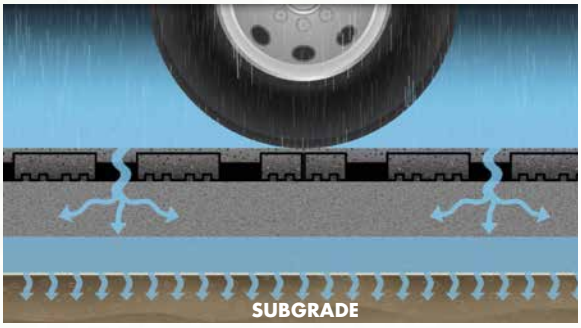
PRESTO | GEOSYSTEMS®
GLOBAL LEADER • GLOBAL PARTNER

porous pavement solutions
RIGID PAVERS

GEOBLOCK® & GEOPAVE®
POROUS PAVEMENT SYSTEMS

RIGID PAVERS DELIVER PERFORMANCE.

Environmental regulations that control and limit stormwater runoff, reduce impervious surface, and increase green space have resulted in the growth of permeable pavements for traffic areas. Presto manufactures two high-quality rigid pavers that offer numerous environmental and performance benefits over hard surface pavements.



POROUS PAVEMENT OPTIONS

Presto's GEOBLOCK® and GEOPAVE® systems are both rigid porous pavements designed to handle the most demanding load support requirements while promoting natural stormwater infiltration, reducing runoff, and reducing the need for detention or retention ponds.

GEOBLOCK® GRASS PAVERS

Robust design delivers exceptional protection to turf, resistance to torsional loading stresses and support for optimal growing medium.

GEOPAVE® AGGREGATE PAVERS

Molded mesh bottom design spreads loads and keeps highly-permeable aggregate confined for maximum stormwater infiltration and on-site storage.

Shown with SNAP delineators.

COMMON POROUS PAVEMENT APPLICATIONS

- Access Roads: Emergency, Maintenance & Utility Vehicles
- Roadways: Shoulders, Pull-off Areas
- Parking Areas: Daily, Overflow
- Trails & Walkways: Pedestrian Trails, Greenways, Barrier-Free Access
- Golf Courses: Cart Pathways & Edging, Tee Areas
- Residential: Driveways, Parking Areas, Camper & Boat Bays
- General: Event Areas, Pedestrian

AREAS OF USE:

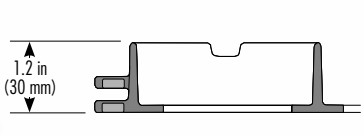
- Condominiums & Housing Complexes
- Commercial Buildings
- Educational Campuses
- Parks & Nature Preserves
- Hospitals & Medical Centers
- Shopping Centers
- Sports Facilities
- Golf Courses
- Churches
- Residential

GEOBLOCK® & GEOBLOCK®5150

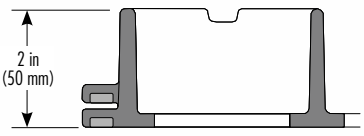
GRASS PAVERS FOR OCCASIONAL TRAFFIC

The industry's strongest and most proven, high-performance turf protection systems address all vehicle loading and stormwater requirements. The GEOBLOCK® & GEOBLOCK®5150 systems' engineered base material supports loading up to H-20, is highly permeable to maximize stormwater percolation and, with topsoil infill, offers an optimal growing medium for vegetation.

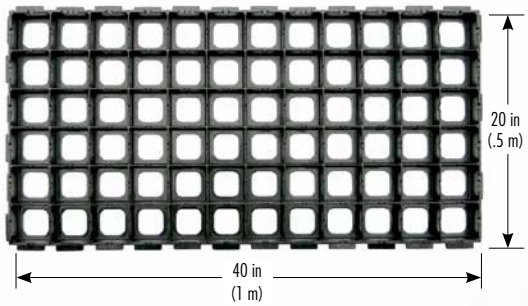
GEOBLOCK®	GEOBLOCK®5150
1.2" wall height	2" wall height



GEOBLOCK®



GEOBLOCK®5150



GEOBLOCK® & GEOBLOCK®5150
PERFORMANCE POINTS

High Load Transfer & Flexural Strength
The large, rigid surface area with interconnected cell walls and strong interlocking connections offers the highest load transfer and flexural strength in the industry.

Resistance to Torsional Loads
The rigid design with shared walls and strong interlocking connections resists movement or breakage from vehicle turning stresses and torsional loading.

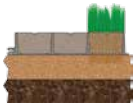
Resistance to Rutting
Interconnected cell walls spread point loads across the paver system with minimal 'flexing', eliminating potential for concentrated drive lane rutting.

Turf Performance
Deep, interconnected cells protect topsoil and grass from damage caused by repeated loading. Topsoil infill supports healthy grass that establishes faster, remains hardier, and performs better than systems with sand infill. The engineered base material contributes to good percolation, healthy grass growth, and long-term performance.

Low Base Requirements
Strong unit strength lowers installation costs by requiring less base depth than lighter-weight or rolled systems to achieve H-20 loading.

GEOBLOCK® RIGID grass pavers offer SUPERIOR PERFORMANCE BENEFITS

GEOBLOCK® & GEOBLOCK®5150
PERFORMANCE COMPARISON TO ROLLED PRODUCTS

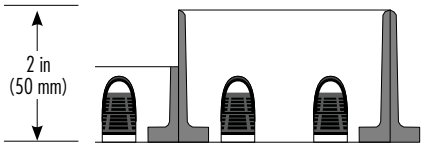
							
Performance Point	**Load Distribution & Resistance to Torsional Loads**	**Resistance to Concentrated Rutting**	**Base Requirements**	**Medium for Vegetative Growth**	**Turf Protection**	**Turf Performance**	**Stormwater Infiltration**
GEOBLOCK® Rigid Pavers	✓ Contiguous pavement with shared walls offers highest load distribution and resistance to vehicle loading stresses.	✓ Interconnected cell walls spread point loads across the paver system for a high resistance to concentrated rutting.	✓ Higher paver strength results in higher performance with less base material. Less base = less excavation cost and less land disturbance. Paver units can even be driven on unfilled.	✓ Engineered base mix of clear stone/topsoil offers high percolation rate and an ideal medium for vegetative root growth. Grass establishes faster and remains hardier without additives.	✓ Deep, interconnected cell walls encapsulate and protect topsoil and grass from damage caused by repeated loading for optimal turf protection.	✓ Good turf protection, and topsoil infill and engineered base offer high percolation to support healthy grass. Grass establishes faster, remains hardier, requires less maintenance and performs better long term.	✓ Topsoil infill and engineered base offer a 5-10X faster percolation rate and better water storage capacity.
Flexible Rolled Systems	Disjointed cell walls flex under loading, offering lower load distribution and resistance to torsional stresses.	Flexible rolled systems flex upon loading, making them extremely prone to rutting.	Flexible rolled systems rely on sand infill and deeper base (up to 2X more) for strength.	Flexible systems require sand infill and roadbase to achieve strength–both poor growing mediums for vegetation.	The gaps between cells allow the pavement to flex under wheel loading, resulting in less protection to the turf.	Sand infill and road gravel base cannot sustain vegetation long term.	Sand infill and road gravel base offer a lower infiltration rate and storage capacity.

GEOPAVE®

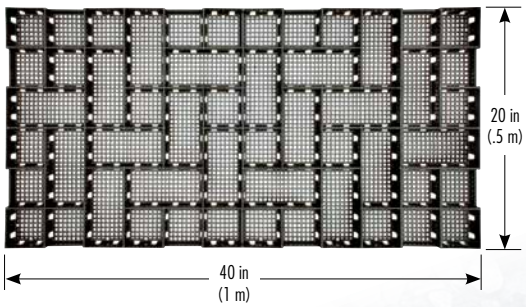
AGGREGATE PAVERS FOR EVERYDAY TRAFFIC

The industry's only aggregate paver system designed from the ground up for aggregate infill. The GEOPAVE® system's structural framework holds highly-permeable, open-graded base course in place through a unique herringbone cell pattern and monolithic mesh bottom. Strong connections create one contiguous pavement that is highly resistant to traffic loading and torsional stresses. The herringbone surface offers a paver-stone aesthetic and allows colored stone for design options and area differentiation. GEOPAVE® pavements are a natural way to infiltrate and store stormwater on-site.

GEOPAVE® – 2" wall height



SNAP Delineator



GEOPAVE®
PERFORMANCE POINTS

High Load Distribution
A shared wall system, strong connection clips and load-spreading mesh bottom (snow-shoe effect) offers an industry-high load transfer capability.

Resistance to Torsional Loads
A shared wall system and strong connection clips create a contiguous framework that resists movement or breakage from vehicle turning stresses and torsional loads.

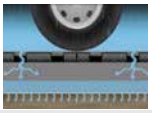
Resistance to Rutting
Interconnected cell walls spread point loads across the paver system with minimal 'flexing', eliminating potential for concentrated drive lane rutting.

Aggregate Containment
A monolithic mesh bottom design keeps aggregate infill contained and prevents the 'lifting' effect from granular fill downward migration.

Low Base Requirements
Strong paver strength lowers installation costs by requiring less base depth than lighter-weight or rolled systems to achieve H-20 loading.

GEOPAVE® RIGID aggregate pavers offer SUPERIOR PERFORMANCE BENEFITS

GEOPAVE®
PERFORMANCE COMPARISON TO ROLLED PRODUCTS

Performance Point	 Load Distribution	 Resistance to Torsional Loading	 Resistance to Concentrated Rutting	 Aggregate Containment	 Base Requirements	 Storm water Infiltration
GEOPAVE® Rigid Pavers	✓ Contiguous pavement with shared walls, strong connection clips, and load-spreading mesh bottom offers high distribution of vehicle loads.	✓ A shared wall system and strong connections create a framework highly resistant to movement or breakage from vehicle turning stresses and torsional loads.	✓ A shared wall system and strong connections distribute point loads laterally and is highly resistant to concentrated rutting even in high traffic areas.	✓ An integral mesh bottom keeps aggregate contained, preventing the 'lifting' effect from granular fill downward migration.	✓ Interconnected cell walls and strong connections create a robust paver structure with low base requirements for structural strength.	✓ Highly-permeable open-graded aggregate infill infiltrates stormwater exceptionally fast.
Flexible Rolled System	Disjointed cell walls that 'flex' and shallow cells do not effectively spread loading across the pavement surface.	Disjointed cell walls and weak connection points are susceptible to movement and breakage under vehicle torsional loads.	Disjointed cell walls that 'flex' under loading allow for deep rutting over time in wheel lanes.	Flexible rolled systems are typical with glued-on fabric bottoms, which are susceptible to tearing, allowing aggregate to push through the bottom.	Shallow cell walls and cell wall gaps have lower load-spreading capability, creating need for higher base requirements for structural strength.	Rolled systems with glued fabric bottoms clog and percolate much more slowly.

STORMWATER & ENVIRONMENTAL BENEFITS

Achieve your green building and stormwater goals by incorporating the proven GEOBLOCK® & GEOPAVE® porous pavements in your landscape plans.

HIGH PERMEABILITY

Highly permeable systems increase groundwater recharge and decrease surface runoff associated with stormwater discharge from paved areas.

Our systems minimize site disruption and the development footprint by reducing or eliminating the need for larger, on-site stormwater ponds.

STORMWATER STORAGE

GEOPAVE® pavements function as a stormwater detention/retention layer storage 'basin' and can complement underground storage systems. Depth of base can be increased when additional stormwater storage is required.

IMPROVES STORMWATER QUALITY

Both pavements increase natural water infiltration, filter contaminants and reduce non-point source pollution.

RECYCLED MATERIAL CONTENT

GEOBLOCK® and GEOPAVE® pavers are manufactured from up to 97% recycled polyethylene.

COOLER SURFACE

Grass and aggregate are cooler pavements that reduce the heat island effect associated with traditional hard pavements.

ENHANCE THE BUILT ENVIRONMENT.

Design long-lasting, permeable pavements that perform to stringent loading and stormwater requirements and minimize environmental impacts.

CONTRIBUTIONS TO GREEN INFRASTRUCTURE (GI) & LOW IMPACT DEVELOPMENT (LID) DESIGN

GEOBLOCK® and GEOPAVE® solutions are suitable for green infrastructure (GI) and low impact development (LID) land planning. Both systems promote stormwater infiltration and reduce environmental impact through their permeable pavement surfaces to effectively manage stormwater runoff at its source.

Contributions to U.S. Green Building LEED® Credits

Both the GEOBLOCK® and GEOPAVE® systems offer contributions to USGBC LEED® credits in these categories:

- Reduced Site Disturbance
- Stormwater Management
- Reduced Heat Island Effect
- Recycled Content

Many prestigious LEED® projects have included GEOBLOCK® and GEOPAVE® porous pavements because of their numerous credit contributions and the systems' sustainability and performance.

DESIGN RESOURCES
SPECIFICATION & PLANNING TOOLS

Presto offers comprehensive and easy-to-use resources and tools for designing GEOBLOCK®, GEOBLOCK®5150 and GEOPAVE® porous pavements. CSI-specifications, CAD details, design resources and videos are available for each product.

Presto SPECMaker® Specification Tool

Our online SPECMaker® specification program lets designers build custom 3-part CSI specifications in 5 minutes or less.

Industry Standard Resources

Presto's product specifications, CAD details and BIM models are available in industry-standard formats on ARCAT.com and CADDetails.com, leading providers of manufacturer-specific building product information for architects, engineers and contractors.

ARCAT

CADdetails

Depth of Engineered BASE Recommendation

DESCRIPTION	GEOBLOCK® VEGETATED SURFACES Topsoil Infill Topsoil/Aggregate Base		GEOBLOCK®5150 VEGETATED SURFACES Topsoil Infill Topsoil/Aggregate Base		GEOPAVE® AGGREGATE SURFACES Aggregate Infill Aggregate Base	
	CBR[1] 2-4	CBR >4	CBR[1] 2-4	CBR >4	CBR[1] 2-4	CBR >4
Heavy Fire Truck & H-20 Loading Typical 110 psi, 80,000 lb Single axle loading of 32 kips, tandem axle loading of 48 kips	14 in (350 mm)	10 in (250 mm)	6 in (150 mm)	4 in (100 mm)	6 in (150 mm)	6 in (150 mm)
	Infrequent Passes		Infrequent Passes		Normal Traffic	
Light Fire Truck & H-15 Loading Typical 85 psi, 60,000 lb Single axle loading of 24 kips	10 in (250 mm)	6-10 in (150-250 mm)	4 in (100 mm)	2 in (50 mm)	6 in (150 mm)	4 in (100 mm)
	Infrequent Passes		Infrequent Passes		Normal Traffic	
Utility/Delivery Truck & H-10 Loading Typical 60 psi, 40,000 lb Single axle loading of 16 kips	6-10 in (150-250 mm)	4-8 in (100-200 mm)	2 in (50 mm)	2 in (50 mm)	4 in (100 mm)	2 in (50 mm)
	Infrequent Passes		Infrequent Passes		Normal Traffic	
Cars & Pickup Truck Access Typical 45 psi, 8,000 lb Single axle loading of 4 kips	4-8 in (100–200 mm)	2-4 in (50–100 mm)	None	None	2 in (50 mm)	None[2]
	Occasional Passes		Occasional Passes		Normal Traffic	
Trail Use: Surface Stabilization <1,000 lb Loading for ATVs, golf carts, campers, boats, equestrian, motorcycle, bicycle, pedestrian, wheelchairs	2-4 in (50-100 mm)	0-2 in (0-50 mm)	None	None	None	None

[1] For CBR<2, contact Presto Products Company for recommendations. CBR is the abbreviation for California Bearing Ratio.

[2] A minimum of 2 inches of aggregate base should be placed below the GEOPAVE units as a drainage layer and an infiltration storage area. Greater depth may be required depending upon design rainfall requirements and subbase permeability.

The Engineer of Record shall be responsible for the design and stability of the open graded base course.

SITE PLANNING & DESIGN

CREATE YOUR DESIGN VISION

Enhance your site plans with two unique porous pavement solutions that will define your design vision. Include GEOBLOCK® and GEOPAVE® systems in your landscape plan for optimal performance and stormwater benefits—as well as to make unique aesthetic design statements.

PRESTO GEOSYSTEMS'® COMMITMENT — *To provide the highest quality products and solutions.*

Presto GEOSYSTEMS® is committed to helping you apply the best solution to your porous pavement requirements. Rely on the leaders in the industry when you need a solution that is right for your application.

Contact Presto GEOSYSTEMS® or their network of knowledgeable distributors/ representatives for assistance with your permeable pavement needs.

CONSTRUCTION RESOURCES

INSTALLATION TOOLS

GEOBLOCK® and GEOPAVE® systems are designed for easy installation—requiring less site preparation, less subgrade improvement, less excavation and less structural base than other porous pavement systems.

The paver units are easily cut with ordinary hand or power tools for installing around obstructions and contours, as well as irrigation systems. Their easy-to-handle size minimizes the quantity of units required on a given job, reducing labor and installation costs.

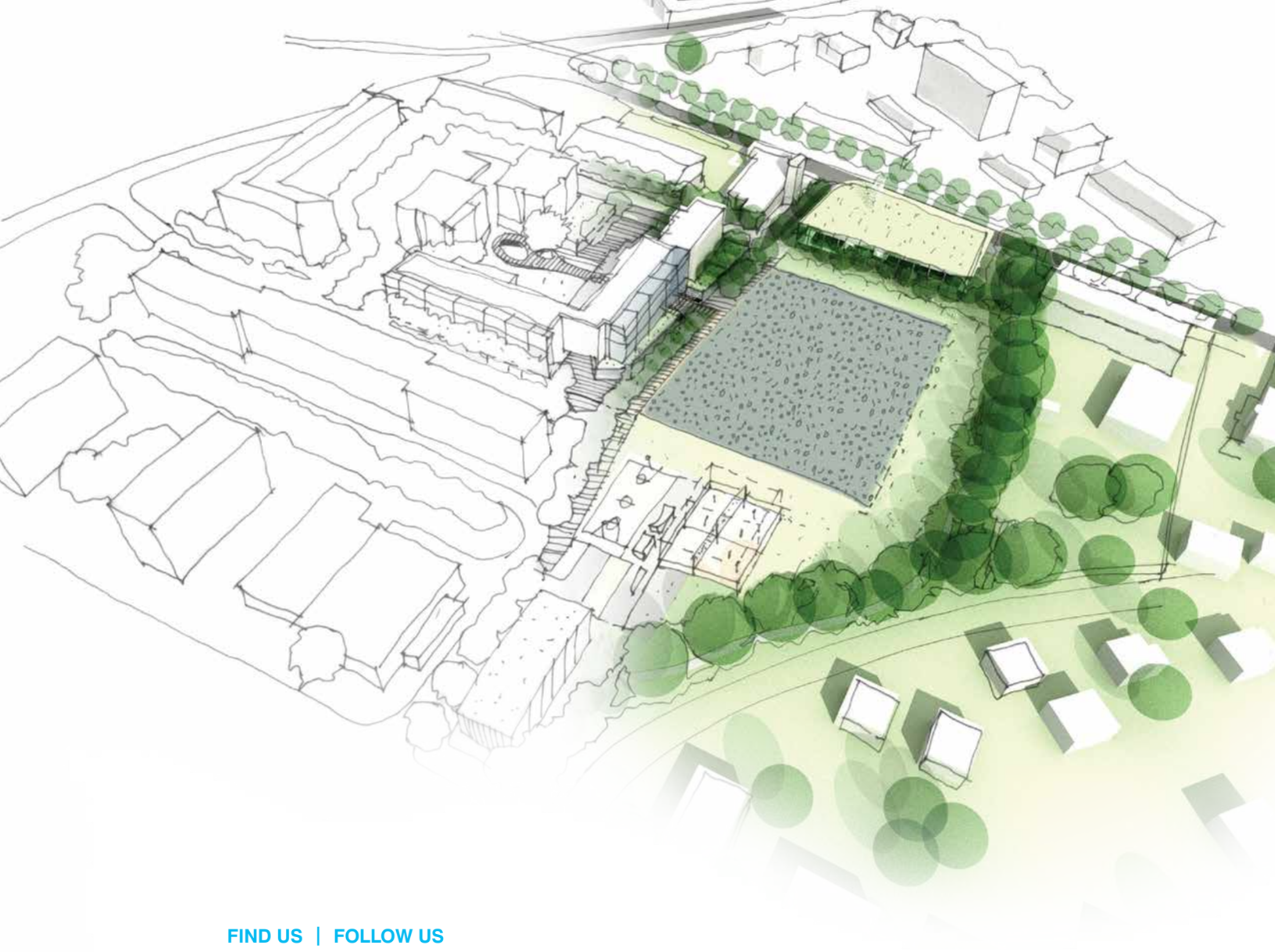
Product is shipped in cubes that allow stacking for maximum shipping efficiency.

GEOBLOCK® and GEOPAVE® pavers can be driven on when unfilled, facilitating construction equipment for installation of the topsoil infill.

Site Evaluation and On-Site Installation Support

A qualified manufacturer's representative may be contracted to assist with pre-construction site evaluation, construction training or on-site supervision.

Contact Presto GEOSYSTEMS® for details.



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