

## Why Is This The Next Generation of Hurricane Protection?

### The Polymer Fabric/Geogrid Composite Protects From All Storm Hazards

- The polymer fabric protects from wind and wind-driven rain
  - The geogrid protects from large flying missiles
  - No single layer protection provides the same level of protection
- The Self-Deployment and Storage System Surpasses All Others
- Self-deploying and self-storing
  - Covers spans up to 50' wide and 14' tall
  - Flexible mounting brackets can be used anywhere
  - Can be mounted horizontally or vertically
  - Can be deployed from the top, bottom or either side
  - Available in electric or manual models

### Flexible Wind Abatement Systems Are Well-Proven

Flexible wind-abatement systems have been in use throughout Florida, the Caribbean, the Gulf states, and Hawaii since 1999. Millions of square feet of high-strength industrial fabric has protected homes, businesses, hospitals, airports, government buildings through some of the worst storm seasons on record.

With approvals from insurance companies, Miami-Dade, state and international building codes, the validity of first-generation flexibly wind abatement systems is well accepted and proven.

While exploring new markets, Donovan Industries developed a product with incredible strength and began testing to see if it would work as a hurricane barrier. Their depth of experience in the development and manufacture of industrial fabric products in other industries led them to believe that the first generation flexible hurricane protection systems could be improved.

Donovan Advanced Hurricane Protection, Inc. was formed to develop and manufacture the next generation of flexible hurricane protection systems.

Donovan Enterprises has years of experience in fabric and mechanical systems product development. They have learned the value of bringing the best people together to accomplish the difficult task of creating the next generation of hurricane protection.

DAHP needed a combination of experienced and proven product engineering and a depth of experience in the flexible wind abatement industry. They found the first in Omer Akdag, Donovan's Head Engineer. The second came with the addition of Chris Nielsen who brings eleven years experience in the hurricane protection market.

The next step was to create a test lab that allowed DAHP to exhaustively test any product design using the same requirements as the tough Miami-Dade standards.

Now the real work began.

It took almost a year of continuous research, development, and testing to find a solution. One early result of this intensive approach was a realization that there is no single fabric capable of meeting all the requirements. The system must:

- Protect from the extreme wind pressures on high-rise condominiums.
- Protect from large flying missiles.
- Provide visibility so people can see out during a storm.
- Be easy to deploy so anyone can use the protection.
- Require little or no maintenance.

The team tested over a dozen of the strongest industrial fabrics available in various combinations to learn what actually worked. The end result is a remarkable product that combines the best two materials into a "sandwich" that provides both wind and flying missile protection. It is truly the next generation of hurricane protection.

DAHP has designed a composite screen made from trampoline fabric and a geogrid that allows visibility and airflow while stopping projectiles at speeds well above the requirements of approval agencies. This Donovan Advanced Hurricane Protection screen is so unique that it being patented. Innovative Mounting Another result of the experience of this team was an understanding of the reality of mounting flexible systems on condominiums and other difficult installations. They decided to develop a mounting system that was as innovative as their fabric solution.

Again, the team used their in-house testing lab and depth of experience in other industrial fabric markets. The system design specifications are rigorous:

- Must be capable of spanning 50 feet in width and 14 feet in height for use on condominium balconies and windows.
- Must be capable of electric push-button or manual deployment and storage.
- Must be capable of self-storage in a way that would not detract from architectural designs.
- Must be capable of being deployed horizontally, vertically or at any angle.
- Must be capable of being deployed bottom up, top down, from any side or any angle.
- Must be capable of supporting the fabric at wind pressures exceeding that required by any government agency or organization.

Again, the intensive product development approach of DAHP proved successful. The end result is a self-deploying and self-storing system that provides load-bearing support for the screen exceeding the original design requirements.

The DAHP mounting system is so unique that it, too, is patent pending.

**Approval & Production Status** Once these products were developed, DAHP began using its own testing laboratory to assure successful testing of the products in an official lab as required by Miami-Dade code, the Florida Building code, the International building code and the Texas Insurance board.

DAHP took further steps of getting all their testing methodology approved by Miami-Dade before initiating the official tests. All parties &ndash; DAHP, the independent lab and Miami-Dade &ndash; are aligned on the tests and the methodology with a focus on exceeding all requirements. This approach is so rigorous that some of the existing standards for testing are being refined.

As of this date &ndash; March 28, 2007 &ndash; DAHP has been tested in an approved laboratory for Miami-Dade, Florida and International Building Codes. The NOA is pending.

Testing of electrical system for Underwriters Laboratory certification is scheduled for March, 2007. Due to the time required for paperwork and regulatory approval, DAHP is expecting to go into full production in May of this year. Prototypes are being prepared for installation on select facilities prior to the final approval. Orders will be taken as soon as the Notice of Acceptance (NOA) is received.