

COUNTRY MANOR®

Old World Charm



Natural Stone
Appearance

Random Pattern Walls



COUNTRY MANOR®

Keystone Retaining Wall Systems is proud to bring you another great wall system....Country Manor!

This dry stacked yet mechanically connected wall evokes the old world charm of a mason crafted wall. Imagine an English countryside lane or a European estate wall... now you have the idea of Country Manor. Random and rugged yet blended with color and character, these high strength concrete modules appear as natural stone, but have the latest built-in technology of the Keystone pin assured connection.

Whether for castle or home...graceful curves, monumental corners and free standing parapets are all part of the charm of Country Manor from Keystone...The first, and last name you need to know for the finest site solutions!

UNMATCHED FLEXIBILITY



CORNERS



CURVES

Assembly of the varying length Country Manor units will result in a random layout, with the texture, color and appearance of an old world stone wall. Walls can be built as low height gravity landscape walls or, taller soil reinforced wall structures capable of handling surcharge loads!



UNIT TYPES

Large Unit*
60 lbs. (27 kg)
6"h x 10"d x 16"/14"w
(150mm x 250mm x 400mm/350mm)



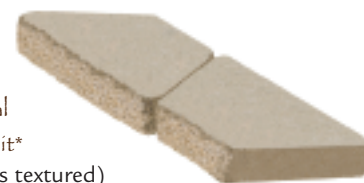
Medium Unit*
40 lbs. (18 kg)
6"h x 10"d x 12"/10"w
(150mm x 250mm x 300mm/250mm)



Small Unit*
25 lbs. (11 kg)
6"h x 10"d x 6"/4"w
(150mm x 250mm x 150mm/100mm)



Universal Cap Unit*
(two sides textured)
24 lbs. (11 kg)
3"h x 10"d x 14"/8"w
(75mm x 250mm x 350mm/200mm)



Fiberglass Pin
5 - 1/4" (130mm) long
1/2" (13mm) diameter
3/4" (20mm) diameter at shoulder



*unit dimensions, weight and color may vary by region.

Positive Mechanical Connection with
Keystone Fiberglass Pins

F

Vertical, Battered and Parapet Options

F

Simplicity of Construction

F

Wall Solutions from Gravity to Soil
Reinforced.

INSTALLATION STEPS



1. PREPARE THE BASE LEVELING PAD

Remove all surface vegetation and debris. Do not use this material as backfill. After selecting the location and length of the wall, excavate the base trench to the designed width and depth. Start the leveling pad at the lowest elevation along wall alignment. Step up in 6" (150mm) increments with the base as required at elevation changes in the foundation. Level the prepared base with 6" (150mm) of well-compacted granular fill (gravel, road base, or 1/2" to 3/4" [10 - 20 mm] crushed stone). Compact to 95% Standard Proctor or greater. **Do not use PEA GRAVEL or SAND for leveling pad.**



2. INSTALL THE BASE COURSE

Place the first course of Country Manor units end to end (with front corners touching) on the prepared base. The long groove (receiving channel) on the unit should be placed down and the three pin holes should face up, as shown. Make sure each unit is level - side to side and front to back. Leveling the first course is critical for accurate and acceptable results. For alignment of straight walls, use a string line aligned on the unit pin holes for accuracy. Minimum embedment of base course is 6" below grade.



3. INSERT THE FIBERGLASS PINS

Place the fiberglass pins into the holes of the Country Manor Units (note: place one pin only per each grouping of 3 holes). Place pins in the middle hole for near vertical alignment or the holes nearest the embankment for a 9.5° +/- setback per course. According to wall requirements and design, the front pin hole (towards the face of the wall) can be used randomly to allow a forward projection of a specific unit for accent and variation in the wall appearance.



4. INSTALL DRAINAGE FILL, BACKFILL AND COMPACTION

Once the pins have been installed, provide 1/2"-3/4" (10 - 20mm) crushed stone drainage fill behind the units to a minimum depth of 12" (300mm). Fill open spaces between units and open cavities/cores with the same drainage material. Proceed to place backfill in maximum 6" (150mm) layers and compact to 95% Standard Proctor with the appropriate compaction equipment.



5. INSTALL ADDITIONAL COURSES

Place the next course of Country Manor units over the fiberglass pins, fitting the pins into the long receiving channel recess of the units above. Push the Country Manor units toward the face of the wall until they make full contact with the pins. If pins do not connect with channel but align in open core of upper unit, place drainage fill in core to provide unit interlock with pin.

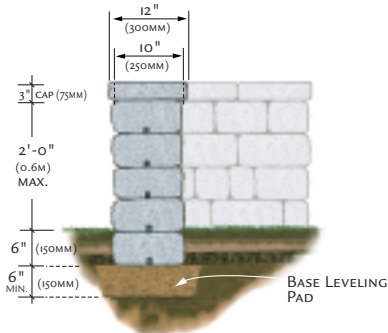


6. CAPPING THE WALL

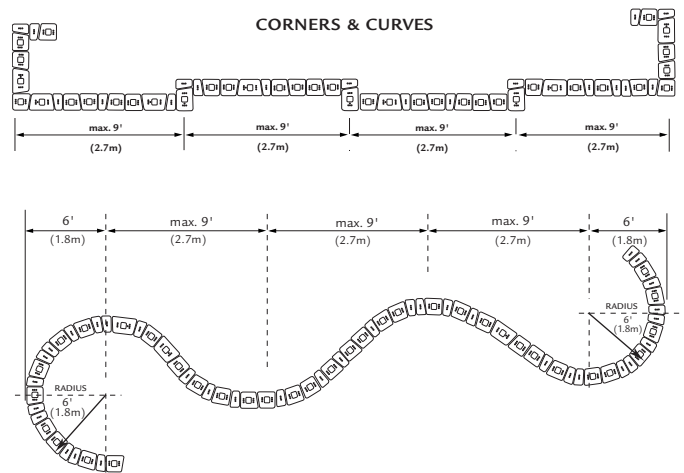
Clean off the last course of Country Manor in preparation for the cap or coping to finalize the wall. With units dry and clean, use construction adhesive (Keystone Kapseal) or mortar for a mechanical bond. Install the Country Manor 3" (75mm) capping unit, architectural precast concrete or cut stone as a coping element. Cap may be flush or overhanging as required by aesthetics and design.

FREE STANDING BORDER WALL:

With Country Manor, you have the added option of building unreinforced free standing walls to various plan geometry and limited heights. From low border walls, which define the edge of patios and decks to free standing entry monuments, pilasters and parapets walls, Country Manor uses this interlocking geometry to achieve wider wall areas which provide strength and resistance to overturning forces.

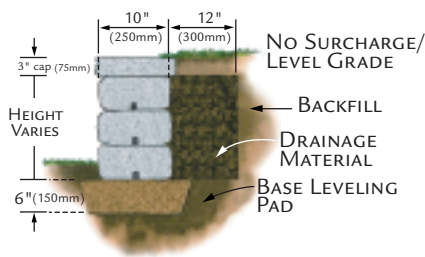


CORNERS & CURVES

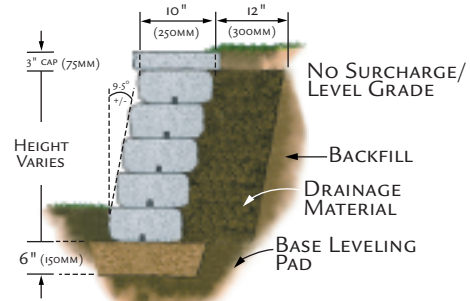


DESIGN CONSIDERATIONS

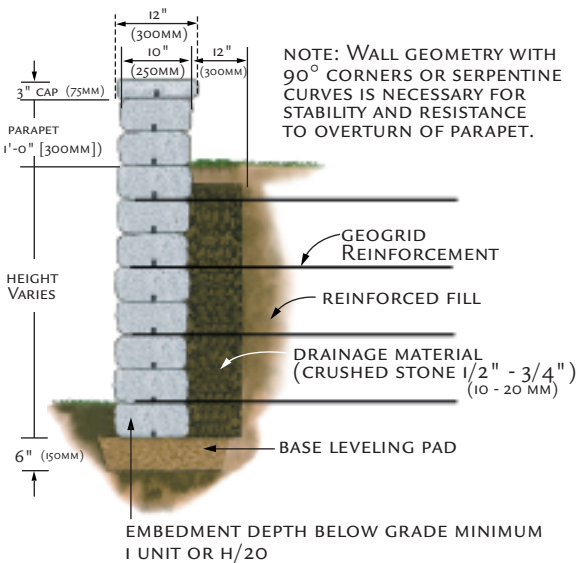
Gravity Wall - Vertical



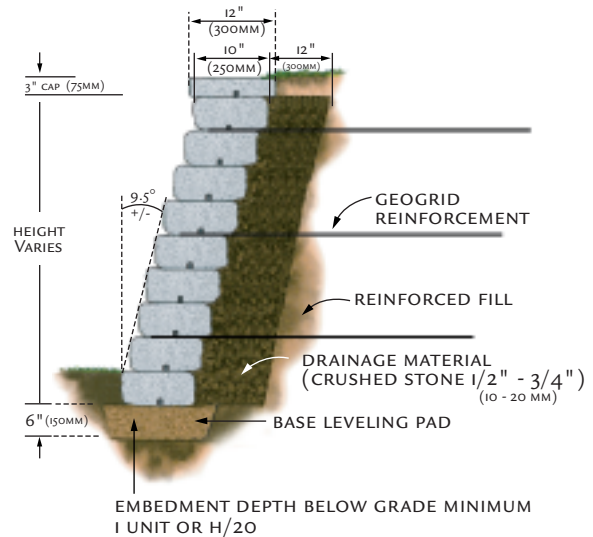
Gravity Wall - Battered



Reinforced Wall - Vertical With Parapet



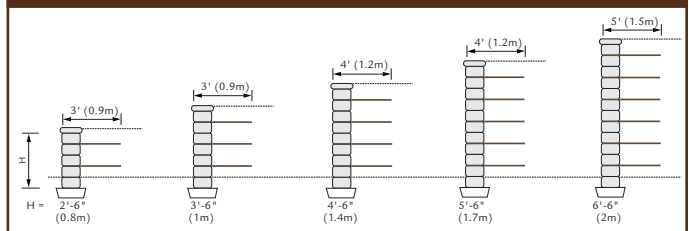
Reinforced Wall - Battered



GRAVITY WALLS (maximum unreinforced wall height)

MAXIMUM HEIGHT	NEAR VERTICAL		9.5° +/- BATTER	
	Level	3H:1V	Level	3H:1V
SAND/GRAVEL PHI = 34°	2'-0" (0.6m)	1'-6" (0.45m)	3'-0" (0.9m)	2'-6" (0.75m)
SILTY SAND PHI = 30°	1'-6" (0.45m)	1'-6" (0.45m)	2'-6" (0.75m)	2'-0" (0.6m)
SILT/LEAN CLAY PHI = 26°	1'-6" (0.45m)	1'-0" (0.3m)	2'-0" (0.6m)	1'-6" (0.45m)

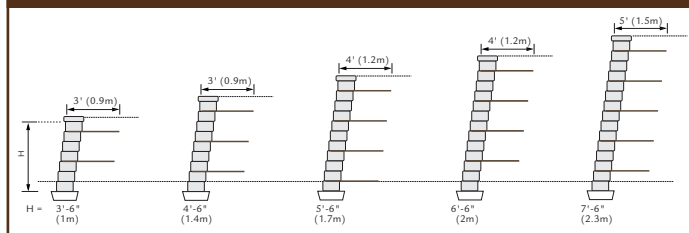
REINFORCED WALLS - VERTICAL



Design Notes

- Friction angle (PHI) for earth pressure calculations is (min. 28° - max. 32°).
- Moist weight of all soil types is 120 lb./ft.³ (19kN/m³).
- Sliding calculations use 6" (150mm) crushed stone leveling pad as compacted foundation material.
- All backfill materials are compacted to 95% maximum density.
- The term "vertical" is a wall built to a near vertical alignment with a slight positive setback.
- The information provided herein is for preliminary design use only. A qualified engineer should be consulted for design and analysis of structures. Keystone Retaining Wall Systems, Inc. assumes no liability for the improper use of these tables.

REINFORCED WALLS - BATTERED (9.5° +/- SETBACK)



Another great product from ...



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D I S T R I B U T E D B Y :