RETAINING WALLS 02830

Oldcastle Architectural, Inc.





Walls & Floors for Your Outdoors™

1. Product Name Celtik® Wall

2. Manufacturer

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3. Product Description

BASIC USE

Celtik® Wall

Celtik[®] Wall units are designed for use as retaining walls, terraces, planting beds, steps and any decorative application where a maintenance-free, easy-to-install building material is preferred. A unique anchoring system is available for the construction of vertical or sloping walls. The Celtik Wall evokes the texture and unevenness of natural stone and is ideal for creating curves or straight walls and pillars.

COMPOSITION & MATERIALS

Celtik Wall units are made from specially designed and shaped modular concrete masonry units. The Celtik Wall anchor pin facilitates the construction of walls with a maximum height of 42" (1067 mm). A special pin system has been designed to stabilize the overall structure and guide the installation of the modules. The dual position system allows for the construction of vertical or 9 degree sloped walls. Modules are delivered with 2 different anchor pins: a regular pin with blades, and a second pin without blades, designed for the construction of corners.

TYPES, FINISHES, COLORS

Celtik Wall is available in a wide range of colors and finishes. Colors may vary by region. Contact Oldcastle for a complete color chart.

SIZES, SHAPES

Sizes are nominal. Celtik wall units are available in 3 1/2" and 5 1/4" (90 and 135 mm) sizes.



Straight capping modules measure 3 1/2" \times 16" \times 12" (90 \times 406 \times 305 mm).

LIMITATIONS

Structural retaining walls are design dependent. A design professional such as an architect, structural engineer or geotechnical engineer familiar with the product and the project requirements should determine the requirements for any specific wall installation.

4. Technical Data

APPLICABLE STANDARDS

ASTM International - ASTM C1372 Standard Specification for Segmental Retaining Wall Units

APPROVALS

Consult manufacturer for current information on compliance with requirements of specific agencies and/or building code jurisdictions.

ENVIRONMENTAL CONSIDERATIONS

Materials are noncorrosive and safe for the environment.

PHYSICAL/CHEMICAL PROPERTIES

Segmental retaining wall units manufactured in the U.S. should meet the requirements of ASTM C1372, Standard Specification for Segmental Retaining Wall Units. Shear clips shall be 1/2" (12.7 mm) diameter ABS injection molded or equivalent to provide alignment between vertically adjacent units. Pins shall be 2" (51 mm) long and tapered for insertion control. Strength of shear connectors shall be a minimum of 6400 psi (44,096 kPa) per ASTM D4475 and shall be applicable over a design temperature of 10 -100 degrees F (-12 - 38 degrees C). Test reports and design data are available to design professionals upon request.

5. Installation

PREPARATORY WORK

Handle and store product according to Oldcastle recommendations. Substrate requirements vary.

METHODS

Installation should be performed by experienced contractors. Site/soil conditions and application variations directly affect installation recommendations. Contact the manufacturer for complete installation recommendations.

Excavation

The excavation depth must take into account the 6" (152 mm) depth of the foundation as well as the buried depth of the modules. Ten percent of the total wall height must be buried. The width of the trench will depend on the type of stone selected. Allow for a trench at least 18" (457 mm) in width to construct a drainage system with clean stone behind the wall.

Base Preparation

Cover the back and the bottom of the trench with a geotextile membrane to prevent the soil from obstructing the drainage system. The geotextile membrane should project at least 12" (305 mm) beyond the top of the slope.





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Foundation

Prepare a 6" (152 mm) foundation of 3/4" (19.1 mm) crushed stone (increase the excavation depth in areas with clay soil) and compact it using a mechanical or 4000 psi (27,560 kPa) vibrating compactor.

Install a 4" (102 mm) diameter perforated drain pipe on the foundation and connect it to the existing draining system. This drain will be covered with 3/4" (19.1 mm) crushed stone.

Wall Assembly

Select one of the following modules:

- 3 1/2" (90 mm)
- 5 1/4" (135 mm)
- Combination of 3 1/2" and 5 1/4" (90 and 135 mm) modules

Oldcastle recommends using a combination of the larger pieces for the first row. Even if the selected arrangement is a combination of 3 1/2" and 5 1/4" (90 and 135 mm) modules, the first row must contain modules of one height.

Assemble the first row on the compacted foundation. Carefully align the first-row modules horizontally to ensure that the wall will be level. Level the blocks side to side and front to back. No pins are used at this stage.

Install subsequent rows. First insert pins in modules to be installed. Use appropriate grooves, depending on whether the wall is to be vertical or sloped 9 degrees. Lay each row by overlapping joints of the last row installed.

Supplied radii may be used vertically to give a natural, original look to the layout. Radii measure 2 rows high. Use a small 6 3/4" (172 mm) radius to match two 3 1/2" (90 mm) rows and a medium 10 1/4" (260 mm) radius to cover two 5 1/4" (135 mm) rows.

Back Filling

Every 2 rows, fill the space behind modules with 3/4" (19.1 mm) clean stone. When com-

bining 3 1/2" and 5 1/4" (90 and 135 mm) modules, spaces may appear between some modules in the structure.

Capping Modules

Celtik Walls can be capped using standard modules in flush and overhanging configurations. In either case, the modules must be properly secured with concrete adhesive to ensure wall stability. Use straight modules for capping straight portions of the wall. Use beveled modules for the curved portions, as less cutting will be required.

Celtik straight capping modules are purchased individually. Prepare a Celtik straight capping module as follows: Cut 4" (102 mm) from the capping module (lengthwise). Distress the newly cut face to achieve the same finish as that of other sides.

Install the corner cap first before proceeding with installation of the other capping modules. Secure the capping modules with concrete adhesive to the top row of Celtik units.

PRECAUTIONS

Pea gravel should not be used as a backfill material. Comply with jobsite safety requirements of authorities having jurisdiction.

BUILDING CODES

Current data on building codes requirements and product compliance can be obtained from Oldcastle. Installation must comply with the requirements of all applicable local, state and national jurisdictions.

6. Availability & Cost

AVAILABILITY

Celtik Wall units are available throughout the U.S. and Canada. Contact Oldcastle for information about local availability.

COST

Installed cost information may be obtained from Oldcastle upon request.

7. Warranty

Oldcastle certifies that the specified product meets the requirements of ASTM C1372. Belgard offers a lifetime product warranty against manufacturing defects, provided the product is installed by an authorized Belgard contractor.

8. Maintenance

When properly designed and installed, Celtik Wall systems typically require almost no maintenance. Like any concrete surface, they can be pressure washed periodically to remove soiling or stains.

9. Technical Services

Contact Oldcastle for technical assistance. A staff of trained service personnel offers design assistance and technical support.

10. Filing Systems

- First Source
- Additional product information is available from the manufacturer upon request.



