



Slope Reinforcement & Soil Retention

The Terra-Lock™ System



- Lightweight
 - Durable
 - Effective

Gripple

Gripple is a market leading manufacturer delivering time-saving simplicity and problem-solving innovation in Building Services, Seismic and Force Protection, Agriculture and Civil Construction. With partners around the world, Gripple is a globally recognised brand, synonymous with time, labour and CO₂ saving solutions, outstanding technical support and innovation driven by employee ownership.

Gripple offers a comprehensive solution for slope stability and erosion control, characterised by high quality products, designed and manufactured in-house, alongside on-site training and support delivered by a team of dedicated technical experts.

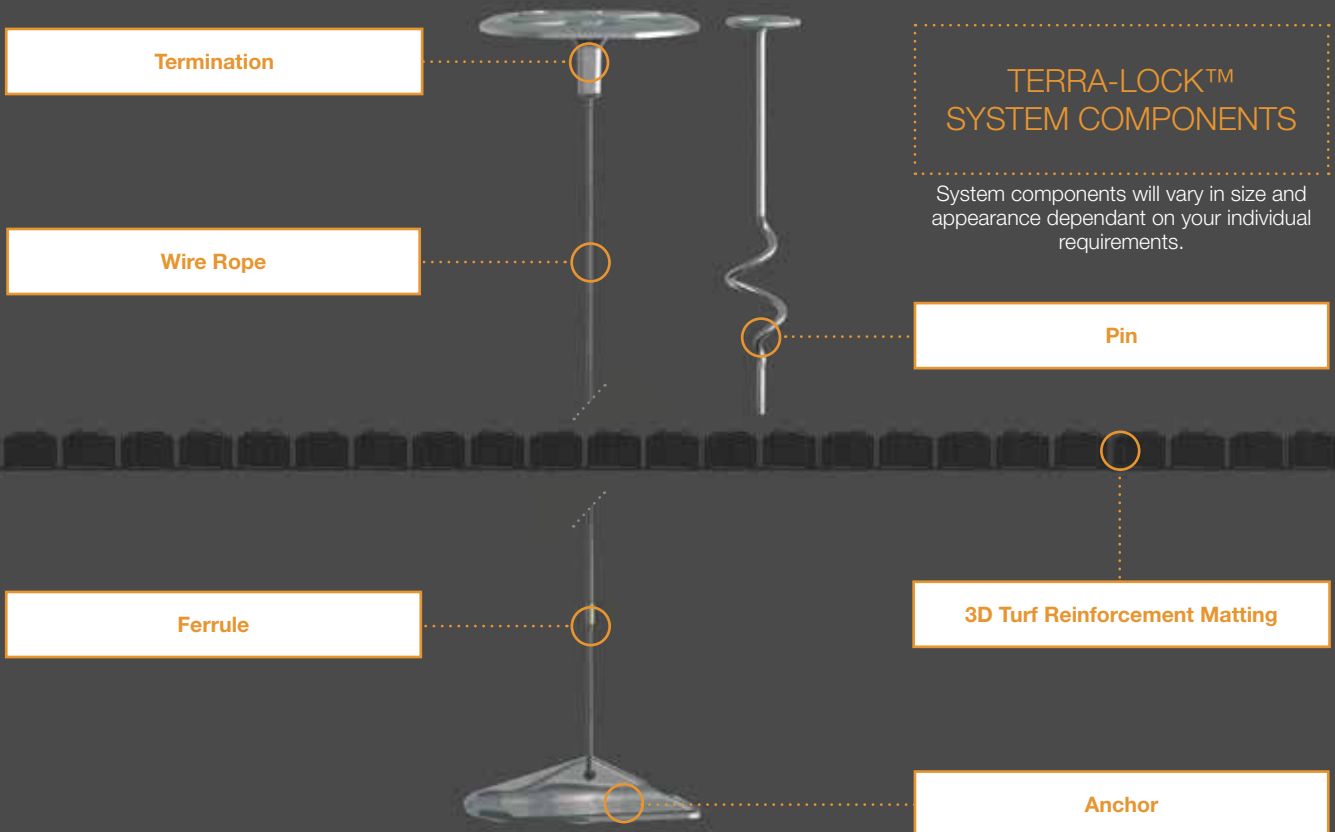
Terra-Lock™ System

Gripple's Terra-Lock™ System, in-use on sites around the world, is an innovative method of geotechnical engineering for heavy erosion and slope stability, delivering significant time and labour savings, immediate security and aiding vegetation growth.

The system is well suited but not limited to:

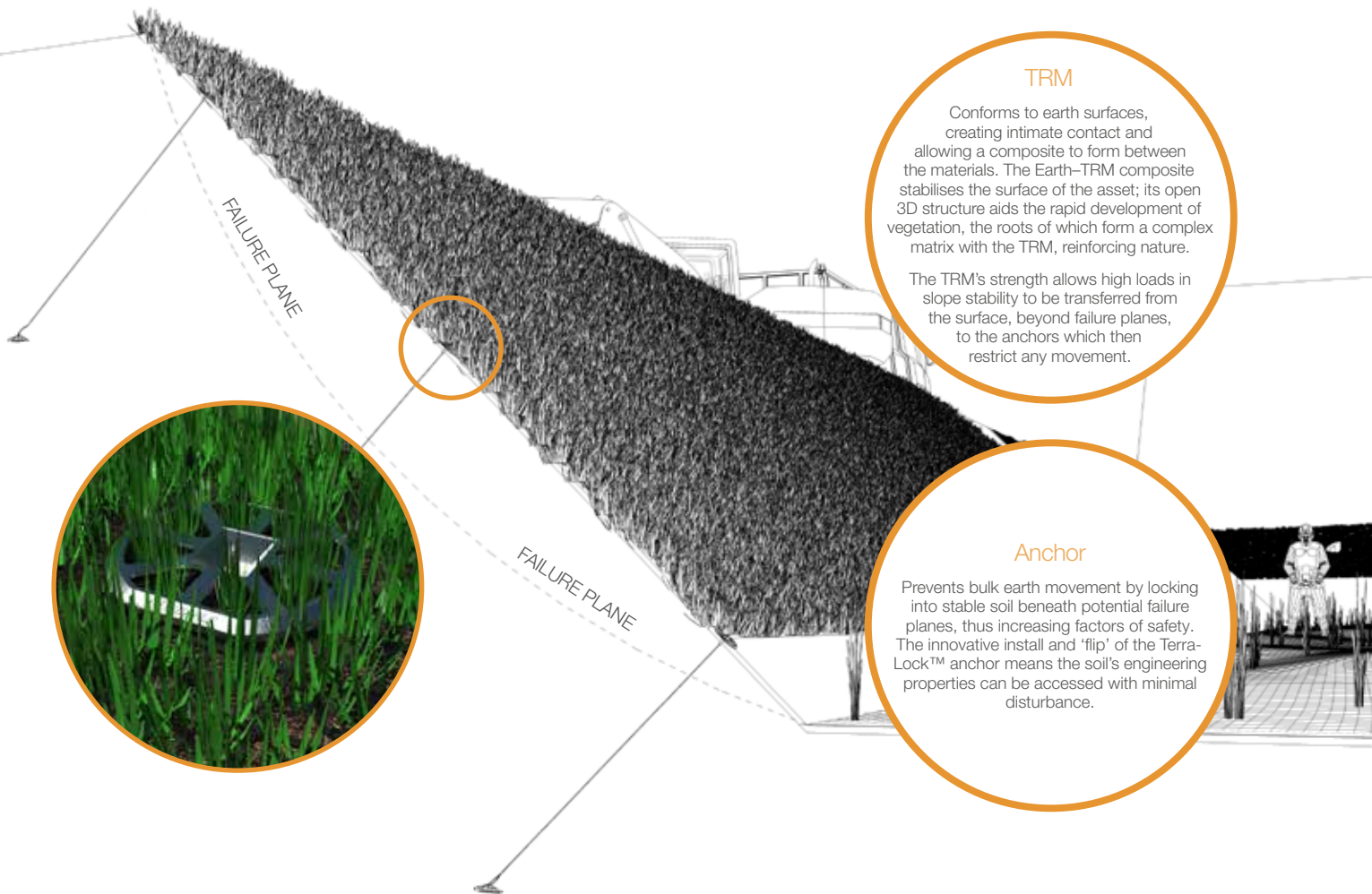


Creating sustainable and durable green structures by reinforcing nature, the Terra-Lock™ System is the innovative, next generation solution, designed to replace or work in conjunction with traditional methods of soil retention and slope stabilisation.



How It Works

The Terra-Lock™ System gains its stability by coupling key engineering principles with specifically designed products to successfully utilise the natural properties of on-site materials. Gripple's innovative 'grip' and 'pull' technology is complemented by anchor systems and TRM (Turf Reinforcement Matting) to deliver a comprehensive, trusted solution.



TRM

Conforms to earth surfaces, creating intimate contact and allowing a composite to form between the materials. The Earth-TRM composite stabilises the surface of the asset; its open 3D structure aids the rapid development of vegetation, the roots of which form a complex matrix with the TRM, reinforcing nature.

The TRM's strength allows high loads in slope stability to be transferred from the surface, beyond failure planes, to the anchors which then restrict any movement.

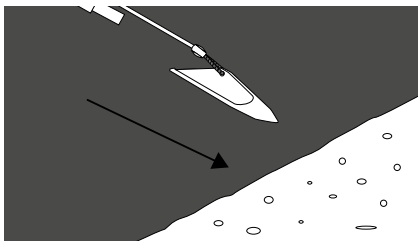
Anchor

Prevents bulk earth movement by locking into stable soil beneath potential failure planes, thus increasing factors of safety. The innovative install and 'flip' of the Terra-Lock™ anchor means the soil's engineering properties can be accessed with minimal disturbance.

WATER MANAGEMENT

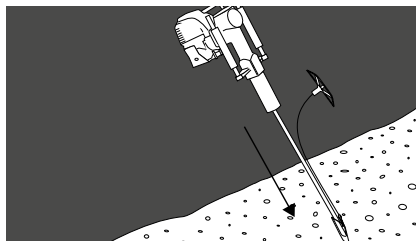
Hydraulic design ensures the correct TRM can be installed. The TRM reduces surface erosion from water and air, while its permeability prevents undermining of the structure. The Earth-Vegetation-TRM composite allows for a large increase in the allowable shear stresses from erosion which prevents excessive soil loss. The anchors then transfer shear forces deep into the ground to ensure a secure and stable system.

INSTALLATION

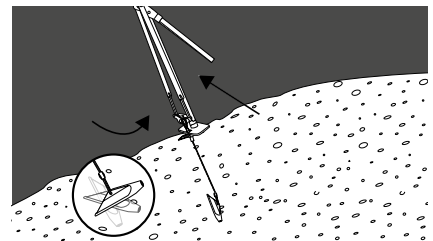


DRIVE:

Insert Drive Tool through the anchor and place against surface.



Use GPD to install the anchor at the required depth.



LOCK:

Use JackJaw® to remove Drive Tool and load lock system.

TIP: For a neat and professional finish, use Gripple Wire Cutter (page 18) to cut wire below grade if required.

Traditional Methods

Whilst effective hard armour is associated with high costs and emissions; it is also susceptible to undermining and structural failure. The Gripple Terra-Lock™ System reduces the amount of hard armour used on site while also significantly reducing failure risks.

Transport

Heavy transportation such as concrete mixers is a characteristic of traditional hard armour installs. The Terra-Lock™ System's use and enhancement of on-site materials, coupled with its lightweight nature, significantly reduces vehicle movements and simplifies handling on-site. Over 4900 m² of the Gripple System can be delivered in one load.

Groundwork

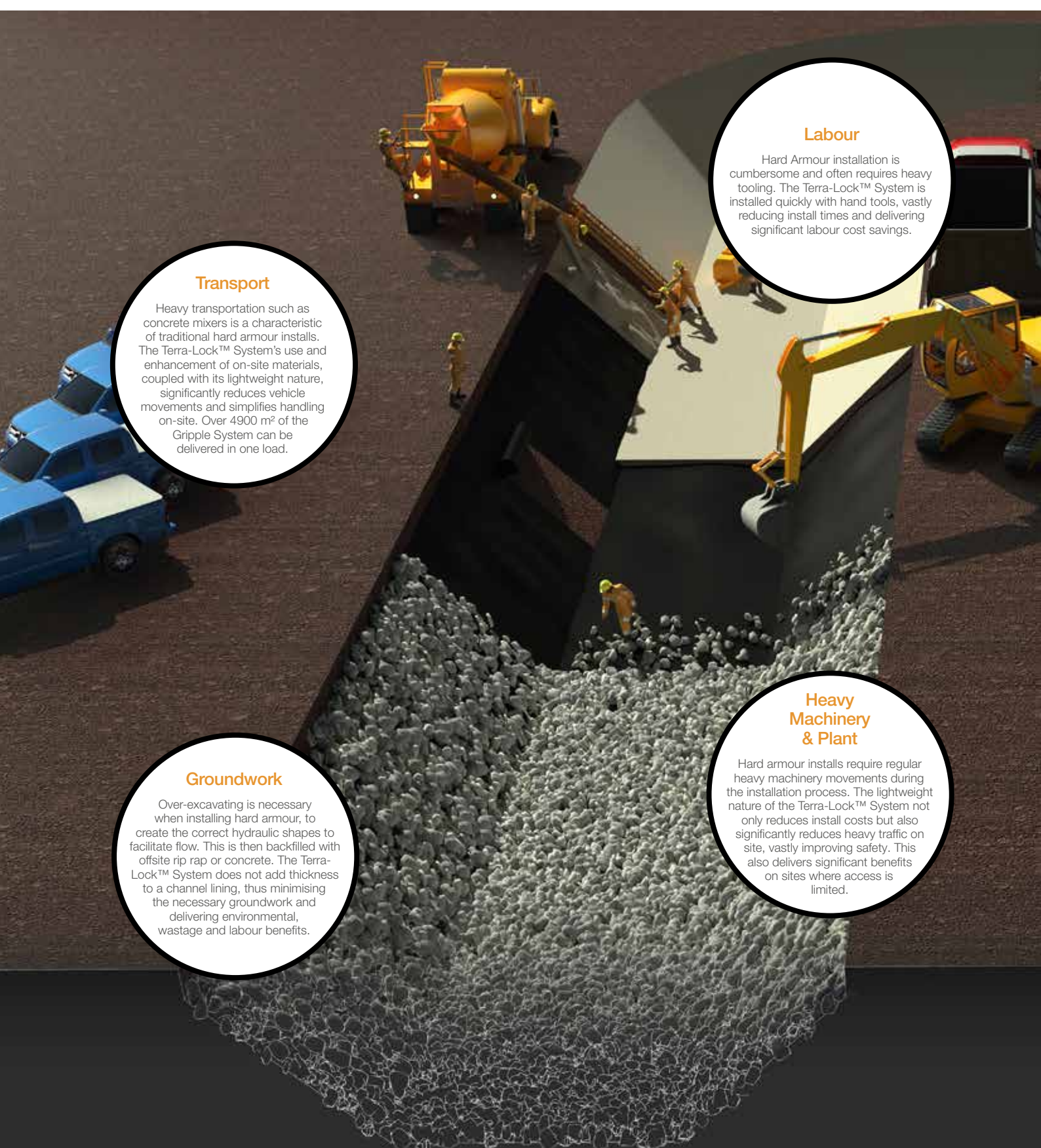
Over-excavating is necessary when installing hard armour, to create the correct hydraulic shapes to facilitate flow. This is then backfilled with offsite rip rap or concrete. The Terra-Lock™ System does not add thickness to a channel lining, thus minimising the necessary groundwork and delivering environmental, wastage and labour benefits.

Labour

Hard Armour installation is cumbersome and often requires heavy tooling. The Terra-Lock™ System is installed quickly with hand tools, vastly reducing install times and delivering significant labour cost savings.

Heavy Machinery & Plant

Hard armour installs require regular heavy machinery movements during the installation process. The lightweight nature of the Terra-Lock™ System not only reduces install costs but also significantly reduces heavy traffic on site, vastly improving safety. This also delivers significant benefits on sites where access is limited.



Greener With Gripplle

Hard armour solutions are still needed in some applications. Gripplle has engineered the Terra-Lock™ System as a comprehensive solution but also an effective complement to hard armour, to ensure the best on-site solution is always delivered based on the geotechnical conditions. The use of the lightweight but durable Terra-Lock™ System leads to a saving in time & therefore money.

Aesthetics

A clear benefit over traditional systems is the green finish achieved by the Terra-Lock™ System. A natural vegetated finish delivers enhanced aesthetics when compared to concrete which is often susceptible to graffiti damage.

Vegetation

The Terra-Lock system promotes and enhances vegetation growth, making it a sustainable option which allows nature to create its own protection. It's long lasting, environmentally friendly and can actually capture sedimentation.



Gabion

The Terra-Lock™ system complements heavier solutions by utilising anchors; the gabion's weight and capacity can be increased without the need for extra heavy materials.

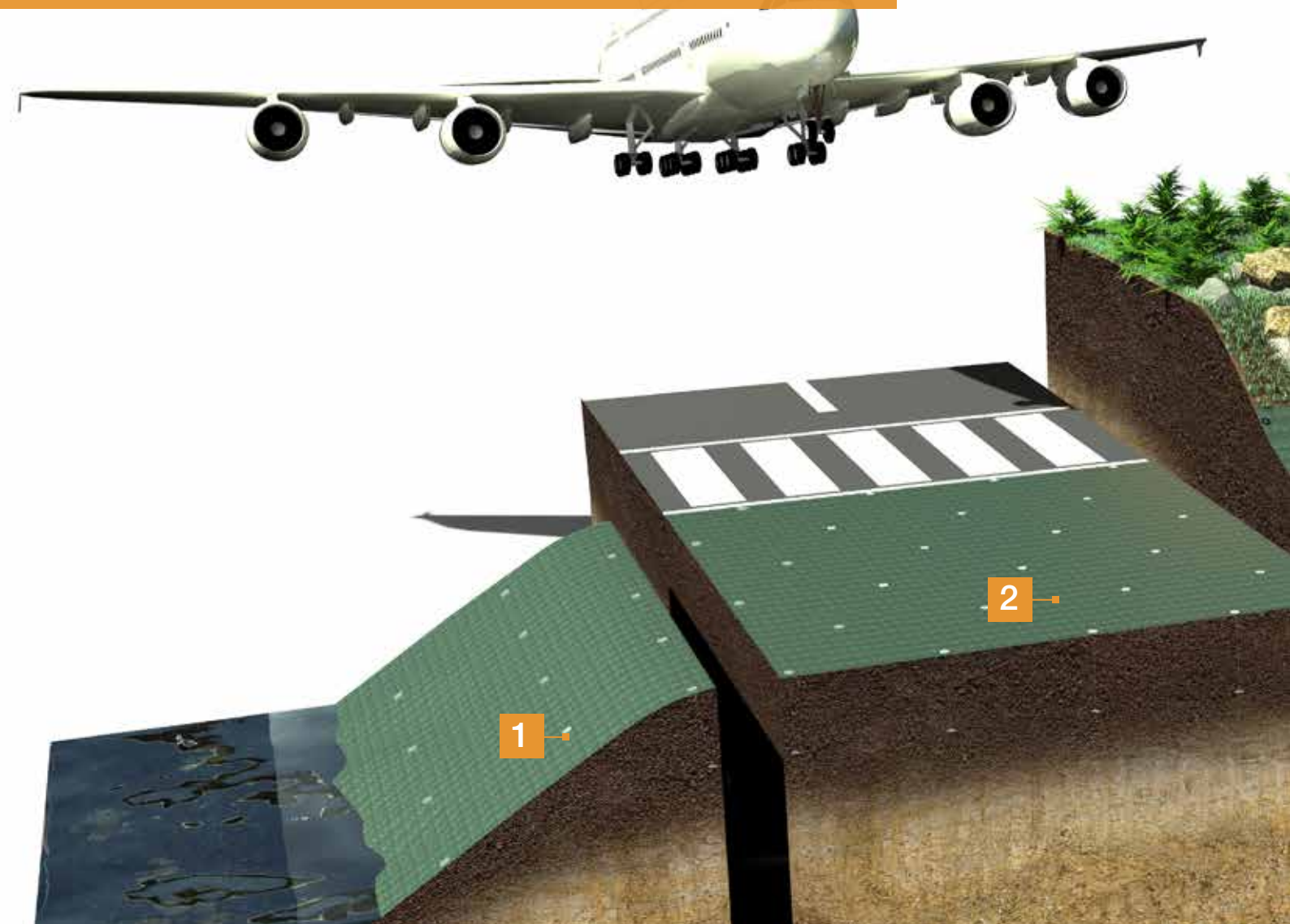
CO₂ & Other Pollutants

The Terra-Lock System ensures large reductions in carbon footprint and emissions when compared to traditional hard armours. Concrete is responsible for 5% of worldwide synthetic CO₂ emissions, whereas the vegetation promoted in the Terra-Lock™ System actively absorbs CO₂.

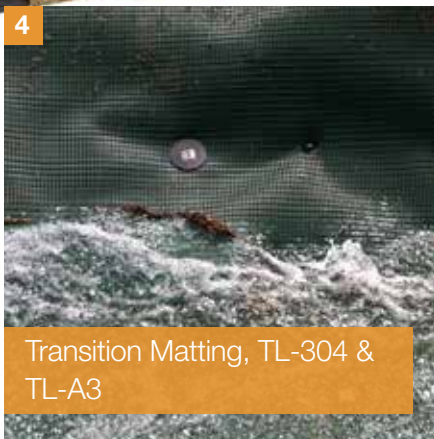
Gripple is renowned for providing innovative, cost-effective solutions for erosion control and soil stabilisation applications.

The **Terra-Lock™ System** is provided in ready-to-use kits with combinations of Terra-Lock™ Anchors, Terra-Lock™ terminations and wire lengths specific to the project requirements and geotechnical conditions.

The system provides immediate stabilisation, requires no crimping and is accompanied by a range of installation tools.



“The Terra-Lock™ System has been developed for fast, easy installation and immediate security”



System Benefits

Gripple's Terra-Lock™ System ensures considerable time, labour and consequently, cost savings, while delivering greener structures. The solution offers many construction, engineering and environmental benefits when used near water or on slopes alone.

The system reduces failure and importantly, flood risk by maintaining the engineered size and shape of water assets so they continue to function correctly.



Slow flows

The use of vegetation in the Terra-Lock™ System can control hydraulic flows, minimising scour and damage to other parts of the system.



Resilience

Reinforcing elements of the solution alongside the promotion of vegetation means the Terra-Lock™ System is essentially 'self-healing', delivery longevity to the install.



Sediment control

Intimate contact with substrates retains soil particles, minimising erosion and downstream sedimentation.



Durable

Manufactured using corrosion resistant materials to ensure longevity.



Steepened slopes

Allows slopes and embankments to be sharply angled, reducing groundwork and maximising use of space.



Lightweight

Easy to handle on site and adds minimal excess loads to the structure. Minimises settlement and subsidence, especially in poor soils.



Increased factor of safety

The installation depth of anchors is calculated based on engineering principles to guarantee the System locks into structurally sound soil.



Failure prevention

The system actively holds the surface, locking it deep into the structure while catching and retaining surface failures.

Technical Services

Gripple is committed to delivering the best value-engineered solution to site. Our team of dedicated engineers ensure all systems are fit for purpose and delivering immediate security. Our services include but are not limited to:



Concept generation

Site surveys and geotechnical report interpretation ensure Gripple is able to provide engineering concepts to solve geotechnical issues. Full drawings with justification can be provided for a value engineered solution.



Installation design service

Gripple offers a design service of site submittals including technical recommendations, calculations and drawings. Solutions are site specific and tailor-engineered to ensure input from Gripple engineers at all stages of the project.



Training

Engineering and on-site installation training ensures the system is performing to its full potential and peace of mind for the installers.



CPD

An accredited CPD course on anchoring solutions is available upon request.



Product providers

Gripple is a world class product manufacturer with a wealth of expertise – should the requirement be bespoke, we'll work with our in-house product design engineers to deliver the right solution.



Site visits

Our engineers are characterised by their 'hands on' approach; they enjoy visiting sites and getting their hands dirty – this is how we understand the problems on site and deliver practical solutions.



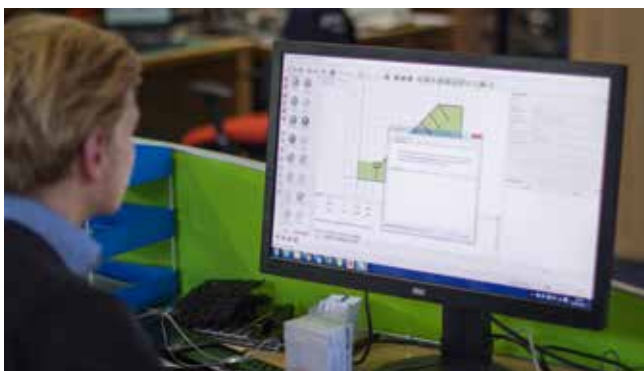
Technical submittal

All Gripple products are supplied with best practice and installation instructions – should further advice be needed, our technical team are available to provide support.



Testing

On-site and laboratory testing of the System and its components ensures the solution is fit for purpose and meets our own rigorous quality checks.

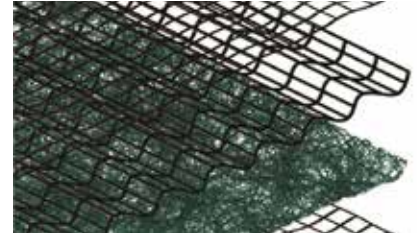


For more information visit www.gripple.com
For any technical services, including **FREE site visits**,
please call us on: **+33 (0)3 88 95 44 95**

G-MAT

Terra-Lock® G-MAT is a lightweight, long-lasting, environmentally friendly, tough and flexible reinforced erosion control mat that provides both an effective erosion control surface and a vegetative root reinforcement layer.

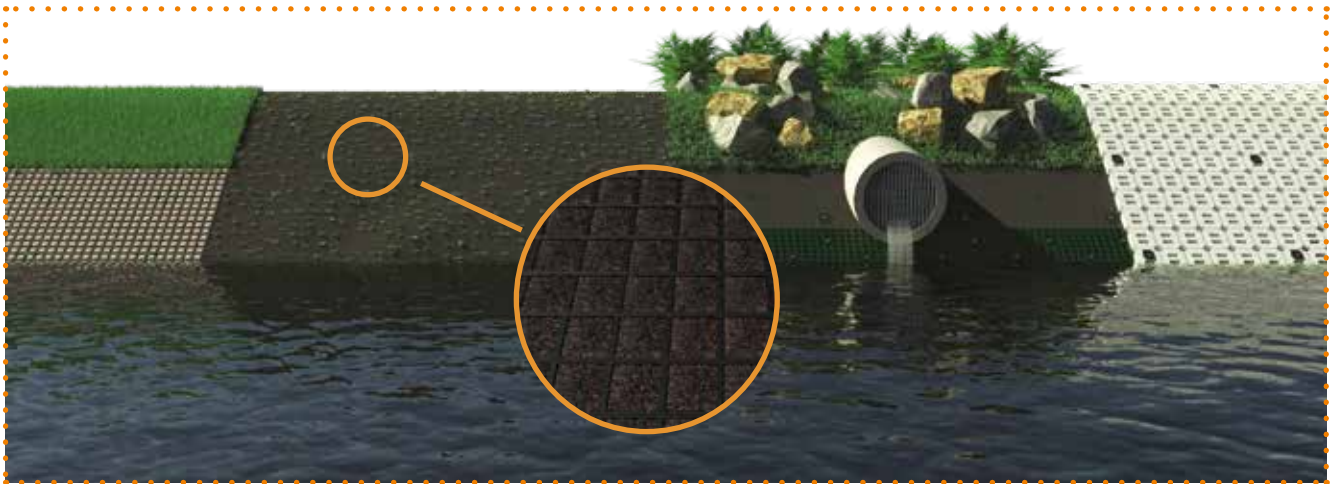
- Up to 10 times faster than traditional methods
- These composite Turf Reinforcement Mats (TRM) provide long-term erosion protection and vegetation establishment assistance while permanently reinforcing vegetation
- Matrix made of 100% PP-fibre
- Top and bottom netting made of UV-stabilized polypropylene and middle, corrugated UV-stabilized polypropylene



G-MAT P550



G-MAT T50



Properties	G-MAT P550	G-MAT T50
Part code	G-MAT-P550	G-MAT-T50
Mass/Unit Area	700 g/m ²	250 g/m ²
Tensile Strength MD (ISO EN 10319)	14,2 kN/m	50 kN/m (-5)
Tensile Strength CMD (ISO EN 10319)	5 kN/m	50 kN/m (-5)
Elongation	15,3%	3% (±5%)
Thickness	22 mm	20 mm
Flow Velocities (m/s)	> 3,8 (unvegetated) to > 7,6 (fully vegetated)	> 4 (unvegetated) to > 7 (fully vegetated)
Width	2 m	2,5 m
Length	15 m	24 m
Weight	22,5 kg	36 kg
Roll Diameter	0,5 m	0,7 m
Overlap Allowance	6%	6%
Covering surface	30 m ²	60 m ²

For anchoring recommendations please contact Gripple.

Material	Protection Grade	Life Span (Years)	Suitable Submerged	Surface Cover
PP	High	> 25	Yes	75%

G-MAT

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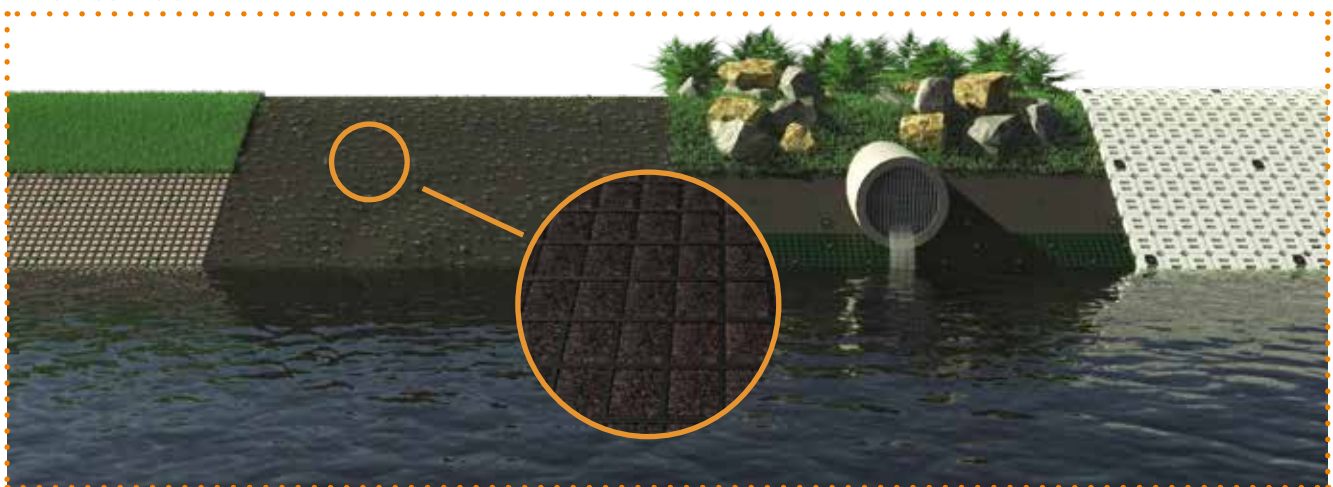
- Up to 10 times faster than traditional methods
- These composite Turf Reinforcement Mats (TRM) provide long-term erosion protection and vegetation establishment assistance while permanently reinforcing vegetation
- Matrix made of 100% coconut fiber
- Top and bottom netting made of UV-stabilized polypropylene and middle, corrugated UV-stabilized polypropylene



G-MAT C350



G-MAT C550



Properties	G-MAT C350	G-MAT C550
Part code	G-MAT-C350	G-MAT-C550
Mass/Unit Area	550 g/m ²	700 g/m ²
Tensile Strength MD (ISO EN 10319)	10,6 kN/m	14,2 kN/m
Tensile Strength CMD (ISO EN 10319)	12,3 kN/m	14,1 kN/m
Elongation	17,8%	15,3%
Thickness	17 mm	22 mm
Flow Velocities (m/s)	> 3,2 (unvegetated) to > 6 (fully vegetated)	> 3,8 (unvegetated) to > 7,6 (fully vegetated)
Width	2 m	2 m
Length	20 m	15 m
Weight	22 kg	22,5 kg
Roll Diameter	0,4 m	0,5 m
Overlap Allowance	6%	6%
Covering surface	40 m ²	30 m ²

For anchoring recommendations please contact Gripple.

Material	Protection Grade	Life Span (Years)	Suitable Submerged	Surface Cover
PP & coconut fiber	High	> 25	Yes	90%

TL-100

Secures TRM and HPTRM whilst promoting vegetation regrowth in erosion control and soil stabilisation applications.

- Open face promotes vegetation regrowth
- 100 mm head size
- Accepts 3 mm wire
- Zinc die-cast, one-piece housing
- Pre-assembled kit ensures time and labour savings
- Wire can be cut below grade
- Available with 1 m wire length as a standard and can be delivered with 1,5 m on request



Part code	Working load	Wire rope material	Anchoring depth (m)	Anchor size	Box Quantity
TL100-TLA2-1M-3MM-Z	Load rating: 225 kg	Zinc Aluminium	1	TL-A2	25
TL100-TLA2-1M-3MM-S	Load rating: 225 kg	Stainless Steel	1	TL-A2	25
TL100-TLA3-1M-3MM-Z	Load rating: 400 kg	Zinc Aluminium	1	TL-A3	20
TL100-TLA3-1M-3MM-S	Load rating: 400 kg	Stainless Steel	1	TL-A3	20
TL100-TLA4-1M-3MM-Z	Load rating: 400 kg	Zinc Aluminium	1	TL-A4	15
TL100-TLA4-1M-3MM-S	Load rating: 400 kg	Stainless Steel	1	TL-A4	15

For more working load values depending on the type of soil see the SPT results on page 22.



TL-A2

Surface

1 940 mm²



TL-A3

3 870 mm²



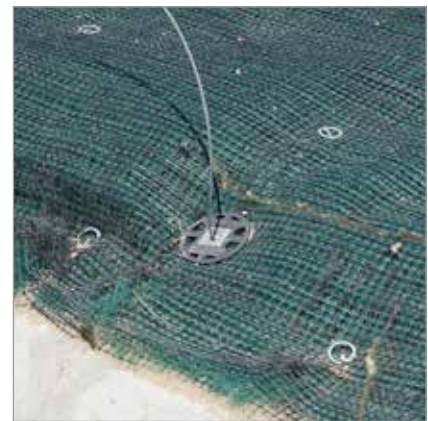
TL-A4

7 740 mm²

TL-304

Two-piece design incorporating patented Gripple technology with a multi-purpose injection moulded load bearing plate.

- Ideal for mat fixing for the fight against invasive plants
- Diameter 100 mm
- GF Nylon UV stabilised, injection moulded plastic disc
- Accepts 3 mm wire
- Zinc die-cast housing
- Low profile design
- Pre-assembled kit ensures time and labour savings
- Available with 1 m wire length as a standard and can be delivered with 1,5 m on request



Part code	Working load	Wire rope material	Anchoring depth (m)	Anchor size	Box Quantity
TL304-TLA2-1M-3MM-Z	Load rating: 225 kg	Zinc Aluminium	1	TL-A2	25
TL304-TLA2-1M-3MM-S	Load rating: 225 kg	Stainless Steel	1	TL-A2	25
TL304-TLA3-1M-3MM-Z	Load rating: 400 kg	Zinc Aluminium	1	TL-A3	20
TL304-TLA3-1M-3MM-S	Load rating: 400 kg	Stainless Steel	1	TL-A3	20

For more working load values depending on the type of soil see the SPT results on page 22.



TL-A2

Surface

1 940 mm²



TL-A3

3 870 mm²

TL-406

Two piece design incorporating a rubber coated steel bearing disk and a 4 mm wire tendon for higher load applications.

- High load rubber coated steel bearing plate
- 150 mm disk head size
- Accepts 4 mm wire
- Zinc die-cast housing
- Pre-assembled kit ensures time and labour savings
- Wire can be cut below grade



Part code	Working load	Wire rope material	Anchoring depth (m)	Anchor size	Box Quantity
TL406-TLA3-2M-4MM-Z	Load rating: 450 kg	Zinc Aluminium	1,5	TL-A3	10
TL406-TLA3-2M-4MM-S	Load rating: 450 kg	Stainless Steel	1,5	TL-A3	10
TL406-TLA4-2M-4MM-Z	Load rating: 680 kg	Zinc Aluminium	1,5	TL-A4	10
TL406-TLA4-2M-4MM-S	Load rating: 680 kg	Stainless Steel	1,5	TL-A4	10

For more working load values depending on the type of soil see the SPT results on page 22.



TL-A3



TL-A4

Surface

3 870 mm²

7 740 mm²

TL-606

The Terra-Lock™ TL-606 is ideal for high performance security of soil stabilising geotextiles whilst aiding vegetation growth.

- 150 mm head size
- Accepts 6 mm wire
- System load rating 1 250 kg
- Heavy duty kit components designed for high level security
- Zinc die-cast housing, rubber coated galvanised steel plate, UV stabilised
- Engineered for corrosion resistance
- Pre-assembled kit requires no crimping, ensuring significant time and labour savings delivered by easy and efficient installation



Part code	Working load	Wire rope material	Anchoring depth (m)	Anchor size	Box Quantity
TL606-TLA3-1M-Z-NL	Load rating: 1 250 kg	Zinc Aluminium	1	TL-A3	10
TL606-TLA3-2M-Z-NL	Load rating: 1 250 kg	Zinc Aluminium	1,5	TL-A3	10
TL606-TLA4-1M-Z-NL	Load rating: 1 250 kg	Zinc Aluminium	1	TL-A4	10
TL606-TLA4-2M-Z-NL	Load rating: 1 250 kg	Zinc Aluminium	1,5	TL-A4	10

For more working load values depending on the type of soil see the SPT results on page 22.



TL-A3



TL-A4

Surface

3 870 mm²

7 740 mm²

Liner-Lock

Self-sealing anchoring system for the security of geomembranes; prevents membrane movement in uplift or draw down applications.

- **Strong** – ‘locks’ into the engineering properties of the substrate, providing resistance to external forces increasing slope stability
- **Durable** – constructed with inert/chemical resistant materials for long lifetime in most conditions
- **Self-sealing** – clamps around membrane with minimal disturbance, reducing the need for welds, trenching and sand bags
- **Compatible** – capstan ‘tie-off’ feature allows the connection of other units in a larger grid across the site, and other geosynthetics e.g. geocells, to eliminate sliding
- **Safe** – metal edges are fully covered by plastic
- **Versatile** – can be used with a wide range of geosynthetics and membranes as well as puncture repairs
- **Resistant** – two part system can be fixed around the membrane with two or four points, delivering high clamping force and resistance to ingress



Part code	Wire rope material	Anchoring depth (m)	Anchor size	Box Quantity
TL30LL-TLA2-1M-3MM-Z	Zinc Aluminium	1	TL-A2	5
TL30LL-TLA3-1M-3MM-Z	Zinc Aluminium	1	TL-A2	5
TL40LL-TLA3-1M-4MM-Z	Zinc Aluminium	1	TL-A3	5
TL40LL-TLA4-1M-4MM-Z	Zinc Aluminium	1	TL-A3	5
TL60LL-TLA4-1M-6MM-Z	Zinc Aluminium	1	TL-A4	5
LINER-LOCK-CUTTING-GUIDE	Galvanised Steel	-	-	1



TL-A2

Surface

1 940 mm²



TL-A3

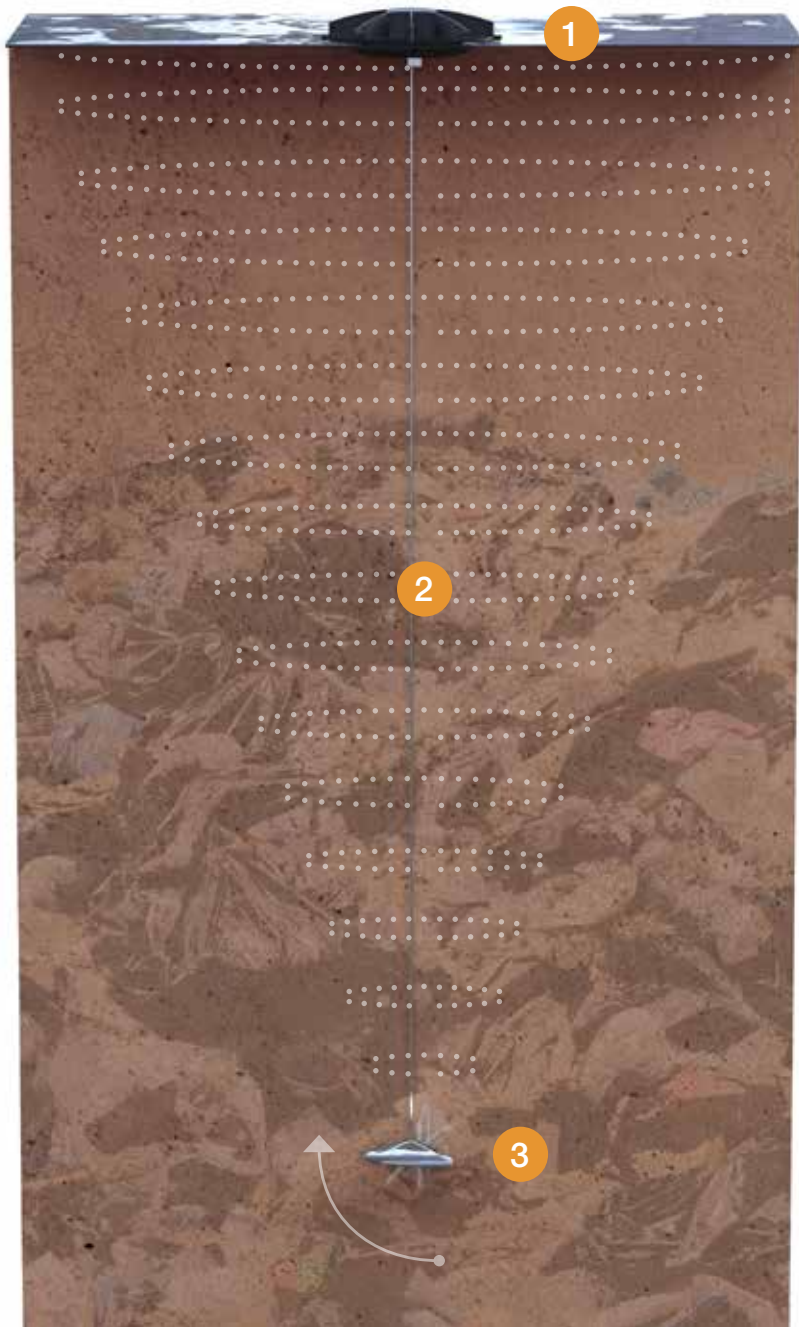
3 870 mm²



TL-A4

7 740 mm²

How It Works



1

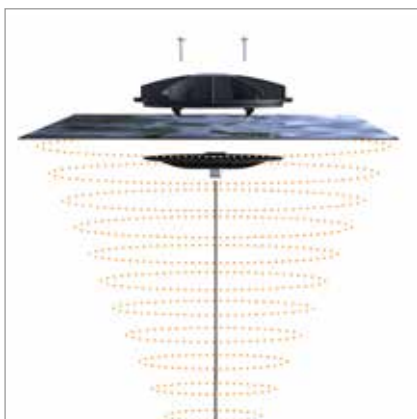
The two-part design clamps around the membrane delivering high clamping force and resistance to ingress, reducing the need for welds, trenching and sand bags.

2

The Terra-Lock™ Anchor prevents bulk earth movement by locking into the ground beneath the potential failure planes, creating a truncated cone of consolidated waste & soil which determines the ultimate load bearing capacity of the anchor.

3

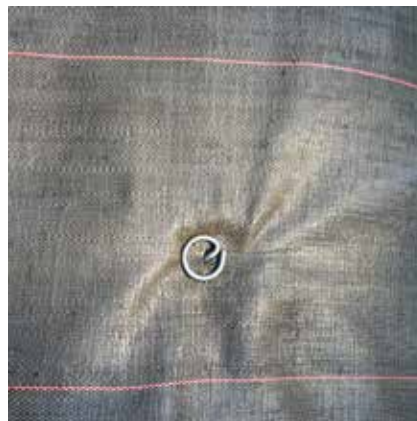
The innovative install and 'flip' of the Terra-Lock™ Anchor means that the ground's engineering properties can be accessed with minimal disturbance.



TL-P

The high load anchoring pin is designed to hold all types of turf reinforcement matting, erosion blankets, geotextiles and landscaping fabrics.

- Up to ten times quicker to install
- Reduces labour costs associated with reworking loose pins
- Superior pull out performance compared to traditional pins and stakes
- Ensures close contact between the matting and soil
- Designed to eliminate damage to the mat
- Removes the need for a separate washer
- Easy installation with standard electric drill and bespoke installation tool



Part code	Designation	Material	Anchoring depth (mm)	Soil type	Box Quantity
TL-P1	Wire diameter: 4 mm Length: 200 mm Head diameter: 35 mm	Galvanised Steel	200	Soft soil	200
TL-P2	Wire diameter: 4 mm Length: 200 mm Head diameter: 35 mm	Galvanised Steel	200	Tough soil	150
TL-P3	Wire diameter: 4 mm Length: 300 mm Head diameter: 35 mm	Galvanised Steel	300	Soft soil higher load	100
TL-P4	Wire diameter: 4 mm Length: 300 mm Head diameter: 35 mm	Galvanised Steel	300	Tough soil higher load	100



Standard Tool



Installation



Washer (50x50 mm)

For more information about installation tools see page 18 and installation steps see page 19

CellGrip™

The new CellGrip secures and enhances the performance of geocells.

- Eliminates time & labour associated with carrying, deploying and hammering traditional J-hooks
- Clips into the perforated side walls of the Geocell
- Superior performance when compared to traditional rebar J-hooks, up to 9x the pull out force versus J-hooks
- Quick and easy to install with a standard electric drill – 5x faster installation process
- Can be installed to full depth without damaging the Geocell
- Actively anchors Geocell's against natural and sliding forces, reducing the need for heavy anchoring and trenching.



TL-GCP-1

TL-GCP-2



Part code	Designation	Material	Anchoring depth (mm)	TL-P size	Box Quantity
TL-GCP-1	The CellGrip with TL-P1 is designed to anchor Geocells against natural and sliding forces	Galvanised Steel	200	TL-P1	100
TL-GCP-2	The CellGrip with TL-P2 is designed to anchor Geocells against natural and sliding forces	Galvanised Steel	200	TL-P2	100



Standard Tool



Installation

For more information about installation tools see page 18 and installation steps see page 19

Tools & Accessories



GPD

The Gripple Petrol Driver provides quick installation of Gripple's anchor range. Lightweight and portable. Rental options are available.
Part code: EPPD-BXD



TL-P Tool

Installs TL-P to full depth without damaging mat. Automatically dis-engages when pin reaches full depth.
Part code: TL-P1-TOOL-STD



Tensioning Tools

Tensioning Tools are lightweight, strong, robust, compact and tensions up to 6 mm Gripple fasteners.
Part codes:
TOOL-5-SINGLE (Torq Tool)
TOOL-7-SINGLE (Contractor Tool)



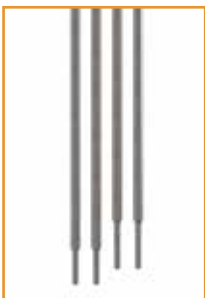
JackJaw®

Multi-Function tool extracts drive tools and load locks the anchor system. Available with load cell for immediate testing.
Part codes:
JACKJAW-CIVIL
JACKJAW-0316 -LOAD-CELL



Wire Cutters

Suitable for cutting high tensile wire up to 4 mm (Small Cutters) and 6 mm (Large Cutters).
Part codes:
CUTTER-GRIPPLE (For wire rope diameter up to 4 mm)
CUTTER-6MM (For 6 mm wire rope diameter)



Drive Tools

High strength rod specifically engineered for easy installation of anchors. Designed to be robust for re-use.
Part codes:
DR-A2-1.5M (For TL-A2 anchoring depth 1 m)
DR-A2-1.8M (For TL-A2 anchoring depth 1,5 m)
DR-A34-1.5M (For TL-A3 or TL-A4 anchoring depth 1 m)
DR-A34-1.8M (For TL-A3 or TL-A4 anchoring depth 1,5 m)

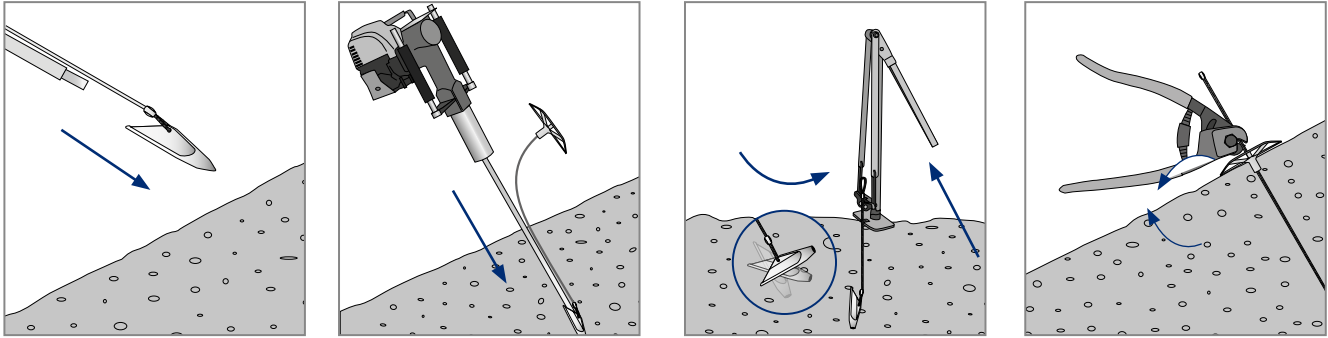
Tool Matrix

Necessary
 Optional

		GPD	Hammer	Torq Tool	Contractor Tool	Wire Cutters	TL-P Tool	JackJaw®	Drive Tool DR-A2-1.5M	Drive Tool DR-A34-1.5M	Drive Tool DR-A34-1.8M
Anchor	TL-A2										
	TL-A3										
	TL-A4										
TL-P	TL-P1										
	TL-P2										
	TL-P3										
	TL-P4										
CellGrip	TL-GCP-1										
	TL-GCP-2										

Technical Advice & Installation

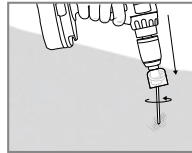
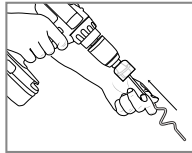
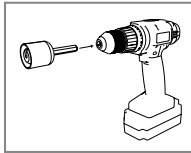
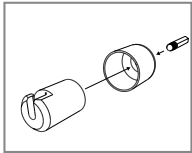
Installation Steps



- Always drive the Anchor fully into the ground, to a depth of at least 1 m.
- For even quicker installation of Gripple's Anchors, use the Gripple Petrol Driver (GPD).

TL-P Tool

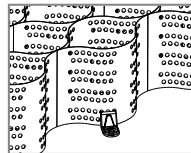
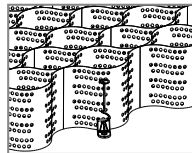
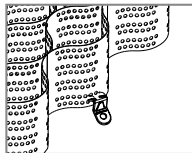
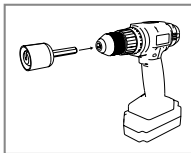
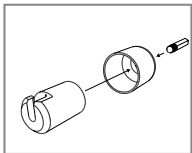
TL-P



- Before drilling you can also set out the pins by driving them partially into the ground by hand.

TL-P Tool

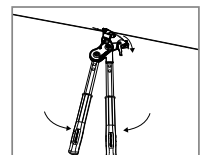
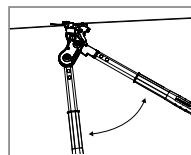
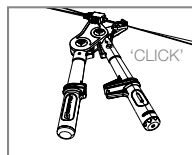
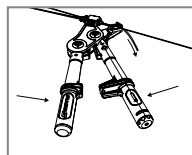
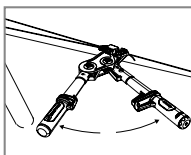
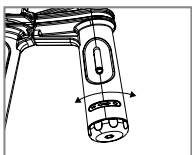
CellGrip



- Before drilling you can also set out the pins by driving them partially into the ground by hand.

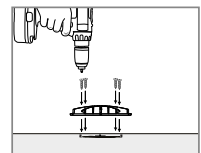
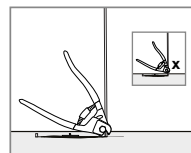
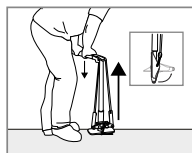
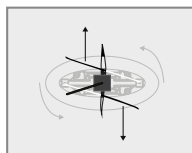
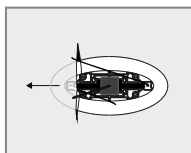
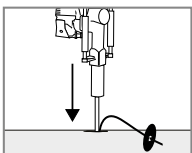
Torq Tool

Contractor Tool



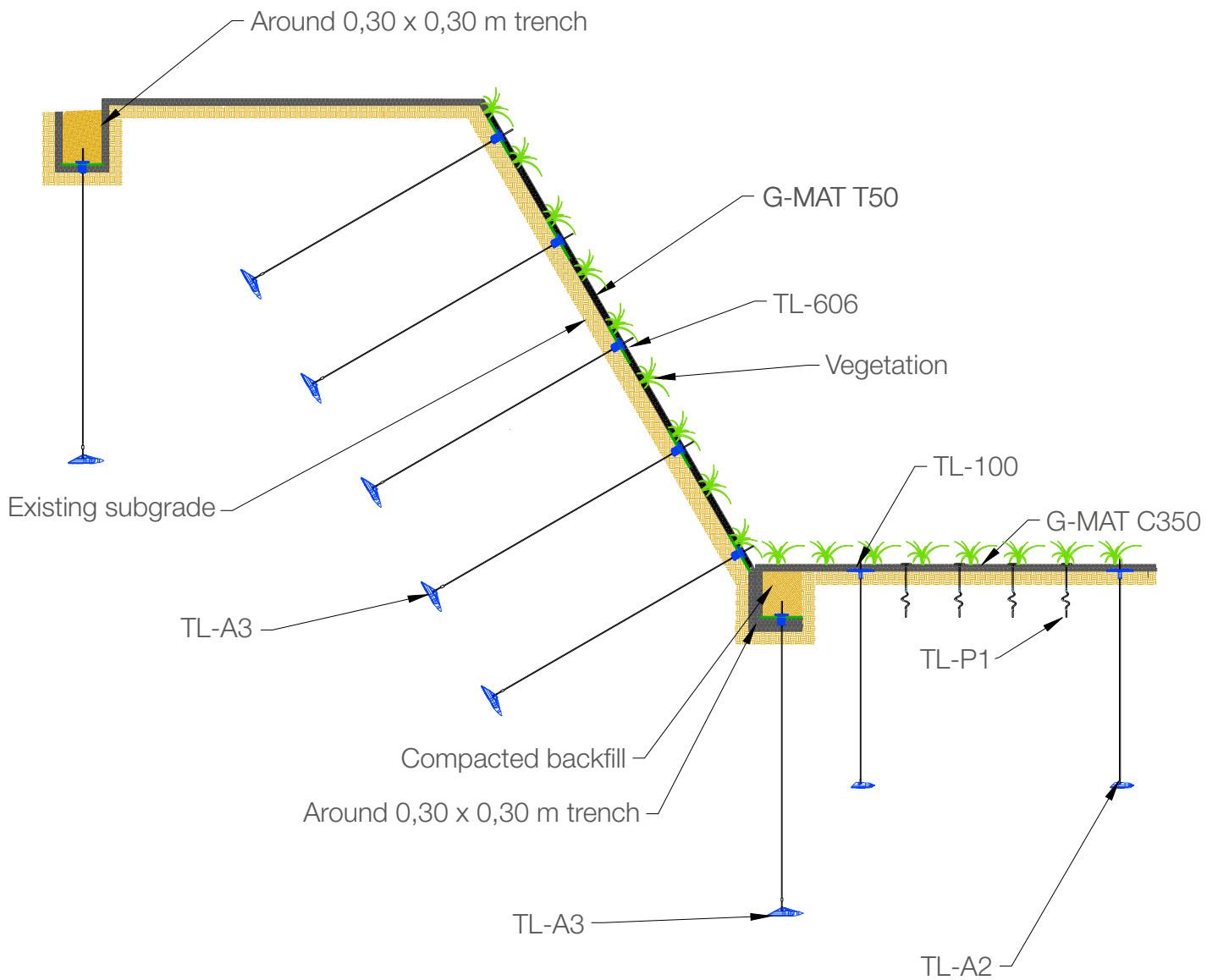
- Never tension above the wire manufacturer's recommendation.

Liner-Lock

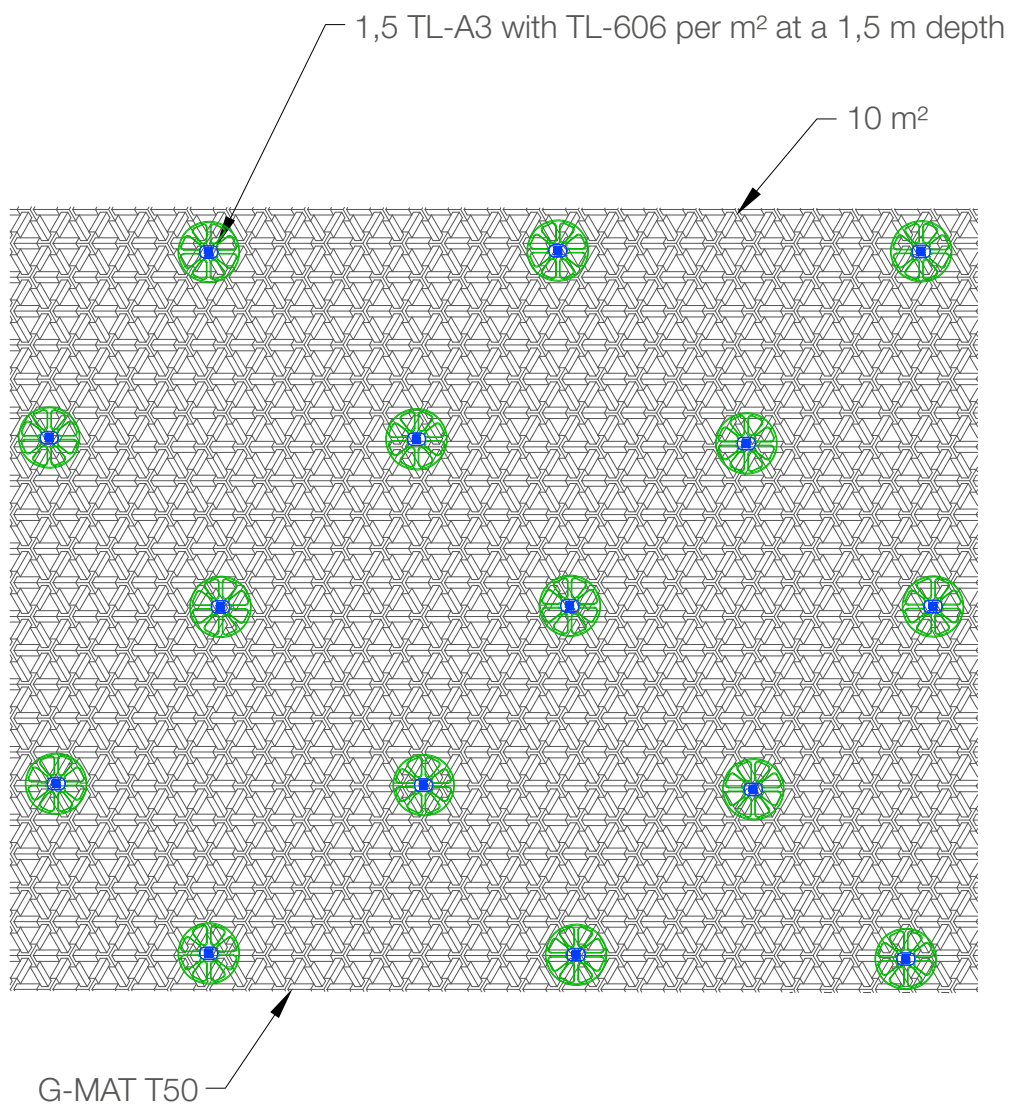


- Use the LINER-LOCK-CUTTING-GUIDE to neatly snip the geomembrane for Liner-Lock installation

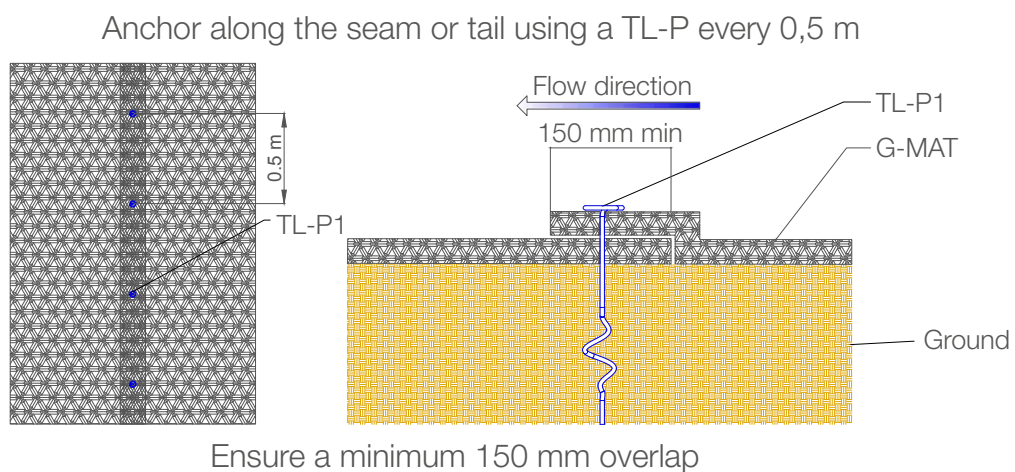
Indicative Terra-Lock™ System Slope and Channel Installation Detail



Indicative Terra-Lock™ System Slope Pattern Detail



Overlap Installation Detail



SPT Count & Gripple Anchor Performance

The Standard penetration test (SPT) is widely used to determine the strength and deformation properties of the course soil. Approximate correlation of properties of drained granular soil are:

Very Loose	SPT 0-4
Loose	SPT 4-10
Medium Dense	SPT 10-30
Dense	SPT 30-50
Very Dense	> 50

These figures can then be used to obtain typical shear strength and bulk unit weight for each soil. This information is then used to predict Gripple Anchor Performance in relation to the conditions described.

The following tables are derived from idealised theoretical calculations and should be used as a guide only. The variability of soil types should always be taken into account and on-site testing should always be carried out in order to obtain more accurate results.

The longevity depends on location factors and soil, water & climate conditions as well as the local risk of erosion on site. PP materials are UV protected, designed for a long life.

Soil Density	TL-A2 Anchor Performance (kg)			
	Install Depth 1 m		Install Depth 1,5 m	
Very Loose	36	56	57	88
Loose	56	94	88	149
Medium Dense	94	282	149	464
Dense	282	750	464	1 303
Very Dense	750	1 254	1 303	2 292
Wire Rope Break	3 mm - 815 kg			



TL-A2



TL-A3



TL-A4

Soil Density	TL-A3 Anchor Performance (kg)			
	Install Depth 1 m		Install Depth 1,5 m	
Very Loose	70	105	108	152
Loose	105	173	152	279
Medium Dense	173	487	279	845
Dense	487	1 184	845	2 271
Very Dense	1 184	1 797	2 271	3 840
Wire Rope Break	3 mm - 815 kg			
	4 mm - 1 200 kg			
	6 mm - 2 270 kg			

Soil Density	TL-A4 Anchor Performance (kg)			
	Install Depth 1 m		Install Depth 1,5 m	
Very Loose	133	197	213	323
Loose	197	315	323	534
Medium Dense	315	796	534	1 525
Dense	796	1548	1525	3 765
Very Dense	1 548	1 663	3 765	5 830
Wire Rope Break	3 mm - 815 kg			
	4 mm - 1 200 kg			
	6 mm - 2 270 kg			

Sites Installations





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