AVENG INFRASET

LANDSCAPE PRODUCTS

World-class concrete products for eco-friendly and sustainable development

AVENG GROUP
Leaders in infrastructure development

INTRODUCING

Bevel

Exposed aggregate white stone

Aveng Infraset

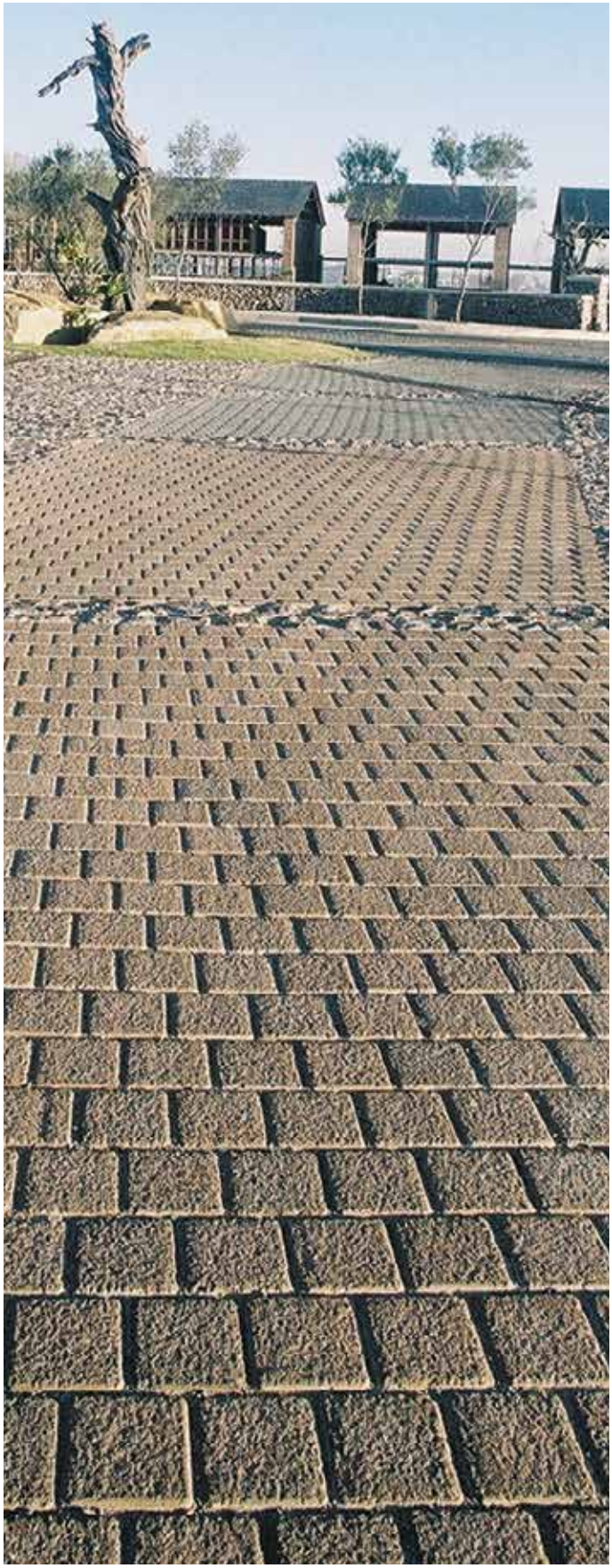
MISSION

Building a positive and lasting legacy of which customers, employees, their families, shareholders and future generations will be proud.

Our active pursuit of extensive global interests encompasses the building, construction, engineering, mining, manufacturing and steel processing industries.

We have	• a long heritage of technical excellence with roots as far back as 1928. • often been nominated as a preferred supplier. • played a major role in Africa's infrastructure development, including many landmark roads, bridges, dams, buildings and power stations in several developing economies. • a footprint extending into Australia and the Middle-East.
We are differentiated through our	• engagement with some of South Africa's iconic projects, including inter alia Soccer City, the Gautrain and the Gauteng Freeway Improvement Project. • successful track record of work executed on a project-by-project basis in countries other than our established locations.
We are	• a business unit of Aveng Manufacturing. • made up of four divisions: Infrastructure Products; Railway Products, Poles and Masts; Landscape Products and Building Products. • in operation throughout the southern Africa region through strategically located factories in South Africa, Swaziland, Zambia and Zimbabwe, placing us in close proximity to our markets.
Safety, health and quality	• our products are manufactured to stringent quality standards in accordance with SANS 508 and SANS 1058, and our factories are all SABS ISO 9001-2008 accredited.
Environmental / Sustainability	• World-class concrete products for green eco-friendly development

Overview



Aveng Infraset is a business unit within the Aveng Manufacturing Operating Group and a leader in the manufacture of a wide range of precast concrete products. These are produced to world-class quality standards in compliance with SANS using the ISO 9001:2008 quality management system.

Aveng Infraset sustains a long heritage of technical excellence – its roots can be traced back as far as 1928 – and is often nominated as a preferred supplier. Many of its products have been used on some of South Africa's iconic projects, and since its formation, the business unit has developed a reputation for manufacturing quality products which consistently exceed client expectations.

Landscape Products:

Aveng Infraset supplies an innovative and diverse range of landscape products of which several have made a substantial contribution to sustainable and ecologically-friendly environments. The landscape product range includes erosion control systems, paving, permeablepaving, kerbing, retaining wall systems and embankment seating. Products are produced to world-class, quality standards and are available in a variety of colours, textures and strengths.

NB: Any technical information provided by Aveng Infraset in relation to any product or system (whether before or after order) is provided by way of GUIDANCE ONLY and, to the fullest extent of the law, without liability on the part of Aveng Infraset for any loss or damage suffered as a result of relying upon it. Such technical information should not be relied upon in substitution for obtaining independent expert advice prior to using any product or system both from a suitably qualified engineer and building contractor, in particular, as to the suitability of the product or system for use at the intended site for the intended scheme.

Our factories are all SABS ISO 9001-2008 accredited.

SABS ISO 9001

CONCRETE MANUFACTURERS ASSOCIATION
Quality cast in concrete

Certification


SABS

Permit to Apply Certification Mark

AVENG (AFRICA) LIMITED
(TRADING AS AVENG MANUFACTURING INFRASET - ROSSWAY)
CENTURION

SANS 508:2012
TO: CONCRETE RETAINING BLOCKS

2738/15266
08 April 2015
01 February 2018
01 February 2012

sanas


SABS

Permit to Apply Certification Mark

AVENG (AFRICA) LIMITED
(TRADING AS AVENG MANUFACTURING INFRASET)
MEYERTON

SANS 927:2013
TO: PRECAST CONCRETE KERBS, EDGINGS AND CHANNELS

10237/14475
23 April 2014
23 April 2017
23 April 2014

sanas


SABS

Permit to Apply Certification Mark

AVENG (AFRICA) LIMITED
(TRADING AS AVENG MANUFACTURING INFRASET - ROSSWAY)
CENTURION

SANS 542:2012
TO: CONCRETE ROOFING TILES

2738/13260
04 September 2013
11 July 2016
11 July 2007

sanas


SABS

Certificate of Registration

AVENG (AFRICA) LIMITED
(TRADING AS INFRASET - ROSSWAY FACTORY)
CENTURION

ISO 9001:2008
QUALITY MANAGEMENT SYSTEMS - REQUIREMENTS

THE FACTORY MANUFACTURES AND SELLS CONCRETE PAVING, EMBANKMENT PROTECTION UNITS, ROOFING TILES, STADIUM SEATS AND MANHOLES INCLUDING THE NECESSARY SLABS AND LIDS TO THE LANDSCAPE, HOME BUILDERS AND INFRASTRUCTURAL INDUSTRY

EXCLUDING CLAUSES:
7.3 DESIGN AND DEVELOPMENT
7.5.2 VALIDATION OF PROCESSES FOR PRODUCTION AND SERVICE PROVISION
7.5.4 CUSTOMER PROPERTY

LS 1001
06 February 2013
16 February 2016
25 June 1993

IAF
sanas


SABS

Permit to Apply Certification Mark

AVENG (AFRICA) LIMITED
(TRADING AS AVENG MANUFACTURING INFRASET - ROSSWAY)

RENEWAL PENDING

CONCRETE RETAINING BLOCKS

2738/15266
1 February 2012
1 February 2015
1 February 2012

sanas


SABS

Permit to Apply Certification Mark

AVENG (AFRICA) LIMITED
(TRADING AS AVENG MANUFACTURING INFRASET - ROSSWAY)
CENTURION

RENEWAL PENDING

2738/6900
23 August 2012
03 June 2015
20 February 1986

sanas

Our global presence

A leading infrastructure development group with strong presence and expertise in key target geographies –

- Works actively in over 30 countries
- Employs over 30 000 people
- Builds iconic structures and landmarks

HOME WITHOUT HARM
EVERYONE EVERYDAY

Safety is paramount, never to be compromised in the pursuit of any objective.

Group structure

Entrenching world-class safety

Key safety principles to ensure the highest practical standards of behaviour and performance across the Group are shown below:

HOME WITHOUT HARM
EVERYONE EVERYDAY

Integrated health, safety and environmental management

Safety is a core value of the Aveng Group and is integral to the way the group does business. The Aveng Group aims for a zero fatality rate, and a disabling injury frequency rate ("DIFR") of less than 0,2.

The Aveng Group's focus on safety has seen NOSA award Aveng Grinaker-LTA with a NOSCAR for five consecutive years for industry leading safety achievements on projects. This is the highest accolade in safety, health and environmental risk management in South Africa.

The Aveng Group's safety culture is cultivated through the following key factors:

- Entrenching safety as a value for its people
- Identifying, assessing and managing risks to employees, contractors, service providers and communities
- Striving to achieve industry best practice
- Meeting and where appropriate exceeding applicable legal and other requirements.

With safety paramount to operations, the Aveng Group has implemented various measures to minimise the possibility of work place injuries. The Aveng Group's internal processes also ensure that should an incident occur, a thorough investigation is undertaken with a view to making relevant changes to avoid recurrences.

The construction and engineering sector, in which the Aveng Group is involved, by nature exposes people to hazardous and high risk environments.The board and management of the Group, however, believe that such hazards and risks can be managed through strong leadership and adherence to world-class standards and practices.

Through the safety vision HOME WITHOUT HARM, EVERYONE EVERYDAY, our culture of safety awareness is truly inculcated in the daily lives of the Aveng Group's employees.

Safety standards

Visible Leadership		
Legal Requirements	Monitoring, Audits and Reviews	Communications, Consultation and Involvement
Incident Management	Hazard Identification and Risk Management	Objectives, Targets and Performance Management
Crisis and Emergency Management	Training, Awareness and Competence	Suppliers, Contractors and Partners

HOME WITHOUT HARM
EVERYONE EVERYDAY

Our safety vision, **"Home without Harm, Everyone, Everyday"** is becoming a way of life for all of us in everything that we do, whether at home or at the workplace. This is the only sure way we can achieve a sustainable world-class safety culture.

Aveng Infraset landscaping products carry the SANS mark and are designed, manufactured and tested in accordance with SANS 508 and SANS 1058.



Content

PAVING

Aveng Infraset supplies a wide range of paving options in numerous shapes, sizes, finishes and strengths, in virtually any colour or multi-colour variant. State-of-the-art plant and computerised concrete batching ensure best-practice production to high quality standards and close tolerances. The range includes Uni-Decor®, Village Cobble®, Classic Cobble®, York Cobble Paver™ and G-blok®, Villa® 250 (flagstone) among others, as well as bush-hammered, high-gloss and exposed aggregate finishes.

Features of Aveng Infraset's paving systems

DESIGN FLEXIBILITY

Aveng Infraset pavers offer landscape architects and other construction professionals an extensive array of paving options. Shape, thickness and strength ratings are all variable, depending on the application, and textures can be specified to suit specific conditions. Available in a virtually limitless colour spectrum, including warm, subtle and body-through variants, the range also includes multi-blend and bespoke options.

WORLD-CLASS TECHNOLOGY

Production is centered on one of the world's most technically advanced paving and retaining block plants. Commissioned in 2011, the new plant was custom-built by Germany's Masa Group – a world leader. Known as Masa-2, this new-generation plant has extended Aveng Infraset's landscape product offering to include dry-pressed flagstone (Villa® 250) and exposed aggregate pavers. The new plant includes steel production pallets for enhanced vibration transference, in-line washing and sealing, ageing and waving techniques, and a specially-insulated curing chamber.

APPLICATIONS AND DURABLITY

Our pavers are used extensively in domestic, commercial and industrial applications. Driveways, parking areas, forecourts, industrial storage yards, paths, pedestrian malls and patios are some of the applications where our pavers are to be found. Easy to install and requiring very little maintenance, our pavers are renowned for their strength and durability.

GUARANTEED QUALITY

All products are manufactured to stringent quality standards and fine tolerances in compliance with the ISO 9001:2008 quality management system. This ensures superior product performance and enhanced aesthetic appeal.

Uni-Ecolok®

Permeable Interlocking Concrete Paving (PICP)

Uni-Ecolok® pavers are used on paved surfaces which advance rather than retard water infiltration. The prime purpose of Uni-Ecolok® paving systems is to alleviate over-burdened stormwater systems, but they also offer other benefits such as pollution control and water harvesting. Used in what is known as Permeable Interlocking Concrete Paving (PICP) systems, Uni-Ecolok® pavers combine excellent load-bearing capacity with permeability rates of up to 1 800 litres/sec/hectare.

World-class concrete products for eco-friendly and sustainable development

Product features

As urban and industrial areas throughout the country have continued to expand, the total area of impermeable surfaces such as roofs, roads, pavements and car parks has increased. These surfaces prevent the natural infiltration of rainwater into the ground and place an additional burden on drainage systems, many of which are no longer able to cope with the increased levels of water run-off. The consequences are flash-flooding and increased levels of pollution.

During periods of dry weather, heavy metals, hydrocarbons, oil, rubber and other pollutants are deposited on impermeable surfaces. When it rains these pollutants are washed into drainage systems and end up in rivers where they pose a threat to local communities and wildlife.

Local authorities realise that urbanisation increases the risk of flooding and pollution and many are now specifying systems which attenuate stormwater and improve water quality.

One such system is Permeable Interlocking Concrete Paving (PICP) which has been successfully used in Europe and the Americas since the mid 1980s, and in Australia for the past 12 years. PICP is proven in applications as diverse as pedestrian walkways, commercial car parks, major road and ultra-heavy industrial applications.

Uni-Ecolok® PICP allows for the on-site retention of rain water and its controlled discharge into municipal drainage systems. It also reduces pollution and/or sedimentation levels. It is particularly effective when existing stormwater drainage systems are operating near or at capacity.

Uni-Ecolok® PICP can:

- Deal with run-off close to where it falls
- Manage potential flooding at its source
- Allow new development in areas where existing drainage systems are at full capacity, thereby enabling new development within existing areas
- Protect water resources from accidental spills and pollution
- Protect or enhance water quality
- Encourage natural groundwater recharge
- Blend in with the environmental setting and assist the needs of the local community
- Provide a habitat for wildlife in urban areas.

The inclusion of Uni-Ecolok® PICP as part of a drainage system will not only increase the likelihood of planning proposals being approved but may also offer the developer considerable cost savings over traditional methods (detention ponds, pipes, manholes etc) due to a significant reduction in stormwater management costs.

Four elements of permeable paving

There are four elements which make up permeable paving:

1 Permeability
2 Detention of stormwater
3 Pollution control
4 Structure.

Permeability

Uni-Ecolok® PICP systems have permeability rates of up to 1 800 litres/sec/hectare, providing a significant performance improvement over what is normally regarded as the required permeability rate of 180 litres/sec/hectare.

Detention

The **sub-base** thickness should be designed to detain rain falling over a 24 hour period and must provide voids of at least 30%. A 4,75/19,0mm coarse open graded crushed rock to SANS 1083:2006 should be used. If the designer opts to specify alternative materials, a site trial must be undertaken to ensure that the laying course material does not invade the sub-base material.

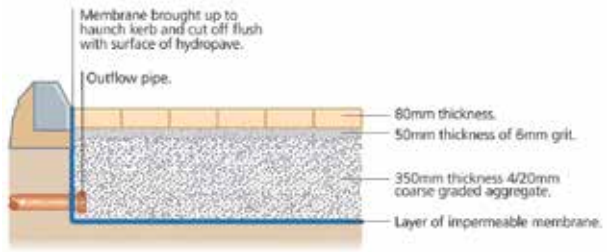
The laying course and jointing material must be 6,7/2,36mm grit to SANS 1083:2006. Tests have shown that this grading has a superior permeability rate and will not invade the 4,75/19,0mm sub-base material. Under conditions in which water cannot infiltrate the subgrade, an impermeable membrane must be laid between the subgrade and sub-base and up the sides of the PICP installation for water retention.

The photographs in this brochure do not necessarily reflect actual product colours.

Product features

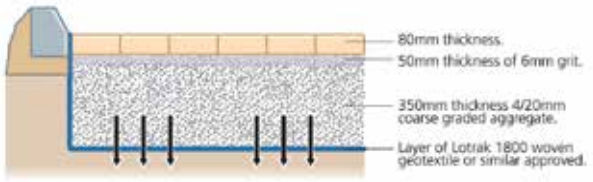
There are two common types of permeable paving systems, Attenuation and Infiltration.

Typical Attenuation System



The Attenuation system temporarily stores the water in the crushed stone beneath the paving before being gradually released back into the drainage systems. This reduces the peak downstream flow during heavy rainfall.

Typical Infiltration System



The Infiltration system allows the water to flow slowly through the crushed stone beneath the paving before being slowly released back into the ground through a geotextile membrane.

Pollution

As water flows slowly into the sub-base it deposits pollutants on the large surface area of the aggregates. The pollutants are then broken down by natural microbial action. Alternatively, they eventually come to rest at the bottom of the system.

Structure

The specification of a permeable paving structure depends upon hydraulic and traffic-loading characteristics as well as the properties of the subgrade.

Many pavements will be required to have a water detention capability rather than infiltration because of the subgrade types and under these conditions, the permeable paving system should be designed to retain a 24 hour rainfall and to release it slowly back into the drainage system.

Some Words of Caution

Although PICP is in its infancy in South Africa, over 25 years experience in Europe and the Americas have shown that failures of PICP a have largely been due to:

- Incorrect grading of the sub-base and/or bedding layer and/or jointing material.
- The use of sand as a jointing and/or bedding material. It has been shown that there is about a 50% reduction in the permeability of PICP when sand is used in the jointing and/or bedding, resulting in slow infiltration, ponding, clogging and excessive run-off.
- The use and subsequent clogging of an inappropriate upper geotextile between the sub-base and bedding layer instead of using compatible materials which meet conventional soil-filter course-laying criteria.
- Adding fines to the laying and subgrade layers for better compaction.
- The under-estimation of the impermeable surface which drains onto the permeable paving surface.
- The specification and/or use of a paving block that is not specifically designed for use in permeable paving. A standard ICP surface installed with conventional joints will not provide sufficient permeability for a permeable pavement to function as designed.
- Run-off, which includes mud and other debris due to soft landscaping or construction work, clogging the paving.
- Heavy silt loads from the in-service function of the paved area, e.g. recycling centers, wood chip stock piles etc.

masonique®

Since its introduction to South Africa, Masonique® has earned an enviable reputation as a state-of-the-art paver. The reasons are many, including its elegance, beauty and versatility. In addition, being bevelled on both sides, Masonique® allows for easy installation and maintenance. Because chipped or damaged pavers can be turned over and used, site wastage is significantly reduced.

Product features

Masonique® elegance

- Warm, subtle, body-through colours including multi-blend options
- A texture that blends naturally with the environment
- Non-slippery when wet
- Exciting and interesting shapes and designs can be created.

Masonique® precision

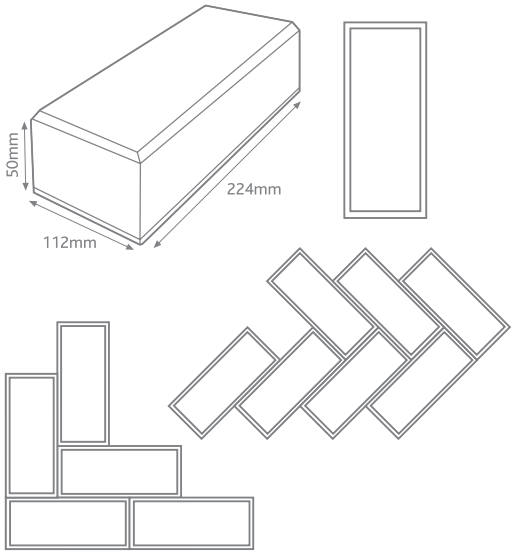
- Strong and durable. Manufactured from quality materials
- Light, easy to handle and install
- No cement grouting needed
- Fully reversible - easy to lift and relay.

Masonique® versatility

50mm thick: Driveways, walkways, pedestrian malls, patios, pathways and pool surrounds.

Dimensions

Length : 224mm
Width : 112mm
Thickness : 50mm.



Coverage

Approximately 40 blocks per m^2.

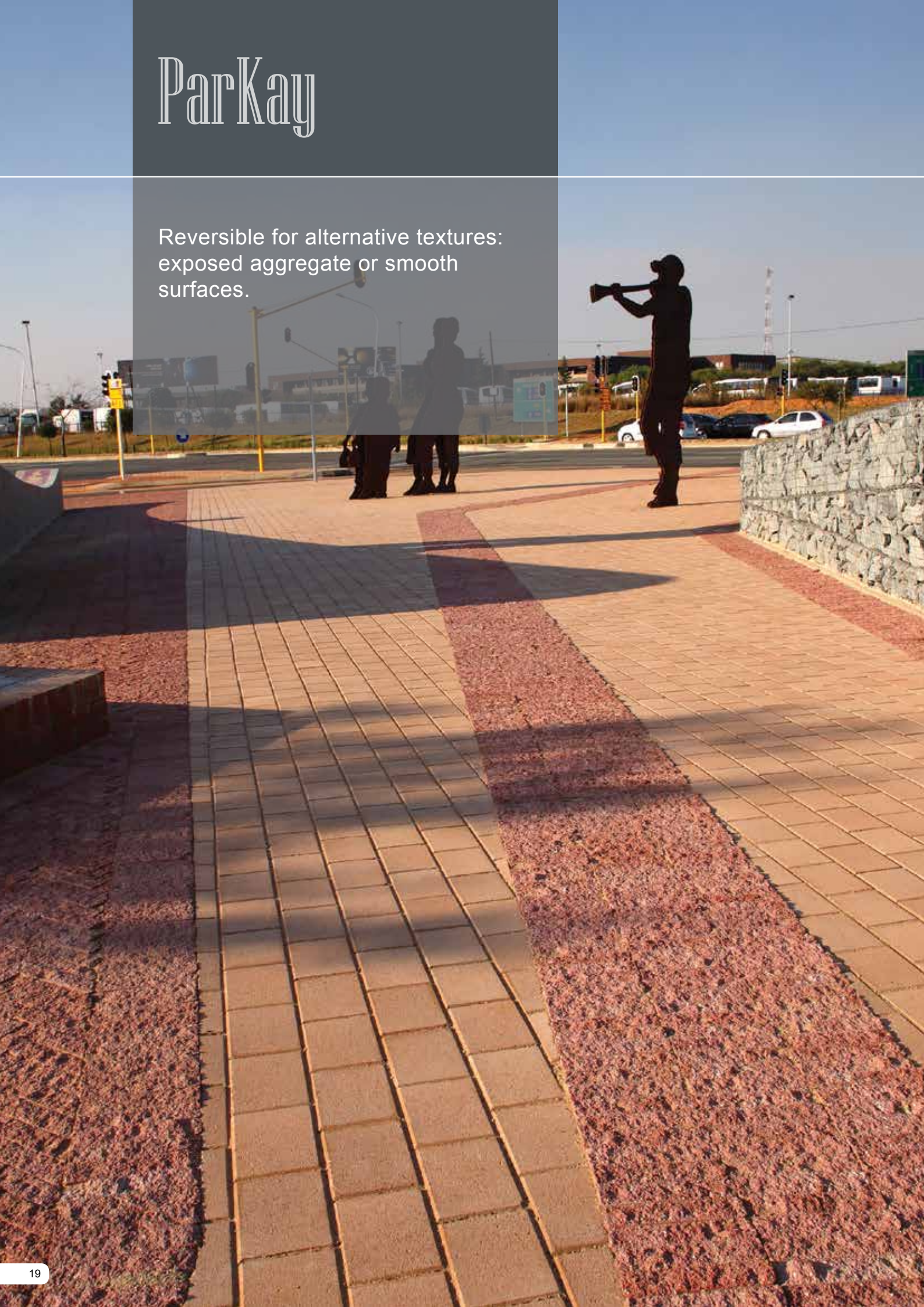
Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.

ParKay

Reversible for alternative textures: exposed aggregate or smooth surfaces.



Product features

Parkay elegance

- Warm, subtle, body-through colours including multiblend options
- A texture that blends naturally with the environment
- Non-slippery when wet
- Exciting and interesting shapes and designs can be created.

Parkay precision

- Strong and durable. Manufactured from quality materials
- Light, easy to handle and install
- No cement grouting needed
- Reversible for alternative textures: exposed aggregate or smooth surfaces.

Parkay versatility

- Driveways, walkways, borders, wall cladding.

Please note

- **Plate compacting with rubber mat only**
- **When laying in herringbone pattern, a 45 degree angle to the kerb is recommended.**

Coverage

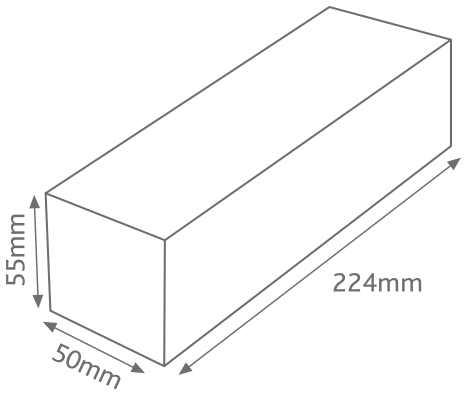
Approximately 80 blocks per m^2.

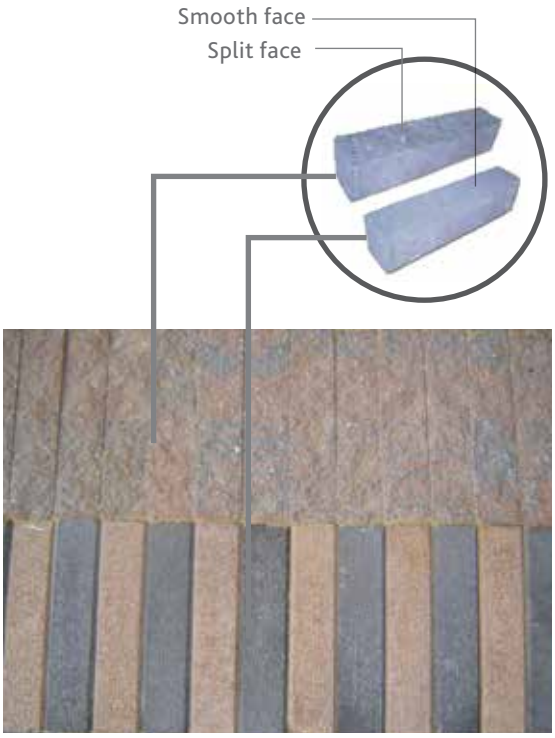
Estimating

Allowance must be made for laying tolerance and edge cutting.

Dimensions

Length: 224mm
Width: 50mm
Thickness: 55mm.





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COTTAGE STONE®

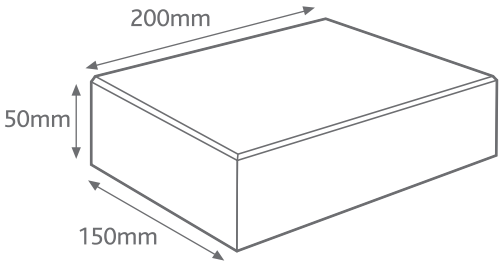
Its elegant charm, smooth finish and appealing colours have made the Cottage Stone® paver a favourite in applications as varied as home gardens, shopping malls, office parking, patios, swimming pool areas and retirement home projects.

Product features

The Cottage Stone® is a uniform paver. This unique paver features a non-bevelled edge on one face making it ideal for use in areas where trolley and heel-friendly surfaces are required. The alternative face has a small bevelled edge, thereby providing two finish options.

Cottage Stone® is highly cost-effective with only 33 blocks required for each m^2 of paving and is offered in a range of body-through colours.

The use of the paver is, however, not restricted to conventional pavements. It can be used for constructing flower boxes, stairs, benches, municipal pavements, walkways, traffic islands and parking areas. It can also be employed to create a wide variety of contrasting effects when used in conjunction with Aveng Infraset's wide range of paving products.



Coverage

Approximately 33 blocks per m^2.

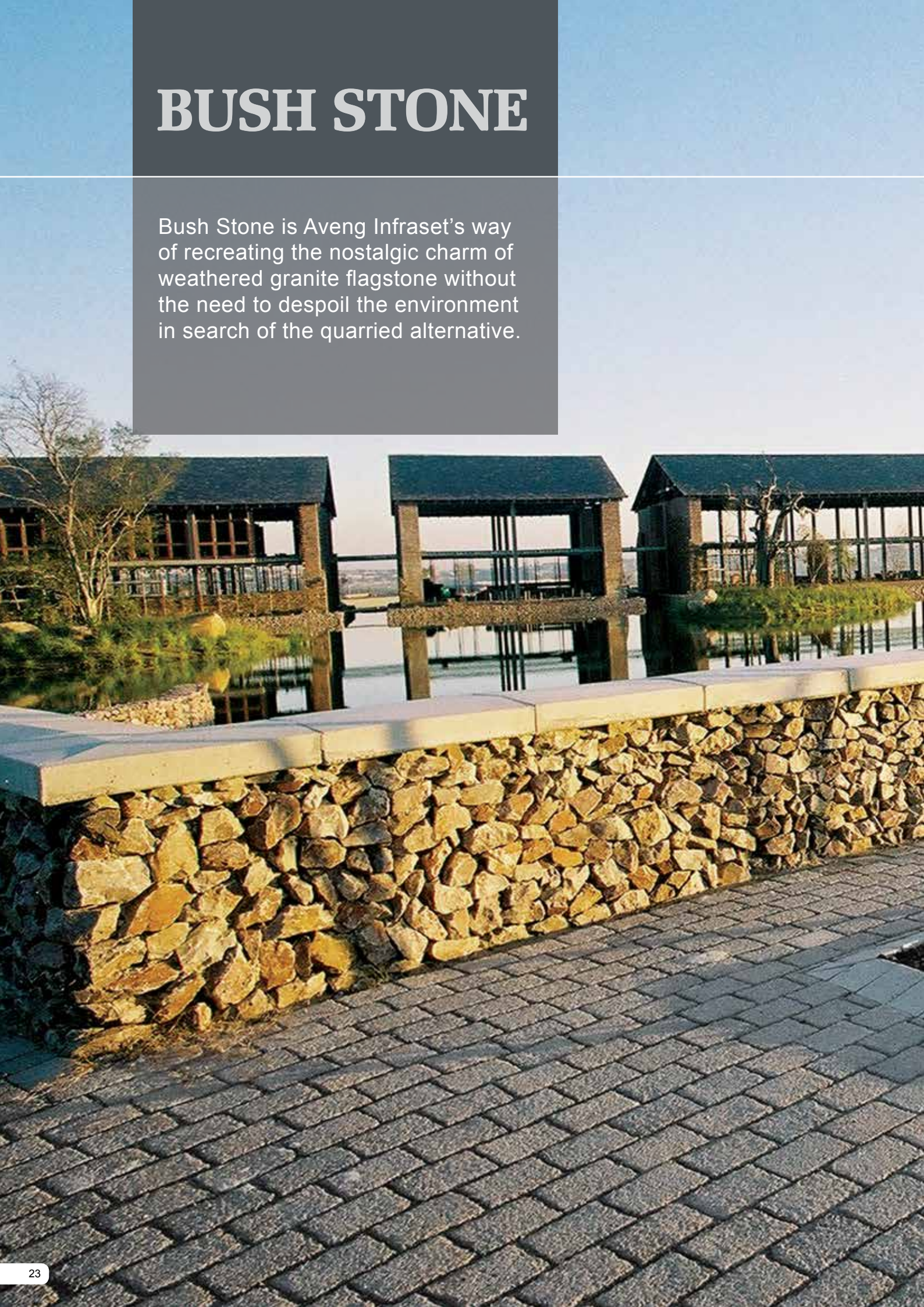
Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.

BUSH STONE

Bush Stone is Aveng Infraset's way of recreating the nostalgic charm of weathered granite flagstone without the need to despoil the environment in search of the quarried alternative.



Product features

Available at a fraction of the cost of natural granite, Bush Stone is a factory manufactured concrete product which has a natural stone-like appearance because of its hammered textured surface.

With its rustic charm and textured finish, Bush Stone is a favourite in applications as varied as shopping malls, townhouse complexes, retirement complexes and commercial projects.

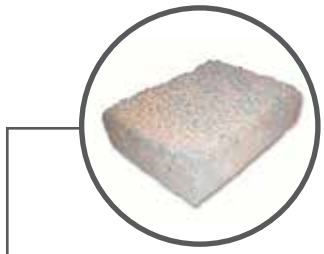
In addition to being used on its own, Bush Stone is a valuable asset to designers wishing to create an aesthetically softer feel by contrasting the natual stone look with that of other similar sized pavers such as Cottage Stone® and Rumblestone®.

Coverage – Product dependant

Estimating

Allowance must be made for laying tolerance and edge cutting.

Important note: Plate compacting is not recommended.



Village Cobble® – Bush Hammered

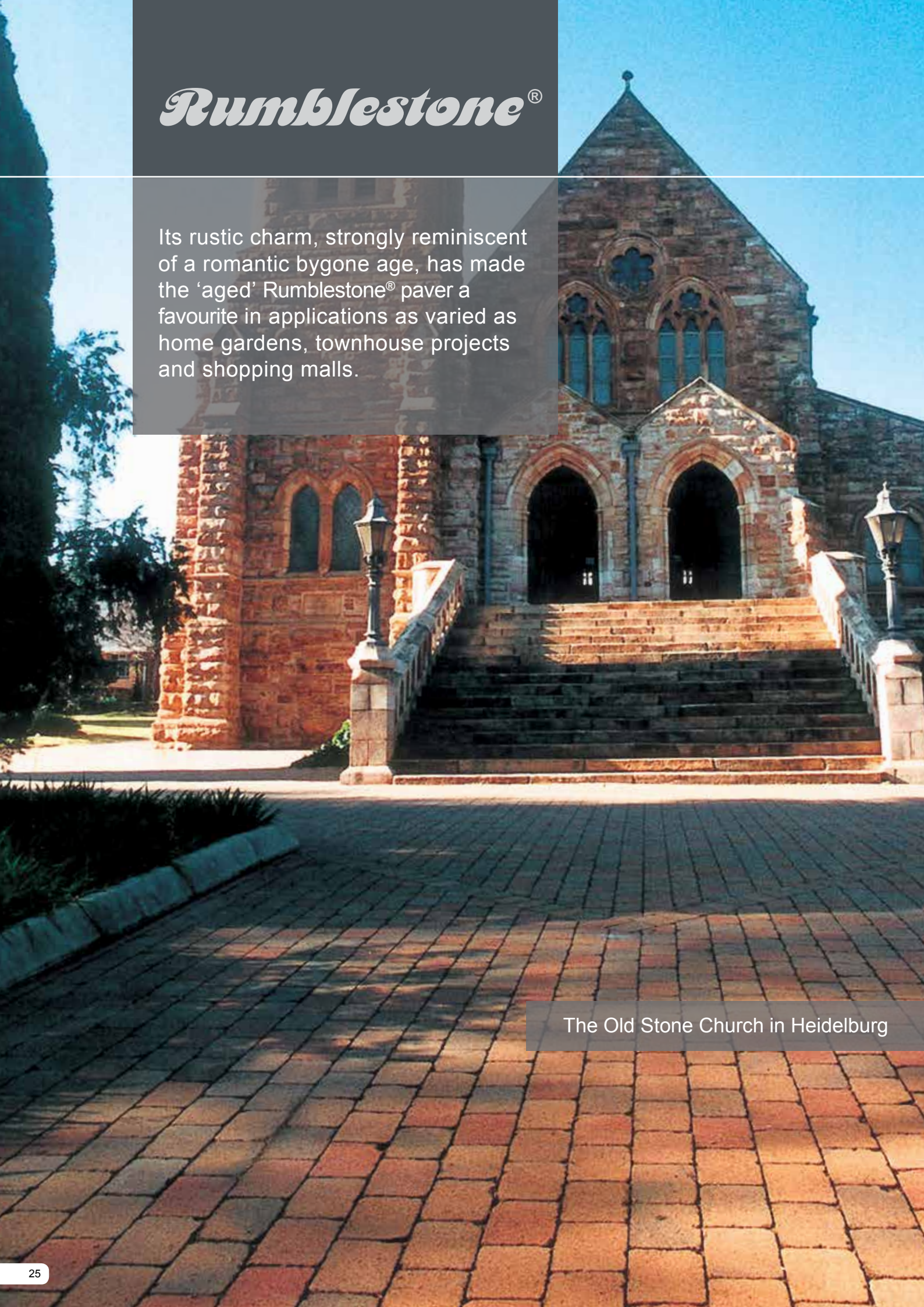
Cottage Stone® – Bush Hammered

Bush hammering is a process and can be applied to most of the Aveng Infraset's range of products

The photographs in this brochure do not necessarily reflect actual product colours.

Rumblestone®

Its rustic charm, strongly reminiscent of a romantic bygone age, has made the ‘aged’ Rumblestone® paver a favourite in applications as varied as home gardens, townhouse projects and shopping malls.



The Old Stone Church in Heidelburg

Product features

Its rustic charm, strongly reminiscent of a romantic bygone age, has made the Rumblestone® paver a favourite in applications as varied as home gardens, townhouse projects and shopping malls.

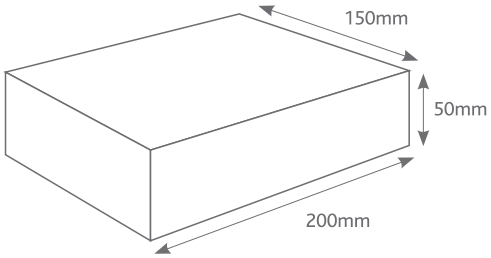
But there is a lot more to Rumblestone® than its natural feel or the ease with which it blends into the environment. Each 150mm x 200mm paver has its own character, yet is simple to install. And because of its shape and the fact that it is fully reversible the paver is easy to lift and re-lay whenever necessary.

The Rumblestone® is a highly cost-effective paver with only 33 blocks required for each m^2 of paving and is offered in a range of body through-colours.

The use of the paver is, however, not limited to conventional pavements. It can be used for constructing character flower boxes, stairs, mowing edges and other garden features.

Dimensions

Length: 200mm
Width: 150mm
Thickness: 50mm.



Coverage

Approximately 33 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

Please note - Rumblestone® is a process and can be applied to most of the Aveng Infraset's range of products.

The photographs in this brochure do not necessarily reflect actual product colours.

VILLAGE COBBLE®

Aveng Infraset's Village Cobble® is a paving stone which in an inimitable way imparts the character of cobbles to the paved area.

Product features

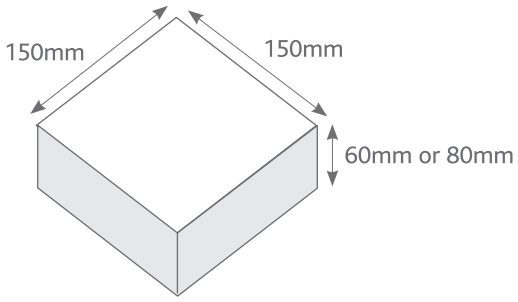
The Village Cobble®, which is 150mm square and 60 or 80mm thick, is ideal for use in townhouse complexes, shopping malls, office blocks, homes and sidewalks. In addition, as a result of its thickness, it is also suitable for use in car parks and driveways.

Village Cobble®, which carries the SABS mark, normally features a bevelled edge. However, it can be rumbled to provide the designer with a more rustic feel and can be bush-hammered. Its shape and texture make it an ideal contrasting material when used with any of the many other pavers in the Aveng Infraset range.

The paver is supplied in a range of colours and 44 blocks are required for each m^2 of paving.

Dimensions

Length: 150mm
Width: 150mm
Thickness: 60mm and 80mm.



Coverage

Approximately 44 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.

YORK COBBLE PAVER™

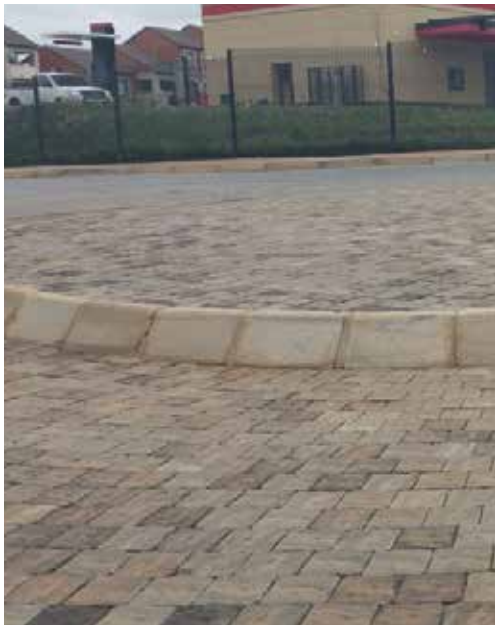
Landscape architects have welcomed the introduction of the York Cobble Paver™ which is ideally suited to large paved surfaces in driveways, parking areas and pedestrian malls in shopping and community centres, office parks and industrial parks.

Product features

Landscape architects have welcomed the introduction of the York Cobble Paver™ which is ideally suited to large paved surfaces in driveways, parking areas and pedestrian malls in shopping and community centres, office parks and industrial parks. It is also used in header courses to highlight or demarcate specific areas within other types of pavers.

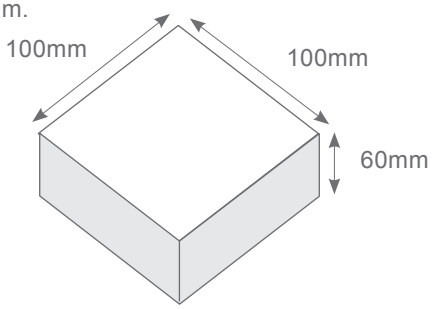
Manufactured to full SABS specifications using the latest German-dry casting technology, the paver successfully replicates the stone finish of wet-cast pavers. Non-slippery when wet, strong and durable, the York Cobble Paver™ is readily available in charcoal, tan and grey as well as in special to-order colours.

The paver is made with spacer nibs to hold the paving line and facilitate ease of installation making it vastly more labour-efficient than its wet-cast equivalent. Its simulated stone finish means it can't be plate-compacted in the traditional way and must be protected with a rubber mat or similar material.



Dimensions

Length: 100mm
Width: 100mm
Thickness: 60mm.



Coverage

Approximately 100 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

This product cannot be plate compacted without protecting the surface.

The photographs in this brochure do not necessarily reflect actual product colours.

Villa® 250

Architects are favouring the contemporary look that flagstone pavers provide.

Villa® 250 are ideally suited to squares, shopping malls, inner courts, patios and swimming pool surrounds, and Aveng Infraset's range is manufactured using the latest German dry-casting technology. The paving is non-slippery when wet and is strong and durable. The new range is being produced in a variety of warm and subtle colours in four popular sizes.

Product features

Architects favour flagstone pavers for the contemporary look

A new trend in concrete block pavers is unfolding in South Africa with large dry-pressed flagstone pavers now being manufactured locally. Flagstone pavers (anything longer than 300mm) have captured the imagination of Europe, its architects favouring the contemporary look that the larger paving stones provide. South Africa looks set to follow the flagstone trend now that they are available through dry-pressing. Until recently, local production of flagstone pavers had been confined to wet-casting, a production process which is considerably more expensive than dry-pressing.

Flagstone pavers are ideally suited to public squares, paths and pavements, shopping malls, inner courts, patios and swimming pool surrounds. Aveng Infraset's Villa® 250 range is manufactured using the latest in big-board paving technology from Germany. The technical superiority of this new manufacturing technology facilitates superior colour blending and includes in-line washing and sealing, ageing and waving, as well as a variety of exposed aggregate finishes.

The Villa® 250 flagstone range is being produced in 60mm thick and available in the following sizes:

Sizes
100 x 200mm
250 x 250mm
250 x 500mm
300 x 400mm*

*Soon to be launched

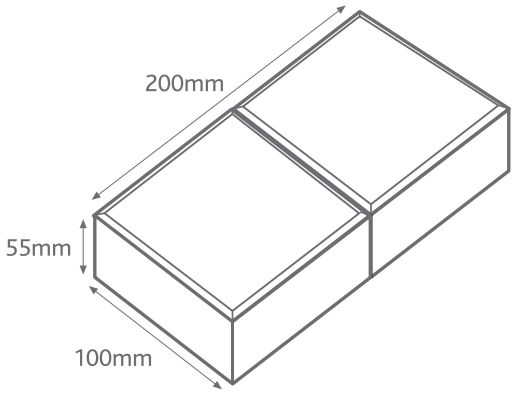
The photographs in this brochure do not necessarily reflect actual product colours.

Classic Cobble®

Classic Cobble® gives a beautiful small cobblestone effect to paved areas.

Product features

Classic Cobble® gives a beautiful small cobblestone effect to paved areas and can be used in conjunction with the Craz"E"® Classic Cobble® which gives a more rustic effect to the cobblestone.



Elegance

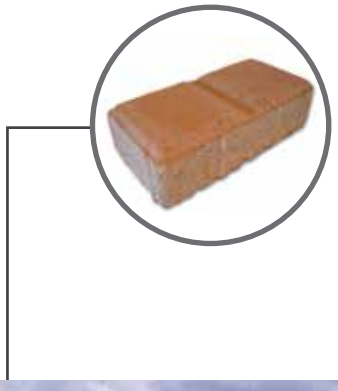
- Warm subtle colours
- A texture that blends naturally with the environment
- Non-slippery when wet.

Precision

- Strong and durable
- No cement grouting needed
- Easily lifted and replaced
- Easy maintenance
- Light and easy to install.

Dimensions

Length: 200mm
Width: 100mm
Thickness: 55mm.

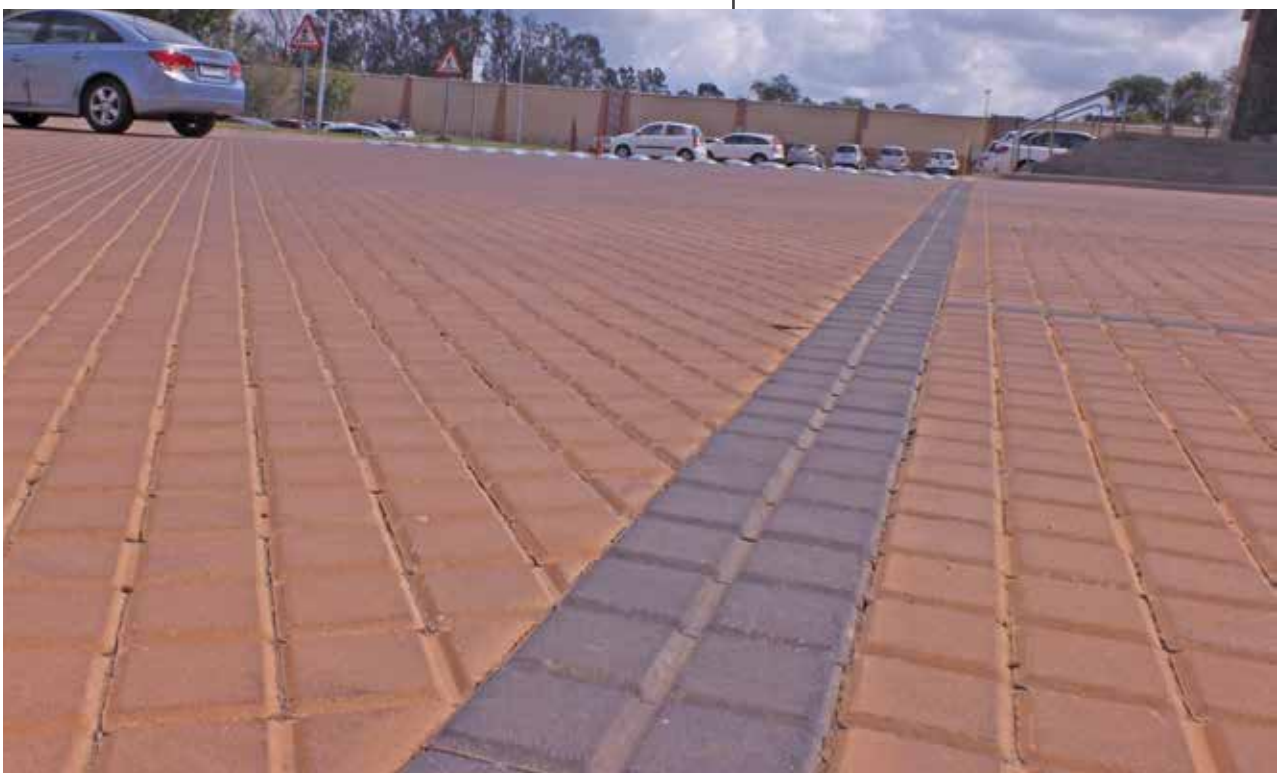


Coverage

Approximately 50 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.



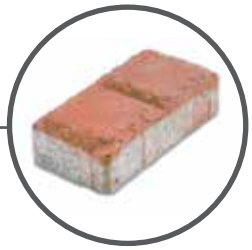
The photographs in this brochure do not necessarily reflect actual product colours.

CRAZ "E"®
Classic Cobble®

Craz "E"® Classic Cobble® gives a beautiful small cobblestone effect to paved areas.

Product features

Craz “E”® Classic Cobble® can be used in conjunction with Classic Cobble® which gives a more rustic effect to the cobblestone.



Elegance

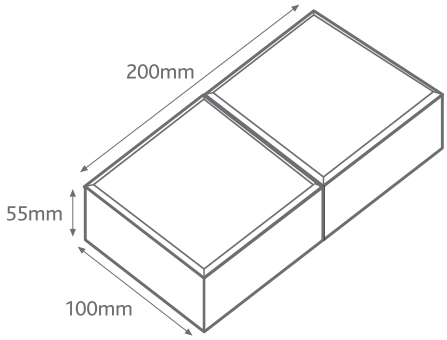
- Warm subtle colours
- A texture that blends naturally into the environment
- Non-slippery when wet.

Precision

- Strong and durable
- No cement grouting needed
- Easily lifted and replaced
- Easy maintenance
- Light and easy to install.

Dimensions

Length: 200mm
Width: 100mm
Thickness: 55mm.



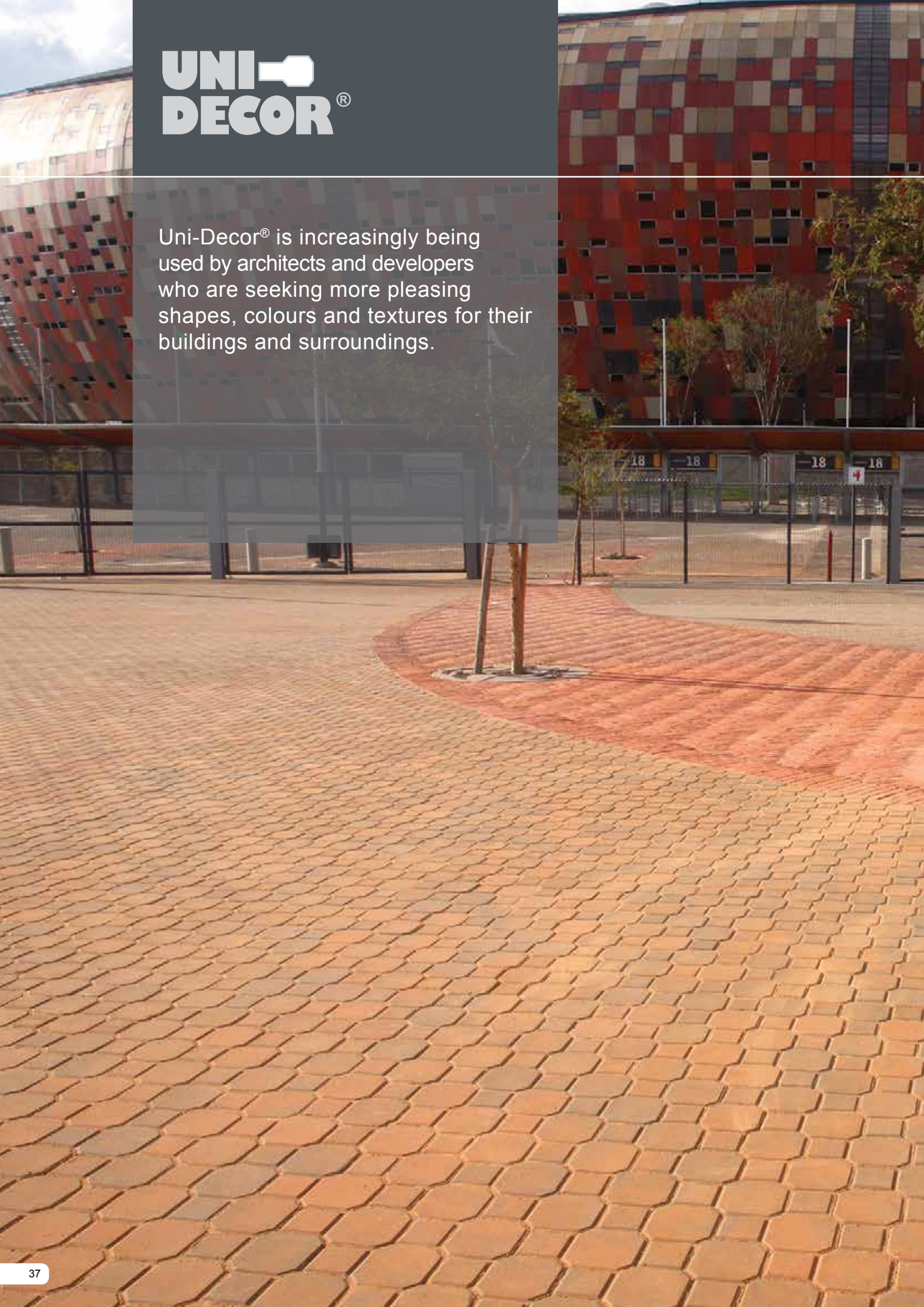
Coverage

Approximately 50 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.



UNI-DECOR®

Uni-Decor® is increasingly being used by architects and developers who are seeking more pleasing shapes, colours and textures for their buildings and surroundings.

Product features

Today's landscape architechts and developers are fully in touch with the forces that shape the built environment and many are using Uni-Decor® for more pleasing shapes, colours and textures in their landscape designs.

Art and Uni-Decor®

- Interesting and aesthetically pleasing areas can be created with the unique shape and colours
- The cobblestone effect adds charm and character
- There is total design flexibility.

Engineering and Uni-Decor®

- Designed for strength and durability
- The interlocking action increases load-carrying abilities
- The chamfered edges preserve the riding surface
- The non-skid surface is safer
- Underground services can be reached easily and quickly
- The surface can be in use immediately after laying.

Nature and Uni-Decor®

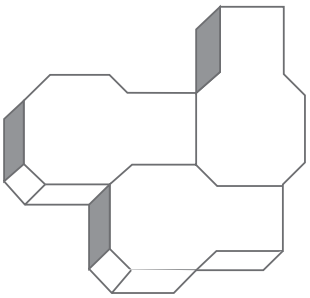
- The earthy colours blend into the environment
- The textured cobblestone effect links the building to its surroundings
- Natural harmony and balance is created with the unique, decorative blocks.

Applications for Uni-Decor®

- Commercial forecourts, shopping malls, townhouse developments, driveways, pavements and walkways, patios, courtyards and parking lots.

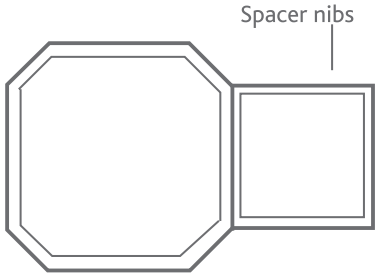
Dimensions

Length: 230mm
Width: 140mm
Thickness: 60 or 80mm



Coverage

Approximately 38 blocks per m^2.



Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.

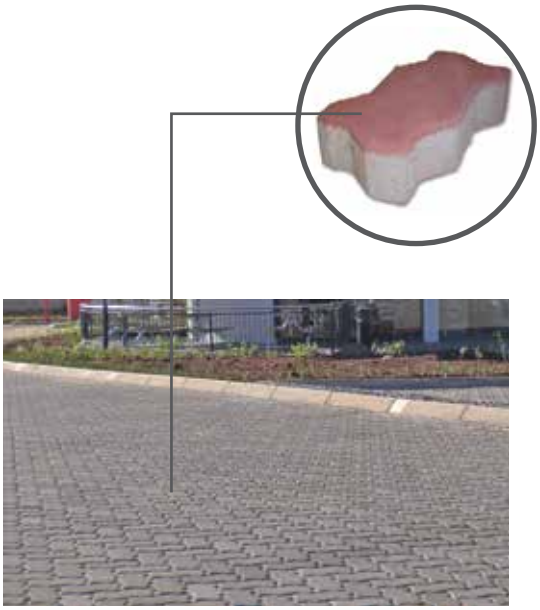
G-Blok®

G-Blok®, the paving surface that will provide a good, durable, load bearing and riding surface, requiring little maintenance.

Product features

G-Blok® precision saves money

- Fewer base layers are required because the precision-made interlocking G-Blok® forms an integral part of the structure, carrying and spreading the load.
- Little maintenance is required as the interlocking action of the G-Blok® spreads the load, reducing rutting in heavy traffic areas. The chamfered tap edges reduce chipping and assist in preserving the jointing sand.
- The paved surface is highly durable because of the strength and load-spreading abilities of the G-Blok®.
- There is less wastage and a neat finish with the unique full and half edge G-Blok®.



G-Blok® versatility for good looks and peace of mind

- Exciting and interesting patterns can be created with the plain and coloured G-Blok® and the crazed edge Craz”E”® G-Blok® .
- The surface can be reinstated after lifting the G-Blok® to get to underground services.
- Both level and sloping surfaces can be covered, as the interlocking action of G-Blok® works on any slope.
- G-Blok® paving can be used in both heavy traffic and stacking areas and under most soil conditions because of its load-carrying and spreading abilities.
- Over 80% of G-Blok® can be recovered and re-used, even after many years in use.
- The paved area can be in use immediately on completion, as there are no wet trades.
- G-Blok® paving has a safe surface, particularly when wet, because of the textured, non-slip finish of the pavers.
- The Craz”E”® textured block offers an architectural alternative to industrial paving.

G-Blok® applications

Heavy industrial areas, heavy parking areas, abnormally heavy industrial stacking areas, medium industrial working areas, parking areas and driveways, service areas and sloped embankments.

Coverage

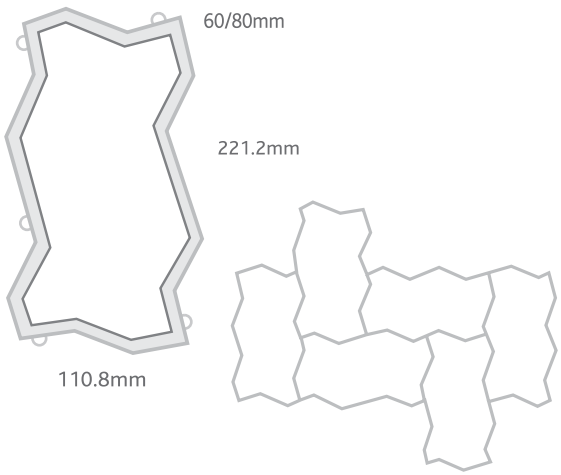
Approximately 40 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

Dimensions

Length: 221.2mm
Width: 110.8mm
Thickness: 60 or 80mm.



The photographs in this brochure do not necessarily reflect actual product colours.

CRAZ "E"®
G-Blok®

The Craz“E”® G-Blok® paved surface is highly durable because of its strength and load-spreading features.

Product features

CRAZ “E”® G-Blok® precision saves money

- Fewer base layers are required because the precision-made interlocking Craz“E”® G-Blok® forms an integral part of the structure, carrying and spreading the load.
- Little maintenance is required as the interlocking action of the Craz“E”® G-Blok® spreads the load, reducing rutting in heavy traffic areas. The chamfered tap edges reduce chipping and assist in preserving the jointing sand.
- The paved surface is highly durable because of the strength and load spreading abilities of the Craz“E”® G-Blok®.

CRAZ “E”® G-Blok® versatility for good looks and peace of mind

- Exciting and interesting patterns can be created with the plain and coloured Craz“E”® G-Blok® and the crazed edge Craz“E”® G-Blok®.
- The surface can be reinstated after lifting the Craz“E”® G-Blok® to get to underground services.
- Both level and sloping surfaces can be covered, as the interlocking action of Craz“E”® G-Blok® works on any slope.
- Craz“E”® G-Blok® paving can be used in both heavy traffic and stacking areas and under most soil conditions because of its load-carrying and spreading abilities.
- Over 80% of Craz“E”® G-Blok® can be recovered and re-used, even after many years in use.
- The paved area can be in use immediately on completion, as there are no wet trades.
- Craz“E”® G-Blok® paving has a safe surface, particularly when wet, because of the textured, non-slip finish to the pavers.
- The Craz“E”® G-Blok® textured block offers an architectural alternative to an industrial pavement.

CRAZ “E”® G-Blok® applications

Heavy industrial areas, heavy parking areas, abnormally heavy industrial stacking areas, medium industrial working areas, parking areas and driveways, service areas and sloped embankments.

Coverage

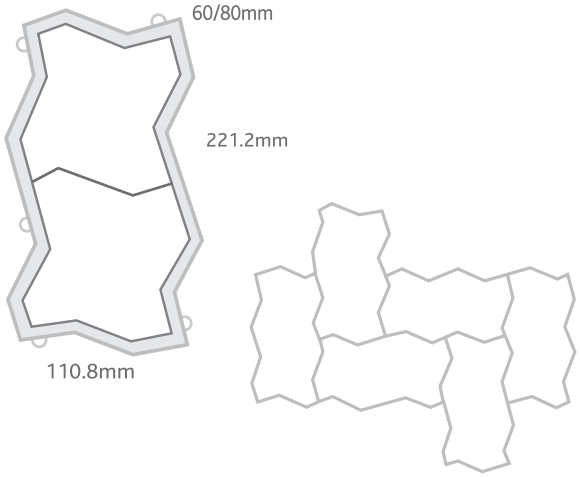
Approximately 40 blocks per m^2.

Estimating

Allowance must be made for laying tolerance and edge cutting.

Dimensions

Length: 221.2mm
Width: 110.8mm
Thickness: 60 or 80mm.



The photographs in this brochure do not necessarily reflect actual product colours.

BEVEL

The Bevel is a trusted favourite across the paving industry sectors for many years. The Bevel is manufactured in a 50mm thick version only.

Product features

Bevel elegance

- Warm subtle colours
- A texture that blends naturally into the environment
- Non-slippery when wet
- Moss resistant
- Exciting and interesting shapes and designs can be created.

Bevel precision

- Strong and durable
- No grouting needed
- Easily lifted and replaced
- Easy maintenance

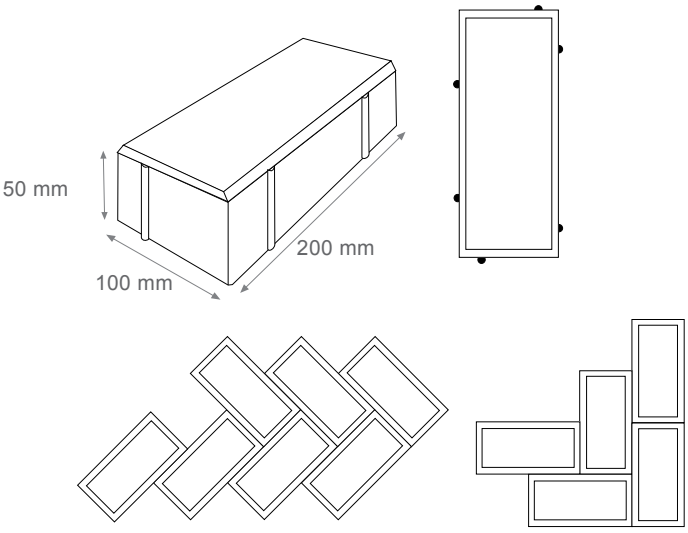
Bevel versatility

- Driveways, walkways, pedestrian malls, patios, pathways and pool surrounds.

Anywhere you need a surface that looks good, lasts longer and is virtually maintenance free.

Dimensions

Length : 200mm
Width : 100mm
Thickness : 50mm.



Coverage

Approximately 50 blocks per m^2.

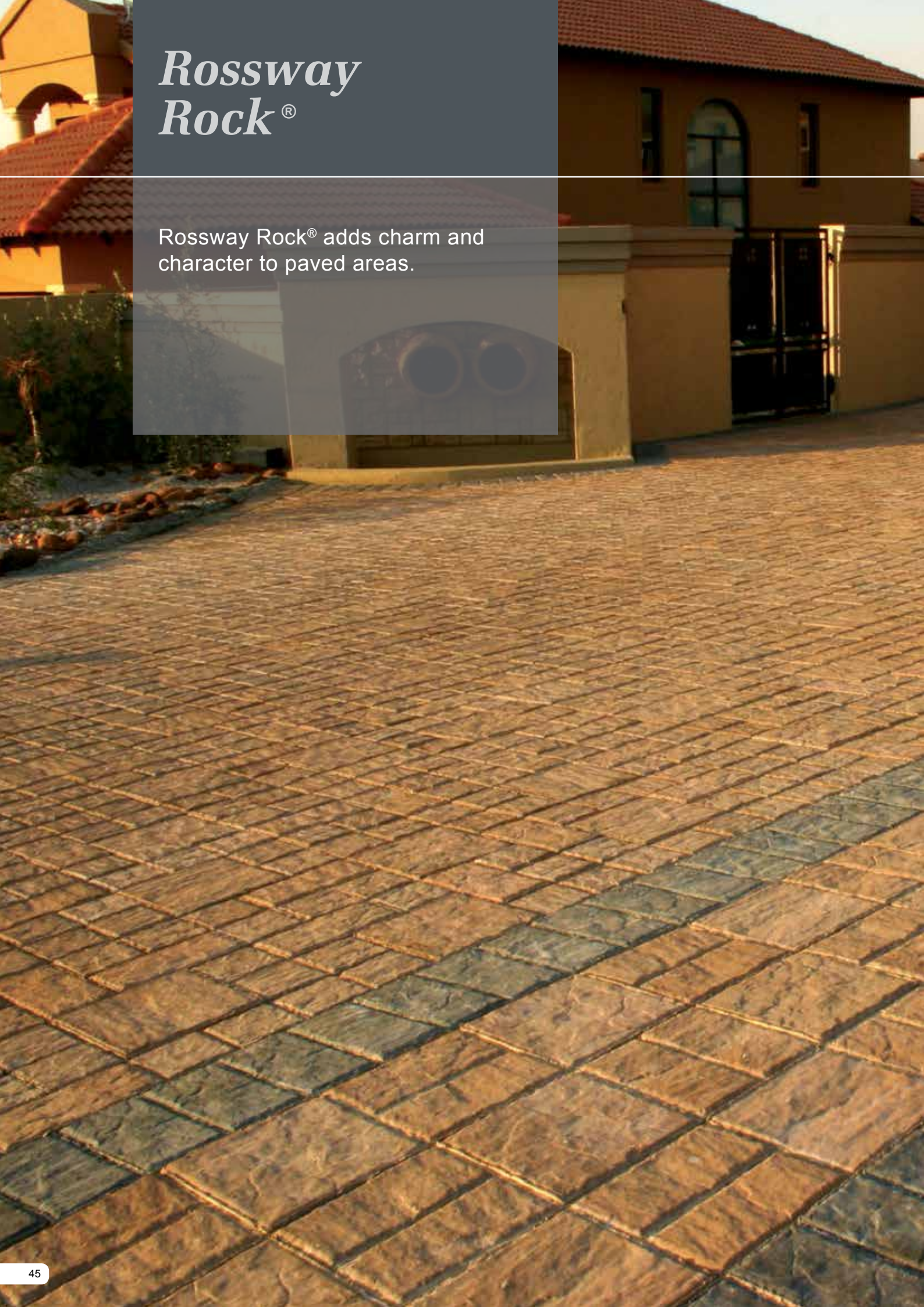
Estimating

Allowance must be made for laying tolerance and edge cutting.

The photographs in this brochure do not necessarily reflect actual product colours.

Rossway Rock®

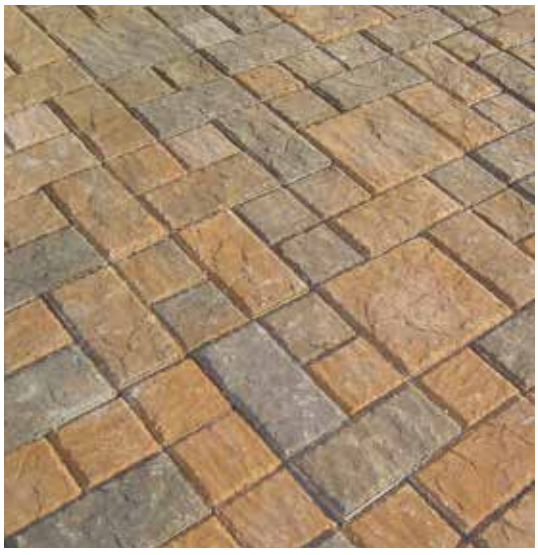
Rossway Rock® adds charm and character to paved areas.



Product features

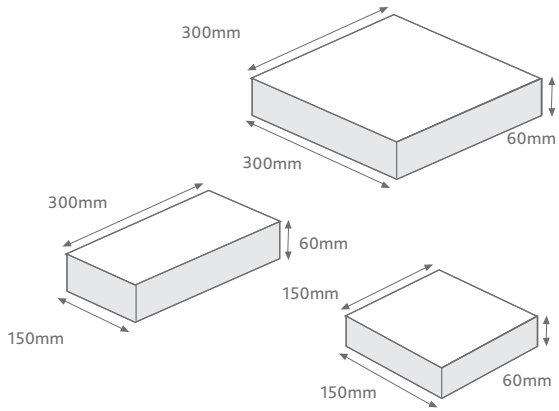
Rossway Rock® adds charm and character to paved areas. It is created by rock-face impressions which provide the top of the paver with beautiful rock-face finishes. Rossway Rock® is manufactured in three sizes and can be laid in different combinations for both domestic and commercial applications.

Rossway Rock® is manufactured in warm, subtle colours and the texture blends naturally with the environment. The paver is non-slippery when wet and is strong and durable. Cement grouting is not recommended.



Sizes

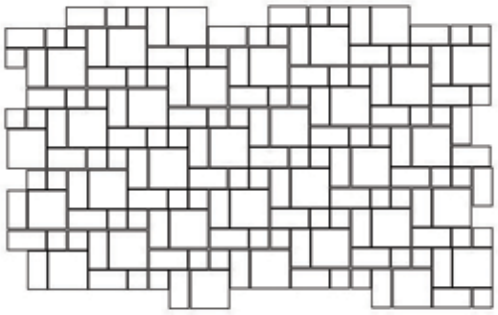
300mm x 300mm x 60mm
300mm x 150mm x 60mm
150mm x 150mm x 60mm.



Estimating

Allowance must be made for laying tolerance and edge cutting.

Rossway Rock® design 1 (random)*
Blocks used: 40% - 300 x 300mm
40% - 300 x 150mm
20% - 150 x 150mm.



***Important note: Plate compacting is not recommended.**

The photographs in this brochure do not necessarily reflect actual product colours.

RETAINING WALLS

A wide range of attractive retaining walls with exceptional features, offering the best in convenience, quality and service excellence.

Aveng Infraset's retaining walls

Terrace Blok® 190 Rockface

Geo-Link®

InfraBlok® 425

Löffelstein®

Retaining Systems

The dry stacking, interlocking retaining system.

John Orr Technical College - Empire Road

SABS ISO 9001

Product features

Löffelstein® is a dry stacking, interlocking retaining system. It is unique because of its versatility, adaptability and plantability.

- Structurally stable - no need for additional concrete infill
- All Löffelstein® systems are available in vertical and heavy duty applications
- Ideally suited for retaining cut or fill slopes between 3 and 15m high.
- Three basic block sizes - L300/L500/L750.

Löffelstein® heavy duty - where wall heights exceed 3,5m. This block's thickened base prevents it being crushed under the wall's own mass. This specially engineered block is employed as a facing to geosynthetic reinforced slopes or for geonail or rock-anchored cut slopes. The L750 block is used for critical path design applications where certain design criteria call for maximum mass per m^2.

Löffelstein® vertical - two undercut corners permit wall construction at an angle of 87°. It can be used in conjunction with the standard block in restricted areas, and in the construction of higher structures, used in conjunction with geosynthetic reinforcement, cement stabilization, geonailing, rock anchors or other soil stabilization methods. When compared with conventional retaining structures, such custom designed walls can contribute to dramatic savings in time and money.

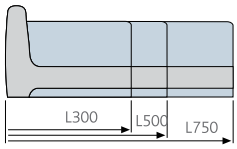
Foundations - must be designed to suit individual projects. In most instances a simple concrete foundation will suffice.

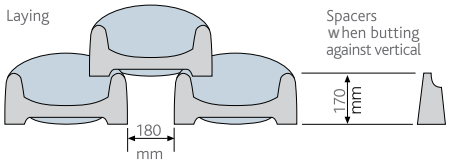
Laying - at 180mm spacings, lay the first course of blocks on the level base/angled base. Interlocking blocks of the second course are then centrally stacked to span two blocks of the lower course. Align the blocks horizontally with a straight edge spirit level. Adjust minor level variations in blocks by trimming the higher sides with a chipping hammer, or lifting the lower side and packing stabilized soil underneath. Align long straight lengths of walling by securing a fish line around the outermost lying blocks and pulling the face of each block almost against the line. Fill preceding blocks with a suitable plant supportive soil. Compaction behind the blocks is critical.

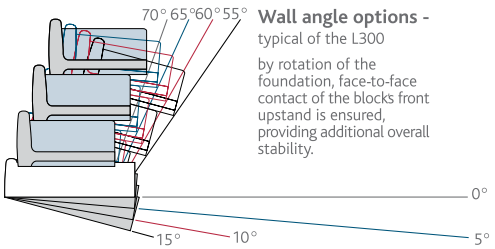
Curvatures - with the smallest possible radius of 2m for L300 and 3m for L500. Convex curvatures get smaller as an inclined structure rises. The first course is laid out to a maximum spacing of 190mm at the front and a corresponding smaller spacing at the back to suit the required radius. Concave curvatures get bigger as you build an inclined structure. Therefore, the first course is laid out with a minimum of spacing to suit the radius at the front and a correspondingly reduced spacing between the backs of the blocks. Depending on the accuracy of laying and the actual layout of curvatures, you may experience difficulties with the interlock or spacing of blocks after erecting four or five courses. To rectify this you should fill the completed preceding row of blocks with soil, tamper it down hard and reset in accordance with the first course's layout. Engineered designs - before construction consider soil conditions, cohesion of material, overall slope stability, foundation requirements and choice of reinforcement.

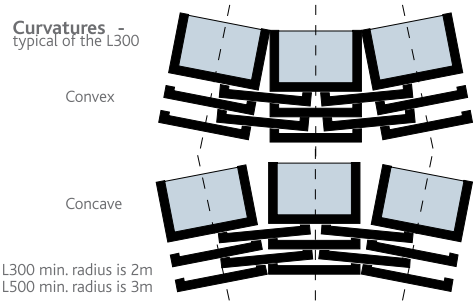
Planting - completed structure. Take care in the choice of plants, in order to minimise possible maintenance problems. Indigenous ground covers are recommended.

Technical advice - the structural stability of a gravity retaining system depends on soil conditions, wall angle, overall slope stability and slope angle (surcharge) on the top and the base of the wall. NB - Structures exceeding l,2m in height necessitate engineered designs and the submission of plans to the local authority. Note - This leaflet serves only as a guideline.









Technical Data	L300	L500	L750
Mass per block - approx.	34kg	52kg	82kg
Length	300mm	500mm	750mm
Width	450mm	450mm	450mm
Height	170mm	170mm	170mm
No. of units per linear metre	1.6	1.6	1.6
No. of blocks per m^2 (not influenced by the wall's angle)			
- Straight line	9.5	9.5	9.5
- Curved structures	10-12	10-12	10-12
Variable wall angle options			
- Maximum std blocks	70°		
- Maximum std blocks	87°		

The photographs in this brochure do not necessarily reflect actual product colours.

Waterlöffel®

Retaining Systems

Waterlöffel® is a versatile, interlocking, dry-stack concrete retaining system.

Umhlanga Rocks

SABS ISO 9001

Product features

Waterlöffel® is a versatile, interlocking, dry-stack concrete retaining system purposely designed to combat:

- Coastal dune erosion by wave action and wind
- River bank erosion in water courses by seasonal storms
- Erosion of stormwater outlets.

Other uses for Waterlöffel® in construction:

- Sea walls
- Coastal promenades
- Beach-access ramps
- Bio-filters
- Dam walls
- River weirs
- Marina waterways
- Canals.

Environment - Waterlöffel® is eco-friendly and has passed all environmental impact studies linked to projects that have been completed to date.

Technical advice - Waterlöffel® walls are design-intensive and as the manufacturers of this specialised product, we recommend that you use the services of a recognised geotechnical or hydraulic engineer to design your projects.

Note - This leaflet serves as a guideline only. For specific applications please make use of our free technical service.

Technical Data	WL650
Mass per block - approx.	72 kg
Length	650mm
Width minus wings	450mm
Width with wings (100mm each)	650mm
Height	150mm
Number of blocks per m²	
- Straight line	11
- Curved structures	12
Standard wall angle	65°

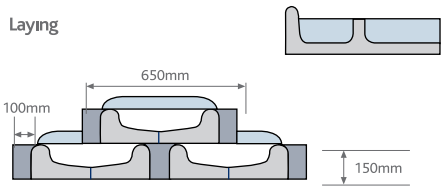
Wave tunnel testing carried out at the CSIR's Division of Earth, Marine and Atmospheric Science and Technology - University of Stellenbosch

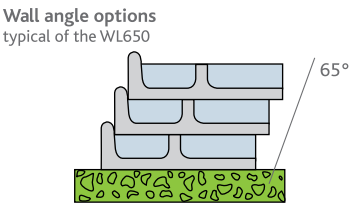
Technicians preparing scale model blocks of Waterlöffel®

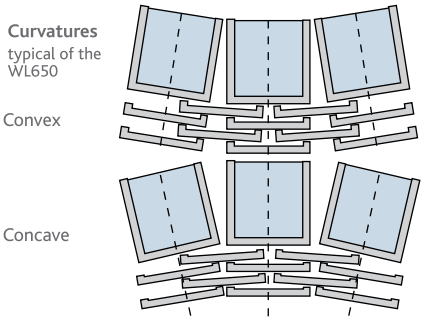
Scale model of 3.4 metre

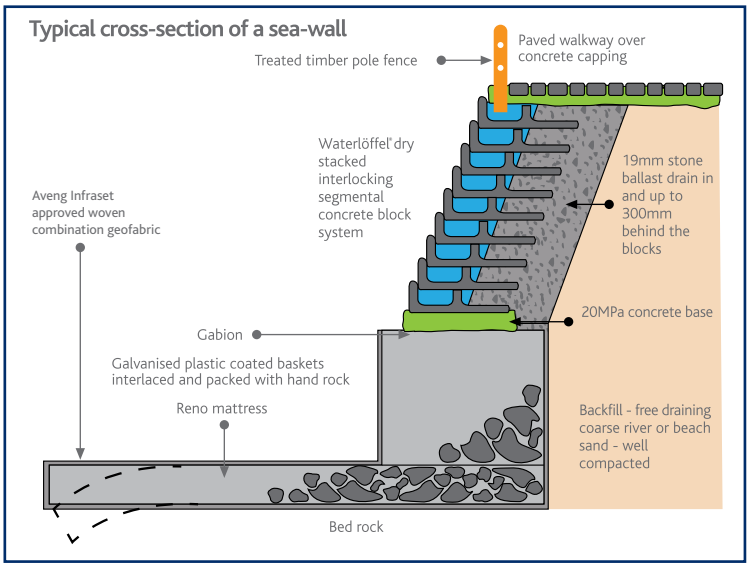
Various wave action forces being monitored

Visual evidence of wave action being dissapated









The photographs in this brochure do not necessarily reflect actual product colours.

Terrace Blok® TB 190/ 190 Rockface

The Aveng Infraset Terrace Blok® is a light versatile concrete block which provides the ideal solution for homeowners and DIY enthusiasts wishing to provide support to slopes in their gardens.

Product features

With the Terrace Blok® construction is simple. Blocks can be rapidly stacked without the need for foundations or mortar.

Whilst stacking, the blocks are filled with either topsoil or humus. The appearance of the entire structure can then be enhanced by planting herbs, creepers or flowers in each of the various pockets. Plants that grow well in your garden will perform even better in a Terrace Blok® structure. Due to the moisture retention capacity of concrete, the structure, when warmed by the sun, is transformed into a humid microclimate.

This facilitates the speedy establishment of plant life in each of the earth pockets. Root systems remain unrestricted and can extend into the natural embankment behind the wall.

The Terrace Blok® can be stacked to accommodate straight edges, curves or right angles. Its applications are limited only by your imagination.

Keep in mind

The overall stability of a gravity retaining structure relies on the mass of the wall per square metre. For this reason the following safety pointers should be kept in mind:

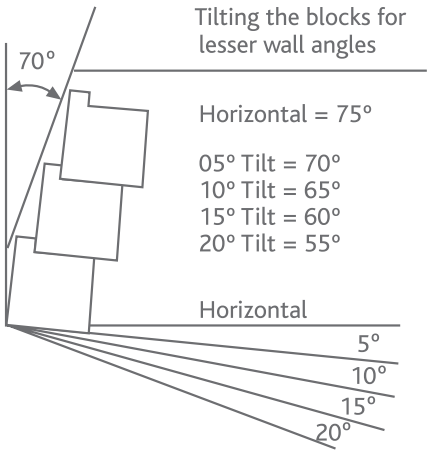
- Unusual conditions should be examined by our own staff.
- Near vertical structures should not exceed a height of seven courses or 1 260mm.
- Should your requirement be for higher structures at steeper wall angles, the bigger Terrace Blok® TB 300/490 and Löffelstein® systems should be used.
- Before building your wall ensure that you comply with your local bylaws and requirements.

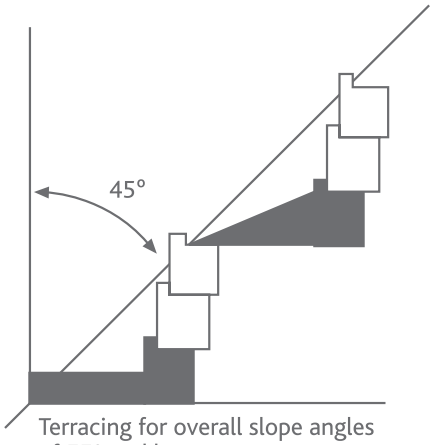
Please contact any of our various outlets for free technical advice.

Laying

- The blocks should be set in a 100mm deep level trench.
- If the ground inclines sharply, the blocks can be stepped up in multiples of 180mm.
- The spacing between blocks on the same layer is 320mm. If stacked to this spacing, 9-10 blocks per m^2 are required, measured vertically. The slope angle does not change the number of blocks required per m^2.
- A solid wall can be constructed by placing the units with a 10mm gap between them, in which case 15 units per m^2 are required.
- Loose soil behind the wall must be hand-compacted and watered row-by-row to avoid settlement at a later stage.
- The individual pockets in the wall should be loosely filled with humus leaving sufficient space for each plant's own soil mass when it is taken out of the nursery bag.

Available in Sahara Sand, Multi-blend and Tan.





Terracing for overall slope angles of 55° and less

Technical Data	TB 190
Mass per block - approx.	± 17,5 kg
Length	390mm
Depth	190mm
Height	180mm
Number of blocks	
- per m^2	± 9
- per linear metre open space	1,8
- closed space	2,5
Maximum height @ 70/75	1,2m *
	7 courses

*** Subject to confirmation with varying soil conditions**

The photographs in this brochure do not necessarily reflect actual product colours.

Terrace Blok® TB 300 TB 490

The Aveng Infraset Terrace Blok® TB 300/490 system has unique features that firmly establish it as a market leader.

Product features

The Aveng Infraset Terrace Blok® system has unique features that firmly establish it as a market leader.

Economical - Seven blocks per square metre.

Open or Closed Face Options - by using a unique slider that fits easily between the blocks.

Plantability - it's open bottom-hole design and trough shape create a greenhouse effect within the environs of the block. This promotes rapid healthy plant growth with unrestricted root systems that aid in the stabilisation of the bank.

Quality - this product is manufactured under ISO 9001:2000 requirements and carries a full manufacturer's warranty.

Testing - backed by full-scale tests conducted by independent geotechnical engineers, every aspect of Terrace Blok® has been checked to establish the design integrity of the system.

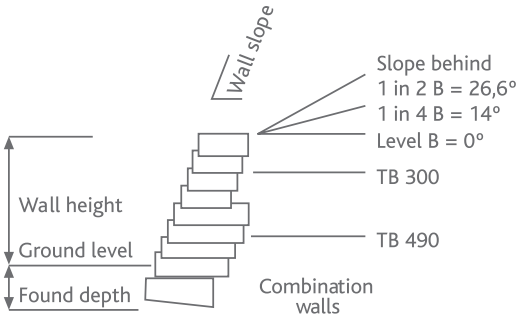
Cautionary Note:

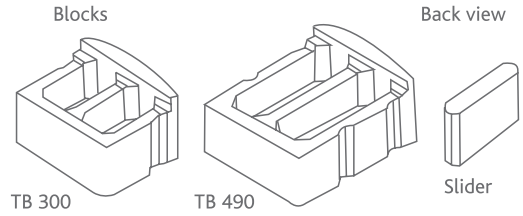
- The design of dry-stack concrete retaining systems involves geotechnical rather than structural elements.
- Check with your local authorities regarding their requirements for the design, plan submission and stability certification of your retaining structure before commencing construction.
- This leaflet serves as a guideline not a guarantee. For specific applications please make use of our free technical service.

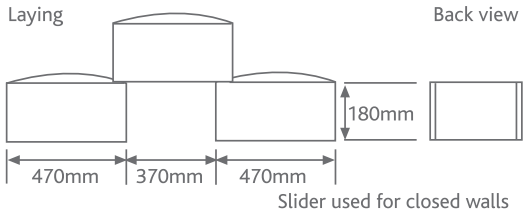
Terrace Blok® TB300/490 is available in Grey.

Colours can be made to order – quantity dependant.

Please note that sliders must be ordered seperately.







Slider used for closed walls

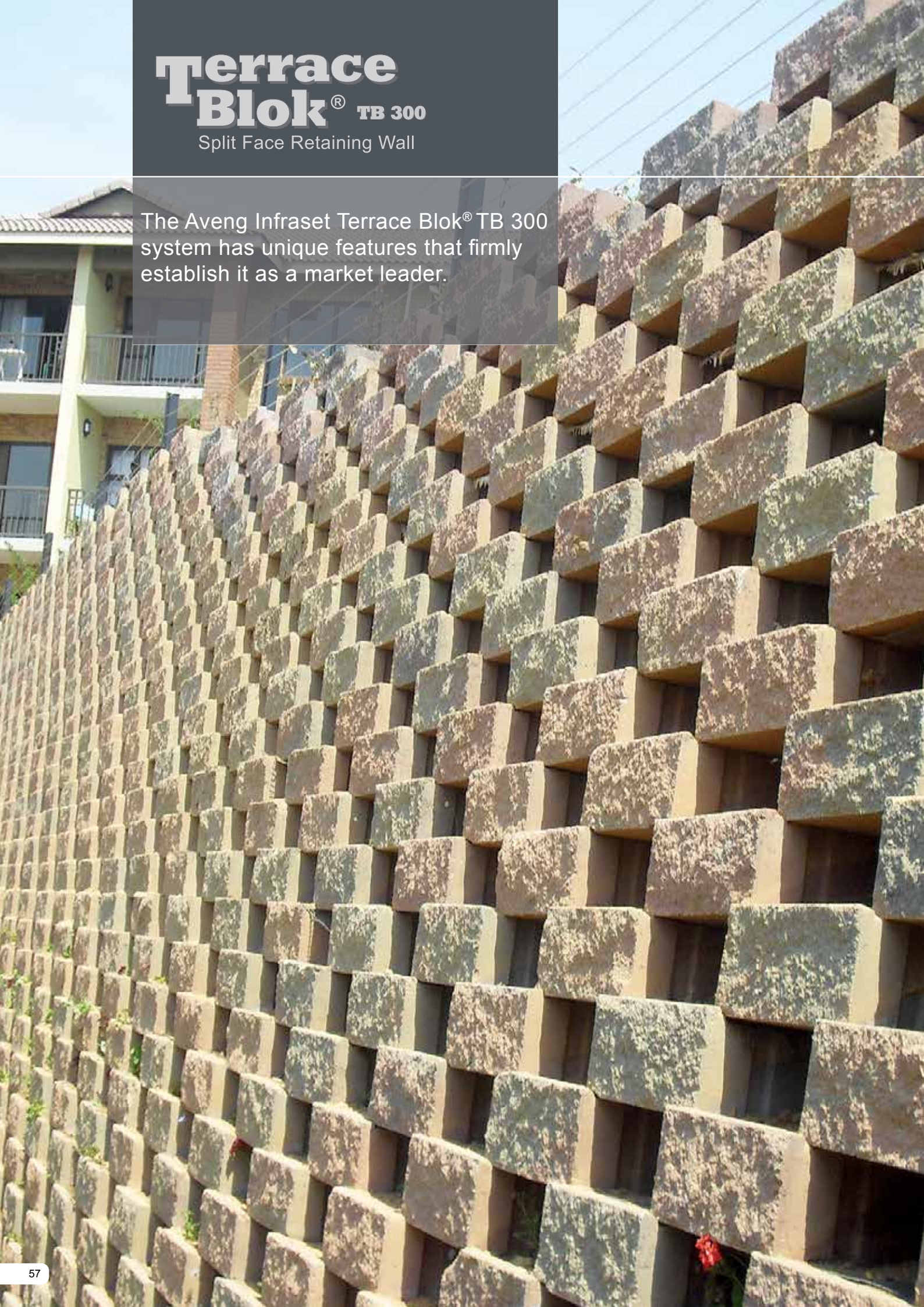
Technical Data	TB 300	TB 490
Mass per block	40 kg	49 kg
Length	300mm	490mm
Width	470mm	470mm
Height	180mm	180mm
Number of blocks per m^2		
- Straight line	7	7
- Curved structures	8-9	8-9
Standard wall angle	75°	75°
Engineered options	55°/ 75°	55°/ 75°
KwaZulu-Natal dimensions and weights vary from those shown above. Please ask for a TB 300/500 leaflet.		

The photographs in this brochure do not necessarily reflect actual product colours.

Terrace Blok® TB 300

Split Face Retaining Wall

The Aveng Infraset Terrace Blok® TB 300 system has unique features that firmly establish it as a market leader.



Product features

The Aveng Infraset Terrace Blok® TB 300 Split Face system has unique features that firmly establish it as a market leader.

Economical - Seven blocks per square metre.

Open or Closed Face Options - by using a unique slider that fits easily between the blocks.

Plantability - it's open bottom-hole design and trough shape create a greenhouse effect within the environs of the block. This promotes rapid healthy plant growth with unrestricted root systems that aid in the stabilisation of the bank.

Quality - this product is manufactured under ISO 9001:2000 requirements and carries a full manufacturer's warranty.

Testing - backed by full-scale tests conducted by independent geotechnical engineers, every aspect of Terrace Blok® TB 300 Split Face has been checked to establish the design integrity of the system.

Cautionary Note:

- The design of dry-stack concrete retaining systems involves geotechnical rather than structural elements.
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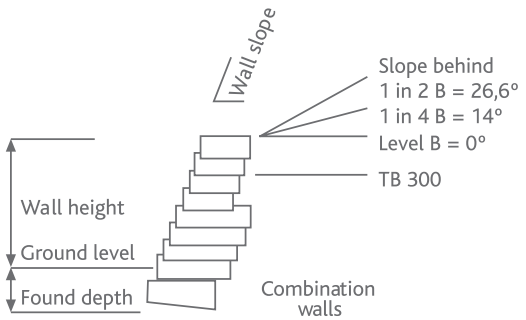
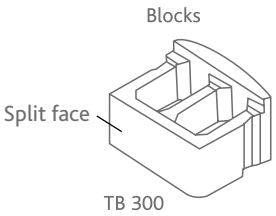
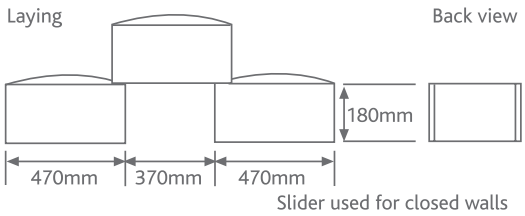






Technical Data	TB 300 Split Face
Mass per block	48 kg
Length	300mm
Width	470mm
Height	180mm
Number of blocks per m^2	
- Straight line	7
- Curved structures	8-9
Standard wall angle	75°
Engineered options	55°/ 75°

TB300 Split Face is available in a variety of standard colours to choose from.

Colours can be made to order – quantity dependant.

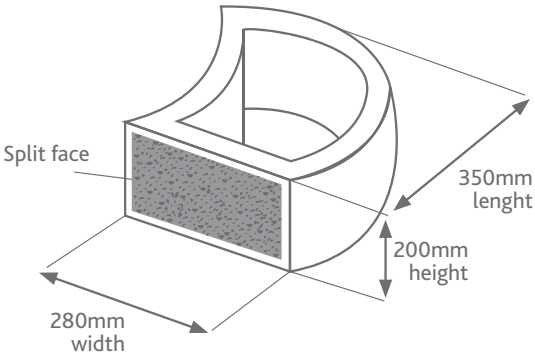
The photographs in this brochure do not necessarily reflect actual product colours.

InfraBlok® 350

The Aveng Infraset InfraBlok® 350 retaining block system is unique in its flexibility and aesthetic appeal.

Product features

- The block allows for the creation of convex or concave curves.
- Transition from vertical concrete filled to plantable inclined installations can easily be achieved.
- The blocks interlock in the horizontal plane.
- The construction of complex staircases can be incorporated into the wall with relative ease.
- Vertical structural walls can be achieved using reinforcing steel to create columns within the wall.
- Handrails, light posts and fences can be set in concrete on top and within the block.
- The closed-face construction method allows for maximum wall mass and effective backfill compaction.
- It is ideal to fill the blocks (in the offset configuration) in order to landscape the completed wall.



Cautionary note

- The design of dry-stack concrete retaining systems involves geotechnical rather than structural elements.
- Check with your local authorities regarding their requirements for the design, plan submission and stability certification of your retaining structure before starting construction.
- This leaflet serves as a guideline not a guarantee.

InfraBlok® 350 Split face only. Available in Grey, Tan, Sahara Sand and Multiblend.

Technical data	InfraBlok® 350
Length	350
Width	280
Height	200
Blocks per m^2	18
Av. mass of block (kg)	20
Volume by Infill	0.011
Mass of Constructed Wall	600 kg per m^2
Colours Available	Grey, Tan, Sahara Sand and Multiblend

The photographs in this brochure do not necessarily reflect actual product colours.

InfraBlok® 425

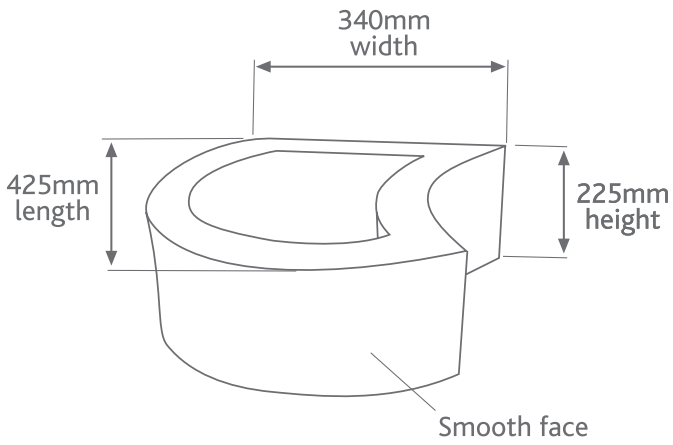
The Aveng Infraset InfraBlok® 425 retaining block system is unique in its flexibilityand aesthetic appeal.

Product features

- The block allows for the creation of convex or concave curves.
- Transition from vertical concrete filled to plantable inclined installations can easily be achieved.
- The blocks interlock in the horizontal plane.
- The construction of complex staircases can be incorporated into the wall with relative ease.
- Vertical structural walls can be achieved using reinforcing steel to create columns within the wall.
- Handrails, light posts and fences can be set in concrete on top and within the block.
- The closed-face construction method allows for maximum wall mass and effective backfill compaction.
- It is ideal to fill the blocks (in the offset configuration) in order to landscape the completed wall.

Cautionary note

- The design of dry-stack concrete retaining systems involves geotechnical rather than structural elements.
- Check with your local authorities regarding their requirements for the design, plan submission and stability certification of your retaining structure before starting construction.
- This leaflet serves as a guideline not a guarantee.



InfraBlok® 425 Smooth face only. Available in Grey.

Technical data	InfraBlok® 425
Length	425
Width	340
Height	225
Blocks per m^2	13
Av. mass of block (kg)	32
Volume by Infill	0.018
Mass of Constructed Wall	750 kg per m^2
Colours Available	Grey

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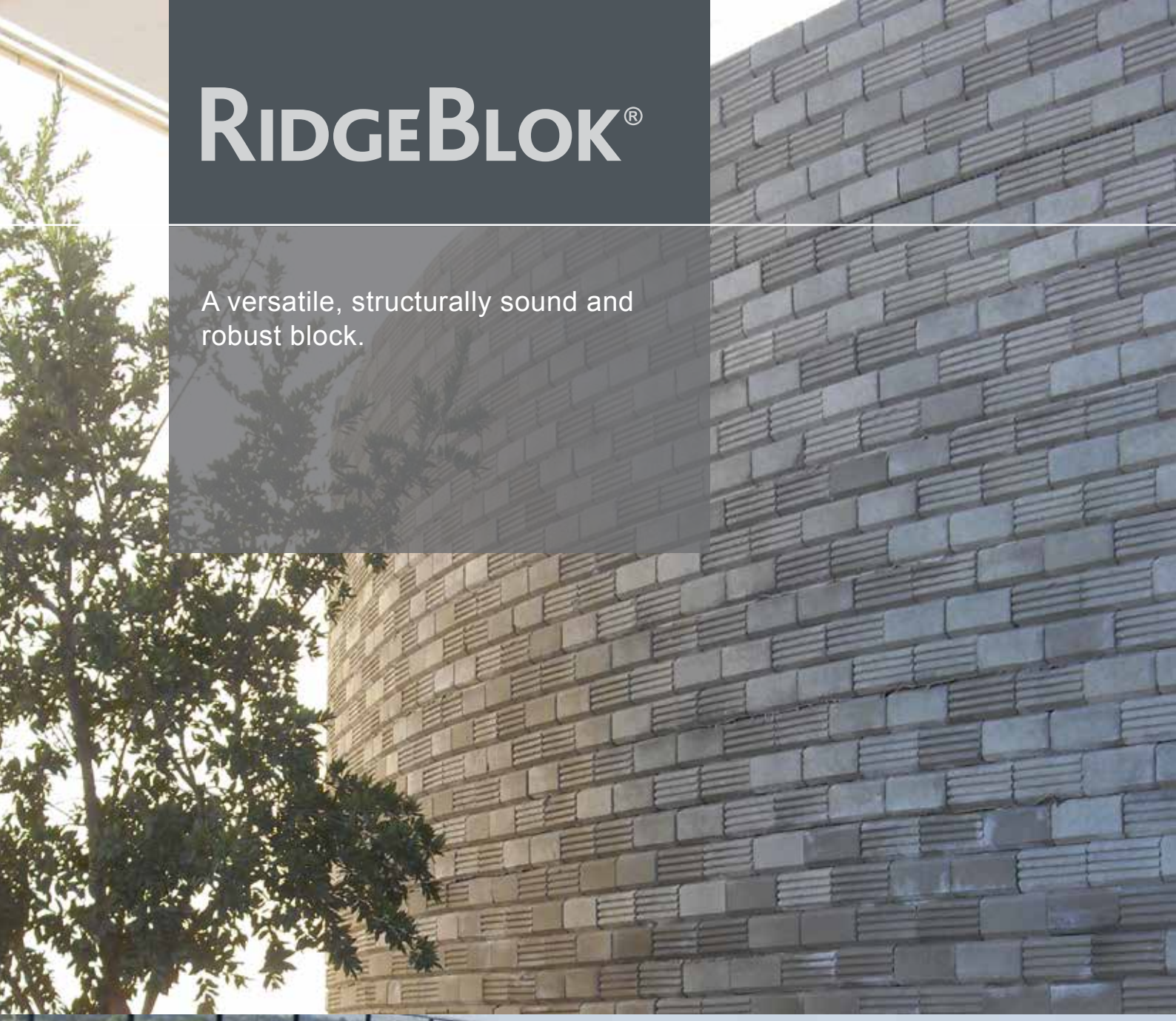
RidgeBlok®

A versatile, structurally sound and robust block.



SABS
ISO 9001

Product features

RidgeBlok® is versatile

- The RidgeBlok® is a dry stacked, concrete block system that can be aligned into tight, convex and concave curves.
- The spacing between RidgeBlok® can easily be narrowed to increase the unit weight of the wall and its effectiveness as a gravity structure. Alternatively, greater spacing between the blocks increases the plantable area for a more environmentally-friendly end product.
- The open spaces can be increased to provide a more open and permeable facing to prevent excess build up of pore-water pressures behind the retaining wall.

RidgeBlok® is structurally sound and robust

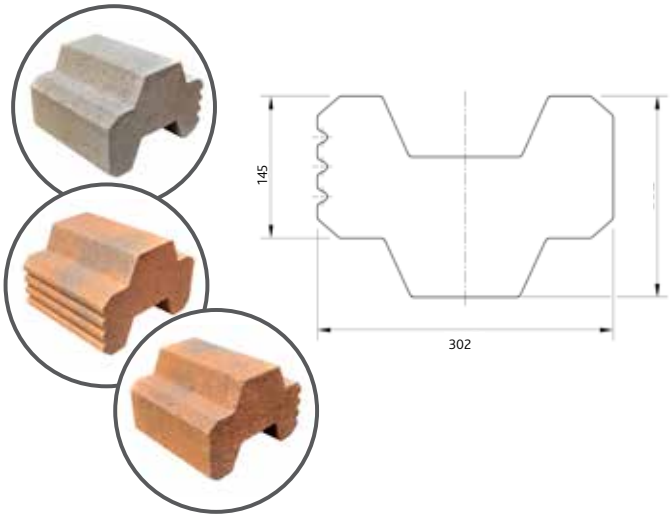
- The solid concrete blocks are robust, resulting in fewer breakages during transport and construction activities.
- The RidgeBlok® is a solid concrete block designed to dissipate stresses effectively once built into a retaining wall.
- The deep-lip recess system (tongue and groove) provides a positive interlocking force to dissipate horizontal forces exerted on the interface between the blocks.
- The compressive strength of the solid concrete RidgeBlok® allows for construction of higher walls compared to hollow concrete retaining blocks.

RidgeBlok® is unique

- The RidgeBlok® facing is constructed at any angle between 70° and 90° to the horizontal without compromising any of its structural integrity. This character is seen as a major advantage over conventional, dry-stacked concrete blocks used in retaining-wall structures.
- The architectural grooves on the one side of the RidgeBlok® enable the blocks to be packed in different visually pleasing patterns.

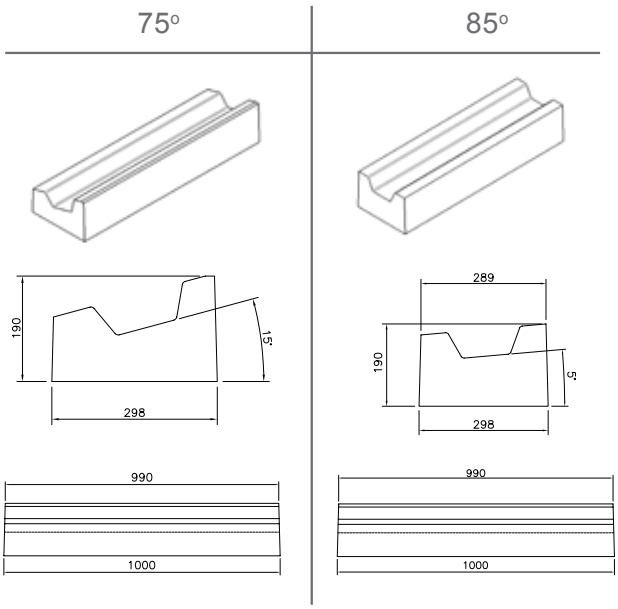
RidgeBlok® is intergrated

- The deep-lip recess system, tongue and groove system, provides a positive clamping force between the RidgeBlok® and the facing geosynthetic reinforced backfill. This aspect is seen as a major advantage over the conventional concrete retaining block which relies solely on friction to prevent “pull-out” of the geosynthetic from the concrete block.



Technical Data	
Length	270mm
Height of block	145mm
Width	302mm
Block per m²:	
• Closed face wall	± 25
• Open face wall	± 16
Minimum radius, convex or concave	2m
Mass of block	24kg

A base block is available for the foundation of a 75° or 85° wall.

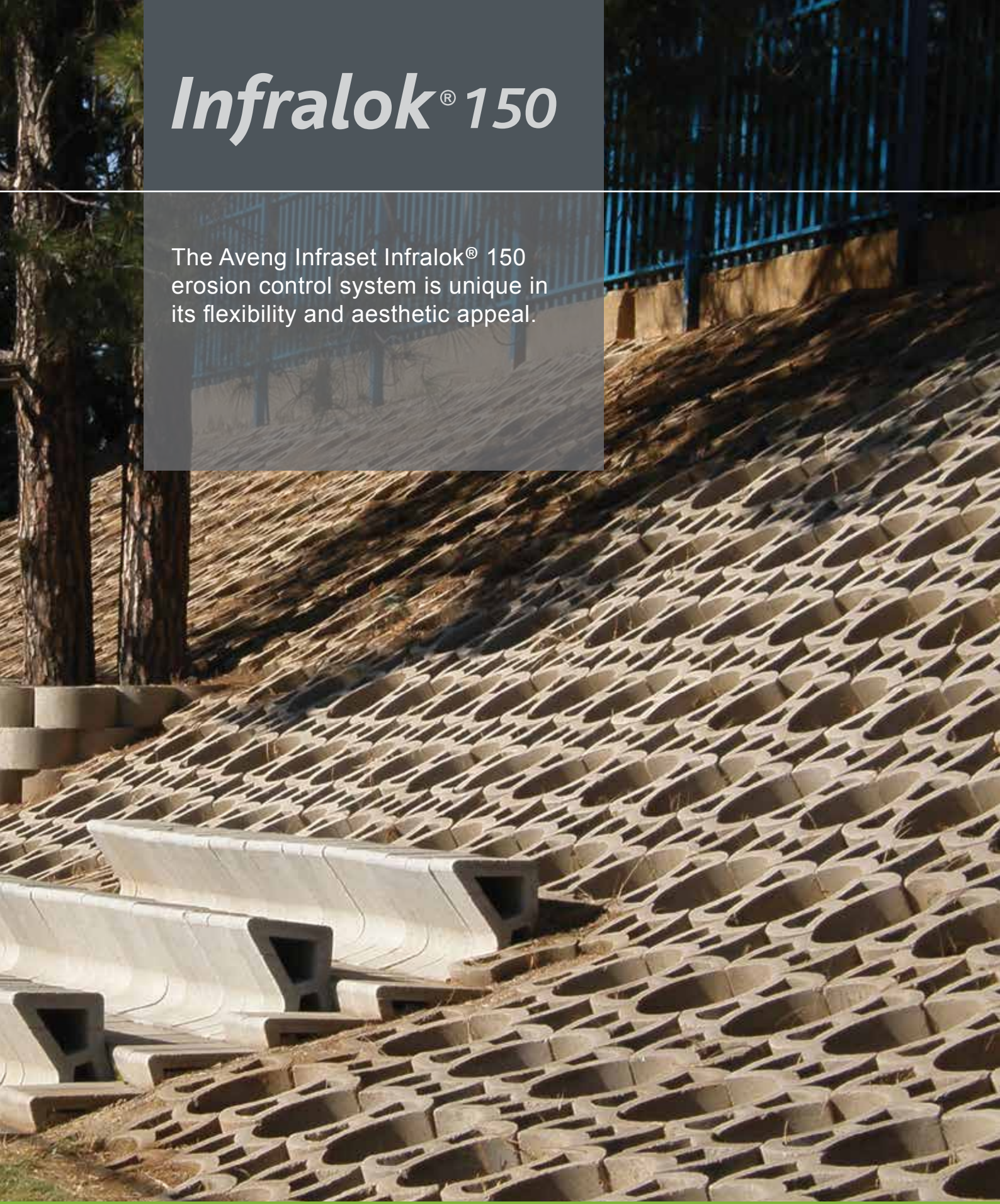


Base blocks to be ordered seperately.

The photographs in this brochure do not necessarily reflect actual product colours.

Infralok® 150

The Aveng Infraset Infralok® 150 erosion control system is unique in its flexibility and aesthetic appeal.

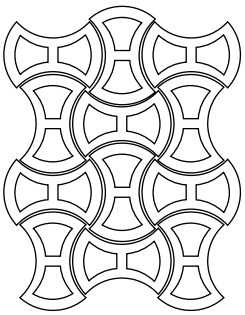


World-class concrete products for eco-friendly and sustainable development

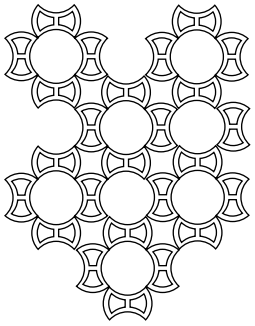
Product features

- The Aveng Infraset Infralok® 150 is a light versatile concrete block which provides the ideal solution for homeowners and DIY enthusiasts wishing to create an erosion control system in their gardens.
- With the Infralok® 150 construction is simple. Blocks can be rapidly laid without the need for foundations or mortar.
- Please note: If the area is subject to traffic, i.e. driveways, or significant water flow, the sub-base should be sufficiently prepared before bedding the blocks.
- The blocks can be laid in various configurations depending on the aesthetic requirement or the condition of the soil and vegetation of the area.

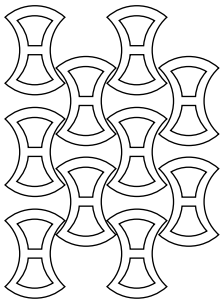
Technical Data	*Infralok® 150*
Length	452
Width	320 - 188
Height	150
Av. mass of block (kg)	18.8 (kg)
Blocks per m²	4 - 10
Colours Available	Grey



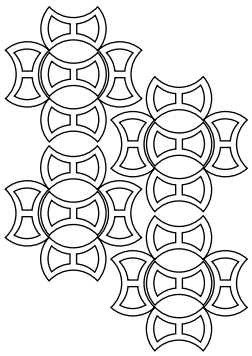
10 blocks per m²



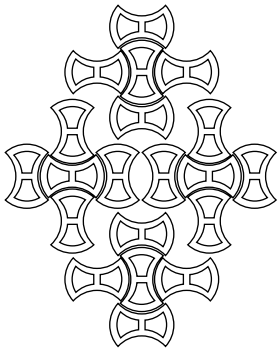
4 blocks per m²



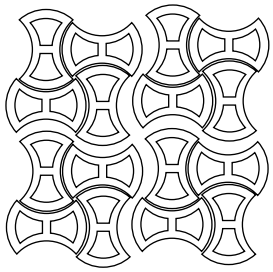
6-7 blocks per m²



5-6 blocks per m²



4 blocks per m²

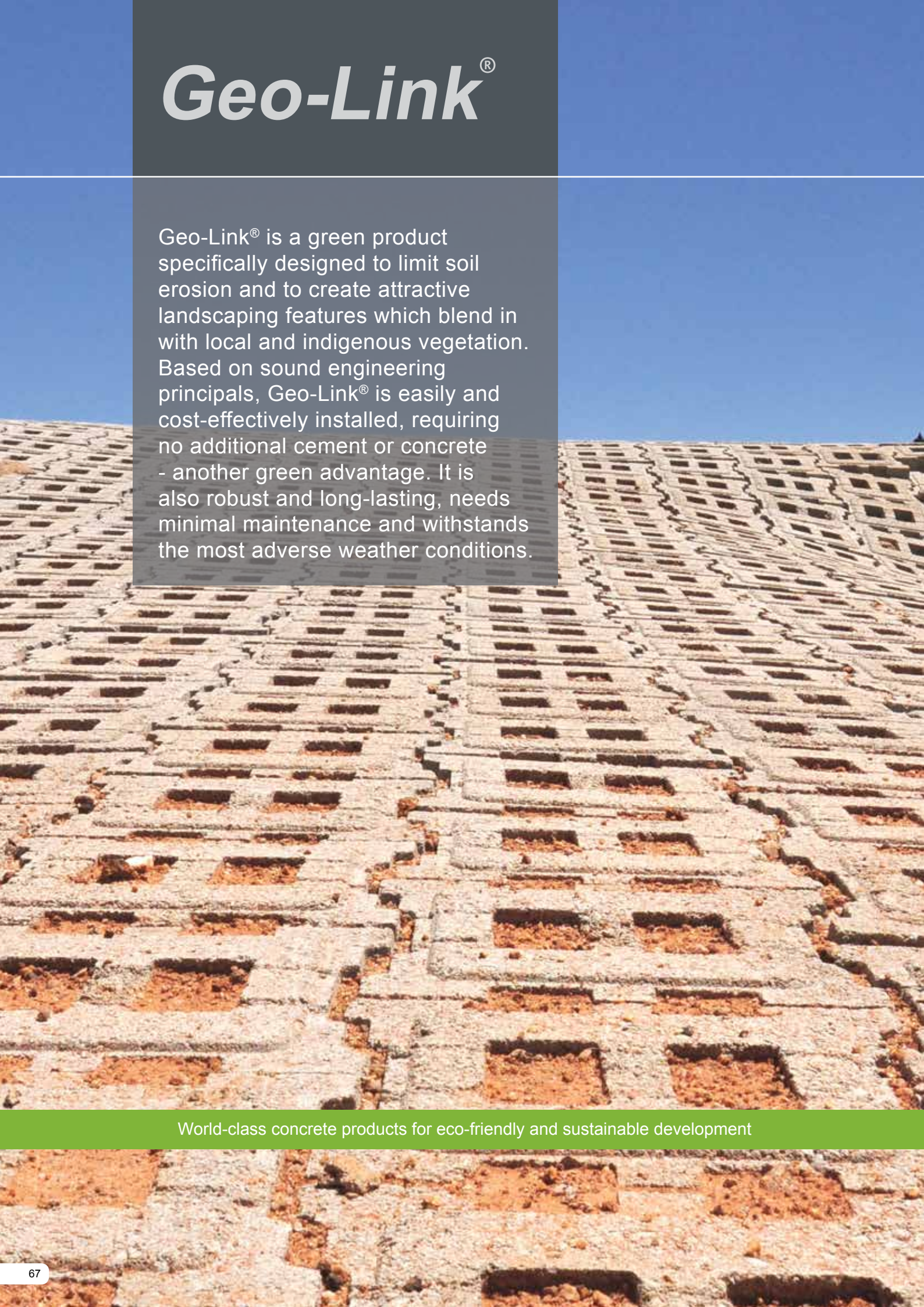


6-7 blocks per m²

The photographs in this brochure do not necessarily reflect actual product colours.

Geo-Link®

Geo-Link® is a green product specifically designed to limit soil erosion and to create attractive landscaping features which blend in with local and indigenous vegetation. Based on sound engineering principals, Geo-Link® is easily and cost-effectively installed, requiring no additional cement or concrete - another green advantage. It is also robust and long-lasting, needs minimal maintenance and withstands the most adverse weather conditions.



Product features

Erosion control and water management

Water management

Comprising a flexible lining of hollow interlocking precast concrete cells, the broken surface created by the cells reduces water flow-speeds (hydrostatic pressures) and inhibits soil erosion in waterways and drainage channels, as well as in flood-prone ditches, spruits, riverbanks, estuaries and beach embankments.

Attenuation ponds and reservoirs

Geo-Link® can be installed underwater and is used to line the banks and bottoms of attenuation ponds and reservoirs, which not only protects the soil but makes for easy maintenance and servicing.

Protecting water pipes

It is also deployed to avoid soil erosion around flow-ramps at pipe inlets and outlets, preventing the loss of soil under the pipes.

Reinforcing gravel roads

Geo-Link® is well-suited to reinforcing gravel roads and tracks on undulating and mountainous terrain where it provides excellent erosion control and better grip for all types of traffic, including heavy trucks, especially under slippery conditions.

Vegetation

Filled with topsoil, Geo-Link® cells provide an environment in which vegetation flourishes. This offers both practical and aesthetic advantages. Besides adding a natural and visually appealing dimension, the vegetation binds the soil and slows down water flows even further.

Structural integrity

Geo-Link® cells are factory-made and then assembled on site, ensuring consistent quality and the lowering of site establishment costs. Individual cells are solidly wedged against each other creating a single yet flexible ground covering. Additional stability is gained by cabling, in either metal wire or polyester twine, threaded through ducts and tied to the individual cells.

The cells are designed with tapered edges to allow for independent movement and the cabling ensures that individual cells are not subject to excessively high movement. The cells also follow ground contours which reduce the need for extensive earthworks and, owing to their inherent flexibility, there is no loss of function through the moderate settlement of the subgrade.

When installed on steep slopes, further stabilisation can be gained by inserting pegs through the cabling.

Preparation

Very little subgrade preparation is required and, under normal circumstances, only minimal compaction of the lay-down surface is needed. However, surfaces must be smooth without sharply protruding rocks, roots or other elements.

	GeoLink® 180	GeoLink® 140
Length x width x thickness(mm)	340 x 294 x 115	340 x 400 x 90
Length x width(mm)	309 x 294	309 x 400
Cells (p/m^2)	11	8
Cell weight (ave.)	16.4	17.5
Weight (kg/m^2)	180	140
Open area (%)	18	18
Material vol. to fill joints & voids (m^3/m^2)	0.022	0.017
Cable/rope	Galvanised steel wire/ synthetic rope	Galvanised steel wire/ synthetic rope
Bending radius	0,5 to 1,0m	0,5 to 1,0m

The photographs in this brochure do not necessarily reflect actual product colours.

Eco-Link®

Eco-Link® is a green product specifically designed to limit soil erosion and to create attractive landscaping features which blend in with local and indigenous vegetation. Based on sound engineering principals, Eco-Link® is easily and cost-effectively installed, requiring no additional cement or concrete - another green advantage. It is also robust and long-lasting, needs minimal maintenance and withstands the most adverse weather conditions.

Product features

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Preparation

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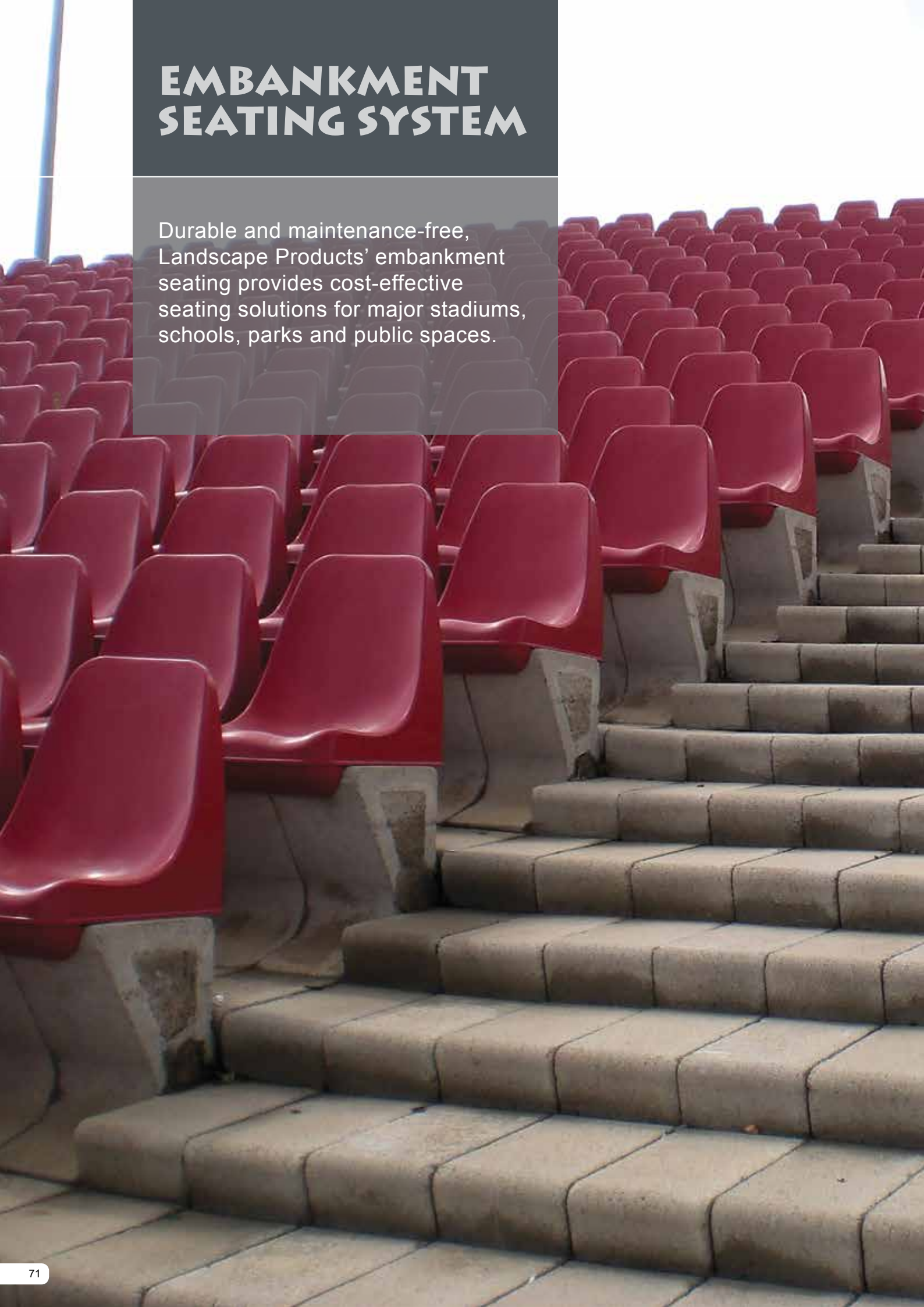
	Eco-Link®
Length x width x thickness(mm)	340 x 294 x 95
Length x width(mm)	309 x 294
Cells (p/m^2)	11
Cell weight (ave.)	13,1
Individual weight (kg/m^2)	140
Open area (%)	18
Material vol. to fill joints & voids (m^3/m^2)	0,022
Bending radius	0,5 to 1,0m

The photographs in this brochure do not necessarily reflect actual product colours.

EMBANKMENT SEATING SYSTEM

Durable and maintenance-free, Landscape Products' embankment seating provides cost-effective seating solutions for major stadiums, schools, parks and public spaces.



Product features

"Highly Innovative" is how the Fulton Award judges described Aveng Infraset's locally developed concrete seating system, widely used to provide cost-effective solutions for seating requirements from bus stops to schools and major stadiums. Features include:

- Only the Aveng Infraset system is specially engineered and designed for quick and simple installation.
- The precast units are robust enough to weather the wear-and-tear of construction.
- The Aveng Infraset system is vandal-proof and maintenance-free.
- Seats come in standard grey but may be coloured for aesthetic appeal.
- The system is labour intensive in its construction and thus ideal for job creation in disadvantaged communities.

The Aveng Infraset Embankment Seating System consists of a hollow seat block with a mass of about 45kg and a hollow aisle block with a mass of approximately 25kg. Two seat blocks and two aisle blocks form one seat with a recommended width of 450mm.

Embankment preparation

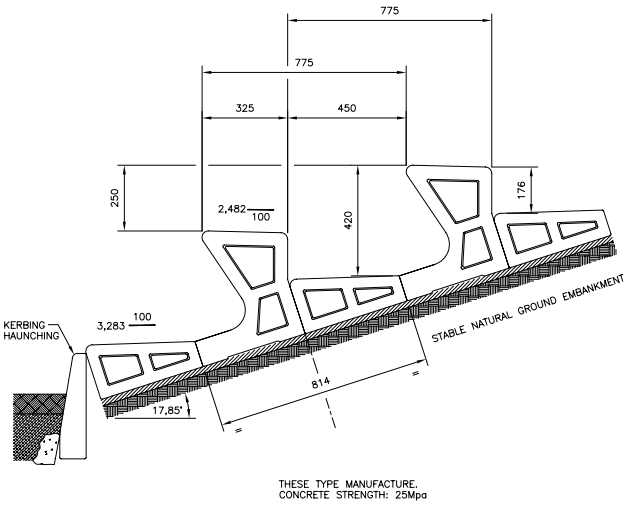
The embankment should be constructed either in cut and then accurately trimmed to the designed slopes, or if the embankment is in fill, then the fill should be adequately compacted to minimise settlement and then accurately trimmed to the designed slope.

Finally, the embankment should then be screeded with a 75mm concrete screed which will act as the bearing surface for the seats and prevent scoring of the embankment.

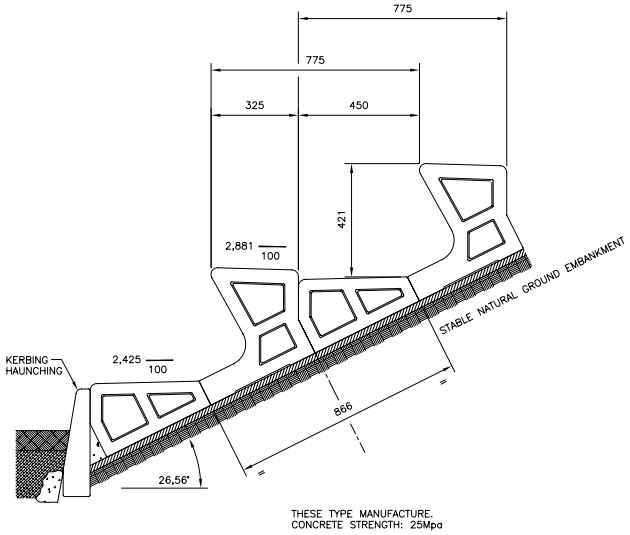
Construction

The units are dry-stacked on the prepared screed, working from the base up. The aisle units also perform the function of creating access ways. Note that any curves will be constructed in a series of cords as only straight line construction is effective.

Upon completion of installation, bucket seats may be fixed to the seating if required, or at a later date when upgrading the facility.



THESE TYPE MANUFACTURE.
CONCRETE STRENGTH: 25Mpa



THESE TYPE MANUFACTURE.
CONCRETE STRENGTH: 25Mpa

Seat Type	Ratio	Angle	Measurement A	Measurement B
2	1:3, 105	17,85	814	775
4	1:2	26,56	866	775

The photographs in this brochure do not necessarily reflect actual product colours.

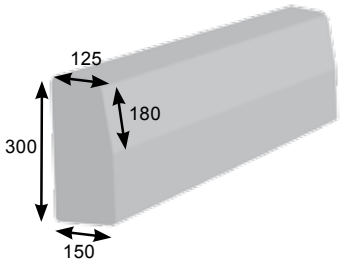
Kerbs

This wide range of South Africa's most popular Kerbs is manufactured to SABS standards and accurate tolerances. They are easy to install and are designed to withstand the harshest operating environments.

Kerbs detail and dimensions

Figure 3 – Barrier

Size:1 000 x 300 x 150 mm
Kerb p/pack: 12
Kerb mass p/kg: 101

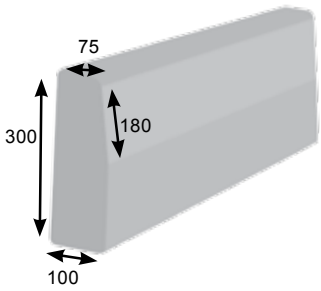


Shorts available:

Size: 330 x 300 x 150 mm
Kerb p/pack: 36
Kerb mass p/kg: 106

Type C / Figure 5b - Barrier

Size:1 000 x 300 x 100 mm
Kerb p/pack: 18
Kerb mass p/kg: 63

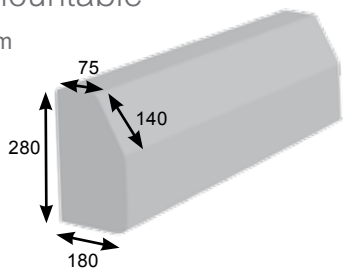


Shorts available:

Size: 330 x 300 x 100 mm
Kerb p/pack: 36
Kerb mass p/kg: 86

Figure 7 – Semi-mountable

Size:1 000 x 280 x 180 mm
Kerb p/pack: 10
Kerb mass p/kg: 101

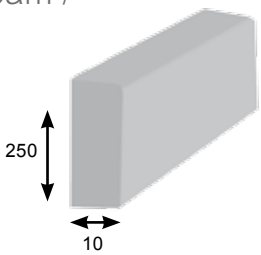


Shorts available:

Size: 330 x 280 x 180 mm
Kerb p/pack: 33
Kerb mass p/kg: 111

Figure 10 – Edge beam / Barrier Kerb

Size:1 000 x 250 x 100 mm
Kerb p/pack: 20
Kerb mass p/kg: 57

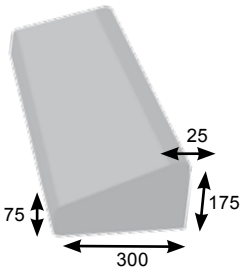


Shorts available:

Size: 330 x 250 x 100 mm
Kerb p/pack: 60
Kerb mass p/kg: 19
Type: Barrier

Figure 8b – Semi-mountable (medium duty)

Size:1 000 x 300 x 175 mm
Kerb p/pack: 10
Kerb mass p/kg: 90

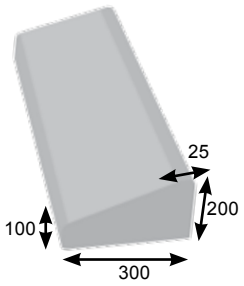


Shorts available:

Size: 330 x 300 x 175mm
Kerb p/pack: 36
Kerb mass p/kg: 95

Type 8c – Semi-mountable (heavy duty)

Size:1 000 x 300 x 100 mm
Kerb p/pack: 10
Kerb mass p/kg: 111

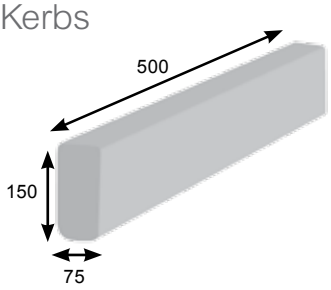


Shorts available:

Size: 330 x 300 x 200 mm
Kerb p/pack: 36
Kerb mass p/kg: 109

Figure 11 – Garden Kerbs

Type: Garden Kerbs
Size: 500 x 150 x 75 mm
Kerb p/pack: 88
Kerb mass p/kg: 27



Type: Garden Kerbs

Size: 500 x 150 x 75 mm
Kerb p/pack: 48
Kerb mass p/kg: 27

Braille Blocks

Size: 330 x 330 x 100 mm
Blocks p/pack: 36
Blocks mass p/kg: 23.5

Due to the dimensions of this Kerb, it is manufactured in pairs - split this Kerb by using a brick balster three times along the length.

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