

The Star EDGE

ASSA ABLOY

Technical Data Series
Revised: 16 June, 2015

Article V. The Star EDGE

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The Star EDGE Pre-Assembled Door Units

The Star EDGE Pre-Assembled Walk-Door System is designed specifically for pre-engineered metal buildings. The following specified door, frame, subframe and hardware are standard and are completely preassembled at the factory. ASSA ABLOY reserves the right to change component specifications or substitute components of similar quality without notification.

Section 5.01 Specifications

(a) Door Specifications

Standard doors are made of electro galvanized or galvaneal steel sheets (18 gauge). All doors to be 1-3/4" thick with a patented two-panel design to insure structural integrity.

Doors are a fabricated rigid, neat in appearance, and free from defects, warpage, and buckle. Exposed welds are made smooth, flush and invisible. Core is a one piece, polystyrene slab, bonded to the inside of both face sheets with a waterproof contact adhesive.

All doors have been tested for thermal properties to ASTM C1363 standard and Air Infiltration testing to ASTM E283 standard. Core calculated R value = 6.35, U value = 0.157 (ASTM C518). Fully operable assembly R value = 2.83, U value = 0.35.

The lock edges are non-beveled with a mechanical interlocking edge seam. An 18-gauge lock ring reinforcement is installed in the standard provision for Gov. Series 160/161 cylindrical lock sets, and in accordance with ANSI standard A 115.2.

The hinge edge is non-beveled, non-handed, and reinforced with a 7 gauge hinge reinforcement attached at each hinge

location. The doors are prepared for 4 1/2" full-mortise template hinges per ANSI/A156.7.

The top and bottom door edges are closed with 16 gauge steel channels welded to both faces to prevent water penetration.

All 20 gauge standard doors for metal walls can be ordered with a textured (embossed) or smooth skin. 18 gauge is available in Smooth Skin only.

(b) Frame Specifications

Standard frames are made from electro galvanized or galvaneal steel sheets of 16 gauge material. Frames are double rabbeted. Frame stops are a minimum of 5/8". Standard frames shall be 5-3/4" in width and a throat size of 4-3/4".

The hinge jamb is reinforced with a 7-gauge plate and prepared for a full mortise 4-1/2" template hinge. The strike jamb is prepared for a universal 4-7/8" ASA strike per ANSI standard A 115.1 & A 115.2.

(c) Door and Frame Finish

Doors and frames are thoroughly cleaned, then provided with one coat of oven-cured neutral color primer paint (white, bronze or gray). Primer conforms with ANSI A250.10.

The primer coat is a preparatory base for necessary finish paint. Doors and frames pass a 200 hour salt spray test in accordance with ASTM B117 and a 500 hour humidity test in accordance with ASTM D2247.

(d) Subframing

Subframing is factory installed to the door jambs and consist of two 16 gauge galvanized steel C-channels to match the specified girt depth.

(e) Standard Hardware and Components

LOCK SET – Meets certifications ANSI/BHMA A156.2 Series 4000 Grade 1, ANSI A117.1 Accessibility Code and ANSI/BHMA A156.115 preparation. Locks have a 2-3/4" backset and 626 satin chrome plated finish.

HINGE – (3) 4-1/2" non-removable pin ball bearing template hinges with a color-coded powder coated finish. Meets Federal Specifications FF-H-116C and ANSI A156.1.

THRESHOLD - Saddle type 5-3/4", factory cut, with an aluminum mill finish. Meets ADA requirements.

WEATHER STRIP - Kerf, factory installed to the jamb and header stops.

SWEEP – Surface applied vinyl sweep with rain drip.

JAMB CLIPS - 12-gauge galvanized steel.

FASTENERS - (4) 1/2" anchor bolts, (25) #10 self-drilling screws and 3070 (3), 4070 (4), 6070, (6) 1/4" anchor bolts.

(f) Packaging

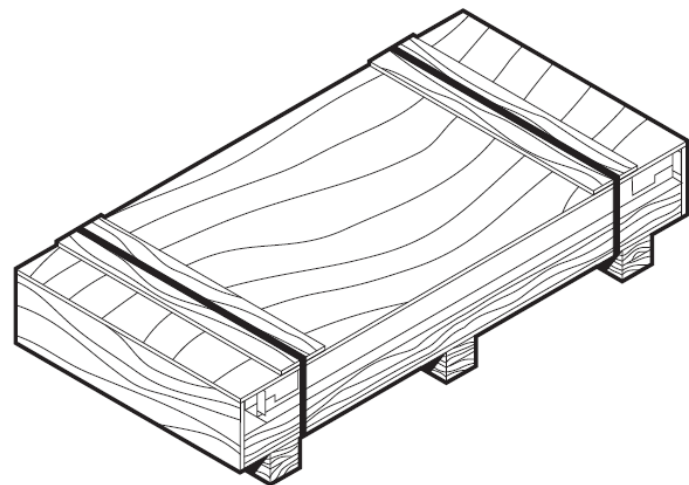
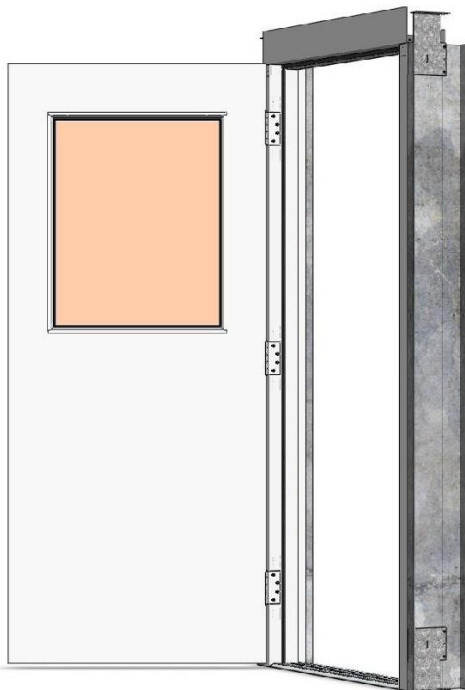
Preassembled door systems are packaged in heavy-duty wooden crates and skidded for forklift handling.

(g) Conformance to Nationally Accepted Specifications and Standards

The ASSA ABLOY door unit, when properly specified, will meet standards that conform to the following specifications:

- ANSI A250.4 test procedure and acceptance criteria for physical endurance. The materials provided in the door unit pass as follows:
 - 20 Gauge: Level B (500,000 cycles)
 - 18 Gauge: Level A (1,000,000 cycles)
- All doors have been tested for thermal properties to ASTM C1363 standard and Air Infiltration testing to ASTM E283 standard. Core calculated R value = 6.35, U value = 0.157 (ASTM C518). Fully operable assembly R value = 2.83, U value = 0.35.
- ASTM E90-81 and E413-73 (Fully Operable) sound transmission class for insulated steel door systems rates at STC 23 (flush design, 18 gauge face sheets).

Section 5.02 ASSA ABLOY Standard Packages

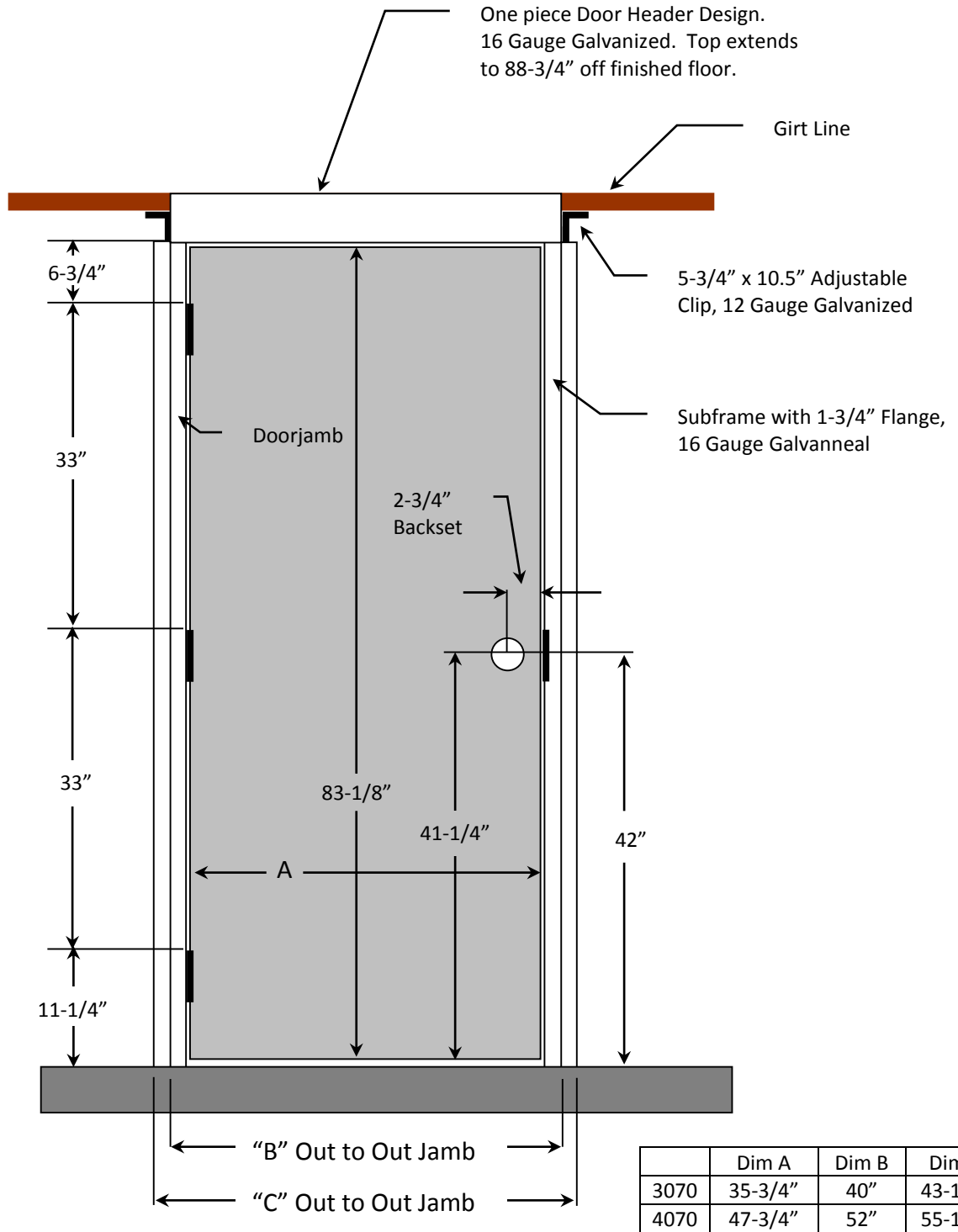


Size	Approximate Weight (Inc. Skidding)
	18 Gauge
3070	340 lbs.
4070	398 lbs.
6070	680 lbs.

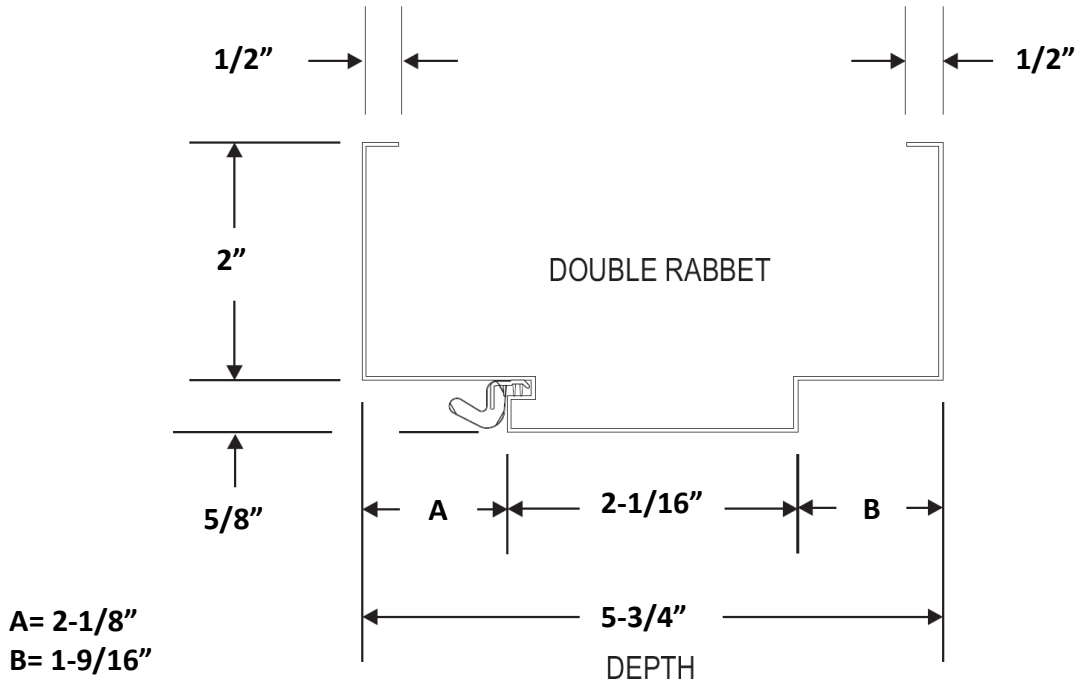
- Galvanneal insulated door
- Doors are completely preassembled including subframe
- Door and Frame have a baked on primer finish
- 5-3/4" 16 Gauge galvanneal frame
- Grade I Keyed Lever Lock
- Concealed vinyl sweep with rain drip.
- Kerfed Weather Seal
- ADA Approved Aluminum threshold
- 4-1/2" x 4-1/2" Ball Bearing NRP Hinges with powder coat finish
- Insulated Frame
- Packaged in Heavy Duty Wood Crating
- White or Bronze

Section 5.03 Door Hardware Locations & Dimensions

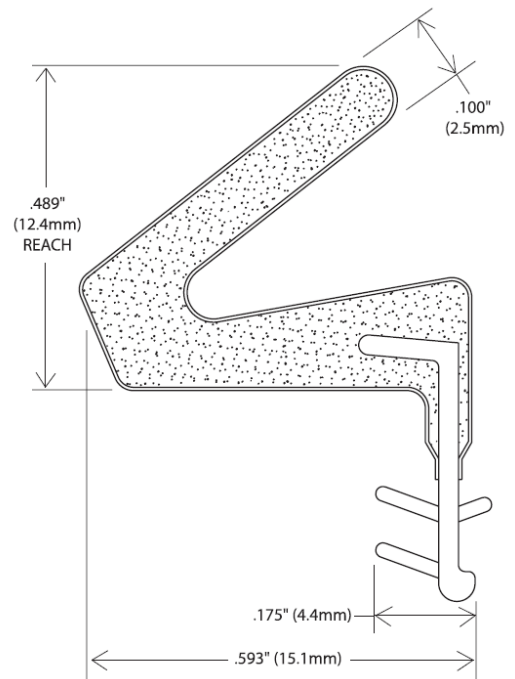
Standard Metal Wall Walk Door
Preassembled with Subframes



Section 5.04 Kerfed Frame Profile

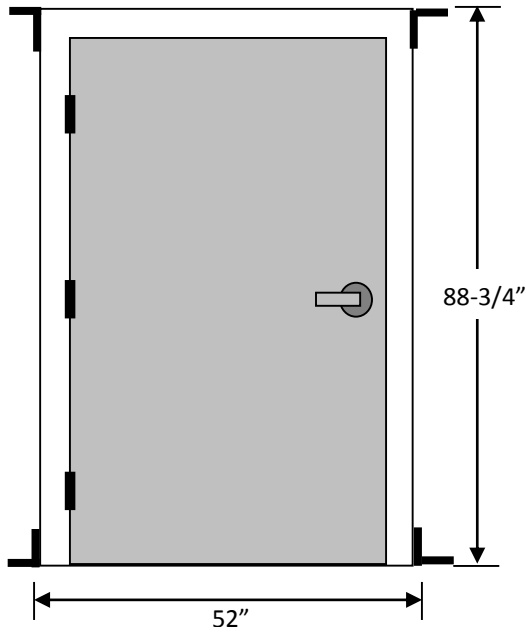


Material	Polyethylene Clad Urethane Foam Compression Seal
Kerf Width	0.125" (3.2mm)
Kerf Depth	0.438" (11.1mm)
Rabbet Depth	1-15/16" (49.2mm)
Compression	Recommended 50% Minimum 10% Maximum 60%
Compression Set	Less than 5% when compressed to 50% of its original reach for 22 hours @ 158° F (70° C).
Fire Rating	Up to 3 hours under UL10C and UBC 7-2-97, GVI, file #R14384

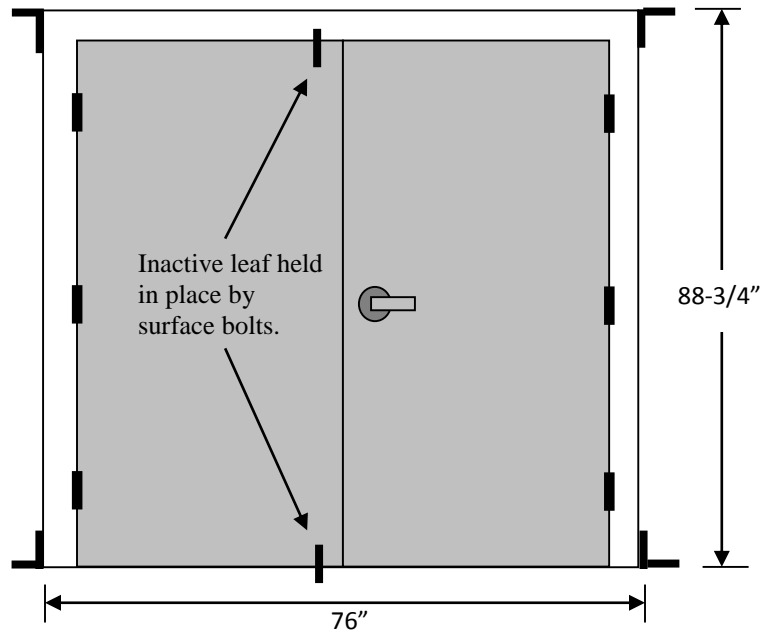


Section 5.05 Additional Standard Opening Sizes

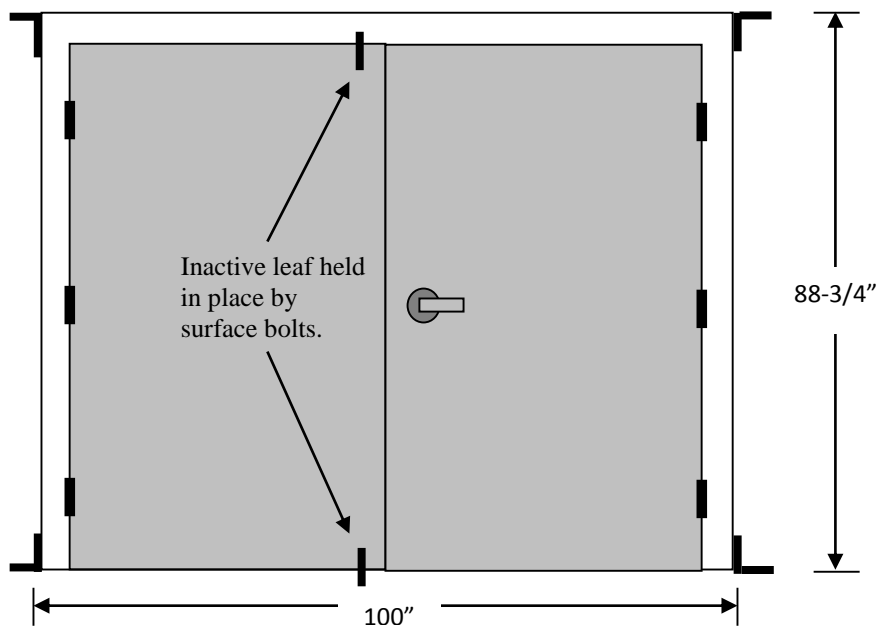
4070 Door System



6070 Door System

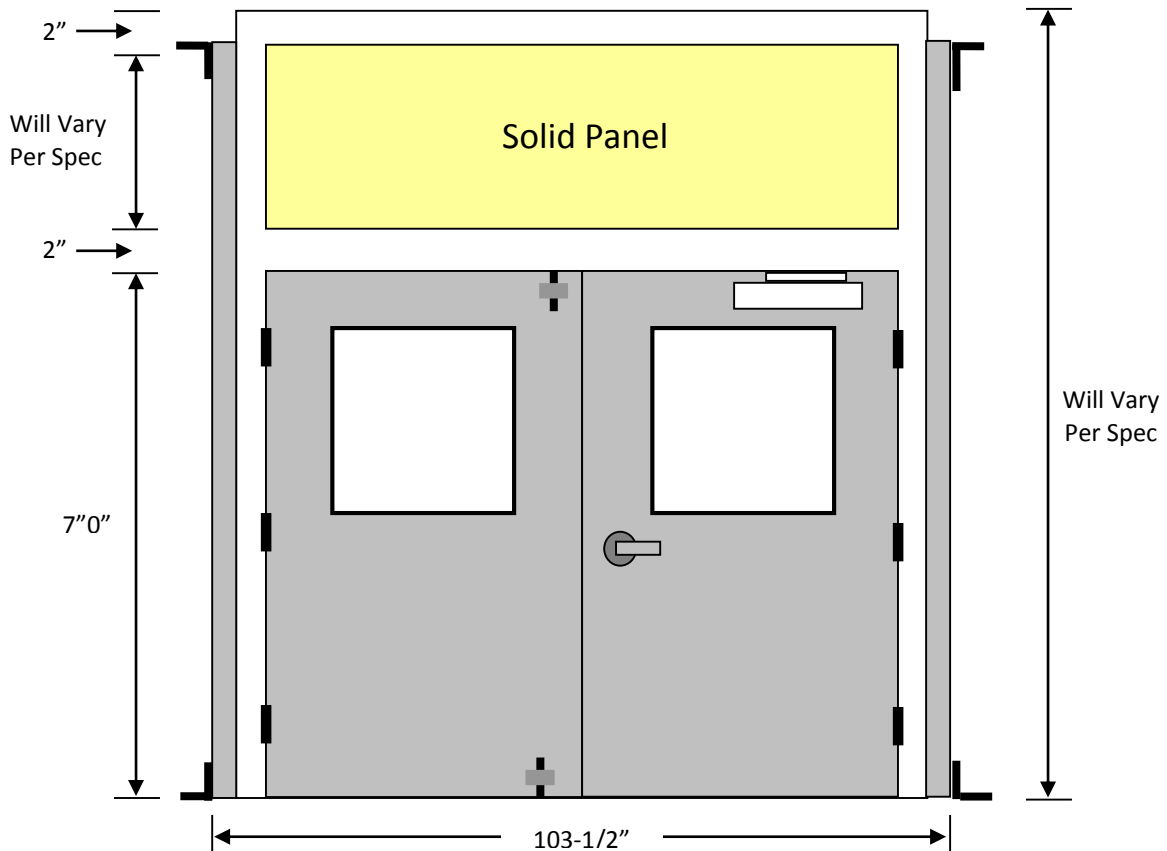


8070 Double Door System



Note: Some part proportions are exaggerated for visual effect.

Section 5.06 6070 Double Door System with Transom



Note: Some part proportions are exaggerated for visual effect.

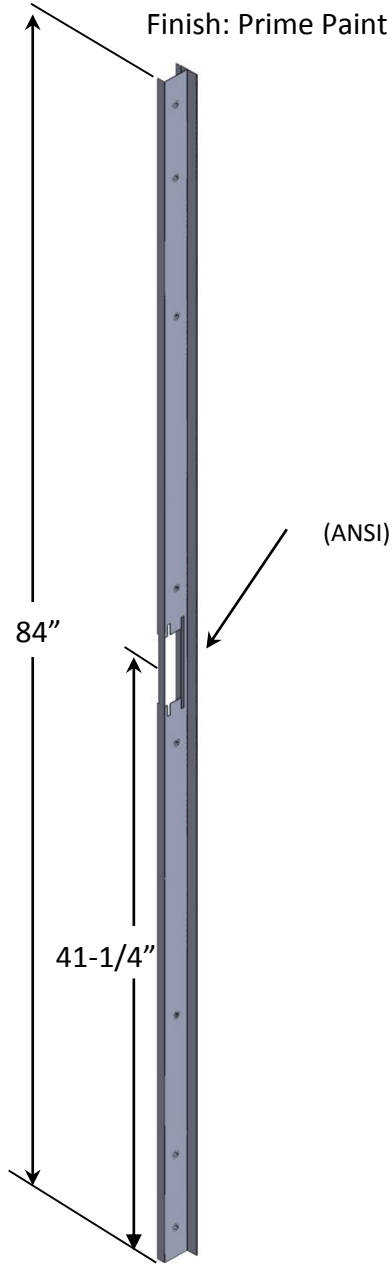
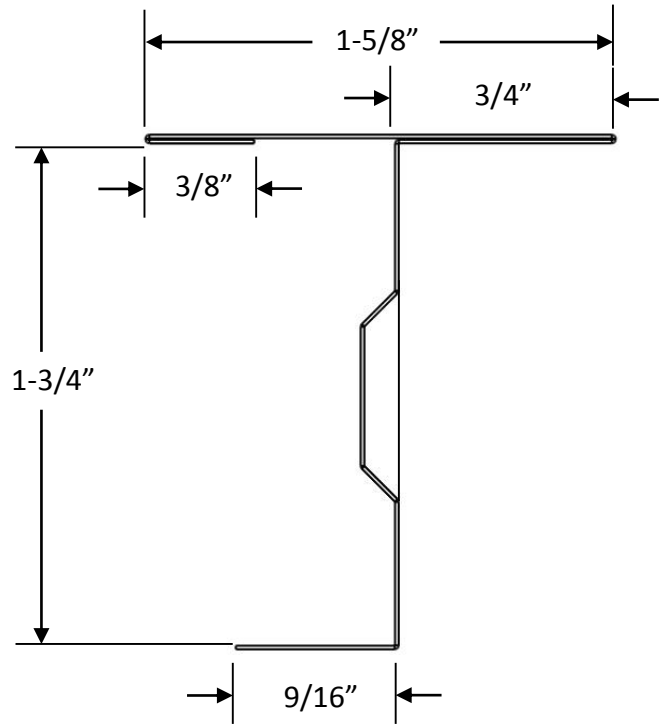
Section 5.07 Miscellaneous Options

(h) Z-Style Astragal for Pairs of Doors

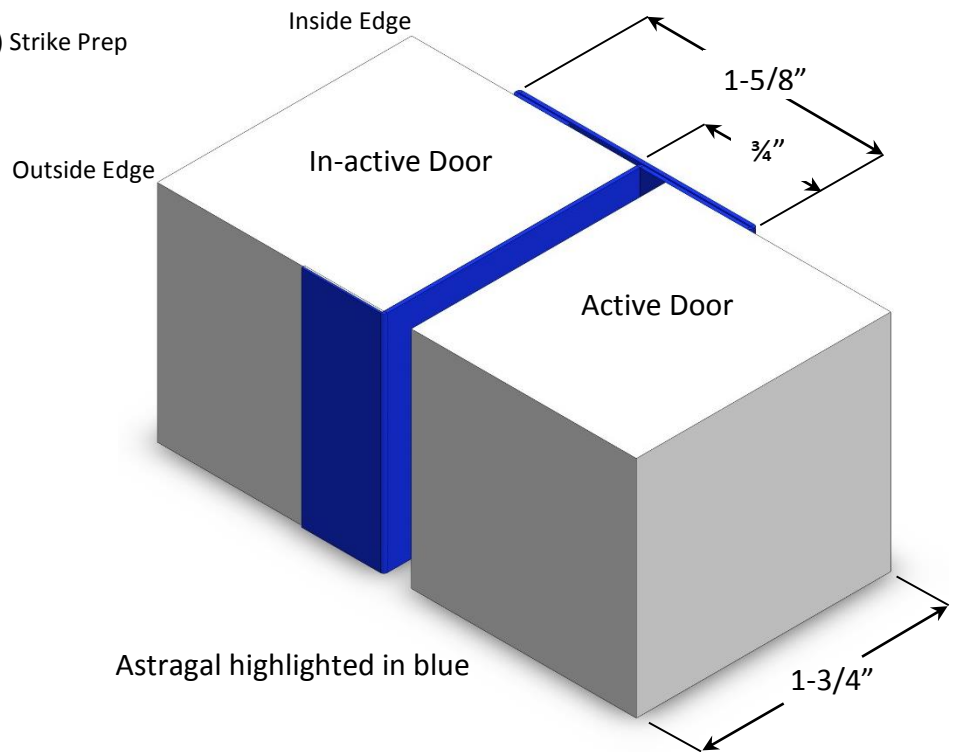
Handed:

Use LH (L) astragal for R or LR Active opening

Use RH (R) astragal for L or RR Active opening

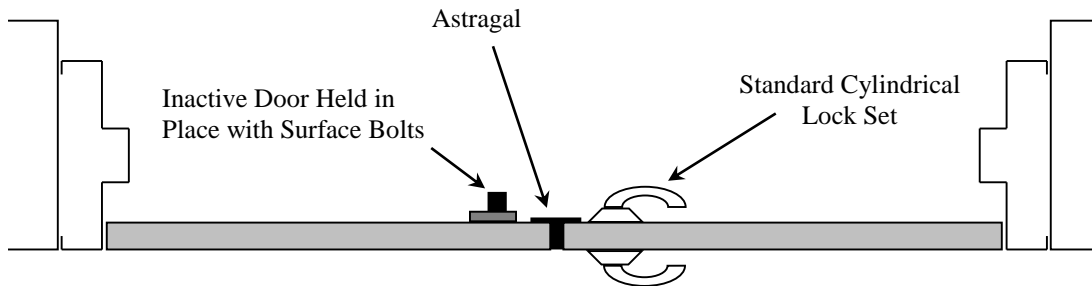


(ANSI) Strike Prep

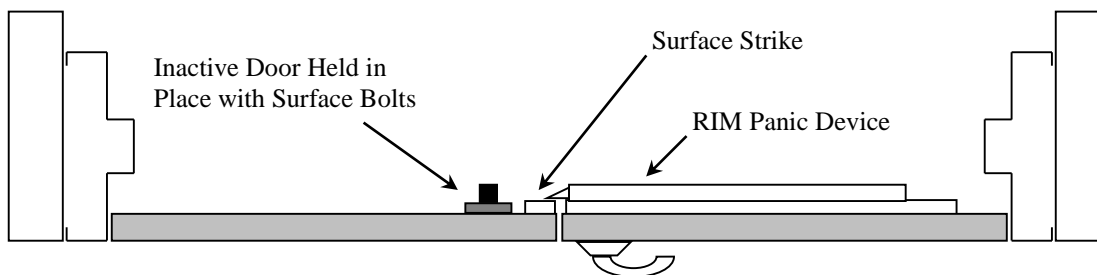


(i) Double Door Options

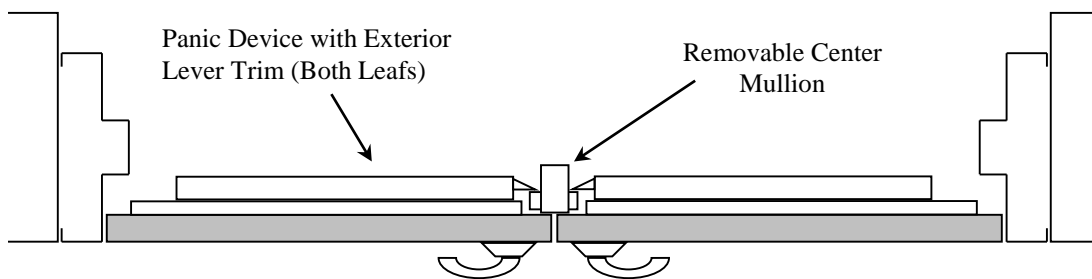
#1 Standard Door Package with One Active Door and One Inactive Door



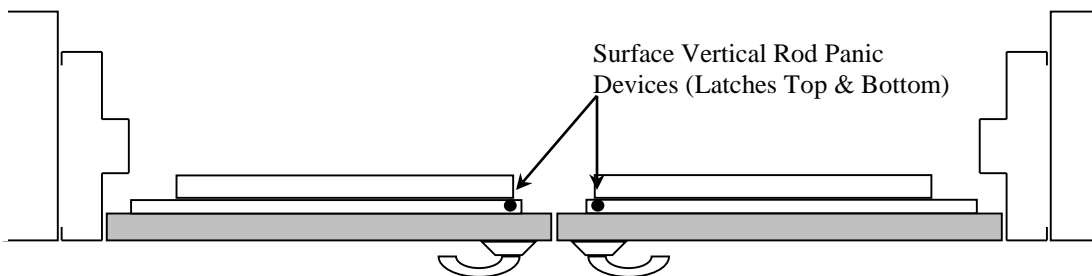
#2 One leaf active with (1) Rim Panic Device and Surface Strike on Inactive Leaf



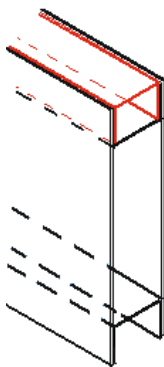
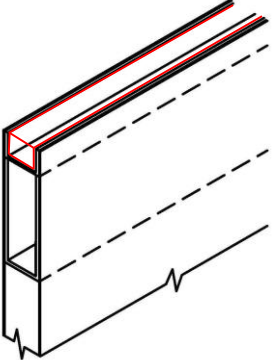
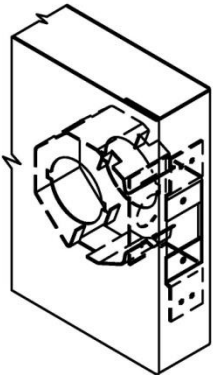
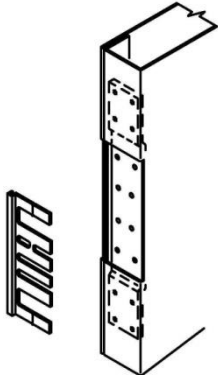
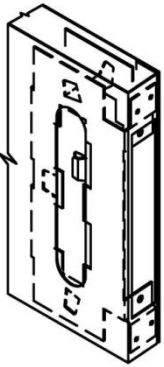
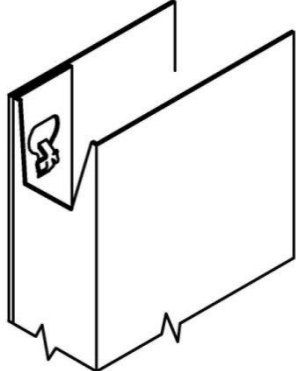
#3 Both Leafs Active with Removable Center Mullion



#4 Both Leafs Active Using Vertical Rod Panic Devices

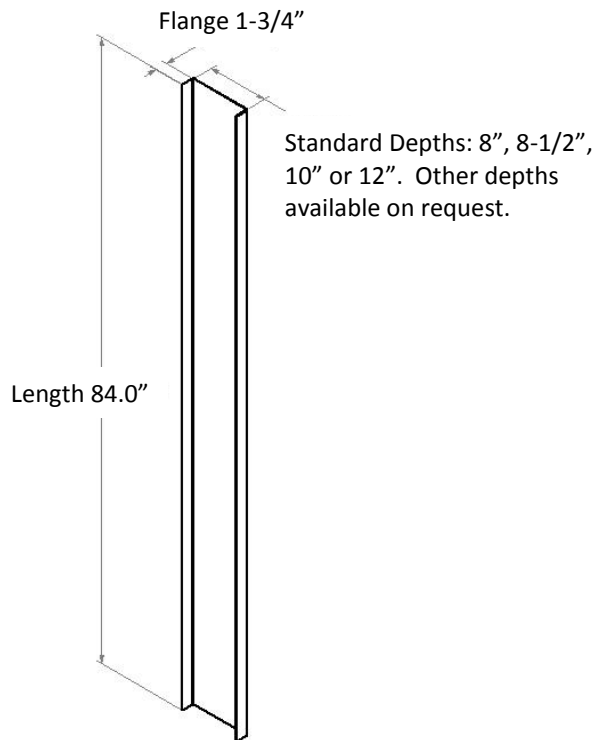


Section 5.08 Standard Door Leaf Detail

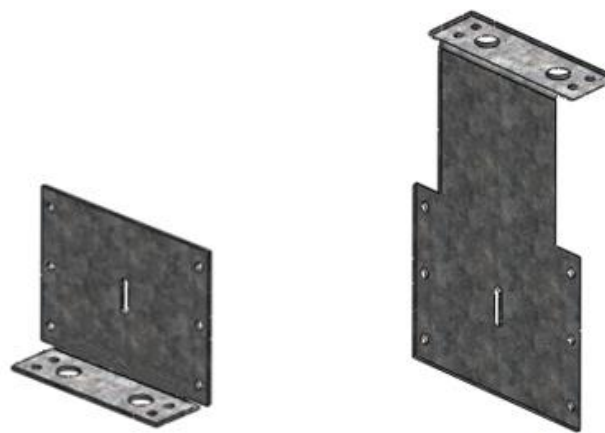
<p>16 Gage End Channels</p>		<p>Closer Reinforcement (Optional)</p>	
<p>End channels welded to both face sheets. 16 Gauge Top Cap screwed in place.</p>	<p>14 Gage steel channel 20" long</p>	<p>Lock Preparation Gov. 160/161 Cylindrical Type</p>	
<p>(ANSI A115.2) 2-3/4" Backset</p>	<p>Hinge Preparation</p>		<p>4-1/2" x .134" High, Standard or Heavy Wt. Full Mortise Hinge Preps with closure plate.</p> <p>ANSI A156.7 Template</p> <p>Non-Handed</p>
<p>Lock Preparation Gov. 86-4 Mortise Type</p>		<p>Vertical Edges</p>	
<p>(ANSI A115.1) 2-3/4" Backset</p>	<p>Mechanically interlocked hemmed edges</p>		

Section 5.09 Standard Subframe System / L-Clip

Subframes are manufactured from 16 gauge galvanized material. The depths are designed to match metal building manufacturer girt depths.



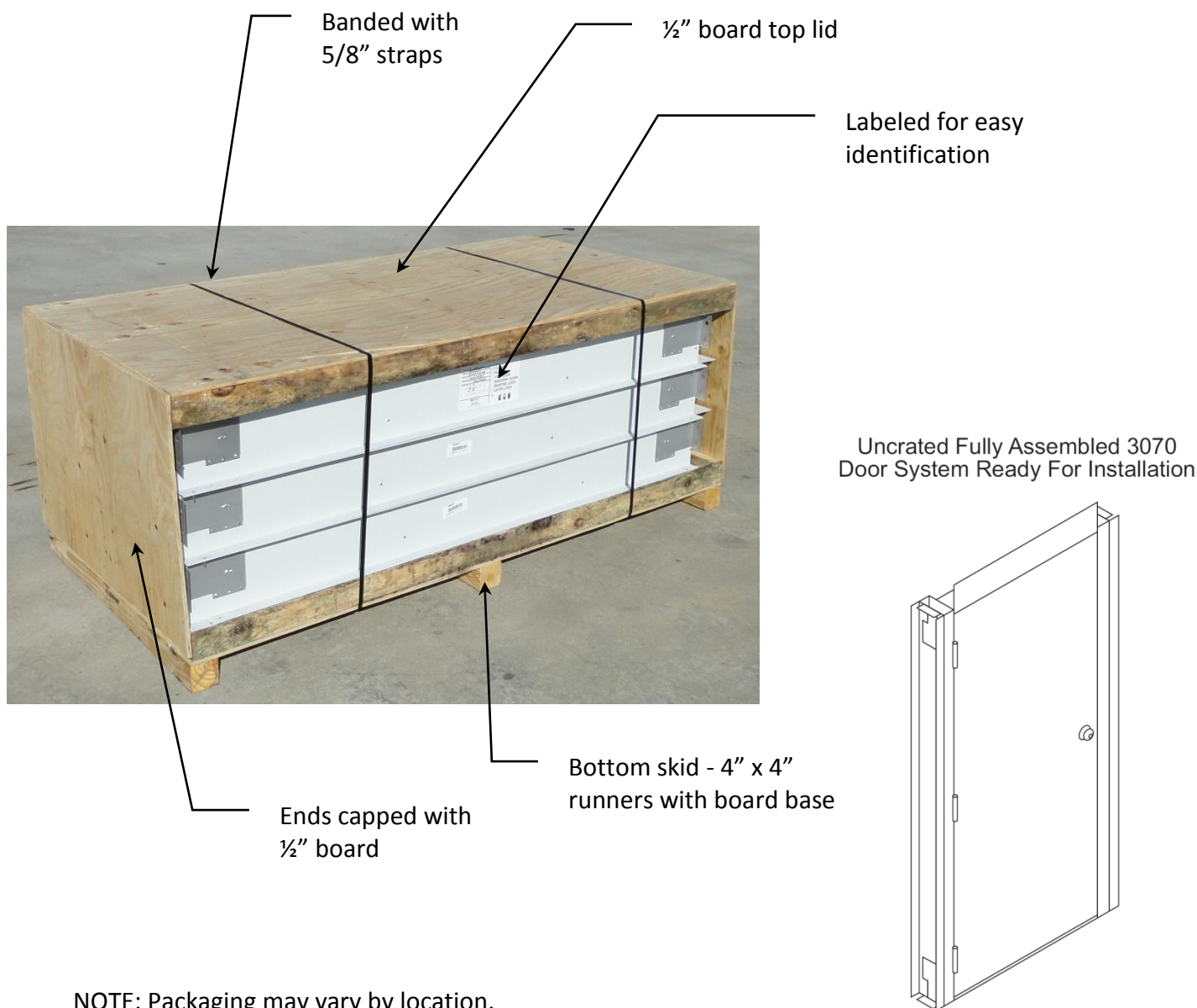
The adjustable jamb mounting clips are constructed from 12 gauge galvanized steel.



Floor anchor clip

Top Girt Clip

Section 5.10 Door Packaging



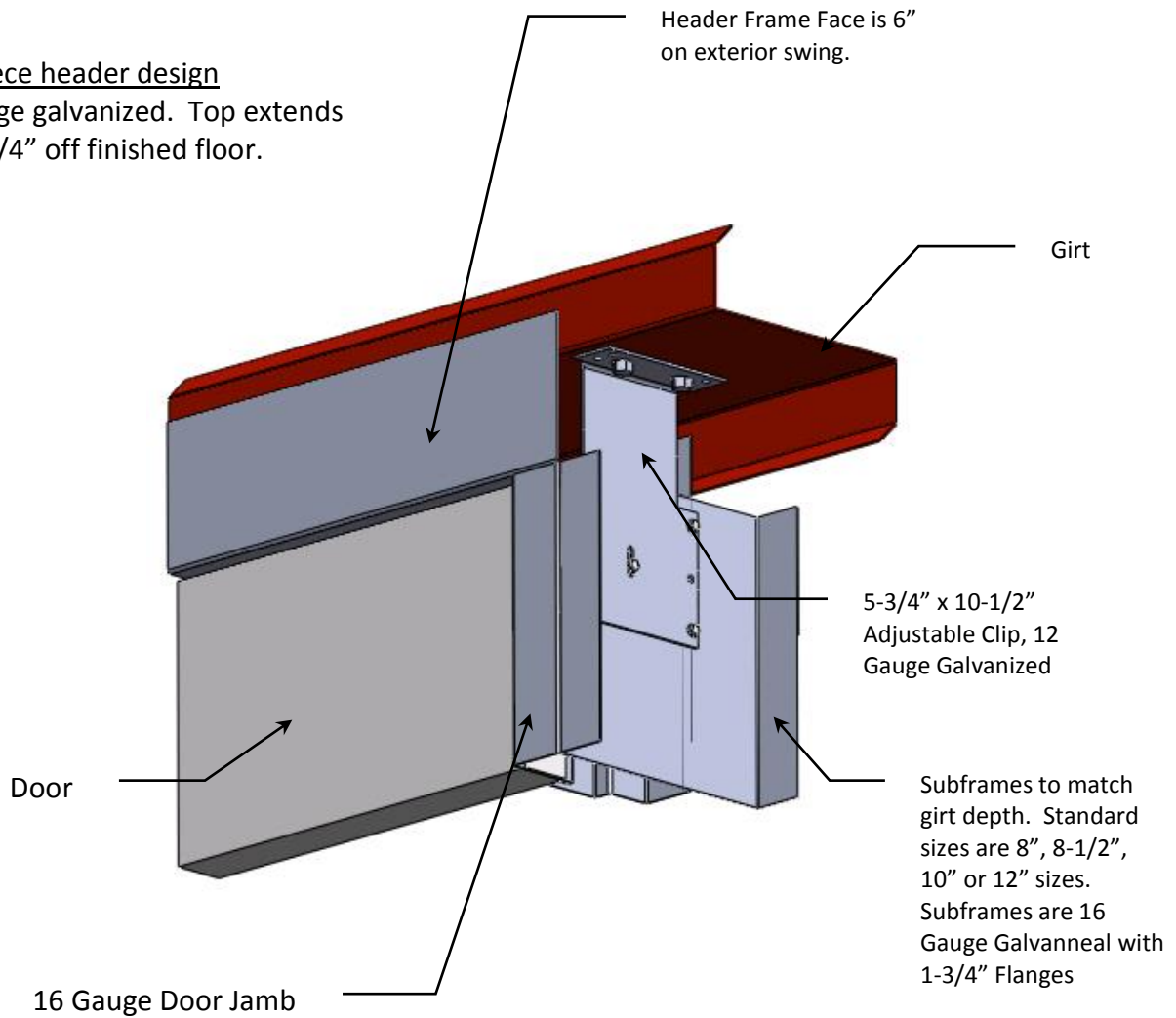
NOTE: Packaging may vary by location.

Doors Are Shipped Fully Assembled Including Required Door Hardware, Subframes, And All Hardware Necessary for Installation

Section 5.11 Door Installation

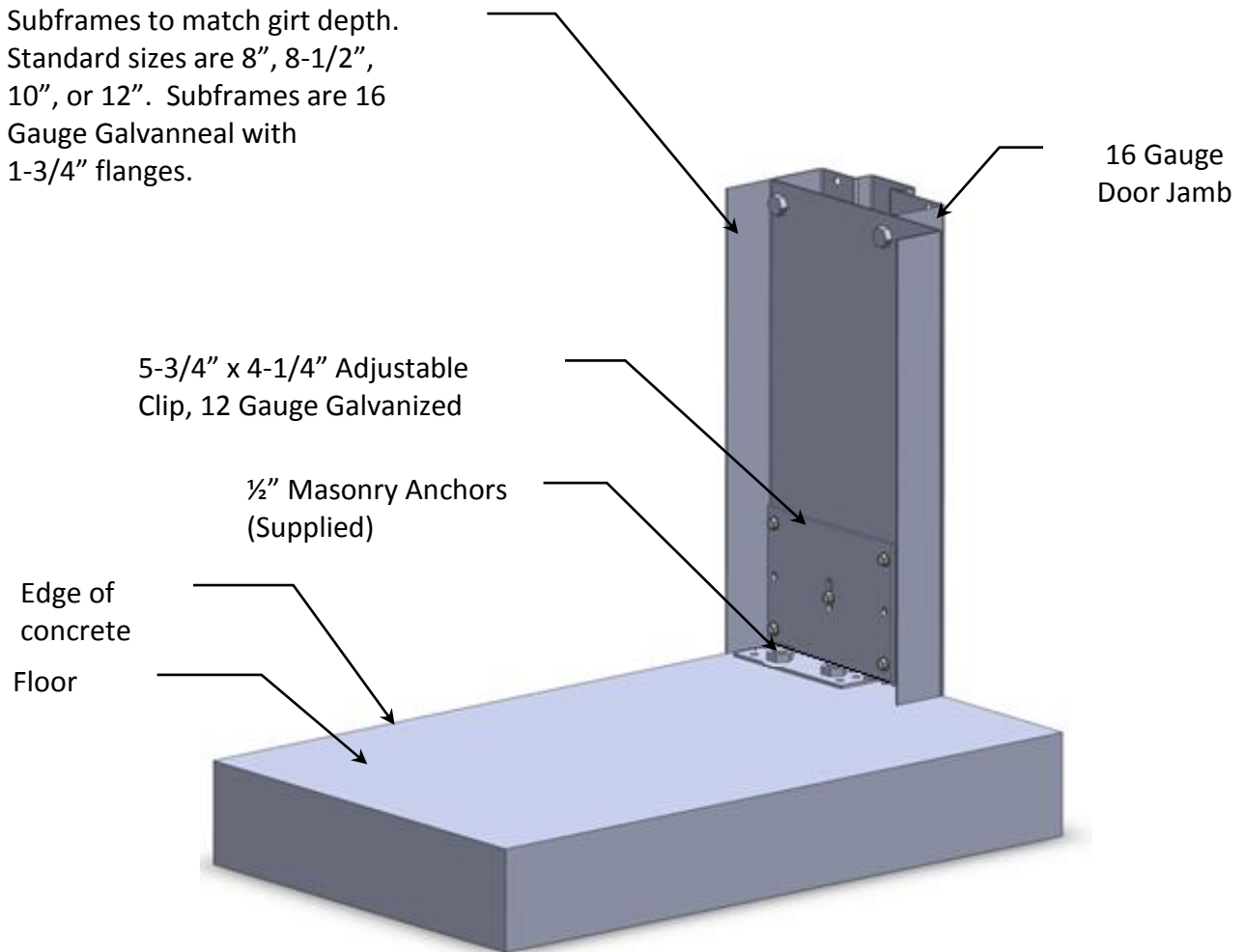
(j) Header Girt Attachment

One piece header design
 16 Gauge galvanized. Top extends to 88-3/4" off finished floor.



(k) Base Detail – Floor Attachment

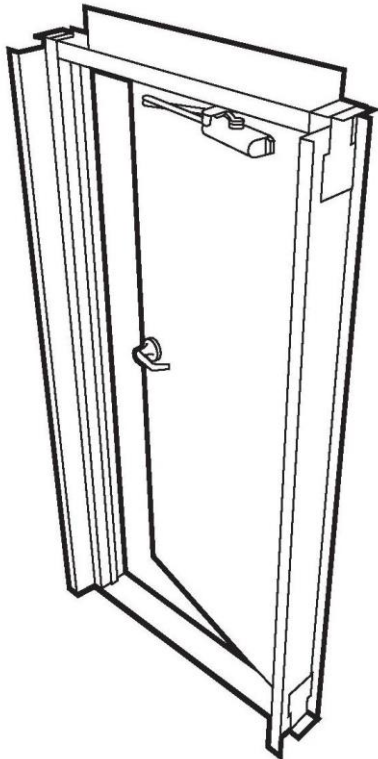
Subframes to match girt depth. Standard sizes are 8", 8-1/2", 10", or 12". Subframes are 16 Gauge Galvanneal with 1-3/4" flanges.



Section 5.12 Installation Guide

General Pre-Installation Notes:

- This door unit is designed to install before the wall panels are put up (although the door unit can be installed later).
- DO NOT remove the spacers holding the door leaf closed until after the door is installed. These spacers hold the door in place during the installation process.



Installation Steps:

1. After uncrating the door, position under the girt with the outside edge of the threshold flush with the edge of the concrete. The header should be up against the outside face of the girt.
2. Plumb the door unit.
3. When the door is plumb, secure the door header to the face of the girt with 2 self-taping screws. These screws can be moved later if they interfere with the sheeting or trim.
4. Bolt the door to the floor with the base clips and the four (4) anchor bolts provided.
5. Back out the screws holding the top jamb clips and slide clips straight up to the girt. Use six (6) screws minimum per clip (4 into the subframe and 2 into the overhead girt).
6. Remove spacers holding door leaf shut.
7. Screw down threshold with concrete anchors

Adjustments:

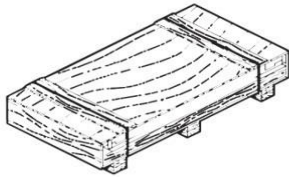
If the door does not operate properly:

1. Check frame to ensure plumb and square.
2. Check floor level at each jamb. Shim under side needing adjustment (if necessary)
3. If gap around door is unequal, shim hinges appropriately.

*** For further information, refer to the Steel Door Institute (SDI) Installation and Troubleshooting Guide. SDI Technical Data Series #122-90.

Installation Instructions

1. Uncrate the door



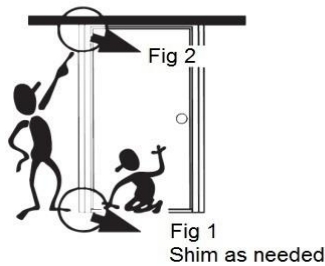
2. Check floor for level



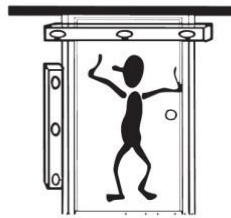
3. Plumb & square door and fasten head extension



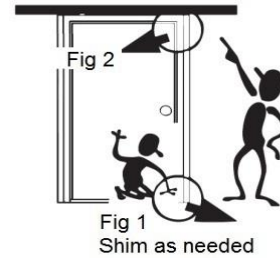
4. Anchor hinge side



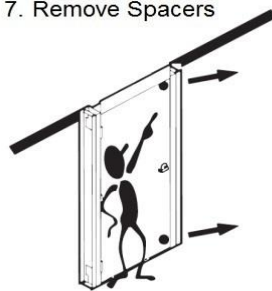
5. Check plumb and level



6. Anchor strike side



7. Remove Spacers



8. Attach threshold anchors



Fig 1

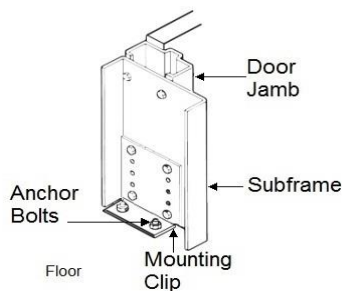
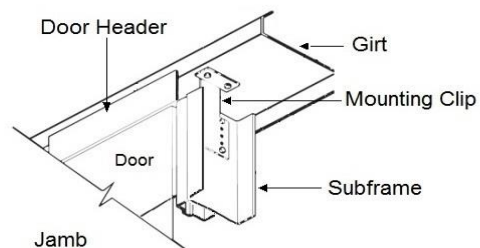


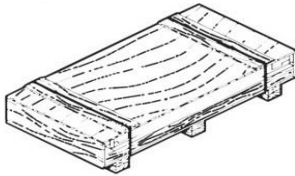
Fig 2



Adjustments to door units are expected, normal and sometimes necessary for proper door and door hardware function. Failure to properly install and adjust these doors may result in voiding the product warranty. Shimming material is not provided by the manufacturer.

Instrucciones De Instalación

1. Saque la puerta



2. Examine el piso está nivelado



3. Asegure la cabeza, aplome y cuadre la puerta



4. Anclar el lado de las bisagras del marco

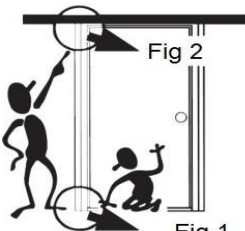
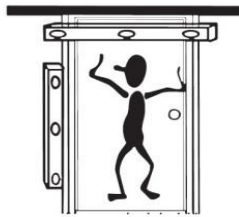


Fig 1
Ajuste como necesario

5. Compruebe que el marco es de plomada y el nivel



7. Ajuste el clip como se requiere en el suelo y asegure el lado huelga de la jamba

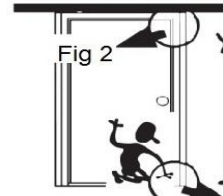


Fig 1
Ajuste como necesario

7. Retire los espaciadores



8. Instale los anclajes para el umbral

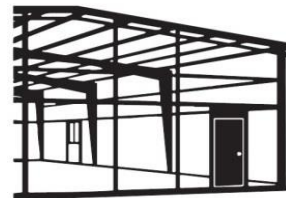


Fig 1

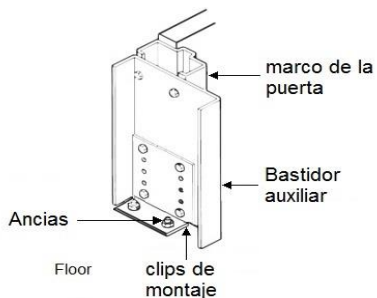
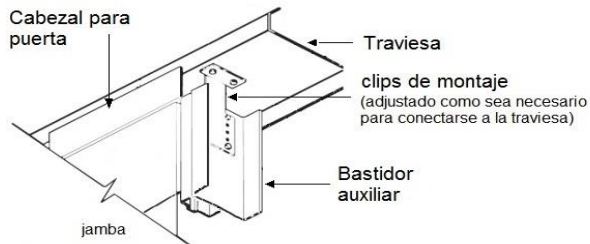


Fig 2



Ajustes a las unidades de puerta son esperadas, normal, y a veces necesarias para las funciones del equipo entero que va de puerta en puerta. Al no instalar o ajustar estas puertas correctamente, puede resultar en la anulación de la garantía del producto. Rellenar el material no es proporcionado por el fabricante.

Section 5.13 Maintenance of Hollow Metal Doors and Frames

(l) Introduction

This document is intended to serve as a general outline of maintenance activities needed for hollow metal doors and frames. However, it should be noted that the door and frame are virtually maintenance free. Maintenance will be, for the most part, associated with accessories and hardware attached to the door and frame.

(m) Areas to be Inspected

The following items should be periodically checked. The frequency with which these checks are performed must be established at the discretion of the building owner, insurance company and maintenance service. Since doors in different areas of a building access different traffic, the frequency of periodic inspections would occur respectively.

Hinges

Check all hinges for loose attaching screws, hinge pin wear or other notable defects. Service the hinges or remove defective parts and replace if necessary. The door should always swing freely and smoothly without obstruction from open to latched position (when latching device is used).

Locksets, Panic Devices, Fire Exit Hardware

Check all locksets for loose attaching screws, latch wear or other notable defects. Service the lockset or remove defective parts and replace per the manufacturer's recommendation. The door should always latch freely and smoothly without obstruction. Self-latching devices should always function freely and smoothly as the door swings into the closed position. Additional force should not be needed to achieve latching.

Strike Plate

The strike plate should be firmly attached to the frame or inactive leaf or a pair of doors. Check for loose screw and/or other notable defects. Service or remove and replace strike plate if necessary.

Closing Devices

Check all closing devices for loose attaching screws, linkage arm and pin wear, fluid leakage or other notable defects. Service the device or remove defective parts and replace as needed. The primary and secondary closing speed adjustments should also be set and maintained in accordance with the manufacturer's recommendations. The device should allow the door to operate freely and smoothly throughout its entire swing range and positively latch (if so equipped) or remain in the closed position.

Surface Bolts/Flush Bolts

Check all surface bolts/flush bolts for loose attaching screws, rod bolt adjustment and strike plate attachment (on both door and frame if so equipped). Service the devices or remove defective parts and replace if necessary. The rod bolts should retract, extend and engage the strike or keeper hole freely and smoothly for both manual and/or automatic flush bolts.

Glass Lites

The glazing material should be checked for cracks and/or missing pieces of glazing. The glazing mounting frame should be checked to assure attaching screws (if used) are tight and the unit is securely attached to the door. Service the glass lite or remove defective parts and replace as needed. Also be sure to use approved safety glass in appropriate applications/locations, or fire rate glass and glazing in fire doors, windows or lites.

Door and Frame Finish

A general visual inspection of the door and frame finish should be periodically conducted. Any excessive finish defects should be repaired and repainted. Adequate protection is needed to prevent the product from rusting prematurely and shortening its service life.

Unobstructed Operation

Fire rated and/or smoke and draft control assemblies are specified and installed to meet “safety to life code requirements”. It is imperative that these assemblies receive regularly scheduled maintenance checks for all of the above items. Additionally, for the assembly to serve its purpose of stopping fire and/or smoke propagation it must function freely with the ability to positive latch in the closed position. Therefore, propping or blocking these doors in an open position is in violation of the intended use and purpose as established in building codes. These doors must not be obstructed in any fashion which would prevent them from functioning as intended.

Related documents:

- SDI 124 Maintenance of Hollow Metal Doors and Frames
- SDI 122 Installation and Trouble Shooters Guide for Standard Steel Doors and Frames
- NFPA-80 Fire Doors and Windows – Chapter #15

Section 5.14 Painting Instructions

Clean Surface of Door

Surface must be free from dirt and oils. Do not use harsh chemical cleaner, high pressure sprayers, nor abrasive cleansers as damage or stripped paint may result.

Inspect for Damage

REPAIR AS NECESSARY (scratches, dents, etc.)

- Scratches - Sand lightly to obtain smooth surface
- Dents - Sand to bare metal and fill with automotive body filler. After the filler has cured, sand to a smooth flat surface.
- Prime repair spots with a low gloss oil base primer.

FINISH PAINT USE LOW GLOSS OIL BASE FINISH PAINT DO NOT USE WATER BASE FINISH PAINT, UNLESS THE DOOR IS REPRIMED WITH A BARE METAL TYPE PRIMER.

It is the responsibility of the user to maintain the integrity of the finish after receipt and installation of the door.

Section 5.15 Warranty*Revised February 1, 2009*

For a period of one year from date of initial shipment, ASSA ABLOY warrants that it will at its option, either repair, replace or otherwise correct any product acknowledged by ASSA ABLOY to be defective in materials or workmanship. ASSA ABLOY disclaims all liability for labor, transportation and other cost resulting from repairs or replacement, and for incidental or consequential damages directly or indirectly sustained without ASSA ABLOY's expressed written consent in advance. The warranty will be null and void if ASSA ABLOY's products are subject to abuse, accident, misapplication, or installation not in accordance with ASSA ABLOY's specifications and instructions.