



Door Installation and Service Manual



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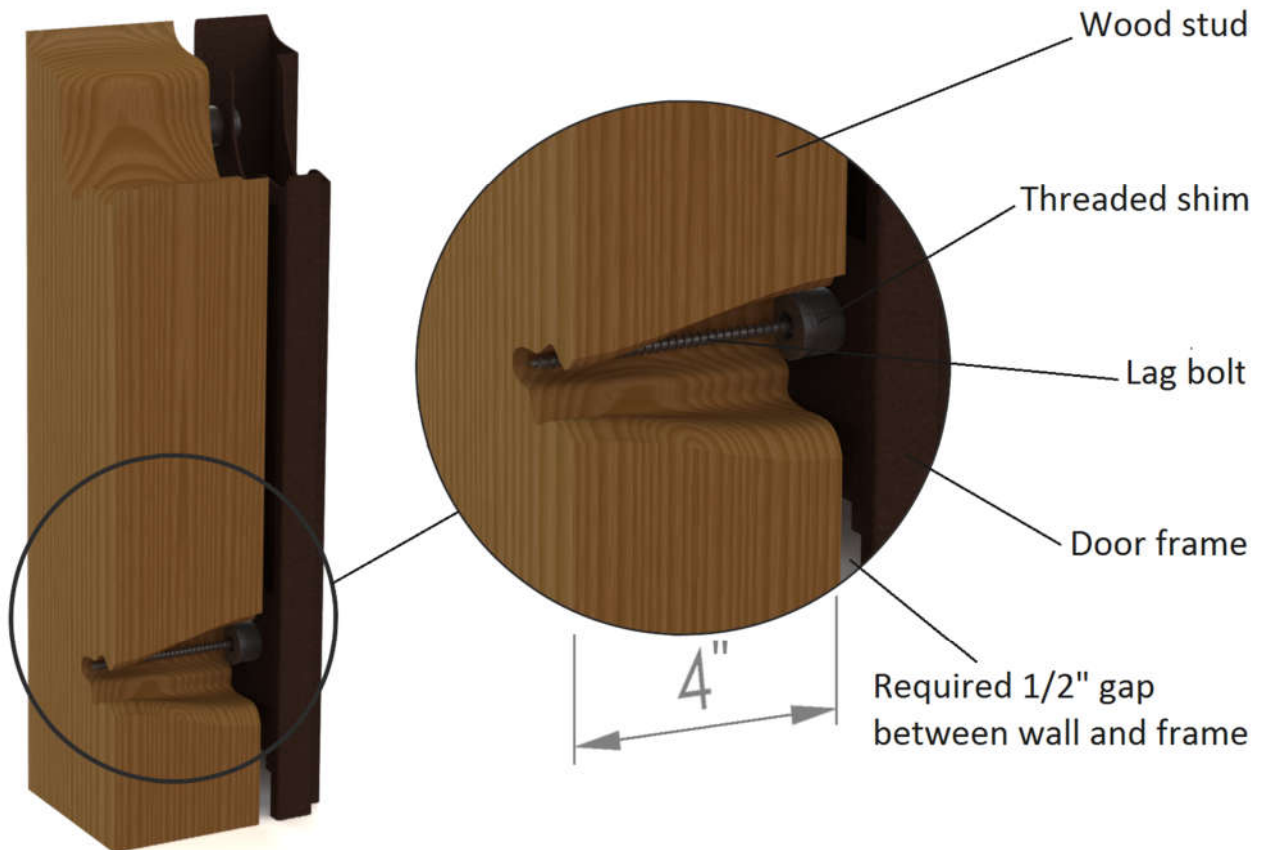
Before Installation

1. Uncrate the door and inspect for any damage that might have occurred during transport. Immediately photograph and report and damage.
2. Verify that the rough opening is the correct size. It should be 1"-1-1/2" wider than the frame and 1/2"-1" taller than the frame.
3. Ensure that the rough opening is adequately framed as per the framing requirements.
4. Separate the door leaf from the frame.
5. Ensure that there is adequate ceiling clearance to hang the door on the drop-in hinges once the frame is installed.
6. For doors without a threshold, remove the spacer bar at the bottom of the frame using an angle grinder.

Framing Requirements

For openings framed in wood, Shield strongly recommends reinforcing the opening to better support the weight of our doors and frames. This can be done by doubling or tripling up on the king jacks or studs to create a minimum of 4" of depth to accept the 4" lag bolts.

For masonry or concrete openings, no modifications are required.



Separating Door and Frame

1. Lie the door and frame with hinges down. Place 2-3 layers of Styrofoam at top and bottom to raise the frame off the ground and prevent damage to the hinge side handle. Make sure the door is completely unlocked and press down on the lever handle to retract the spring latch.



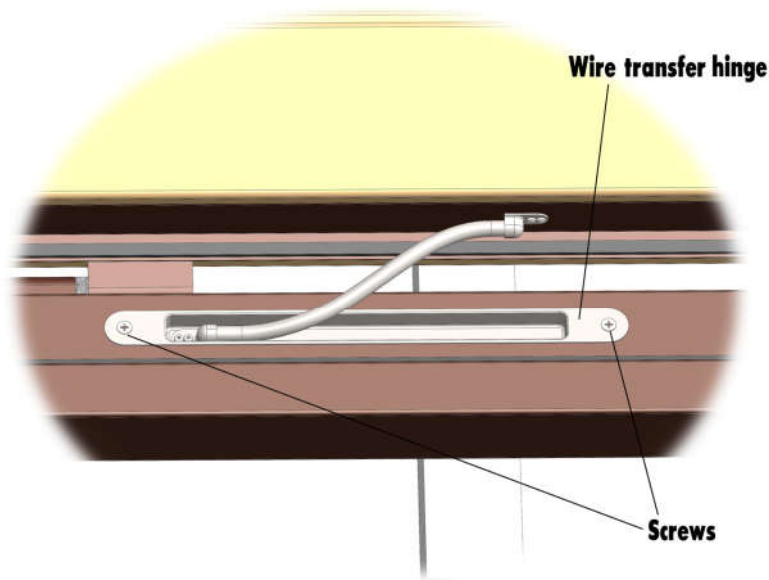
2. With the lever handle depressed, lift the frame from the lock side until it is at a 90-degree angle.



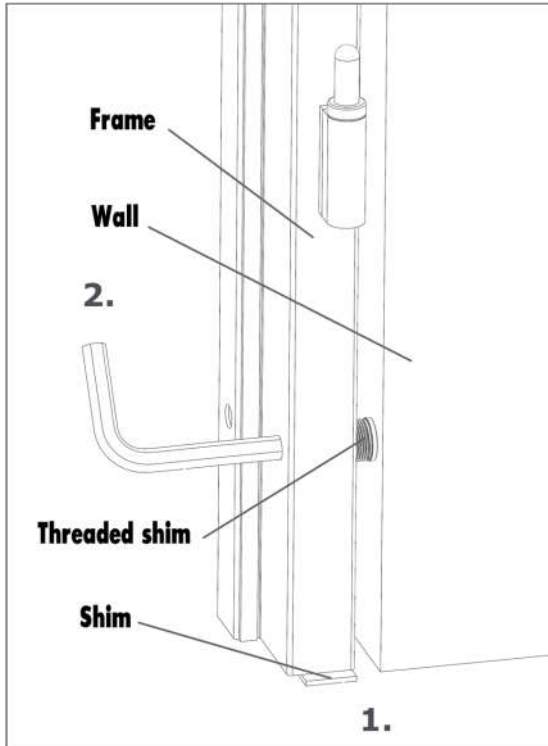
3. Push on the frame from the header so that the hinge begins to separate. Once the hinge pins are completely clear of the door, remove the frame and position it for installation.



Note: If the door has an electronic lock, you must disconnect the transfer hinge before removing the door from the frame. Remove the screws shown below from the frame side of the transfer hinge and pull the cables through the frame until they are clear of the frame.

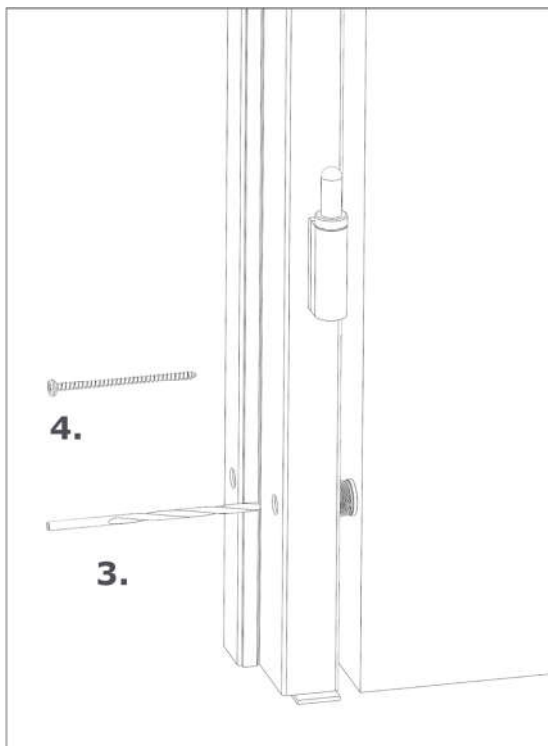


Single Door Installation



1. Place the frame in the opening and slide a 1/8" (3mm) wood shim under the hinge side of the frame to raise it.

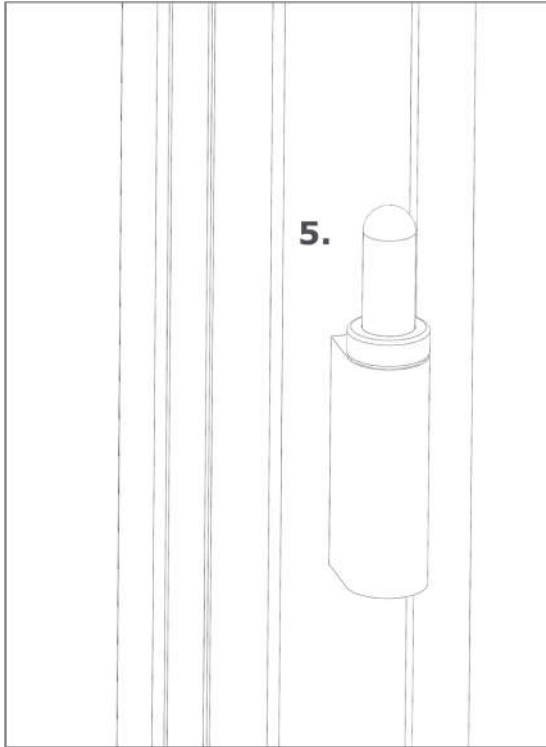
2. Use the supplied 12mm allen key to extend out the top and bottom threaded shims until they kiss the wall. Do not tighten the threaded shim as it will deform the frame. For doors without a threshold, you can place a 2x4 between the frame to maintain the shape.



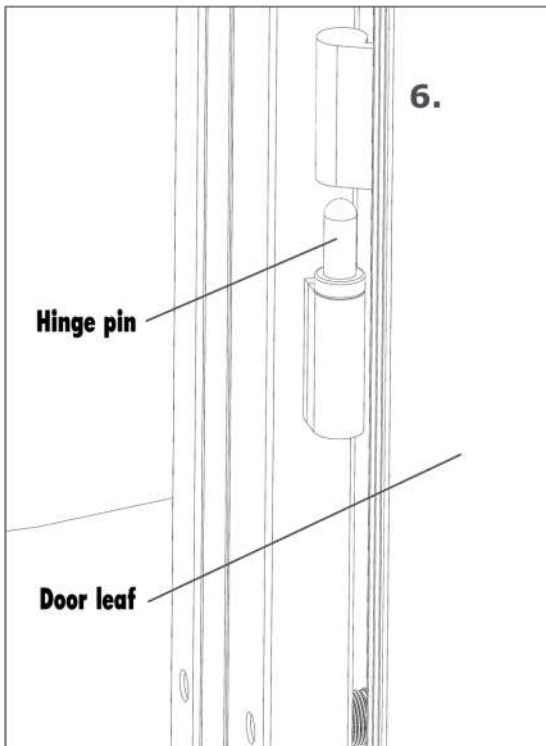
3. Make sure the frame is plumb and true on the hinge side. Use the supplied 6mm drill bit to predrill a hole at the bottom of the frame. If installing in a concrete or masonry wall, use the supplied anchors and corresponding drill bit.

4. Secure the frame with lag bolt. Then repeat step 3 and 4 for the rest of the holes on the hinge side.

Notice that all threaded shims should be touching the wall after screwing lag bolts in. Frame should be true and plumb on the hinge side. Recheck and adjust if needed.



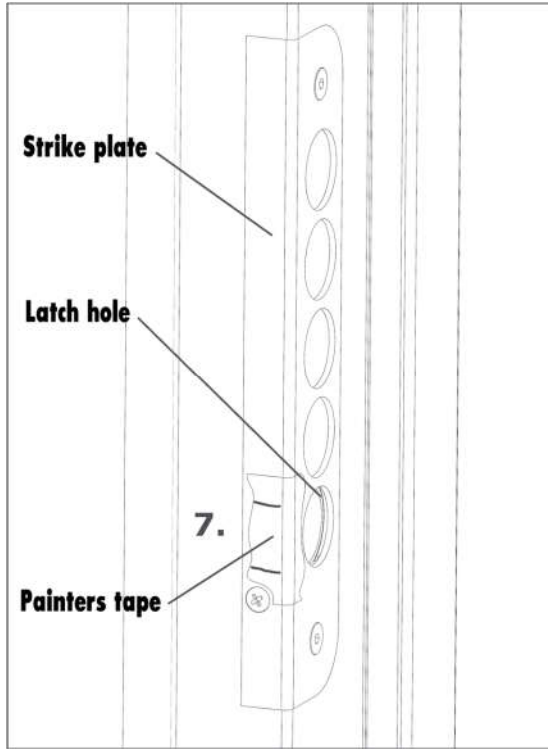
5. Make sure the hinge pins are clear of any dirt or dust. Lubricate all hinge pins using the supplied lubricant.
Note: Failure to lubricate the hinge pins can result poor operation, squeaking, and damage to the door.



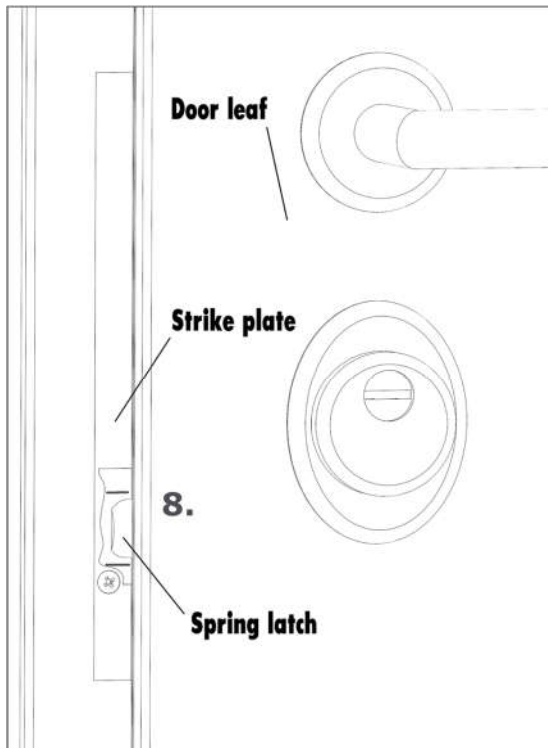
6. Position the door leaf close to the frame. Place it at a 90 degree angle to the frame as this will make hanging the door leaf easier.

We recommend using forearm straps to lift the door as it allows the door to be hung with fewer people and less physical strain. One person should focus on aligning the door with the hinges while the others lift.

Note: Hanging the door leaf on some but not all the hinges can result in permanent damage to the door. Also never lift a door from the handles during installation.



7. Place a piece of painter's tape by the bottom hole on the strike plate. Mark the top and bottom of the hole on the tape using a pen or pencil to have as a reference. This is necessary for bolt alignment.

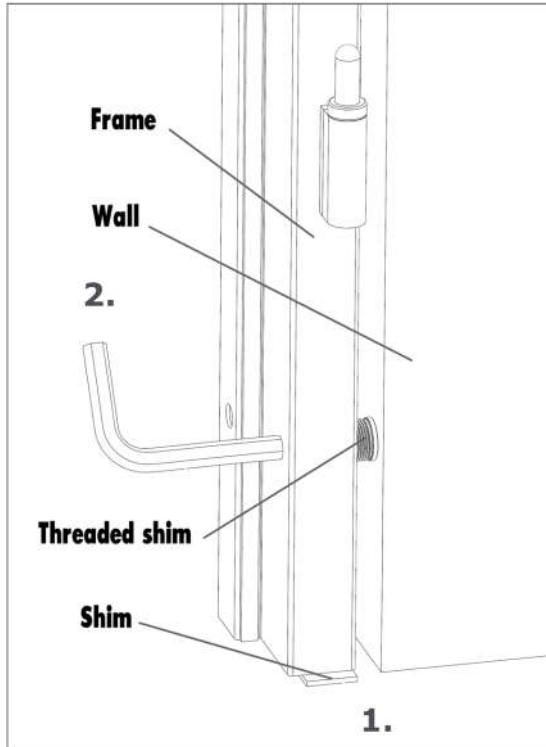


8. Close the door without latching (as shown in the image) to check the vertical position of the latch on the markings made on the painter's tape. The latch should be in the middle of the hole. If it is too low or too high, adjust the frame using wood or plastic shims until the latch is centered.

Secure one lag bolt at the top of the frame. Slowly close the door to ensure that the door latches easily and check for an even gap between the door leaf and frame along the lock side. If the gap is uneven adjust the frame. Then secure frame position on the opposite end and finally screw in remaining lag bolts.

The door should now operate without any issues. If there are any issues, check the troubleshooting section.

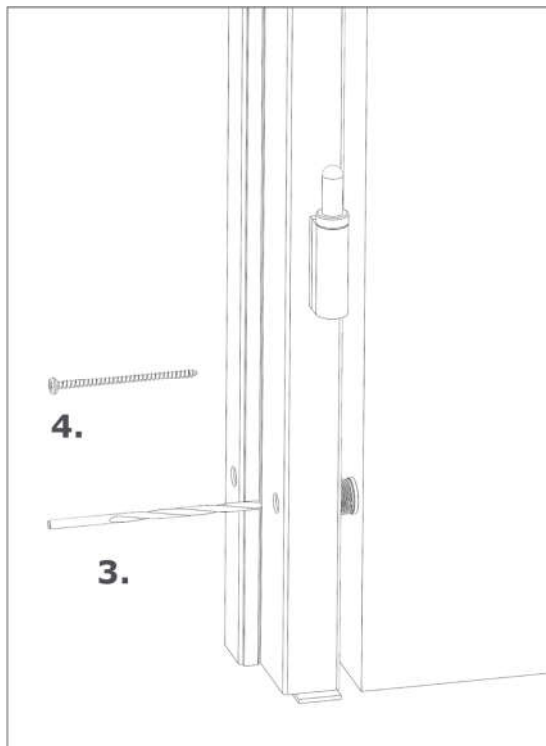
Double Door Installation



1. Place the frame in the opening and slide a 1/8" (3mm) wood shim under each leg of the frame to raise it up.

2. Use the supplied 12mm allen key to extend out the top and bottom threaded shims on the thinner (hinge side) of the frame until they kiss the wall. Do not tighten the threaded shim as it will deform the frame. For doors without a threshold you can place a 2x4 between the frame to maintain the shape

3. Make sure the frame is plumb and true on the side you are attaching first. Use the supplied 6mm drill bit to predrill a hole at the bottom of the frame. If installing in a concrete or masonry wall, use the supplied anchors and corresponding drill bit.

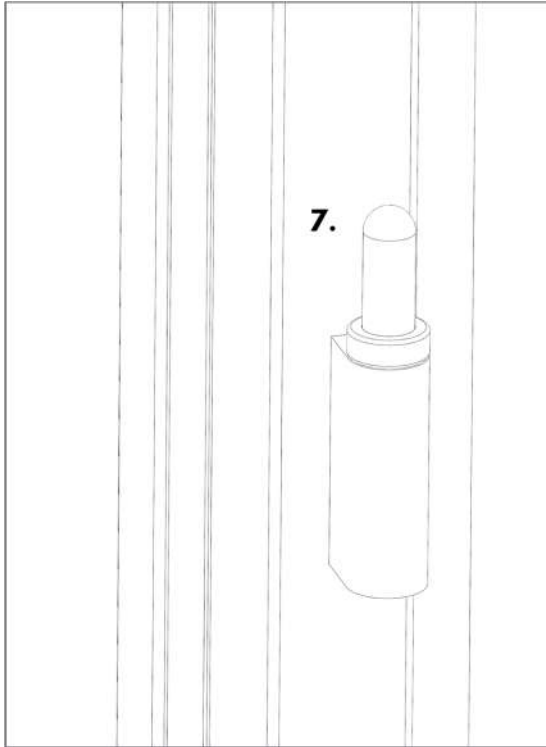


4. Secure the frame with lag bolt through predrilled hole. Then repeat step 3 and 4 for the rest of the holes on this side starting from the top of the frame. After screwing each lag bolt double check if this side of the frame is still true and plumb. Make adjustments if needed.

5. Repeat steps 3 and 4 on the other side of the frame. Remove or replace the shim with different size one if needed to make the frame true.

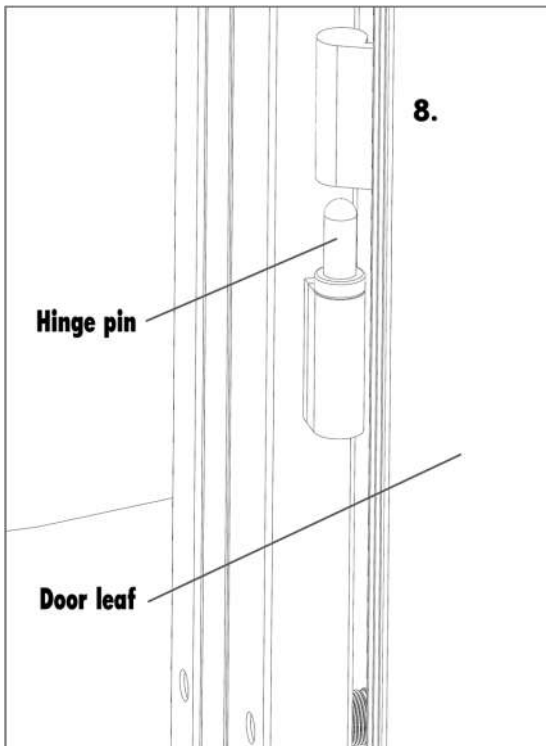
6. If door has a threshold, put some shims under it support it from flexing.

Note that all threaded shims should be touching the wall after screwing lag bolts in. Frame should be true and plumb. Recheck and adjust if needed.



7. Make sure the hinge pins are clear of any dirt or dust. Lubricate all hinge pins using the supplied lubricant.

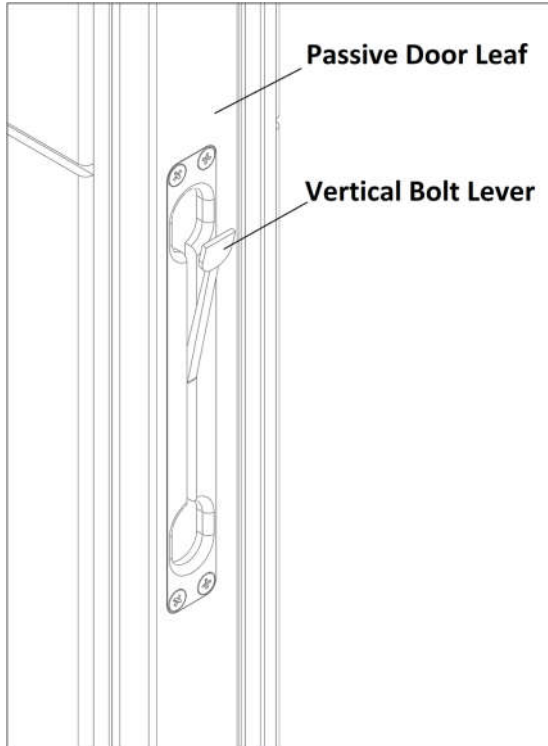
Note: Failure to lubricate the hinge pins can result poor operation, squeaking, and damage to the door.



8. Position the passive door leaf close to the frame. Place it at a 90 degree angle to the frame as this will make hanging the door leaf easier.

We recommend using forearm straps to lift the door as it allows the door to be hung with fewer people and less physical strain. One person should focus on aligning the door with the hinges while the others lift.

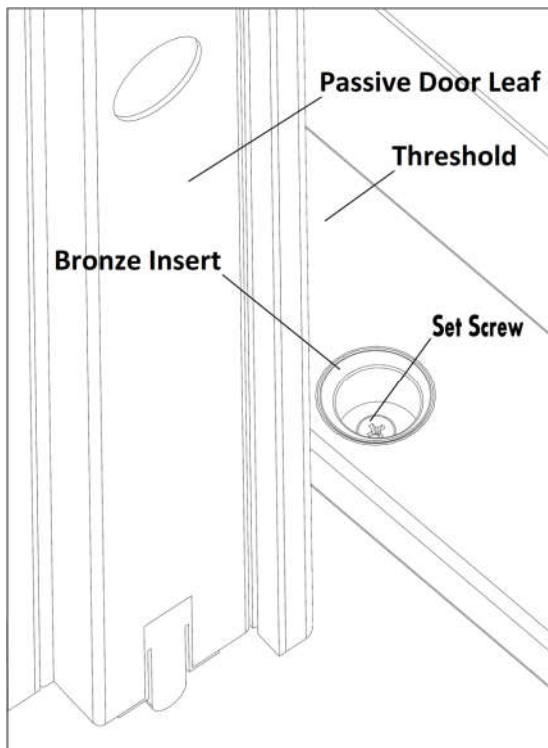
Note: Hanging the door leaf on some but not all the hinges can result in permanent damage to the door. Never lift a door from the handles during installation.



9. Close the passive door leaf and try locking it in place using vertical bolt lever.

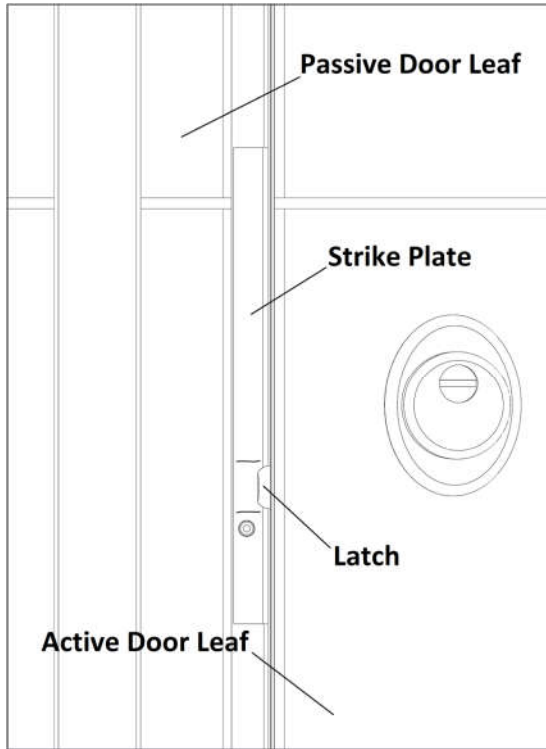
Note: If the vertical bolts are not aligning properly with the holes, do not attempt to force them.

If the door does not have a threshold, you must install the adjustable floor sleeve before trying to lock the passive door. Instructions how to do so are on page 19.



10. If the vertical bolt is missing the hole, loosen the set screw (shown at left) and rotate the bronze insert until the passive door locks easily. Then tighten the set screw. Make the same adjustment in the header of the frame.

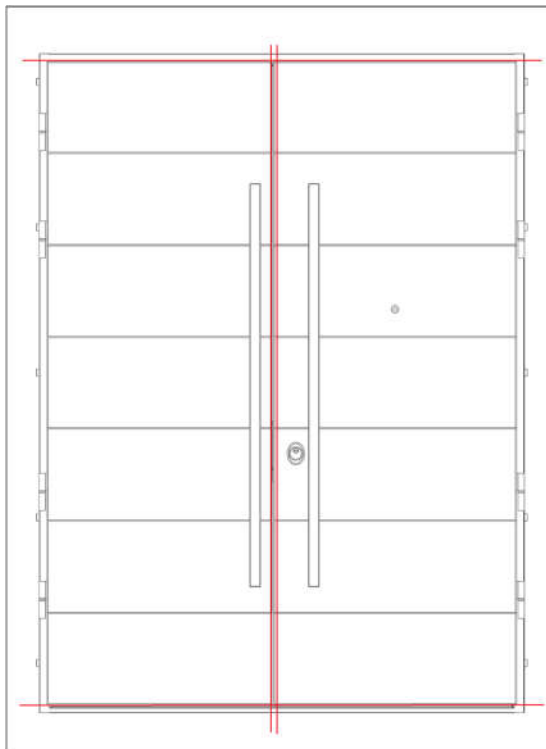
Note: If the door doesn't have a threshold, adjust floor sleeve instead.



11. Once the passive door is secure, hang the active door.

12. To check alignment, mark the height of the latch on the strike using tape, in the same way as instructed on page 14.

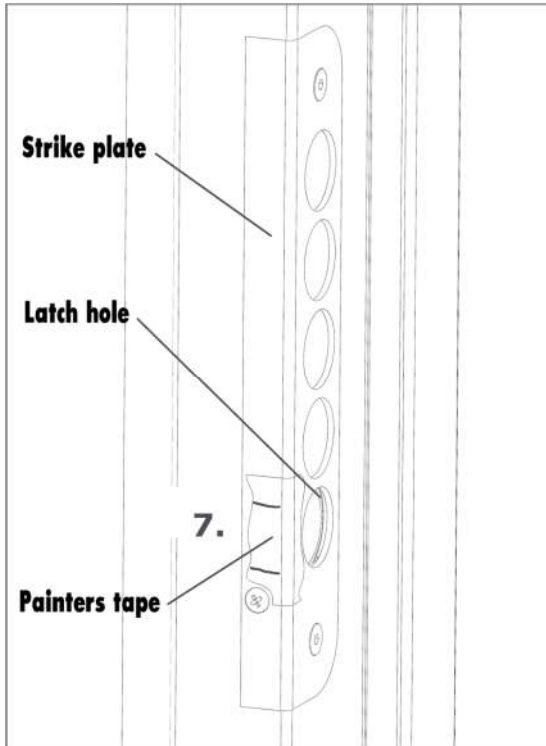
13. If alignment is looking correct, try closing the door and locking it. In case the door does not have a threshold and active leaf is equipped with a security bolt going to the ground, install another floor sleeve before attempting to fully lock the door.



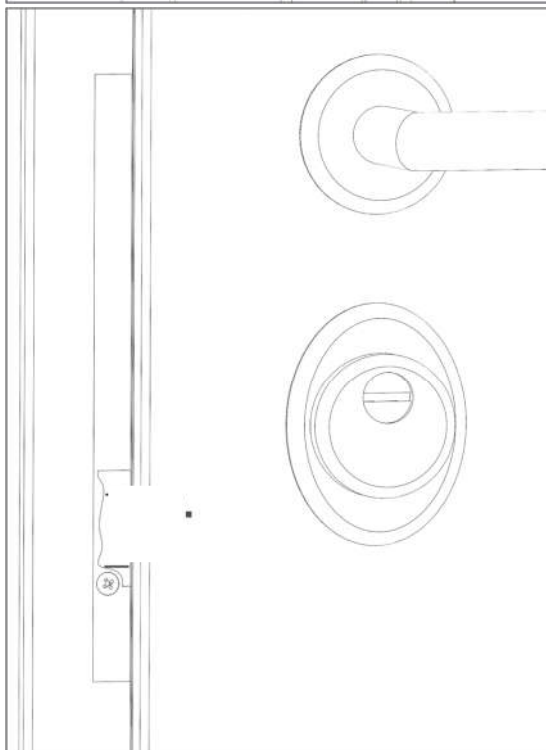
Note: Correctly installed doors should be square and level at top and bottom. Vertical gap between the doors should be consistent from top to bottom. If it is not an additional adjustment is needed, see pages 15 and 16 for instructions.

Troubleshooting

Checking Alignment



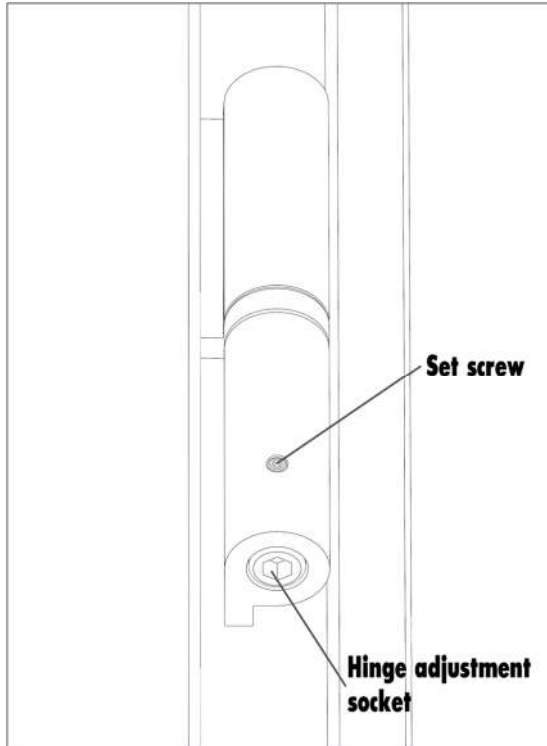
Like in installation step 7, place a piece of painter's tape by the bottom hole on the strike plate. Mark the top and bottom of the hole on the tape using a pen or pencil to have as a reference.



Close the door without latching (as shown in the image) to check the vertical position of the latch on the markings made on the painter's tape. If the latch is not in the middle of the markings, then an adjustment is necessary.

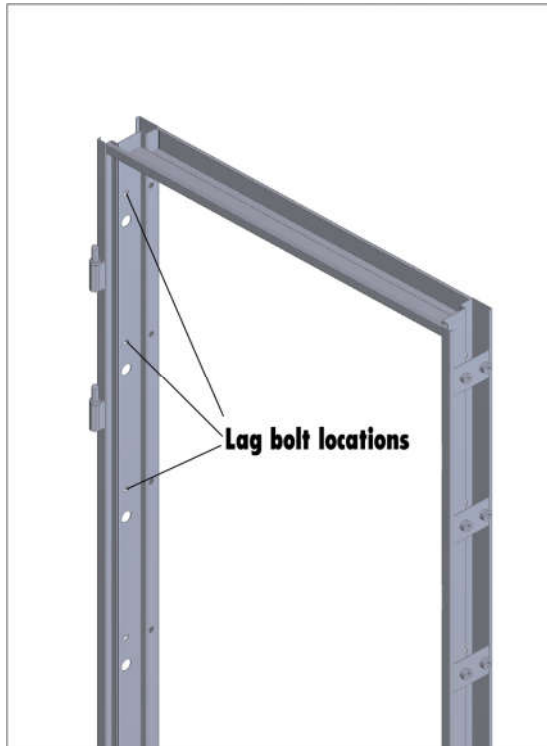
Visually inspect the gap between the door and frame. If the edge of the door and the frame are perfectly parallel, a hinge adjustment is necessary. If the door is sagging, then a frame adjustment is necessary.

Adjusting Hinges



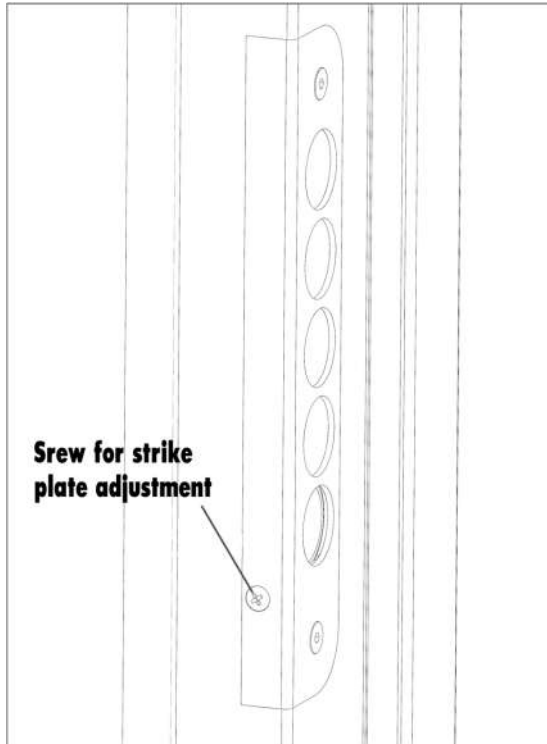
To adjust the hinges, loosen the set screw and raise the door using the hinge adjustment socket. Be sure to raise all hinges evenly. When finished, tighten the set screws.

Adjusting Frame



1. Remove the plastic caps from the holes indicated at left.
2. Loosen the lag bolts in these three locations.
3. Use the 12mm allen wrench provided to back the threaded inserts in the frame slightly off the wall.
4. Using a drill/impact, tighten the lag bolts until the threaded inserts in the frame are touching the wall. This will lift one side of the door leaf.
5. If it does not adjust sufficiently after the first attempt, repeat the steps.

Adjustable Strike Plate



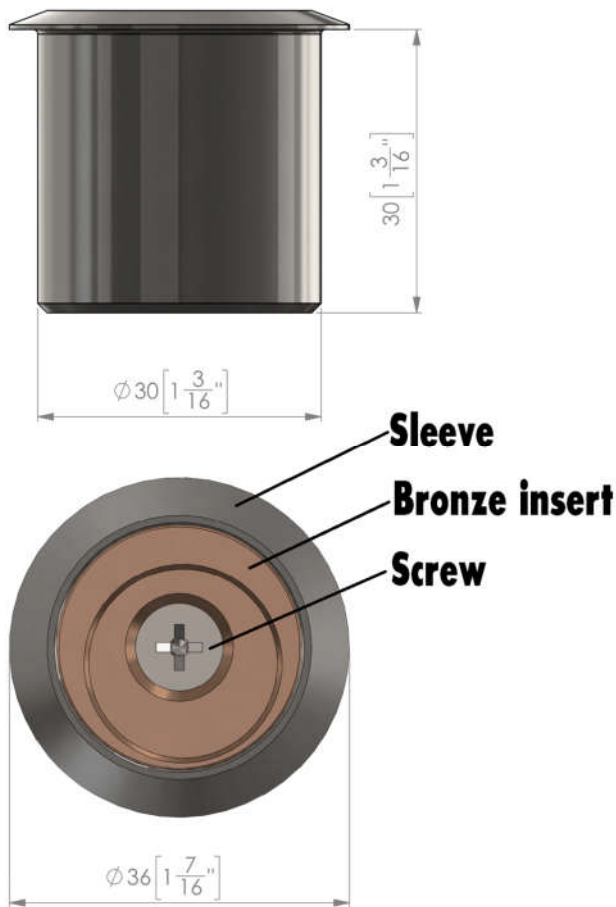
Use the strike plate adjustment screw if necessary, to adjust the latching position of the door. Turn the screw counterclockwise to tighten the latching position

Common Mistakes

- Threaded shims should not be too tight against the wall. They should be snug. The threaded shims are not designed to secure the frame to the wall but rather to protect the screws from being cut. The most common installation mistake is tightening the threaded shims too much as this will bend the frame. Loosening them is also the most common solution to alignment problems.
- Do not try to align the frame with the wall. Often, walls are not perfectly straight. In some places, you may have to extend the steel threaded inserts further out than in other places. Always trust that the frame is straight, not the wall.
- Always start frame installation on the hinge side. Do not secure the lock side of the frame to the wall until the end as this will allow you to adjust the frame during the bolt alignment process.
- If the hinge side frame installation is done correctly, you should not have any issues with the lock side installation or with bolt alignment.
- The door leaf and frame will settle slightly over time. In order to mitigate this, once installation is complete you can raise the door approx. 1mm using the adjustable hinges. Measure this based on dead center bolt alignment in their slots.
- **Notice**, when the frame is installed in line with a leaning wall, they look good, but they malfunction (i.e. the door-leaf will swing open or shut).
- Doors should never be lifted from the handles. Doing so will result in damage.
- Never remove the cylinder when the door is locked or the bolts are thrown. This will cause irreversible damage to the lock.

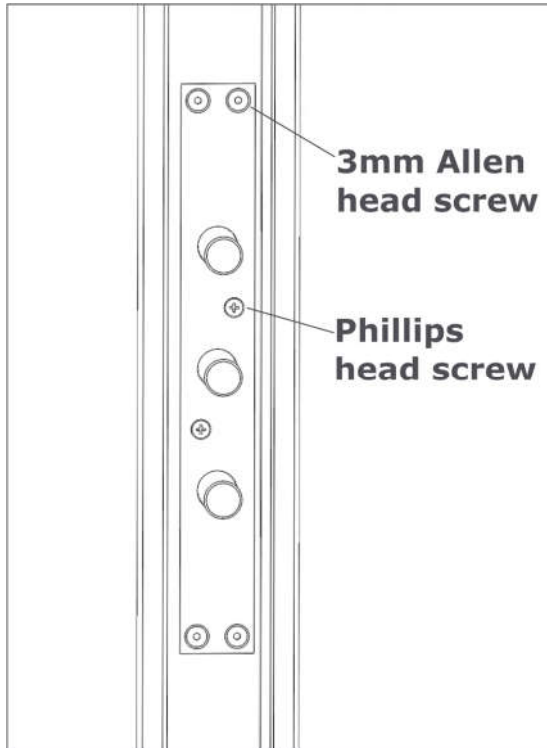
Adjustable Floor Sleeve

Doors without a threshold come with a vertical bolt into the floor (unless otherwise specified). If the client wishes to remove this vertical bolt, see the relevant instructions. The floor sleeve provided is designed for easy adjustment to ensure bolt alignment and easy locking of the door.



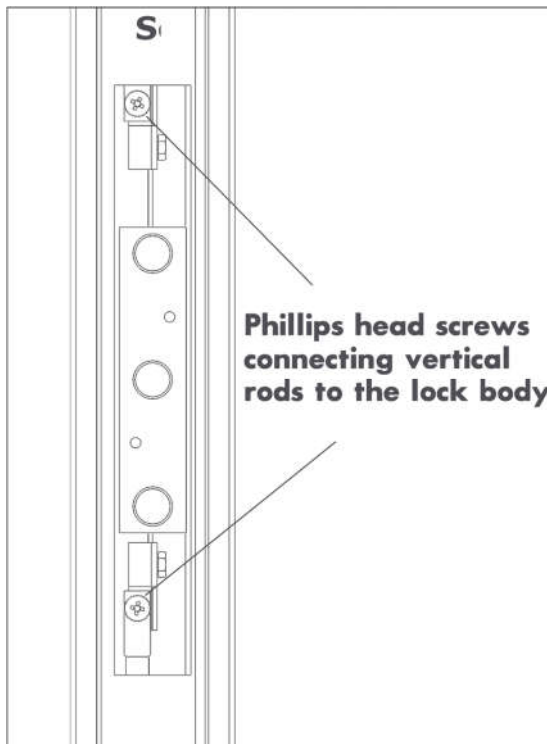
1. Ensure that the door is properly installed and aligned and that bolt position does not need to shift.
2. Close the door, fully throw the bolts using the key or thumb turn. You can also put down blue tape in the general area and then circle around the bolt with a pencil or marker.
3. Drill a hole in the floor to accommodate the sleeve (exact dimensions shown at left). After installation, only the lip of the sleeve should be visible above the floor.
4. Place the sleeve with bronze insert into the newly drilled hole and try to align it with the vertical bolt to ensure that it will enter the sleeve smoothly once the sleeve is permanently installed.
5. Once proper alignment has been confirmed, use an adhesive to glue the sleeve permanently in place.
6. If necessary for alignment, place a piece of blue tape over the sleeve and try locking the door. This will leave an imprint on the tape so you can see exactly where the vertical bolt is landing. Loosen the set screw and spin the bronze insert to better align the hole with the vertical bolt.

Removing Bottom Security Bolt



1. Remove the 6 screws from the bottom faceplate (4 hex and 2 Phillips).

2. Remove the faceplate.



3. Using a #3 Phillips magnetic tip screw driver (so as not to lose the screw inside the door), remove the screw connected to the bottom vertical rod as shown.

4. While holding the lock body with one hand, remove the screw connected to the top vertical rod. It is important to hold the lock body because once the screw is removed, the lock body will fall if not held.

5. Remove the lock body from the door.

6. Grab the bottom vertical rod with pliers to prevent it from falling and slide it up and out to remove.

7. Reinstall the lock body, attaching the screw to the upper vertical rod using the layering shown.

8. Reinstall the faceplate and fasten screws.

Note: If the screw is lost inside the door, use a magnetic wand to retrieve it.

