We’ve done more green roofs than anyone. Bigger green roofs than anyone. Customized to suit unique Canadian Climates.

- At your service: Soil engineers, Bio-scientists, Composite Material Consultants, Horticulturists, Local Growers, and an Experienced Roof Membrane Manufacturer.
- We feel extremely confident that our TEAM is the most cost efficent of the all-inclusive green roof assemblies, most professional and experienced, having the most available resources in today’s garden roof market.
- Each rooftop is a unique microclimate, with varying factors such as region, height protection from other buildings, wind patterns, freeze/thaw cycle, weather extremes, etc., which is why our TEAM provides ‘Made in Canada’ solutions.

PONTAROLO ENGINEERING
CUPOLEX WINDIDRAIN APPLICATIONS:
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Available Through
Research/Know-How/Patents/Sustainable Building Technologies

XXI Trofeo Internacional de La Construcción 2000, Spain
Winner Second Place Innovative Product Technology Toronto Construction Ass.
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THE ESSENTIAL ELEMENTS FOR GREEN ROOFS & ROOF GARDENS

Drainage/Water Storage/Aeration

**WINDIDRAIN®** provides superior water drainage, water storage, and aeration to create a harmonious balance of air and water in the substrate soil. The WINDIDRAIN® elements are specifically designed for extensive and intensive systems where substantial water retention is required for plant usage. They are light weight panels made of 100% recycled polypropylene, moulded specially and designed with retention cups and drainage. The unique design allows for the free drainage of excess water, achieving flow rates from 10 to 30 times higher than that of conventional drainage methods. At the same time, the system is engineered to promote irrigation through capillary action and evaporation into the soil/vegetation level. WINDIDRAIN® may easily be installed over waterproofing membranes or insulation. It is easily cut to fit around penetrations, perimeters, and drains. In applications where intensive systems are required, the retention cups may be filled with mineral substrates. WINDIDRAIN® may also be installed on sloped roofs thanks to its interlocking design.

**CUPOLEX WINDIDRAIN®**

**ADVANTAGES, FEATURES AND BENEFITS**

- Rounded feet allow elements to be applied directly on the waterproofing.
- Unlike other systems, WINDIDRAIN® creates a consistent cavity underneath in all directions for passing of irrigation systems, pipes or other services; WINDIDRAIN elements may also be installed on sloped roofs thanks to its interlocking design.
- Adaptable for both flat and sloped roofs thanks to its patented interlocking design; elements will not move once installed and loaded with substrates;
- Excellent component for Extensive and Intensive roof assemblies;
- Cost Competitive;
- High compressive strength of 6000 kg/m² (9.0 Psi), allowing for a variety of landscape surfaces, pavers, concrete slabs, pedestrian and vehicular traffic;
- Suitable for steep roofs, due to its patented interlocking system;
- Superior drainage of excess water/flow rates;
- Ideal for use with lightweight engineered soils;
- Speed and simplicity of assembly are the primary benefits;
- Ventilation and aeration in all directions;
- Made of 100% recycled high density polyethylene plastic;
- Endless adaptability. Quick cutting using circular saw in unique situations.
- CUPOLEX WINDIDRAIN® is available in 50mm and 100mm heights and is a patented product.

**ASSEMBLY PROCEEDINGS:**

Each unit has an installation arrow. Commence installation by starting from left to right in rows, then repeat checking joints on feet base.

**FAST ASSEMBLY WITH NO NEED OF SKILLED LABOUR**

**ON AVERAGE TWO LABOURERS INSTALL 150 M²/HR**

**MATERIAL PROPERTIES**

- 100% RECYCLED POLYETHYLENE

**DIMENSIONS**

- 560 mm X 560 mm X 50 mm

**COMPRESSIVE STRENGTH**

- 6000 KG/M² (9.0 Psi)

**APPLICATIONS**

- EXTENSIVE OR INTENSIVE

**WATER RETENTION**

- 10 L/M²

**WEIGHT PER UNIT**

- 1.0 Kg

**PACKAGING**

- 700 PIECES. (220 M²) PER PALLET

Pantarolo Engineering is associated with a diversified group that is capable to coordinate and provide sustainable and durable garden roofs with a ‘TEAM’ approach, from the roof assembly to the complete plantings. We believe strongly that our team is the most comprehensive in the green roof industry.

The TEAM provides:

- Available technical support with established green roof advisors
- Consultants knowledgeable in plants and bio-engineered growing mediums, able to assist the design professional and landscape architect
- Available technical literature, system samples, updated literature to meet the designer’s requirements
- Recorded, proven track record of lightweight garden roofs in Canada.

Your TEAM of Green Roof Systems Professionals will ensure that the client will inherit an UNMATCHED garden roof in terms of overall performance, for years of enjoyment.