MAGNUMSTONE™

DESIGNED TO PROVIDE AN EFFECTIVE RETAINING SOLUTION

CIRTEX®
GAIN MORE GROUND™

MAGNUMSTONE™

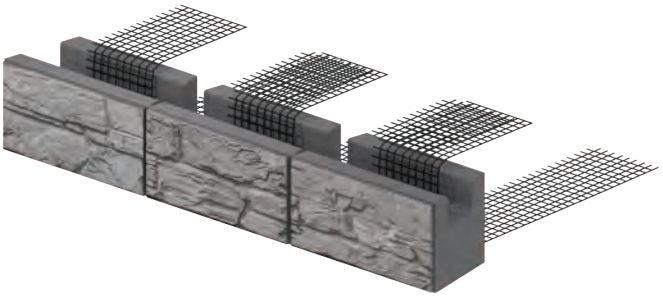
The retaining wall system that ticks all the boxes.

- Quick and easy installation
- Engineered system with up to 100 year design life
- Easy to transport
- Versatile hollow core design allowing drainage at the face
- Minimises manual labour
- Less concrete than solid block systems
- Cost effective
- Flexible design options
- Custom faces available

MAGNUMSTONE DESIGN OPTIONS

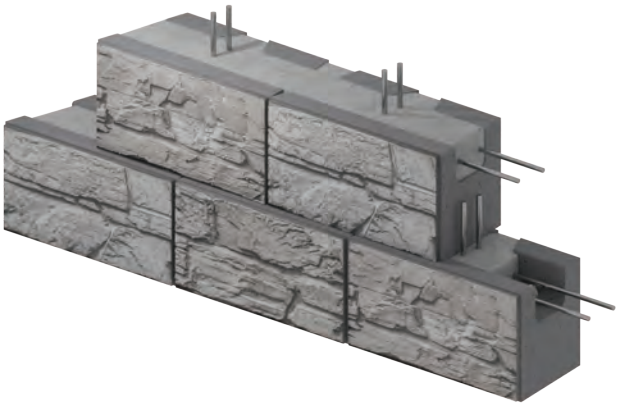
GRAVITY WALL

Gravity walls are built with the large MagnumStone blocks that use a tongue -and-groove system to lock the gravity extenders in place. They rely on their own and extended weight to hold back the earth behind them.



POSITIVE CONNECTION

Geogrids used with the appropriate lengths, layers and compacted backfill materials will resist the active forces above and behind the wall. The use of geogrid reinforcement with the MagnumStone system is typically very cost effective.

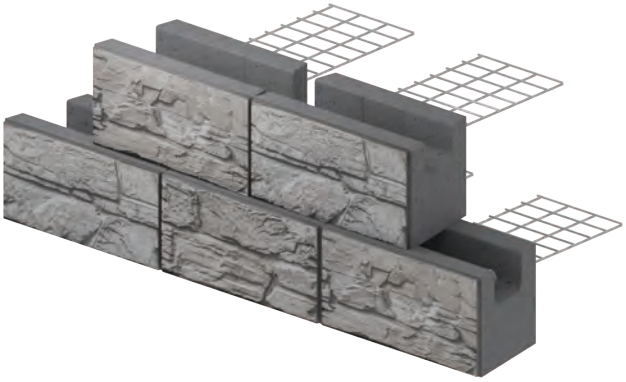


CANTILEVERED WALL

The large vertical and horizontal hollow cores of the MagnumStone units provide the permanent form for reinforcing steel and concrete, making installation easy and cost effective.

SOIL NAILED

Soil nailing could be one of the fastest growing solutions for retaining wall structures, as building restrictions increase due to population growth.



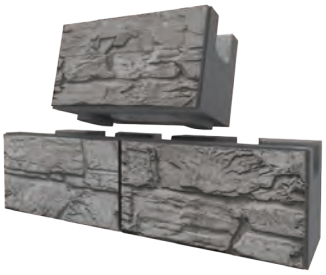
STEEL GRID

The MagnumStone steel grid solution provides designers with a great option, similar to traditional panel/steel systems, with significant installation and cost advantages to the end user.

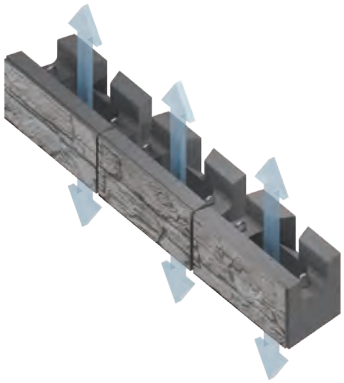
PLANTER WALL

The aesthetically pleasing plantable terraces maximise green area, which reduce the "heat island" effect. Its unique internal drainage system make it the prime choice for environmentally friendly and sustainable wall solutions.

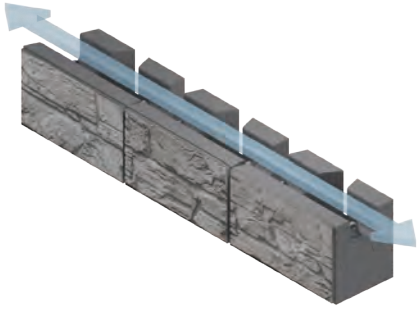
HOLLOW CORE ADVANTAGES



SUPERIOR CONNECTION



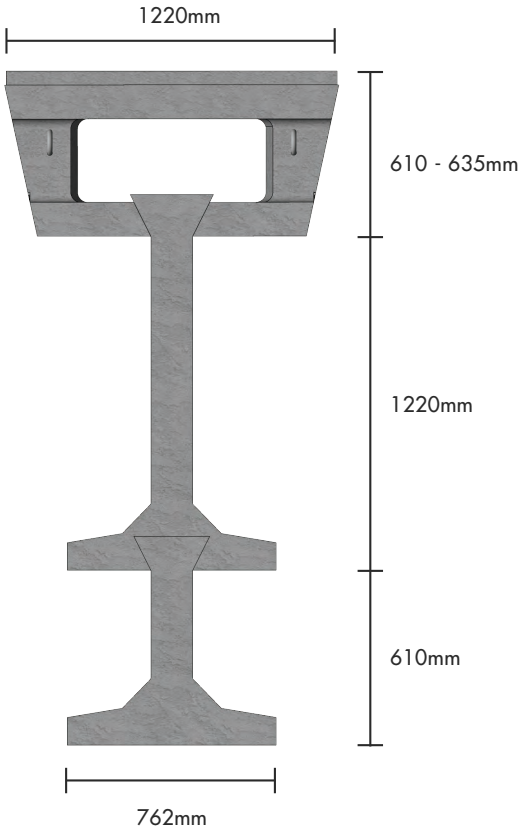
VERTICAL DRAINAGE



HORIZONTAL DRAINAGE

GRAVITY WALL

The MagnumStone extender system allows the designer to create taller gravity walls by adding T-shaped extenders. These extenders lock into the infill material to provide greater gravity mass for wall stability.



MAGNUMSTONE UNIT

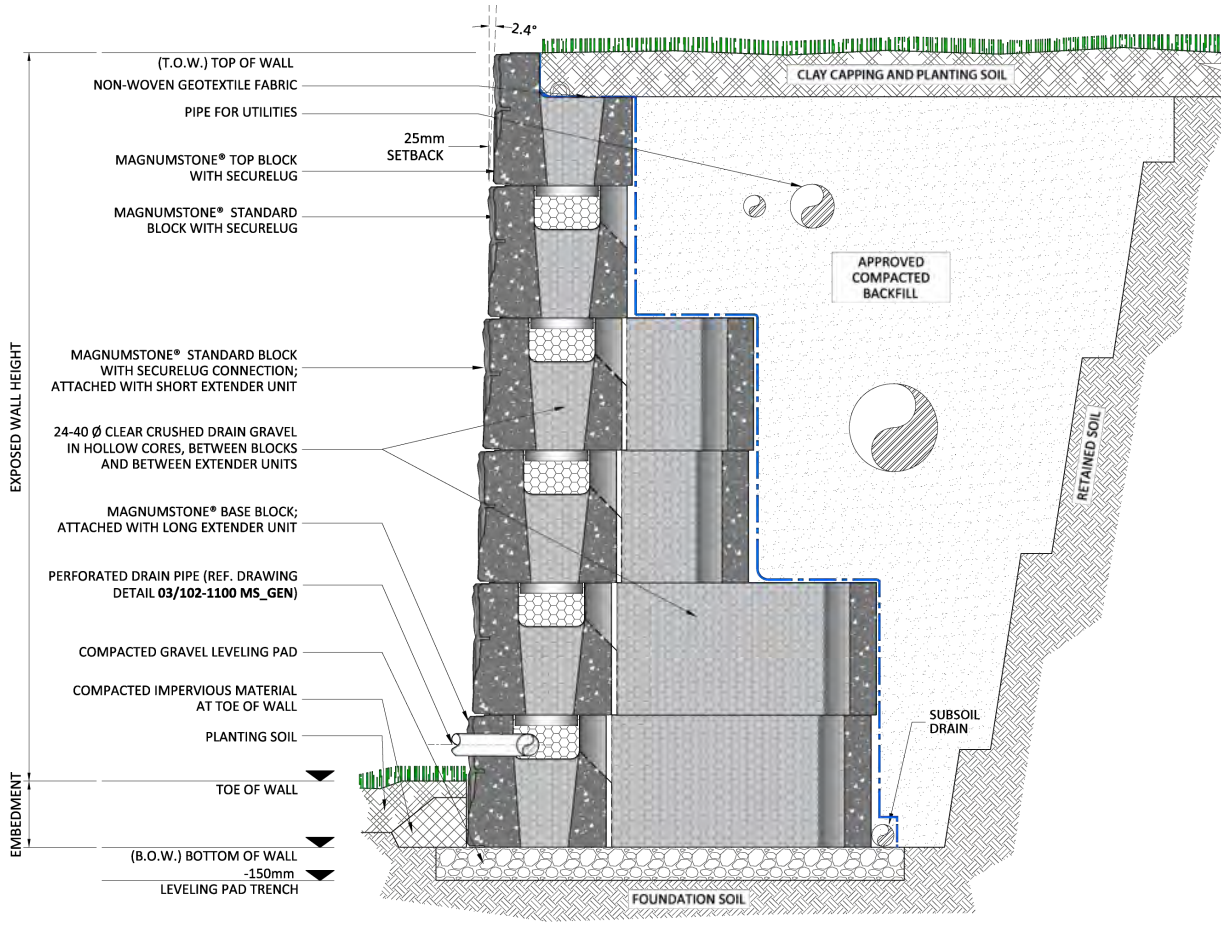
Units are made from high strength, wet cast concrete to provide durability and resistance to weathering.

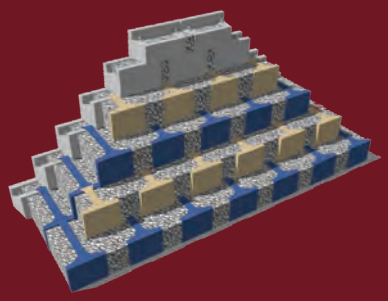
HOLLOW CORE

Makes it easy to sawcut, add special lighting, or install fence posts when adding creative details.

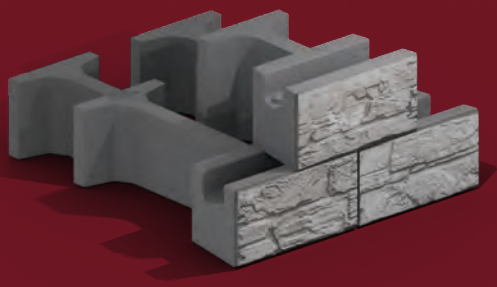
LARGE & SMALL EXTENDERS

MagnumStone extenders can be used in any combination of standard lengths.





GRAVITY WALL WITH EXTENDERS

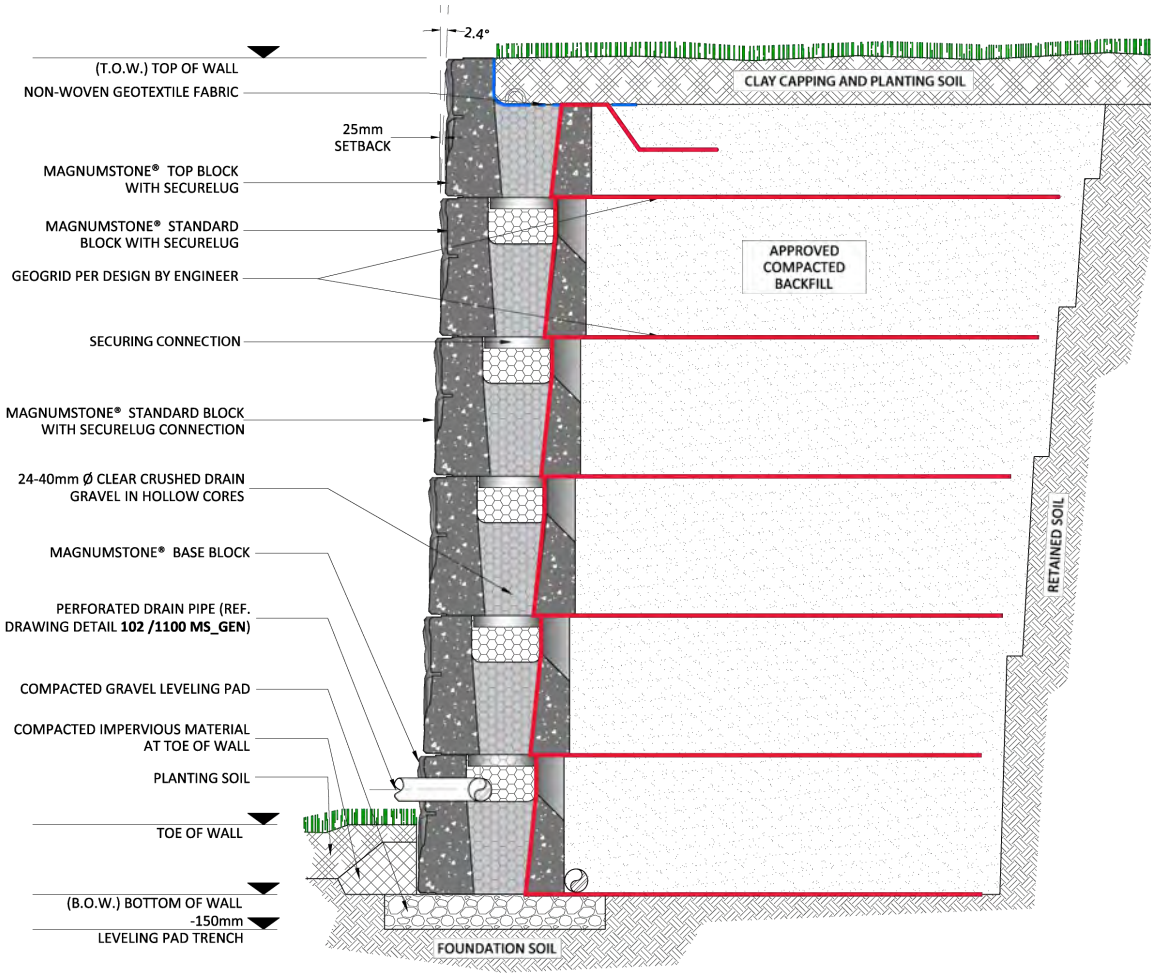


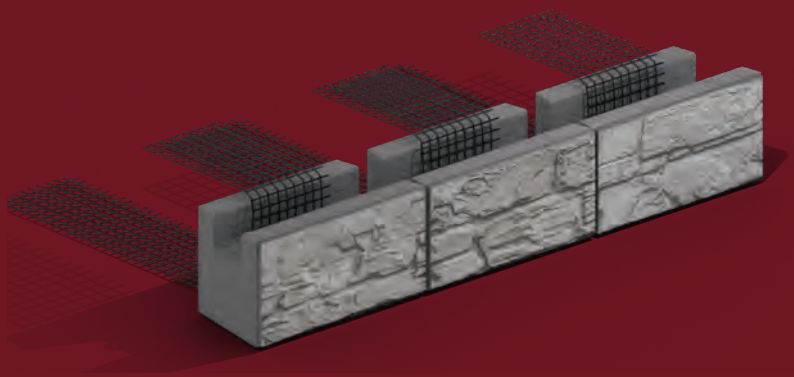
EXTENDER ASSEMBLY

GEOGRID WALLS

Geogrids are used to reinforce the soil mass behind the MagnumStone units to create tall retaining wall systems. The MagnumStone MSE system can be designed to support loads within parking lots, roadways, buildings, bridge abutments and in water applications.

Geogrid, with the appropriate lengths, layers, and compacted backfill materials, will resist forces above and behind the wall. The use of geogrid reinforcements with the MagnumStone system is extremely cost-effective for tall wall structures.



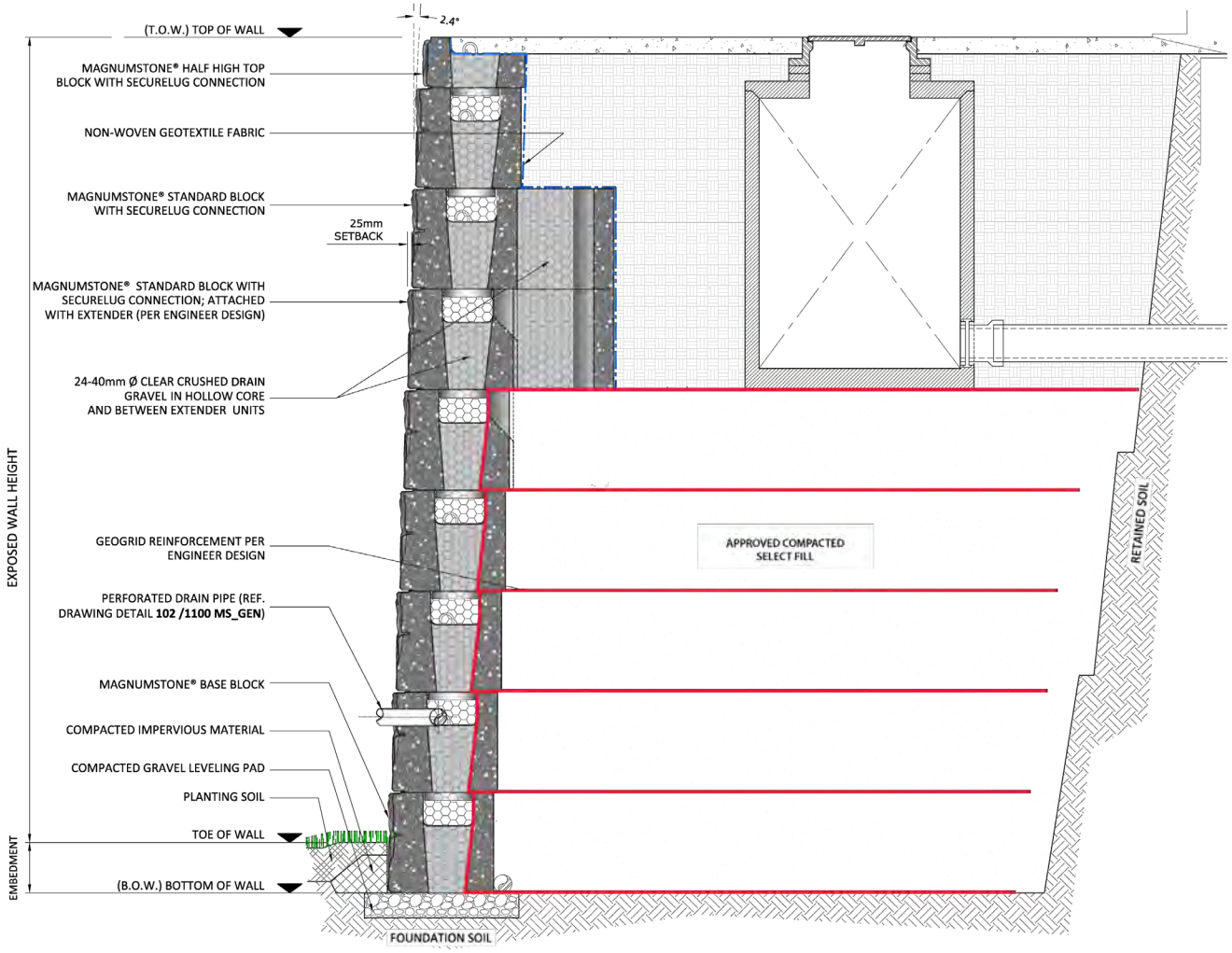


POSITIVE
CONNECTION

HYBRID WALLS

Both MagnumStone MSE Walls and MagnumStone Gravity Walls have benefits for the client. Walls built with MSE technology are especially cost-effective and can take significant loads. In some situations, they can utilise site won fill. The geogrid reinforced zone can restrict site development in some applications with typical geogrid lengths extending 0.7 – 1.2 times the wall height. The MagnumStone Gravity Wall system overcomes this issue with a typical base-to-height ratio sitting between 0.4 and 0.6 times the wall height and tapering back to 0.6m in the upper wall sections.

At Cirtex, we can assist with evaluating your site and optimising the wall system. In some cases, this will be a hybrid solution utilising MSE technology for the lower part of the wall, and a gravity structure for the upper layers to keep any geosynthetic reinforcement well below ground level. This solution can give you the best of both options when used as part of an optimised solution, allowing for services etc to be placed close to the back of the wall in the upper zone of the wall. Speak to your Cirtex representative about your site requirements.



FENCE / BARRIER TOP OF WALL OPTIONS

The unique design of the MagnumStone block allows for clean and professional detailing at the top of the wall. Fence posts can either be set into the hollow core and concreted directly into the block or bolted to a concrete filled core. Both options allow for maximum land use by placing the fence close to the crest of the wall.

The MagnumStone system can be specifically designed to take loads from traffic barriers / wind loadings from high fences. Please contact Cirtex for further guidance how to include this in your design.

Another option is the MagnumStone top block with the back of the unit removed, allowing landscaping to come close to the wall face. Stormwater details such as swale and surface drains can simply be detailed into the top of the wall to ensure water doesn't penetrate the retained zone.

euroclass

VERSATILE APPLICATIONS

GARDEN STEPS

Use the MagnumStone system to integrate matching steps into your landscaping. With a combination of full blocks, half blocks and cap stones you can make an attractive matching stairway in almost any configuration. Combine with a sweeping curved MagnumStone corner for maximum effect.

FENCES

Fences and barriers are often needed to maximise the usable land created from the new retaining wall. The hollow core of the MagnumStone block and the stepped detail of the top block allow for seamless and attractive integration between the fencing and the wall, either with posts fixed directly into the core, or bolted to a capping beam.

TERRACES WITH PLANTERS

The MagnumStone retaining wall provides a large vertical and horizontal hollow core. The large, light-weight units allow wall designers the flexibility of creating many solutions without environmentally costly side-effects. The hollow core provides a plantable pocket within the retaining wall system.

WATER APPLICATIONS

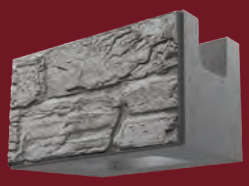
The hollow core of the MagnumStone block provides an effective drainage system to relieve pore water pressure within the retained soil. In addition, the robust concrete facing system is ideally suited for water applications which require extended lifespans.

DESIGN SOFTWARE

The MagnumStone Wall Designer program is designed with the engineer in mind. It includes multiple methodologies, MagnumStone gravity systems, geogrid friction, and positive reinforcement options for the designer to choose from. Select and edit soil information, input loads and slopes above and below the retaining wall.

UNIT SPECIFICATIONS

STANDARD
630kgs

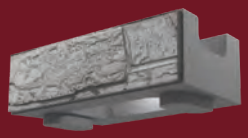


STANDARD BASE
625kgs

STANDARD TOP
570kgs

HEIGHT	610mm
DEPTH	610-635mm
FACE WIDTH	1215-1220mm
BACK WIDTH	991mm
FACE AREA	0.745m2
SETBACK	2.4°

*Block dimensions may vary based on the selected face texture and/or pattern.



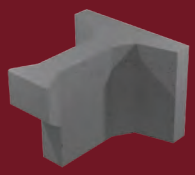
HALF HIGH
320kgs

HALF HIGH BASE
310kgs

HALF HIGH TOP
295kgs

HEIGHT	305mm
DEPTH	610-635mm
FACE WIDTH	1215-1220mm
BACK WIDTH	991mm
FACE AREA	0.37m2
SETBACK	2.4°

*Block dimensions may vary based on the selected face texture and/or pattern.



SMALL EXTENDER
290kgs

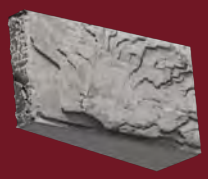
HEIGHT	610mm
DEPTH	610mm
BACK WIDTH	762mm

LARGE EXTENDER
435kgs

HEIGHT	610mm
DEPTH	1220mm
BACK WIDTH	762mm

CORNER/END
156kgs

HEIGHT	610mm
DEPTH	203mm
TOP WIDTH	51mm
BOTTOM WIDTH	102mm



HALF HIGH CORNER/END
70kgs

HEIGHT	305mm
DEPTH	229mm
TOP WIDTH	76mm
BOTTOM WIDTH	102mm

STEP/CAP
290kgs

HEIGHT	152mm
DEPTH	610-635mm
WIDTH	1220mm

FULL SPECIFICATIONS

A full list of specifications can be found on:

WWW.CIRTEX.CO.NZ

*Dimensions and weights may vary

CIRTEX® GAIN MORE GROUND™

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CIRTEX®

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