

# REPLACEMENT PATIO DOOR INSTALLATION INSTRUCTIONS (NAIL FIN REMOVED)

## Slim Line, Northern Elevations & Classic French Style Patio Doors

### Materials included:

- (10) #8 x 2" Phillips Pan head installation screws
- (2) #10 x 2-1/2" Phillips Flat head keeper screws
- (12) 3/8" Hole plugs

### Recommended materials:

- High-quality caulking compatible with the building exterior and door surface
- Flexible flashing tape (width determined by application and wall thickness)
- Door and window low-expansion insulating foam or standard fiberglass insulation

### Recommended tools:

- Tape measure
- 6' Level
- Drill/screw gun
- Scissors & utility knife
- Hammer
- Screwdrivers  
(#2 Phillips, 8" or longer for Classic French Doors)  
(#3 Phillips for Slim Line and Northern Elevations Doors)  
(#1 Phillips for all screen doors)
- Stapler
- Square
- Caulking gun
- Wide flat blade putty knife

The perimeter joint between door exterior and the exterior building material must conform to siding manufacturer's recommendations. All masonry, stucco, or synthetic stucco systems require an expansion joint around the window perimeter that must be filled with sealant compatible with the building material and window components.

For siding details for windows with and without integral J-channel see the siding manufacturer's recommendations. Due to variables in local building codes, jurisdictions and the variety of building details these are recommended instructions only.



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### PLEASE READ BEFORE BEGINNING:

- Regional standard practices, environmental conditions and building codes may vary. Identify and follow local regulations and standard practices when they may differ or exceed the enclosed procedures. The responsibility for compliances is yours; the installer, inspector and owner(s).
- Penetrations and openings in the exterior walls shall be flashed or sealed in such a manner that it will inhibit entry of water into the wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with AAMA 711.
- Ensure sizing of the rough opening and all clearances from exterior finish systems to allow for normal materials expansion and contraction, and building shifting. Failure to do so can void Thermo-Tech's warranty.
- It is the responsibility of the builder, installer, and subcontractors to protect the interior and exterior of windows and doors from excessive contact with harsh chemical washes, construction material contamination, dents and abrasions, and moisture. Damage to glazing, hardware, weather stripping can occur.
- Due to variables in local building codes, jurisdictions and the variety of building details these are recommended instructions only.
- The perimeter joint between window exterior and the exterior building material must conform to the siding manufacturer's recommendations. All masonry, stucco, or synthetic stucco systems require an expansion joint around the window parameter that must be filled with sealant compatible with the building material and window components.

**WARNING:** This door is glazed with safety glass (tempered or laminated glass) and if broken must be replaced with safety glass. This is in accordance with state and federal laws. Ensure the slide direction is correct before installing. The slide direction cannot be changed. **Practice safety!! Wear safety glasses or goggles and appropriate hearing protection when working with any of Thermo-Tech's window and door products.**

### 1 Step 1. Rough opening size

- The rough opening must provide a shim space that does not exceed 3/8" on the jambs and the head of the door.
- Verify rough opening is plumb and level. It is very important that the sill plate is level. (**fig. 1 & 2**)

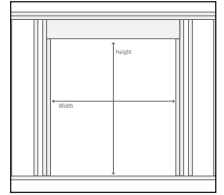


fig. 1

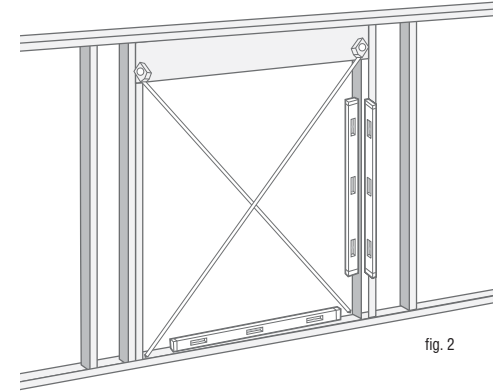


fig. 2

- Verify the door will fit in the rough opening.
- Ensure that the sill condition provides a continuous solid level support along the entire length of the sill.

**NOTE:** When removal of existing windows/doors is necessary, proper precautions and procedures for lead paint management may be required. Visit [www.epa.gov/lead](http://www.epa.gov/lead) for more information. Consult [www.energystar.gov/products/recycle/where\\_do\\_old\\_windows\\_doors\\_go](http://www.energystar.gov/products/recycle/where_do_old_windows_doors_go) for recycling/reuse of old building components.

## 2 Step 2. Install sill flashing

Thermo-Tech recommends a flexible flashing tape for ease of use. If a flexible tape is not available use **alternate #2** for sill flashing.

- Cut the formable flashing tape at least 12" longer than the width of the rough opening sill. (**fig. 5**)
- Remove the release paper, cover the horizontal sill by aligning flashing tape inside the edge of the sill and adhere into the rough opening along the sill and up the jambs a minimum of 6". (**fig. 6 & 6a**)

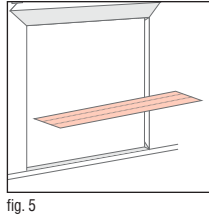


fig. 5

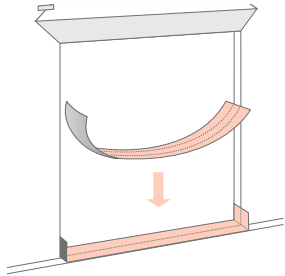


fig. 6

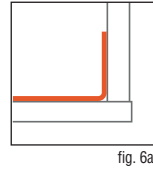


fig. 6a

- Fold down on to the face of the exterior wall. Tape, staple or nail to keep the corners in place. (**fig. 7**)

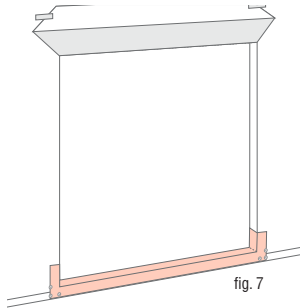


fig. 7

## ALTERNATE #2

- Cut a piece of self-adhering window flashing tape 4" tall and as long as the opening width and as far past the rough as is appropriate to your rough opening conditions. Apply to the face of the exterior wall so minimal of 1" extends above the opening and the amount determined to extend beyond each side of the opening (**fig. 8**). Cut along the corners of the rough opening and fold down onto the sill (**fig. 8a**).

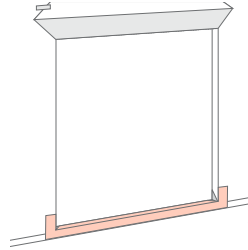


fig. 8

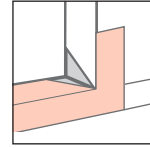


fig. 8a

- Cut the second piece of self adhering flashing tape the thickness of the wall plus what is the determined width to overlap to the exterior. Make the tape 18" longer than the width of the opening. Align flush with the interior sill and extend the edge of the tape as much as determined with your specific conditions. Start the piece 9" up the side of the rough opening and run it to the bottom of the opening to the other side of the opening and 9" up the other side. Use a utility knife to cut the sill piece on both corners of the rough opening and fold along the outside wall. (**fig. 9 & 9a**)

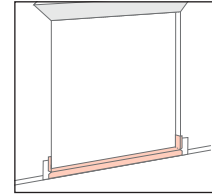


fig. 9

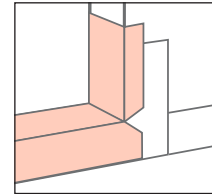


fig. 9a

## 3 Step 3. Prepare the door for installation

- With a replacement door installation the nailing flange will have to be removed. Using a sharp utility knife score the edge of the nailing flange where it meets the frame multiple times (**fig. 10**). With a pliers grip the flange and pull away from the cut to allow the vinyl to release from the frame. Repeat this for all sides. It may be easier to lay the door flat for this process being careful to protect the finish of the door.
- Pre-drill holes for fastening the door to the rough opening. All fasteners need to be centered inside the interior pocket of the main frame of the patio door. On the lock keeper side of the door frame with a 3/8" drill bit, drill access holes through **one wall of the vinyl framing only** drilled at 4" to 6" down from the head and 4" to 6" up from the sill. On the fixed panel side repeat the same hole placement as on the active side of the door plus two more holes placed evenly from the top and bottom holes (**fig. 11**). Place two more holes for the head centered on the active and inactive panels. In the center of all the pre-drilled access holes drill a 1/8" pilot hole completely through the main frame.

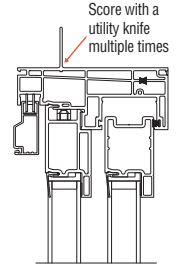


fig. 10

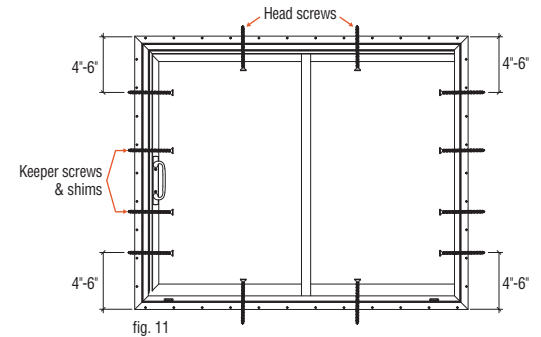


fig. 11

#### 4 Step 4. Operation panel installation and removal

*NOTE: Depending on the door configuration the door may be shipped with the operating panel installed in the door frame or the panel could be shipped loose. If the operating panel is installed when shipped from factory, the installer may find it more convenient to remove before installation, allowing for easier movement and placement of the door.*

##### Operator panel installation and removal:

##### FOR CLASSIC FRENCH STYLE SLIDING PATIO DOOR:

- a. Installing the operating panel, adjust the roller assemblies to their most upward position, do this by turning the adjustment screws (located on the bottom edge of each side of the operating panel) counter clockwise with a #2 Phillips screwdriver 8" or longer.

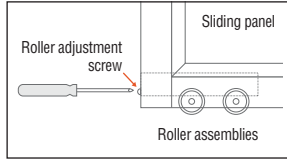


fig. 12

**NOTE: Hand adjust only.**  
(fig. 12)

- b. Insert the top of the panel into the top pocket of the patio door frame using a wide putty knife at the sill between the frame and rollers to assist in the installation and removal, set the panel into the bottom pocket of the sill.  
(fig. 13)

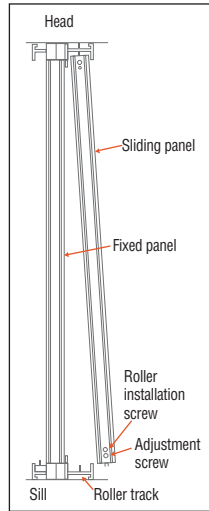


fig. 13

- c. Panel removal is the opposite, lift the panel into the top pocket and bring the bottom of the panel out.

*WARNING: Handling this door is at a minimum a 2-person job. Ensure that the panels do not fall out of the main frame while handling the door as it may cause damage to the door and/or injury.*

##### FOR SLIM LINE AND NORTHERN ELEVATIONS SLIDING PATIO DOORS:

- a. Installing the operating panel, adjust the roller assemblies to their most upward position, do this by turning the adjustment screws (located on the interior face of the bottom rail) counter clockwise with a #3 Phillips screwdriver.

**NOTE: Hand adjust only.**  
(fig. 14 & 14a)

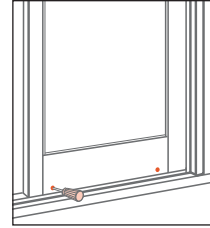


fig. 14

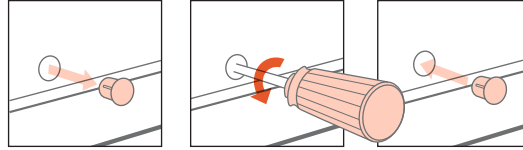


fig. 14a

- b. Insert the top of the panel into the top pocket of the patio door frame, set the panel into the bottom pocket of the sill.  
(fig. 15)

- c. Panel removal is the opposite, lift the panel into the top pocket and bring the bottom of the panel out

*WARNING: Handling this door is at a minimum a 2-person job. Ensure that the panels do not fall out of the main frame while handling the door as it may cause damage to the door and/or injury.*

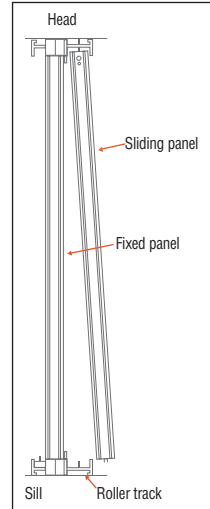


fig. 15

#### 5 Step 5. Prepare the opening with caulk/sealant

*IMPORTANT: With no nailing flange installation, rough opening conditions can vary considerably. It is very important as to where sealant is applied to ensure a tight weather proof seal.*

- a. If there is existing trim or extension jambs and the door is going to fit against those, apply a bead of sealant at those surfaces to set the door frame into. (fig. 16)
- b. At the interior of the sill if there is existing trim or tile seal this area also.
- c. **Sill caulking:** Apply one continuous, generous bead of caulking 1/2" in from the exterior of the rough opening and one continuous bead at 2-1/4" in from the exterior of the rough opening and at 4-1/4". (fig. 17)

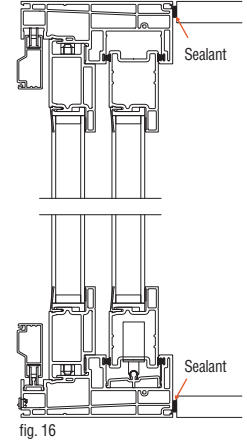


fig. 16

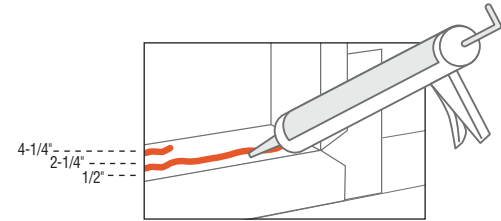


fig. 17

## 6 Step 6. Setting and fastening the door

- a. **Setting the door:** Center the door in the opening at the sill and tip door into the opening for shimming. (**fig. 18**)

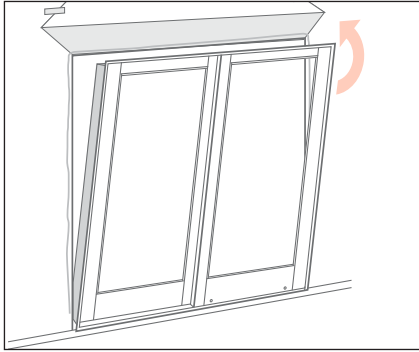


fig. 18

- b. Use shims to center the door in the rough opening and to hold the door plumb and square until the fasteners have been installed. Placing the shims behind each screw hole. Behind the lock keeper, from the center of the keeper, measure up 4" for one set of shims and 4" down for the other set of shims. (**fig. 19**)

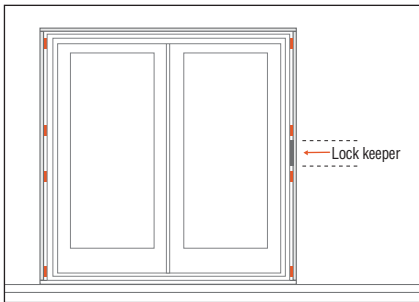


fig. 19

- c. Ensure the jambs are straight, level and plumb, the sill must be level and straight. Check diagonal measurements for the entire frame and adjust shims as necessary until the frame is square. (**See fig. 2**)
- d. In the holes drilled previously (**fig. 20**), using #8 x 2" corrosion resistant Pan head screws, start fastening the door at either side jamb near the head and then go to the opposite side jamb towards the sill and install that screw. Then install a screw at the other side jamb near the head and the opposite side jamb towards the sill. At this point you should have all four corners secured. Then finish up by installing the center screws in the inactive jamb location assuring that the jambs are plumb and straight. Do not install keeper screws yet, this will be done in a later step. Now fasten the 2 screws at the head, making sure not to bow the head. Check with a straight edge.

*NOTE: Proper shimming is extremely important. Under shimming can cause the unit to sag out of square, over shimming can result in bowed jambs or head. Both conditions can result in improper operation of door panels. It is not necessary to place shims at the head of the patio door.*

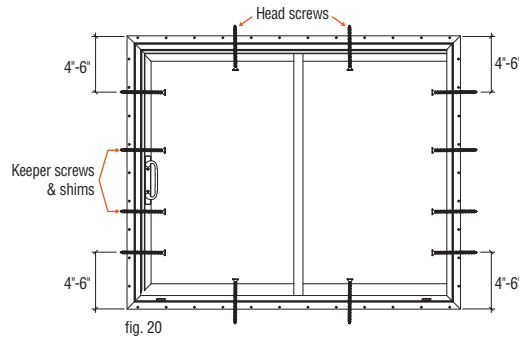


fig. 20

## 7 Step 7. Securing the Patio Door sill when sill nail fin is removed

For fastener hole locations on the the Slim Line model refer to **fig. 20 & 22**. On the Classic French model refer to **fig. 20 & 23**.

### FOR SLIM LINE AND NORTHERN ELEVATIONS SLIDING PATIO DOORS:

- a. With the active panel removed, it will be necessary to remove the sill track and the sill stop from the Slim Line Patio Door. (**fig. 21**)
- b. Drill a 3/8" hole through the first layer of vinyl only. Place holes on each side of the fixed panel rail approximately 10" to the right and left of the rail (**See fig. 20**). Use a #8 x 2" corrosion resistant Pan head screw to fasten the sill or if installing over masonry use a fastener appropriate for masonry and drill holes that are appropriate for your fastener. (**fig. 22**)
- c. After fastening the sill completely fill each hole with silicone sealant and use 3/8" hole plugs to complete the sealing.

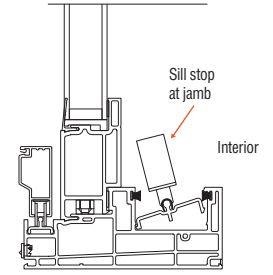


fig. 21 - Slim Line model

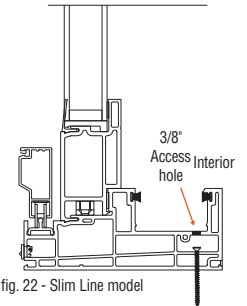
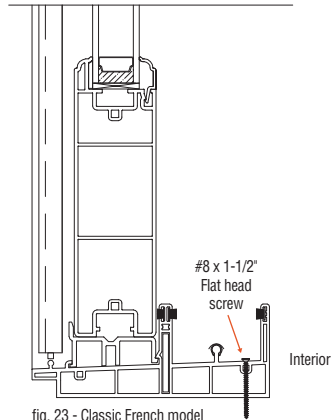


fig. 22 - Slim Line model

*IMPORTANT: When fastening the sill it is very crucial to ensure that all fastener locations are sealed to prevent water penetration to the interior. It is also recommended to check these locations periodically to make sure the sealant in no way has been compromised and there is no leakage. It is up to the installer and homeowner to ensure this area is sealed properly and maintained.*

### FOR CLASSIC FRENCH STYLE SLIDING PATIO DOOR:

- a. Drill a 1/8" pilot hole then using a #8 x 1-1/2" corrosion resistant Flat head screw or a appropriate size masonry fastener fasten the sill. (fig. 23)
- b. After fastening the sill completely fill each hole with silicone sealant. **IMPORTANT:** When fastening the sill it is very crucial to ensure that all fastener locations are sealed to prevent water penetration to the interior. It is also recommended to check these locations periodically to make sure the sealant in no way has been compromised and there is no leakage. It is up to the installer and homeowner to ensure this area is sealed properly and maintained.



### 8 Step 8. Installing the operator panel

- a. If the operating panel is not installed, install now. (See Step 4 - Operating Panel Installation and Removal).

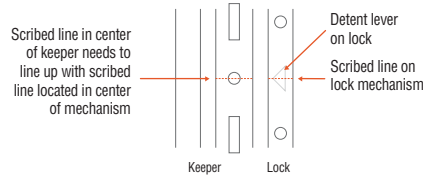
### 9 Step 9. Install door handle

- a. Install handle set according to the instructions enclosed with the handle set.

### 10 Step 10. Adjust door and door lock keeper

- a. Now adjust roller assemblies up, (clockwise) until the door slides easily. **For Slim Line and Northern Elevations models see fig. 14 & 14a. For Classic French model see fig. 12.**
- b. Open door 1/4" from the jamb and adjust one roller until operating panel is parallel to the jamb from top to bottom. **NOTE: Hand adjust only.**
- c. Close the door panel and rotate the thumb turn to the locked position. If the door locks, there are no further adjustments to be made. If the door does not lock properly, you will need to adjust the lock keeper either up or down and try locking again.

1. The lock keeper can be adjusted up and down by first removing the top and bottom screws and loosen the center screw to allow the lock keeper to move up and down to align the lock and keeper as shown in below.



2. Further adjustment can be done by adjusting the rollers to align the lock and keeper. **NOTE: Hand adjust only.**
3. If locking properly use (2) #10 x 2-1/2" Phillips Flat head screws supplied and fasten through the top and bottom of the keeper and into the door jamb.
4. When the adjustment is done, use the hole plugs supplied to fill the adjustment screw holes in the door panel.

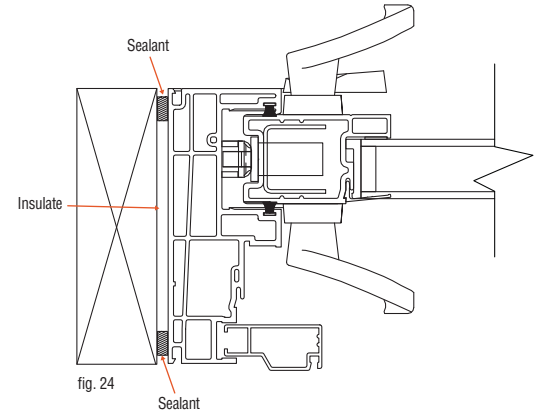
**IMPORTANT:** For 4-Lite OXXO Classic models, you must use 2-#10 x 2 1/4 screws supplied for fastening the keeper.

### 11 Step 11. Insulate the door frame

- a. Insulate the gap between the door and the rough opening using either fiberglass or low expanding foam insulation. Do not over pack insulation. With any type of insulation ensure the insulation fills as much of the cavity as possible behind the frame leaving enough room to finish sealing the door frame. (fig. 24) **CAUTION:** When using expanding foam insulation it is very important not to bow the head or side jambs of the unit.

### 12 Step 12. Seal the door frame to the rough opening

- a. Seal both sides of frame and bottom of the sill, then finish trimming on the interior and exterior. (fig. 24)



**13 Step 13. Sliding screen installation and adjustment (screen keeper kit attached to screen)**

- Using a #1 Phillips screwdriver, turn the adjustment screws counterclockwise to retract the rollers on the top and bottom rail of the screen, stop when you feel resistance. (fig. 25)
- With the adjustment screw facing the interior lift the door into the top screen track far enough to provide clearance for the bottom of the door to swing over the bottom of the track and position it on the screen roller track (fig. 25). You may need to compress the bottom rollers up to properly position the rollers onto the track.
- Adjust the bottom rollers up to provide enough clearance for the door to slide smoothly. Align the screen door to the jamb for equal sightline, adjusting the rollers up or down as needed.
- Adjust the top rollers up until the rollers engage the top screen pocket. Turn the adjustment an additional turn. This will put enough tension on the wheels to keep the door rolling smoothly and prevent it from jumping track.
- Once the screen door is properly adjusted, install the lock keeper.

**NOTE: Hand adjust only.**

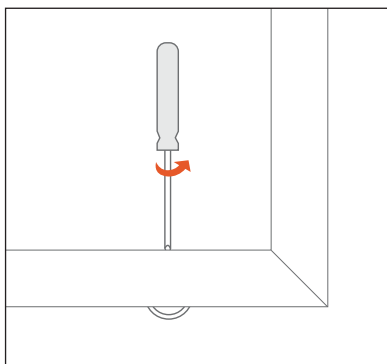


fig. 25

**FOR SLIM LINE AND NORTHERN ELEVATIONS PATIO DOOR SCREEN KEEPER INSTALLATION:**

- With the screen locking mechanism in the down position, draw a line 1/8" above the actual hook on the mechanism.
- Align the bottom hook of the keeper to the line drawn. The open end of the hook needs to face down and be centered in the screen channel.
- Fasten the keeper to the frame with screws provided.

**(Keeper and screws are in a bag and attached to the screen door)**

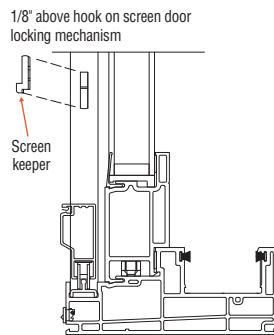


fig. 26

**FOR CLASSIC PATIO DOOR SCREEN KEEPER INSTALLATION:**

- With the screen locking mechanism in the down position, draw a line 1/8" above the actual hook on the mechanism.
- Align the bottom hook of the keeper to the line drawn. The open end of the hook needs to face down and be centered in the screen channel.
- Fasten the keeper to the frame as shown on fig. 27.

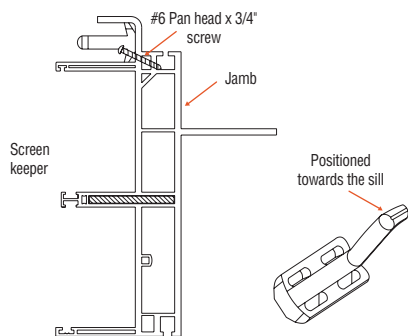


fig. 27

**CARE AND MAINTENANCE OF YOUR PATIO DOOR**

**Cleaning of your New Patio Door:**

- Clean all vinyl surfaces with a mild detergent and water solution and a soft cloth or brush
- Do not use abrasive cleaners or corrosive solvents
- For the more stubborn materials use a mild abrasive cleaner
- Clean sill track on a regular basis to ensure smooth easy operation
- Ensure the water drainage system or weep holes in the sill pocket are free from obstructions
- To wash interior or exterior glass use a premixed vinegar-based cleaning solution or make your own using 10% vinegar and 90% water and soft lint free towel (paper or cloth). Or you may use any other non abrasive or non corrosive glass cleaner
- To clean a screen, either remove the screen and wash it with soap and water, or use a drapery brush attachment on your vacuum cleaner
- Wash hardware using a mild detergent and soft cloth. Avoid abrasive cleaners, clothes, or brushes.

DO NOT USE A RAZOR BLADE TO SCRAPE OFF STUBBORN MATERIALS. DOING SO MAY LEAVE PERMANENT MARKS ON THE GLASS OR VINYL.

**Simple adjustments you can make:**

- If the door operates hard – the door adjustment could be set too low and is dragging. To adjust the door locate the access hole on each bottom edge of the active panel. Using the screwdriver specified in the Recommended tools section at the beginning of the document, turn the screw clockwise to raise the panel as required. Open door 1/4" and check vertical space between frame and door panel. Panel is properly adjusted when space is equal from top to bottom.
- If insect screen operates stiffly – check to make sure rollers are properly seated on the guide rib at the bottom. If bottom appears to be dragging, adjust the screen at the bottom adjustment screws with a #1 Phillips screwdriver.