WindDisc® by LiveRoof®

WindDisc technology is a patent-pending, secure method to secure any size LiveRoof modules or RoofStone pavers together across a green roof installation. Each WindDisc is 100 mils thick and has a 1.75" diameter.
This method has been tested in a full scale wind uplift chamber according to CSA A123.24-15. At uplift pressures exceeding 200 PSF, the modules remained connected across the green roof surface.

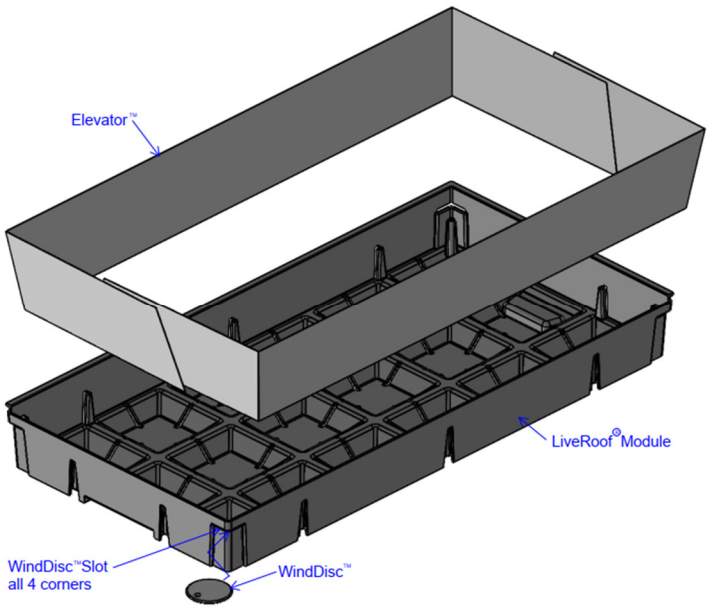
SYSTEM	**LITE**	**STANDARD**	**DEEP**	**MAXX**
Soil Depth	2.5 in (65 mm)	4.25 in (110 mm)	6 in (150 mm)	8 in (200 mm)
Dry Weight	±12 lbs/ft^2 (±0.6 kPa)	±20 lbs/ft^2 (±1.0 kPa)	±30 lbs/ft^2 (±1.4 kPa)	±40 lbs/ft^2 (±1.9 kPa)
Fully Saturated Weight (*Maximum, varies by vegetation type and maturity level)*	≤17 lbs/ft^2 (≤0.8 kPa)	≤29 lbs/ft^2 (≤1.4 kPa)	≤50 lbs/ft^2 (≤2.4 kPa)	≤65 lbs/ft^2 (≤3.1 kPa)
Test Results June & December 2015, CAN/CSA A123.24-15 (Testing Protocol for Modular Vegetated Roof Assembly) **with WindDisc**				
Wind Uplift Resistance	200 PSF (9.6 kPa) sustained* (133 PSF (6.4 kPa) resistance after 1.5 experimental factor)		200 PSF*** (133 PSF after 1.5 experimental factor)	
Test Results November 2016, CAN/CSA A123.24-15 (Testing Protocol for Modular Vegetated Roof Assembly)				
Wind Flow Resistance (without WindDisc)	100 mph (160 km/h) sustained* (67mph (133 km/h) rating after 1.5 design factor)	124 mph (200 km/h) sustained** (83mph (133 km/h) rating after 1.5 design factor)	150 mph (240 km/h) projected† (100mph (160 km/h) after 1.5 design factor)	172 mph (276 km/h) projected† (115mph (185 km/h) after 1.5 design factor)
Test Results April 2012, CAN/CSA A123.21-10 (Testing Protocol for Membrane-Roofing Systems)[1]				
Wind Uplift Resistance (without WindDisc)		100 PSF (4.8 kPa) sustained* (67 PSF (3.2 kPa) resistance after 1.5 experimental factor)	100 PSF*** (67 PSF after 1.5 experimental factor)	

* Test Performed
** Test Performed – Sustained maximum wind speed produced by testing equipment.
*** Minimum Performance Expected Based on Similar Testing of Lighter System(s) [2]
†Performance Projected Based on Similar Testing of Lighter System(s) & modeling

Here's how it works:

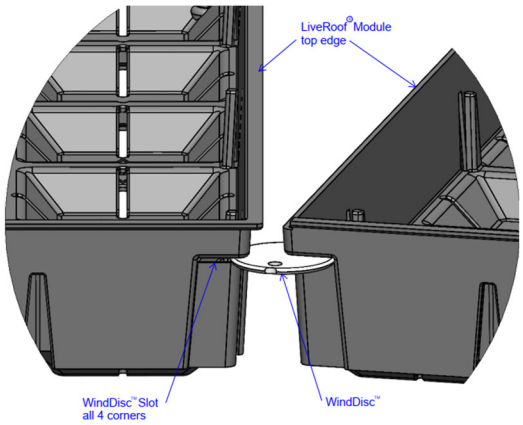
The modules have small openings in each corner to receive the WindDisc.

Videos & more information on LiveRoof.com

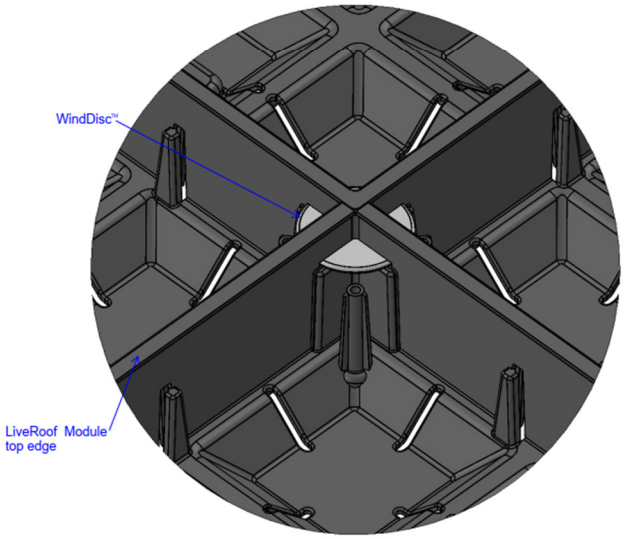


The WindDisc is inserted into the openings of two modules.

As the next row of modules is installed, the openings in the module corners slide into place over WindDiscs inserted into the previous row.



TOP VIEW

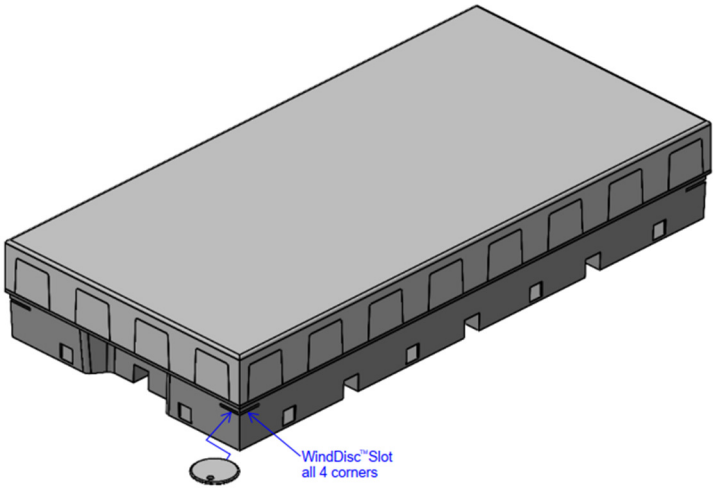


Because the WindDisc inserts into each corner, it does not allow independent vertical movement or displacement of the modules.

Also works with RoofStone®

WindDisc can also be used to connect RoofStone pavers together

RoofStone Pavers and LiveRoof Modules Cannot be inter-connected by Wind Disc.



Wind Resistance Notes

1. LiveRoof Standard modules *without WindDisc* were tested with an upper limit of 100 PSF according to the standard for membrane-roofing systems (CAN/CSA A123.21-10). It passed that protocol, and has not been retested at higher pressures.
2. LiveRoof expects that wind uplift resistance will be improved as the soil depth increases. Based on the paver model, the wind resistance of ballast is directly proportional to the square root of the weight of the ballast.
3. The RoofStone system has not been tested for uplift resistance.
4. The membrane roofing system must also be wind resistant. Proper installation is critical to the wind resistance of a vegetated roofing system.