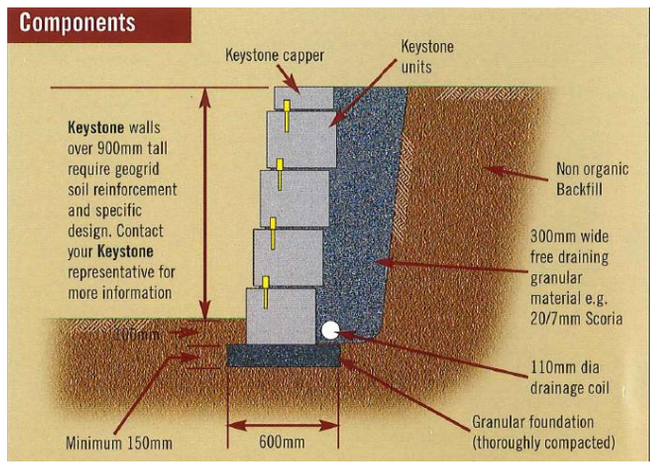
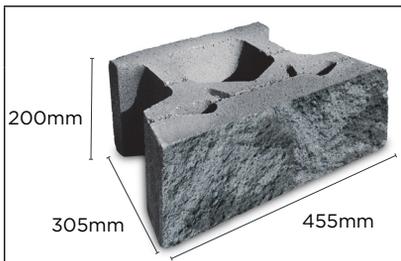
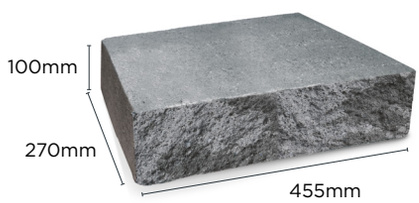
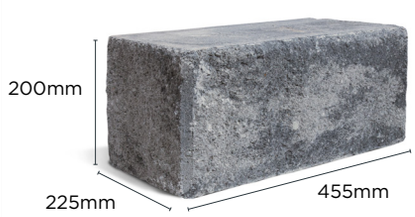
KEYSTONE COMPAC III™
DIY RETAINING GUIDE

MAY 2021

HOW HIGH

Keystone® Compac III walls can be built up to 0.9m (900mm) before engineering or Geo-grids are required, provided that there is no loading on the area adjacent to the top of the wall (building or car parks), soil conditions are suitable and there is horizontal backfill behind the wall and the ground in front of the wall is flat, consult your local representative for more information and advice for any queries.



	**STRAIGHTFACE** - 33.7kg • 45 blocks per pallet • Unit size 200h x 455w x 305d • Unit weight 33.7kg (minimum dry weight) • 11 units per m² (4.09 m² per pallet)
	**CAPPING UNIT** - 25.8kg • 64 blocks per pallet • Unit size 100h x 455w 267d • 2.2 units per linear metre (29 metres per pallet)
	**CORNER** - 43.3kg • 40 blocks per pallet • Unit size 200h x 455w x 225d • Unit weight 45kg (minimum dry weight)
	**KEYSTONE® FIBREGLASS PINS** • 45 pins per box • 2 boxes required per pallet of blocks

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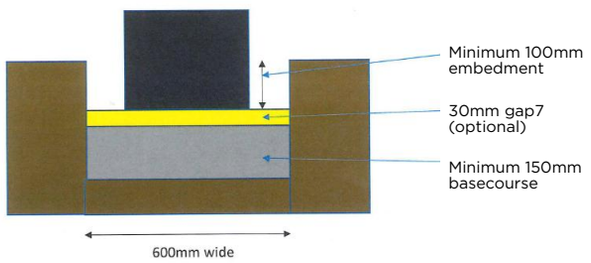
INSTALLATION

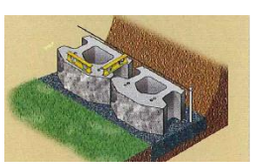
Safety First – know what is below your proposed excavation before you dig, contact your local authority if in doubt.

- Always start at lowest point of wall, excavate a working trench 600mm wide and deep enough to allow a bedding course of 150mm gap20 or gap40 after compaction. The block needs to be embedded below your finished ground by a minimum 100mm or 25mm per course height of wall (25mm for every 200mm high).
- Optional - A bedding layer gap7 of no more than 30mm may be added to ease installation of the first course – for example a wall 1.0m high would need a trench of 150mm (base course) + 30mm (bedding if used) + 125mm (5 courses at 25mm per course) – total trench depth of 305mm.
- It is very important that the first course goes in level, take time to ensure that the blocks are level front to back and side to side, time taken here will speed the installation of further courses.



STEP 1: Base

Excavate a trench 600mm wide and deep enough to allow a 150mm granular levelling base and thoroughly compact. Place first row of blocks at least 100mm below finished ground level.

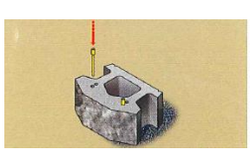


STEP 2: First Course

Starting at the lowest point and working up the slope, lay Keystone units with theocating pin holes on top.

PINS

The pin system allows for a near vertical installation without impacting on the running bond when the wall curves or has a corner if utilising the front pin holes, a batter of 8 degrees can be achieved using the rear pin holes. Pins are a separate SKU item and must be ordered specifically (45 to a box).



STEP 3: Pins

Place the high strength fibreglass pins into the front holes for near vertical and curved walls. Use back pin position to achieve a setback wall. Do not place pins in all 4 holes.

BACKFILL

Clean drainage material 20/6 (clean stones from 6mm to 20mm in size with no fine sand or chip in it)or similar is to be used to fill the Compac III blocks and the drainage zone (the area 300mm behind back of block) fill each course and sweep blocks clean of all loose material before installing the next course, behind the drainage zone backfill the cut in lifts of 200mm using sand or gravel, avoid using a media that holds water or that can shrink or swell depending on water content.

STEP 4: Backfill and Compaction

Fill all voids and 300mm behind wall with free draining granular material e.g. 20/7 scoria. Backfill behind granular material with site soil, provided it is not heavy clay or top soil. Compact using only a lightweight walk-behind compactor within 1 metre of Keystone units. Place and compact fill in 200mm lifts on a coure by course basis.

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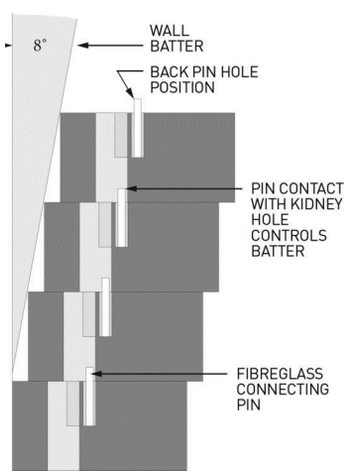
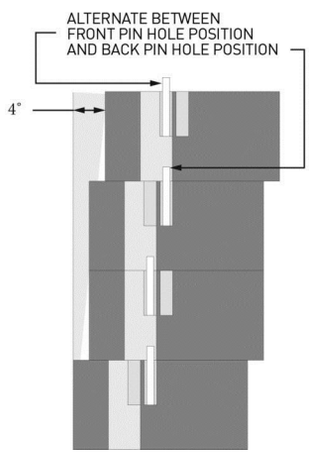
ALIGNMENT

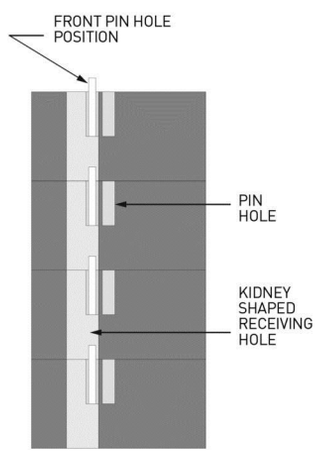
Check the alignment by running a stringline along the pin holes for a straight wall, and using a level to check front to back. if correction is required slide the block back or forward to line the pin holes up, if the blocks are leaning back inorganic shims can be used at the rear of the block to bring level in small increments, if the blocks are leaning forward i.e. they are higher at the back than front, immediate action to correct must be taken, the use of inorganic shims at the front of the block can utilised to correct the lean in small increments. If the lean exceeds 20mm from the back of the block to the front then the wall will need to be disassembled and rebuilt with corrective actions to fix the lean undertaken.

STEP 5: Additional Courses

Sweep top of units clean. Place units of next course so that triangular holes fit over pins of the units below. Pull units towards the face of the wall until it locks with pins on both sides. Repeart STEPS 3, 4 and 5. walls over 900mm tall require geogrid soil reinforcement. **Consult your Keystone representative for more information.**







ESTIMATING TABLE

Wall Height	Wall Length						
	1m	2m	5m	10m	20m	30m	50m
0.2m (1 course)	2.2	4.4	11	22	44	66	110
0.4m (2 courses)	4.4	8.8	22	44	88	132	220
0.6m (3 courses)	6.6	13.2	33	66	132	198	330
0.8m (4 courses)	8.8	17.6	44	88	176	264	440
Cap	2.2	4.4	11	22	44	66	110

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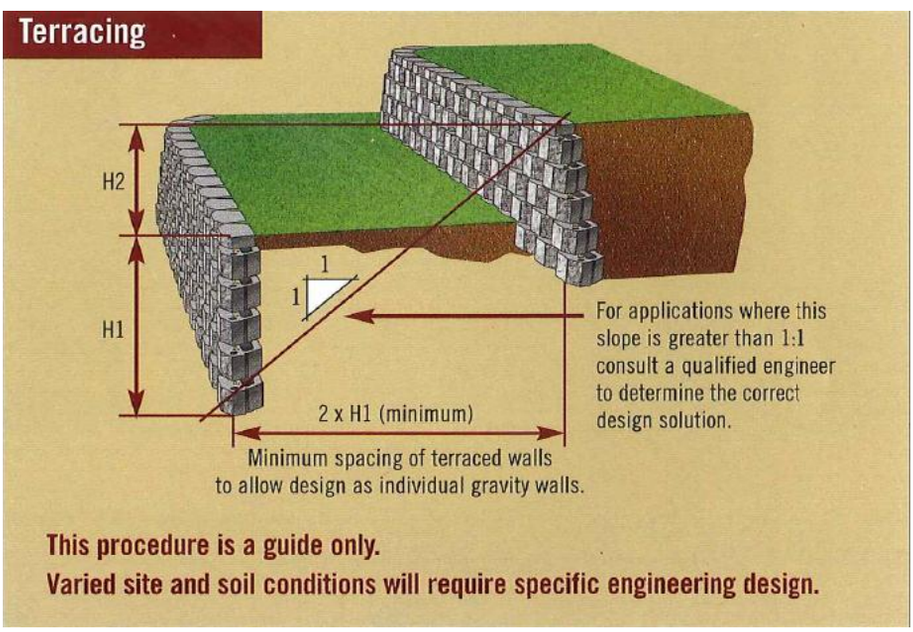
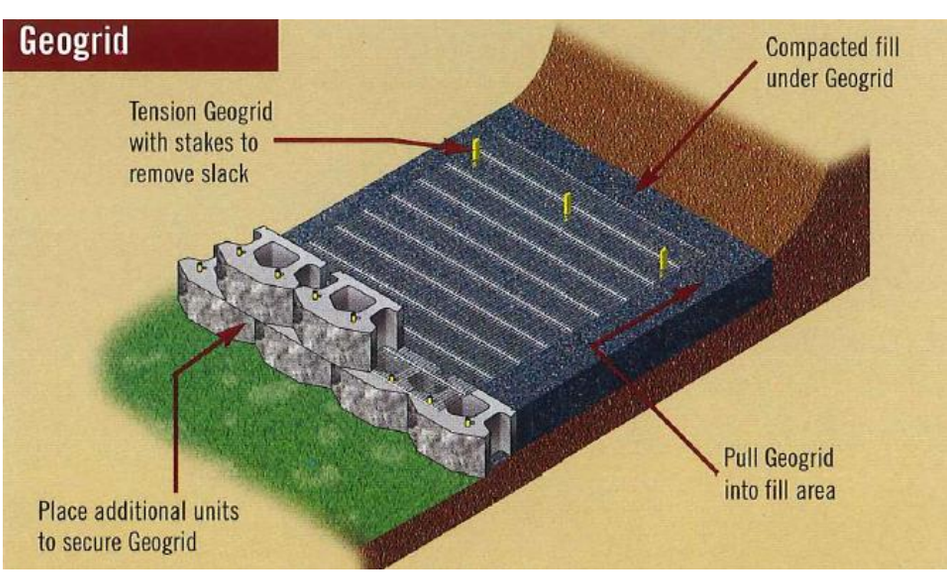
TERRACING

The distance between walls when terracing must be greater than twice the height of the lower wall, where this cannot be achieved the total height of the retaining must be calculated as one wall.



GEOGRIDS

Keystone® walls over 900mm high or any walls supporting vehicles, building foundations, slope or other load that require Geogrid soil reinforcing will need to be engineered, consult your local representative for more information and advice.



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