barkman™

MagnumStone™

Product Guide

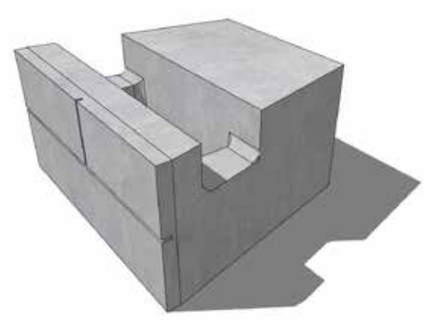
MagnumStone™

Innovative design... easy on the environment

While still sharing the same hollow core that our dry cast products have, our MagnumStone™ product is perfect for DOT (department of transportation) industrial and commercial retaining walls that require a more aesthetic look.

Ideal for gravity and geogrid retaining walls, soil nailing, cantilevered, plantable and mechanical geogrids, the flexibility of MagnumStone™ retaining wall units are endless. Incredibly realistic looking, your MagnumStone™ retaining system brings the same stability of other industry products, but with less cost and greater visual appeal!

Gravity Unit Specifications



41" BASE UNIT OR STANDARD UNIT

2150 lbs (977 kgs)

24" Height x 48" Width x 41" Depth (61 H x 122 W x 104 cm D)

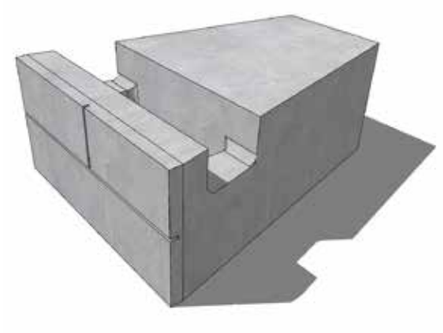
Face Area: 8 sq ft (0.745 m^2)

Volume of Voids: 6.35 ft^3 (.180 m^2)

Faces: Varies

Gravel Filled Weight: 2850 lbs (1296 kgs)

Batter/Setback: 4.5° 2"/Unit (5 cm / Unit)



60" BASE UNIT OR STANDARD UNIT

3100 lbs (1409 kgs)

24" Height x 48" Width x 60" Depth (61 H x 122 W x 152 cm D)

Face Area: 8 sq ft (0.745 m^2)

Volume of Voids: 6.35 ft3 (.180 m^2)

Faces: Varies

Gravel Filled Weight: 3800 lbs (1727 kgs)

Batter/Setback: 4.5° 2"/Unit (5 cm / Unit)

Gravity units available with optional solid core for sub-surface and drainage applications.
Drainage hole for weeping tile connection available upon request. Actual block weights and volumes may vary.

Standard Unit Specifications

STANDARD BASE UNIT

1450 lbs (659 kgs)

STANDARD UNIT

1450 lbs (659 kgs)

STANDARD TOP UNIT

1350 lbs (614 kgs)

24" Height x 48" Width x 24" Depth (61 H x 122 W x 61 cm D)

Face Area: 8 sq ft (0.745 m^2)

Volume of Voids: 6.35 ft^3 (.180 m^2)

Faces: Varies

Gravel Filled Weight: 2150 lbs (975 kgs)

Batter/Setback: 4.5° 2"/Unit (5 cm / Unit)

Drainage hole for weeping tile connection available upon request.

HALF HIGH BASE UNIT

700 lbs (318 kgs)

HALF HIGH UNIT

700 lbs (318kgs)

HALF HIGH TOP UNIT

680 lbs (308 kgs)

12" Height x 48" Width x 24" Depth (30.5 H x 122 W x 61 cm D)

Face Area: 4 sq ft (0.37 m2)

Volume of Voids: 3.15 ft3 (0.09 m2)

Faces: Varies

Gravel Filled Weight: 1080 lbs (490 kgs)

Batter/Setback: 4.5° 1"/Unit (2.5 cm / Unit)

STANDARD CORNER/ END UNIT

180 lbs (82 kgs)

24" Height x 26" Top Face Width x 28" Bottom Face Width x 2" Top Narrow Face x 4" Bottom Narrow Face

(61 H x 66 TFW x 71 BFW x 5 TNF x 10 BNF cm)

Face Area: 4.66 sq ft (0.434 m^2)

Faces: Varies

HALF HIGH CORNER/END UNIT

100 lbs (46 lbs)

12" Height x 27" Top Face Width x 28" Bottom Face Width x 3" Top Narrow Face x 4" Bottom Narrow Face

(61 H x 69 TFW x 71 BFW x 8 TNF x 10 BNF cm)

Face Area: 2.33 sq ft (0.217 m^2)

Faces: Varies

STEP/CAP

600 lbs (273 kgs)

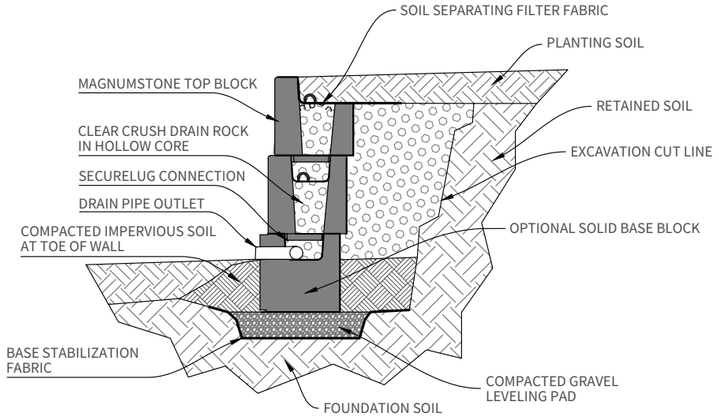
6" Height x 48" Width x 24" Depth

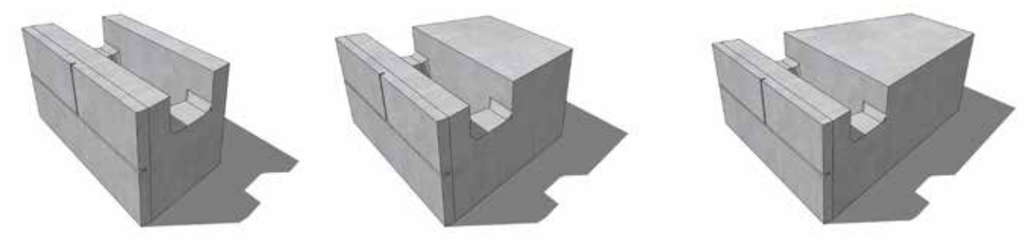
(15.25 H x 122 W x 61 cm D)

Face Area: 2 sq ft (0.186 m^2)

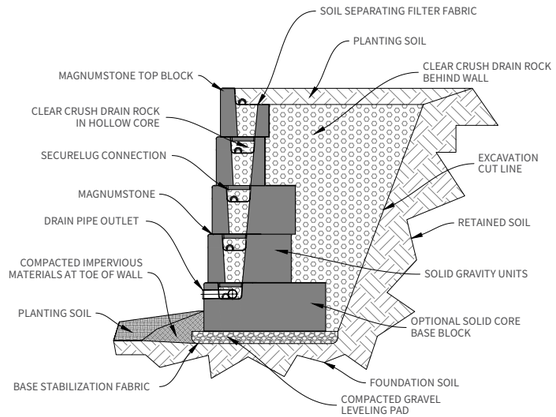
Gravity Wall

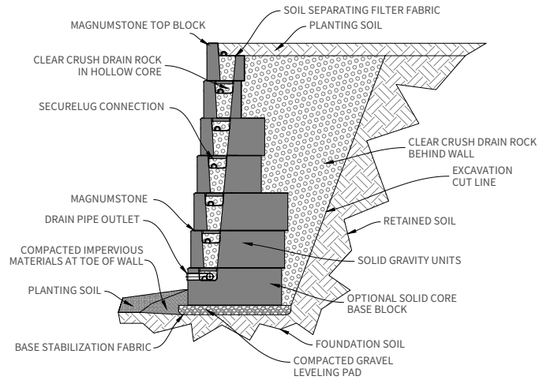
Gravity (PMB) Precast Modular Block retaining wall systems are structures lower in height, that use the MagnumStone™ unit weight combined with gravel core infill to resist earth pressures behind and on top of the wall. The 2"/unit (4.5 degree or 1"/vertical foot) batter or setback of the MagnumStone™ wall along with proper soil conditions below and behind the wall provide the stability of the structure. For walls 4.0ft (1.2m) and taller, a qualified engineer should be consulted.





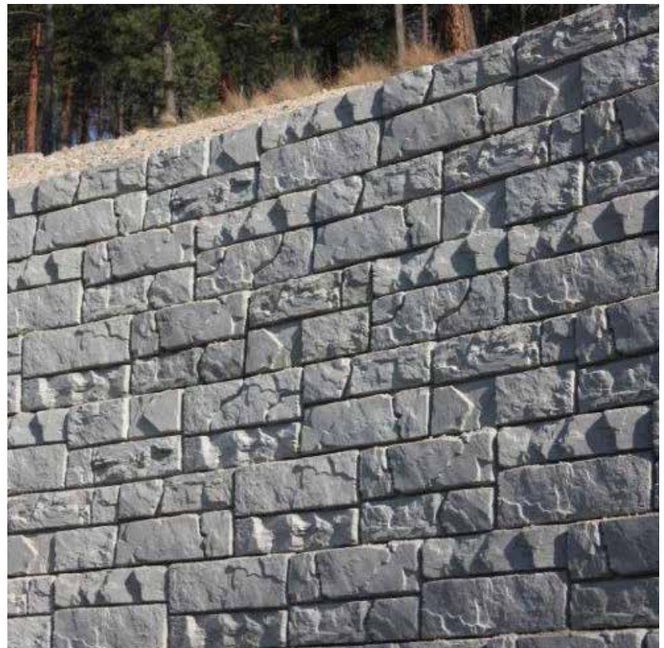
- Superior drainage, design and engineering capabilities for large gravity walls.
- Better quality installation and cost savings.
- Gravity units available with optional solid core for sub-surface and drainage applications.





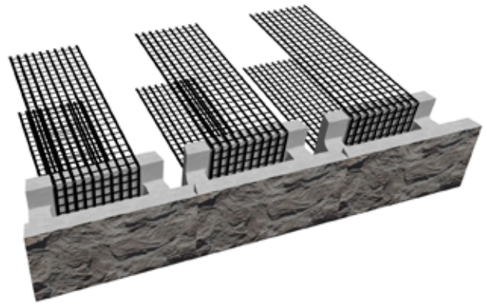
Geogrid Wall

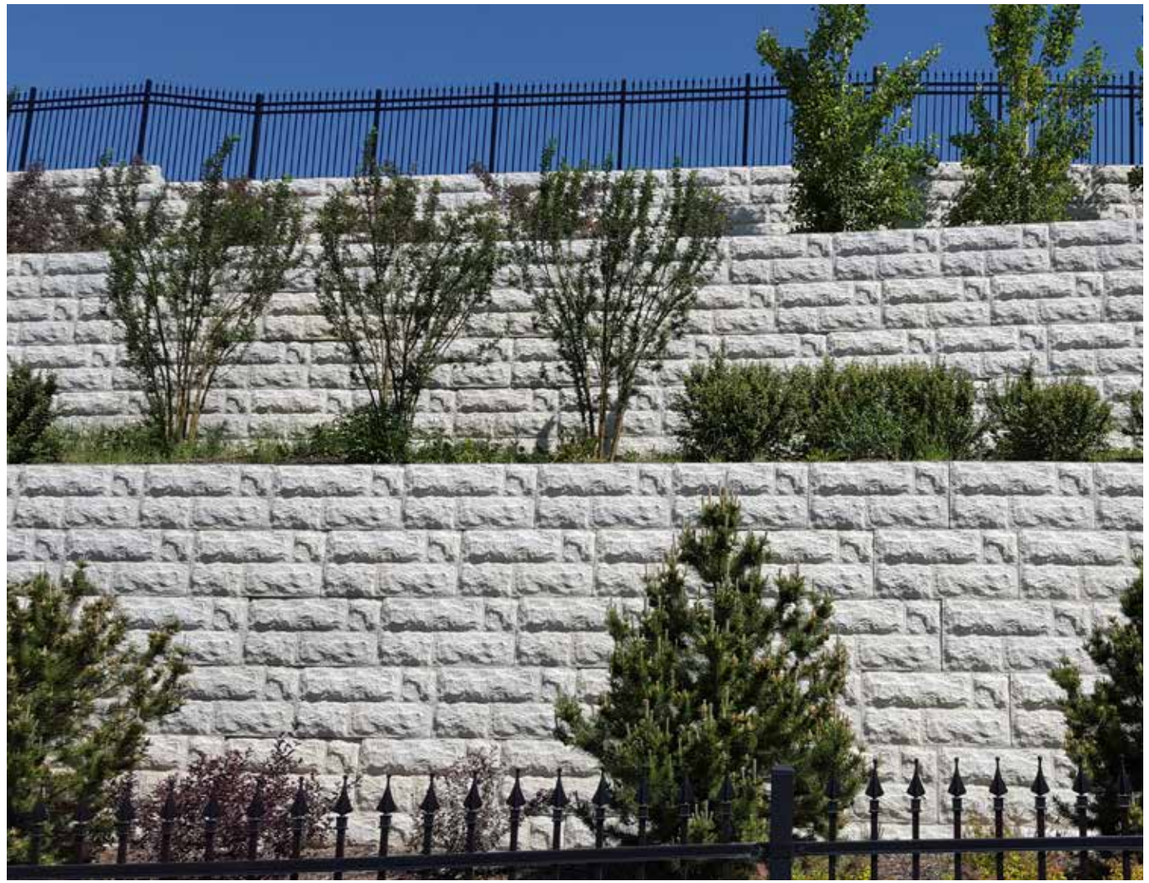
Geogrids are used to reinforce the soil mass behind the MagnumStone™ units to create tall retaining wall systems. Wall structures that may require geogrid reinforcement to resist the increased pressures behind the wall are parking lots, roadways, water applications or positive slopes above. Geogrid used with the appropriate lengths, layers, and compacted backfill materials will resist these active forces above and behind the wall. The use of Geogrid reinforcements with the MagnumStone™ system is very cost effective for very tall wall structures.



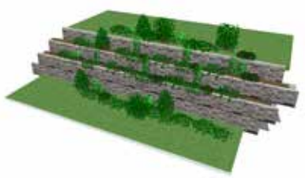
Positive Connection

To create a positive or mechanical connection between the MagnumStone™ units and geogrids, a single length of geogrid is wrapped through the hollow core providing equal length reinforcement at the bottom and top of a single unit. The geogrid wrapped hollow core is then filled with gravel making which is the ultimate geogrid positive connection. This unique positive or mechanical connection provides the system with a greater safety factor for connection when designing for heavy loads such as (DOT) roads, bridges and railways.

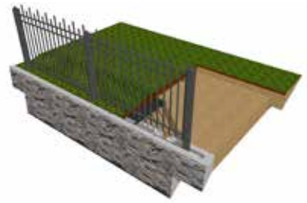




Design Advantages

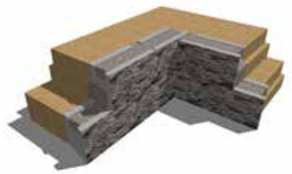


GREEN PLANTABLE WALL



FENCE POSTS

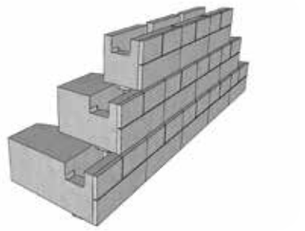
OUTSIDE CORNER



INSIDE CORNER

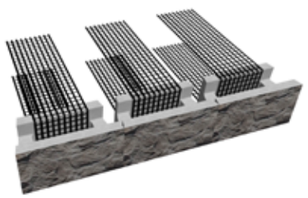
OUTSIDE CURVE

INSIDE CURVE



GRAVITY WALL

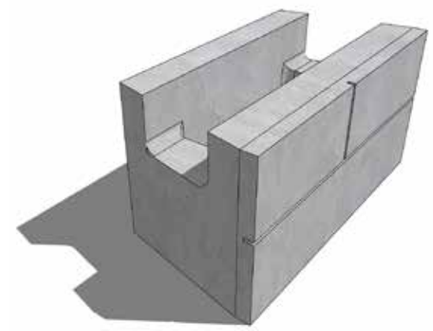
GEOGRID WALL



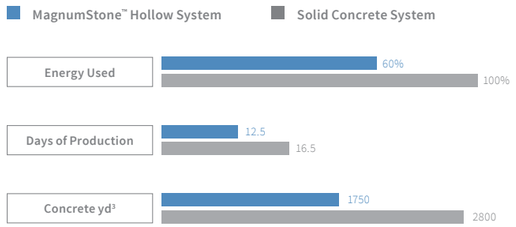
POSITIVE CONNECTION

More: Steel/Concrete Wall, Soil Anchoring, Steel Grid, Wall Step-Up, Free Standing

The MagnumStone™ retaining wall system was developed with the engineer, designer and installer in mind. MagnumStone's durable, high strength concrete SecureLugs fit into the lower unit's hollow core, allowing significant lateral movement without losing the unit interlock. The wet-cast manufacturing process provides the units with high strength, low absorption and great freeze/thaw results. Tapered sides make it easy to build tight curves and straight walls with complete accuracy. The MagnumStone's vertical and horizontal hollow core, filled with clear crushed gravel, provides added weight, an excellent wall drainage system and a superb connection with the geosynthetic reinforcements.



Environmental Benefits



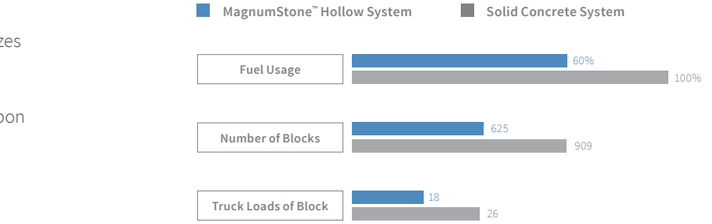
Graph is based on a 5000 square foot retaining wall project.

PRODUCTION

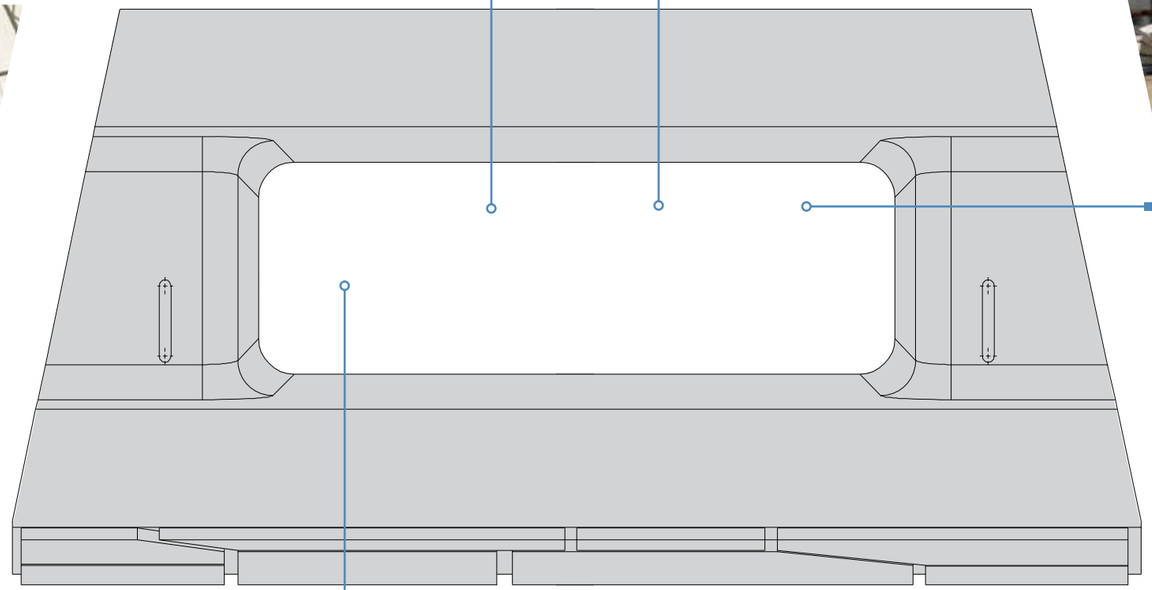
MagnumStone's hollow core allows production facilities to maximize their output and reduce their carbon footprint. Its unique hollow core design means less concrete to pour, making the units lighter for handling purposes and reducing the amount of cement required per block. Both of these factors translate into cost savings and a significant reduction in harmful greenhouse gas emissions (nearly 40%) when compared to solid concrete systems.

TRANSPORTATION

MagnumStone's light weight design maximizes each truck load to the site, reducing the number of trucks on the road, and their carbon footprint. A typical 48,000 lb truck can transport nearly 300 sq ft of MagnumStone™ units, reducing the number of loads to ship to each job. Plus, each unit can be loaded and unloaded quickly and easily two at a time, reducing time and labor on the job site.

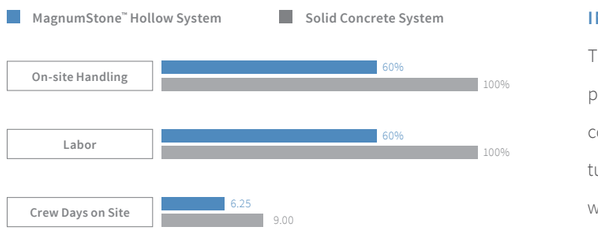


Graph is based on a 5000 square foot retaining wall project.



DESIGN

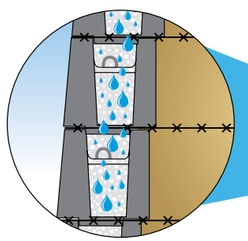
The MagnumStone's large vertical and horizontal cores allow wall designers the flexibility of creating many solutions without environmentally costly side-effects. The aesthetically pleasing plantable terraces maximize green area, which reduce the "heat island" effect common among concrete surfaces. MagnumStone™ works in harmony with the environment. Its unique internal drainage system, and ease of incorporating both through wall, and top of wall details makes it the prime choice for environmentally friendly wall solutions.



Graph is based on a 5000 square foot retaining wall project.

INSTALLATION

The MagnumStone™ 8 sq face ft is light enough to be moved on site in pairs of 16 sq ft with a standard bobcat. The large light weight hollow core MagnumStone™ units can be installed quickly, to create curves and turn corners, with smaller equipment and less labor. MagnumStone™ was designed for the end user by providing many options for solving nearly any contractor wall problem.



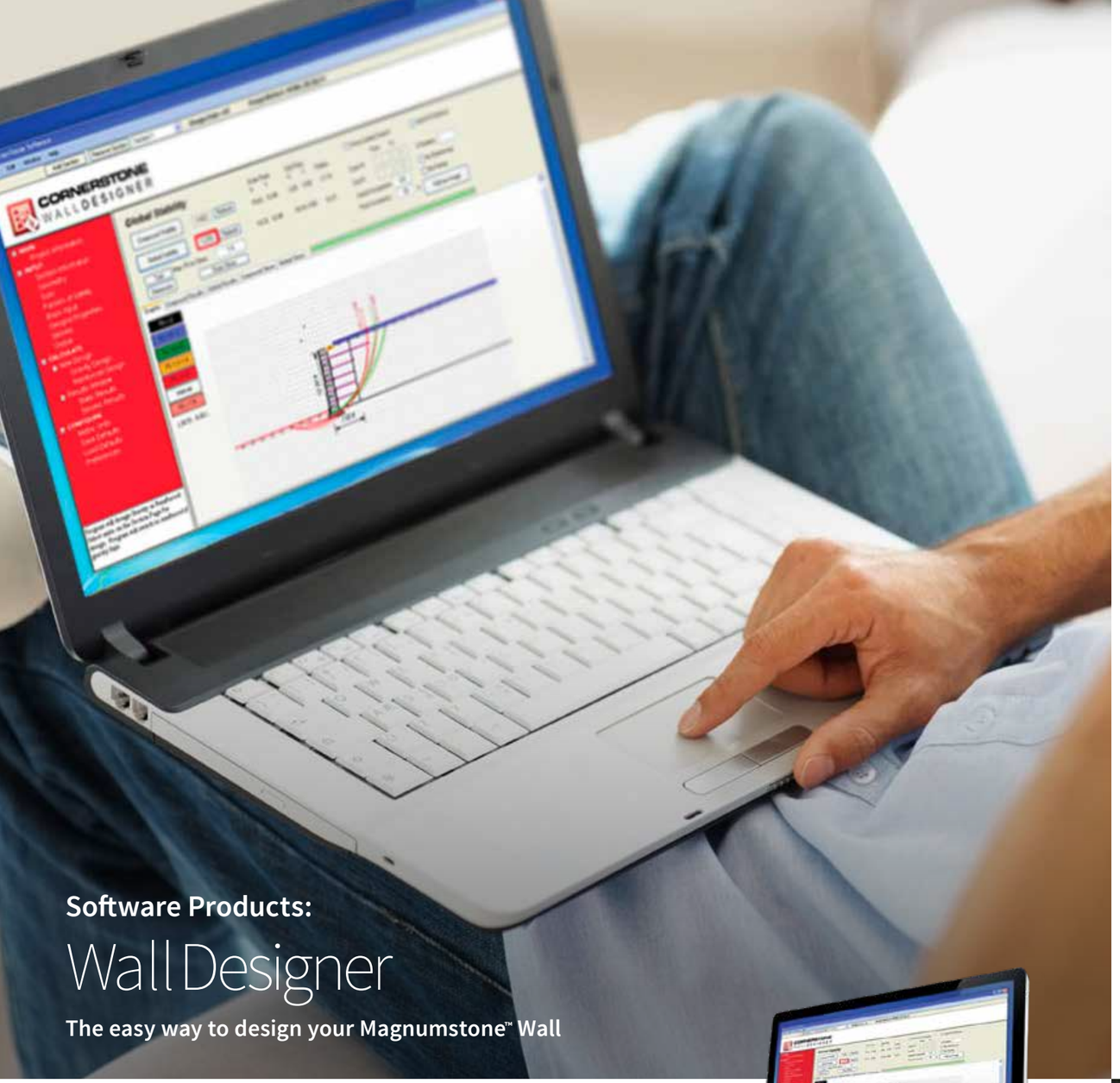
Permeability

The ability for water to flow freely through MagnumStone's vertical and horizontal hollow cores.

Plantable Terrace

MagnumStone's hollow cores provide the perfect planting pocket for a variety of plants and shrubs.

All graphs and charts used in this brochure are estimations, and should be used only for comparisons.



Software Products:

Wall Designer

The easy way to design your Magnumstone™ Wall

Designed with the engineer in mind, the MagnumStone™ Wall Designer provides you easy access to a variety of scenarios to design your project in. Powerful and easy to use, this program saves you time and money in the design process.

Wall Designer Advantages

Pre-programed in the software are multiple methodologies, MagnumStone™ products, and geogrid reinforcement options, all of which are there to help you “visualize” what your wall will look like at the click of a few buttons.

FEATURES & BENEFITS

To help you with your design solutions, some additional benefits to using the MagnumStone™ Wall Designer include its utilization of NCMA, AASHTO, and AASHTO LRFD methods, a plethora of options for design inputs – such as geometry of wall, soil types, block specs, compound stability, etc., and preprogramming of Magnumstone™ products themselves.

TRAINING & TECHNICAL SUPPORT

When learning the software, enjoy our easy to understand (and use!) training videos. Broken into small segments, you can focus on a specific section for guidance, rather than having to go through the whole course.

For more information please visit: **magnumstone.com/magnumstone-wall-designer**

Face: Boulder Face

Producer: D&M Concrete Products

Location: Calgary, AB

Year Built: 2013

Face: Boulder Face

Producer: D&M Concrete Products

Location: Calgary, AB

Year Built: 2010

Face: LedgeStone Face

Producer: Burnco

Location: Kelowna, BC

Year Built: 2015

Face: LedgeStone Face

Producer: Burnco

Location: Kelowna, BC

Year Built: 2015

Custom stain after installation

Face styles vary depending on location. Contact your local representative.

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