



Sliding Door Assembly & Installation Instructions

(rev. 11.17.2011)

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Section 1: Site Planning and Preparation

The Lift and Slide, Slide and Seal™ and HFX sliding door systems manufactured by Pacific Architectural Millwork (PAM) have been developed for easy installation. However, pre-planning the installation is critical, because you must maintain the proper dimensions and ensure that the concrete and wood framing in the opening areas are plumb, square and level in order for these doors to operate properly.

1. Refer to the Shop Drawings provided by PAM to determine the correct rough opening dimensions, floor depression depth (for recessed tracks), and pocket size (if required per the configuration) for each unit. These details may vary in each opening based on site-specific conditions such as threshold/track type, waterproofing method, desired weather performance, and floor elevation changes. It is very important to know the exact **finish floor thickness**, as you will use it to determine the required depth of the floor depression for recessed tracks and to calculate the correct height of the header.
2. Headers should be designed with minimal deflection, with or without loads. **No deflection greater than ¼"** over the entire span should be allowed to occur. Most service-related issues are due to track or header sagging that result from improperly engineered openings.
3. The top and sides of the rough opening (RO) need a **continuous surface of plywood or wood framing (1-1/2" thick or more)** that extends the full depth of the opening. This will provide a solid surface to properly secure and plumb the head track and side jambs.
4. The rough framed opening must be **sufficiently larger in width and height** than the actual frame dimensions of the door in order to receive the door and make necessary adjustments. Refer to specific PAM shop drawings for the required RO dimensions.
5. Ensure that you have **isolated any aluminum PAM product or component** (e.g., aluminum track spacers) from direct contact with dissimilar or corrosive materials (e.g., concrete, steel and/or stucco) to prevent corrosive reactions. All fasteners used during installation must be corrosion-resistant.
6. **Proper flashing and/or sealing** is necessary as a secondary barrier to prevent water from entering the wall between the door frame and adjacent wall materials, and is part of the overall weather-resistive barrier system. It is not the responsibility of the door manufacturer to design or recommend an appropriate flashing system and/or method of sealing for each job condition.
7. When a unit has pocket doors, refer to the PAM shop drawings for specific pocket dimensions. You should **leave one side or "wall" of the pocket open** or easily accessible to allow for installation of the track and jamb in the pocket. After installation, this remaining wall can be installed or framed to enclose the pocket. The interior of the pocket should be completely covered on both sides in a material such as drywall, plywood or MDF, and painted black for a finished appearance.

Section 2: Pre-Installation Instructions

Carefully review the final approved PAM shop drawings for each specific door opening and type. Ensure that each opening matches the dimensions and requirements called out on the shop drawings.

1. Verify that the **rough opening size** matches the dimensions shown on the drawing, and is plumb, level and square.
2. Check that each **header height** matches the dimension on the drawing, is level, and is not sagging due to deflection. Take into account the loading conditions at each specific opening, and ensure that the header has been engineered so that it will not sag more than the maximum allowed deflection shown on the shop drawings.
3. For recessed track systems, check for high or low points along the trough (sub-floor area beneath the track). Verify that the depth of the depression is accurate based on the **overall finish floor thickness**, so that the flush tracks will project **3/16" above the finish floor after the finish floor is installed**.
4. For door configurations that include one or more pockets, verify that the **pocket dimensions** and conditions are correct. Make sure the inside of the pocket walls have been lined with plywood, drywall or MDF and painted black for a finished appearance, and that one wall of the pocket is not yet framed/installed or is removable, to **allow access inside the pocket** during installation.
5. Once the PAM door units are on-site, unpack all the components, spread the components out on a covered, protected surface, and compare them against the packing slips and shop drawings.
6. Check and inspect all the components for damage. PAM should be notified within 24 hours of any damage. It is helpful to take pictures that identify the damage and document the damage. Send them to PAM with a written damage statement about the damage.
7. PAM warranty requires that the wood product be Sealed within 72 hours. This protects the wood from warping, swelling and contracting which will cause problems with the door operation in the future.
8. A continuous plane of plywood or wood framing(1-1/2 inches or better) should have been installed to attach, level/plumb the head and side jambs.
9. A continuous sill pan and waterproofing should be in place around the entire perimeter and should extend at least 6" high on all pocket and fixed walls

Note: A water proofing expert should be consulted when any issue arises outside of normal waterproofing conditions, standards in the industry, or code conditions.

Section 3: Sliding Door System Components

- *All door components have been securely wrapped for protection during shipping.*
- *Upon receipt of all the door components place them in a location that minimizes any unnecessary future movements.*
- *Unwrap and inspect all the components for damage or missing parts.*
- *Notify PAM of any damage within 24 hours.*

Components

1. Bottom Track – The tracks are either mounted on a wood threshold or rolled stainless steel attached to cross members. The Bottom Tracks in most cases arrives fully assembled. Exceptions include corner type units or units that are too long for shipping. In these cases, splices will be identified and attached.
2. Head Track – The Head track in most cases arrives fully assembled. Exceptions include corner type units or units that are too long for shipping. In these cases, splices will be identified and attached.
3. Side Jambs – Side Jambs come assembled as a single unit either as an all wood or aluminum/wood combination based on your door type. The aluminum/wood type will have the wood facing the interior direction, and the aluminum facing exterior. The jambs have adjustable shims attached for ease of installation.
4. Interlocker – Pocket door applications have an exterior interlocker that is included for each pocket.
5. Door Panels – Door Panels are delivered assembled. Each individual door has the edges protected with cardboard and is plastic wrapped for protection during shipping. The doors are numbered and labeled per the Shop Drawings. This will identify their location and configuration.
6. Hardware – Miscellaneous loose hardware and screws will be in a separate box.
7. Pocket Door Panels are supplied with Pocket Door Systems.

Section 4: Assembly Instructions (Track & Jamb)

- *The assembly instructions vary based on the particular door unit configurations and type. Some steps may differ or be repeated depending on the number and configuration of the panels. Due to the custom nature of PAM products always refer to the Shop Drawings for specific information of each unit.*
 - *During the manufacturing process, PAM Door units are often assembled at the manufacturing plant then partially disassembled for shipping. This ensures manufacturing accuracy and ease of site assembly.*
1. Place a soft protective floor covering below the area that will be used for the frame assembly in front of the appropriate opening. This will help prevent scratching the finish off the door frame.
 2. Lay out the frame header, and bottom tracks on the protective floor covering. Place the two (2) jamb legs, along side.
 3. Side jambs run the full height (top to bottom) with the aluminum cross member attached to the bottom
 4. Caulk the end of the header then attach it to both the side jamb legs by sliding the galvanized angle brace into the aluminum header groove. . So when the frame is assembled and tilted upright, it can be easily placed in the opening.
 5. Use clamps to keep the header and jambs flush on the interior and exterior during attachment. Use caution when attaching so as not to scratch the finish where the head track meets the jamb.
 - a. Use self-tapping #6 x 5/8" screws into the aluminum
 - b. Use #6 x 7/8" wood screws into the wood
 - c. Verify that the header is tight against the jambs before fully tightening the screws.
 6. Align the track cross-members on each end of the bottom track with the matching bottom jamb leg cross-member.
 - a. Attach the track using the supplied screws, washers and nuts in a similar fashion as all the other attachments along the track. Care must be taken not to scratch the finish.
 - b. Due to varying site installation conditions it may be easier to install the track with the jamb standing.
 7. When the frame is fully assembled, measure the width at the top and bottom to ensure that the dimensions are the same and that the side jambs are parallel. If they aren't, loosen the track attachments and adjust as needed.
 8. The jamb is now ready to stand and install after the opening is prepared, and the sill is waterproofed.

9. Door Panels do not require any assembly.
10. Use the Installation Guide to proceed.

Section 5: Installation Guide

- *Prior to Installation of the Door System, the finish floor elevation needs to be identified and confirmed. The floor elevation sets the bottom track height and the related measurements for the door system in conjunction with the Shop Drawings.*
- *Waterproofing and/or a waterproofing sill pan with continuous vertical projections should be installed on the sub-floor with a positive drainage slope prior to the installation of the track and jamb.*
- *Standard rough and finish carpentry tools are required for the installation.*

Required Tools

The following tools are required:

- A. Allen wrenches: 4mm , 5mm, 6mm (PAM specific)
- B. Glass Suction Cups
- C. Tape Measure
- D. Laser or water level
- E. Plumb bob or level
- F. Drill and assortment of drill bits
- G. Step Ladders
- H. All related fasteners
 - a. ¼" x 20 all thread
 - b. ¼" concrete anchors
 - c. ¼" nuts
 - d. ¼" washers
 - e. # 10 x 3-½" or 4" long stainless steel screws for the jambs
 - f. Tapcon™ screws where applicable
- I. Phillips and regular screw drivers and/or screw guns
- J. Caulking gun and high quality compatible sealant
- K. Flat Bar
- L. Story Pole
- M. Wrenches
- N. Hammer
- O. Impervious shims
- P. Utility knife

- Q. Colored Keel
- R. Pencil or fine marker
- S. Nylon String
- T. Metal Saw

General Installation Steps

1. Using your laser level, check for any high spots in the sub-floor. Mark them with a contrasting colored keel.
2. Identify the finish floor elevation and using a fine marker, locate that near the opening as a future guide.
3. Recheck the accuracy of the rough opening based on the Shop Drawings and the finish floor elevation. Verify the depression in the sub-floor and that the frame is Plumb, level and square. If necessary, correct as needed prior to moving on.
4. Carefully stand the pre-assembled frame and guide it into the framed opening. Be careful not to allow any unnecessary sagging of the head jamb or twisting and deforming of the track.
5. Locate the Head jamb in its proper location with the pre-determined shim space on each end. Check also that the clearance allows the jambs to be properly plumbed. Adjust as needed. Use the Shop Drawings in conjunction with the Site Architectural Drawings and confirm the accuracy of its location from front to back. The final fastening of the jambs will be completed after the bottom track is completely installed.
6. System Header Install
 - a. Install #10 Stainless Steel Screws temporarily in the head frame through approximately 1/4 of the pre-determined holes to hold the frame in its proper location. . The head frame comes with factory installed adjustable shims.
 - b. Tighten the screws in the head track enough so that the lower track is approximately at its proper elevation in relationship to the finish floor. Use the score line in the track that is 3/16" down from the top of the track as the guide line for the proper height..
7. System Side Jamb Install
 - a. The side jambs should be plumbed in both directions and temporarily fastened with #10 stainless steel screws. The jambs come with factory installed adjustable shims.
 - b. Using the appropriate Allen wrench in the preset hole locations, adjust the shims individually so that the jamb is plumb and level. Only place enough screws to hold the jamb in place temporarily.
 - c. Measure the frame from corner to corner to assure the frame is square.
 - d. Adjust accordingly.
8. Bottom Flush Track Install

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- a. All Fasteners should be Corrosion resistant and have similar compatibility. It is extremely important that the track be installed properly, and that all waterproofing is compatible with the associated metallic materials.
- b. The track system must be straight, parallel, and perfectly level in both directions at its proper elevation, so that exactly 3/16" (indicated by the score line) is exposed above the finished floor. Track should be attached to the jambs in its proper location on each end and securely fastened.
- c. Use the nylon string to make sure the leading track (interior side) is perfectly straight.
- d. Using shims and a laser level, shim the track under the cross members, so that the track is level in both directions (L/R, interior/exterior). The shim space distance under the cross member (along with the type of sub-floor) will determine the type of attachment to be used in each location. Do not use more than 1" thick of shims in a given location.
- e. Tapcons may be used to fasten the cross members to the concrete or wood sub-floor. If the shim space needed is more than 1", then use minimal ¼" threaded stainless steel (bolts or all thread) with its related sub-base anchor.
- f. Concrete should have an appropriate concrete anchor and wood should have a stud-type anchor, with wood threads on one end and machine threads on the other.
- g. With the bottom track in place, drill the appropriate bolt hole through each cross member into the sub-floor, so that they are evenly spaced from each end of the cross member and the center (2 -3 holes each).
- h. Drill through to the sub-floor so that it properly locates and pilots the anchor hole. When you are drilling a concrete anchor, the related anchor hole will be larger.
- i. Move the track aside to permit access to the pilot hole.
- j. Using the pilot hole, and based on the anchor size, drill the appropriate hole into the concrete per its specified diameter and depth.
- k. Vacuum out the concrete dust and debris, and then place the anchor in each hole.
- l. Using the necessary bolting system for each hole, install the bolts or studs where applicable.
- m. Install proper sealant so that the bolt is sealed to the waterproofing.
- n. Install a lower nut and washer on each.
- o. Using the string and a laser level, make sure the track is straight by adjusting the bottom nuts until the track is level. Then, replace the bottom track into its proper location.
- p. Attach separate washers and nuts on the top of the cross members to secure the track in place.
- q. Cut and remove the threaded rod above the nut, after you set the track and lock it down tight.
- r. Verify that the bottom track is:
 - i. Straight
 - ii. Parallel
 - iii. Level in both directions (3/16" score mark must be even with the finish floor surface)
 - iv. Lined up properly with the side jambs
 - v. Firmly secured
 - vi. Sealed/waterproofedIf not, re-adjust and correct accordingly.

9. Now that the track is permanently set in place, the sides and head track should be permanently attached.

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- a. Use the appropriate Allen wrench to adjust the shims against the rough framing so that the side jambs are perfectly plumb and level in both directions.
- b. Install #10 stainless steel screws through each hole and firmly fasten.
- c. Check again for plumb and level in each direction.
- d. Measure from corner to corner to check for square and readjust as needed.

10. The head track installation may now be finished.

- a. Use your laser level to ensure that the head track is straight and lined up with the bottom track.
- b. Create a story pole from one end or the other to use as a guide to set the exact height and distance of the head track from the bottom track. It should also match the dimension on the Shop Drawings.
 - i. This is important to ensure the correct parallel clearance so the top of the doors seal correctly. Make sure the bottom track is perfectly level and use the story pole to ensure that the head track runs level and parallel to it.
- c. Starting from one end, place the story pole on the track and, using the appropriate Allen wrench, adjust the shims so that the track is at the correct height. The story pole should be snug, not tight.
- d. Fasten the head track using #10 stainless steel screws.
- e. Install a screw in each preset hole through the adjusting shim as you move down the line.
- f. Complete the fastening in each hole.
- g. Completely secure the head track.
- h. When you are finished, recheck it to ensure again that it is level in both directions, parallel and in line with the floor track. If not, readjust and correct accordingly.

11. Installation of the Door Panels

- a. The door panels are delivered fully assembled and numbered according to the Shop Drawing sheets for each unit. Depending on the configuration of the door, the panels usually will be installed with the lead panel(s) first on the interior. Then, stagger outwards towards the last or fixed panel, which will typically be on the exterior. Each panel needs to interlock with the next one in proper sequence.
- b. Determine the order and correct placement of the doors using the Shop Drawings and the numbering system on each door. If your system has fixed panels, they will have blocks instead of wheels on the bottom. NOTE: these doors are heavy, so use caution when lifting them. It is recommended to use glass suction cups when handling.
- c. Starting with the lead panel(s), place the glass cups on the glass panel in their proper location.
- d. Lift and angle the door into the correct top guide track, and then set the bottom rollers on the matching bottom track.
- e. Continue installing each panel in the system in sequential order, so that the panels can interlock with each other. If the system has a fixed panel on one or both end, slide this panel in place, making sure it is tight and plumb against the jamb. The fixed panels are designed to have a very slight reveal against the jamb.
- f. Fasten the panel(s) using the screws provided. Operate the panels (making sure they are in the unlocked position) in the opening; they should slide easily and smoothly.

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- g. Position the doors in the closed position. Make sure the panels are all plumb and parallel. The weather stripping should fit tight against the jambs (or the adjacent panel, depending on the configuration).
- h. Adjust the locking strike up or down if needed.
- i. Now you are ready to cover the fixed panel screw holes with the plugs provided.

Slide & Seal Additional Steps

Slide and Seal Door Panels require some additional adjustment steps. They have adjustable wheels and weather sealing systems and are typically delivered with the wheels adjusted all the way up for ease of lifting in and out of the track and jamb.

1. Adjust the panels after they are installed using a 4 mm Allen wrench through the two holes on the bottom interior of the door:
 - a. Start with adjusting the roller that is closer to the leading edge of the panel. Turn the Allen wrench clockwise to raise the door, and counter-clockwise to lower door. Adjust the door so that the bottom weather stripping is even with the top of the track.
 - b. Plumb and level the door using both wheel adjusters.
 - c. Continue the adjustments with all the operable door panels.
 - d. When the initial height adjustment is done, slide the leading door so that the vertical edge of the locking first panel is approximately 5/16" from touching the jamb (or from the opposing panel, on bi-parting systems). The trigger for the bottom weather stripping should be touching and in position to activate.
 - e. When the door is then pushed against the jamb (or opposing panel), the bottom weather stripping should drop down 3/16" to seal against the finished floor (indicated by the score line in the bottom track).
 - f. Repeat the process as needed.
2. The Head Track is set at the factory set, but may also require minor adjustments. The door is designed to seal against the top track and leading door jamb on the exterior by tilting outward slightly and pressing against the weather stripping when the door is closed. This is activated by adjustable clips in the head track and guides on the top of the door. If minor adjustments are needed, use the following steps:
 - a. Using a Phillips head screwdriver, slightly loosen the screws that hold the clips.
 - b. Slide them toward the leading edge of the door to loosen the seal or in the opposite direction to tighten the seal. The face of the clip should remain tight against the jamb.
 - c. Repeat the process as needed, and securely tighten the screws when complete.
 - d. The doors should slide easily and smoothly.
 - e. Move the panels into the closed position; make sure they are parallel and fit tight against the side locking jamb or opposing locking door (based on their configuration).
 - f. If necessary, adjust the latch in and out by using the screws on the edge of the door, in conjunction with adjusting the striker plate up and down.

Slide & Seal™ Troubleshooting

ISSUE	RECOMMENDATION
After install doors are hard to move.	<ul style="list-style-type: none">• Make sure that the door did not come off the bottom track.• Is the bottom weather seal riding on the finish floor?• Check top track weather seal and make sure that there is no binding.• Double check the spacing on floor track and make sure that it did not move (spacing between panels should be 3-7/16" on center).
Doors in the closed position are hard to open and close.	<ul style="list-style-type: none">• Make sure that the doors did not come off the bottom track.• Make sure that the doors are adjusted in the up position. So that they may ride smoothly.• Double check that the pressure plates in the head track are adjusted properly.• Are the bumpers on the doors adjusted correctly when the trigger is activated?• Double check the three points lock and make sure that they are adjusted equally.
When the scissors are in the down position, the weather seal is only sealing in the middle and not the ends.	<ul style="list-style-type: none">• See if there is any binding at the stiles.• Make sure that there is no construction debris at the plug areas.• Check to see if the triggers are working properly.• The bumpers might need to be adjusted.• Make sure that the doors are adjusted in the up position. (Bottom weather seal in the relaxed position should be flush with the top of the bottom track).
When the door is going in the closed position it is too far away from the striker jamb.	<ul style="list-style-type: none">• You will need to check the bumpers. (You should be about 1/4" to 3/8" away from the striker jamb before the scissors are activated.)• Check your pressure plates in head track you might have to adjust.• The doors only need to fall forward slightly, so that means that the head guides on the doors and the pressure plates only need to be engaged about 1/4".
Three point lock is not locking properly and is hard to turn.	<ul style="list-style-type: none">• Double check the striker plate and the three point lock, make sure lock lines up with the striker plate.• Three point lock has three screws that are adjustable separately. Make sure they are all lined up equally agents the striker jamb.• You might have to adjust bottom rollers on the door slightly, so that the door is parallel with jamb.

Pocketing Door Additional Steps

Pocket door systems require an exterior pocket interlocker, which creates a seal between the exterior wall and the last panel.

1. Slide the doors out of the pocket towards the closed position for access. Confirm the length with the site Architectural Drawings. It normally is measured from the head jamb to the finish floor elevation (Verify in the field). If needed cut to length.
2. Stand the interlocker in its proper upright position. The interlocker should mate with the exterior of the door panel interlocker.
3. Compare it with the Shop Drawings for accuracy.
4. Place the interlocker on the interior corner edge of the exterior pocket wall.
5. Using the appropriate Allen wrench adjust the plastic shims to the middle of their travel.
6. Loosely mount the interlocker in place with stainless steel screws.
7. Adjust the interlocker so that it is plumb and level in both directions and the door interlocker disengages smoothly in and out without any noise or metal rubbing.
8. Securely fasten the interlocker and readjust as needed.
9. Cut off any excess part of the plastic shim that extrudes.
10. The interior framing Pocket Wall(s), when applicable, may be installed at this time.
 - a. The interior of the pocket walls should be lined with sheathing.
 - b. The sheathing should be installed in a manner so that it is waterproof and sheds onto the sill waterproofing and pan.
 - c. Visually, it is a good idea to paint the inside of the pocket black as it is dead space and you don't want to highlight the space.
11. Pocket Closer Panel - door systems with pockets require Pocket Closer Panels be installed on the doors. These are used to block the view into the pocket when the panels are in the fully closed position. They are installed on the trailing edge of the last panel out of the pocket.
 - a. Follow the Shop Drawings for the correct positioning; the holes are predrilled for ease and accuracy of the installation.
 - b. Use the supplied #6 Phillips head stainless steel screws for fastening the panel to the door.

Screens and/or Louver Panels

1. The screen and/or louver panels will be numbered and fully assembled.
2. Use the Shop Drawings to identify the numbering sequence, placement location, and type of door to be installed.
3. Install the doors in their proper sequential order by angling them into the proper guide on the head track then place the rollers on the corresponding bottom track.
4. Straddle each door and continue installing each door until they are completed.
5. Slide each door back and forth, ensuring they are plumb with each other and with the jamb.

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6. There are Allen screws that are accessed on the inside bottom of each door at the wheels. Turn the screw to adjust the wheels up and down so that the doors are even, plumb and level with each other and with the jamb, and so they have proper clearance at the top and bottom.
7. The track above has stops that position the doors in their proper open and closed position.
 - a. To adjust these, loosen the Phillips head screws only enough so the guide slides.
 - b. Adjust the door into position then retighten.
 - c. When the doors are closed they will hold in the closed position against their stop and magnetic latch. The doors should slide easily and smoothly.
8. Fine tune and adjust accordingly.

Final Steps

1. The PAM Door System installation is now ready to complete.
2. The wood should be immediately finished to prevent shrinkage, swelling or any other defect that will void the warranty.
3. The waterproofing should be done by code, according to industry standards and your waterproofing expert.
4. The exterior and interior trim (if any) should be installed.
5. The track should have a cement type sub-base installed using the finish floor thickness and type. This helps by permanently locking the track and connecting members in place. It is highly recommended that a tile or stone product be used in the track area between the doors, preferably with a smooth surface for improved sealing. NOTE: running wood floor between the tracks voids the warranty.

Contact Info

For additional assistance, contact your dealer, installer or Pacific Architectural Millwork Service Department at (562) 905-3200.

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