Installation Instructions

Required Tools & Materials
Safety Glasses, Gloves, 24" to 48" construction level, claw hammer, measuring tape, 24" framing square, screw gun and bits, caulking gun, wood filler, touch up paint, shims, 2-1/2" wood screws, insulation, corner seals, finish nails for exterior and interior trim.

PLEASE NOTE: Failure to install this unit in accordance with architect, design professional or product manufacturer's instructions will have a direct effect on the unit's performance and/or long term wear. Installer shall be experienced in performing work required and shall be specialized in installation work similar to that required for this project. Warranty claims are subject to site inspections by a qualified manufacturer's representation to establish probable cause and proposed corrective action.

Step 1 : Prepare the Rough Opening

Figure 1: A clean, level, solid sub-floor area is essential to a successful installation.

Ensure that the following conditions are met: Clean, clear work area
- The rough opening (RO) is ideally 3/4" wider and 1/4" taller than the outside frame dimensions of the door unit.
- The RO is plumb, square and level
- The old door frame has been completely removed in retro-fit installation
- The sub-floor area is clean, dry and level
- The existing sub-floor area is at least 6" deep for 4-9/16" frames and at least 8" deep for 6-9/16" frames. Because a solid, level sub-floor is absolutely essential for proper door unit installation, do not proceed with the installation until the sub-floor is both solid and level.

Step 2 : Caulk the Sub-Floor

Figure 2: Caulk is applied in three parallel lines running the width of the sill.

Variations in threshold design may require that the caulk lines be applied directly to the bottom of the door unit to ensure a necessary weather-seal. Inspect the bottom of door unit to confirm it features a flat surface before caulking the sub-floor area.
Apply three 1/4" lines of caulk along the length of the sub-floor, the first line starting approximately 1" from the inside edge. The lines should be about 1" apart.

Note - Albany Door also reccommends the use of sill pans wherever possible.

Step 3 : Prepare Door Unit

Remove all packaging materials such as nails, staples and screws.
Some door units may be supplied with plastic or wood skid plates on the bottom of threshold these need to be removed.

Some door units may be supplied with a "clip" or "plug" holding the panel aligned and closed during the initial installation steps. Do not remove at this time.

Step 4 : Place Door in Rough Opening

Figure 6: Place the sill in the opening first and then tilt the door up into the opening.
Door units featuring multiple door panels or glass inserts are heavier and more difficult to handle - do not attempt to handle without assistance.

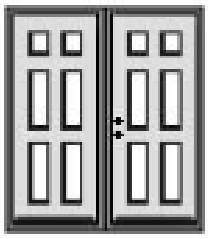
If the door is in a hallway or other critical location, be sure to center the corrected rough opening, so that casing and drywall reveals will be equal on both sides of the finished door.

Place the jamb in the opening, insert two shims at the top of the jamb on opposite side of the head jamb. These two shims will safely secure the jamb and the door in the opening. Adjust the top of the jamb so that it is flush with both sides of the wall—or as close as flush as possible, so that installing the mitered casing will be easier

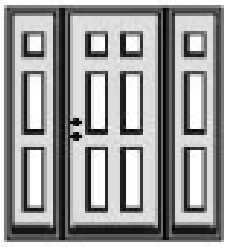
Instructions vary according to door type. Confirm which door type is being installed. Some door styles are not available in all markets.
For single door unit, use Step 5A. For double door unit, use Step 5B. For single door unit with one or two sidelights, use Step 5C.

A: Single Door

B: Double Door



C: Single Door with Two Sidelights



How to Plumb the Door

For all door types, it is essential that the frame is in a straight vertical plane and is not twisted. Check alignment using this method: Stand on the outside of the door. Check that the weatherstripping on the latch side is evenly compressed along the entire height of the door slab without any pinching or gaps (Figures 9 and 10).

Figure 9: Gaps are seen at the top of the door unit

DO NOT use the wall to square and level unit. Unit must be square and level to insure proper operation and performance.
Figures 9 and 10: The weather-stripping on these doors is not evenly compressed.

Figure 10: Gaps are seen at the bottom of the door unit

How to Fasten the Door

After shimming, the door is fastened to the studs by installing screws through the jambs, shims and into the stud (Figure 11).
Screws located in hinge or strike position shall be placed in the thin (rabbet) section of frame, other screws shall be placed in thick (stop) section of frame. Wide frames should be attached with a screw in both sections of the frame to minimize rotation. When shims are properly installed, the frame should not move or twist when the screws are tightened and counter-sunk, thus maintaining the 1⁄8" gap between the edge of door panel and frame. If there is any movement, loosen the screws and shim tighter to maintain the 1⁄8" gap, and then retighten the screws.

Figure 11: Screws are installed through the jamb, shims and into the 2x wood studs or bucking.

Step 5: Shim and Fasten

Step 5A: For single doors

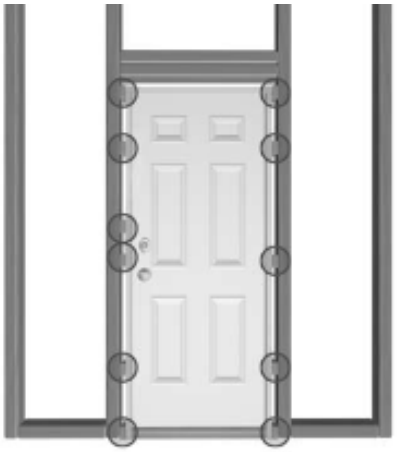


Figure 12: Install the shims in the correct locations and in the correct sequence. Stand on the inside of the door and center the door in the opening.

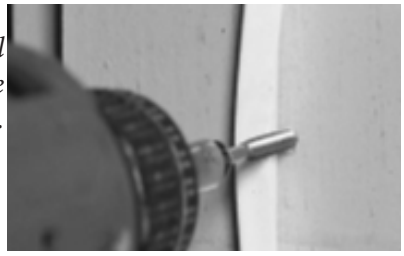
Shim tightly at the bottom corners of the door unit.
This will keep the door centered and the frame tight against the sill.
Shim the top of the door on the latch side. Install shims until there is a consistent 1⁄8" gap between the top of the door slab and the frame header.
Shim the hinge-side of the frame. This will hold the door tight in its position relative to the frame. The door should operate freely with nothing but shims holding it in place. CAUTION: Do not open door panel greater than 30-degrees until 2-1⁄2" screws have been installed.

Figure 13: Proper position of shims at the bottom of the door.
From the outside and with the door closed, ensure that the frame is in a straight vertical plane (not twisted). To do this check that the weather-stripping on the latch side is evenly compressed along the entire height of the door slab without any pinching or gaps (see Figures 9 and 10).

Ensure that there is an even gap across the top of the door slab. With the door closed and from the inside shim directly behind the vacant hinge screw hole in each until there is a consistent 1⁄8" gap between the hinge-side jamb and the door slab edge along the entire height of the door. The gap between the latch-side jamb and the door slab edge should be 1⁄8" at the top and bottom of the door only. Drive one of the 2-1⁄2" screws supplied through the vacant hole in each hinge, through the jamb, shims and into the stud or rough buck (Figure 11).

Figure 14: Shims are placed above and below the dead bolt hole

Figure 14: Install screws underneath the weather-stripping.



Shim behind the latch-side jamb approximately 8” from the top and bottom of the frame. Install shims until there is an even 1⁄8” gap between the jamb and the edge of the door slab along the door. Shim behind the latch-side jamb just above and below the dead bolt hole, maintaining the 1⁄8” gap (Figure14). Pull the weatherstripping away from the jamb and screw 2-1⁄2” installation screws through the jamb and shims into the stud (Figure 15).

Step 5B: For double doors

Figure 16: Install the shims in the correct locations and in the correct sequence.

Stand on the inside of the door and center the door in the opening. Shim tightly at the bottom of the threshold. This will keep the door centered and the frame tight against the sill. Shim the top of the frame. Install shims until there is a 1⁄8” gap between the top of the door slabs and the frame header. This will hold the door tight in its position relative to the frame. The door should operate freely with nothing but shims holding it in place. CAUTION: Do not open door panel greater than 30-degrees until 2-1⁄2” screws have been installed. Door panels with glass inserts may sag toward the center. This is normal. To correct sagging, align the flush bolts on the fixed door with clearance in the header and sill.

Most units do have pre-drilled holes in the header and sill. Holes may have to be drilled on certain units. Slide top flush bolt up against header and bottom bolt down against threshold to mark. Mark where the bolts make contact with the header and sill with a pencil. Drill holes on marks to receive bolts (1-1⁄2” deep minimum). Once holes are drilled, close panel and engage bolts making sure they extend far enough to secure unit. If there is a gap between the threshold and weatherstrip block around the foot bolt, the hole is not deep enough (the weatherstrip block must touch the threshold to properly seal the unit). Shim tightly behind the vacant hinge screw hole in the bottom hinge until the lower flush bolt slides freely into the clearance hole in the sill. Secure the door by driving a 2-1⁄2” installation screw supplied, through the hinge and jamb and into the stud. If the flush bolt does not slide freely, loosen the screw, shim more tightly and then tighten the screw. Shim behind the vacant hinge screw hole in the top hinge to align the top flush bolt with the clearance hole in the header (Figure 17). Secure with the 2-1⁄2” installation screw supplied, through the hinge jamb and into the stud.

Figure 17: Correct sagging until the flush bolt slides freely into the pre-drilled hole in the head/threshold.

Figure 18: The gap between the door slabs and the head is not evenly aligned

From the outside and with the door closed, ensure that the frame is in a straight vertical plane (not twisted). To do this check that the weatherstripping on the astragal side is evenly compressed along the entire height of the door slab without any pinching or gaps. Standing on the inside, shim behind each of the vacant hinge screw holes in both the top and bottom hinge on the operating door until there is a consistent 1⁄8” gap along the entire height of the door between the operating door and the passive door. There should also be a 1⁄8” gap between the top of each door slab and the header. When the shims are properly installed, the frame should not move or twist when the screws are tightened. Thus maintaining the 1⁄8” gap. If there is any movement, loosen the screws and shim tighter to maintain the 1⁄8” gap, then retighten the screws. Install two 2-1⁄2” screws along the head jamb of double door systems for additional reinforcement. Screws should be installed above center of each panel. (Figures 17 and 18). Using the supplied 2-1⁄2” installation screws, drive a screw through the vacant holes in both the top and bottom hinge on the operating door, through the jambs and into the stud. Shim behind the vacant hinge screw holes in each of the center hinges, and then secure them using the supplied 2-1⁄2” installation screws.

Step 5C: For single or double sidelight

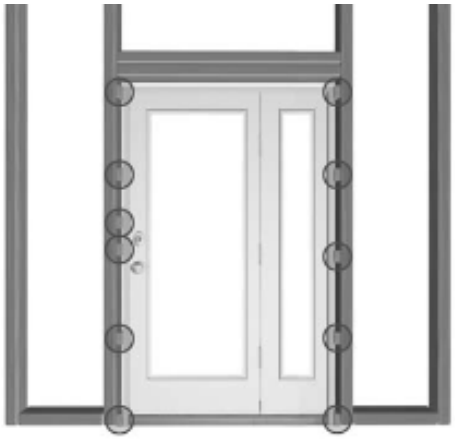


Figure 20: Install shims in the correct location and in the correct sequence.

Stand on the inside of the door and center the door in the opening. Shim tightly at the bottom corners of the door unit. This will keep the door centered and the frame tight against the sill. Shim the top of the frame, behind the latch-side jamb. Install shims until there is a consistent 1⁄8" gap between the top of the operating door slab and the frame header. Shim at the top of the frame, behind the hinge-side jamb to hold the door tight in its position relative to the frame. The door should operate freely with nothing but the shims holding it in place.
CAUTION: Do not open door panel greater than 30-degrees until 2-1⁄2" screws have been installed. From the outside and with the door closed, ensure that the frame is in a straight vertical plane (not twisted). To do this, check that the weather-stripping on the latch side is evenly compressed along the entire height of the door slab, without any pinching or gaps (Figures 8 and 9)

Once there is an even 1⁄8" gap across the top of the door slab and the weather-stripping is evenly compressed along the height of the door slab, proceed with the installation. Shim at perimeter of the frame (Figure 20), until there is an even 1⁄8" gap on both sides of the operating door slab. Drive the supplied 2-1⁄2" installation screws, three on each exterior jamb of a fixed panel, through the exterior (stop) section part of the jamb, through the shims and into the studs. Note: If the door is factory-finished use the "Factory-Finished Door System" information for fastening through exterior jambs.
For units with two non-operable panels: Typically long security screws are used to install the dead bolt strike plate (Step 6).
For units with only one non-operable panel attached on the latch side of the door: The second set of supplied screws are installed through the thin (rabbet) section of the jamb using the vacant hinge screw holes (Figure 21). Typically long security screws are used to install the dead bolt strike plate (Step 6).
For units with only one non-operable panel attached on the hinge side of the door: The second set of supplied 2-1⁄2" screws are installed through the thin (rabbet) section of the jamb under the weather-stripping, and through the shim into the stud approximately 8" from the top and bottom of the jamb (Figure 22). Shim just above and below the dead bolt hole and drive the supplied 2-1⁄2" installation screws through the dead bolt strike plate (Step 6). When shims are properly installed, the frame should not move or twist when the screws are tightened and counter-sunk. Thus maintaining the 1⁄8" gap. If there is any movement, loosen the screws and shim tighter to maintain the 1⁄8" gap, then re-tighten screws.

Figure 21 and 22: The second set of supplied screws is installed in the vacant hinge holes or under the weather-stripping.

Factory-Finished Door System

Because the inside of the jamb is not accessible, a 3/8" hole must be drilled through the factory-finished exterior jamb, 1⁄4" deep at all points where the door system is shimmed (three on each exterior side of a non-operable panel, Figure 23). Drive the supplied 2-1⁄2" installation screws, through the drilled hole in the exterior thick (stop) section of the jamb, through the shims and into the studs (Figure 24). Use wood filler and the supplied touch up paint to cover the holes (Figure 25).
NOTE – Failure to cover screw/nail holes with wood filler and touch up paint may result in the jamb peeling and cracking over time. Jamb finish warranty will be voided if the installation holes are not properly filled.

Figure 23: Pre-finished systems must have holes drilled before screws are installed.

Figure 24: Drill holes through the exterior jamb on factory-finished doors to install screws

Figure 25: Holes must be filled and painted over to prevent jambs from cracking and/ or peeling. **(Very Important)**

Install Deadbolt and Strike Plates

Figure 26: Screws fasten the latch plate to the door slab.

Figure 27: Screws should connect the deadbolt plate to the stud

Step 7: Insulate

Insulate between the jambs and the wall studs all around the door. Fiberglass insulation or a low expansion insulating foam sealant can be used.

Figure 28: Score and snap shims.

Score shims with a utility knife and snap the shims along the score.(Figure 28). Trim any excess with the utility knife. Insulate around the top and sides of the door unit in the cavity between the jamb and the wall studs.

Step 8: Caulk the Doorway

Figures 29 and 30: Caulk the sill crown and the front of the sill.

Figures 31 and 32: Caulk the jambs and the exterior trim.

Note - All seams must be caulked and sealed properly. Failure to properly seal the door unit will void the warranty.

Caulk all exterior seams and all around the brick or siding in the following sequence:
• caulk the sill on both latch and hinge sides from the edge of the sill crown along the edge where the sill and jamb or brickmould meet (Figure 29)
• caulk the front sill edge where the sill and the sub-floor meet (Figure 30).
• caulk the top corners where the header and jambs meet, starting at the weatherstripping and working to the face of the brickmould (Figure 31)
• caulk the perimeter where the exterior trim meets the jamb and brick or siding trim (Figure 32) If the door is center-hinged or has a sidelight, caulk around the mullions where they meet the jambs also.

Step 9: Adjust Sill

Figures 33: Raise or lower the sill by adjusting the sill screws. Some sills may have covers over the adjusting screws. These covers must be removed prior to making any adjustments.

Most door units are supplied with adjustable sills, and these may be raised or lowered to form a tight seal with the fixed sweep on the bottom of the door. This adjustment requires a screwdriver with appropriate screw bit. To increase the height of the sill cap, turn screws evenly along the rail. Refer to the "Steps to test threshold seal". (Figure 33).

Steps to Test Threshold Seal

Close door on a piece of paper placed over the threshold. 2. Pull paper between the sweep of the door and the threshold. If the threshold is properly adjusted, you should feel some tension, but if the paper tears, the door's seal is too tight. If there is no tension on the paper, the door's seal is too loose.

To properly adjust the threshold seal if it is too tight.
1. Adjust rail by turning screws evenly a 1/2 turn.
2. Repeat seal test. If paper does not slide beneath door with a feeling of tension, repeat Step. Re-test seal.
3. Continue testing threshold until it is properly adjusted.

To properly adjust the threshold seal if it is too loose.
(WARNING: Do not increase height by more than 1⁄4")
1. Adjust rail by turning screws evenly a 1/2 turn.
2. Repeat seal test. If paper does not slide beneath door with a feeling of tension, repeat Step. Re-test seal.
3. Continue testing threshold until it is properly adjusted.