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Strength, Set In Steel



eystone KeySystem I<sup>™</sup> is a world-class structural retaining wall system, specifically designed for use with highways and heavy construction. KeySystem I<sup>™</sup> combines patented Keystone modular concrete units and inextensible steel soil reinforcement to develop an extremely stable, aesthetically appealing and cost effective retaining wall structure.

Keystone KeySystem's aesthetic options include a wide range of completed wall appearances without the high cost of customization.

KeySystem I also utilizes design methodology and material components that comply with the standards for inextensible reinforcement as outlined in the current AASHTO Standard Specifications for Highway Bridges.



#### **Durable Components**

• Inextensible steel reinforcement and 75 to 100 years of design life

#### **Aesthetic Appeal**

• Wide variety of color options, textures and patterns

### **Design Flexibility**

• Curves, corners and unique geometries

## **Ease of Construction**

• Quick & Easy, no cranes required

## **Cost Effective Results**

• Competitive with other MSE structures

#### Intended for the Most Demanding Jobs

• Deflections with steel reinforcement are reduced by over 66% compared to geosynthetic reinforcement.

# Ideal for deflection sensitive applications such as:

- Bridge abutments
- Tall walls
- Walls with heavy surcharges
- Walls where loads or structures bear on or are immediately behind the reinforced mass
- Designed to more rigorous AASHTO standards.
- Designed for transportation or other projects requiring AASHTO compliance.
- KeySystem I is a high-performance, mechanically-stabilized earth retaining wall system for highway and heavy applications using inextensible reinforcing. Evaluated by HITEC, in accordance with AASHTO specifications.









## **Galvanized Steel Connection Pins**

9/16" x 8" (14.3 x 203 mm)



Fiberglass Alignment Pins 1/2" x 5-1/4" (12.7 x 133mm)



#### **Straightface**

8"h x 18"w x 12"d (203 x 457 x 305 mm)



#### **Sculptured Rock Face**

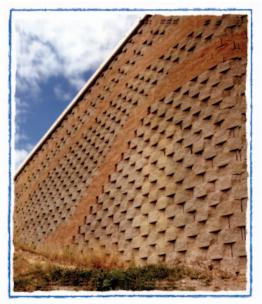
8"h x 18"w x 12"d (203 x 457 x 305 mm)

## Strength

The strength and performance of a retaining wall system is an obvious top consideration for wall specifiers and designers. KeySystem I is one of the most durable retention solutions available. It features patented concrete units that are manufactured to a minimum compressive strength of 4000 psi. The units are dry stacked and interlocked vertically and horizontally using high-strength fiberglass pins and galvanized steel pins. This method provides a very strong, mechanically interlocked facing system.

KeySystem I is also the ideal product for tall walls. Many walls using KeySystem I have been constructed to over 50 ft. (15 m) under a variety of loading conditions. KeySystem I steel soil reinforcement offers an economical and extremely strong structural solution for tall walls and extreme loading conditions.







## KeySystem I™ Flexibility Offers Seismic & Aesthetic Benefits

Copings, crash barriers, railing options, construction slip joints, curves and corners are all possible design elements in the KeySystem I package, without the need for specialized moldings and custom fabrication.

Seismic design loads can easily be factored into the KeySystem I design analysis. The semi-flexible (MSE) system is capable of handling seismic events better than more rigid systems. KeySystem I structures have a proven track record of high performance, withstanding seismic events in the Pacific Rim and Western United States without failure or significant detrimental effects on the wall structure.

#### **The Keystone Advantage**

When KeySystem I is specified, a complete retaining wall system is engineered and supplied to meet site-specific conditions. Keystone's engineering department provides the design package and coordinates with local licensed manufacturers to ensure a completed project meets the demands of critical structure requirements. They also ensure timely arrival and sequencing of materials for construction.

After nearly 20 years at the forefront of the industry, Keystone Retaining Wall Systems, Inc. continues to set the standard for excellence and innovation within the segmental retaining wall industry. Keystone represents the global benchmark in soil retention, erosion control and landscape systems. Holding over 50 patents, Keystone symbolizes cutting-edge design, performance and aesthetics.

Keystone partners with the best network of product developers, engineers, sales professionals and manufacturers in the business. They help ensure that Keystone offers the best in site solutions for residential, commercial, recreational, industrial and government applications.

To learn more about the quality and value in KeySystem I or other Keystone Retaining Wall Systems products and services, please visit us on the web at **www.keystonewalls.com** or call 800-747-8971.







## **Distributed by:**



Retaining Excellence<sup>TM</sup>

www.keystonewalls.com

Keystone Retaining Wall Systems, Inc. reserves the right to improve its products and make changes to its specification and design without notice. The information contained herein has been compiled by Keystone and to the best of its knowledge, accurately represents the Keystone product and how it may be used in the applications which are illustrated. Site conditions, including load pressures acting on the wall, soil types and drainage conditions, may vary. Final determination of the suitability of the product for the use contemplated and the manner of product use are the sole responsibility of the user. Good construction practices and local building codes require the use of an engineered design when constructing retaining walls or free-standing walls in many conditions. Structural design and analysis should be provided by a qualified engineer.