

EXTERIOR STEEL DOOR INSTALLATION INSTRUCTIONS

Tools needed:

- Level
- tape measure
- hammer
- square
- nail set
- Phillips screwdriver
- caulking gun
- safety glasses
- rubber gloves
- power drill and 1/8" drill bit

Materials needed:

- Lockset
- shims
- caulking

PARTS OF A DOOR SYSTEM *(Fig. 1)*

1. For most installations, the rough framed opening (the distance between studs on the right and left and the distance between the header and the sub-floor) should be 2 1/4" wider and 3" taller than the door it-self (not including the door jamb).

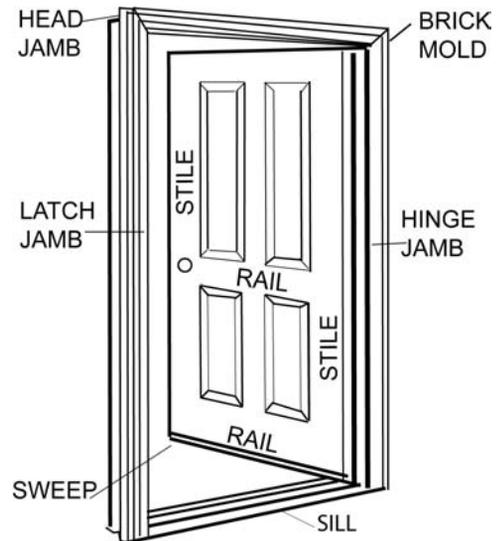


Fig. 1

2. Prior to installing your TRU TECH door system, it would be best to check the rough framed opening to be sure that it is level, square and plumb. The rough opening should be ideally 1" wider and 1/2" taller than the outside frame dimensions of the door system. *(Fig.2)*

The floor area should be clean, dry and level. A solid, level sub-sill is absolutely essential for proper door system installation. Once this has been done, apply three 1/4" lines of caulk along the length of the sub-sill, the first line starting approximately 1" from the inside edge. The lines should be about 1" apart and should seal the sill and sub-floor preventing any moisture from infiltrating the unit. *(Fig.2A)*

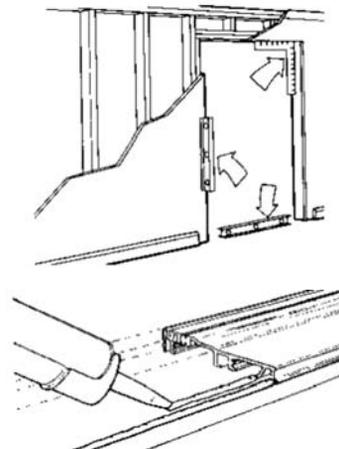
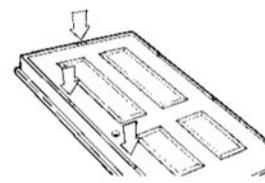


Fig. 2

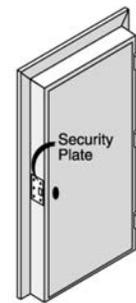
Fig. 2A

2. Remove all packaging materials such as nails, staples, and cardboard prior to installation. (Fig.2)

If your door unit comes with a security plate, do not remove it. Install the door with the security plate attached. (Fig.2A)



(Fig.2)



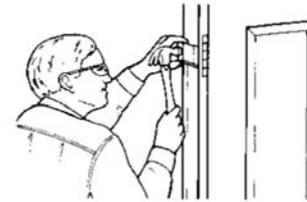
(Fig.2A)

3. When placing the door in the rough opening, you should first stand on the outside of the doorway. With the door facing out, tilt the door back toward the outside. Place the sill in the rough opening and tilt the door up and into the opening making sure that the sill is in contact with the caulking. The brickmould should rest up against the siding of the exterior wall and should slide in easily into the rough opening. (Fig.3)



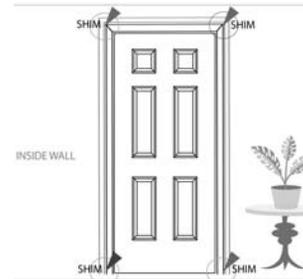
(Fig.3)

4. 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 in the opening and the frame tight against the sill. This will also keep the frame from separating from the sill at the corners, preventing any water infiltration issues at the threshold. (Fig.4)



(Fig.4)

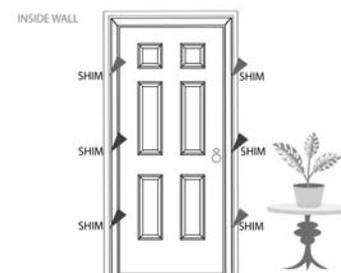
5. Next, shim the top of the frame behind the latch side jamb. Install shims until there is a constant 1/4" gap between the top of the operating door slab and the frame header. Do the exact same procedure on the hinge side of the jamb. This will hold the door tight in its position relative to the frame. The door should operate freely with nothing but the shims holding it in place. If the door binds, then adjust or repeat the above steps until it operates freely in the frame. (Fig.5)



(Fig.5)

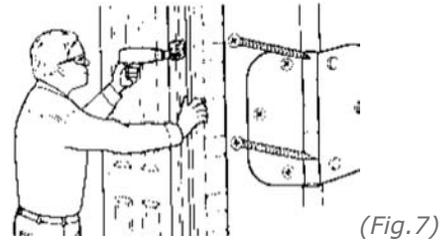
6. To ensure that the door system is square and plumb, move to the outside of the door system and close the door. Check to see that the compression weatherstrip on the latch side is evenly compressed along the entire height of the slab and free from any pinching or gaps. Once there is an even 1/8" gap across the top of the door and the weatherstrip is evenly compressed throughout, you are ready to continue with the rest of the installation. Do not proceed with the install unless this step has been accomplished.

7. When installing a single door system, you should shim behind the latch side jamb roughly 8" from the top and bottom of the frame. Install shims until there is an even 1/4" gap between the jamb and the edge of the door slab along the entire length of the door. Next, shim behind the latch side jamb just above and below the deadbolt hole again maintaining that 1/4" gap. Pull the weatherstrip away from the jamb and screw the factory supplied 2 1/2" installation screws through the jamb and shims and into the stud. Drilling the screws underneath the weatherstrip allows the screw heads to be hidden from view making it more cosmetically pleasing. (Fig.6)

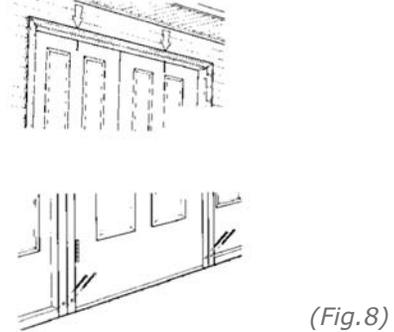


(Fig.6)

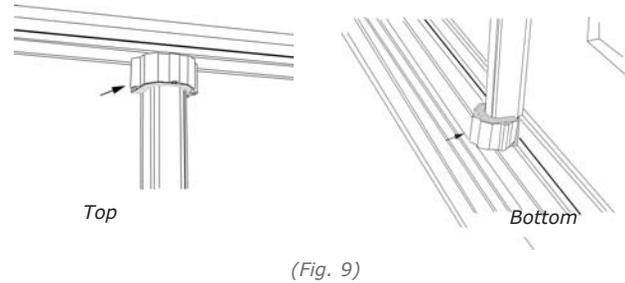
8. On double door systems and systems with astragal posts, again check that the frame is straight and that the weatherstrip is evenly compressed along the entire height of the door system with no binding. Next, shim the operating door behind the top and bottom hinges, keeping a 1/8" gap between the top of the doors and header as well as between the two doors. Secure with 2 1/2" screws through the upper and lower hinges, hinge side jamb and into the wood stud. (Fig.7)



9. Shim behind the center hinges and secure being careful not to over shim causing the doors to bind. Follow the same procedure for the latch side of the unit. To prevent the header from bowing, you should shim above the header on the passive door side of the astragal post pin. When shims are properly installed, the frame should not move or twist when the screws are tightened maintaining the 1/8" gap. If there is any movement, shim tighter and then re-tighten the screws. (Fig.8)



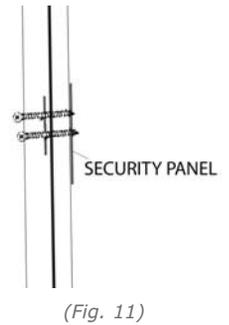
10. Next, install both top and bottom astragal shoes. (Fig. 9) This will help prevent against any water and air leakage into the home and also make the door system more secure. Failure to install these shoes will void the manufacturers' warranty. Drill a hole for the flush bolt pin into the sill crown. Once in position, screw both the top and bottom shoes into place.



11. Now you are ready to install the deadbolt and strike plates. If the plates are being installed on an exterior jamb, use 3" screws. (Fig. 10)

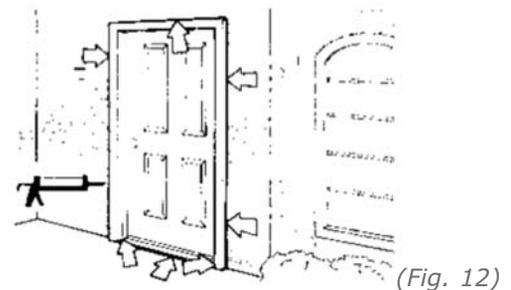


If the plates are being installed on a mullion at a sidelight, use 1 3/4" screws. If your unit has a security plate, it will be in-between the mullions. Drive a screw through the strike plate, jamb and security strike plate and into the stud. (Fig.11)

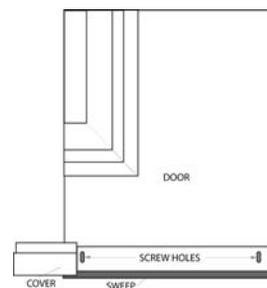


12. When insulating the unit, first you should score your shims with a utility knife and snap along the score. Trim off any excess. Insulate around the top and sides of the door unit between the door jamb and the wall studs. It is recommended that you use either a low-expansion foam insulation or fiberglass insulation. Then install the interior casing around the door.

13. Caulk all four exterior corners and all around the brick or siding. The sill should be caulked on both the latch and hinge sides from the edge of the sill crown to where the sill and jamb meet. Next, caulk the front sill edge where the sill and sub floor meet. Caulk the top corners where the header and jambs meet, starting at the weather-strip and working towards the brick mould. Lastly, caulk the area where the brick mould meets the brick or siding. (Fig. 12)



14. All sweeps must be either raised or lowered upon installation to form a tight seal with the threshold. To adjust the sweep, first remove the sweep cover to expose the screws. Loosen the screws that hold the sweep in place and adjust the sweep far enough to create an airtight seal with the sill. Once the sweep is positioned properly, tighten the screws and snap on the covers. (Fig. 13)



(Fig. 13)

Putting on the hardware will complete the installation. For added beauty, choosing TRU TECH's own line of hardware will enhance the visual elegance of the door system.