Tie Down’s Patented Vector Dynamics Foundation System Provides Windstorm & Seismic Protection For Manufactured Homes

Vector Dynamics

Lateral Foundation System

Vector Longitudinal and Lateral Systems Combined

From the company that pioneered innovative and cost efficient foundation technology

TIE DOWN ENGINEERING • 5901 Wheaton Drive • Atlanta GA, 30336
www.tiedown.com • (404) 344-0000 • FAX (404) 349-0401
The Innovative High-tech Foundation System that defines strength and simplicity

As wind loads increase, lee side pier compressive forces simultaneously increase the Vector Foundation Pad’s resistance to horizontal sliding.

Full Scale Testing

In order to simulate the effects of wind loading (drag loads), Tie Down used a series of winches attached to dynomometers which were connected to the opposite wind side outer frame section. Special frame hooks attached to equalization cables were used to maintain uniform loads during testing.

On two days in May 2001, government and educational researchers used the propwash from a C-130 to test the strength of a single section manufactured home. Against sustained winds of 80-90 mph, gusting to 110 mph, the Vector Dynamics system did not allow any movement of the foundation or the home.
**Concrete Blocks**

Both single stack and double stack concrete block pier configurations can be set on each of the three Vector ground set Pads. Check applicable regulations for pier requirements and for maximum pier heights on single stack and double stack unreinforced piers.

**Metal Piers**

Metal piers or jack stands are readily adapted to the Vector System. U-bolts clamp the metal piers between the compression strut and the Vector Foundation Pads. Metal piers are generally limited to sets not exceeding 30” (below frame).

**Concrete Footers**

Concrete footers, pads, slabs, or runners provide for an extremely stable Vector installation set. Concrete footers are most commonly used for permanent foundations and/or where frost heave occurs. Concrete expansion anchor bolts require a minimum 4” footer depth. Concrete should be 2500 psi tensile strength minimum for all Vector concrete footer sets.

**Lateral/Longitudinal Systems**

Tie Down’s Longitudinal Stabilization Device is designed to combine with Vector’s Lateral component to easily and economically address both wind and seismic loads imposed on all four sides of a manufactured home. Once the longitudinal device is installed, the addition of a compression member and cross tension straps combines the longitudinal/lateral into one system (L²SD).
Examples of Lateral/Longitudinal Combined Systems

Single Section Home
For Wind Zone I

Double Section Home
for Wind Zone I