

Table of Contents

Topic	Page Number
Mounting Overview	2
Mounting Methods - Standard (Wall and Ceiling Panels)	3
Mounting Methods - Optional (Wall and Ceiling Panels)	4
Mounting Methods - Tips and Ideas	5
Drawing 1 - PS80AL Direct Clip	6
Drawing 2 - Stud / Flush mount	7
Drawing 3 - Standard Ceiling Mount	8
Drawing 4 - Optional Ceiling Mount	9
Drawing 5 - Corner Allowance for Measurement	10
Installation Instructions - Adhesive	11
Installation Instructions - Z-Clip	12
Installation Instructions - Hook & Loop	13-14

NOTE: The following pages were designed by Panel Solutions, Inc. engineering department. These instructions and drawings serve only as a guide. As there are many variable field conditions, the responsibility for recognizing these conditions and compensating for them lies with the installer.

MOUNTING

HOOK AND Loop fastening is the suggested method for panels which will occasionally be removed. It is not for panels which will be constantly removed and put back, since that could damage either the fastener or panel board.

ADHESIVE mounting is preferred for applications where speed and ease of installation is the aim, or where various field conditions require flexibility in mounting. This type of installation requires little or no layout time for the installer. Adhesive mounting is a permanent system, so panels cannot be taken off and reused.

Z-CLIP mounting is recommended whenever panels will be removed frequently and requires planning and layout at the time of installation. There are two types of Z-clip mounting: the type where factory installed clips are epoxy-bonded into the fiberglass core of the panel, and the aluminum mounting system where the Z-clips are attached to the panel's aluminum frame with self-tapping screws.



Z-CLIP (FACTORY INSTALLED)



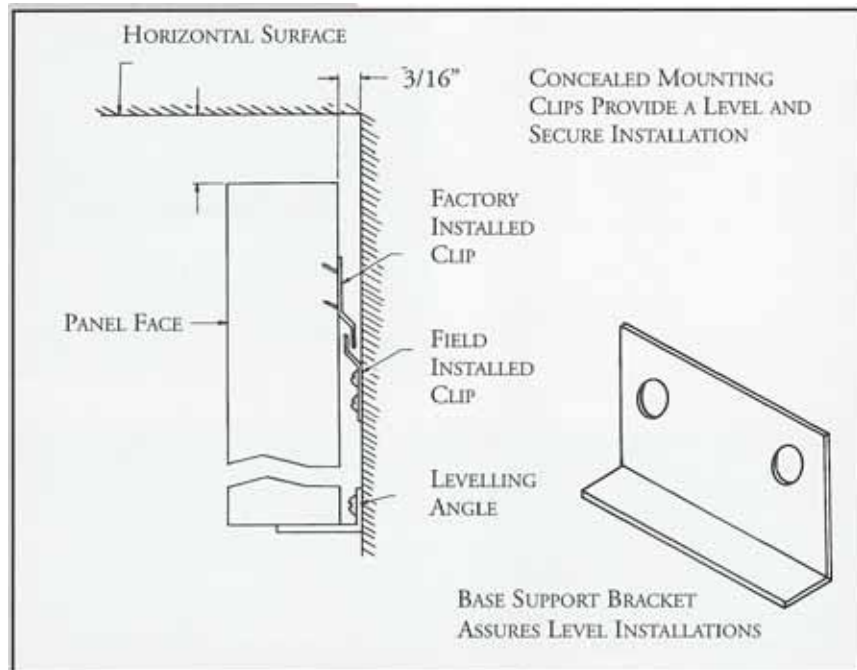
Z-Clip (ALUMINUM MOUNTING)



HOOK AND Loop



ADHESIVE



MOUNTING METHODS

STANDARD MOUNTINGS - WALL PANELS

METHOD	REQUIREMENTS	INSTALLATION	ADVANTAGES/ DISADVANTAGES
ADHESIVE See mounting Instructions All Panel Styles	Most construction adhesives. Some method of support needed until the adhesive sets. Plumb/level wall surfaces.	Permanent. Wall or panel damage, upon removal.	Speed of installation. Random application. Permanent mount. Wall or panel damage upon removal
HOOK & LOOP See mounting Instructions. All Panel Styles	Factory installed loop on panels. Field installed hook, supplied with panels (on rolls). Plumb/level wall surfaces. Supplementary contact adhesive if installed on irregular wall surfaces.	Semi-permanent. Some removal. Potential damage to fasteners if repeatedly removed.	Speed of installation. Field installed hook is supplied with an adhesive on back. Press/roll onto wall. Layout must match factory installed loop locations.
Z-clip (embedded) See mounting instructions. PS80/Trimline	Factory installed embedded panel clip. Field installed 8'-0." wall bar and screws, supplied with panel order. Plumb/level wall surfaces.	Constant removal.	1" clearance req'd. at all horizontal intersecting surfaces. Wall bars may be cut to fit wall surfaces. Wall anchors may be needed to install wall bar. Locations of clips vary with panel size. Wall bar location must match factory-installed clips. Panel clips cannot be relocated after embedding.
Z-clip (Frame Mtg.) See mounting Instructions. Aluminum Frame Panels	Factory installed panel clip Field installed Z-clips and screws supplied with panel order. Plumb/level wall surfaces.	Constant removal.	1" clearance req'd at all horizontal intersecting surfaces. Wall anchors may be needed to install wall clip. Locations of clips vary with panel size. Alignment between panel & wall clips is critical, increased layout time. Extremely secure fastening system.
MAGNETIC Resin Edge Pnls.	Factory installed 1" wide magnetic tape or 4" wide magnetic plate assemblies (Special Order). Plumb/level wall surfaces. Metallic mounting surfaces.	Some removal.	No damage to mounting surface. Fairly random installation. Weakest installation bond. Higher cost.

STANDARD MOUNTINGS - CEILINGS (SEE DRAWING 3)

METHOD	DESCRIPTION	USED ON	
EYEBOLT Drawing #3	Threaded plated steel eyebolt 1/4"-20 Thread installed into captivated nut or embedded nut.	Trendsetter II or AL Baffle.	
T-GRID CLIP Drawing #3A	Threaded steel scissor clip 1/4" -20 thread. Installed into captivated nut or embedded nut. Attached to standard drop ceiling grid pieces. Scissor action to allow clip to grasp T.grid.	Trendsetter II or AL Baffle.	

MOUNTING METHODS

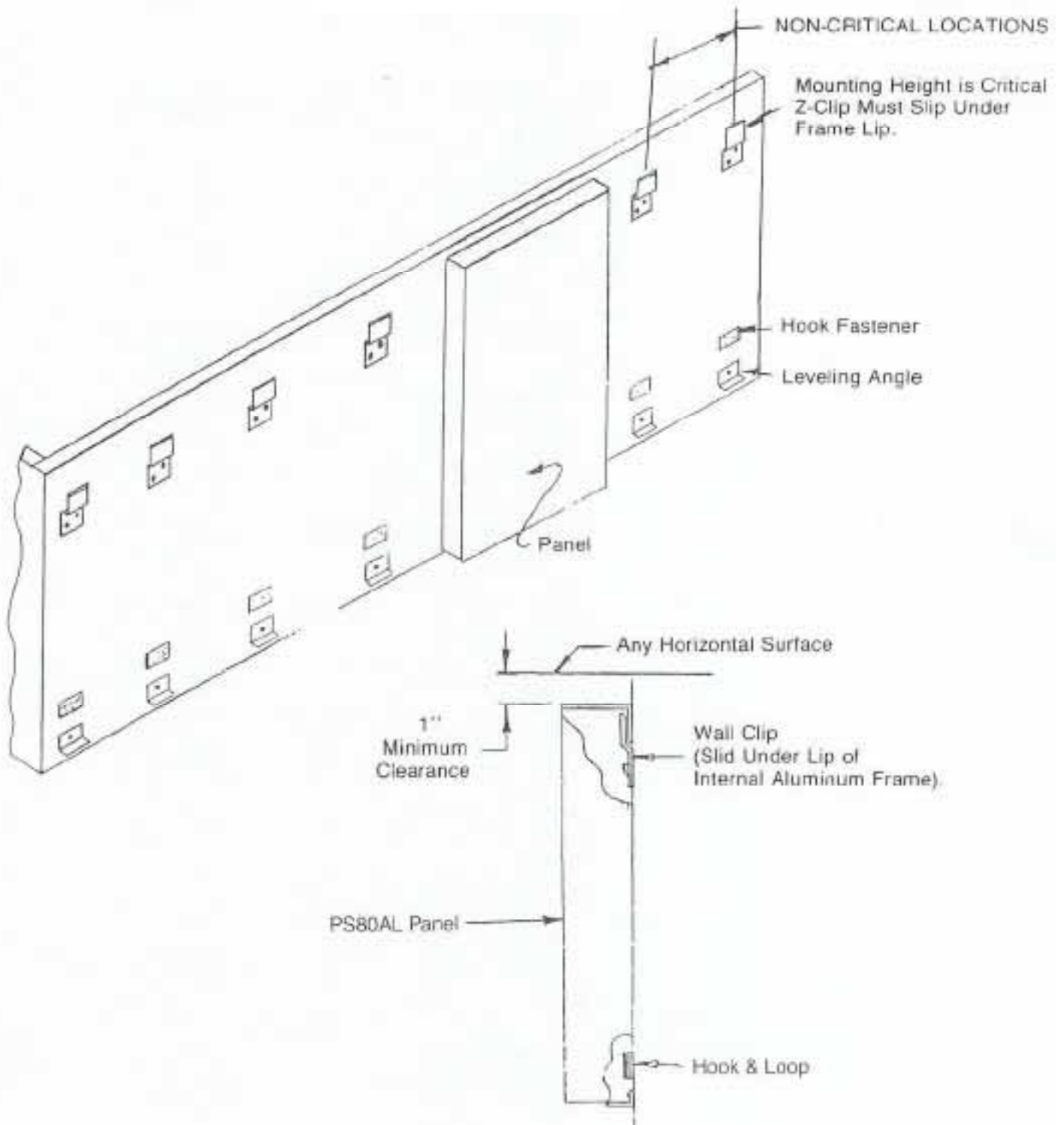
OPTIONAL MOUNTING . WALL PANELS		
METHOD	DESCRIPTION	
PS80AL DIRECT CLIP (Drawing 1)	<p>The Z-clip is mounted directly to the wall surface in a location that will allow the wall mount clip to slide directly under the flange of the panel frame. This method eliminates the need for a panel clip. Also, there is considerably less alignment required when locating the wall clips. Tile wall must still be plumb and the clips level for a successful installation. Hook & loop fasteners may be used to secure the bottom flange of the panel.</p> <p>ADVANTAGE: REDUCED LAYOUT TIME, FEWER FASTENER COMPONENTS.</p>	
STUD ONLY INSTALLATION (Drawing 2A)	<p>Used when there is no wall surface, our panels actually serve as wall surfaces. The wall bars must be attached directly to the wall studs. This can be done using full-length wall bars / clips. Available products are our PS80 Trimline 8'-0" wall bar and continuous lengths of our AL frame Z-clip. Up to 12' - 0" lengths (special order only - minimums apply).</p> <p>ADVANTAGE: REDUCED LAYOUT TIME, FEWER FASTENER COMPONENTS.</p>	
FLUSH PANEL TOP AT HORIZONTAL INTERSECTION (Drawing 28)	<p>Used when required 1" clearance for Z-clip fastener engagement is not acceptable. The installation is accomplished by installing tile panel and wall clips so they engage by sliding up into each other as compared to our standard mounting. Once tile panel clips are engaged by pushing up, the bottom of the panel is secured by using hook and loop fasteners (optional) and some type of bottom support blocking or trim that can be installed after the panel clips are engaged. The panel must be supported until its weight can be released onto the bottom support.</p> <p>ADVANTAGE: ELIMINATION OF THE 1" CLEARANCE GAP. FEWER FASTENER COMPONENTS.</p>	
J-TRIM Commercially Available	<p>Recommended for 1/2" panels where accurate field dimensions are not available or where extreme out of square wall conditions prevail. Standard commercially available J-Trim may be used to create a mounting frame for our panels. The panels can be manufactured to dimensions that will allow the finished panel to fit within the J-Trim return flange and still have the J-Trim hide the difference created by the allowance for lift. The panel can be secured using an adhesive or hook and loop fasteners if the flange clearance will allow.</p> <p>ADVANTAGE: REDUCED LAYOUT REQUIRED FOR OUT OF SQUARE CONDITIONS. STANDARD PANELS RATHER THAN CUSTOM TO FIT OUT OF SQUARE CONDITIONS.</p>	
OPTIONAL MOUNTING . CEILINGS		
METHOD	DESCRIPTION	USED ON:
CLOUD MOUNT (Drawing 4)	<p>Standard wall panels with eyebolts installed to back of frame. Panel face hangs parallel 10 floor, this creates a "cloud" hanging effect. Panels can be installed to create a dropped ceiling look. Excellent alternative to baffles.</p>	Aluminum frame or resin edge.
THREADED RODS	<p>Threaded rods can be used to install AL baffles or cloud mount panels. Tile threaded rod must have a 1/4" x 20 thread and be supplied and field installed by the customer.</p>	AL baffles or aluminum cloud mount panels only.
HANGING CLIPS	<p>Special PS80 hanging clips for use where asbestos in the wall will not allow the wall surfaces to be disturbed. The special clips are embedded to the top of the PS80 panel. The clips have hanging holes that allow a customer supplied hanging device to be attached. These panels are then suspended from an overhanging surface or a ceiling as near 10 the wall as possible to create a wall panel look.</p>	PS80 panels.

MOUNTING METHODS

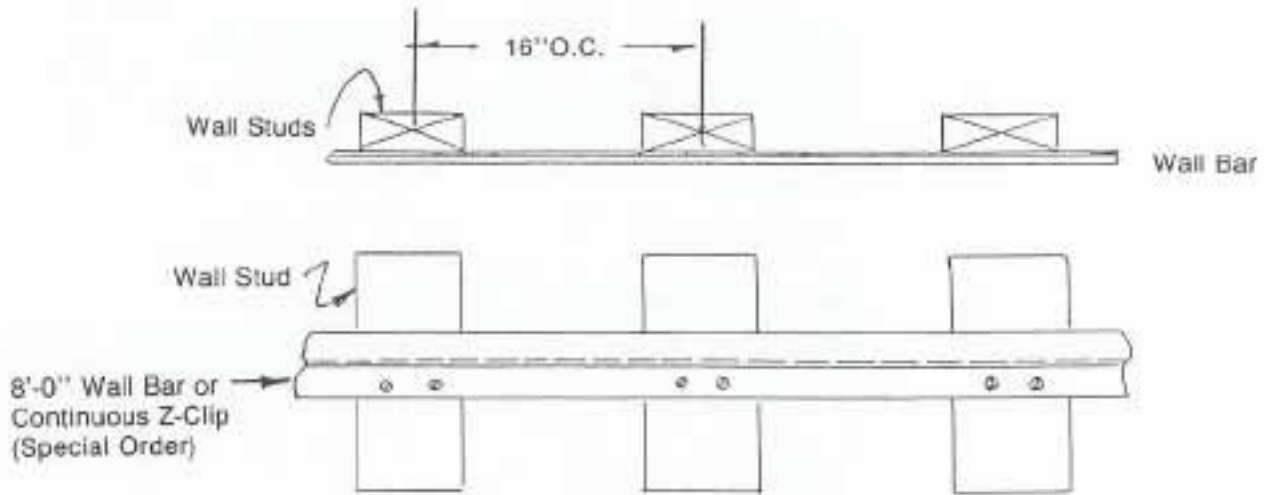
TIPS AND IDEAS

1. Wall surfaces must be square and plumb. If panels are installed on out of plumb wall, misalignment will become very apparent. Care should be taken to prepare the wall prior to installation of any fastener. A few minutes of prep time will result in greatly reduced installation time. A majority of installation problems occur due to lack of preparation prior to installation of hardware and panels.
2. Ambient lighting conditions must be taken into account. Various types of wash, spot and even natural lighting can create shadows that can magnify even the smallest panel misalignment.
3. Consider combining various types of mounting within a job. Use of adhesive where removal is not necessary. Use hook and loop where the 1" clearance gap is not desired or not possible. Use Z-clips for long expanses of same size panels to keep wall clip locations to a minimum, be creative. Although it takes less time to order with all one type of fastener, considerable installation time may be saved by utilizing variations within an order. Keep in mind the variations in thickness of the fastener types when combining. It is better to make one wall a particular type rather than mixing types on the wall.
4. Utilize a level line as a basis for fastener / panel location. Once the level line is established, all leveling angles can be installed assuring that panels will be level once installed.
5. Incorporate a supplemental holding method when installing panels with an adhesive. All adhesives have an open time, that is the time required to harden or set. During the open time, the panel must be supported so it does not slip or fall from the mounting surface. Finishing nails acting as impaling pins or hook and loop fasteners are both excellent supplemental fasteners.
6. To expedite installation, arrangements can be made to pre-ship the field-installed portion of the fastening system. This will be done only when drawings showing the exact location of the fasteners on the panels are approved by the customer and the manufacturer in writing. The installer can substantially reduce his installation time using this method.
7. Leveling angles or some other form of bottom load bearing device must be used for wall panels. These are intended to be the main load bearing support for the fastening system.
8. Allowances for the thickness of the various types of fasteners must be accounted for when field dimensioning, also, when allowing for overlaps at inside and outside corners. (Drawing 5)

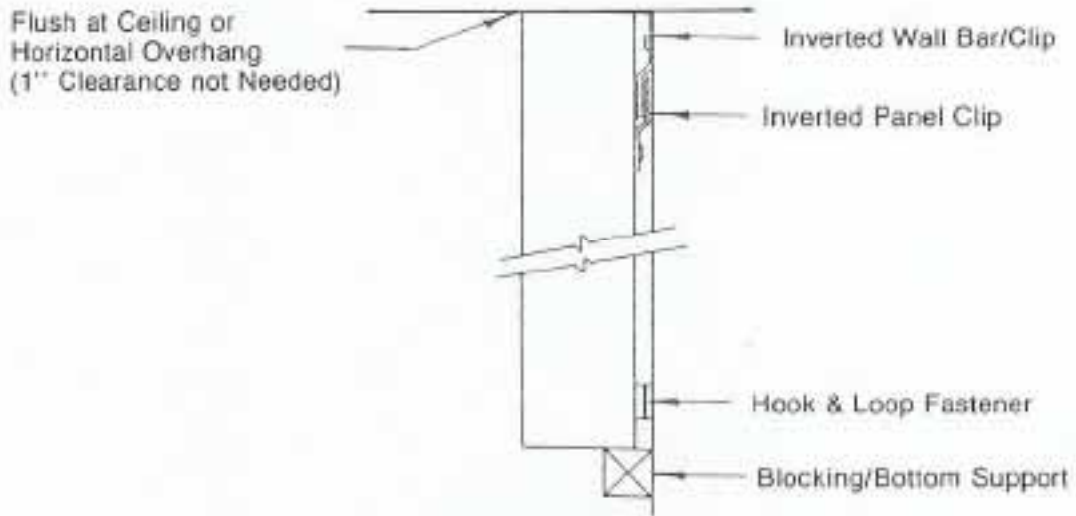
DRAWING 1
PS80AL DIRECT CLIP



**DRAWING 2
STUD / FLUSH MOUNT**



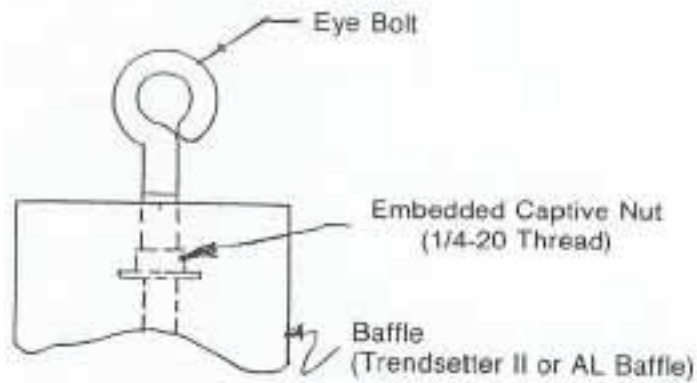
**DRAWING 2A
STUD ONLY INSTALLATION**



**DRAWING 2B
FLUSH PANEL TOP W/ CLIPS**

**DRAWING 3
STANDARD CEILING MOUNTING**

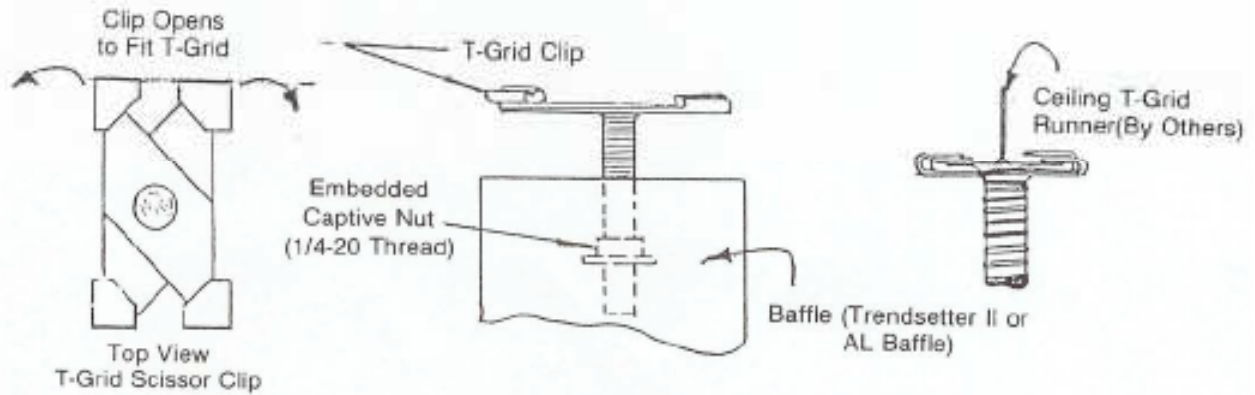
EYE-BOLT MOUNT



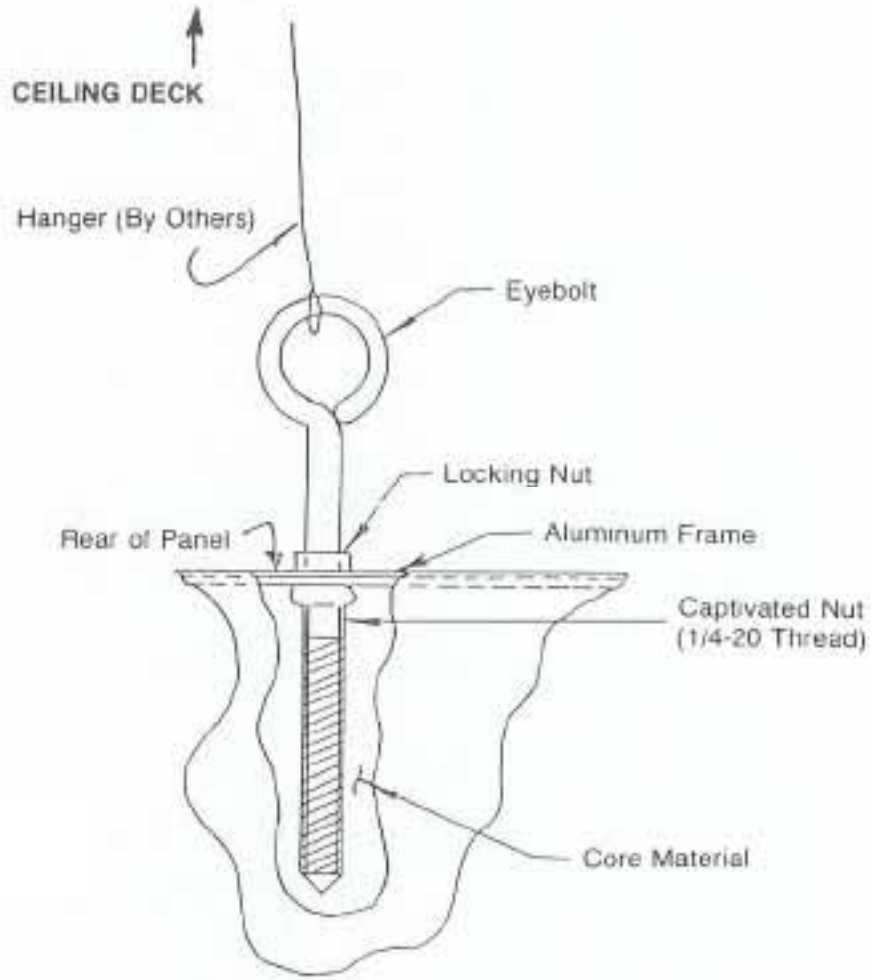
**DRAWING 3A
STANDARD CEILING MOUNTING WITH T-GRID**

T-GRID SCISSOR CLIP MOUNT

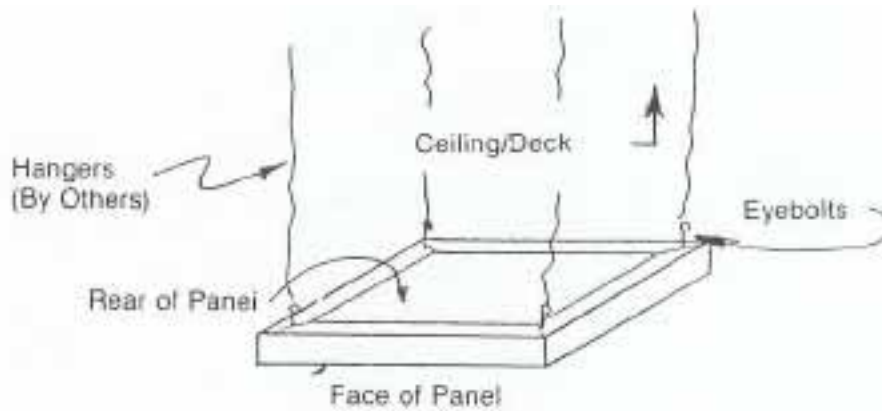
T-GRID SCISSOR CLIP MOUNT



**DRAWING 4
OPTIONAL CEILING MOUNTING**

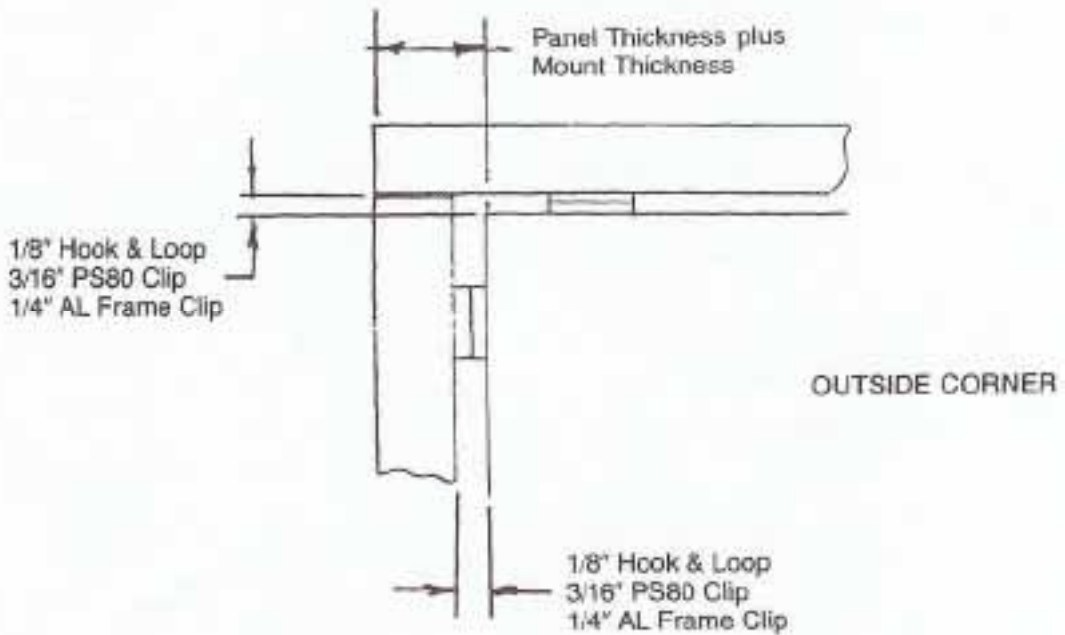
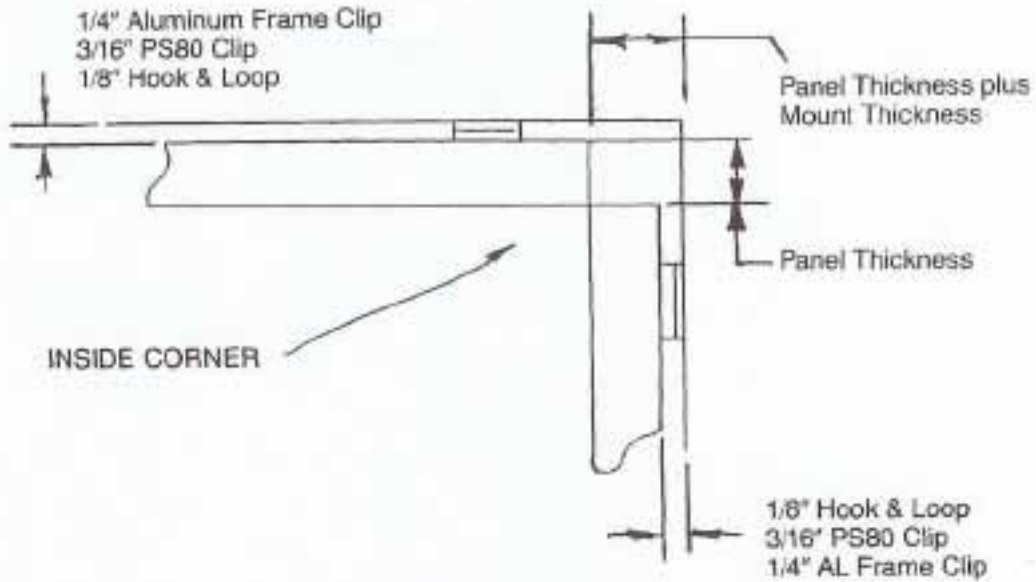


**ENLARGED DETAIL
OF CLOUD MOUNT**



CLOUD MOUNT

DRAWING 5
CORNER ALLOWANCE FOR MEASUREMENT



INSTALLATION INSTRUCTIONS

Adhesive

Adhesive mounting is ideally suited for applications requiring speed and ease of installation or flexibility to adjust to various field conditions. This type of installation requires no layout time for the installer due to the random application of adhesive to the panels.

STEP 1: Wall surface to be clean and free of any surface obstructions.

STEP 2: Install leveling angles (supplied w/ panels) using appropriate mechanical fasteners.

*****DO NOT INSTALL PANELS WITHOUT LEVELING ANGLES*****

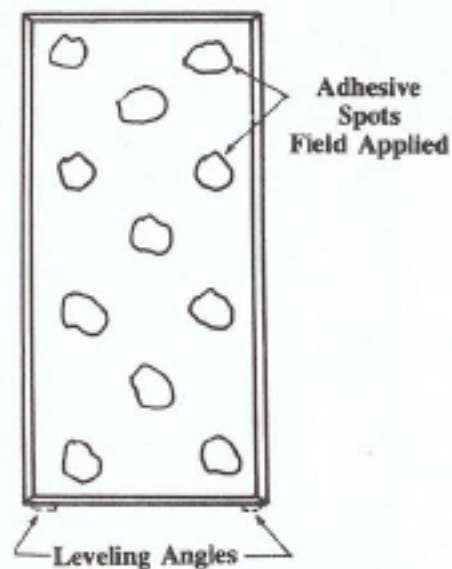
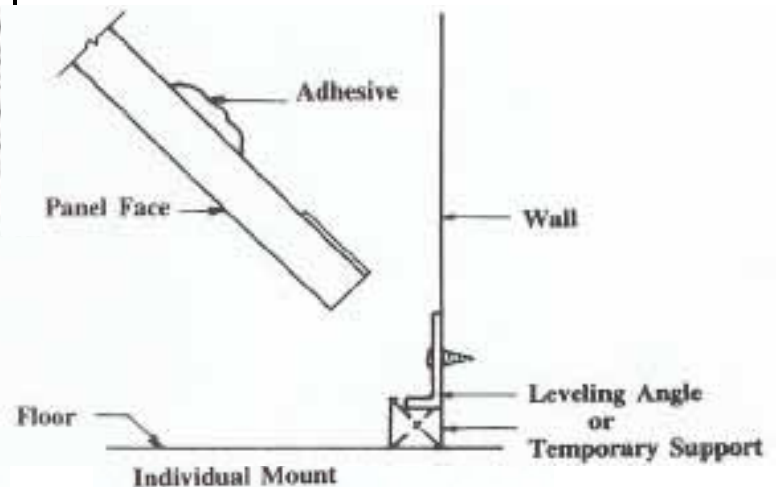
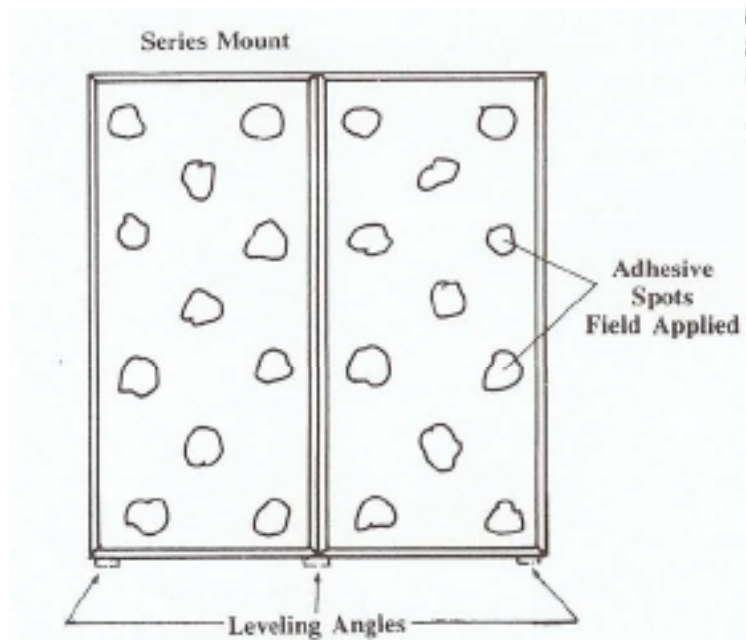
The leveling angles are the primary panel support. If panel installation is from "floor up" leveling angles are not required.

STEP 3: Prepare panel for installation. Mark back of panel for field cutting (if required). Carefully cut fiberglass from back of panel. Then cut the covering surface leaving enough covering to allow for wrapping of the field cut area. Carefully apply adhesive to the cut-out fiberglass edges and panel back then fold the excess covering around the cut-out area edges and wrap the back of the panel.

STEP 4: Apply "spots" (approx. 4 x 6 " diameter) of panel mounting adhesive at random locations around perimeter and across the vertical and horizontal centers of the panel.

STEP 5: Position the panel on the leveling angle and press the panel to the wall to set adhesive. Hold until adhesive sets.

NOTE: When measuring for field cut-outs, be sure to reverse the dimensions as cuts will be made from the back of panel.



NOTE: These instructions serve only as a guide. As there are many variable field conditions, the responsibility for recognizing these conditions and compensating for them lies with the installer.

Installation Instructions

Z - Clip

SCOPE:

Z-Clip mounting is recommended when the need For Frequent panel removal is desired. This installation method requires careful planning and layout at the time of installation.

STEP 1: Wall surface to be clean and free of any surface obstructions. Measure the Z-Clip locations on the panels. A 1-inch clearance between the panel top and any horizontal intersecting surfaces to provide for the sliding engagement of this type of installation must be provided. Transfer mounting dimensions to the wall-mounting surface. Mark the locations for wall bar installation. Install the wall bars using appropriate mechanical fasteners. Wall bars may be field cut to desired lengths.

STEP 2:' Install leveling angles (supplied w/panels) using appropriate mechanical fasteners.

***** DO NOT INSTALL PANELS WITHOUT LEVELING ANGLES*****

The leveling angles are the primary panel support. If panel installation is from "floor up" leveling angles are not required.

STEP 3: Prepare panel for installation. Mark back of panel for field cutting (if required). Carefully cut fiberglass from back of panel. Then cut covering surface leaving enough covering to allow for wrapping of the field cut area. Carefully apply adhesive to the cut-out fiberglass edges and panel back then fold the excess covering around the cut-out area edges and wrap to the back of the panel.

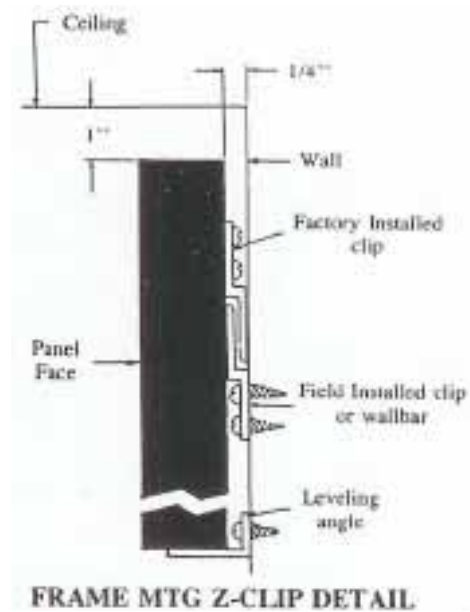
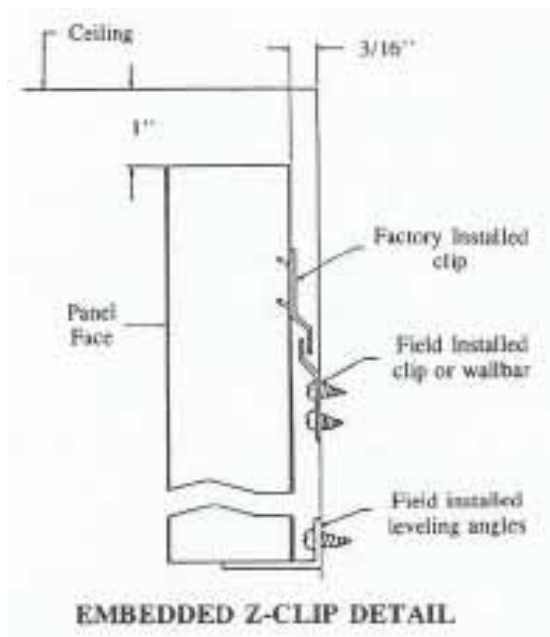
STEP 4: Lift panel to a position that will allow panel Z-Clip to slide into the wall mounted wall bar. There is some lateral movement available if necessary. Carefully slide the panel into position allowing the bottom to rest on the leveling angle. Shim as necessary to provide flush alignment of panel joints. (This is to account for wall irregularities.)

NOTES: Do not subject the factory installed Z-Clips to any peel type stress as this will break the fastener-to-panel joint. The Z-Clip is intended to hold the panel to the wall only.

Completely remove the panel to install any shimming devices. Lifting one corner of the panel will cause damage to the fastener-to-panel joints.

The use of the Z-Clip fastening system will create a gap of approximately 3/16 inches between the panel back and the mounting surface face. This is important for field measurements and edge treatment in a reveal type installation.

When measuring for field cut-outs, be sure to REVERSE the dimensions as cuts will be made from back of panel.



NOTE: These instructions serve only as a guide. As there are many variable field conditions, the responsibility for recognizing these conditions and compensating for them lies with the installer.

INSTALLATION INSTRUCTIONS

Hook & Loop

SCOPE:

Hook and Loop fastening is suggested when some measure of panel removal is desired. It is not intended for constant installation and removal as this could damage the fastener / panel bond.

STEP 1: Wall surface to be clean and free of any surface obstructions. Application can be made to vinyl covered walls using fastener "-L" available upon special request.

STEP 2: Install leveling angles (supplied w/panels) using appropriate mechanical fasteners.

*****DO NOT INSTALL PANELS
WITHOUT LEVELING ANGLES*****

The leveling angles are the primary panel support.

If panel installation is from "floor up" leveling angles are not required.

STEP 3: Prepare panel for installation. Mark back of panel for field cutting (if required). Carefully cut fiberglass from back of panel. Then cut covering surface leaving enough covering to allow for wrapping of the field cut area. Carefully apply adhesive to the cut-out fiberglass edges and panel back then fold the excess covering around the cut-out area edges and wrap to the back of the panel.

STEP 4: Determine the location of the hook tape to be applied to the wall surface. Carefully remove the release paper from the fastener. Press fastener to the wall very firmly. (Contact adhesive may be applied to the fastener prior to installation to wall for increased adhesion, if desired.) Use a small roller to remove any air entrapment.

STEP 5: Position the panel on the leveling angle and press the panel to the wall to engage the hook and loop fasteners.

NOTES: When measuring for field cut-outs, be sure to reverse the dimensions as cuts will be made from back of panel.

Do not install by applying the hook fastener to the factory applied loop fastener on the back of the panel, and press face of panel to apply fastening system to the wall. This can cause damage to the panel face and will result in an improper installation.

Dirt and body oils will greatly reduce the effectiveness of the fastener adhesive. Extra handling care should be taken when removing the release paper and installing the panel. Do not use excessive amounts of hook fasteners on the wall surfaces, as it will create a bond strength that may cause damage when panel removal is attempted. 1 square inch of hook and loop fastener will support approximately 4 pounds weight of in most applications.

When panel removal is necessary, the hook-to-loop fastener bond should be broken by peeling the panel from the wall. Removal by pulling from the panel face directly from the wall causes undue force on the fastener joint and will result in damage to the fastener and panel. The use of a flat blade tool will assist in the breaking of the fastener bond. Care should be taken to not break the bond between the hook fastener and the wall.

Do not attempt to reinstall the hook or loop portions of the fastening system after the adhesive has been used. Replace with a new piece as necessary.

The use of the hook and loop fastening system will create a gap of approximately 1/8 inch between the panel back and the mounting surface face. This is important for field measurement and edge treatment in a reveal type installation.

This method allows "flush" installation between panels top and any horizontal intersecting surface. No clearance is necessary.

NOTE: These instructions serve only as a guide. As there are many variable field conditions, the responsibility for recognizing these conditions and compensating for them lies with the installer.

