

Important Notes:

- The following instructions are intended for openings with standard "H" header and studded angle mounted flush to the wall. If you have obstructions (raised stucco bands, sills, etc.) that will prevent mounting flush contact your retailer for alternative mounting tracks.
- Use the guide below for your type of construction.
- Always wear gloves and safety goggles while cutting, drilling or handling storm panels.

Wood Construction

Drill Size:	Fastener Type:	Drill Hole:
1/8"	Lagscrew	1"
1/8"	Male Panel Mate	1"
1/8"	Female Panel Mate	1"

Concrete Construction

Drill Size:	Fastener Type:	Drill Hole:
3/16"	Tapcom	1-3/4"
3/16"	M & FM Panel Mate	1-3/4"
3/16"	Lead Anchor	1"

Start Here:

On paper, draw a layout of your home, noting the location of each opening. Then number each opening with your front door as #1 then move counter clockwise and number each opening.

Measure both width and height of each opening to be protected, from the outside of your house.

Figure the total number of panels needed along with their height by using the corresponding chart in the brochure.

Panels can also be mounted horizontally by using (2) studded angles installed vertically on each side of your opening.

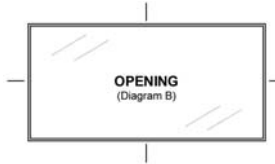
Material Order Form

Opening Number	Opening Size: W x H	Aluminum Panel	Clear Panel	Panel Height	H-Header Size	Studded Angle Size	CPW Sidewalk Bolt & Wingnut =Stitching
1	36" x 51"	2	1	57"	39"	39"	7 each

Installation Instructions:

Step 1: Mounting "H" Header and Studded Angle

- Drill 1/4" holes into "H" header and studded angle not more than 6" on center (oc) and within a maximum of 3" from each end (see Diagram A)
- Mark the horizontal and vertical centers of your opening and the center of your mounting tracks (see Diagram B).
- From the center mark on each side of opening measure half the distance of panel length to the top and to the bottom of the opening and make a mark. Make sure the distance between your two marks equals the total panel length.
- Beginning with the bottom, use a level, now draw a vertical line below the entire opening (must be a minimum of 3 1/2" below the edge of opening).
- Place the studded angle over the bottom line so the holes are centered on the line and with the opening. Mark all holes to drill (make sure anchor centers are a minimum of 3 1/2" below the edge of the opening).
- Drill holes using the type and size of drill bit required for your type of construction. For concrete, blow out all holes to remove cement dust. See chart for drill sizes, fastener type, and hole size.
- Attach studded angle to the bottom of the opening.
- For "H" header installation first place a panel on the left side and one on the right side of the studded angle and fasten with wingnuts. Using a level on top of the panels, make sure the tops are horizontal and tighten wingnuts.
- Place the "H" header on the panels and fully seat it. Make sure the system is centered horizontally with the opening. Now gently raise the "H" header up until there is a maximum of 1/4" space between the top of the mounting holes, then drill and mount the header. The job is complete.



Step 2 Mounting Panels

- It is recommended that gloves be worn while installing panels. Always start left to right and overlap each panel.
- Slide the top of each panel into the "H" header then push in the bottom over the Studs and install wingnut at the bottom.
- When installing clear panel first skip that location and install the next aluminum panel first and attach only one wingnut at the bottom right of the panel.
- Install the clear panel in the opening between the aluminum panels, making sure it rests on top of aluminum panel at the overlaps.
- For the clear panel to fit you can gently squeeze each riser to place keyhole over studded angle. Polycarbonate has memory and will retain some flatness (wider than aluminum panel until installed).
- To reinforce the clear panel installation, install and tighten 1" sidewalk bolt with a clear panel washer and wingnut by first drilling a 1/4" hole 3" from top of panel below "H" header and at the midspan of overlaps as in Diagram A. Each clear panel requires 7 clear panel washers.
- Complete the panel installation on one window at a time. Making sure to tighten all fasteners. Using a permanent marker number each panel in the sequence they were installed and identify each opening. Record number on your layout and save for later applications.

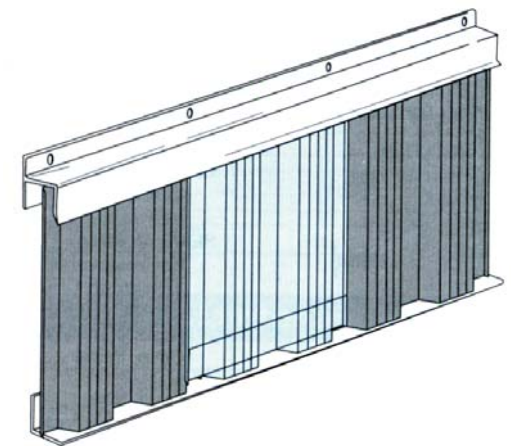
ERTHA® Storm Panel Installation and Specification Guide

Distributed By:
















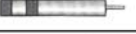

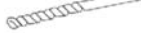


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Metal Panels Manufactured by:
Eastern Metal Supply

Parts List:

1	.050 Aluminum Panel or 24 gauge Galvanized Steel Panel	
2	Polycarbonate Clear Panel	
3	H-Header Top Track	
4	Studded Angle- Bottom Sill	
5	Lagscrew- Permanent Mount in Wood	
6	Tapcon- Permanent Mount in Concrete	
7	Male Panel Mate- Permanent Mount in Wood or Concrete	
8	Female Panel Mate- For Removable Mount for Wood or Concrete	
9	Lead Anchor- For Removable Mount in Concrete	
10	Sidewalk Bolt- 1 1/2" For Removable Mount 1" Used in CPW	
11	Clear Panel Washer- (CPW) Reinforces Clear Panel	
12	Wingnut- Secures Panel to Sill used with CPW also	
13	Wingnut Driver- Secures Wingnut	
14	Lead Anchor Set Tool- Taps in Lead Anchor	
15	5/16" Nut Driver- Secures Tapcon	
16	1/4" Steel Drillbit- Mounting Holes in Tracks and Panels	
17	3/16" Masonry Bit- Drills Holes for Tapcon into Concrete	
18	Combination Drillbit- Drills Hole for Lead Anchor into Concrete	

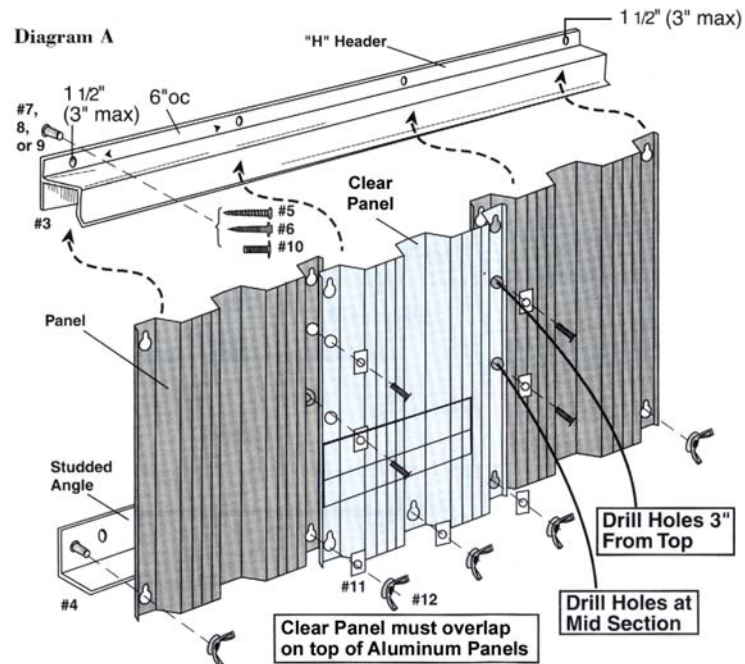
Tools Required:

- Pencil • Tape Measure • Level • Hammer • Electric Drill/ Hammer Drill • Straight Screw Driver • 1/4" Steel Drill Bit • 3/16" Masonry Bit • Blower/Turkey Baster-a Tool* for removing Cement Dust • 5/16" Nut Driver • Lead Anchor Set Tool • Wingnut Driver • Electrical Extension Cord • Black or Red Permanent Marker •

Required tools for direct mount and removable tracks with lead anchors

ERTHA® Storm Panel System

Metal Panels Manufactured by:
Eastern Metal Supply



Number of Panels:

Opening Width:	# of Aluminum Panels	# of Clear Panels	"H" Header	Studded Angle
20" - 37"	2	1	39	39
38" - 49"	3	1	51	51
50" - 61"	4	1	63/75	63/75
62" - 73"	4	2	75	75
74" - 84"	5	2	87/99	87/99
85" - 96"	6	2	99	99

Panel Height

Opening Height:	Panel Height:
23" - 26"	33"
26" - 41"	47"
40" - 51"	57"
52" - 64"	70"
63" - 82"	88"

Warning:

The homeowner or tenant is advised that this storm panel system will not offer hurricane protection unless all reinforcing bolts and clear panel washers are properly installed. Clear Panel must overlap on top of Aluminum Panels. Clear Panels are to be installed only for the duration of a hurricane warning period and are not intended for permanent use, with prolonged exposure to the sun.

While the storm panel is installed, the openings blocked cannot be used as escape exits.

Storage & Maintenance:

Protective gloves should always be worn when handling panels. Panels should be stored flat to prevent a tipping hazard, but should be elevated off of the floor with several pieces of 2 x 4 lumber to prevent moisture from contacting metal. Make sure panels are clear and dry and stored in an area with good air circulation. Do not wrap panels in plastic or other moisture trapping material. If moisture discoloration occurs (gray or black stain) this does not effect your structural strength.

Lexan is an extremely strong material, however, it can be scratched. When moving the panels (putting up, taking down, or storing), be sure to avoid contact with abrasive surfaces such as concrete walls, stucco, and sharp metal corners. Also, be sure to wash away abrasive particles and granules of sand before storing in the nesting position.

If panels need cleaning, use ONLY SOAPY WATER and a clean sponge or rag. Dishwashing detergent and water is recommended. DO NOT use ammonia, chlorine bleach, or any product containing solvent based ingredients. DO NOT use abrasive cleaners. DO NOT use steel wool pads, scrubber sponges, or a used sponge or rag that may have sand particles embedded in it.

Illustration A.

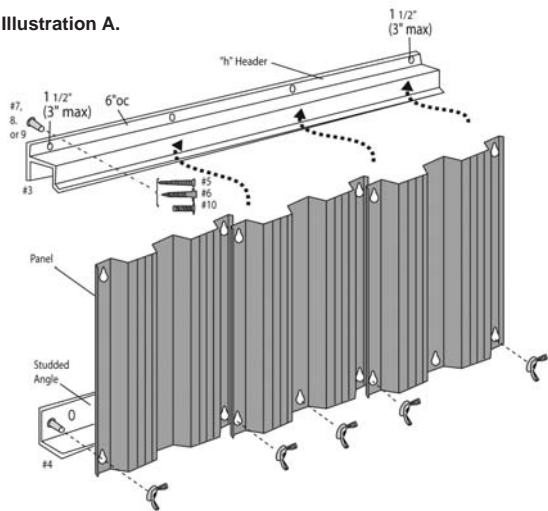
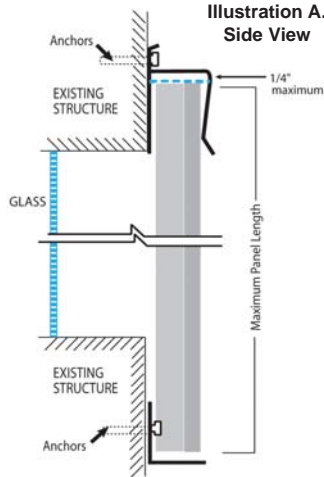


Illustration A. Side View



nut driver, screw the header to the wall, level it, drill the remaining holes and fasten with the appropriate tapcon (if walls are heavily stuccoed, use a minimum 2 1/4\"/>

1 1/2\"/>

Installation Instructions:

Mounting "h" Header and Studded Angle:

Concrete or CBS Construction

1. Drill 1/4\"/>

See Illustration A.

2. Mark the center of both the header and studded angle.

3. Locate the center of the top of the opening and pencil a 4\"/>

See Illustration B.

4. Align the center mark on the header with the vertical line at the top of the window. Level the header track while verifying that the bottom of the track is even with the top of the opening.

5. While holding the header in place, make a mark in one of the 1/4\"/>

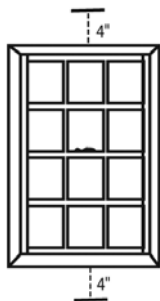


Illustration B.

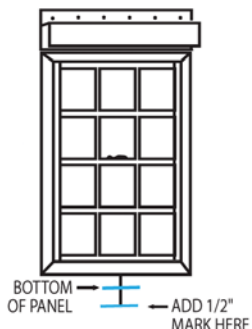


Illustration C.

Installing Panels

1. We recommend that installer use gloves and eye protection during installation. Always start left to right and overlap each panel.
2. Slide the top of each panel into the header and then push the bottom in over the studs. Verify that panel is straight and then install wing nuts on studs. The maximum gap between header and panel should be 1/4\"/>
3. Complete the installation by overlapping the remaining panels and checking that all wing nuts are tightened.

Mounting "h" Header and Studded Angle-Wood

1. Panel sizes are determined by the amount of available structure around the opening. Structure for wood installations must be wood studs. You cannot attach tracks or panels to plywood, siding or any other non-structural surface.

2. Repeat steps 1-4 as described under mounting for concrete and CBS construction.

3. If the header (area above opening) is similar to Illustration D, you can proceed. While holding the header track in place, make a mark in one of the 1/4\"/>

4. If the plate (area below opening) on your window is similar to Illustration D, you can proceed. Take the distance from the top of the sill to the top of the plate (2\"/>

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Suggestions:

1. Before removing panels from openings, mark each panel with a permanent marker with the same number assigned to this opening on the diagram of your house that you completed earlier. Make several copies and place at different locations in the event that one copy is misplaced.
2. Machine bolts are paintable as well as metal panels, but be sure you receive recommended surface preparation from your local paint store.
3. Plan an escape route, since any opening protected by storm panels will be unavailable to you.
4. At least once a year, lubricate lead or brass anchors, wing nuts and studs located on studded angles.

Installation Instructions (con't):

5. The length of the panel needed in the example will be approximately 5" longer than the height of the opening. If your construction is similar to Illustration D, your panel length will be approximately 5" longer than the height of your opening. In general, your panel height is the distance between a point 1/4" from inside top of "h" header to bottom of studded angle.

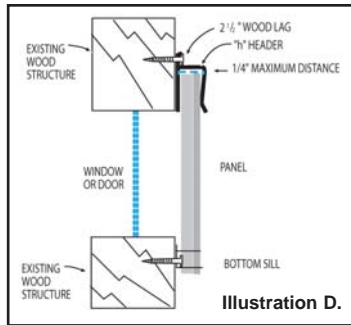


Illustration D.

See Illustration D.

In many cases, the stock sizes will not be the correct size for a code-approved installation. If this is your situation, you can special order your sizes from a sales associate.

6. To make tracks removable, substitute brass wood bushings and sidewalk bolts for wood lags.

Mounting "h" Header and Studded Angle-Wood with Brick Facade

1. Use the same instructions as for wood except you must substitute 6" hex lag bolts as fasteners and pre-drilled brick façade. See Illustration E.

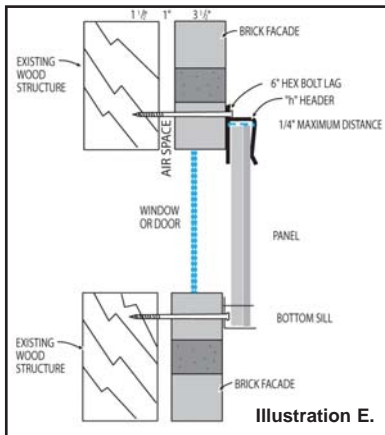


Illustration E.

Mounting "h" Header and Studded Angle-Wood with Siding

1. Use the same instructions as for wood, however, you can better manage the slope of the siding by using a 1" build-out "h" header with a 1" build-out studless track. This is a special order product and is also available in 2" and 3" buildout tracks.

See Illustration F.

Mounting "h" Header and Studded Angle-Situations Requiring Horizontal Mount or Buildout

1. Window sills, doorsteps, expansive trim and other obstructions may prevent a normal flush mount. In most cases, the most cost-effective method to address this problem is to employ a horizontal mount installation. In this case, the "h" header is eliminated and two studded angles are used. They are installed on each side of the window, allowing panels to be placed horizontally. Due to appearance concerns, we recommend that these tracks be made removable. This is accomplished by using either the lead or brass anchor system.

Fasteners are to be a minimum of 3" from edge/side of window.

See Illustration G.

2. Installation on some obstructions can be addressed by the use of buildout tracks. These tracks are also needed where building codes require a minimum separation between the glass and the storm panel. Buildout "h" header and studless tracks are available in 1", 2" and 3" sizes.

See Illustration H.

Direct Mount - No Tracks

1. Use lead or brass anchors and bolts. These should line up with keyholes in panels.
2. Male or female PanelMate® are an alternative anchoring method.

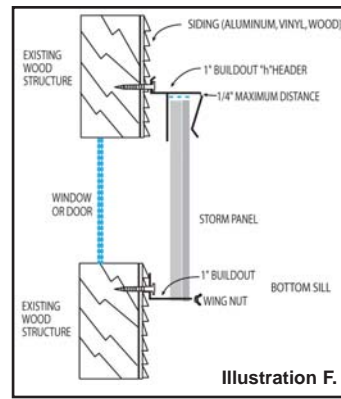


Illustration F.

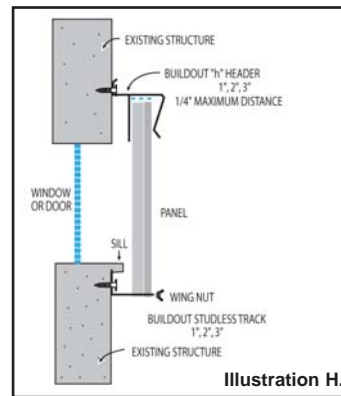


Illustration H.

Use the guide below for your type of construction:

Approved engineering is available upon request. Engineering will show alternative installations to address different standards, proper anchors, anchor spacing, edge distance and the minimum separation to the glass where applicable.

Disclaimer: These storm panels comply with many municipal codes and regulations, but may not comply with all requirements. Purchaser must determine that this product and its installation comply with -all codes and regulations for storm panels at the place of installation. Manufacturer disclaims any responsibility for determining compliance with codes and/or regulations applicable to the purchaser and makes no representation or warranties regarding suitability in this regard.

Relevant Code Approvals: Miami-Dade County, Florida Building Code (FBC), International Building Code (IBC), International Residential Code (IRC) and Texas Department of Insurance (TDI). See engineering for applicable code.

Wood Construction

Drill Size	Fastener Type	Drill Hole
1/8"	Lagscrew	1"
1/8"	Male PanelMate®	1"
1/8"	Female PanelMate®	1"

Concrete or CBS Construction

Drill Size	Fastener Type	Drill Hole
3/16"	Tapcon	1 3/4"
.234"	Male or Female PanelMate®	1 3/4"
1/2" Masonry Combo Bit	Lead Anchor	1 1/2"

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