



HOW TO MEASURE, PURCHASE AND INSTALL

AstroGuard is the next generation of hurricane protection that is Stronger...Safer...More Affordable...and Easier to Deploy than traditional hurricane panels. Tough enough to withstand a Category 5 hurricane, AstroGuard protects your home and family better than metal panels, clear panels, and plywood. Yet it weighs just ounces per square yard, so when storms approach, you can deploy AstroGuard with ease. How is that possible? AstroGuard's high-strength, high-tenacity fibers are interlocked and resin-coated--increasing the effectiveness exponentially. AstroGuard fends off hurricane-force winds, water, and flying debris. Its wind-blocking properties stop your home from becoming pressurized during a storm, thus preventing roof lift-off and catastrophic damage.

Follow these easy Do-It-Yourself instructions to **Measure, Purchase and Install** AstroGuard on your home.

Let's start with Measuring. Draw a quick sketch of your house showing where each piece of AstroGuard belongs. Start with the Front Door and go clockwise, numbering each opening. This drawing will come in handy at storm time.

Rule of Thumb: Begin with the Front Door and go clockwise.

You will need:

- A tape measure
- Pencil and paper

Rule of Thumb: If your openings are concrete, overlap the opening by four inches wherever possible. If you have wood-framed openings, overlap by one inch. This is required for proper installation of AstroGuard.

1. For a Standard Concrete Opening: Measure the opening Width first, then Height
 - a. For Doors, overlap the left side, right side and top by four inches. This means you will add eight inches to the width and four inches to the height. The same is true for Garage Doors and Sliding Glass Doors.

- b. For Windows, add four inches on all four sides. This means you will add eight inches to both the width and the height.
 - c. For Lanais, overlap the left side, right side, and top by four inches.
 - d. If you have trim or decorative molding around a window or door, simply measure far enough past the trim to allow four inches of fabric to lay flat against the wall.
 - e. If your windows are surrounded by stucco band that is thicker than ½", measure outside the band.
2. For a Standard Wood-Framed Opening
- a. Most wood-framed houses have a double 2x4 frame around each opening.
 - b. Anchors should be placed in the center of the 2x4 framing
 - c. Measure one inch past the buck opening on each side.
3. For each opening, write down the
- a. Width & Height
 - b. Type of Opening (window/door/garage, etc.)
 - c. Sides to Attach (Left & Right, Top & Bottom, Top & Both Sides or All 4 Sides)
 - d. Surface Type (usually concrete or wood), and
 - e. Number of Clips needed.

Rule of Thumb: Usually you will attach the longest two sides of each opening. Exceptions include Bay Windows (attach all four sides), Lanai or Patio openings (attach top and both sides) and other large openings with a width or height greater than 120" (attach three or four sides).

The Surface Type tells you which type of hardware to purchase with your AstroGuard material.

AstroGuard is attached to your home with patented Clips. In most cases, Clips are placed every 12 inches along the attachment sides of the AstroGuard material. However, it is important that you check the engineering documents included with your AstroGuard purchase for the proper clip spacing for your type of home and location.

Rule of Thumb: Clips are spaced at 12 inches apart for most homes, but you **MUST** check the engineering documents for proper clip spacing for your home.

Now, simply purchase the AstroGuard material and hardware required for your job and you will be ready to install.

HOW TO INSTALL

Congratulations on your purchase of AstroGuard. In a few short steps, your home will be safeguarded with the most advanced hurricane protection on the market.

First, gather your equipment. You will need:

- Power hammer Drill for concrete or standard drill for wood
- Drill Bits: 7/16" for deluxe anchor or 7/32" for Economy anchor
- Driver Bit for anchor purchased
- Cordless Screwdriver, Phillips head
- AstroGuard Material
- Clips and Hardware (purchased with AstroGuard)
- Sharp Scissors or Box Cutter
- Cutting Surface (a large sheet of cardboard works well)
- Air Duster
- 4-foot Level or Straight Edge
- Permanent Marker
- Stepladder

1. STEP 1: CUT MATERIAL

Spread the AstroGuard material out on the cutting surface. Using a box cutter or scissors, trim a piece to the size of your first measurement. Be sure you added a four inch overlap for concrete openings and a one inch overlap for wood openings when measuring.

2. STEP 2: ATTACH CLIPS

Double check which sides of the opening will need Clips. If top is being attached, start with the top. If not, start on the left side.

Make a mark 2" from the corner. Using your tape measure, mark the other clip positions all the way across that side. Repeat for the other sides that will be attached. Remember to space clips at 12" apart, center-to-center, or use the proper clip spacing for your area.

Attach the first clip. Put the top and bottom pieces of the clip together and slide the fabric in between the pieces until the edge of the fabric is even with the first notch.

Using your cordless screwdriver, attach 8 screws to the clip as shown. Attach the remaining clips.

3. STEP 3: DRILL & HANG ASTROGUARD

Hold the fabric over the opening, make sure it is centered.

Using a permanent marker, place a mark in the upper Left hand corner where the first clip will be attached.

Using your Power Drill, drill a hole in that spot.
Using the Driver Bit, install the anchor into the hole.
Fasten the fabric on that side.
Pull the fabric snug across the opening and mark the clip position on the other side.
Do not over-tighten fabric.
Drill holes and install hardware on other side.
Attach fabric.

4. REMOVE FABRIC AND LABEL

Once the fabric has been properly installed, remove each piece and label the opening with a permanent marker, using the numbers from your house drawing.

STORAGE AND CLEANUP

AstroGuard can be folded and stored in storage bags. Always make sure the fabric is clean and dry before storage. You can clean AstroGuard with water and a mild soap, such as dishwashing liquid. For persistent stains, use OxiClean and a scrub brush.

If any chipping of the stucco occurred during installation, simply fill the hole with stucco patch, let dry and touch up with paint. You can also paint the AstroGuard hardware after it is installed so it blends nicely with your home.

Thank you for purchasing AstroGuard.

For more information go to: www.homedepot.com and search "Astroguard"

Or call (855) 336-6040

ADDITIONAL NOTES:

Opening: AstroGuard is Category 5 hurricane protection that is easy to install and even easier to deploy. AstroGuard is perfect for Windows, Garage Doors, Sliding Doors, and enclosing entire patio or Lanai areas of your home.

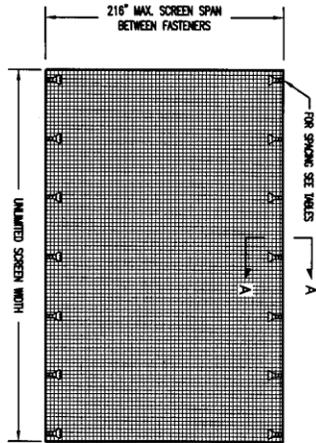
Hurricanes cause the most damage when the homes glazed openings (windows) are exposed and the home is exposed to wind that causes wind pressure to blow the roof off of homes. This is the largest damage to a home during a hurricane that will increase Insurance Premiums to the Maximum level. AstroGuard is the perfect product to protect your home during Hurricane Season. AstroGuard stops projectiles at impact and keeps your home from building pressure that will cause Catastrophic Damage.

We want to show you all applications of measuring your home with AstroGuard.

1. Bay windows are a very weak opening on your home because of the mitered Joint. Measuring a Bay Window Opening you want to overlap all sides by 3" to support the engineering for a 4 sided application.
2. Sliding Glass Doors is another exposed opening that can be covered with AstroGuard. Measure the opening and add 3" to both sides and to the top of the opening. AstroGuard is not required to go in the floor of any opening.
3. Lanai or Patio Openings are a perfect solution for AstroGuard. Large openings can be covered by measuring an overlap of 3" inches on both sides and 3" inches to the top.
4. Windows are the easiest and best solution by using AstroGuard. By overlapping all four sides of the opening you will insure that you are protecting your home with the strongest easiest hurricane protection on the market.

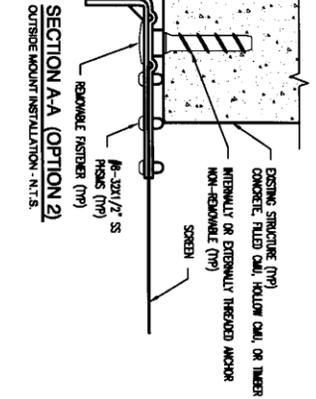
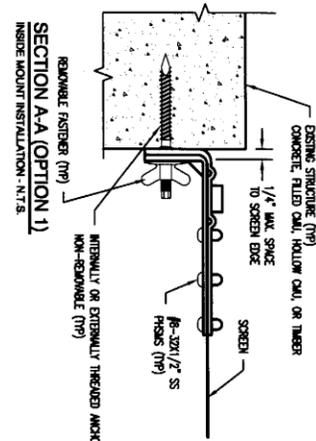
AstroGuard can be cut to fit any opening within the manufactures specifications. When purchasing your AstroGuard Hurricane Fabric layout AstroGuard and cut to your opening sizes adding in the overlap. Using either a box knife or commercial scissors you are ready to install your clips to AstroGuard.

Hardware: starting 2 inches from the corner of your hardware side, place the first clip. Knowing your clip spacing, mark center to center.



TYPICAL TWO-SIDED INSTALLATION
VERTICAL OR HORIZONTAL INSTALLATION - N.T.S.

NOTE:
FASTENERS CAN BE ATTACHED ON THREE OR FOUR SIDES.
SCREEN SPAN DIMENSION IS 216" IN THE SHOWN
DIMENSION BETWEEN FASTENERS.

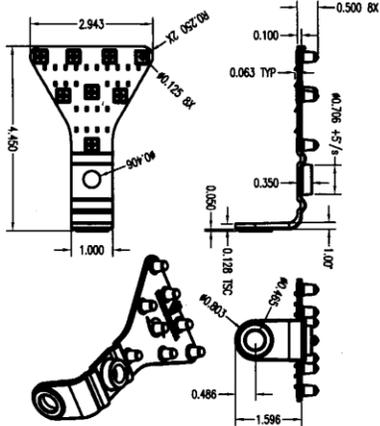


LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM
TX = PARALLEL LOADS (PLF)

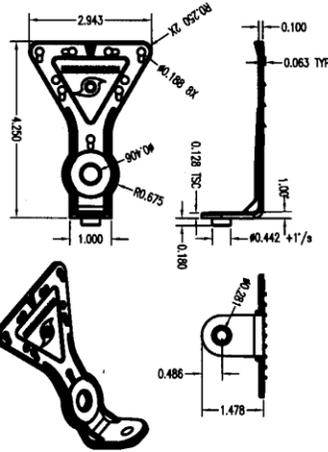
SPAN (INCHES)	60	55	50	45	40	35	30
216	1134	1070	1004	936	866	792	714
192	1020	962	903	842	778	712	642
168	905	854	801	747	690	631	570
144	744	702	659	614	568	519	469
120	651	615	577	538	497	455	410
96	553	521	489	456	422	386	348
72	353	333	312	291	269	246	222
48	254	240	225	210	194	178	160

LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM
TY = PERPENDICULAR LOADS (PLF)

SPAN (INCHES)	60	55	50	45	40	35	30
216	540	495	450	405	360	315	270
192	480	440	400	360	320	280	240
168	420	385	350	315	280	245	210
144	360	330	300	270	240	210	180
120	300	275	250	225	200	175	150
96	240	220	200	180	160	140	120
72	180	165	150	135	120	105	90
48	120	110	100	90	80	70	60



BOTTOM MOUNTING CLIP DETAILS
INSIDE OR OUTSIDE MOUNT INSTALLATION - N.T.S.



TOP MOUNTING CLIP DETAILS
INSIDE OR OUTSIDE MOUNT INSTALLATION - N.T.S.



Professional Engineer
J.K. [Signature]
FL No. 47316
DATE: 2-24-12

2010 FBC (NON-HIGH VELOCITY HURRICANE ZONE)

CA #6762
WWW.MEASWENGINERS.COM

2/2	Description: ASTRO GUARD Wind Abatement System	Project Name: HURRICANE FABRIC LLC PO BOX 80153 CLAYTON, MO 63105 PHONE: (238)966-0096 WWW.HURRICANEFABRIC.COM	REV. 1 DESCRIPTION xx/xx/xx--RESERVED	MEAS ENGINEERS, INC. 5858 Lorton Drive Newport News, VA 23633 (841) 822-3884 CA-8072
	Designer: J.K. Checker: J.K. Date: 02/24/12 Scale: NTS			