



Cable protection system invented in South Africa and patented worldwide

The overall cost of cable theft, considering both replacement value and consequential economic impact, is huge. Driven by high copper prices, the problem has become endemic in South Africa. The development of CABLEGUARD™ promises to assist with this problem in respect of underground power cables.

How CABLEGUARD™ Works

CABLEGUARD™ clamps securely around the cable outer serving, and once fitted with interlocking CABLEGUARD™ outer shield, which also interlocks with the clamping system, the buried cable will resist in-line, reverse and perpendicular pullouts as a result of its sophisticated engineering design.

Testing

Attempting removal of buried cable utilising a variety of test vehicles, including a model 428 4 - wheel drive Caterpillar

Backactor connected directly to a 180 mm² multi-core PILC electrical cable, proved impossible. A DVD of these tests is available on request, or can be viewed on the website: www.cableguard.co.za

Witnessed by professional engineers, these tests failed to move or visibly affect the CABLEGUARD™ protected cables used for electrical main supply ring feed. The use of CABLEGUARD™ does not adversely affect the cable's current rating or any other performance aspect.

Physical and computerised stress testing indicates that CABLEGUARD™ delivers a resistance to movement well beyond the capability of most cable criminals.

CABLEGUARD™ is a valuable addition to best practice cable laying.

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Technical Details

Design

Computer aided design (CAD) and Finite Element Analysis (FEA) assures optimum performance. Attention to detail assures CABLEGUARD™ components accommodate diameter variations of the cable outer serving.

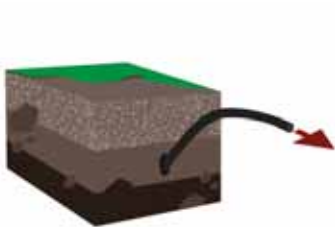
Materials

Components are injection moulded from reinforced engineering polymers for strength and corrosion resistance.

Operating Specification of the CABLEGUARD™ system relies on:

- The number of units fitted.
- The nature of the backfill (Normal backfill and compacting standards need to be followed).
- The optimum spacing of CABLEGUARD™ units along the length of the cable is 5 meters.
- For cohesive soils, longer spacing's of CABLEGUARD™ can be used.

Section of Cable Trenches



In-line Pullout

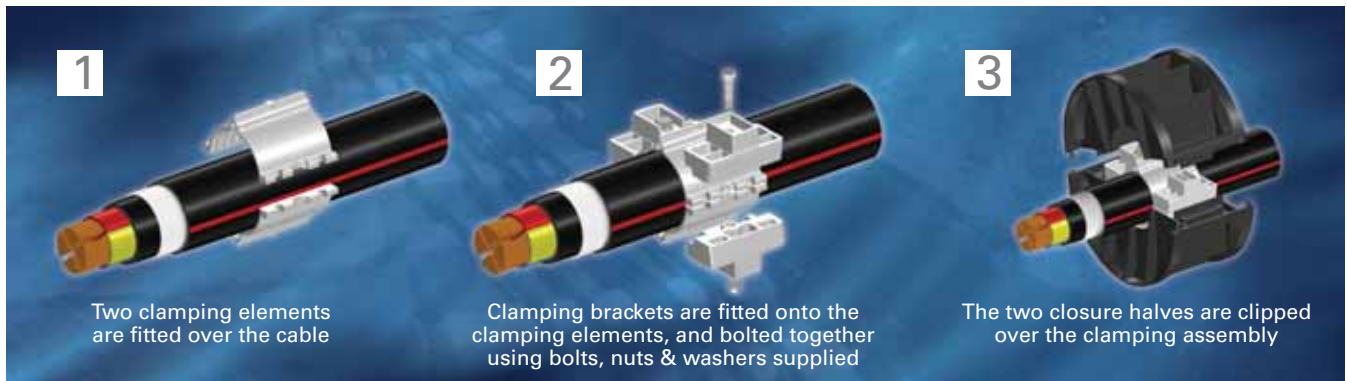


Reverse Pullout



Perpendicular Pullout

Installation



Two clamping elements are fitted over the cable

Clamping brackets are fitted onto the clamping elements, and bolted together using bolts, nuts & washers supplied

The two closure halves are clipped over the clamping assembly

Approx. Cable OD mm	Clamping Element Code	Corresponding to approximate cable sizes			
		LV 4 Core	LV 3 Core	PILC (11kV) 3 Core	XLPE (11kV) 3 Core
43 - 50	D	120	150	25 - 50	25
52 - 59	E	150 & 180	240	120	50 & 70
61 - 67	F	240	300	240	120
68 - 77	G	300	-	400	185
80 - 88	H	-	-	-	300

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