

BALLAST-LOK CONCRETE ROOF SLABS

Brooklin's Ballast-Lok concrete roof slabs and locking clips provide superior wind uplift resistance for protected membrane roofing systems. The innovative Ballast-Lok system has been proven to withstand wind uplift pressure of 180psf (8.6kPa), using the experimental safety factor of 1.5 as per the CSA A 123.21-10 dynamic wind test protocol.

As weather patterns become increasingly erratic, protecting flat roof decks from wind uplift is a growing concern. Over time, wind dynamics can cause fatigue in rooftop materials and lead to disastrous failures. The Ballast-Lok system provides insurance by locking down concrete roof slabs with high-performance polyethylene clips and pedestals.

Performance

Proven to withstand wind pressure of 180psf 1.5 (safety factor)

Environmental benefits

Reduces heat island effect and cooling costs, saves energy

TYPICAL APPLICATIONS

- Flat roof installations
- Green roof (LEED®)
- Low or high-rise structures
- Commercial buildings

Easy Installation

Simple tools increase speed and reduce labour

WIND UPLIFT

What is wind uplift?

Based on a report by Dr. Baskaran of the National Research Council**, wind is a random process. When it separates from roof edges, it creates zones of suction (negative) pressure which vary from one part of the roof to another and from one time period to another.

Determining wind uplift

There are many factors to consider when determining the potential for uplift on a building:

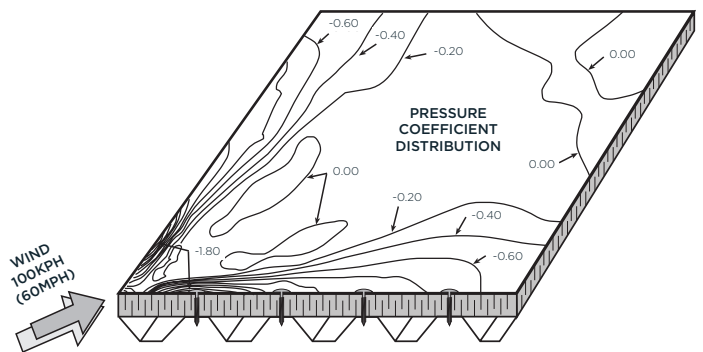
- Overall height of the building
- Terrain surrounding the building
- Type of roof deck on the building
- Special uses—such as airplane hanger, hospital, large dock doors
- Parapet walls and their height
- Geographic factors



“The paver-lock mechanism stayed intact and worked as a joint unit. In cases where other components failed, the pavers lifted and settled back to the original position without any damages to themselves or to the clips.”

National Research Council*

SPATIAL WIND PRESSURE VARIATION OVER A ROOF



SOURCES

- *Wind Uplift Evaluation of Protected membrane Roofing System, B-1454.4, NRC Institute for Research in Construction
- **Top 10 Questions and Answers on Static vs Dynamic Wind Testing for Commercial Roofs, Bas A. Baskaran Ph.D, P.Eng, Senior Research Officer, National Research Council Canada