Installation & Troubleshooting

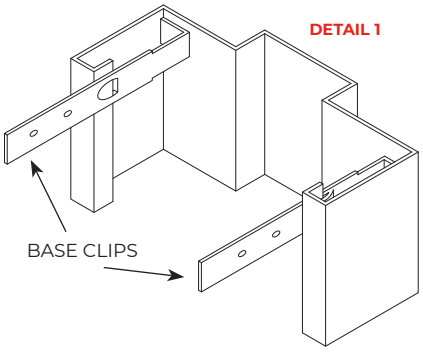
CUSTOM QUICK SHIP STEEL DOORS & FRAMES

HMF EXPRESS

INSTALLING KD DRYWALL 3-SIDED FRAMES

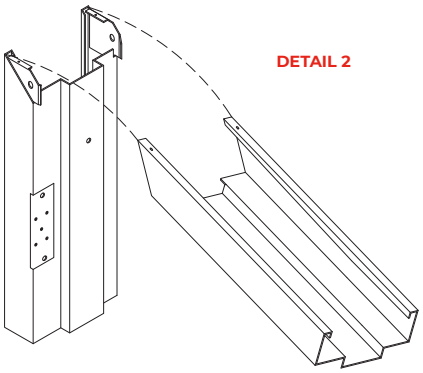
1) Verify that the rough opening is plumb, true, and square.

2) Install base clips on bottom of jambs (detail 1)



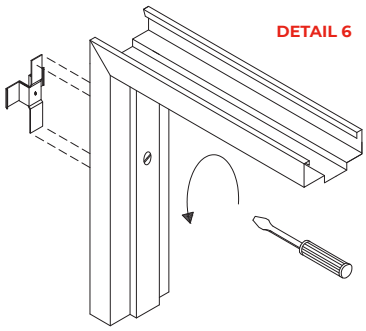
3) Place the hinge jamb in the opening

4) Install head and engage hinge jamb corner gusset (detail 2)

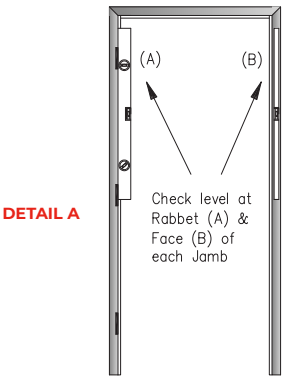


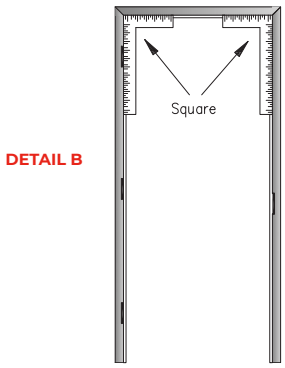
5) Place the other jamb into the opening and engage the corner gusset at head

6) Make compression anchors hand-tight (detail 6)



7) Make the frame plumb, true, and square (details A & B)

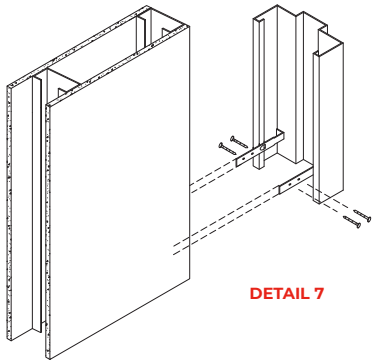




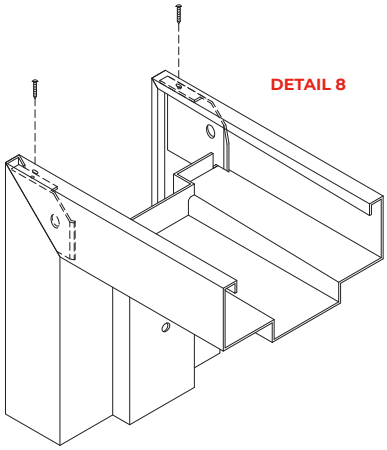
8) Finish tightening compression anchors in both jambs, alternating counter-clockwise turns of compression anchors to assure head remains square (detail 6)

9) Verify opening width at top, middle, and bottom

10) Fasten bottom of jambs to wall, assuring they remain plumb, square, and true (detail 7)



11) Install screws in corner gussets (detail 8)

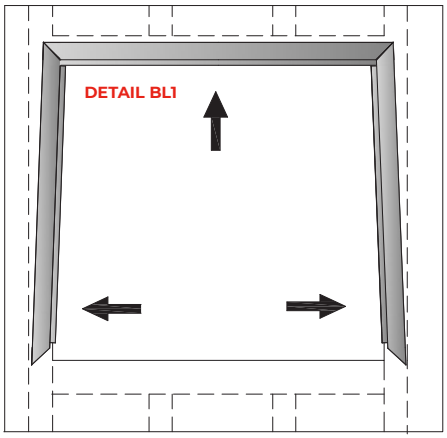


INSTALLING A KD DRYWALL 4-SIDED BORROWED LIGHT FRAME

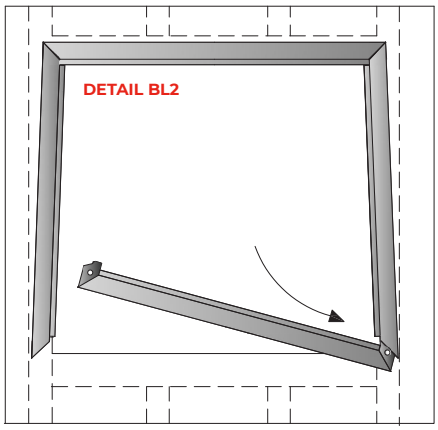
(MITERED SILL FOR INSTALLATION OFF THE FLOOR)

1) Verify that the rough opening is plumb, true, and square

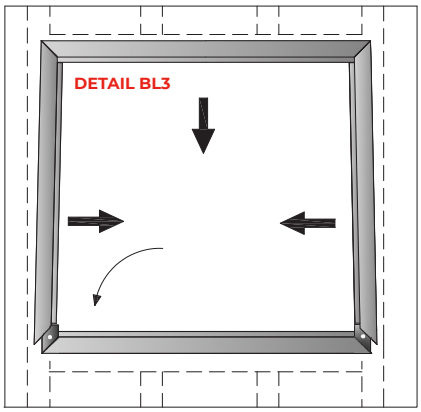
2) Install a jamb, head, and other jamb — be sure to push bottom of jambs all the way up and out of opening (detail BL1)



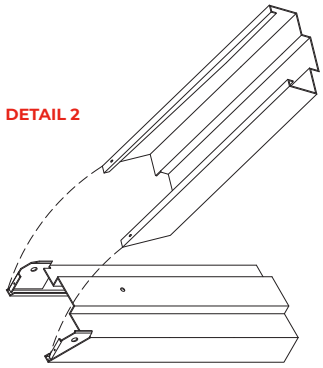
3) Angle sill into opening and push it toward wall as far as possible (detail BL2)



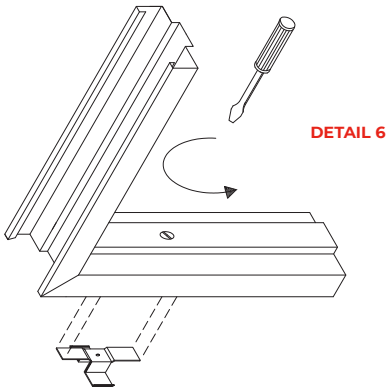
4) Swing other side of sill down past jamb and into place (detail BL3)



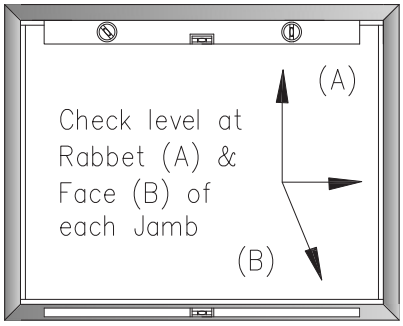
5) Pull jambs and horizontal pieces together while engaging all corner gussets (detail 2)



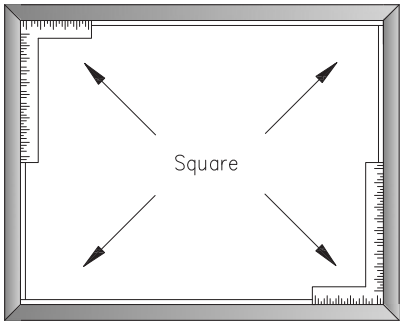
6) Make compression anchors hand-tight, assuring sill is level (detail 6)



7) Square jambs to sill and make sure head is level and square (details A & B)



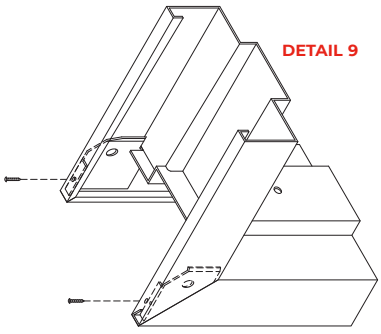
DETAIL A



DETAIL B

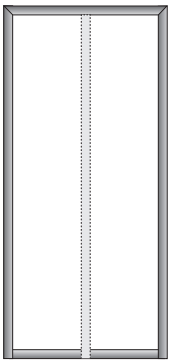
8) Finish tightening compression anchors at head and sill while making sure opening stays level and square

9) Install screws in jambs at corner gussets (detail 9)



10) Secure or save glass bead for installation of glass and glazing

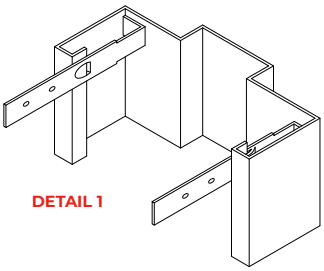
INSTALLATION — QUICK SHIP DOORS AND FRAMES BY HMF EXPRESS



INSTALLING KD DRYWALL FLOOR MOUNTED BORROWED LIGHT FRAMES

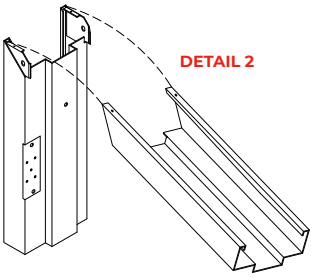
1) Verify that the rough opening is plumb, true, and square.

2) Install base clips on bottom of jambs (detail 1)



3) Install a jamb

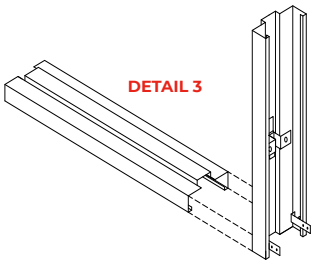
4) Install head and engage jamb corner gusset (detail 2)



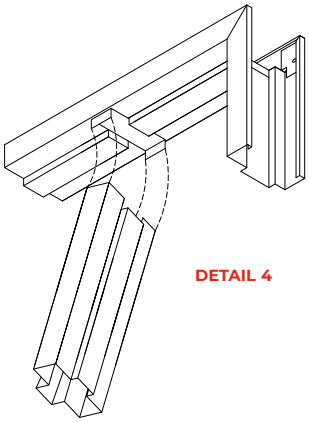
5) Install other jamb and engage corner gusset at head

6) Make top compression anchors hand-tight (detail 6)

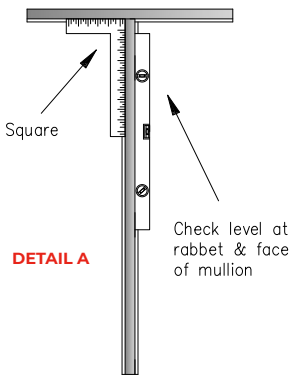
7) Insert the sill on the floor between jambs (detail 3)



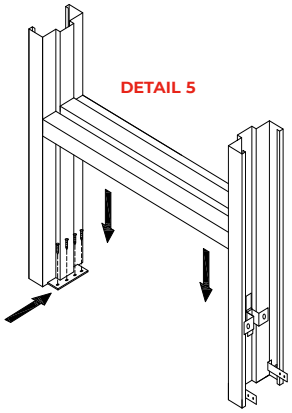
8) Fit top of vertical mullion (if used) over bracket in head (detail 4)



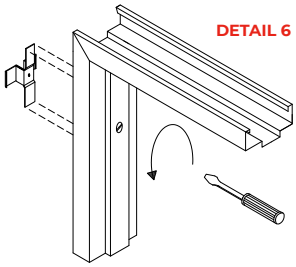
9) Swing vertical mullion (if used) into place — plumb, true, and square (detail A)

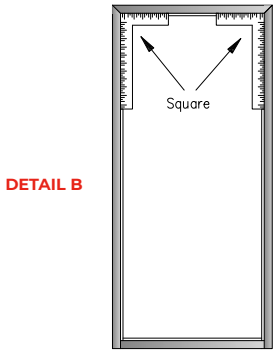


10) Lift sill and fasten mullion bracket to floor (detail 5) (If used)



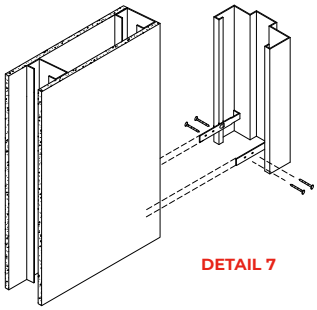
11) Finish tightening compression anchors in both jambs, alternating counter-clockwise turns of compression anchors to assure head remains square and do same at bottom of frame (details 6 & B)



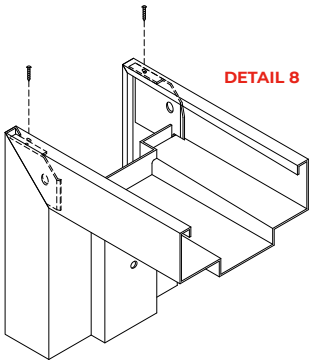


12) Verify opening width at the top, middle, and bottom

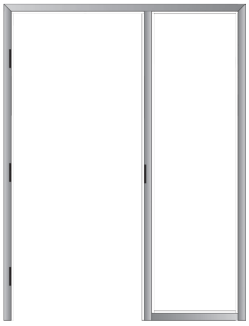
13) Fasten bottom of jambs to wall, assuring they remain plumb, square, and true (detail 7)



14) Install screws in corner gussets (detail 8)



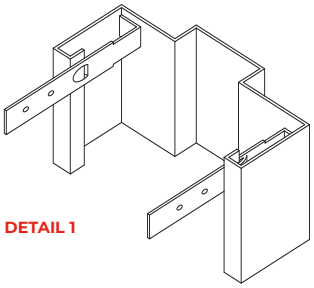
15) Secure or save glass bead for installation of glass and glazing



INSTALLING KD DRYWALL TYPE SIDELIGHTS

1) Verify that the rough opening is plumb, true, and square.

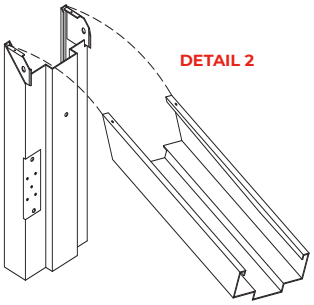
2) Install base clips on bottom of jambs (detail 1)



DETAIL 1

3) Install hinge jamb

4) Install head and engage hinge jamb corner gusset (detail 2)

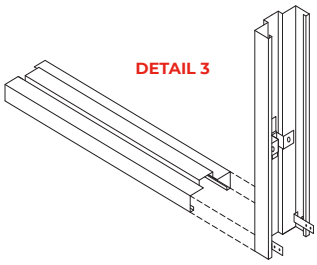


DETAIL 2

5) Install outside (sidelight) jamb and engage corner gusset at head

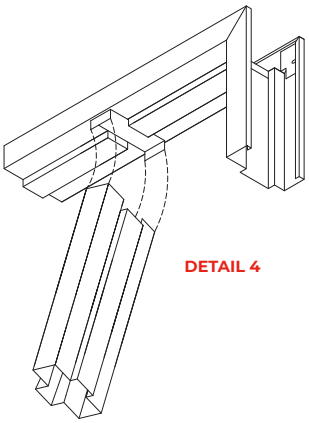
6) Make compression anchors hand-tight (detail 6)

7) Locate sill in place on floor beside outside jamb (detail 3)



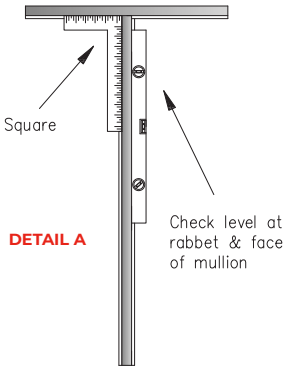
DETAIL 3

8) Fit top of vertical mullion over bracket in head (detail 4)



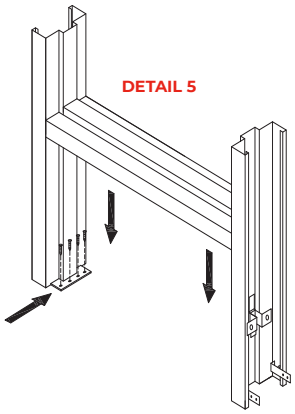
DETAIL 4

9) Swing vertical mullion into place — plumb, true, and square (detail A)



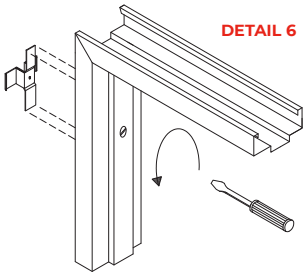
DETAIL A

10) Lift sill and fasten mullion bracket to floor (detail 5)

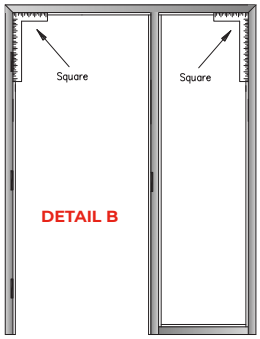


DETAIL 5

11) Finish tightening compression anchors in both jambs, alternating counter-clockwise turns of compression anchors to assure head remains square and do the same at bottom of frame (details 6 & B)



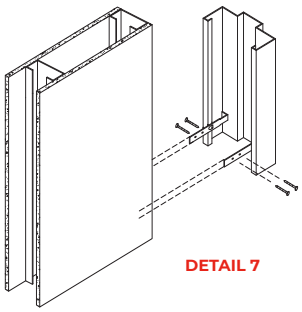
DETAIL 6



DETAIL B

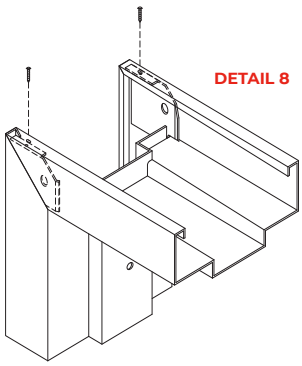
12) Verify the opening width at top, middle, and bottom

13) Fasten bottom of jambs to wall, assuring they remain plumb, square, and true (detail 7)



DETAIL 7

14) Install screws in corner gussets (detail 8)



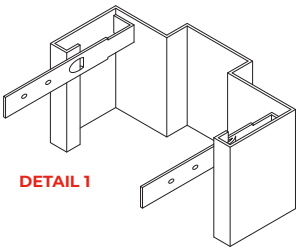
DETAIL 8

15) Secure or save glass bead for installation of glass and glazing

INSTALLING A KD DRYWALL TRANSOM FRAME

1) Verify that the rough opening is plumb, true, and square.

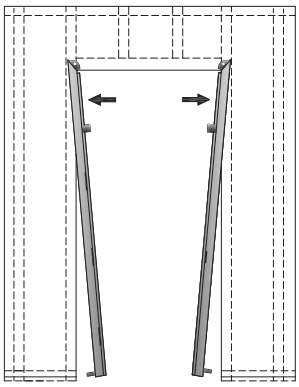
2) Install base clips on bottom of jambs (detail 1)



DETAIL 1

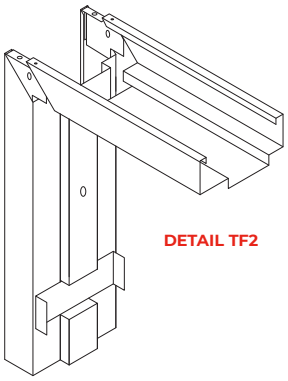
3) Install both outside jambs

4) Push tops of jambs toward each wall as far as possible (detail TF1)



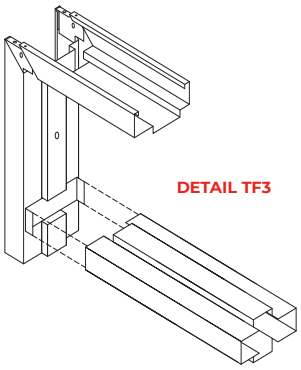
DETAIL TF1

5) Push head onto wall above jambs, but do not engage corner gussets at this time (detail TF2)



DETAIL TF2

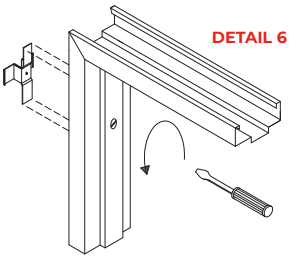
6) Fit one side of transom mullion over bracket in jamb (detail TF3)



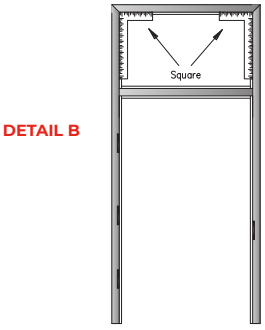
DETAIL TF3

7) Swing transom mullion into place and pull jambs toward mullion to engage brackets (detail TF3)

8) Make compression anchors hand-tight, assuring jamb and mullion location are square to head and transom mullion (details 6 & B)



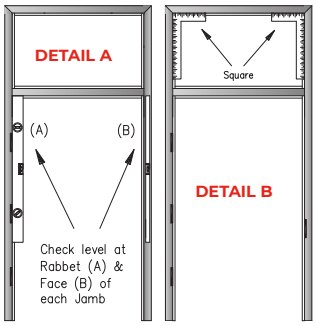
DETAIL 6



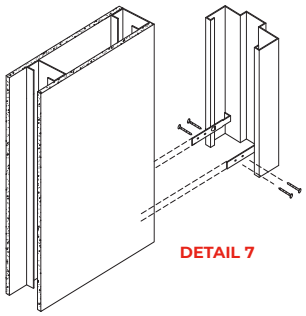
DETAIL B

9) Verify the opening width at top, middle, and bottom

10) Finish tightening compressions anchors while making sure jambs and mullion stay plumb, square, and level (details A & B)

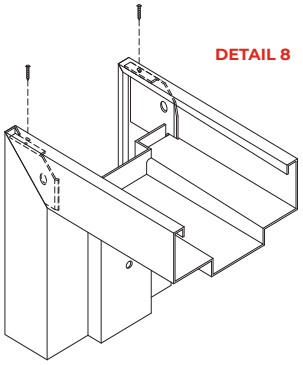


11) Fasten bottom of jambs to wall (detail 7)



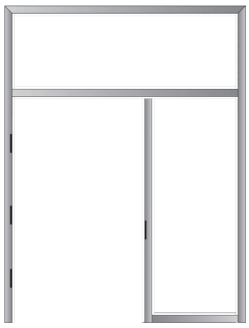
DETAIL 7

12) Install screws in head at corner gussets (detail 8)



DETAIL 8

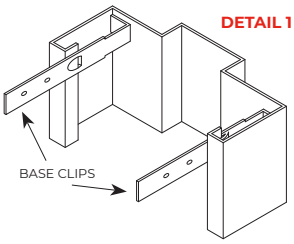
13) Secure or save glass bead for installation of glass and glazing



INSTALLING A KD DRYWALL SIDELIGHT/TRANSOM FRAME

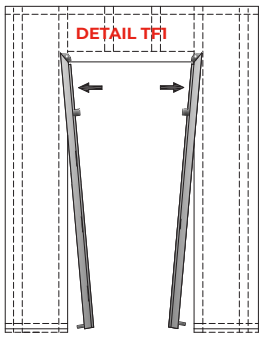
1) Verify that the rough opening is plumb, true, and square.

2) Install base clips on bottom of jambs (detail 1)

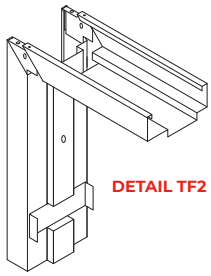


3) Install hinge jamb and strike jamb

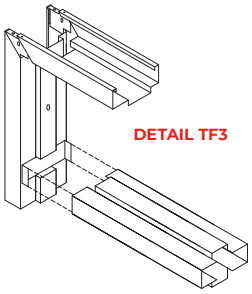
4) Push tops of jambs toward each wall as far as possible (detail TF1)



5) Push head onto wall above jambs, but do not engage corner gussets at this time (detail TF2)

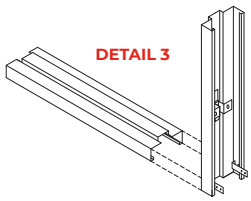


6) Fit one side of transom mullion over bracket in jamb (detail TF3)

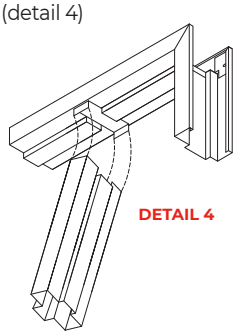


7) Swing transom mullion into place and pull jambs toward mullion to engage brackets (detail TF3)

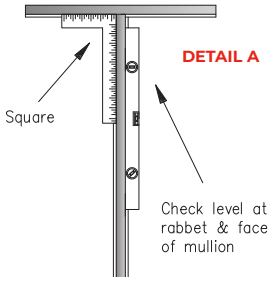
8) Locate sill in place on floor between jambs (detail 3)



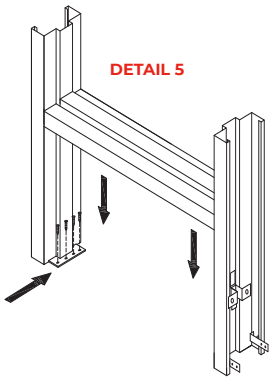
9) Fit top of vertical mullion over bracket in head (detail 4)



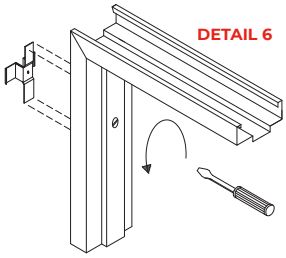
10) Swing vertical mullion into place — plumb, true, and square (detail A)

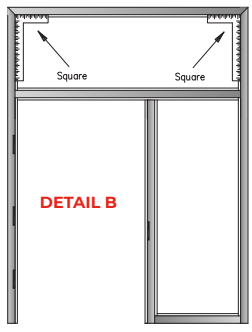


11) Lift sill and fasten mullion bracket to floor (detail 5)



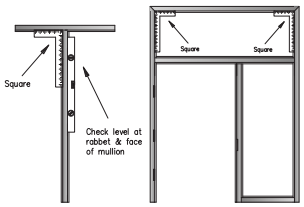
12) Make compression anchors hand-tight, assuring jambs are square to head and transom mullion (details 6 & B)



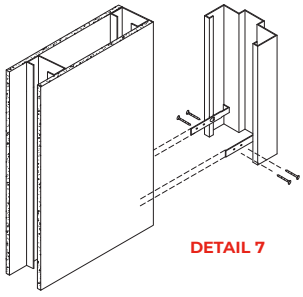


13) Verify the opening width at top, middle, and bottom

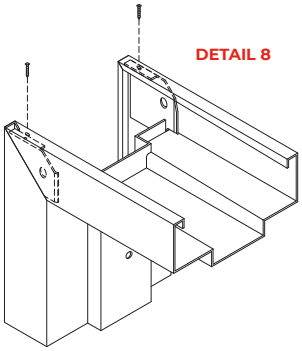
14) Finish tightening compressions anchors while making sure jambs and mullion stay plumb, square, and level (details A & B)



15) Fasten bottom of jambs to wall (detail 7)



16) Install screws in head at corner gussets (detail 8)



17) Secure or save glass bead for installation of glass and glazing

TROUBLESHOOTING DOOR AND FRAME ISSUES

Problem/resolution template for door/frame fitting issues.

GENERAL NOTES

When a contractor calls with a field installation issue, be prepared when the initial call comes in by considering these basic guidelines for that crucial first conversation:

- Listen first
- Take notes
- Ask systematic diagnostic questions
- Be committed to solving the issue
- Do not assign blame or accept responsibility until you know all of the facts

ASK THE RIGHT QUESTIONS

Finding a helpful solutions requires getting the basic information about the problem by asking these questions:

- What seems to be the issue?
- Has the person you are talking to actually seen this issue, or is he just relaying information?
- Can you talk to the person who has seen the issue?
- Is the door or frame in the correct opening?
- Has the tag/mark number been verified?
- Is the correct hardware being used?
- What measurements have been taken on the frame? (Fig. 1: Measure both rabbets)
- What measurements have been taken on the frame? (Fig. 1: Measure both rabbets)
- Can the contractor send a digital picture that shows the issue?
- Are there any visible signs of damage?
- Does the door, frame or hardware seem to be the issue, and why?

SPECIFIC FRAME QUESTIONS:

- Is the frame square? Fig. 3
- Is the frame level? Fig. 4
- Is the frame twisted? Fig. 5
- If welded, who welded the frame?
- If KD, are the miters lining up? Fig. 6
- If KD, are the screws installed in gussets? Fig. 7

SPECIFIC DOOR QUESTIONS:

- Will the door close? If not, why?
- What gaps are between the door and the frame? Fig. 8
- Is the door hitting the stop evenly top-to-bottom? Fig. 9
- Does the door bind when closing?
- Does the door swing with the closer arm on?
- Are there any dents or damage to the door?

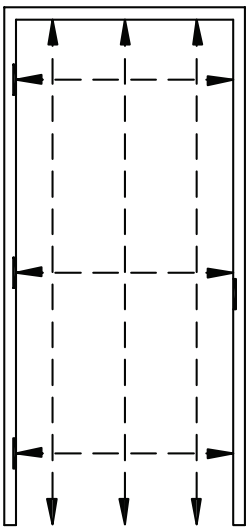


FIG. 1

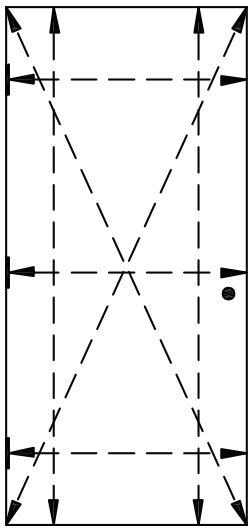


FIG. 2

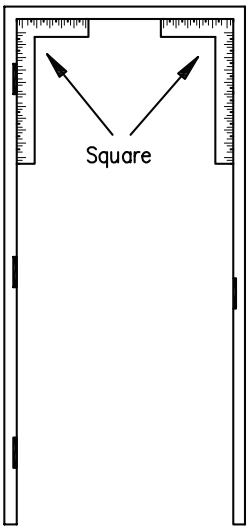


FIG. 3

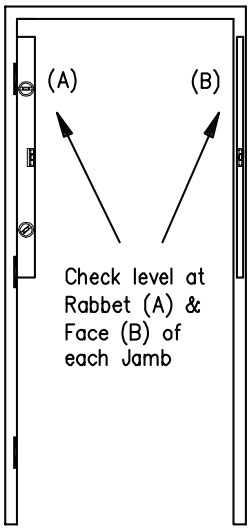
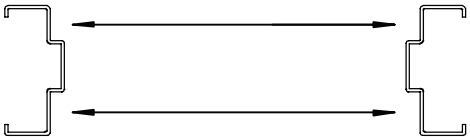


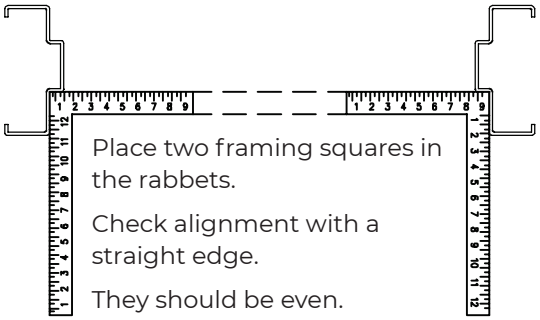
FIG. 4

FIG. 5A



Compare measurements from each rabbet. If they are different, the frame is twisted.

FIG. 5B

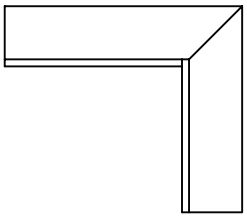


Place two framing squares in the rabbets.

Check alignment with a straight edge.

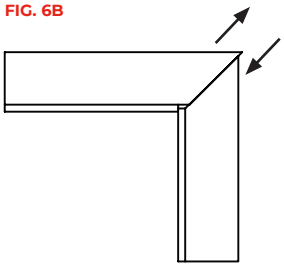
They should be even.

FIG. 6A



Proper alignment of miters shown.

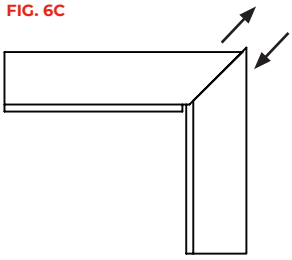
FIG. 6B



Compression anchor too tight?

Opening width too small?

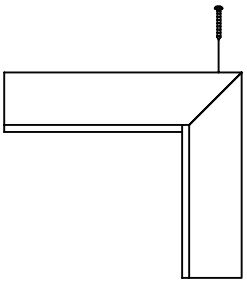
FIG. 6C



Screw installed in gusset prior to tightening of compression anchor?

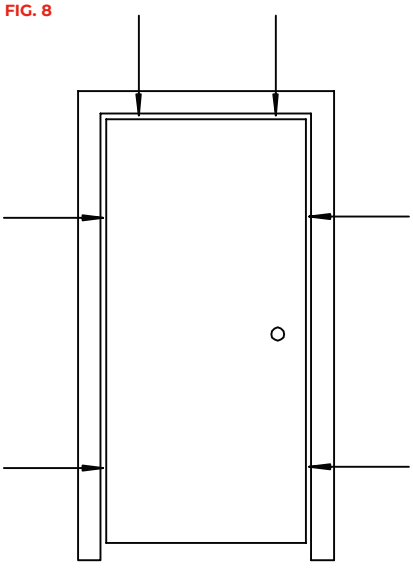
Opening width too large?

FIG. 7



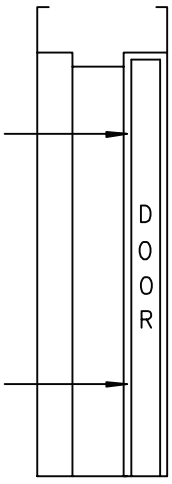
Recommended fastener is a #8 pan head sheet metal screw.

FIG. 8



Clearances should be 1/8” at head and jambs with a tolerance of +1/16” or -1/32” for the opening size.

FIG. 9

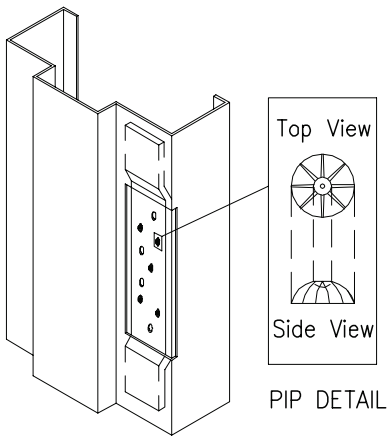


The door should rest against the silencers with no gaps at lock edge. Hinge edge of door should be consistent and not hitting the frame stop.

SOLUTIONS IF FIELD ADJUSTMENTS ARE POSSIBLE:

- Grind/Drill hinge “pips”: Fig. A
- Shim hinges: Fig. B
- Swag hinges: Fig. C
- Adjust frame (varies per condition)

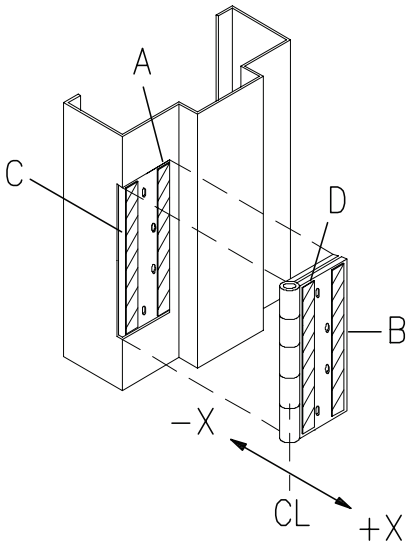
FIG. A



PIPS

- Pips are only present on frames with 4 1/2” standard weight hinges and are removed for heavy weight.
- To remove pips, grind off flush with small grinder or drill out with a 3/16” bit (pip will “spin-off” while drilling).
- Remove pips far from the stop to increase clearance at lock edge and close to the stop to reduce clearance at lock edge.
- Remove all pips to create 3/64” extra clearance.

FIG. B

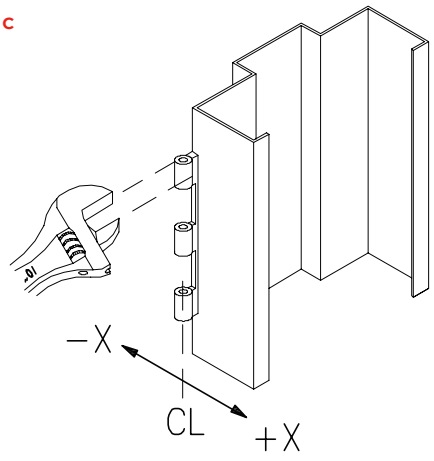


SHIMS

- Using shim (A) will move both the door and center line (CL) of hinge barrel in the -X direction.
- Using shim (B) will move only the door in the -X direction.
- Using shim (C) will move both the door and center line (CL) of hinge barrel in the +X direction.
- Using shim (D) will move only the door in the +X direction.
- Using both shims (C) and (D) will move the door in the +X direction by a greater amount than using them individually.

Note: Shim (A) when too thick can cause hinge bind when the door is closed, especially when weatherstrip is applied to the hinge rabbet.*

FIG. C

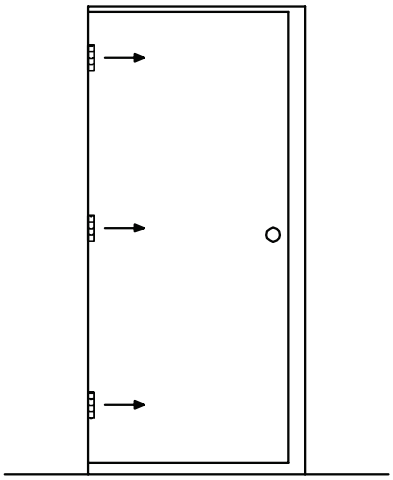


SWAGGING

*Caution: This action could weaken or break the weld at the hinge reinforcement.

- Remove hinge pins and using an 8”-10” crescent wrench, bend all knuckles in +X directions to move door away from strike or -X direction to move door toward strike (tape jaws to protect hinge finish).
- Replace pins to check clearances and repeat procedure as necessary for the required adjustment.
- Try swagging the mortise, weld-on, and non ball bearing hinges.
- Keep door closed to maintain position while adjusting hinge leaves.

CONDITION 1

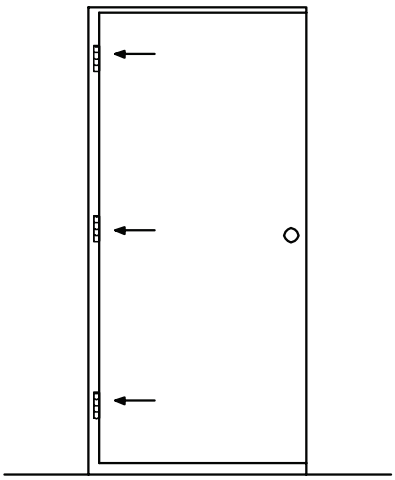


GAP TOO BIG AT LOCK EDGE

Place equal sized shims* between each jamb hinge reinforcement and hinge leaf. Further adjustments can be made by placing equal sized shims* behind each door hinge reinforcement.

**See page 10, figure B, (C) and (D)*

CONDITION 2

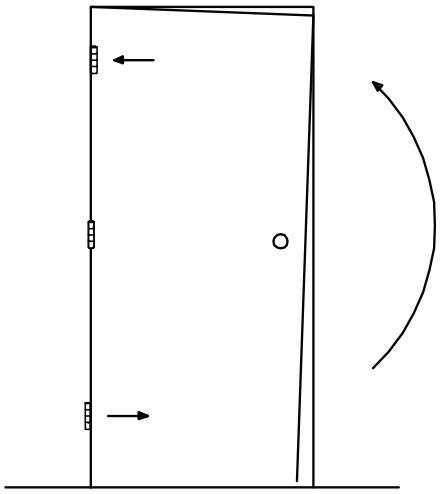


GAP TOO SMALL AT LOCK EDGE

Place equal sized shims* between each jamb hinge reinforcement and hinge leaf. Further adjustments can be made by placing equal sized shims* behind each door hinge reinforcement.

**See page 10, figure B, (A) and (B)*

CONDITION 3



OUT OF SQUARE HINGE OR STRIKE JAMB (TOE OUT)

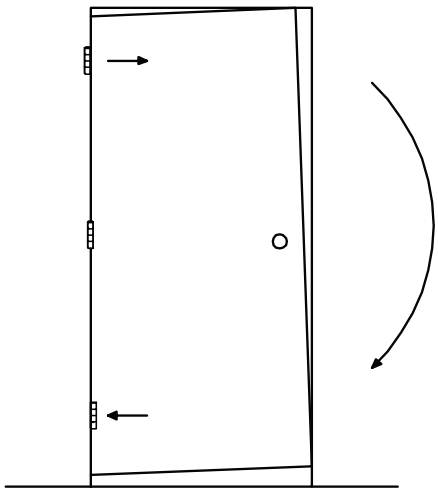
This condition can be improved by placing shims* between the jamb and door hinge reinforcements respectively at the bottom hinge leaves. Further adjustment can be made by placing shim* behind the top hinge which will in effect rotate the door about the middle hinge.

If the strike jamb is toe-out, try placing shims[2] at the middle hinge as well.

**See page 10, figure B, (C) and (D)*

[2]See page 10, figure B, (A)

CONDITION 4



OUT OF SQUARE HINGE OR STRIKE JAMB (TOE IN)

This condition can be improved by placing shim* between the bottom hinge and possibly the middle hinge as well. Further fine adjustment can be made by placing thin shims[2] at the top hinge.

**See page 10, figure B, (A)*

[2]See page 10, figure B, (C) and (D)

ROUGH OPENING GUIDE FOR KNOCKDOWN DRYWALL FRAMES

Frame Type	Add to Opening Width	Add to Opening Height
Standard 3 Sided	2”	1”
3 Sided Cased Open	3”	1”
Double Egress	3”	1”
4 Sided Borrowed Light (Wall Mount)	2-3/4”	2-1/4”
4 Sided Cased Open BL (Wall Mount)	3”	3”
4 Sided Borrowed Light (Floor Mount)	Overall Frame Size -2” on Width, -1” Height**	
Elevations (Sidelight, Transom, etc.)	Overall Frame Size -2” on Width, -1” Height	

***2” face dimensions. Check with your salesperson for other face dimensions.*

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