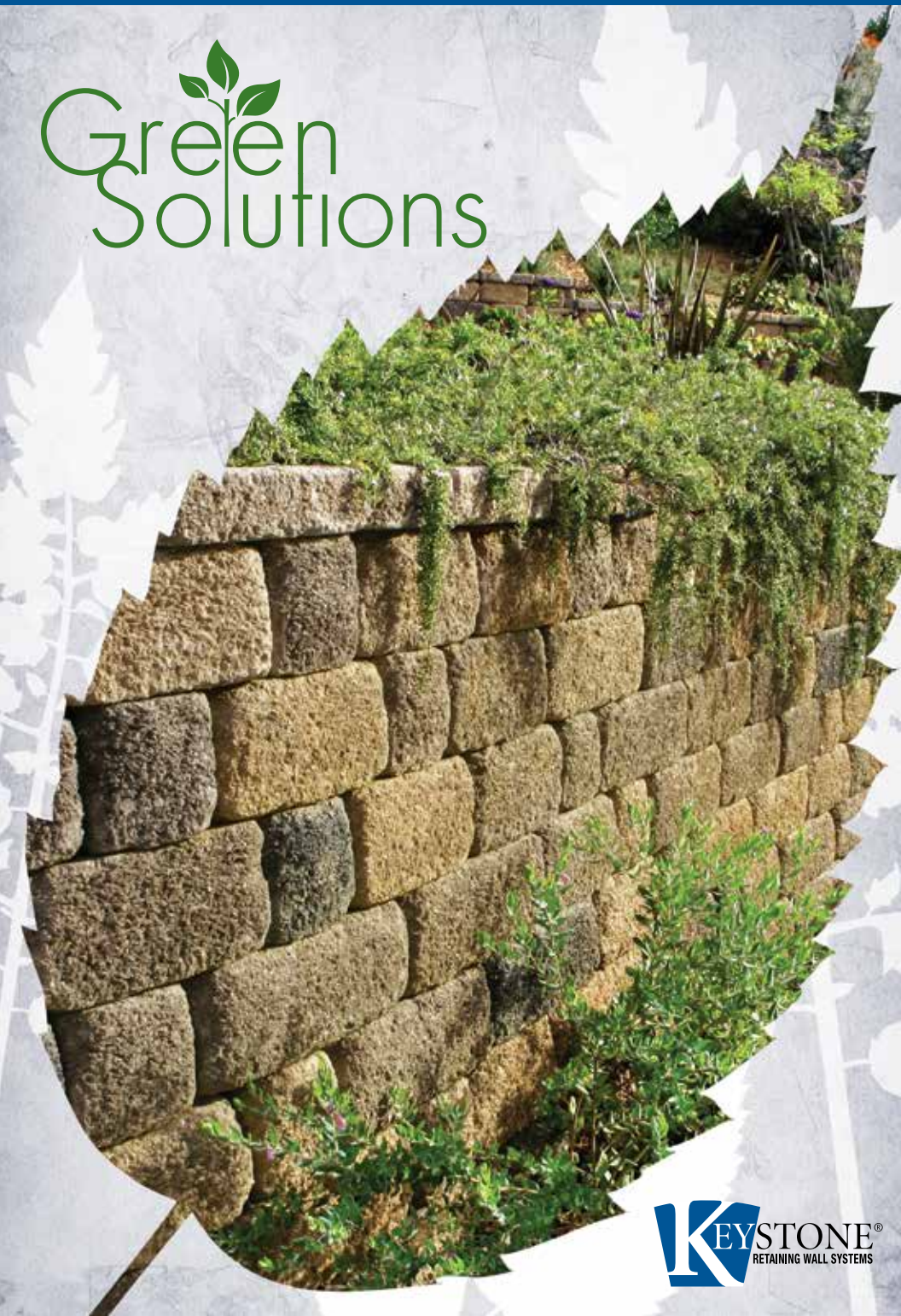
Green Solutions



KEYSTONE® RETAINING WALL SYSTEMS

Green Solutions

BY KEYSTONE

The choice to build "green" has revolutionized the construction industry. Choosing products and processes with a lower impact on the environment not only increases efficiency; but, also guides design decisions toward environmentally sustainable practices. As more people think green, the products and processes that support the green initiative have become the new standard in building guidelines.

As the worldwide innovation leader in the segmental retaining wall (SRW) industry, Keystone Retaining Wall Systems LLC continues to set the standard for excellence. As an environmentally conscious company, Keystone is committed to offering a wide range of site solutions that respond to green building and construction needs. Many of our solutions contribute toward qualifying your project for credits under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program or similar green construction programs. In addition, Keystone's products are often made of recycled materials and offer a durable, long-lasting solution helping to reduce the impact on our environment.

Natural and Recycled Materials

Concrete is an environmentally friendly building product composed of both natural and recycled materials. Among those recycled materials are concrete aggregate, fly ash and iron oxide. During the manufacturing process, waste concrete is often produced. To reduce the amount of waste destined for landfills, most manufacturers crush this concrete into aggregate and reuse it. Fly ash, a waste material produced and then discarded by coal burning plants, is another component used to manufacture concrete retaining wall units. SRW units use synthetic iron oxide, made by burning recycled scrap steel at high temperatures, to color the units. The natural and recycled materials used in the manufacturing process result in an environmentally conscious and efficient construction product.

Water

Sand

Recycled Concrete

Fly Ash

Erosion Prevention

Soil erosion is a serious environmental threat and a major contributor to the degradation of water quality. Wind, rain and water runoff displace soil particles from bare or sparsely covered earth reducing the stability of the original site resulting in impaired performance of downstream drainage systems.

In many instances, SRWs are cost-effective solutions to soil erosion. Keystone products are often used in conservation efforts along channels and waterways, near steep earthen slopes and other critical applications. When taller wall heights are required, geogrid reinforcement may be an appropriate solution and can be added to a wall design.

The result is a long-term, economical solution that minimizes or eliminates soil erosion.

Recycled Durability

Concrete SRW units offer a long-lasting retaining wall solution for both structural and landscaping projects. As a durable building material, concrete's lifespan surpasses that of alternatives such as timber or railroad ties. Concrete units resist weathering action, chemical attack and abrasion while maintaining the desired engineering properties.

Not only are SRW units made from recycled materials, units can also be recycled. When a SRW is no longer needed, or desired, the units can simply be removed from the site and repositioned elsewhere or crushed and recycled into new units.

Promotes Vegetation

Keystone units offer an innovative planting system that can produce a lush blanket of irrigated vegetation. The unique cavity of Keystone's plantable unit is perfect for plants up to one gallon in size. This product also allows for the placement of irrigation systems and provides the natural drainage that encourages plant root growth allowing the wall structure to spring to life.

With the ability to support rich plant life, Keystone plantable units bring a degree of depth and color previously unavailable in a structural wall product.

LEED Credits

The U.S. Green Building Council's LEED program works for all building construction—from homes to corporate headquarters—at all phases of development. Projects pursuing LEED certification earn points across several areas that address sustainability issues. Based on the number of points achieved, a project will receive one of four LEED rating levels: Certified, Silver, Gold, or Platinum.

The chart below shows potential LEED credits available in the category BD+C: New Construction and Major Renovations (v4) when using Keystone retaining wall systems. Actual credits earned will vary by project and product manufacturer. Detailed information on the LEED program and project certification process is available from USGBC at http://www.usgbc.org/.

SUSTAINABLE SITE CREDITS		8 points
❑	Site Development - *Protect or Restore Habitat*	2
❑	Open Space	1
❑	Rainwater Management	3
❑	Heat Island Reduction	2

MATERIALS & RESOURCES CREDITS		11 points
❑	Building Lifecycle Impact Reduction	5
❑	Building Products Disclosure and Optimization - *Environmental Product Declarations*	2
❑	Building Products Disclosure and Optimization - *Sourcing of Raw Materials*	2
❑	Building Products Disclosure and Optimization - *Material Ingredients*	2

MISCELLANEOUS CREDITS		9 points
❑	Innovation	5
❑	Regional Priority	4

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FSC Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
www.fsc.org Cert no. BV-COC-940655
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We reserve the right to improve our products and make changes in the specifications and design without notice. The information contained herein has been compiled by KEYSTONE and to the best of our knowledge, accurately represents the KEYSTONE product use in the applications which are illustrated. Final determination of the suitability for the use contemplated and its manner of use are the sole responsibility of the user.

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