Submittals

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NDD Doors ....................................................... SUB-6
Bullet Assembly ............................................... SUB-7
Door Preps ....................................................... SUB-8
F Series .......................................................... SUB-9
FDJ Series ......................................................... SUB-10
FF Series ......................................................... SUB-11
RF Series ......................................................... SUB-12
Anchors ......................................................... SUB-13
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCK HERSEY INTL.
FACTORY MUTUAL SYSTEM

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

BEVELED EDGE
SQUARE EDGE
FOR LOCK PREPS
SEE DOOR PREP PAGE
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

NU SERIES DOOR

DRAWN BY DATE
CHECKED DATE
SHT OF
JOB NO.

FIGURES
1. TOP CHANNELS
   - FLUSH TOP
   - INVERTED TOP
2. CLOSER REINFORCEMENT
3. VERTICAL EDGE
   - STANDARD
   - NVS
4. HINGE PREP
5. CORE
   - POLYURTHANE
6. LOCK EDGE
   - BEVELED EDGE
   - SQUARE EDGE
7. LOCK PREP
   - FOR LOCK PREPS
   - SEE DOOR PREP PAGE

1/8” 1/8” 3/4”
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCX HERSEY INTL.
FACTORY MUTUAL SYSTEM

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

NF SERIES DOOR TEMPERATURE RISE (250)

IF A TEMPERATURE RISE DOOR IS DESIRED, THEN ONLY 100 SQUARE INCHES OF GLASS ALLOWED.
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCK HERSEY INTL.
FACTORY MUTUAL SYSTEM

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

NH SERIES DOOR
ST SERIES DOOR

DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCK HERSEY INTL.
FACTORY MUTUAL SYSTEM

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

FOR LOCK PREPS
SEE DOOR PREP PAGE

20 GAUGE STEEL STIFFENER WELDED EVERY 6"
1/8" X 1/8"
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCK HERSEY INTL.
FACTORY MUTUAL SYSTEM

AVAILABLE IN:
14, 16, 18, 20 GAUGE
CR, A60, G-90

NDD SERIES DOOR
DUTCH DOOR

SHELF NOT ALLOWED FOR FIRE RATING.
ASTRAGAL REQUIRED FOR FIRE RATING.

SHELF NOT ALLOWED FOR FIRE RATING.
ASTRAGAL REQUIRED FOR FIRE RATING.
DOOR MEETS OR EXCEEDS ANSI 250.4 PERFORMANCE TEST:
20 GAUGE STEEL (500,000 CYCLES)
18 & 16 GAUGE STEEL (1,000,000 CYCLES)

DOORS MEET LEED REQUIREMENTS AND BUY AMERICAN STANDARDS.
LABELING AGENCIES:
UNDERWRITES LABORATORY INC.
WARNOCK HERSEY INTL.
FACTORY MUTUAL SYSTEM

MUST HAVE BULLET RATED GLASS.
GLASS LITE AVAILABLE: 10" X 10" MIN. 28" X 58" MAX
WITH APPROPRIATE GLAZING (BY OTHERS)

14 GAUGE SHEET WELD TO DOOR INTERIOR.

BULLET ASSEMBLY

AVAILABLE IN:
CR, A60, G-90
For additional door preps, see the door section of the technical data manual.
F SERIES FRAMES

F SERIES FRAMES ARE AVAILABLE AS SHOWN FOR THREE SIDED FRAMES OR AS STICK SECTIONS FOR TRANSOMS, SIDELIGHTS AND BORROWED LITE FRAMES.

FOR LABELING DETAILS, ANCHORING OPTIONS, AND DOOR HANDING & SWING, PLEASE SEE THE APPLICABLE SECTION OF THE TECHNICAL DATA MANUAL.
**FDJ SERIES FRAMES**

FDJ SERIES FRAMES ARE AVAILABLE AS SHOWN FOR THREE SIDED FRAMES OR AS STICK SECTIONS FOR TRANSOMS, SIDELIGHTS AND BORROWED LITE FRAMES.

FOR LABELING DETAILS, ANCHORING OPTIONS, AND DOOR HANDING & SWING, PLEASE SEE THE APPLICABLE SECTION OF THE TECHNICAL DATA MANUAL.
**FF SERIES FRAMES**

FF SERIES FRAMES ARE AVAILABLE AS SHOWN FOR THREE SIDED FRAMES OR AS STICK SECTIONS FOR TRANSOMS, SIDELIGHTS AND BORROWED LITE FRAMES.

FOR LABELING DETAILS, ANCHORING OPTIONS, AND DOOR HANDING & SWING, PLEASE SEE THE APPLICABLE SECTION OF THE TECHNICAL DATA MANUAL.
RF SERIES FRAMES

RF SERIES FRAMES ARE AVAILABLE AS SHOWN FOR THREE SIDED FRAMES OR AS STICK SECTIONS FOR TRANSOMS, SIDELIGHTS AND BORROWED LITE FRAMES.

FOR LABELING DETAILS, ANCHORING OPTIONS, AND DOOR HANDING & SWING, PLEASE SEE THE APPLICABLE SECTION OF THE TECHNICAL DATA MANUAL.