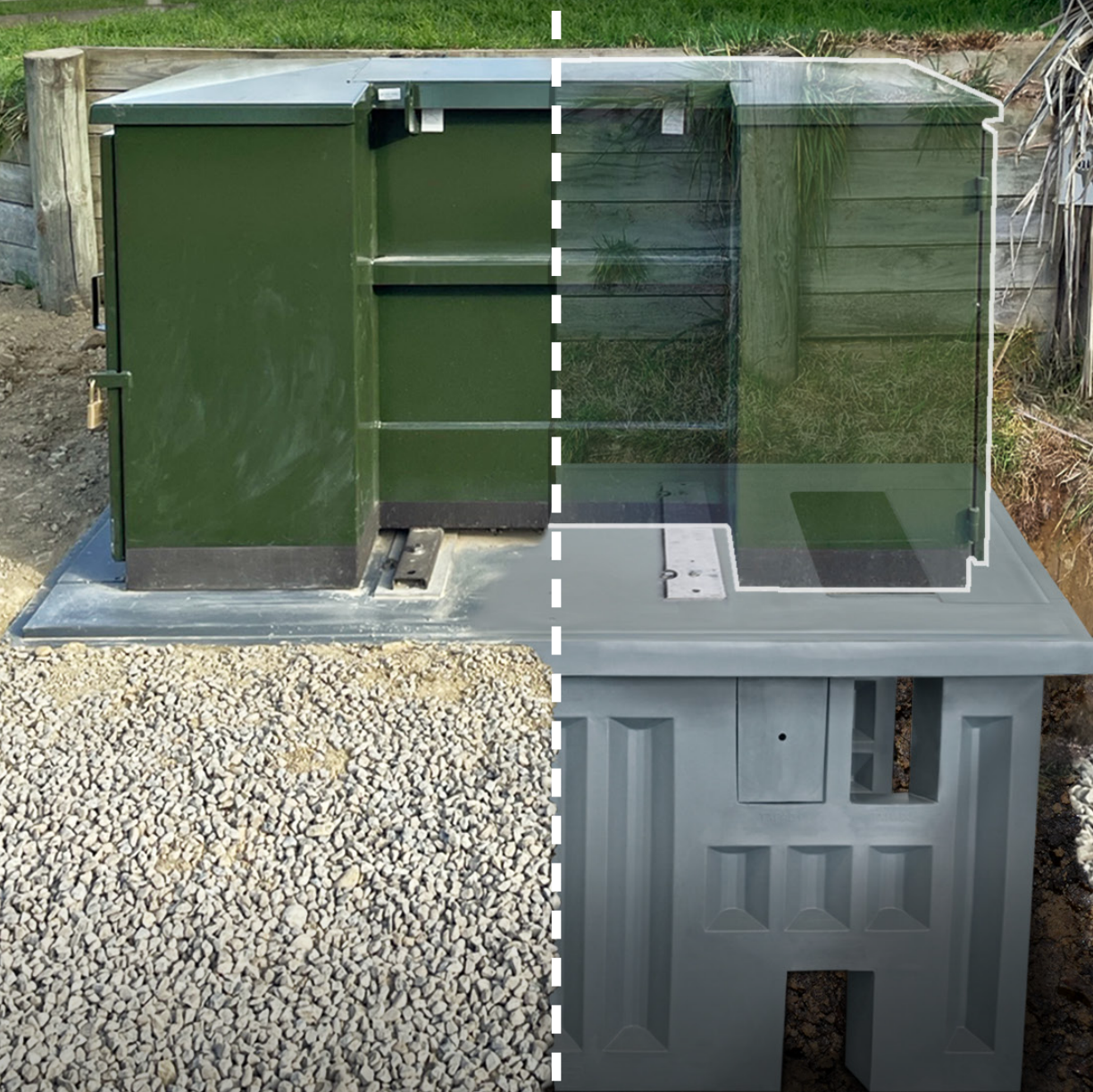


HV JUICE

TRANSFORMER PAD



See Page 6



HVTI/HVTO MV TERMINATION SYSTEM FOR POLYMERIC INSULATED CABLES

Over the last three decades engineers in utilities and industry around the world have specified millions of Raychem cable terminations at distribution voltages up to 33 kV. Raychem terminations have become identified with reliability because of their unparalleled long-term performance – where it really counts – in the field.

TE have continued to extend and improve the product range based on extensive experience both in the field and at outdoor test sites in polluted and desert environments. These developments have resulted in a new generation of Raychem heat-shrinkable cable terminations that are even easier to select and install without compromising the reliability of proven materials technology. The improved system is simple to use because the basic termination components and installation steps are the same, whether your network operates with voltages of 11, 22, or 33 kV or you make equipment connections in a cable box or in compact switchgear.

FEATURES

- Universal termination family for 11-33 kV based on Raychem SCTM stress control technology
- All applications for polymeric on 1-core, 3-core, unarmoured cables
- Red non-tracking Raychem HVOT tubing provides excellent environmental protection
- Can be used in combination with Raychem RICS / RCAB / RSRB switchgear connection systems

- Tested in accordance to CENELEC HD.629.1.S2:2006 and IEC 60502-4
- Outstanding long-term reliability
- Fully sealed against water ingress from the environment or from within the conductor strands
- Polymeric materials load-cycle with the cable without mechanically stressing termination components and sealants
- Unsurpassed performance in polluted environments, proven over three decades

UNIVERSAL SELECTION PROCEDURE

- Simplified selection table allows quick selection based on conductor cross-section and voltage class for polymeric insulated cables (For MIND and MI draining oil cables, contact your local representative)
- Enhanced range-taking ability means that one kit fits more conductor sizes, reducing stocking requirements
- Unlimited shelf life allows stocking of economic quantities without product spoilage

SIMPLIFIED CABLE PREPARATION

- Improved treatment of screen cut-back is compatible with all state of the art screen removal techniques
- No tapering of insulation required
- No polishing of polymeric insulation surface
- No special preparation of sectored, or eccentric conductors, or of cable that

- is curved after unreeling from the cable drum
- Cable preparation steps are similar to those for Raychem joints

SIMPLIFIED INSTALLATION

- Components are lightweight and non-shattering
- Clear instruction sheets
- Common installation procedure for polymeric and MIND paper cables
- Factory engineered kit permits rapid on-site installation
- No mechanical stress at insulation screen cut-back
- Termination accommodates same bending radius as cable
- Visual confirmation of correct assembly sequence possible after installation
- Rain skirts can be installed to allow either top or bottom feed
- No soldering of earthing accessories required

- void filling compound
- stress control tubing
- non-tracking sleeve with sealant layer



MXSU FEATURES

- Can be designed to network specific requirements
- Screen termination products can be included according to network specifications and cable fault-current ratings if required
- Mechanical connectors for conductor and wire shield are supplied with the kit
- Kits are widely range-taking and cover most conductor constructions including tolerances
- No crimping tools or tool maintenance required
- Short and space-saving design for installation
- Improves installation reliability
- Unlimited shelf life, reducing cost and avoiding bulky waste and costly waste disposal
- Exceeds international performance standards including CENELEC HD 629 or IEC 60502-4 for joints

SHIELD CONTINUITY

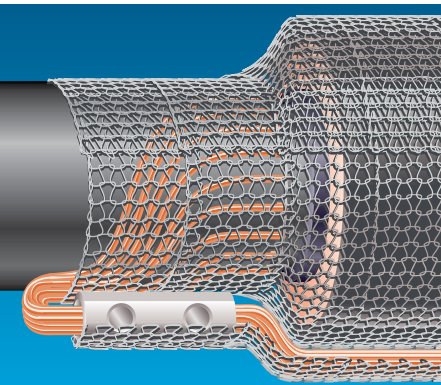
Typical shield wire cross-sections up to 35mm² can easily be connected with the mechanical connector supplied in the kit. Positioned at the oversheath cut-back, the connection provides a smooth profile and resists mechanical damage. Two shearbolts provide the required contact force in order to ensure safe installation and reliable performance during load cycling in service as well as during short circuit conditions. An additional layer of copper mesh is applied around the joint to provide satisfactory shielding and protection.

ELECTRICAL STRESS CONTROL

The stress control tubing at each cable end, in combination with the yellow stress grading mastic at the screen cut, provide a precisely defined impedance characteristic which smoothes the electrical field. For ease of installation, a stress control patch is applied around the mechanical connector to provide a similar function.

ROBUST OUTER SEALING AND PROTECTION

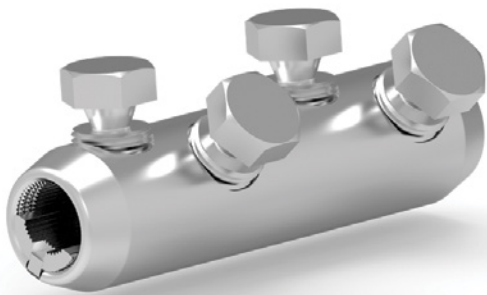
Oversheath replacement is capable of withstanding high mechanical stresses during conventional cable laying as well as mechanical impact occurring during the entire cable life time. The hot melt adhesive lined thick-wall heat-shrinkable tubing ensures an effective moisture seal and corrosion protection for the joint. When installed, the joints provide a similar level of protection and thickness as modern cables with PE oversheath. All voltage sheath testing commonly used today after cable laying, or as control test methods, have easily been passed.



BSM TYPE SHEAR BOLT CONNECTORS FOR ALU & CU CONDUCTORS

All joint kits incorporate a Raychem screw connector with shear head bolts to ensure a reliable pre-engineered electrical connection. The pre-set shear torque of the bolts ensures that the correct contact pressure is always achieved. The specially designed contact surface on the inside of the connector breaks up any conductor oxide layer and ensures reliable service over the entire lifetime of the joint.

- Pre-set shear torque provides safe & reliable installation
- Removable half shell insert provides core centering
- Tin-plated and greased contact surface for corrosion protection
- Shorter length compared to compression connectors
- Excellent tensile performance due to special bolt tip design

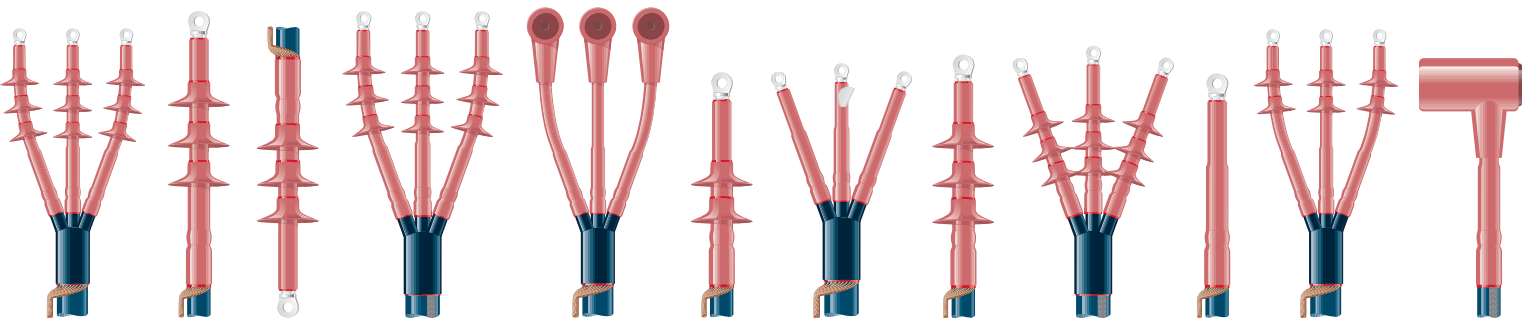
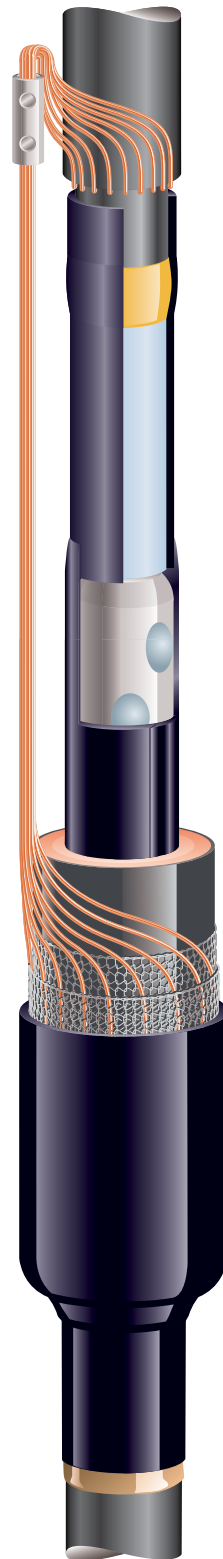


Tested in accordance with IEC 61238-1 class A.



AUTHORISED DISTRIBUTOR

Range Includes	
INLINE JOINTS FOR XLPE CABLES	11KV, 22KV, 33KV
TRANSITION JOINTS FOR 1C & 3C XLPE UNARMoured CABLES	11KV, 22KV, 33KV
REPAIR JOINTS FOR XLPE CABLES	11KV, 22KV
CROSS BOND JOINTS	11KV, 33KV





WILDLIFE & ASSET PROTECTION AT ITS BEST



When it comes to protecting the network, as well as vulnerable and endangered wildlife, prevention is frequently better than the cure. TE Connectivity (TE)'s wildlife and asset protection products and systems of tubes, tapes, sheets, pre-formed covers and barriers provide a proven, cost-effective and easy-to-install solution to bird, animal, weather, and vegetation related outages. TE offers solutions that are fast and simple to install, and suitable for retrofit and new build applications. Their extensive range covers all potential contact points with medium voltage options up to 35kV and offers UV stable as well as tracking and erosion resistant products. Based on 40+ years of field proven experience with high voltage products in harsh environments TE's WAP features high-performance materials for extreme durability, providing reliable protection from animal-caused outages and reduced phase to phase and phase to ground related outages that can be prevented if these uninsulated connections are protected.



BCAC

BUSHING CONNECTION COVERS



These insulating covers have been successfully eliminating outages from all types of animals for years. The cover is easily installed on bushings and connections by wrapping the double hinged design around the insulator's top skirt and snapping it in place with a robust latching mechanism, allowing for conductors to exit from both the top and side interfaces without the need to trim the cover. The design allows for visible inspections of oil fill levels on transformer bushings as well.

MVCC

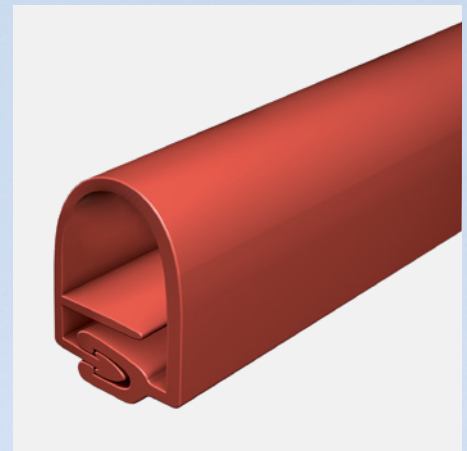
MEDIUM VOLTAGE CONDUCTOR COVER



TE's Raysulate Medium Voltage Conductor Covers are made from a non-tracking silicone material that is suitable for harsh medium voltage outdoor environments. MVCC covers are split for easy installation and are suitable for applications up to 25 kV phase to ground. The flexibility of the covers allows for installation on tight bends which is ideal for substation applications. Covers are designed to protect energised conductors from flashovers due to contact from birds and animals.

MVLC

MEDIUM VOLTAGE LINE COVER



MVLC provides state-of-the-art insulation to help prevent electrical outages caused by trees or wildlife coming into contact with distribution lines. Designed to insulate existing bare lines without costly conductor replacement expenditures or additional line hardware, MVLC covers can be applied selectively on problem spans. The MVLC covers material formulation is based on TE's Raychem products' field-proven experience with medium voltage products in harsh environments.



ECOBLOCK has been tested by IRL using NZ made concrete poles and proven to work as an integral part of correct pole installation.

When our customers had health and safety concerns about using concrete blocks we decided to do something about it. Our solution is ECOBlock, a strong, lightweight NZ made alternative to traditional concrete pole blocks. Quality material is key - you can't just use any plastic - so we make ours out of high quality PE plastic. Tested for integrity, ECOBlock won't creep over time like other plastics can. Let's keep plastic out of landfills as well as keep staff safe.

ECOBLOCK is STRONG

WON'T CRACK OR CRUMBLE IF DROPPED

LIGHT

1 PERSON LIFT FOR QUICK INSTALL*

MADE OF HIGH QUALITY PE PLASTIC

WON'T DEFORM FROM PRESSURE OVER TIME

FULLY TESTED

BY INDUSTRIAL RESEARCH LTD WITH NZ
MADE CONCRETE POLES, REPORTS AVAILABLE



FIND OUT MORE



e
**ECO
BLOCK**



NZ MADE

AND DESIGNED BY TRANSNET

ECOBLOCK has been tested as an integral part of correct pole installation and is widely used across the country.



*Excludes
Anchor Block



TRANSFORMER PAD

A new generation in transformer support structures has arrived.

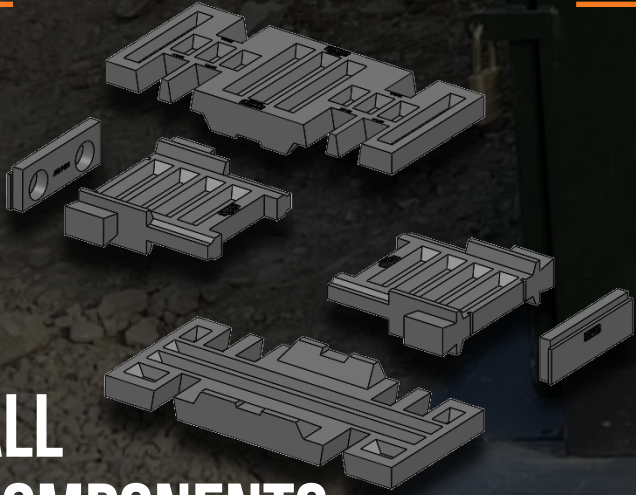
This UV stabilised medium-density polyethylene (MDPE) plastic range is made to replace currently used concrete pads and supporting structures.

With Health and Safety front of mind, this range has been designed for ease of use, lightweight manoeuvrability, and environmental protection. The MDPE components are rotationally moulded right here in New Zealand to the very clever design specification of our local engineers. They are both lightweight and strong, for fast and simple assembly on site.

TXPAD1-C assemblies include supporting base structures and the Transformer pad. The supporting structures consist of pads supported by interlocking footings. Each pad is supported by two longitudinal footings and two transverse footings. The TXPAD is also available if you want a pad only without footings.

FE (Finite Element) simulation results show all products in this range satisfy requirements around seismic loading (Earthquake) and static loading from transformers.

ALL
COMPONENTS
ON ONE PALLET



COMMON MINISUB STYLE TRANSFORMERS



Features & Benefits

COST EFFECTIVE

- No heavy machinery required for installation
- Rotational moulded construction
- No excess materials used
- Supplied flat packed for shipping & storage savings

ENVIRONMENTAL RESPONSIBILITY

- No timber used, preserving forests
- No chemical leaching
- Fully recyclable at end of life
- Long service life

HEALTH & SAFETY

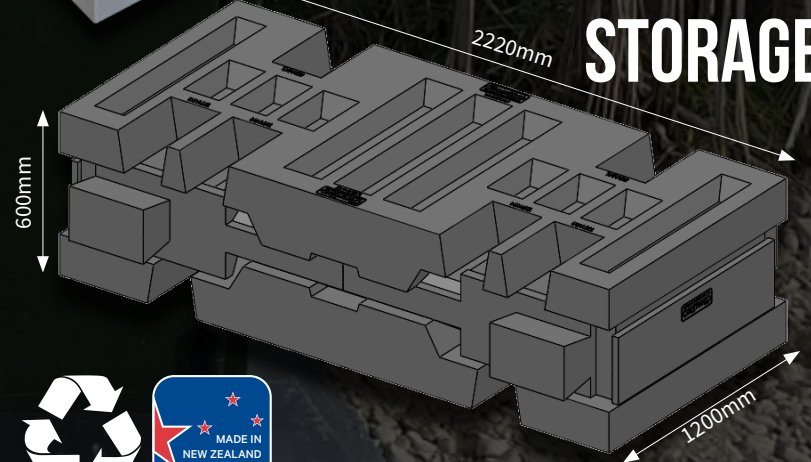
- Lightweight design
- No special tools or skills required
- Won't crack or crumble
- Designed to meet requirements of AS/NZS 1170.0 for Earthquake/Seismic resilience

QUICK & EASY

- Can be assembled on site by two persons only
- No special skills required
- No heavy machinery required to lift & position
- Components simply lock together
- Consistency of finished install regardless of installer



FLAT PACKED
FOR SHIPPING &
STORAGE



SEE MORE INFO ON OUR WEBSITE:





G&W TEROS™ RECLOSER

The Teros recloser is a solid dielectric three-phase gang operated 15kV and 27kV recloser device that provides system reliability and grid resiliency at a very competitive price.

FEATURES & BENEFITS

Simplified Mechanism

- Contains a minimum of operating components
- No operating electronics in the main enclosure
- Lightweight
- Highly reliable and maintenance-free device
- Clear visibility of the position indicator from the bottom of the pole

Modular Control Platform

- Plug-and-Play design
- Simple and modular layout of control components
- Quick disconnection and reconnection of components without removal of other/unrelated parts

Smart Technology

- Integration of 6 Internal Voltage Sensors (6VS) and 3 Current Transformers as standard
- GE Multilin R650 control relay
- Supports the latest in communications and protocols (DNP, IEC 61850, etc.)
- Provides standard security tools for the integration into new or existing SCADA, OMS, or DMS

Environmental

- Higher creepage and sealed mechanism significantly improve service life

APPLICATIONS

Designed to reduce the amount, frequency, and duration of outages on Overhead Distribution Systems:

- Main Distribution Lines & Branch Circuits
- Substations
- Reclosing
 - High-speed clearing of Temporary Faults
 - Radial Overcurrent Protection
- Sectionalizing/Switching
 - Load break switching
 - Open Tie points
- Automation Platform
 - System reconfiguration
 - Automatic transfers
- Pole Centre-Mount & Side-Mount options



GE R650 relay module

VIEW PRODUCT INFO



G&W

Engineered to order. Built to last.



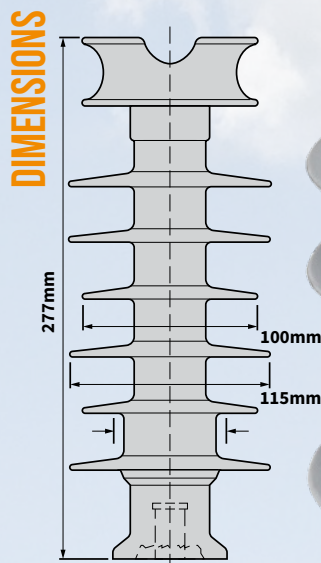
SILICONE POST INSULATOR - 11KV

TE Connectivity's CZ2120 silicone line post insulator has been used extensively throughout NZ with no reported failures. It combines mechanical strength with excellent pollution performance. It consists of protruded fibreglass rods and non-tracking silicone housing directly bonded to metal end fittings. A corrosion-resistant tie top fitting is crimped to the pultruded fibreglass core to allow the transition of mechanical loading to the line and mounting structure. This is the insulator to use when reliability counts.

A patented crimp control technology monitors for damage to the fibreglass rod while achieving maximum mechanical strength. The direct bonding of the polymer housing to the metal end fitting results in an ideal moisture barrier in the sensitive interface area.

FEATURES

- Composite design
- Lightweight – easy installation
- Builds a huge safety factor into the design of any 11kV system
- Vandal and break resistant
- Impact resistant
- High tracking and erosion resistance
- M20 pin includes flat washer, double helix spring washer, nut, & half nut
- Excellent performance under polluted conditions
- Reduced maintenance costs
- Direct bonding to end fitting offers moisture barrier on fibreglass rod
- Tie top fitting



TECHNICAL SPECIFICATIONS	CZ2120-000
INSULATOR STYLE	TIE TOP
USAGE VOLTAGE (KV)	11
CREEPAGE DISTANCE (MM)	535*
DRY ARC DISTANCE (MM)	223
NO OF SHEDS	6
SCL (KN)	11
WET POWER FREQUENCY WITHSTAND (KV)	38
DRY POWER FREQUENCY WITHSTAND (KV)	60
LIGHTNING IMPULSE WITHSTAND (KV)	105
WEIGHT (KG)	2.02
COLOUR	GREY
END FITTING	GALVANISED CAST STEEL
HOUSING	SILICONE
CORE	FRP
PIN INCLUDED	M20 × 219MM STUD, SPRING WASHER, DOUBLE HELIX SPRING WASHER SQUARE WASHER & NUT
BOX QTY	6 (48 × 6 PER PALLET)

*535mm creepage at 11kV = 48.63mm per kV.

Level 4 or Extra Heavy Duty creepage = 31mm per kV.

This insulator has massive creepage for NZ conditions!



AUTHORISED DISTRIBUTOR



STAY TIGHT V-LOK NUTS

WITH
PATENTED
ANTI-
LOOSENING
THREAD

SICK OF YOUR INSULATORS
ENDING UP LIKE THIS?



V-LOK Nuts will keep your insulators upright, how they're meant to be.

V-LOK is a patented screw-thread technology with a proven anti-loosening function when paired with normal screw thread technology. V-LOK has been tested to NAS 3350 (maximum vibration) and DIN 65151 (change in axial force). V-LOK nuts are manufactured in a similar way to standard nuts and are designed to be used in place of standard nuts in any application.

V-LOK nuts consist of two parallel crests next to each other on the same ridge. These two crests induce double contact lines (locking points) between threads when paired with standard bolt threads. They maximize the static friction force between the bolt and nut threads and prevent loosening.

V-LOK prevents bolts and nuts from loosening due to mechanical impact or vibrations, including Aeolian vibrations, thermal expansion due to thermal load cycling, overheating of joints, expansion due to corrosion etc.

PRINCIPLE OF V-LOK

The screw thread of V-LOK consists of two tangential parts (the first and second tangential parts) to induce double-contact point locking with the other object with a common screw thread. It maximizes the friction force between the bolt and nut screw threads through double-contact points and performs an anti-loosening function.



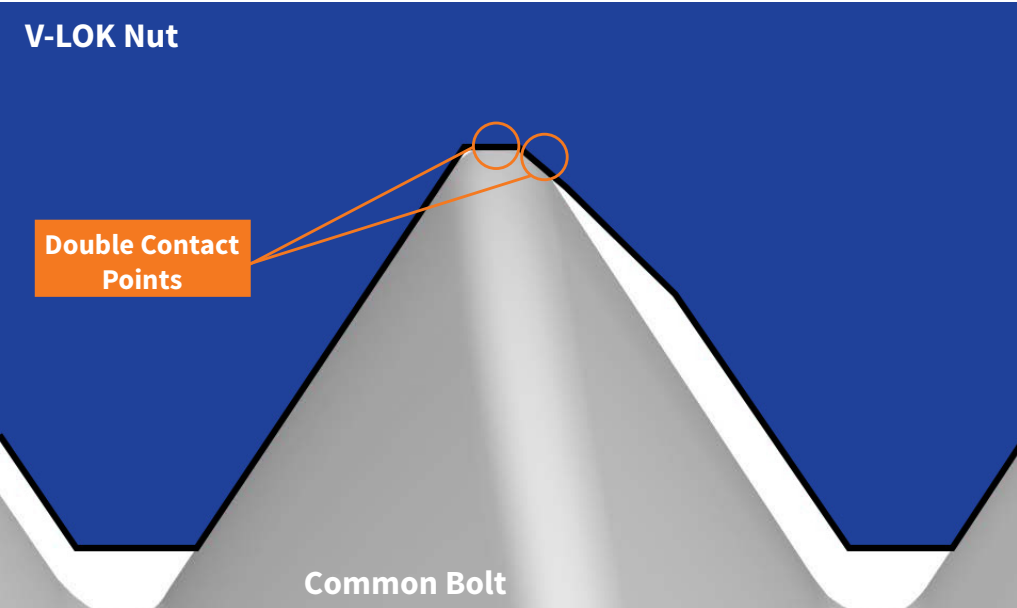
Nut has worked itself loose



HOW THEY WORK:

V-LOK components don't depend on pressure, they rely on strong static friction that is initially created by the double contact lines between the threads. The dual contact lines (crests) double the already strong static friction, which is the key. Secondly, these two 'parallel static frictions' interact and interlock with each other, which further prevents loosening. It means that if one contact line of the two shows slightly reduced static friction the other contact line will still maintain a strong static friction and prevent loosening. In other words - it is highly unlikely that both contact lines would reduce or lose the strong static friction at the same time.

Perfect solution for any situation where a nut is used; i.e steel support structures, crossarm braces, insulator pins, suspension clamps etc.



BENEFITS:

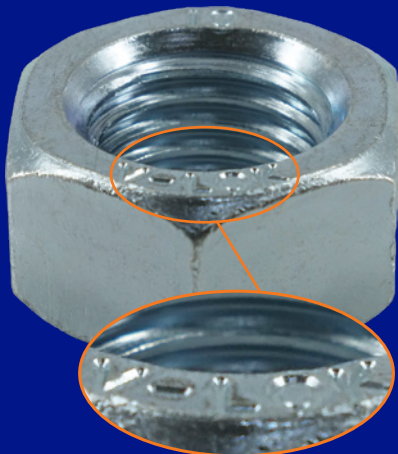
- Improved reliability (SAIDI, SAIFI) and resilience
- Improved public and personnel safety
- Reduced energy losses due to bad connections
- Reduced losses and damage to property due to unnecessary electrical and mechanical failures
- Reduced likelihood of bush fires
- Significant cost savings on maintenance and preventable faults
- Positive environmental effect
- V-LOK nuts are reusable
- No need for special tools making them faster and more cost effective
- Can be used in both electrical and mechanical connections

HOW TO ORDER V-LOK NUTS:

Choose between Hot Dipped Galvanised or 316 Stainless Steel in the table below.

HOT DIPPED GALVANISED NUTS			316 STAINLESS STEEL NUTS		
Cat No.	Size / Thread	MOQ / Pack	Cat No.	Size / Thread	MOQ / Pack
V-LOKNUTM10HDG	M10, 1.5p	1 / 100	V-LOKNUTM10316SS	M10, 1.5p	1 / 100
V-LOKNUTM12HDG	M12, 1.75p	1 / 100	V-LOKNUTM12316SS	M12, 1.75p	1 / 100
V-LOKNUTM16HDG	M16, 2.0p	1 / 100	V-LOKNUTM16316SS	M16, 2.0p	1 / 100
V-LOKNUTM20HDG	M20, 2.5p	1 / 100			
V-LOKNUTM24HDG	M24, 3.0p	1 / 100			

V-LOK NUTS
WITH DOUBLE
CONTACT
POINTS



Clearly labelled for easy and quick identification



Proud to be a 100% New Zealand
Owned & Operated Company



GET A GRIP ON THE BASICS

Essential Load Lifting Tools



Auckland

78 Cryers Road
East Tamaki
Auckland
NEW ZEALAND
Ph 0800 442 182
PO Box 39 383
Howick, Auckland

Wellington

10 Petone Ave
Petone
Wellington
NEW ZEALAND
Ph 04 576 2530
PO Box 39 383
Howick, Auckland
NEW ZEALAND
sales@transnet.co.nz

TransNet Tonga

Nuku'alofa

Lakalakaimonu Multi Utility
Complex
Taufa'ahau Road
Poutaha
Nuku'alofa
TONGA
Ph +67 627 939
PO Box 2932
Nuku'alofa
TONGA
transnet@kalianet.to

NGK WIRE GRIPS

Used to maintain temporary tension on cables until they can be permanently terminated. These grips are to be used for pulling lines up to tension only, and are not to be used as anchors. To select the correct wire grip simply determine the type of wire or cable to be tensioned, the size of that wire or cable and the maximum safe load required. All of this information is outlined in the table below.

The grips have different jaw contours based on the type of wire or cable they are designed to be used on. The jaw length and contour determined ensures the least amount of damage or deformation of the cable or wire.



Cat No.	Type of Conductor	Eye Size	Safe Load	Conductor Dia Range (mm)	Weight (kg)
MINI-GRIP	STEEL ROD, BARBED WIRE & MESSENGER WIRE	STANDARD	0.5T	1-10	0.3
TNABC-GRIP	AERIAL BUNDLED CONDUCTOR	LARGE	0.85T	4 x 35 - 4 x 95	3
TNSD-L-1000C	STEEL ROD, COPPER CABLE & MESSENGER WIRE			2.6-15	0.6
MESSEN-L-GRIP	COPPER CABLE & MESSENGER WIRE	LARGE	1.0T	4-12	0.7
1TON-L-GRIP	BARE COPPER CABLE, COVERED CONDUCTOR & MESSENGER WIRE			4-22	1.1
TNS-2000CL	BARE COPPER CABLE, COVERED CONDUCTOR & MESSENGER WIRE			4-22	1.3
AL-MIDDLE-GRIP	BARE ALUMINIUM & BARE COPPER CABLE			5-25	1.8
MIDDLE-L-GRIP	COPPER CABLE, COVERED CONDUCTOR & MESSENGER WIRE	LARGE	2.0T	5-25	1.8
AL-LARGE-GRIP	BARE ALUMINIUM & BARE COPPER CABLE			16-32	2
LARGE-L-GRIP	COPPER CABLE & COVERED CONDUCTOR			16-32	2.1

TransNet NZ Ltd has made every reasonable effort to ensure the accuracy of this information and it is to the best of our knowledge correct and reliable. Under no circumstances does this constitute an assurance of any particular quality or performance and users should independently evaluate the suitability of products for their desired application. All information in this publication including pricing, drawings, illustrations, images and graphic designs are reflections of our current understanding. TransNet NZ Ltd reserves the right to make any adjustment to this information at any time. Our liability for the products outlined in this publication is set forth in our standard terms and conditions of trade. In case of any potential ambiguities or questions, please contact us for clarification.

