

# CONCRETE ROOF BALLAST SLABS

## PRODUCT GUIDE



INNOVATIVE ROOF SLABS CREATE FUNCTIONAL AND ATTRACTIVE SPACES

Versatile  
Superior quality  
Cost-effective

## 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:

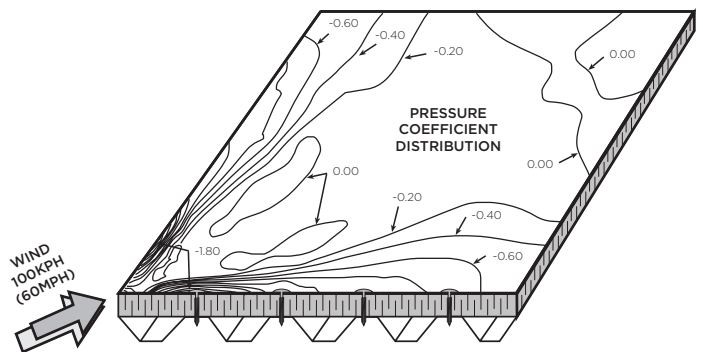
- Overall height of the building
- Terrain surrounding the building
- Type of roof deck on the building
- Special uses—such as airplane hanger, hospital, large dock doors
- Parapet walls and their height
- Geographic factors



“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

## PROTECTED MEMBRANE ROOFING SYSTEM

**BALLAST-LOK SLAB**  
610mm x 610mm x 50mm custom concrete slab with recess pocket centre on each edge of the slab to fit with Ballast-Lok Clip. Available in several finishes and textures including Solar White (LEED®).



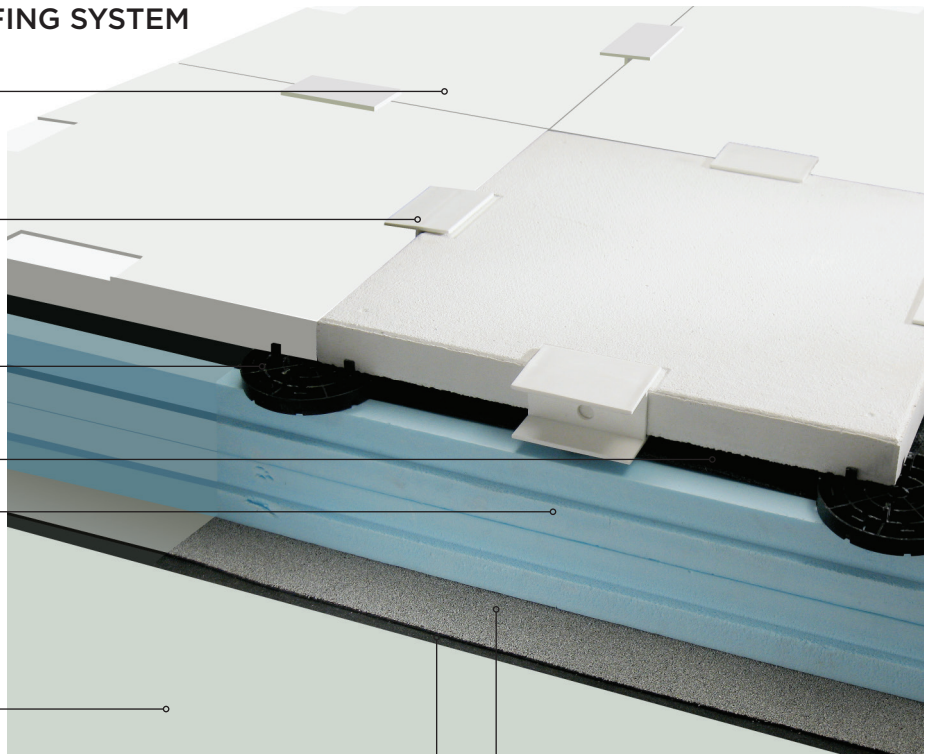
**BALLAST-LOK CLIP**  
A high performance polyethylene with UV protection.

**HD-75 BASE**  
3/4" high with 3/16" spacer bar and 6" wide fixed height.

**WOVEN POLYOLEFIN FABRIC**  
Protects insulation from UV damage.

**STYROFOAM**  
Extruded polystyrene insulation is designed for installation above waterproofing or roofing membranes in protected membrane roof (PMR) applications. Insulation helps the roof membrane maintain a steady temperature, minimizing the harmful effect of freeze-thaw cycles, weathering and physical damage during and after construction.

**PRIMER PAINT**  
An asphalt solvent blend designed as a primary coating for masonry surfaces prior to application of torched roofing systems.



**BASE SHEET**  
A high performance torch grade modified bitumen base ply designed for use in homogeneous multi-layer modified bitumen roof membrane systems.

**CAP SHEET**  
A high performance torch grade modified bitumen finish ply designed for use in homogeneous multi-layer modified bitumen roof membrane systems.

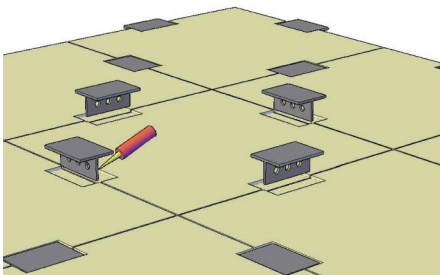


SLAB RECESS

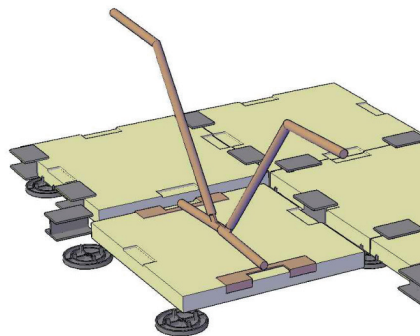


PLACING A SLAB USING LIFTING CLAMP

## ACCESSORIES



**REPAIR KIT**  
If for some reason, a slab needs to be removed from the Ballast-Lok roof assembly, a repair kit is available.



**LIFTING CLAMP**  
Allows two roofers to set the slab in place on top of the base plate.



**LEVERAGE FORK**  
Designed to raise the edge of two slabs while a base is set into position.

## SOLAR REFLECTIVE ROOF BALLAST SLABS

White solar reflective roof slabs promote green building design and new construction practices. They support the Canada Green Building Council's philosophy of creating energy-efficient and environmentally conscious buildings, and may contribute to LEED® project certification.

White solar reflective roof slabs can lower a building's overall energy costs by reducing the heat island effect, created when the sun's rays are absorbed and heat up dark rooftop surfaces. As their name suggests, white solar reflective pavers reflect the sun's rays away from the rooftop, which in turn helps decrease interior heat gain and reduce cooling loads.

### Lower energy costs

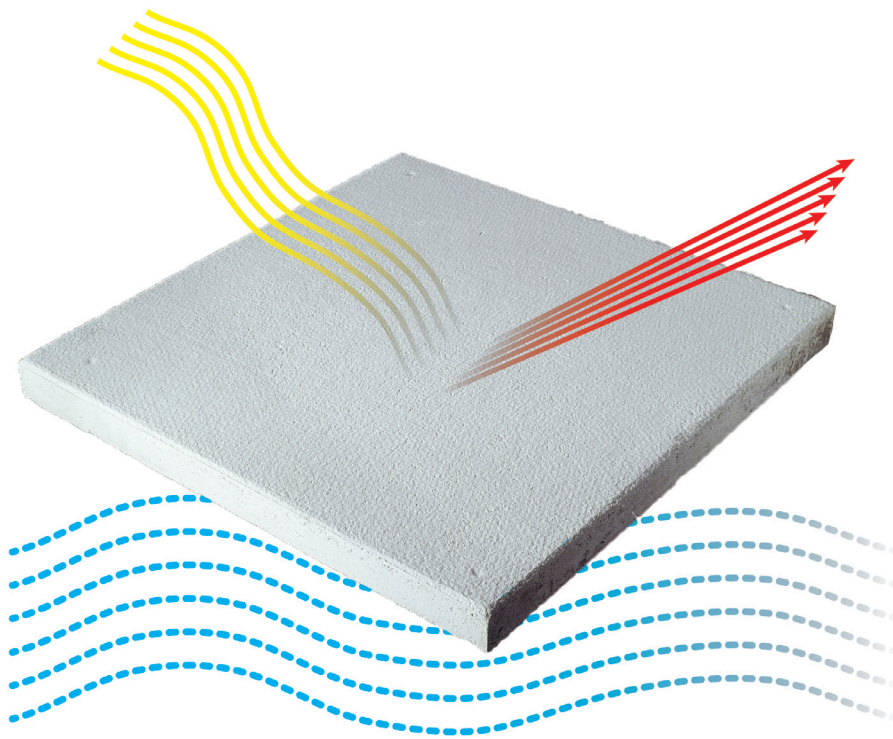
Reflect the sun's rays away from the rooftop, reducing interior heat gain and cooling loads

### Visual Impact

Available in standard matte and Shotblast-textured finishes

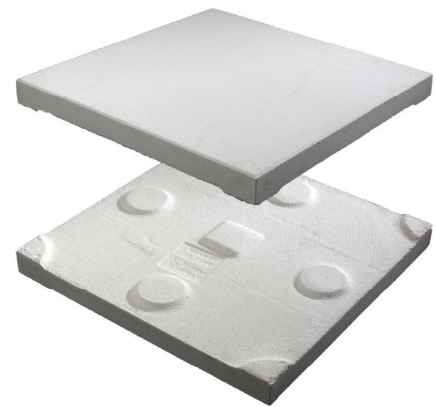
### Functional

Outstanding durability and slip resistance



### TYPICAL APPLICATIONS

- Rooftops
- Terraces
- Balcony designs
- Commercial buildings



SOLAR REFLECTIVE PEDSLAB®

### AVAILABLE FINISHES



Shotblast



Matte

### LEED® CANADA SOLAR REFLECTIVE INDEX (SRI)

Roof Type	Slope Rise:Run	Standard Solar Reflective Index (SRI)	Matte Finish (SRI)	Shotblast Finish (SRI)
Low Sloped Roof	≤2:12	78	<b>90.5</b>	<b>84.3</b>
3-Year Test Results washed			81.8	79.2



TORONTO, ON - SOLAR REFLECTIVE ROOF BALLAST SLABS

## TAKING THE LEED®

Solar Reflective Roof Slabs help support the Canada Green Building Council's (CaGBC) philosophy of creating energy-efficient and environmentally-conscious buildings. Green and sustainable building programs often impact the design and material choice used in new and retrofit construction projects.

To meet LEED® Canada standards, a solar reflective roof slab must cover a minimum of 75% of the roof area in a new construction. Roofs constructed with a combination of vegetation and solar reflective roof slabs may also meet these criteria.

The LEED® Canada program uses a credit (point) system to establish a building's performance. The system has three certification levels—silver, gold and platinum. As per SS Credit 7.2 Heat island effect, installing Solar White Reflective Roof Slabs or a combination of slabs and vegetated roof systems will help to achieve points towards LEED® Certification.



TORONTO, ON - CREATIVE DESIGN WITH SOLAR REFLECTIVE ROOF BALLAST SLABS AND CHARCOAL SLABS TO CREATE THE SHARKS

## ROOF BALLAST SLABS

Roof ballast slabs offer the strength, durability and beauty of natural stone, with the potential for time and cost savings because of their ease of installation. Slabs are precision fit with a consistent thickness and a slip-resistant finish. Designers can choose from a variety of colours, textures, patterns and sizes to create a unique outdoor environment.

Roof ballast slabs are suitable for new construction, renovation and retrofit projects.

### Variety

Wide range of colours, textures, patterns, sizes and thicknesses

### Durable

Protects against UV rays, accidental punctures and temperature extremes

### Quality

Exceeding Canadian and US manufacturing standards and virtually unaffected by weather conditions

### Strength

Able to support pedestrian traffic

### TYPICAL APPLICATIONS

- Rooftops
- Terraces
- Balcony designs
- Commercial buildings



TORONTO, ON - ROOF BALLAST SLABS

## AVAILABLE ROOF BALLAST SYSTEMS

### Built-In Pedslab® Pedestal System

This system is designed to reduce installation labour. Pedestal height is 3/8" with 50.3in<sup>2</sup> of pedestal bearing area. Slabs are available in custom thickness specifications as well.

- Corner pedestals allow traditional methods of shimming or leveling
- Pedestal edges are relieved to reduce the chance of membrane damage
- Unique 9-pedestal layout
- Slabs remain stable—even when cut to accommodate fitting
- Available in standard or shotblast finishes

### PEDSLAB®

	610mm x 610mm (24" x 24")
Standard Thickness	57mm (2-1/4")
Weight Per Slab	46kg (96lbs)
Custom Thickness	<89mm (3-1/2")

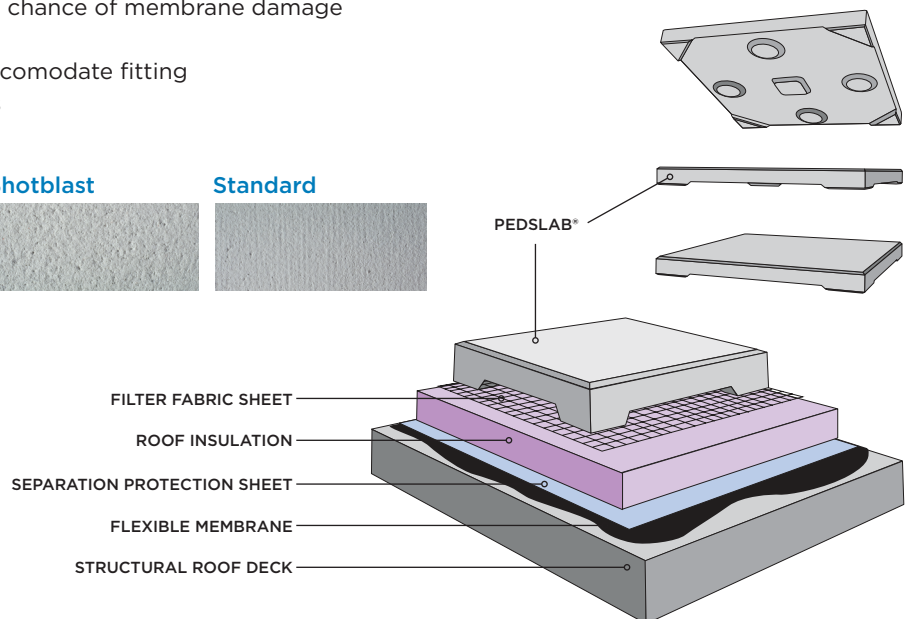


Brooklin is the only North American manufacturer with a ULC-certified flame spread rating on its built-in Pedslab® pedestal system

### Shotblast

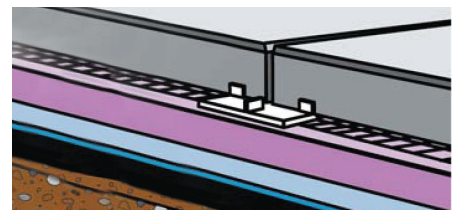


### Standard



### Standard System

This system is installed on industry-approved protected membrane systems. Available in Ledgerrock®, Standard Diamond Texture and Random Brick Pattern styles, these durable slabs can be finished with Brooklin's patented Shotblast process, providing the timeless look of exposed aggregates.



## SPECIFICATIONS

Brooklin Concrete roof slabs are manufactured to meet and exceed the requirements from: CSA A231.1-14  
ASTM C1782M-16

### Sealing

It is recommended all standard finished slabs can be sealed to avoid fading and to provide long-term durability.



### LEDGEROCK®

	450mm x 450mm (17-3/4" x 17-3/4")	610mm x 610mm (24" x 24")
Standard Thickness	45mm (1-3/4")	45mm (1-3/4")
Weight Per Slab	20kg (45lbs)	36kg (80lbs)
Custom Thickness	≤152mm (6")	≤89mm (3-1/2")

#### Shotblast      Standard

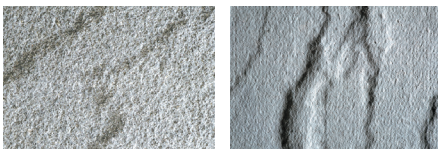
Brown



Natural



Charcoal



Chamois



### RANDOM BRICK

	450mm x 450mm (17-3/4" x 17-3/4")	610mm x 610mm (24" x 24")
Standard Thickness	45mm (1-3/4")	45mm (1-3/4")
Weight Per Slab	20kg (45lbs)	36kg (80lbs)
Custom Thickness	≤152mm (6")	≤89mm (3-1/2")

#### Shotblast      Standard

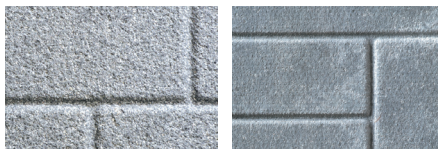
Brown



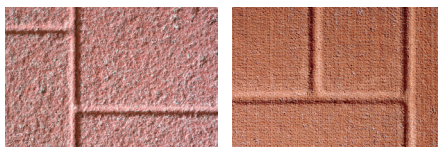
Natural



Charcoal



Red



### DIAMOND

	Standard Thickness	Weight Per Slab	Custom Thickness
<b>450mm x 450mm</b> (17-3/4" x 17-3/4")	45mm (1-3/4")	20kg (45lbs)	≤152mm (6")
<b>610mm x 300mm</b> (24" x 12")	45mm (1-3/4")	19kg (42lbs)	≤70mm (2-3/4")
<b>610mm x 610mm</b> (24" x 24")	45mm (1-3/4")	36kg (80lbs)	≤89mm (3-1/2")
<b>610mm x 762mm</b> (24" x 30")	45mm (1-3/4")	48kg (105lbs)	≤102mm (4")
<b>610mm x 915mm</b> (24" x 36")	48mm (1-7/8")	68kg (150lbs)	51mm to 70mm (2 - 2-3/4")

#### Shotblast      Standard

Natural



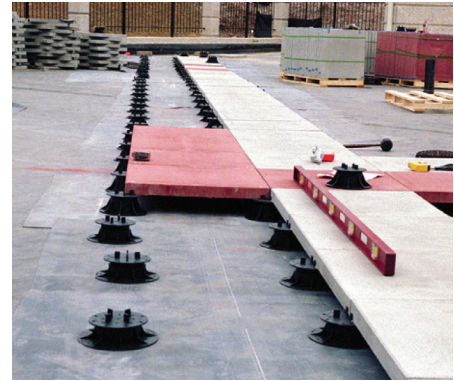
## ACCESSORIES

### Bison Adjustable Deck Supports

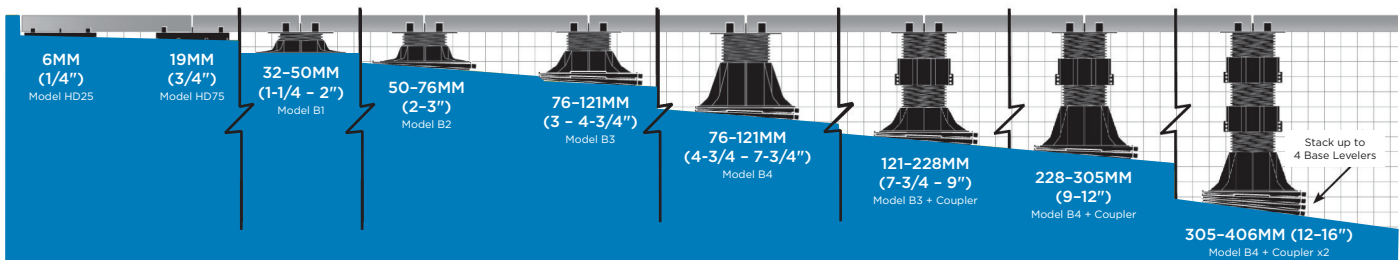
Deck supports can be adjusted to the contours of the rooftop to create a level platform. The maximum design capacity for each pedestal is 1000lbs, and they are impervious to freeze-thaw, water, mold and most chemicals.



BISON ADJUSTABLE DECK SUPPORTS  
MODEL B4



BISON ADJUSTABLE DECK SUPPORTS  
MODEL B2



Drawings and product details are for information and/or illustrative purposes only and may vary. Please contact your Brooklin representative for the most current product information.



### HEAD OFFICE

brooklinsales@brooklin.com

1 Fleetwood Road, Lindsay, ON, Canada K9V 6J1

T: 705-324-8265 | T: 905-655-3311  
T: 1-800-655-3430 | F: 905-655-3847

### HUNTSVILLE /HALIBURTON OFFICE

huntsvillesales@brooklin.com

21 Stephenson Rd. 12 (East of Hwy 11), Huntsville, ON, Canada P1H 2K8

T: 705-789-2338 | 1-800-264-3302  
F: 705-789-9829