

barkman™

pisa2®
romanpisa®

retaining wall installation guide



Congratulations on purchasing one of the finest concrete retaining wall systems available. Pisa2 and RomanPisa retaining wall systems have been designed to provide easy installation and long lasting beauty for a wide range of different projects, from small decorative garden walls to massive earth retaining structures. Compared to alternative materials and methods, these systems provide superior, longer lasting results with fewer installation and maintenance difficulties. This makes retaining wall systems from barkman your best choice.

Step-by-Step Installation

The directions in this guide are for the installation of a typical barkman Pisa2 and RomanPisa retaining wall measuring 4' in height and under. Walls over 4' can be just as easily constructed, but they will require the use of a geogrid. Ask your distributor for details. Before you start, it is important to have your project fully designed on paper. Use the Ashlar Pattern layouts (for RomanPisa only) in planning your design. If you require assistance with creating your design, or have any further questions regarding installation, please consult your knowledgeable barkman dealer.

Equipment Needed

- Gloves, knee pads
- 3" mason's chisel
- 3 lb. hammer or rubber mallet
- Standard carpenter's level, line level and string line
- Tape measure, shovels and wheelbarrow
- Plate compactor (3 HP to 5 HP) and hand tamper
- Concrete saw with a diamond blade
- Construction adhesive
- Safety glasses



construction details

Typical Cross Section

ReversaCap® (for Pisa2) and

Roman Coping (for RomanPisa)

Adhesive

$\frac{3}{4}$ " (20 mm) Free Draining Granular Fill

Pisa2/RomanPisa Units

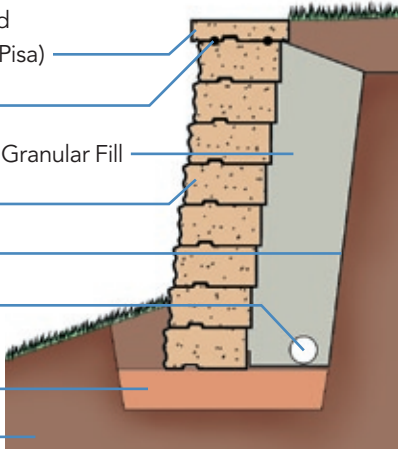
Filter Cloth

Drainage Tile

Compacted

Granular Footing

Undisturbed Site Soil



Steps

Use Standard units for risers.

Use ReversaCap® or Roman Coping for step treads. Use adhesive to adhere.

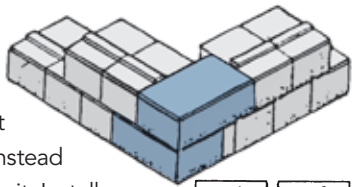


Corners

For outside corners use corner units, available in both rights and lefts. These are designed with a split face on two adjacent sides. Do not cut corner units. Instead

cut standard units to fit corner unit. Install corners on top of each other reversing rights to

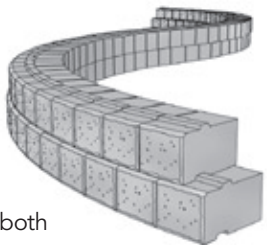
lefts on preceding courses. When installing Pisa2 and RomanPisa, chisel 4" of the tongue off adjacent unit to allow next corner unit to rest flat.



Curves

Use the tapered units on convex curves.

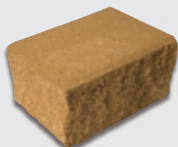
For smoother curves use left tapered on one course, right tapered on the next. Minimum outside radius allowed is 8 ft. Pisa2, Split Face Coping, Roman Coping and RomanPisa can be used for both straight or curved walls.



pisa2[®]



8" x 12" x 6"h
Standard



12" x 9" x 6"h
Corner



8" x 14" x 4"h
Split Face Coping

romanpisa[®]



12" x 9" x 6"h
Corner



12" x 9" x 6"h
Jumbo



8" x 12" x 6"h
Standard



4" x 12" x 6"h
Half

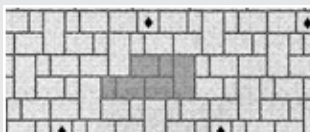


8" x 14" x 4"h
Roman Coping

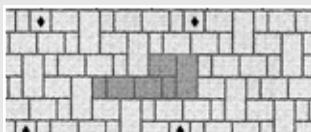
Units Needed

wall height		wall length					
inches	courses	5'	10'	15'	20'	25'	30'
		standard units					
6	1	8	15	23	30	38	45
12	2	15	30	45	60	75	90
18	3	23	45	68	90	113	135
24	4	30	60	90	120	150	180
30	5	38	75	113	150	188	225
36	6	45	90	135	180	225	270
42	7	53	105	158	210	263	315
48	8	60	120	180	240	300	360
		coping units					
-	1	8	16	24	32	40	48
		corner units					
-	-	1 left and 1 right unit for every 2 courses in each corner					

Ashlar Patterns for RomanPisa®



Pattern 1 – Per 100 sq. ft.:
164 Standard, 110 Half, 56 Jumbo



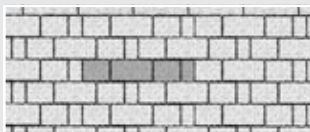
Pattern 2 – Per 100 sq. ft.:
164 Standard, 110 Half, 56 Jumbo



Pattern 3 – Per 100 sq. ft.:
160 Standard, 42 Half, 80 Jumbo



Pattern 4 – Per 100 sq. ft.:
139 Standard, 47 Half, 93 Jumbo



Pattern 5 – Per 100 sq. ft.:
150 Standard, 75 Half, 75 Jumbo

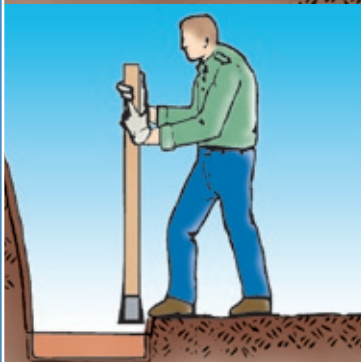
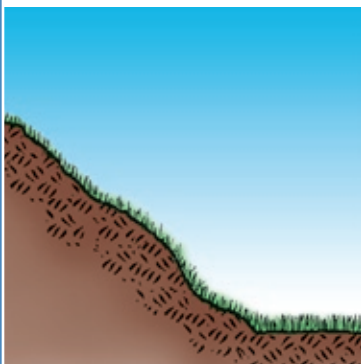


Pattern 6 – Per 100 sq. ft.:
150 Standard, 75 Half, 75 Jumbo



Pattern 7 – Per 100 sq. ft.:
124 Standard, 73 Half, 94 Jumbo

Note: Estimating chart is based on using Pisa2/RomanPisa Standard and Corner units. For RomanPisa, use these ashlar patterns for calculating material requirements using Jumbo and Half units. Jumbos ♦ cut in half make 6" x 6" face.



1

Plan

Mark a line where the front base of the wall will be placed (keeping in mind the $\frac{3}{4}$ " setback per course). Use the Estimating Chart to calculate the number and type of units required, according to your wall's planned measurements. Important: before digging contact utilities to determine if it is safe to excavate.

2

Excavate

Remove enough soil to create a trench 12" deep and 24" wide. Shape the back slope to allow for 12" of drainage material behind the wall over its entire height, remembering to account for the $\frac{3}{4}$ " setback per course.

3

Prepare Base

Place the filter cloth under the base and against the exposed face of the excavation. Compact base and ensure native soil around trench is stable. Fill the trench with well-graded $\frac{3}{4}$ " down granular base. Level and compact base to a depth 6" below ground level.

4

First Course

Position a level string line to mark the location of the first course. Place the first course of units on the prepared base making sure each unit is level front to back, and side to side.



5

Stack Units

Sweep clean the top of first course. Now place next course of units on top of first course in a running bond pattern (placing the center of the block on the top course above the joint between two blocks on the lower course). Repeat this process for each course.



6

Backfill

Place a drain tile on the base material behind first course of units and fill behind the wall with a free draining granular fill. Compact fill after every 6" added. Place soil in front of the wall to ensure the first course is completely buried. Continue to stack units and backfill until desired height is achieved.



7

Secure Coping

On the last course of wall units place a line of adhesive on both sides of the tongue. Place the coping unit on top and apply pressure to secure.



8

Finish Grading

After backfilling to about 6" below the top of the wall, pull the filter cloth towards wall. Backfill the remaining area with top soil. Remember to slope the soil above and below the wall to ensure water will flow away, and not accumulate near the wall. Finish off by pulling the filter cloth towards the wall and place 6" of soil on top.

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Caution: Before any digging, always consult your local utility companies for the location and depth of pipes, cables and conduits. Dry sawing or grinding of concrete products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). The use of a NIOSH-approved respirator and tight fitting goggles is recommended when sawing or grinding operations are in progress.

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