L.I.F. INDUSTRIES, INC

**Manufacturer of Steel Doors and Frames,
Wood Doors and Hardware**

Installation Procedures

Hanging of Doors

Painting Hollow Metal Doors and Frames

For Help...Call 516-390-6800

Ask For The Home Depot Department

Monday thru Friday 8:00 am thru 4:30 pm EST

***"Building Relationships
One Opening at a Time"***

Commercial Fireproof Door Unit

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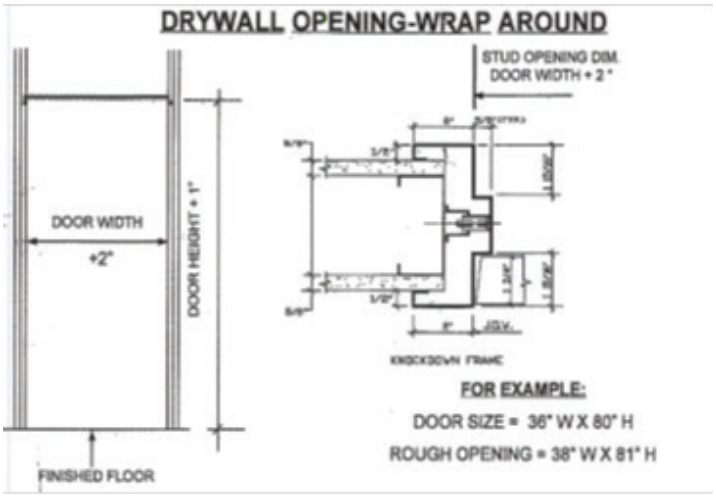
ROUGH OPENING
FOR KNOCK DOWN FRAME

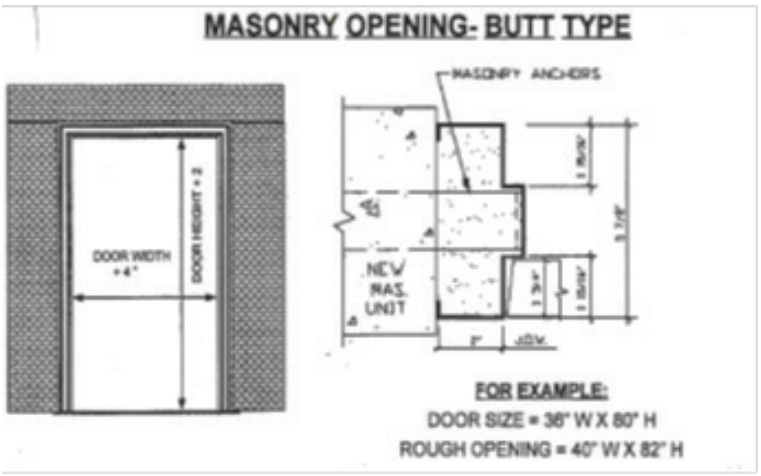
Rough opening size, KD frame cased open: Take the nominal door width and add 2" and the nominal door height and add 1". Keep in mind that on a 36x80 door, the nominal measurements are 36” x 80" while the actual measurements are 2' 11 3/4" x 6' 7” Using a 36x80 door as an example, the rough opening size for a KD cased open frame would be 38" x 81".



ROUGH OPENING
FOR WELDED FRAME

Rough opening size, Welded Frame (Masonry Wall): Take the nominal door width and add 4 1/4" and the nominal door height and add 2 1/4". Keep in mind that on a 36x80 door, the nominal measurements are 36" x 80" while the actual measurements are 35- 3/4" x 79". Using a 36"x 80" door as an example, the rough opening size for a welded frame would be 40- 1/4" x 82- 1/4". Since the standard face on a hollow metal frame is 2", the outside dimensions of a 36x80 frame will be 40" x 82" so this RO dimension will give you 1/4" of "play".

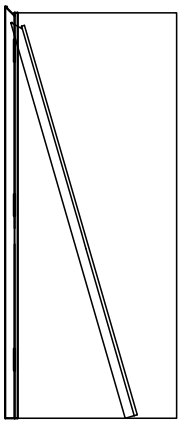
If you are installing a welded frame into a fire rated stud wall, remember that the drywall will have to extend **at least** 1/2" into the frame so you cannot simply butt the drywall up to the frame at fire rated openings. On non-rated openings you can run the drywall down to the frame or caulk the seam if it is going into block.



TYPICAL KNOCKED DOWN (KD) HOLLOW METAL FRAME INSTALLATION INSTRUCTIONS

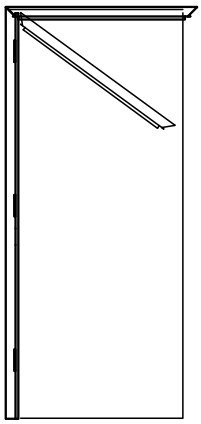
20, 18 OR 16 GAUGE GALVANNEAL A40

1



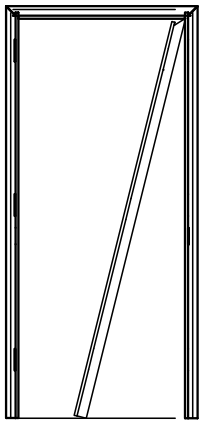
- Fully retract compression anchor
- Install jamb by pushing the top of jamb over the wall.
- Hold top of jamb in place, then push the bottom in toward and over the wall

2



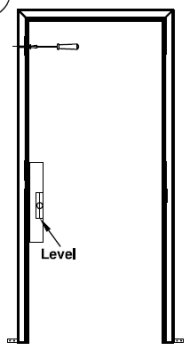
- Install frame head over the wall
- Align head tabs with slots in jamb, then slide head toward jamb and engage tabs in slots

3



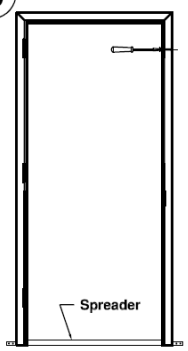
- Place second jamb onto wall and align slots in jamb with tabs in head, push the bottom of this jamb in toward and over the wall.
  Note: Pull head down slightly to align slots in jamb with tabs in head.

4

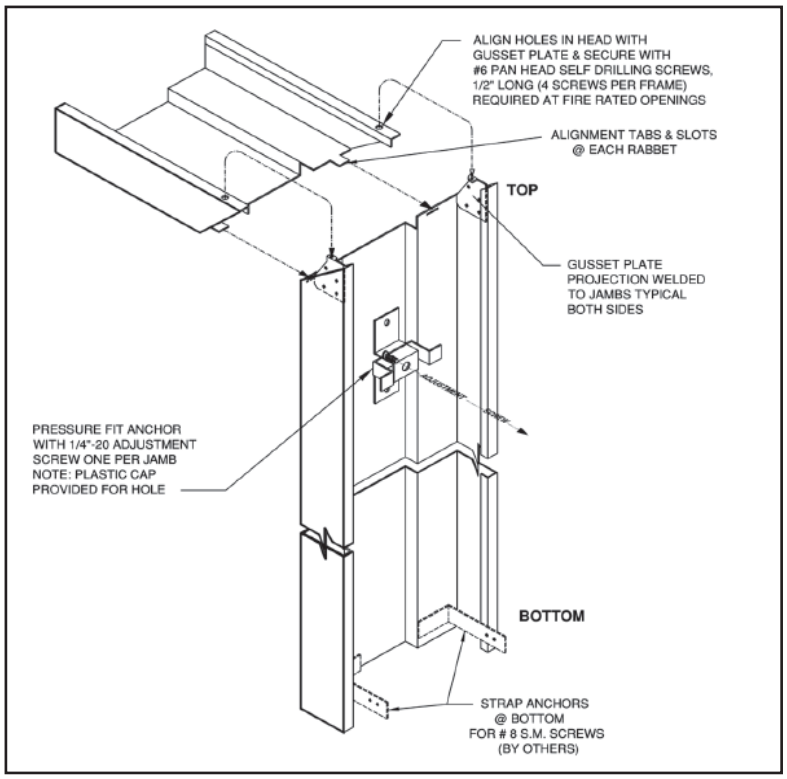


- Adjust compression anchor evenly until they bear firmly against stud.
- Level the head of frame and plumb hinge jamb
- Fasten bottom strap anchors with drywall screws

5



- Install wood spreader (not supplied) at base and plumb second jamb.
- Square frame and tighten compression anchor screws
- Fasten jamb at bottom with drywall screws Remove wood spreader



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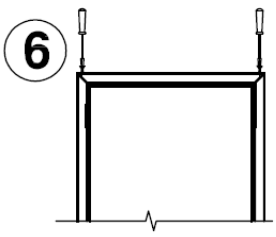
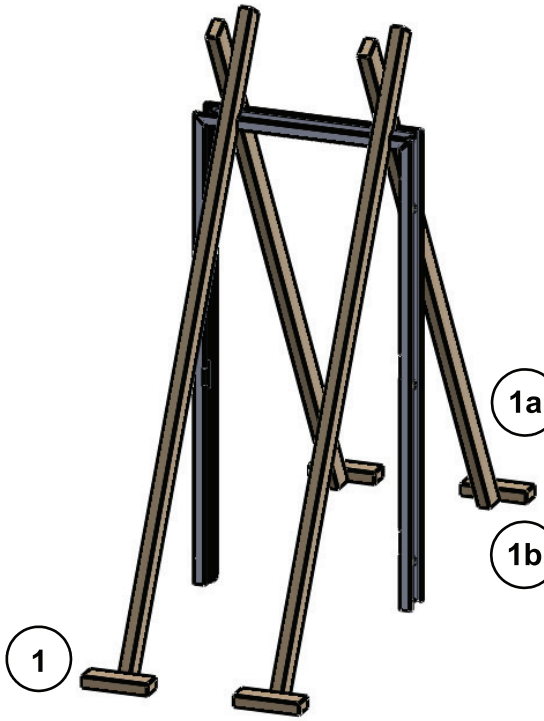


- Install # 6 Sheet Metal Screw in each corner at Head on Fire Rate Frames;
- # 6 Sheet Metal Screw (4 Req'd) Not Supplied, to be Furnished by Installer.

INSTALLATION INSTRUCTIONS FOR DRYWALL WELDED FRAME

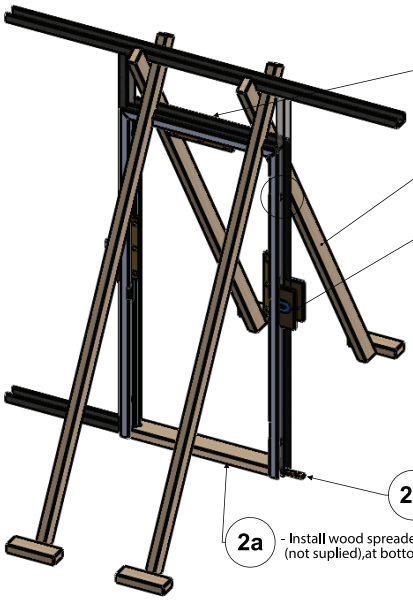
Note:
- **Always confirm that frame has remained level throughout installation of frame.**



1a - Remove temporary steel spreader from Bottom of Frame.

1b - Place frame at opening, level frame and install temporary bracing.

1

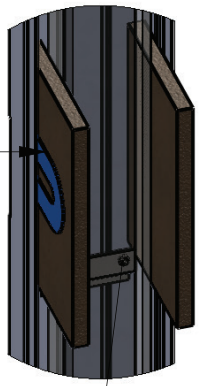


2d - Attached metal stud at head

2e - Remove bracing.

2c - Install metal studs to frame,shim if necessary.

- To center metal studs on frame cut small pieces of drywall, insert with metal stud before attaching.

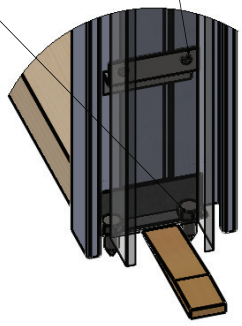


2b - Install floor anchors (not supplied).

2a - Install wood spreader (not suplied),at bottom of frame.

2

2d - Attached metal stud to Z-Anchor with TWO #8 sheet metal screws per Zee Anchor.



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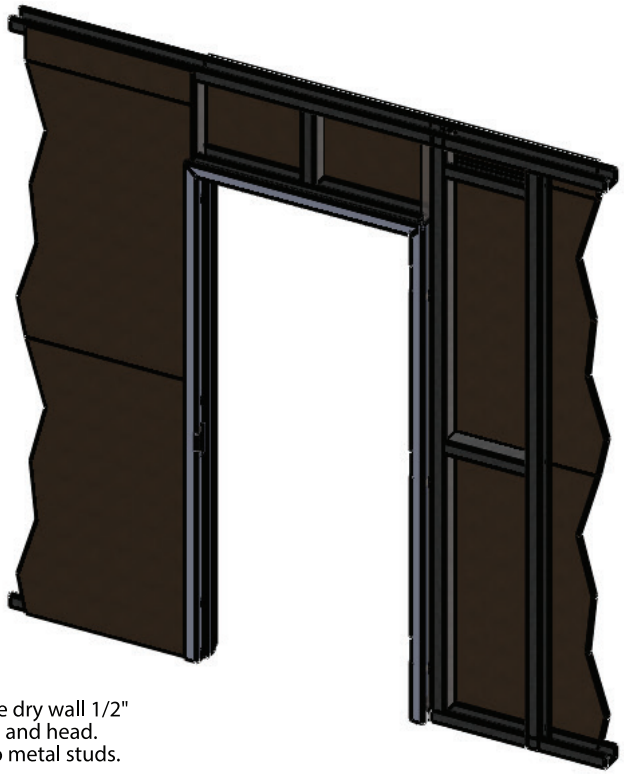
Note:
- Always confirm that frame has remained level throughout installation of frame.

3

- Remove temporary wood spreader
- Install metal studs.



4

- Install drywall, slide dry wall 1/2" into frame at jambs and head. Attached drywall to metal studs.

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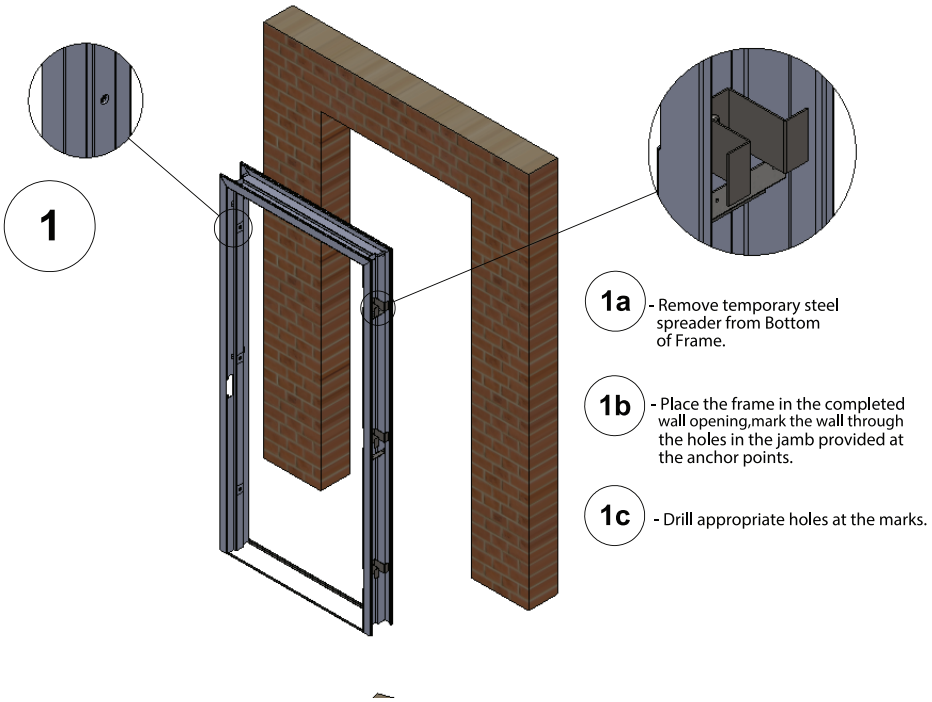
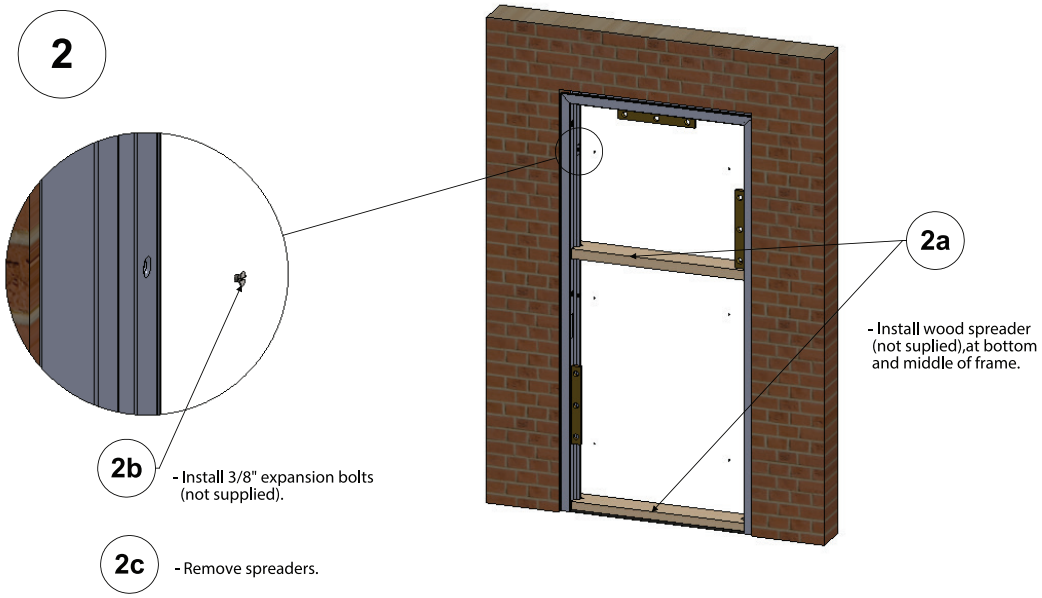
INSTALLATION INSTRUCTIONS FOR EXISTING MASONRY WALL WELDED FRAME WITH PUNCH & DIMPLE ANCHORS





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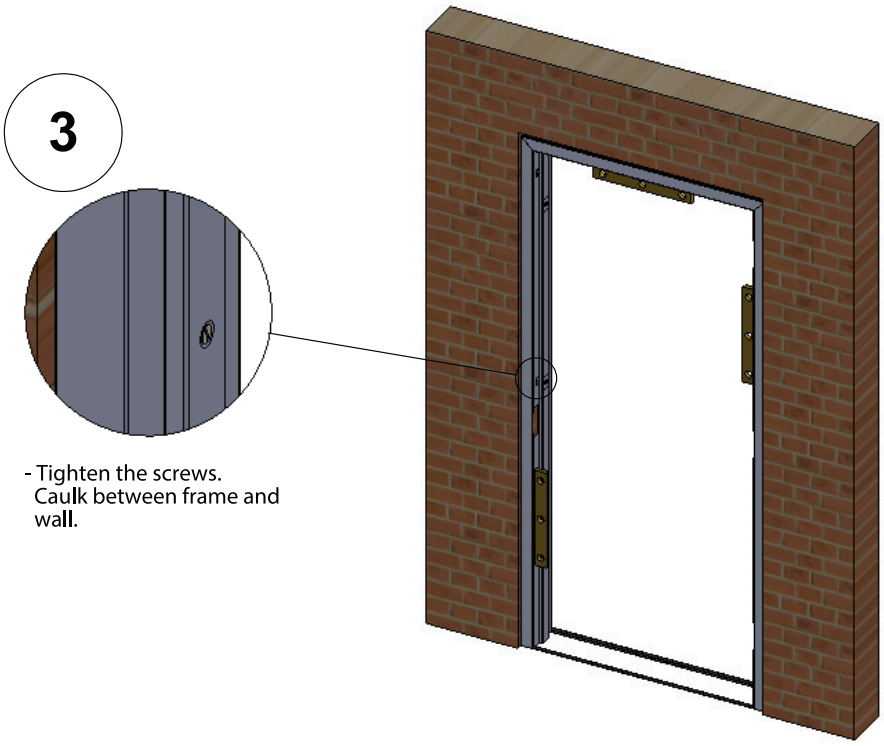

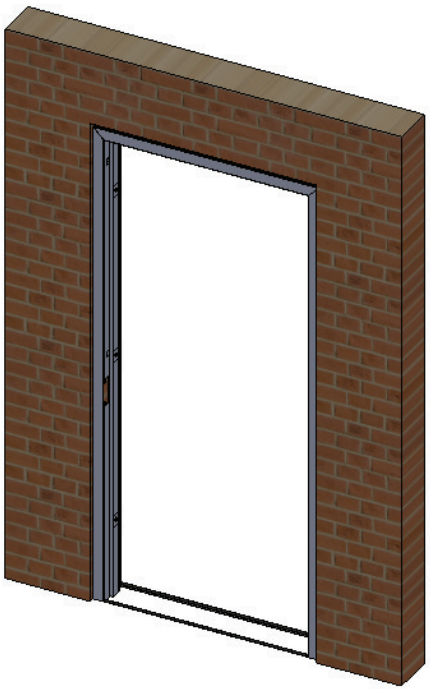

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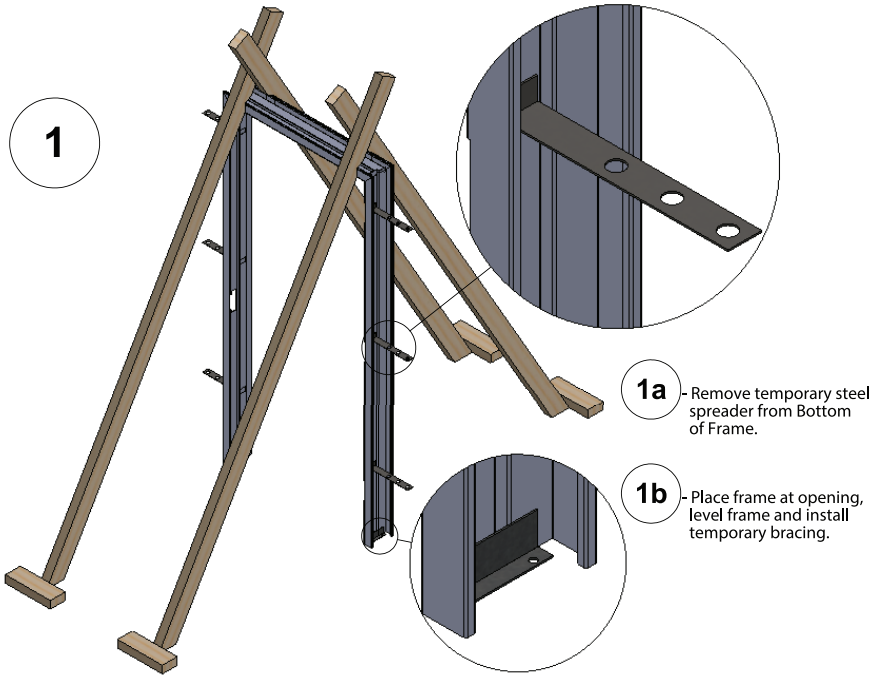
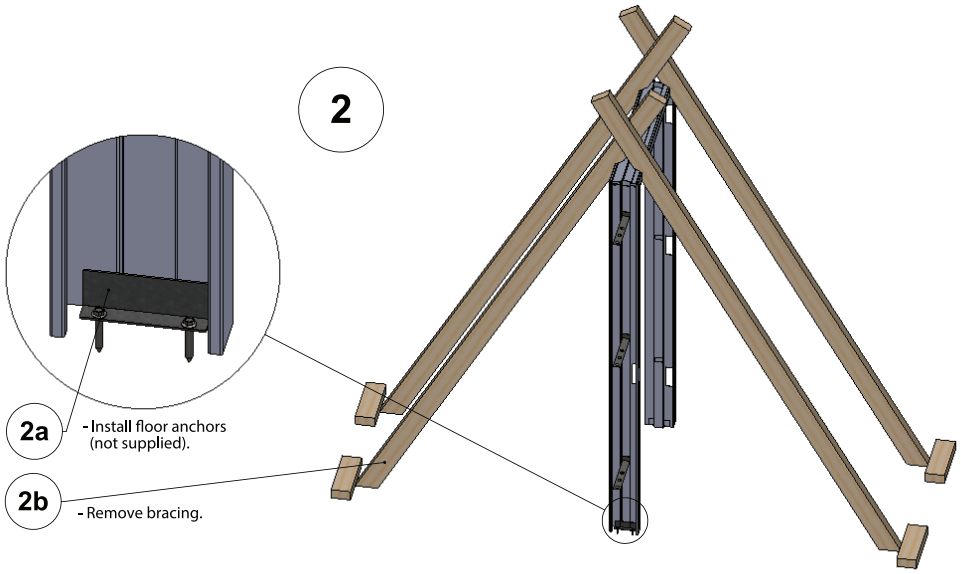
INSTALLATION INSTRUCTIONS FOR MASONRY WALL WELDED FRAME





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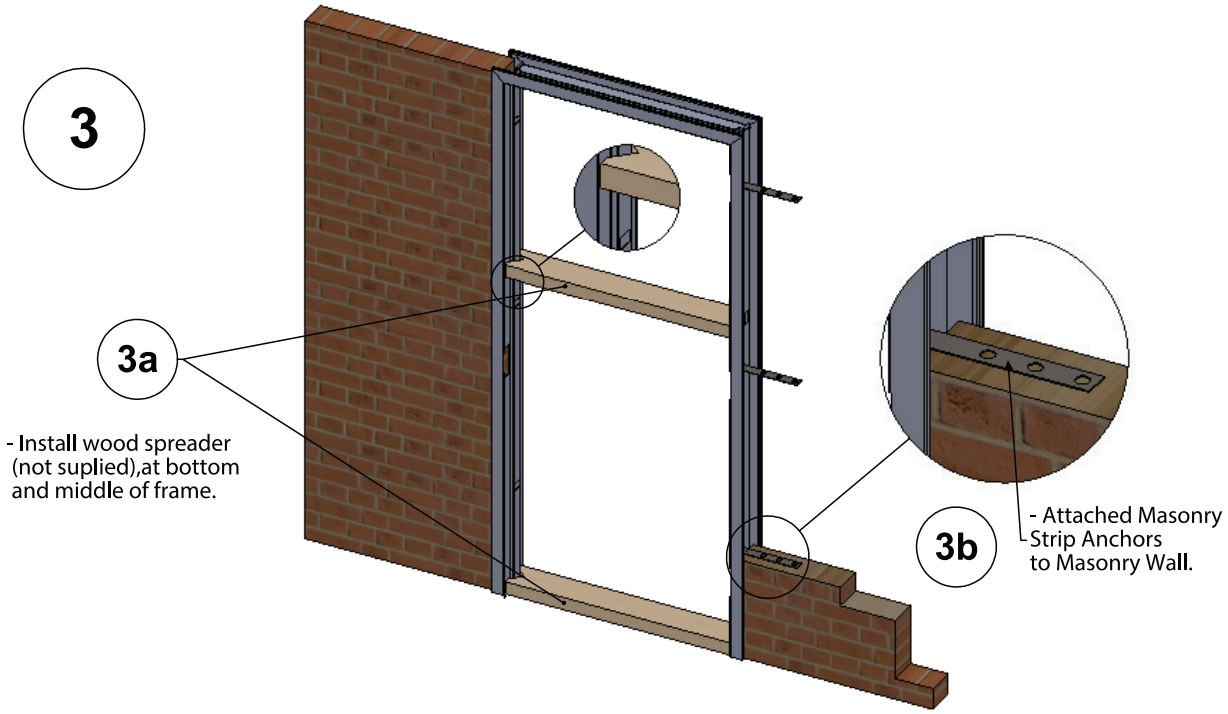

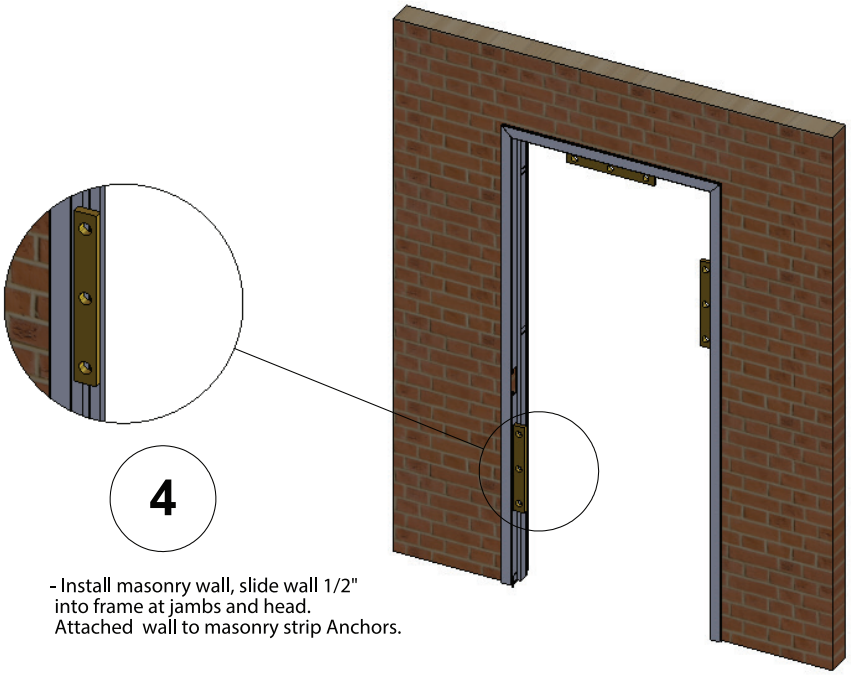

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Note:
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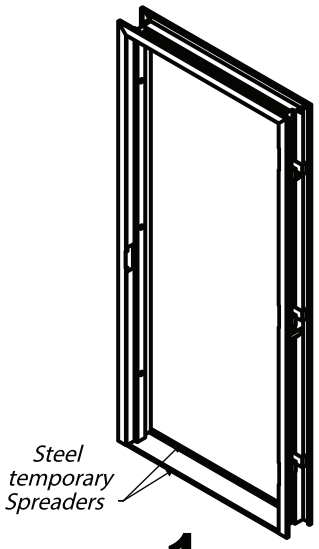
INSTALLATION INSTRUCTIONS FOR A PUNCH & DIMPLE FRAME IN AN EXISTING MASONRY/CONCRETE WALL FRAME BACK FILLED WITH CEMENT (GROUT)



1

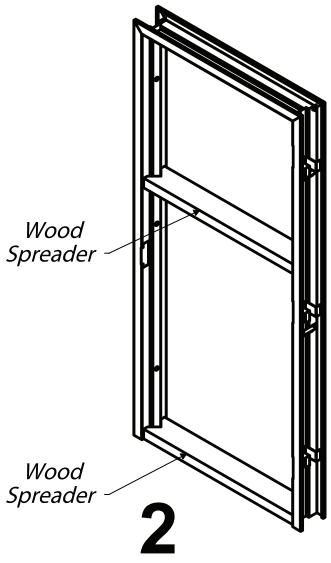
1

Measure masonry opening for a new frame. Leave a 1" gap (clearance) at the top of the frame, so that, concrete can be poured into the jambs of the frame (hand trowel/scoope and/or pumped).

Remove the temporary steel spreader tack welded to the bottom of the frame.

2

Install wood spreaders (not supplied) at the bottom and middle of the frame. Wood spreaders must be cut to exact size of the required jamb opening and notched to clear stop on the frame.



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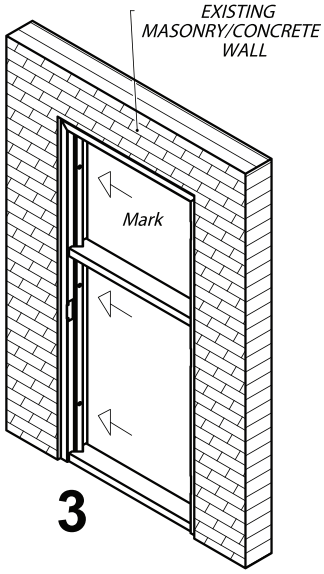

3

3

Slide the frame into the existing masonry wall opening and mark the wall through the holes in the frame where the anchor bolts are located.

Slide the frame out of the opening and drill the holes in the wall for the anchor bolts.

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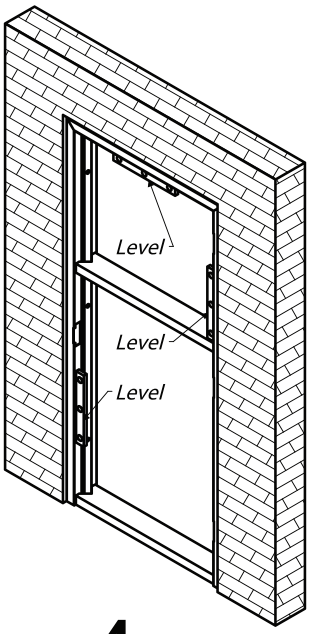


4

4

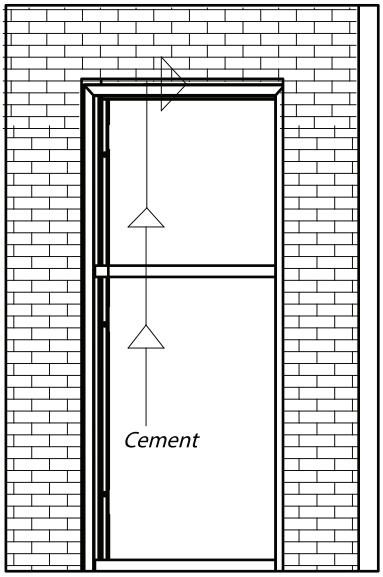
Slide the frame into the opening, shim and level the frame (horizontally and vertical).

Secure the frame with 3/8" Diameter expension bolts, 5" long (not supplied).

5

Mix cement (grout) as per manufacturer's instructions. From the top of frame fill each jamb with cement, tapping (vibrating) the frame so that the cement will flow to the bottom of each jamb.

Fill the head of the frame with cement, including the void at the top of the frame.



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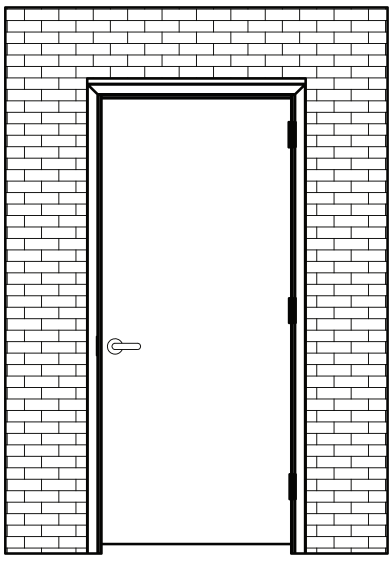

6

6

Remove the wood spreaders.

Let cement (grout) set for at least two hours before installing door.

Install (hang) the door.

Caulk (not supplied) around the perimeter of the frame.

Do not use this opening (door) for at least 24 hours.

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USE HINGE SHIMS TO ADJUST DOOR CLEARANCE

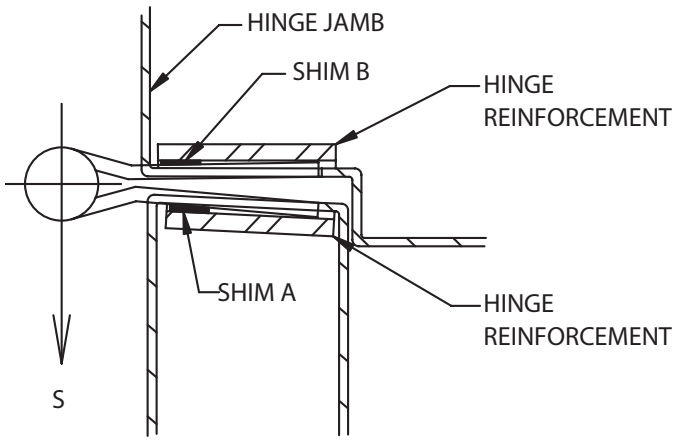

FIGURE 21
SHIMMING TO INCREASE
CLEARANCE AT HINGE EDGE

Using shim A only, door will be relocated in direction of arrow S.

Using shim B only, both door and centerline of hinge barrel will move in direction of arrow S.

Using both shims A and B will move the door further in direction of arrow S than by using either A or B alone, and hinge barrel will be relocated just as using B alone.

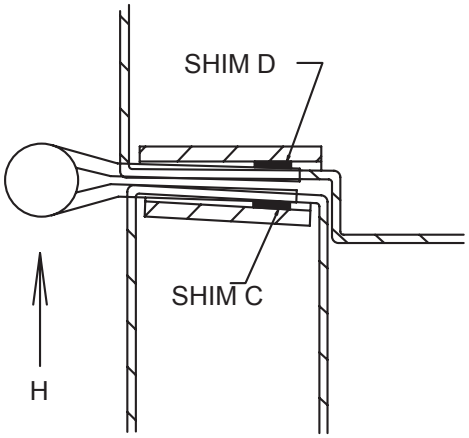

FIGURE 22
SHIMMING TO DECREASE
CLEARANCE AT HINGE EDGE

Using shim C only, door will be relocated in direction of arrow H.

Using shim D only, Both door and centerline of hinge barrel will move in direction of arrow H.

Using both shims C and D will move the door further in direction of arrow H than by using either C or D alone, and hinge barrel will be relocated just as by using D alone.

Painting Hollow Metal Doors and Frames

The Steel Doors and frames that you have purchased have been manufactured using the highest quality GALVANNEAL Steel.

Galvanneal Steel is produced on a continuous hot-dipped galvanized steel line. As the steel emerges from the molten zinc bath all excess zinc is removed. From there the steel continues through an annealing furnace at a temperature of 1050 degrees converting the zinc into a ZINC-IRON Alloy coating (Galvanneal). The coating is satin smooth to the touch and is dull gray in appearance and offers excellent protection to corrosion as both the inside and the outside of the door and frame are completely protected . In addition Galvanneal Steel also provides an excellent surface for finish painting
Galvanneal has become very popular over the years and has become widely used in the automobile and appliance industries.
Preparation for finish painting Galvanneal Steel is very simple in that it only requires a complete wipe down of all surfaces with a clean cloth and a quality Mineral Spirits that will remove any foreign substances that might have formed during transportation or manufacturing. Priming Galvanneal Steel prior to finish painting is NOT necessary. It is also recommended that once all steel surfaces have been cleaned with Mineral Spirits and the steel surfaces have dried that another clean cloth with clean water be used to again wipe down the steel surface to remove any cleaning residue. A light sanding between coats is normally recommended. Please consult with the paint manufacturer for recommendations.

Most Paint Manufacturers recommend an air temperature of 55 degrees before painting and most recommend a high quality Latex paint to be used. Oil Base can also be used but due to odor and longer clean up time Latex is normally preferred. Lastly High Gloss or Gloss Paints are not recommended due to the fact they may highlight any imperfections in the steel surface..