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# **Installation Instructions For Overly Acoustical Window**

## **Model STC 549226**

## General Information

The proper performance of most manufactured building products depends not only on how they are made, but how they are installed. This is particularly true of **Acoustical Window** units. Anyone acquainted with building construction knows that the proper installation of the frames is an operation that requires great skill and care. Even the best designed and most carefully made frames, if improperly installed, will not function or perform to their intended maximum effectiveness. Additionally, **Acoustical Window** openings require careful installation of the frame and glass panel perimeter sealing systems in order to obtain the desired level of acoustical performance.

Overly Door Company is concerned that our product is properly handled and protected after delivery, and that the necessary care and skills are exercised in the setting of our **Acoustical Window** frames. It is important to all concerned, therefore, that attention be given to the essential requirements of good practice in field installation work. Use of these installation instructions along with the approved shop drawings, along with your attention to good workmanship will provide the proper installation and operation of Overly Acoustical Windows.

## Delivery and Receiving of Materials

**Acoustical Windows** are fabricated in accordance with shop drawings that have been approved by the architect or design engineer.

Should any material be damaged in shipment, claims should immediately be filed by the receiving party, who should notify the delivering carrier's regional office by telephone or in writing, requesting inspection of the damaged material. If desired, Overly Door will cooperate by furnishing copies of shipping papers or other pertinent information to help expedite the claim. Accepted materials become the customer's responsibility to protect and store accordingly.

If a claim is to be made for any error or deficiency in the materials supplied, it is imperative that Overly be notified in writing before initiating any corrective action in the field. Overly Door has its own field representatives who are qualified not only to do expert repair work but to determine whether the fault lies with the manufacturer or with some other party.

## On-Site Storage

Improper storage of **Acoustical Windows** at the construction site often results in the deterioration of the shop primer coat of paint. Such deterioration is a continuing source of aggravation to all concerned.

Particular attention must be given to steel products which are to be stored having only one coat of shop primer if corrosion is to be avoided. Because the protective shop primer must be porous to properly receive and hold top coats, water or moisture in contact with prime coated steel will seep through to the steel by capillary action. An electrolytic action then follows, resulting in corrosion and causing the paint to lose adhesion. The presence of oxygen at the water-air interface behind the loosened paint film accelerates corrosive action and further prime coat deterioration.

Manufacturers of metal acoustical windows have found that one week of exposure to water because of improper storage is equivalent to at least a year of outdoor exposure to the elements.

It is imperative that those parties who are responsible for the storage of primed metal work at the job-site be carefully instructed as to proper storage procedures. All ferrous metal products should be stored where they are least likely to come in contact with or be exposed to water or moisture.

The following steps should always be observed when storing **Acoustical Windows** at the job-site:

- A. Store all materials in a dry area under cover.
- B. Place all material on planking or blocking at least 4" off of the ground, 2" off of slab or paved area.
- C. Do not stack material flat. Store with frames in an upright position.
- D. Provide, by means of wood or styrofoam strips, a space of at least 1/4" between all units, to allow air to circulate between them.

- E. Do not permit cardboard or paper to become wet and come in contact with the frames. If this should occur, remove them immediately.

## Uncrating Instructions

Depending on the size of your particular order and the manner in which items required for the window installation were ordered, the crate which you have received may contain one, two or several acoustical window units. The quantity and type of items provided by Overly can be found on the packing list located on the outside of the crate. Many times, the glass required is provided by an outside source and should be coordinated with the Overly framing system. As you uncrate, you will be required to locate the following items for a complete installation:

- A. Frame - identification information on the frame can be found on a small white tag located on one of the frame jambs. This information includes Overly order number and unit mark number. If a UL Label is provided, it can be found attached to the trim on one side of the frame.
- B. Glass - This acoustical window requires one piece of 1/2" thick Acousta-pane 39 or equal glass and one piece of 3/4" thick Acousta-pane 43 or equal glass. Refer to the approved shop drawings as to the type of glass required for your particular installation. Glass may or may not have been provided by Overly. Check the shop drawings and packing lists to verify if supplied by Overly.
- C. Frame Gasketing System - this acoustical window model requires the use of a special sponge neoprene gasketing material for the glazing of the unit. A sufficient length of 3/16" x 1/2" neoprene with peelable adhesive backing is provided.
- D. Loose Stops - metal loose stops are provided and shipped attached to the frame with several #10-24 x 1-1/2" long screws. The remainder of the screws required for the loose stops are provided in a plastic bag.
- E. Frame anchors for appropriate wall construction have been provided. Check the shop drawings and packing lists to verify type supplied by Overly.

## Frame Installation Procedure

The frame assembly provided consists of a 4-sided welded unit that was factory inspected prior to shipment to assure that they are square and that no jamb twists have occurred during their fabrication. To minimize misalignment or other damage during shipment, the frames are packed and loaded onto the carrier by personnel experienced in frame packaging. However, in spite of these precautions, the frames can and sometimes do arrive at the jobsite with minor deviations. Should this occur, most out-of-square and misalignment problems can be readily corrected during installation.

Frame anchorage systems are custom designed to accommodate individual project opening requirements to suit specified wall conditions. Therefore, it is necessary to refer to the approved shop drawings for each individual frame for the method of anchorage. The four types of anchorage covered by these instructions include:

1. Built-in masonry
2. Built-in drywall with wood or channel studs
3. Bolt-in masonry
4. Bolt-in drywall with wood or channel studs

At this time, review the shop drawings for the openings and proceed to the type of installation required. Regardless of the anchorage system required, the installation guidelines must be adhered to. At anytime during the installation of the product, if questions arise, call **Overly Door Company at 724-834-7300**.

## 1. Built-in Masonry Partition

**Note:** Prior to installation, check frame to see if it is equipped with purge ports. If so, check shop drawings or Architect's plans for orientation of purge ports for installation.

- A. The loose stops have been temporarily attached to the frame for shipping purposes. Match mark, remove, and set aside for later installation.
- B. Using some type of triangular support and bracing device that will securely hold the frame in the exact location and alignment required for proper installation. Usually such bracing is made of wood. However, metal "jacks" or supporters designed specifically for this purpose are commercially available, and their use is recommended.
- C. Cut 3/4" thick temporary wood spreaders and locate at 1/3 points across the short dimension of frame to maintain proper opening size during installation.
- D. Check that the frame is square and aligned by measuring the diagonal dimensions and "cross string" the frame to insure that the jambs are properly set. (See Figure 1).
- E. While protecting the frame from accidental abuse, build walls to the frame utilizing the strap anchors attached to the frame, making sure that proper frame alignment is maintained.

**Note:** As the walls are being built, the frame must be grouted full to ensure maximum acoustical performance. Extreme caution must be exercised while performing this operation to make sure the head does not sag nor the jambs or sill be allowed to bow.

- F. After the frame is permanently built into the wall, with all strap anchors installed and cement and/or grout set, remove the wood spreaders.
- G. Caulk frame continuously around perimeter of frame on both sides as shown in Figure 2.

Now Proceed to "Installation of Glass" section.

## 2. Built-in Drywall Partition

**Note:** Prior to installation, check frame to see if it is equipped with purge ports. If so, check shop drawings or Architect's plans for orientation of purge ports for installation.

- A. The loose stops have been temporarily attached to the frame for shipping purposes. Match mark, remove, and set aside for later installation.
- B. Using some type of triangular support and bracing device that will securely hold the frame in the exact location and alignment required for proper installation. Usually such bracing is made of wood. However, metal "jacks" or supporters designed specifically for this purpose are commercially available, and their use is recommended.
- C. Cut 3/4" thick temporary wood spreaders and locate at 1/3 points across the short dimension of frame to maintain proper opening size during installation.
- D. Check that the frame is square and aligned by measuring the diagonal dimensions and "cross string" the frame to insure that the jambs are properly set. (See Figure 1).

**Note:** At this point, the frame must be packed full with 6 to 12 PCF density mineral wool in the form of blanket or board type, to ensure the maximum acoustical performance of the opening.

- E. While protecting the frame from accidental abuse, build walls to the frame utilizing the anchorage shown on the approved shop drawings, making sure that proper frame alignment is maintained. Due to weight of the final installed unit, provide adequate stud bracing under sill of frames to support weight.

- F. Caulk frame continuously around perimeter of frame on both sides as shown in Figure 2.

Now Proceed to "Installation of Glass" section.

### 3. Bolt-in Masonry Partition

**Note:** Prior to installation, check frame to see if it is equipped with purge ports. If so, check shop drawings or Architect's plans for orientation of purge ports for installation.

**Note:** Masonry openings that are to receive preassembled welded frames must be accurately constructed. They should be 1/2" wider than the overall frame width dimension and 1/2" higher than the overall frame height, to provide a clearance on all sides of 1/4" to allow for shimming during installation.

**Note:** At this point, check the approved shop drawings or architects plans to see if the frame is to be grouted full or packed with mineral wool. If the frame is to be grouted full, proceed to **Step A**. If the frame must be packed full, pack all frame cavities full at this time using 6 to 12 PCF density mineral wool in the form of blanket or board type, to ensure the maximum acoustical performance of the opening.

- A. The loose stops have been temporarily attached to the frame for shipping purposes. Match mark, remove, and set aside for later installation.
- B. Shim frame as required to maintain the tolerances shown in Figure 1 and securely anchor the frame to the wall using the anchor bolts of type and dimensions specified on the approved shop drawings and supplied by Overly.
- C. Check that the frame is square and aligned by measuring the diagonal dimensions and "cross string" the frame to insure that the jambs are properly set. (See Figure 1).

**Note:** If the frame is to be grouted in place, grout at this time with Gold Bond brand grout or equal. Extreme caution must be exercised while performing this operation to make sure the head does not sag nor the jambs bow. Support frame head and jambs with adequate bracing, removing only after grout has had sufficient time to cure.

- D. Caulk frame continuously around perimeter of frame on both sides as shown in Figure 2.

Now Proceed to "Installation of Glass" section.

### 4. Bolt-in Drywall Partition

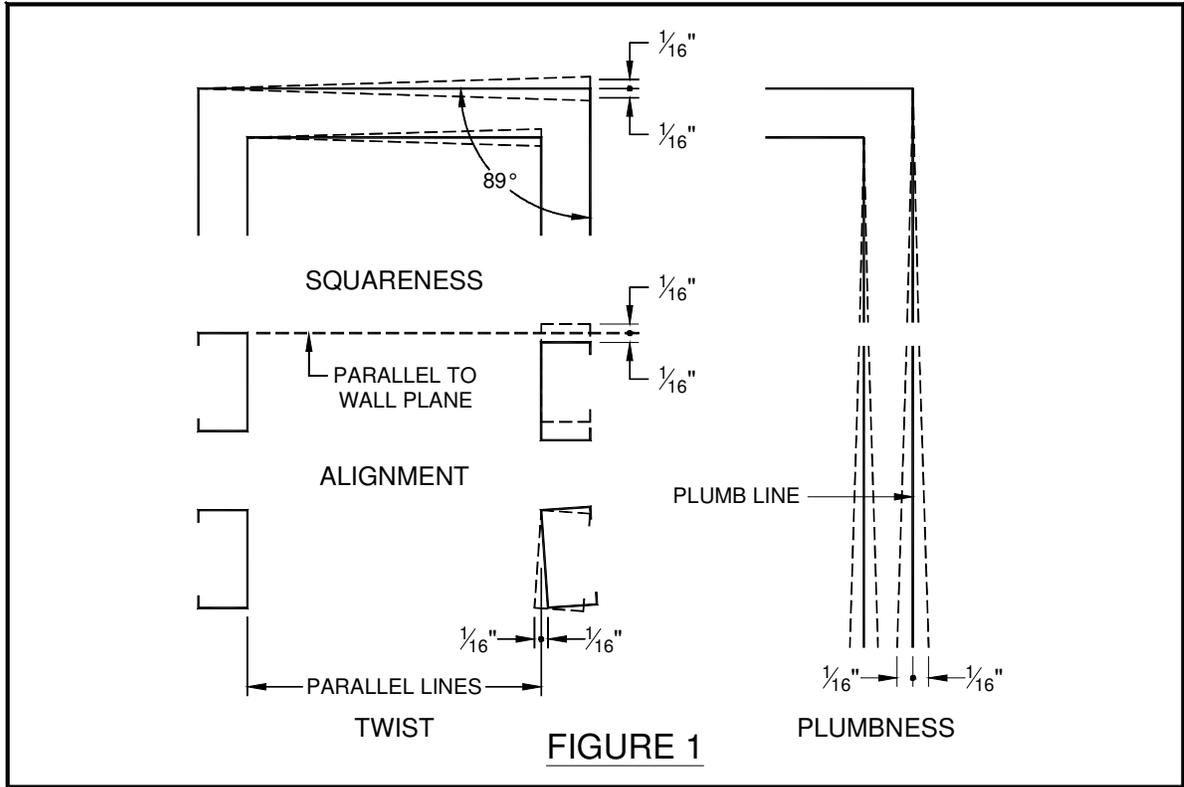
**Note:** Prior to installation, check frame to see if it is equipped with purge ports. If so, check shop drawings or Architect's plans for orientation of purge ports for installation.

**Note:** Drywall openings that are to receive preassembled welded frames must be accurately constructed. They should be 1/2" wider than the overall frame width dimension and 1/2" higher than the overall frame height, to provide a clearance on all sides of 1/4" to allow for shimming during installation.

**Note:** At this point the frame must be packed full, pack all frame cavities at this time using 6 to 12 PCF density mineral wool in the form of blanket or board type, to ensure the maximum acoustical performance of the opening.

- A. The loose stops have been temporarily attached to the frame for shipping purposes. Match mark, remove, and set aside for later installation.
- E. Shim frame as required to maintain the tolerances shown in Figure 1 and securely anchor the frame to the wall using the anchor bolts of type and dimensions specified on the approved shop drawings and supplied by Overly.
- B. Check that the frame is square and aligned by measuring the diagonal dimensions and "cross string" the frame to insure that the jambs are properly set. (See Figure 1).
- C. Caulk frame continuously around perimeter of frame on both sides as shown in figure 2.

Now Proceed to "Installation of Glass" section.



## Installation of Glass

**Note:** Prior to glazing window, all finish painting should be completed. For exterior units, it is recommended that both inside and outside surfaces of loose stops be finish painted.

- A. Locate the 3/16" x 1/2" adhesive backed sponge neoprene on the sill portion of the frame rabbet as shown in **Figure 2**.
- B. Place 3/16" x 1/2" adhesive backed neoprene continuously around perimeter of frame stop, as shown in **Figure 2, Detail "A"**.
- C. Place 3/16" x 1/2" adhesive backed sponge neoprene on the entire length of each loose stop as shown in **Figure 2, Detail "A"**.
- D. Install the piece of 1/2" thick glass. Be sure to center the glass side to side in the opening.
- E. Reinstall match marked loose stops with #10-24 x 1-1/4" long screws provided.
- F. Repeat steps A-E for the 3/4" thick glass.

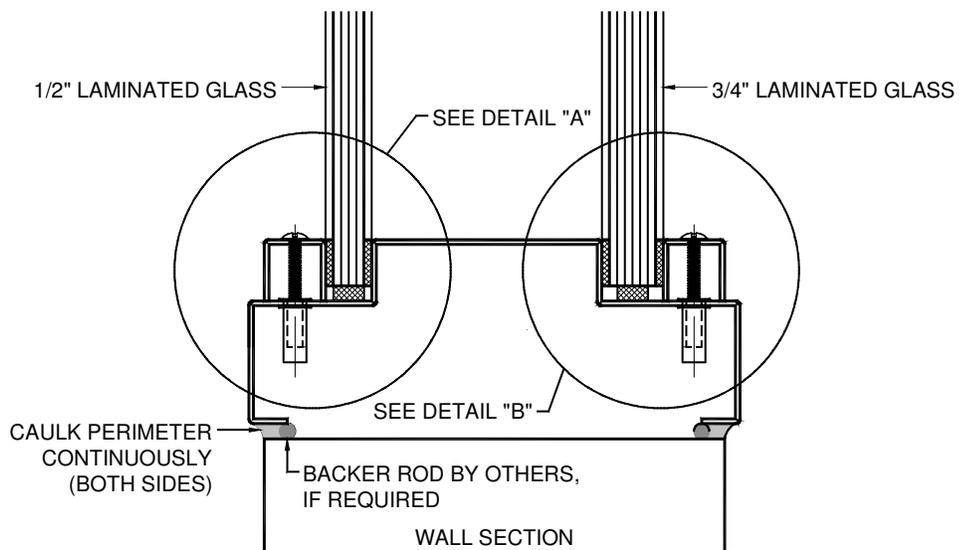
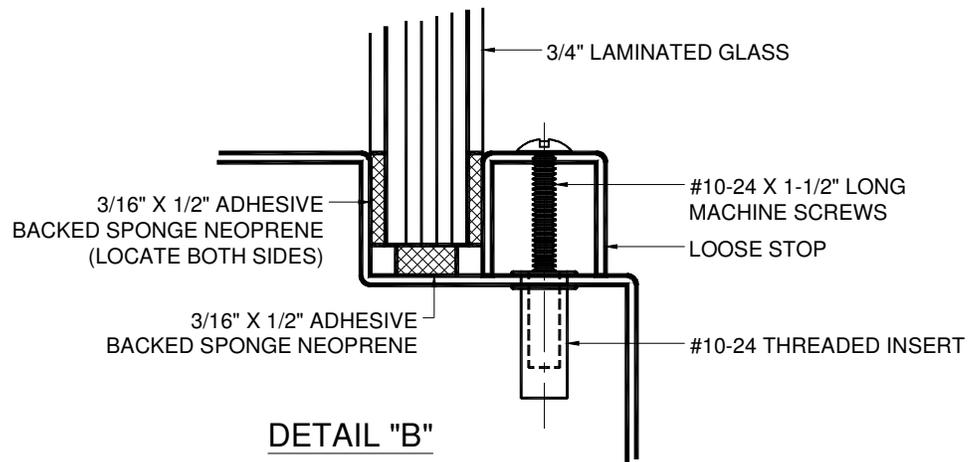
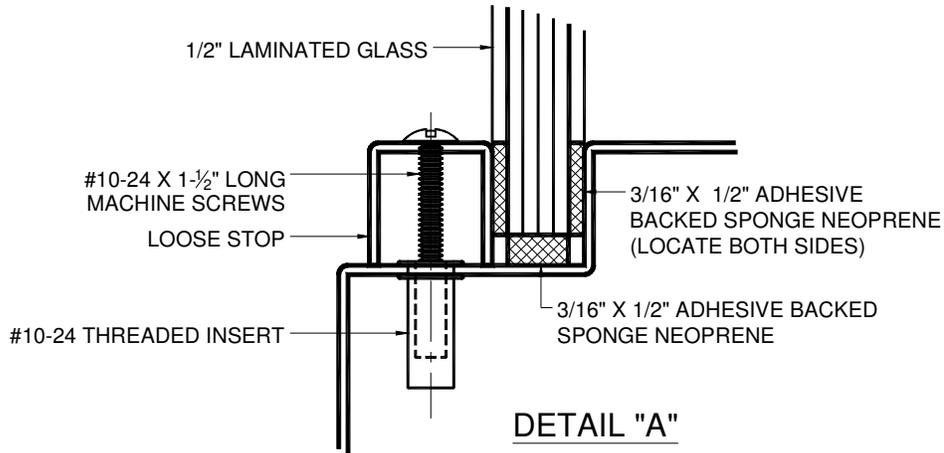
## Optional Purge Ports

If purge ports have been provided for this window unit, the following instructions are to be followed, if moisture is present between the panes of glass. If moisture is not present, skip this section. Purging **is not** required for acoustical rating.

- A. Once the frame has been installed, and the airspace that surrounds both sides of the unit has been allowed to reach its normal temperature, moisture may form between the two panes of glass. If this occurs, purging is required.
- B. Remove both purge port plugs located on trim of one side of the frame. Each purge port is a 1/4" pipe fitting.
- C. Choose one of the purge ports and hook up a nitrogen gas bottle to the port by a hose and proper fittings. Begin releasing the gas into the chamber and allow all of the airspace to be replaced with the gas. This takes approximately 10 minutes for a standard size window.

**Note:** Caution must be exercised not to allow the exhaust port to become blocked. This will cause the gas pressure to build-up between the glass panels.

- D. Once the moisture disappears, replace both purge port plugs.



**FIGURE 2**