



“45 YEARS WITH R. STAHL

GLOBAL LEADER IN HAZARDOUS AREA PROTECTION TECHNOLOGY

PAGE 12



ARE YOU PAYING TOO MUCH FOR YOUR PF SOLVENT WIPES?

Talk to PLP for Industry standard Socomore PF Solvent Wipes at super sharp prices.

Solvent wipes are used for residue free electrical equipment cleaning and degreasing, cable cleaning prior to jointing and maintenance of cables, switchgear and network equipment.

Suitable for use on static and live cables. Single wipe solvent and dry wipe sachets available for jointing kits.



PLP BIMETAL LUG

PLP "Mechanical" Shear Bolt BiMetal Lugs "LV and MV to 33kV"

PLP NZ has a range of quality BiMetal Shear Bolt Lugs. No longer do you need crimping tools, just a socket spanner or wrench as you would in any normal shear bolt installation.

Used in the transition connection of aluminium cable or aluminium alloy cable with copper end of electrical equipment in medium voltage, this is the must have range of lugs that every network should carry.

Material

- Body: high-strength aluminium alloy Cu 99.9%
- Bolts: brass or aluminium alloy

Product benefits

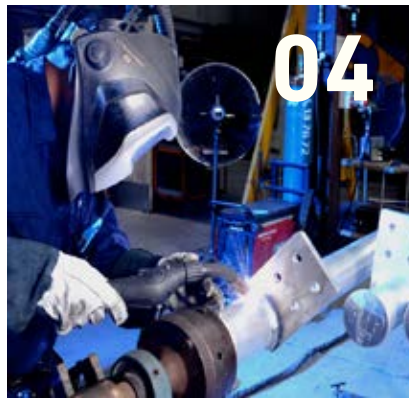
- No need for crimping tools, only a socket spanner or a wrench.
- Torque controlled shear head bolts won't cause any damage to the conductor, and make lugs working performance more stable.
- Controlled sheared-off bolts guarantee a good electrical contact.
- Friction welded, will not be subject to electrolysis.
- Wide application range.
- Pre-filled with jointing compound.
- Electrical Standard IEC 61238-1.2003

Talk to the team today about the range of BiMetal Shear Bolt Lug options we have available to improve the reliability of your network.



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PLP GLOBAL OPERATIONS

Introducing PLP Australia

**“PLP IS A GLOBAL LEADER WITH LOCATIONS
IN OVER 20 COUNTRIES”**

PLP GLOBAL

PLP (Preformed Line Products) was established in Ohio, USA in 1947 and is a recognised global leader with locations in over 20 countries. PLP works as a united global corporation, delivering high-quality products and unparalleled service to customers around the world. International operations provide products uniquely suited to meet the needs of local customers. Commitment to technical innovation, outstanding product performance and exceptional customer service are the hallmarks of PLP's success.

PLP AUSTRALIA

PLP's local manufacturing and engineering facility has an on-site NATA Accredited Testing Laboratory. The advanced manufacturing facility includes wire forming, forging, casting, plastic moulding

and extrusion, sheet metal work, powder coating and an area for assembling products ready for delivery and installation.

The facility also has a modern tool room equipped with the latest CNC vertical machining centres, modern turret punches and a powder coating area.

A dedicated team of on-site customer service and industry experienced external sales professionals assist customers throughout the ordering process from initial project costing to on time delivery.

PLP Australia's industry professionals provide the most comprehensive solution for period contracts and projects.

Energy Distribution

As a leading manufacturer of fittings for bare and insulated overhead distribution lines and underground

systems for power and railway networks, PLP supports energy and rail transit companies throughout the Asia Pacific region.

PLP also manufactures and stocks an extensive range of conductor fittings and accessories.

Energy Transmission

PLP has experience designing, manufacturing, and supplying overhead line hardware and fittings for the High Voltage electrical industry.

PLP Australia has established itself as a respected supplier throughout the Asia Pacific region supplying products for overhead transmission line projects in voltages up to 500kV. Through diverse manufacturing capabilities and strategic alliances, PLP is able to offer a total supply package for transmission line hardware and accessories.

Substations

PLP is a leading manufacturer and supplier of integrated substation busbar systems. The PLP process from design and estimation to manufacture and testing, ensures a high quality, reliable substation from experienced engineers.

PLP's substation product range caters for all standard tube sizes with wall sections from 3mm to 12mm. The range includes connectors, clamps, and hardware for tubular aluminium busbars in both bolted and welded solutions.



AEM Switchgear

AEM Switchgear is manufactured in Australia and has a reputation for high-quality, reliability, safety, easy installation and on-time delivery.

Insulators

PLP supplies insulators designed and tested to meet the dimensional, electrical, and mechanical requirements of the Australian and IEC standards.

Underground Solutions

PLP supplies a range of underground products and accessories for the energy and telecommunication industries. The range includes electrical products, turrets, bases, panels, and connection pits.

PLP Training

PLP offers training for customers focusing on the application and installation of PLP's products. All training is free and suited to all skill levels.



PLP Inspection Services

PLP Australia provides energy companies with a safe and economical asset management and inspection service, utilising Unmanned Aerial Vehicles (UAV). The comprehensive visual inspection service includes radiometric infrared and high resolution electro-optical image data collection, assessment, and classification of assets by our experienced engineers, secure data management and delivery of a data set including mapped results and a final report to the utility.

- We communicate with our customers on a regular basis to ensure their needs are met.
- We maintain an experienced technical base to ensure our products and processes are at industry best practice.
- Our NATA Accredited Testing Laboratory is compliant with ISO / IEC 17025.
- We encourage our suppliers to meet our needs and expectations for our customers.

Quality Control

PLP Australia is committed to being our customers' preferred choice by delivering excellence to build, protect and maintain critical infrastructure.

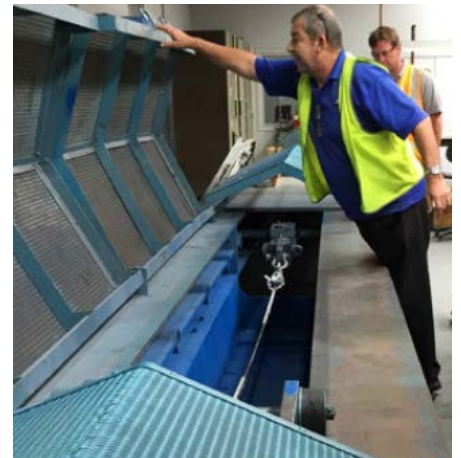
PLP provides quality products, fit for purpose solutions, exceptional customer service and we keep our promises.

- We employ qualified personnel to enhance our skill base.
- We provide on-going training to personnel and where required, to our customers.



Electrical and Mechanical Testing

At PLP the engineering department is not only responsible for design and product development, but also for ensuring quality standards meet NATA and ISO accreditation. Manufacturing processes are monitored, audited, tested, and continuously improved, based on statistical information.



In-short we keep up to date with new technologies and the direction that our industry is moving to enable PLP to deliver our products and services more efficiently to our customers and the consumer.

“PLP offers a wide range of CLEVIS THIMBLES to suit every application and load up to 120kN”

TC-17



PLP **Galvanised Clevis Thimbles** are used in conjunction with PREFORMED Dead-ends on suspension-type or Dead-end insulators. The thimble is intended to provide a smooth internal contour to prevent stress concentration within the loop of a PREFORMED Dead-end.

Features

- ✓ Smooth internal contour to prevent stress concentration.
- ✓ Tested to IEC standards.
- ✓ Includes a humpback pin.
- ✓ Comes with a straining eye.
- ✓ Galvanising to AS4680 standard.

Application

Copper, Copper clad and Galvanised steel
Preformed deadends
(loop diameter up to 40mm)

Specification

Thimble Rating	Pulling Eye Rating	Clevis Opening "A"
70kN	40kN	20mm
Thimble Opening "B"	Thimble Radius "C"	Clevis Pin Dia "D"
20mm	20mm	16mm

EPACT-70



PLP **Aluminium Clevis Thimbles** are used in conjunction with PREFORMED Dead-ends on suspension-type or Dead-end insulators. The thimble is intended to provide a smooth internal contour to prevent stress concentration within the loop of a PREFORMED Dead-end.

Features

- ✓ Smooth internal contour to prevent stress concentration.
- ✓ Tested to IEC standards.
- ✓ Includes a humpback pin.
- ✓ Comes with a straining eye.
- ✓ Made with high grade aluminium alloy.

Application

Aluminium and Aluminium clad Preformed
deadends (loop diameter up to 57mm)

Specification

Thimble Rating	Pulling Eye Rating	Clevis Opening "A"
70kN	40kN	22mm
Thimble Opening "B"	Thimble Radius "C"	Clevis Pin Dia "D"
28mm	28.5mm	16mm

GCT-120-TC5F



PLP **Galvanised Clevis Thimbles** are used in conjunction with PREFORMED Dead-ends on suspension-type or Dead-end insulators. The thimble is intended to provide a smooth internal contour to prevent stress concentration within the loop of a PREFORMED Dead-end.

Features

- ✔ Smooth internal contour to prevent stress concentration.
- ✔ Tested to IEC standards.
- ✔ Includes a humpback pin.
- ✔ Comes with a straining eye.
- ✔ Galvanising to AS4680 standard.

Application

Copper, Copper clad and Galvanised steel
Preformed deadends
(loop diameter up to 56mm)

Specification

Thimble Rating	Pulling Eye Rating	Clevis Opening "A"
120kN	40kN	23.5mm

Thimble Opening "B"	Thimble Radius "C"	Clevis Pin Dia "D"
23.5mm	28.0mm	16mm

ACT-37-16



PLP **Galvanised Clevis Thimbles** are used in conjunction with PREFORMED Dead-ends on suspension-type or Dead-end insulators. The thimble is intended to provide a smooth internal contour to prevent stress concentration within the loop of a PREFORMED Dead-end.

Features

- ✔ Smooth internal contour to prevent stress concentration.
- ✔ Tested to IEC standards.
- ✔ Includes a humpback pin.
- ✔ Comes with a straining eye.
- ✔ Galvanising to AS4680 standard.

Application

Aluminium and Aluminium clad Preformed deadends (loop diameter up to 72mm)

Specification

Thimble Rating	Pulling Eye Rating	Clevis Opening "A"
70kN	-	22mm

Thimble Opening "B"	Thimble Radius "C"	Clevis Pin Dia "D"
36mm	36mm	16mm



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OUR FACTORY IS BUSY DELIVERING MASSIVE PROJECTS!



22kV S&C Omni-Rupter® Switches getting packed for export to the Pacific Islands.

Great to see customers investing in quality S&C switchgear proudly assembled here at PLP NZ.

Easy to install, robust and operationally dependable – talk to us about the 11, 22 and 33kV S&C's Omni-Rupter® Switch.





Transpower Norwood 220kV busbars project. The welding details show our quality ... this is NOT robotic welding!



Very Impressive packing of complex bars. The bottom ones have elbow bends & top have flexibles.



/// BBC CELLPACK

LOW VOLTAGE

Heat Shrink Technology

SRMAHV

Heat shrinkable repair sleeve with adhesive and stainless-steel channel

“For repairing damaged sheaths of all polymeric- and rubber-insulated cables and conductors”



Characteristics;

- Medium wall
- Resistant to chemical agents
- Stabilized against UV rays
- Free from paint-wetting inhibiting substances
- Halogen-free
- Non-corrosive
- Infusible
- Maximum inner pressure: 1.5 bar
- Superior electrical properties
- High tensile strength
- Resistant to cold flow (thermally stable)

Application/Suitability Sealing

- Repair of damaged cable sheaths
- Material
- Cross-linked polyolefin

- Free of lead and cadmium
- Test standards
- Corresponds to IEC 60684-2 Storage conditions/Shelf life
- Unlimited shelf life

SEH

Heat shrinkable Breakout boots for 2-, 3-, 4-, 5-core cables and conductors, with adhesive

“Sealing breakout boots for plastic, rubber and paper-insulated cables”



Characteristics;

- Stabilized against UV rays
- Free from paint-wetting inhibiting substances
- Halogen-free
- 100 % waterproof
- Pressure-tight
- Superior electrical properties
- Superior mechanical properties

Application/Suitability

- Indoor
- Outdoor
- Material
- Cross-linked polyolefin
- Free of lead and cadmium
- Test standards
- Corresponds to IEC 60684-2 Storage conditions/Shelf life

PLP Heat Shrink Gland

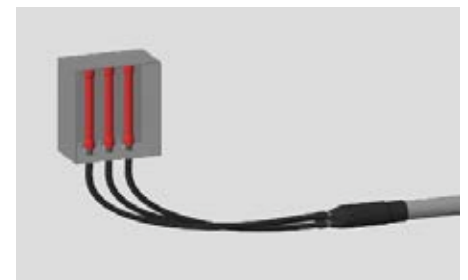
Key Features

- Made of flame retardant Polyolefin.
- Inner coated with adhesive to provide sealing protection.
- Provides a watertight and fume tight seal where the cable enters connection boxes, bulkheads, or other enclosures.
- Consists of 3-part assembly – a ridged plastic nut, O- ring and heat shrink moulded body.



Trifurcation kits

An insulating breakout for three-core cables and three sleeves for the protection of each phase.



All heavy-duty trifurcation kits come with extra mastics and phase marking as standard.



Characteristics;

- Consists of an insulating breakout for three-core cables and three sleeves for the protection of each phase
- Extra mastics and phase marking as standard
- Hot melt adhesive guarantees
- Moisture Seal

Application/Suitability

- Screened elbow
- Heat shrinkable terminations
- Can be directly buried with the correct fine backfill and mechanical cover

SRH3

Heat shrinkable thick wall tube

halogen-free, shrink ratio 3 : 1, with or without adhesive



Characteristics

- Thick wall
- Inscrutable
- Resistant to chemical agents

- Stabilized against UV rays
- Free from paint-wetting inhibiting substances
- Halogen-free
- Non-corrosive
- Infusible
- Superior electrical properties
- High tensile strength
- Resistant to cold flow (thermally stable)

**BBC
CELLPACK**

Russell Harper
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PLP NZ CELEBRATING 45 YEARS WITH R. STAHL

GLOBAL LEADER IN HAZARDOUS AREA PROTECTION TECHNOLOGY



Three things are needed to make an Explosion happen, Fuel, Oxygen and a source of Ignition.

Forty-Five years ago, three things came together, R. Stahl, PLP (Electropar Ltd), and the willingness to adopt innovative new Hazardous Area protection techniques, in a Flammable environment (Solvents, gases, dusts and powders) market that had not seen change for many decades and wasn't particularly interested in change.

Who would have realised that 45 years ago the installation and acceptance of Fibreglass Reinforced Polyester as a method of Explosion Protection would become widespread.

"We have had the privilege and advantage of being at the leading edge of such technology (and leading the change) because of our close and long-lasting partnership with R. Stahl for these 45 years."

Our relationship is the longest running partnership that R. Stahl has with a single company, outside Europe, and is something both parties are immensely proud of and looking forward to continuing. Forty-five years ago, the product that was being used on the New Zealand market was of "Flameproof" type construction,

it was very heavy, thick-walled aluminium construction, designed to contain an internal explosion. Products in this design included light fittings, control stations and all other types of applications. Then along came R. Stahl in partnership with PLP (Electropar Ltd) with the introduction of a Fibreglass Reinforced Polyester enclosure, with terminals inside, as an Explosion Protection technique, this made people nervous as it didn't

seem immediately safe compared to what was traditionally available. Soothing frayed nerves and leading the charge on established traditional techniques was the job of the sales team for Hazardous Areas, this charge was an ongoing uphill struggle with leaps of faith on behalf of Engineers and Customers alike to learn and understand how this Ex e (Increased Safety) technique was to become their "go to" solution.



Maintaining a close working relationship with R. Stahl over the distances involved, between New Zealand and Germany, meant getting goods manufactured and assembled there and then a long Sea Freight journey over 12000 miles (19,000 km) to NZ. Forty five years ago there was less Air Freight at a competitive level. This led to discussions with R. Stahl as the business grew, and 35 years ago we were awarded the opportunity to have the First R. Stahl assembly workshop outside Europe.

"What an achievement, an assembly workshop in East Tamaki, Auckland."

Customers were pleased as we started delivering more rapidly and with more flexibility than our competitors. With our ability to assemble locally, the market began to change. The old flameproof technology became minimal as the Fibreglass technology grew.

We assembled a wide variety of control panels as well as terminal enclosures. As the market grew there was a need for more knowledge and R Stahl was happy to assist.



We went to Germany many times for training and their specialists came to NZ to educate the NZ customers.

By travelling to R. Stahl in Germany, there were opportunities to learn about other protection techniques and products. Fibreglass Reinforced Polyester light fittings came on the radar and provided a cheaper alternative to existing heavy solutions, albeit with a single pin fluorescent lamp 38mm in diameter with a 2000 hour lamp life.

Heavy duty switch sockets of boxy design came along and were added to the portfolio, now we could plug in and switch a Hazardous Area, times were slowly changing.

Flurries of changes and understanding across the market of Hazardous Areas meant the Sales Team had to step up and become focussed on specific areas instead of being generalists.

This found staff from PLP(Electropar Ltd) becoming involved in Standards Committees for New Zealand and Australia as technologies needed

Australia as technologies needed to, and began to change. Being involved in Standards led to a better understanding of the international hazardous area market and how the changes there would affect NZ. We could also update R Stahl on the NZ and Australian marketplaces and this information would assist them with their future product planning.





We introduced a wider range of Ex rated techniques over the years allowing us to build assemblies of pressurised large cabinets for the Oil, Gas and Dust environments. Increased Safety, (Ex e), Distribution panels, Remote I/O systems, Bespoke Control Stations, large and small terminal enclosures. We have gone full circle now assembling Flameproof enclosures such as DOL or Star Delta Motor control centres. We also have the technology to join boxes together, combining Ex d and Ex e techniques.

The most recent innovation for R. Stahl is a thin wall stainless steel enclosure rated as Flameproof (Ex d), with industrial gear inside and Ex d controls penetrating the lid, this is called Ex Pressure, it uses burst or pressure dissipating discs to achieve the desired flame path dissipation in line with Ex d standards and makes any such explosion visible as and after it happens, what a good thing for maintenance to know.

Development of Ex d control elements to go inside Ex e enclosures was a breakthrough as this dramatically reduced weight, for installation purposes.

Of course, we had to increase our workshop ability to cope with these new demands and techniques. We met the challenge and rose with it to assemble bespoke control stations of switches, indicators and pushbuttons, some of which are still in full operation today, some 30 years later.

R. Stahl continued to push the boat out with introduction of Ex d contactors, overloads, motor control circuit breakers, MCB's and RCD's for example which led us into the path of assembling upon request distribution boards and Like for Zone 1 (Div 1 in USA) installations, this raised our workshop skill set to Level 2, the next highest is at R. Stahl itself, the Production Facility where products are manufactured. Another significant achievement.





Throughout this journey, a close working relationship has been maintained with R Stahl specialists and quality auditors.

In a market where the lives of the workers depend on our quality it is good to know we have the backing of a world leading company like R Stahl. The regular interaction both physically for training and

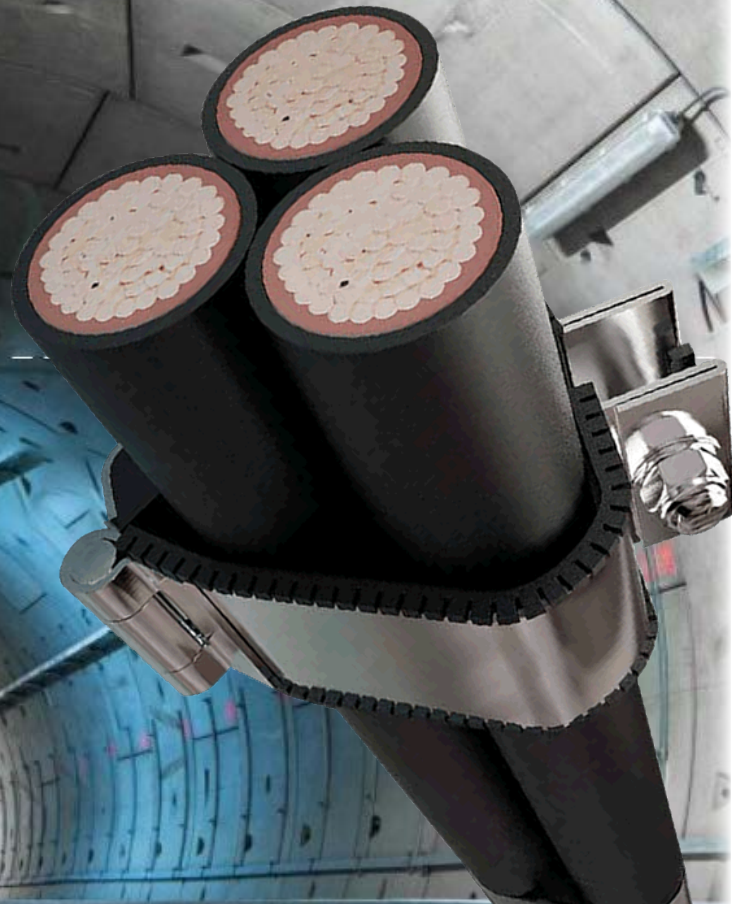
auditing and via various forms of communication has led to a true partnership, and many direct friendships have developed as a result.

Who knows what tomorrow may bring, but if it's more of similar challenges to what has been faced in the last 45 years, who better to be a partner with than R. Stahl.



For further information contact

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CABLE CLEATS AND GLANDS



Cable Cleats for Electrical Installations

Cable cleats are available for a number of different applications such as rail, underground, oil and gas, mining and petrochemical. They're the perfect accompaniment to our extensive range of cable glands.



The range is tested in accordance with IEC 61914 to ensure that, regardless of the cable formation used on the installation, there is a suitable cable cleat.

- > Metal / Polymeric
- > Single / Multicore Application
- > Trefoil Application
- > Quad Application
- > High Voltage Cable Cleats
- > Accessories

Cable Glands for Industrial & Explosive Atmospheres

Electrical cable glands can be used with a range of cable types, including armoured and unarmoured, and are available in brass, nickel plated brass and stainless steel.



With a wide variety of electrical cable glands available to suit IEC, NEC and CEC wiring codes, products can be used within a large number of applications – including oil and gas, petrochemical, construction, pharmaceutical, transportation and mining to name a few.

- > Industrial / General purpose
- > Explosive Atmosphere
- > Group / Mining American NEC & CEC
- > Thread Conversion & Accessories
- > High Voltage Cable Cleats
- > Accessories



Thread Conversions & Accessories

The CMP range of thread conversion adaptors, reducers and associated products are available for use in Industrial, Marine and Explosive Atmosphere applications, and are particularly suited to construction projects where a high volume of cables of all types and sizes are being installed.



When the cable gland fits the cable but its connecting thread differs from that of the equipment, the best solution may be to use a CMP thread conversion adaptor, especially when schedules are critical and time is of the essence.

CMP thread conversion adaptors and reducers offer the flexibility of allowing the job to progress by using a standard product to save time and ultimate cost compared with modifying hole sizes in equipment.

- > Stopper Plugs
- > Cable Gland Adaptors / Reducers
- > Breather / Drain Plugs
- > Unions & Barrier Unions
- > Cable Gland / Cleat Accessories

For further Information contact

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DSPA 5 Series - Handheld Extinguisher

DSPA features a fantastic range of handheld devices. DSPA handheld are standalone fire suppression units ideal for placing inside / outside substations, MCC rooms, switch rooms, server rooms, and control rooms. They replace the need for staff on site to be actively trained to intervene if a fire occurs.




DSPA Portable units can also be connected to fire panels as part of an overall fire strategy for sites where a full system is not present, making older dry powder fire extinguishers redundant.



Unlike more traditional dry powder fire extinguishers, the DSPA 5 series are a non-pressurised unit, they require little to no ongoing maintenance over their 15-year operational life, which removes the need for annual ongoing pressure tests, tagging, that will significantly reduce site costs and reduce the need for site visits and possible shutdowns, all the while reducing your carbon footprint.

Features

- Non-conductive, non-corrosive, non-oxygen depleting
- Not Pressurised!
- No requirement for annual pressure testing and tagging.
- Class leading 30-minute hold time in an enclosed building.
- Low maintenance. Reduced operational costs.
- 15-year operational life.
- Reduces backdraft and flashovers.
- Can be integrated into existing fire panels and building systems.
- Class A – F

 **Murray Howell**
 DSPA Market Manager
 Email: murray.howell@plp.com

DSPA's class leading certified hold times will assist in protecting the asset and site until fire crews intervene, allowing staff safe passage away from the area of risk.

CMP CABLE CLEAT PROFILES

Companies promote their products using different means and it is always interesting to observe that some companies will insist on adding something like an insert to their product to make it perform better. When you purchase a product from the CMP range there are no inserts as these have been engineered in their initial design to accommodate and lock the cable in situ by the use of their twin arc profile.


Benefits

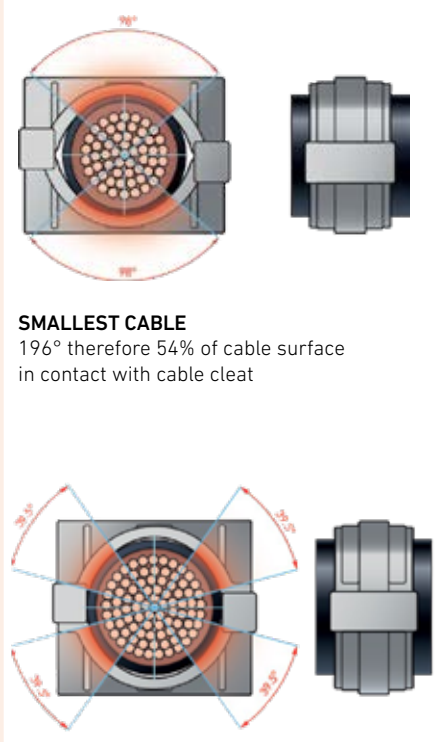
Analysing CMP's single bolt Sabre, Valiant and Solace and two bolt Falcon, Zenith and Themis cable cleat internal profile, there are two separate arcs joined tangentially; one arc suited to the minimum sized cable and the other arc suited to the maximum sized cable in the clamping range. The tangential joint means that all cable sizes in-between are clamped just as effectively.

This gives an almost uniform level of surface contact throughout the clamping range (44% on the minimum and 54% on the maximum sized cables) meaning axial restraint is just as good on the smaller sizes of cable in the range as it is for the largest.

The better comparative surface area contact throughout the clamping range also means that the same torque settings can be used, no matter what size of cable is fitted; removing any uncertainty during installation.

By using the new twin arc design, CMP has also dramatically increased the range taking capability of these types of cable cleat, which varies from 10-15mm on cable outside diameter.

 **Philip Watson**
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SMALLEST CABLE
 196° therefore 54% of cable surface in contact with cable cleat

LARGEST CABLE
 158° therefore 44% of cable surface in contact with cable cleat

CELLPACK - Cable sets for screened polymeric cables

KA, KAV

Cast resin branch joint

for polymeric cables and conductors

Universally suitable for branching cables and conductors insulated with PVC, PE and XLPE (e.g. N(A)YY, GKN). Suitable for cable branch clamps/ring clamps and compression connectors on copper and aluminium conductors.

- Characteristics
- Compact dimensions
- Splice area visible before casting
- High-quality transparent shockproof plastic shell
- Large filler aperture to facilitate casting
- Resistant to chemical agents

- Resistant to alkaline earth elements
- Stabilized against UV rays
- Longitudinally and transversely water-tight
- High electrical insulating values
- High mechanical strength
- Ready for immediate operation
- Quick and easy assembly saves time and reduces costs



Application/Suitability

- Indoor
- Outdoor
- Underground
- Water
- Installation ducts

Voltage level

- U_0/U_m (U_m) 0.6/1 (1.2) kV

Test standards

- DIN EN 50393 (corresponds to VDE 0278) Storage conditions/ Shelf life
- Cast resin up to 40 months

Russell Harper

Senior Technical Director

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WELCOME TO THE TEAM

We appreciate the hard work of the PLP team who go an extra mile to ensure our customers receive the most from our products and services. We are excited to welcome new faces to the business.



Matt McCarthy
South Island Manager

Matt joined our Sales team in October of this year. He has been in the Energy sector for many years and to many of our South Island customers, he will be a familiar face.

Matt is a relationship builder and will be a great asset to our Sales team.

Based in Christchurch, Matt will be responsible for all our South Island business.

Our customers will enjoy his honesty, work ethic and customer focused attitude.



CHARMAINE VAN DER BYL
Manager Customer Excellence

Charmaine has recently re-joined PLP NZ.

Previous roles include Production Planner at PLP, Field Service Planner at Schneider and Project Coordinator at Toyota SA Motors.

Current role is in Sales leading the overall Customer Excellence program through improvement initiatives to processes, transactional efficiency and managing price updates.

We look forward to working with her again.



Marriam Sheikh
Marketing Assistant

With years of experience in digital marketing and graphic designing from various industries and businesses, Marriam brings an open mind and fresh ideas to improve the company's exposure to customers, online & offline.

Responsible for improving PLP's presence on digital platforms and maintaining customer engagement on multiple channels.

We are excited to have you onboard.



SIL2 capability now available in our GNEx GRP and STEx stainless steel families

Available from the NZ agents PLP

SIL2 compliance is increasingly becoming a de facto requirement in high risk industries such as oil, gas and petrochemicals, particularly for safety-critical fire and gas detection systems, emergency shut-down initiation and process control applications. E2S is the only warning signal manufacturer able to offer a complete range of alarm horn sounders, Xenon strobe beacons and manual call points with SIL2 compliance to IEC 61508 in three different housing materials. This unique capability gives system integrators the ability to choose the best device to meet the application's environmental requirements and gives them greater confidence when specifying a complete signalling and activation package for critical life safety systems requiring an enhanced safety integrity level.



SIL2 certification joins the extensive range of international approvals held by our STEx enhanced corrosion resistant 316L marine grade stainless steel devices, our GNEx lightweight spark-resistant, corrosion proof GRP units and the copper free marine grade LM6 alloy D1x family.

If SIL2 capability is an important consideration when specifying the audible and visible warning signal and manual activation components of your system, please contact us by email in the first instance to discuss your requirements.

Available from the NZ agents PLP

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LONG LASTING PROTECTION

RUBBER INSULATING GLOVES, LEATHER PROTECTOR & SLEEVES



RUBBER INSULATING GLOVES

Not all gloves are created equal

All of our gloves are made from natural latex using our environmentally friendly aqueous dip manufacturing process.

CLASS 00 GLOVES

AC Maximum Use Voltage: 500V
AC Proof Test: 2,500V
DC Maximum Use Voltage: 750V
DC Proof Test: 10,000V

The default on a Class 00 Glove is Orange 280mm (11") on a Straight Cuff.



CLASS 0 GLOVES

AC Maximum Use Voltage: 1,000V
AC Proof Test: 5,000V
DC Maximum Use Voltage: 1,500V
DC Proof Test: 20,000V



CLASS 1 GLOVES

AC Maximum Use Voltage: 7,500V
AC Proof Test: 10,000V
DC Maximum Use Voltage: 11,250V
DC Proof Test: 40,000V



CLASS 2 GLOVES

AC Maximum Use Voltage: 17,000V
AC Proof Test: 20,000V
DC Maximum Use Voltage: 25,500V
DC Proof Test: 50,000V



WHICH GLOVE IS RIGHT FOR ME ?

NOVAX® recommends the "Palm Measurement" where you measure the circumference around the palm to determine the size of the glove. This would equate to the probable size of glove to select.

Personal preference for tightness and finger length will ultimately determine the glove size that is deemed most comfortable. Allow for addition room if glove liners to be worn.

Sizes	8	8½	9	9½	10	10½	11	11½	12
Palm Circumference Measurement	203mm (8")	216mm (8½")	229mm (9")	241mm (9½")	254mm (10")	267mm (10½")	279mm (11")	292mm (11½")	305mm (12")

CLASS 3 GLOVES

AC Maximum Use Voltage: 26,500V
 AC Proof Test: 30,000V
 DC Maximum Use Voltage: 39,750V
 DC Proof Test: 60,000V



CLASS 4 GLOVES

AC Maximum Use Voltage: 36,000V
 AC Proof Test: 40,000V
 DC Maximum Use Voltage: 54,000V
 DC Proof Test: 70,000V



BELL CUFFS

The bell cuff variant allows for thicker clothing in colder climates. It also allows for greater airflow in warmer weather.

Available in:

- Class 1
- Class 2
- Class 3
- Class 4



CONTOUR CUFFS

The contour cuff is angled to prevent bunching at the elbow when the arm is bent, whilst still providing protection to the user on the external side of the arm.

Available in:

- Class 1
- Class 2
- Class 3
- Class 4



BELL CUFFS & CONTOUR CUFFS

NOVAX
 Always Wear Your Gloves



LEATHER PROTECTORS

NOVAX® Leather Protectors are worn over Rubber Insulating Gloves to protect the gloves from any abrasions, cuts, tears and punctures that may occur when working.

NOVAX® Leather Protectors are manufactured from Top Grain Goatskin Leather, which is the softest, most abrasion resistant leather while still providing the dexterity needed to conduct certain sensitive tasks.

LPG-10

10" Goat Grain
in a Gunn Pattern
Used with: Class
00-0 Gloves
Size: 7-12



LPG-12

12" Goat Skin
Grain on Palm
with Cow Split
Leather Cuff
Used with: Class
1-2 Gloves
Size: 7-12



LPG-13

13" Goat Skin
Grain on Palm
with Cow Split
Leather Cuff
Used with: Class
3-4 Gloves
Size: 9-12



RUBBER INSULATING SLEEVES

NOVAX® Rubber Insulating Sleeves are made with the same environmentally friendly aqueous process used in the manufacture of our NOVAX® Rubber Insulating Gloves.



CLASS 0 SLEEVES

AC Maximum Use Voltage: 1,000V
AC Proof Test: 5,000V
DC Maximum Use Voltage: 1,500V
DC Proof Test: 20,000V
Style: Curved Elbow



CLASS 1 SLEEVES

AC Maximum Use Voltage:
7,500V
AC Proof Test: 10,000V
DC Maximum Use Voltage:
11,250V
DC Proof Test:
40,000V
Style: Curved
Elbow



CLASS 2 SLEEVES

AC Maximum Use Voltage:
17,000V
AC Proof Test: 20,000V
DC Maximum Use Voltage:
25,500V
DC Proof Test:
50,000V
Style: Curved
Elbow



CLASS 4 SLEEVES

AC Maximum Use Voltage:
36,000V
AC Proof Test: 40,000V
DC Maximum Use Voltage:
54,000V
DC Proof Test:
70,000V
Style: Curved
Elbow



S&C FAULT TAMER® FUSE LIMITER

“A perfect fit for your overhead protection strategy to mitigate fire risk”

S&C's Fault Tamer® Fuse Limiter combines the function of a conventional fuse with the benefits of a current-limiting fuse. The Fault Tamer Fuse Limiter is an energy-limiting fault-interrupting device that provides tighter coordination with upstream lateral fuses. It fits into existing S&C mountings with no additional hardware or expensive modifications required, allowing it to be added to any overhead distribution transformer installation.

The current-limiting ability of the Fault Tamer Fuse Limiter provides an additional benefit for wildfire and bushfire mitigation. As utilities grow increasingly concerned about wildfire risks, they are looking to reduce spark-intensive equipment that can start wildfires, which endanger their customers, finances, and reputation.

Because the Fault Tamer Fuse Limiter uses significantly less energy for its operation, it produces minimal debris during an operation compared to a fuse. The minimal debris creates less of a spark during fault-clearing, offering an alternative for utilities increasingly concerned about the operation of fuse cutouts during fault interruption on high fire-risk days.

Product Training

The Fault Tamer comes with extensive collateral and training material, PLP together with S&C

typically run training sessions with operators to familiarize them with the product, covering installation, handling, and operation.



Improved Transformer Protection

- Ideally suited for protecting single or three-phase transformers.
- 100 kVA single-phase at 15 kV
- 167 kVA single-phase at 25 kV
- Excellent continuous, hot-load pickup, and cold-load pickup capabilities.
- Allows arrester to be mounted on transformer tank without increasing the chance of nuisance operations due to lightning.

Minimizes equipment damage

- Reduces chances of catastrophic transformer failure from internal high-current faults.
- Minimizes bushing and tank damage due to external primary faults.

Enhances power quality

- Minimizes voltage dips that can cause sensitive electronic equipment to shut down.

Operational Characteristics

- Dropout action.
- No parts expelled during circuit interruption.
- Complies with Australian Spark Production Standard AS 1033.1-1990. Ideal for installation in areas prone to grass fires.

Handling Characteristics

- Easy to install/remove using extendo stick. No climbing or bucket truck needed to re-fuse unlike conventional backup current-limiting fuses.
- Retrofits into all vintages of S&C Type XS Fuse Cutouts.
- Operable with Loadbuster®, S&C's Portable Loadbreak Tool.



Kobus Botha (KB)
National Sales Manager
Email: kobus.botha@plp.com

Augustine Wong
Senior Account Manager
Email: augi.wong@plp.com

1 Overhead protection practices are exposing you to fire risks

DEBRIS PRODUCED DURING FUSE OPERATION



EXPULSION FUSE OPERATION EXISTING PROTECTION

MAY INCREASE FIRE RISK
Shows the area with sparks and red-hot particles, which have the potential to cause devastating fires.



HIGH MAGNITUDE FAULTS HAVE POTENTIAL TO STRESS AGING EQUIPMENT

This can lead to big safety and environmental impacts such as transformer failures.



CHANGING TECHNOLOGIES TO ADDRESS THESE ISSUES IS OFTEN COSTLY

Limiting current often involves making changes to the system such as adding expensive current-limiting fuses or modifying existing EDOs.

GROUND FIRES DUE TO NETWORK ASSET FAILURES*



- Ground
- Other
- Connections
- Overhead cables
- Poles
- HV Fuses
- Broken wires/ties
- Crossarms

3 Current limiting technology provides better fire protection

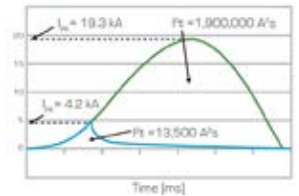


99%
LESS ENERGY
than an expulsion fuse

LIMITS LET-THROUGH CURRENT OF HIGH-MAGNITUDE FAULTS

Minimise damage to transformers, bushings, and surge arrestors

LET-THROUGH CURRENT OF FAULT INTERRUPTION



57%
GROUND FIRES
are a result of asset failure

■ Fault Tamer ■ Expulsion Drop Out Fuse



Improves service continuity



Enhances power quality



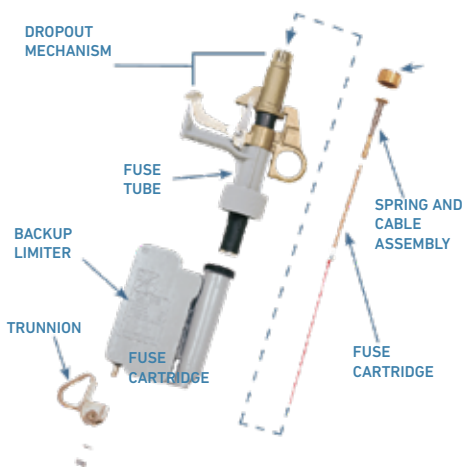
Addresses rising fault levels

2 Sparkless operation significantly reduces fire hazards

DEBRIS PRODUCED DURING FAULT TAMER OPERATION



FAULT TAMER® FUSE LIMITER



SPARK PRODUCTION CLASSES AS1033-1.1990

Class	Max. number of sparks during test
A	0
B	1
C	Unrestricted

S&Cs FAULT TAMER® FUSE LIMITER IS SPARKLESS

No sparks produced during fault clearing

4 The Fault Tamer® is the only device that is sparkless, current limiting, and has grading flexibility

FAULT TAMER® FUSE LIMITER



COMPACT PACKAGE

LIMITS CURRENT

SPARKLESS



Fits in existing S&C mountings



No additional Hardware required



No expensive modifications required



Can be installed using a hot stick from the ground

PLP POLYMER STRAIN INSULATORS

PLP has been supplying the New Zealand and Pacific markets with ECI Brand Polymer strain insulators for the last 10 years and offer a high quality aerial strain solution, especially when combined with PLP's extensive range of Clevis Thimbles.

These insulators are tested to IEC 61109:2008 Insulators for overhead lines.

Talk to your PLP account manager today about our PLP Insulator offering.



332332

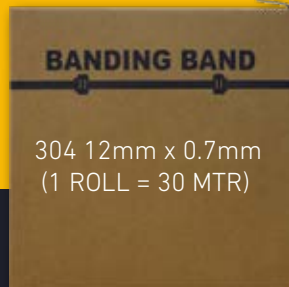
FBX-15/70-CT354 POLYMER INSULATOR 15KV 70kN SILICONE SUSPENSION

332336

FBX-36/70-CT-525 POLYMER INSULATOR 36kV 70kN SILICONE SUSPENSION

Epastrap Stainless Steel Strapping

Packed in Environmentally friendly Cardboard and to be used as your plastic tote refills



Get Special pricing on your order!

Email us at sales@preformed.co.nz or call at **09 274 2000**

12 Ton Compression Dies for compressing Aluminium & Copper Conductors



Manufactured from steel billet, hardened and stamped with the applicable die size, PLP's aluminium dies carry the prefix "DA", while copper dies feature the prefix "DCU". When compressing solid aluminium conductor, peg dies should always be used and these are specified by the suffix "P".



DID YOU KNOW?

PLP holds one of the widest ranges of BiMetal Lugs and Fittings in New Zealand!

- Terminals Ex Stock For Both CDA & A/F Tooling
- Metric And Named Conductors
- Single And Two Hole Palms
- Pin Terminals
- BiMetal Transition Joints
- BiMetal Switch Terminals
- NZ Manufactured
- Heat Cycle Tested To IEC 61238-1, Part 1, Class B 2003-05
- Mechanically Tested To IEC 61238-1 Clause 7 (limited tension)

This is M

Smart lub solut

More than 70 years



GREASES

Solid to semisolid materials consisting of a lubricating fluid, thickening agent and additives. Used on rolling element bearings and other moving parts.



PASTES

Greaselike materials containing a very high percentage of solid lubricants. Used for assembly and lubrication of highly loaded, slow-moving parts or threaded fasteners.



OILS

These lubricating fluids are fortified with carefully selected additives to provide optimum performance and service life while maximizing protection of the equipment and machinery they are designed to lubricate.

COMMON APPLICATIONS

High/low temp, bearings, chassis, food chemical, water, spindles, motors

GREASES

Threads, solid lubricant, high temp/alloys, assembly/run-in, anti-fretting

PASTES

Multipurpose, hydraulic, compressor, vacuum, synthetic, chain and gear

OILS

MOLY

Identify your application

- Load
- Environment
- Temperature
- Speed



GREASES | PASTES | OILS | COMPOUNDS

POLYKOTE®

Specialty Lubricants

Lubrication Solutions

of trusted expertise

POLYKOTE®

Functions of a lubricant

- Separate surfaces
- Reduce wear and friction
- Manage contamination
- Protect against corrosion
- Carry away heat
- Transmit power

COMMON APPLICATIONS

Plastic/metal, rubber/metal, O-rings, release agent, moisture barrier, dielectric

COMPOUNDS

DISPERSIONS

Silicone lubricant, release agent

ANTI-FRICTION COATINGS

Dry film, heavy load, solid lubricant, paintlike, corrosion protection

To place your orders contact
Ross Hynes
Product Manager - Industry
Email: ross.hynes@plp.com
M: +64 21 733 473



COMPOUNDS

Greaselike materials composed of silicone fluids and silica fillers. Used for their sealing, dielectric, nonmetal-to-metal lubricating properties.



DISPERSIONS

Finely divided solid lubricants suspended in lubricating fluid; preferred when it is necessary to apply lubricants in liquid form.



ANTI-FRICTION COATINGS

"Lubricating paints"; when applied, these materials cure to form dry, solid lubricant coatings that are bonded to the surface.

| DISPERSIONS | ANTI-FRICTION COATINGS



JACKALBERRY CHALLENGE

Charity Mountain Bike Event happening in South Africa

Our National Sales Manager Kobus Botha aka KB will be traveling back to South Africa during November and December to visit family and friends.

While he is in SA he will be taking part in a charity mountain bike event called the Jackalberry Challenge. Kobus has done this event multiple times previously and while living in SA has been part of the organising committee for several years.

What started out as a dare around a barbeque several years ago, has certainly made a profound impact on many people, both the scholars at the beneficiary school Ubuhle Christian School as well as the 190 cyclists who have completed at least one of the JackalBerry Challenges to date.

Ubuhle Christian School is situated on the farm of Hugo and Melanie Prinsloo. Melanie is the passionate founder and driver of the school and has brought so much hope to this community since 2008. The community consists of rural farm

workers and their families whose daily plight is fighting poverty. Somehow the dream to educate their children and thus enable these children to have a chance at breaking the cycle of poverty is what attracts this community to Melanie and her passion to educate their children. The school complex began humbly and has grown in stature and influence over time through relentless vision and passion.

The goal of Ubuhle Christian School is to improve quality of life, especially education, for the orphans and vulnerable children living in disadvantaged families on the farming areas and townships surrounding Bronkhorstspuit. Our strategy is to raise a new generation of children that

- are well educated and literate
- have exceptional character and morals
- can make a positive contribution to society
- will be hard workers and make a good living for themselves in the future

- will give back to their own community one day
- Three businessmen who shared three common passions; supporting this underprivileged school, love for mountain biking and enjoying a good challenge started this event back in 2011.

Since 2011 the Jackalberry Challenge has raised more than \$250K for the school.

The event consists of a two-day mountain bike ride.

- Day 1:** 174km and Ascent of 1834m
- Day 2:** 101km and Ascent of 1358m

You can follow the performance and build up to the event here

<https://jackalberrychallenge.co.za/>
<https://ubuhleschool.co.za/>



JackalBerry MTB Challenge

Follow on facebook



Jackalberry_challenge

Follow on Instagram

NZ FIRE CONERENECE & EXHIBITION

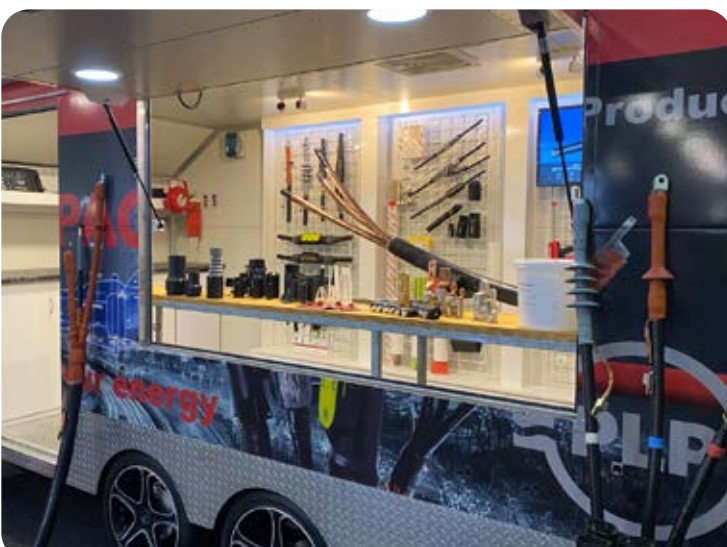
CHRISTCHURCH CONVENTION CENTRE | 21-23 SEPTEMBER 2022



The team at PLP attended the Fire Protection Association New Zealand conference in Christchurch at the new Te Pae Convention centre, held over 3 days in September. The event had over 500 people attending and had insurance companies, fire

engineers and consultants who were there to learn about the latest in fire technology. PLP showcased the DSPA (Dry Sprinkler Powder Aerosol) to the delegates with significant interest with protecting electrical rooms

and cabinets, boats, server rooms and BESS (Battery Energy Storage Systems). This simple yet effective technology ticks a lot of boxes with end users with ease of installation and durability.



EEA CONFERENCE 2022

19-21 SEPTEMBER | CALUDELANDS HAMILTON

A team from PLP attended this years EEA event held in Hamilton on the 20th and 21st of September. Team PLP was well supported by S&C which also had a stand and trailer showcasing their products. As always the event was well supported and gave us the opportunity to connect with multiple customers over a short period of time. It is always great to catch up with old and potentially

new customers. A number of customers had some fun plying with our well known PLP Candy Sticks. Thank you to all our customers for visiting our PLP stand and Cellpack trailer, it was great connecting with you again.

See you in Christchurch in 2023!

UAV INSTALLED BIRD DIVERTERS

PLP® Distribution Products

RAPTOR CLAMP™ DIVERTERS

“UAV installations greatly reduce time and cost when compared to bucket truck or helicopter installations and are less disruptive to homeowners and traffic”

Preformed Line Products provides safe and efficient services for installing RAPTOR CLAMP™ Diverters to transmission overhead shield wires and distribution conductors using unmanned aerial vehicles (UAVs). Our experienced crews operate unique, purpose-built UAVs equipped with added sensors and guides to securely attach bird diverters to power lines.

“The RAPTOR CLAMP™ Diverters are designed to increase the visibility of overhead power lines for birds, providing an economical means of reducing risk to both utility power lines and wildlife.”



RAPTOR CLAMP™ Diverter





Preformed Line Products (PLP) is offering Energy companies a safer and more economical asset management and inspection service using unmanned aerial systems (UAS) and helicopters.

Our Comprehensive and Routine Visual Inspection Services include high resolution E/O and IR data collection, assessment and classifications of assets by our highly trained and experienced analyst and engineers, secure data management, and delivery of an actionable data set. In addition to performing asset inspections, PLP undertakes installation of bird diverters via UAS.



Features

- UAV (Drone) Installation is available through PLP's UAV Installation Services.
- Easy "bump and snap" installation on the cable.
- No special tools required.
- Simple, cost-effective design.
- Lightweight (total weight = 159 grams).
- Manufactured from UV-stabilized polycarbonate and polyethylene materials.
- All metal hardware is corrosion-resistant stainless steel.

Visibility

The flapper paddle increases the visible profile of the cable. With a point of articulation where it attaches to the cable connection, it moves in the wind, providing a hazing effect that is effective at catching the attention of most avian species. Every diverter comes with

reflective tape to reflect light for species traveling at dusk and dawn.

Material

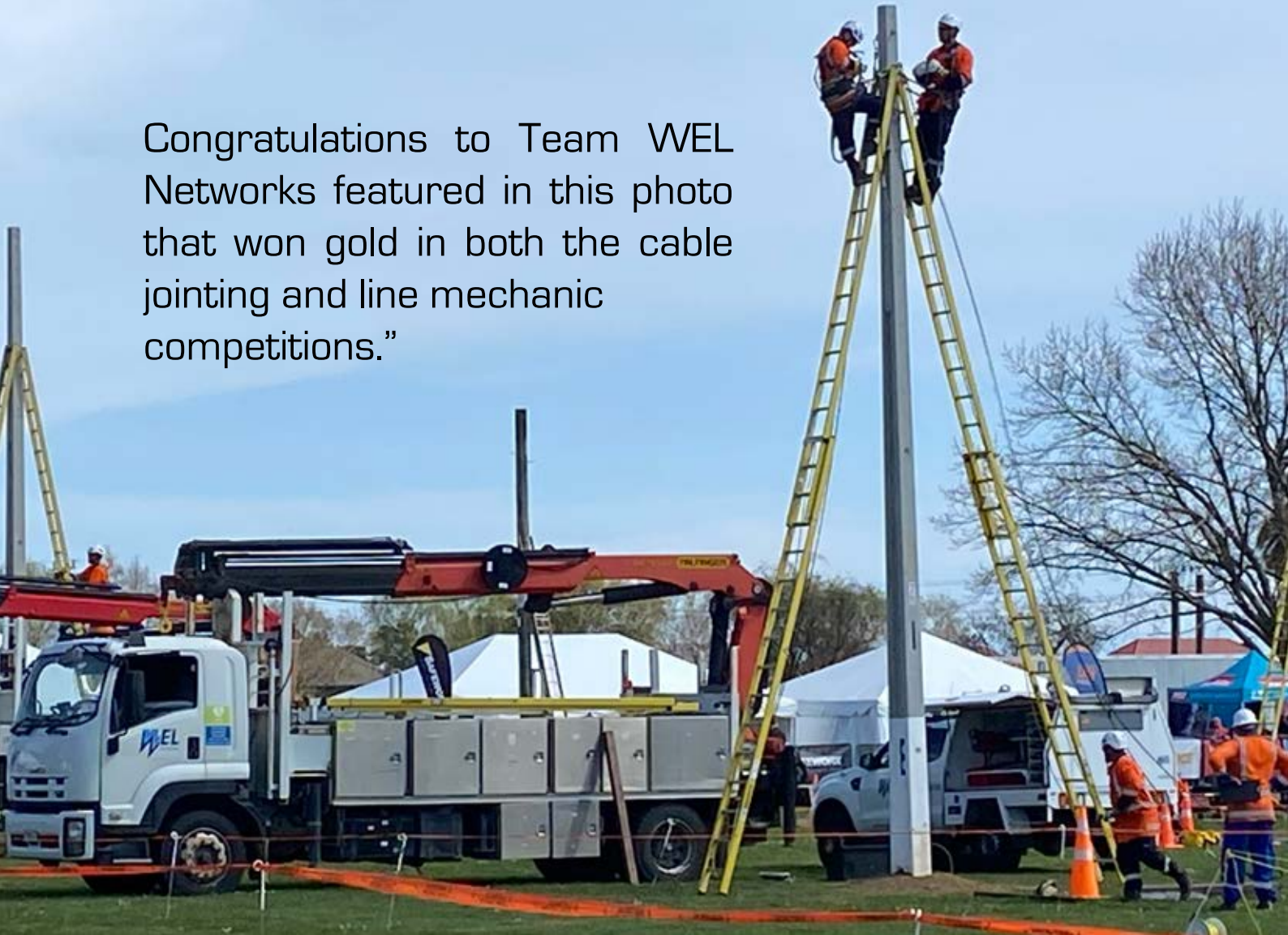
The RAPTOR CLAMP Diverter is made from a UV-stabilized rigid nylon material and includes stainless steel hardware. The yellow flappers are made from a UV-stabilized polyethylene. All components possess excellent chemical resistance and strength properties to function properly in extreme environments.

Spacing

For optimum results, spacing distances are generally recommended at 4-5 metres intervals depending upon local conditions.

ALLEN JAMES
 General Manager Services
 Email: allen.james@plp.com

Congratulations to Team WEL Networks featured in this photo that won gold in both the cable jointing and line mechanic competitions.”



Annual 2022 Connexis Linesman Competition

Some members of our PLP sales team attended the annual 2022 Connexis Linesman Competition held in Levin this year.

It was a real privilege to attend this again after some covid disruptions the past few years.

The three days of competition saw teams from across Aotearoa compete in a series of events that puts their teamwork and expertise to the test

This competition is a showcase of the skills, training, and knowledge which line mechanics and cable jointers rely on every day to keep the lights on in homes and businesses across Aotearoa.

BIG respect for these teams that came from all over New Zealand.

These boys and girls should all wear capes!
True superheroes when we need them to be.

See you in Invercargill for next years event.



DSPA Fire Suppression Systems

Fire Protection for Vehicle and Gensets



Do you require active or passive Fire Suppression for your Vehicles or Generators?

Our DSPA systems offer the best of both worlds. Whether you require a fully integrated system or a simple set and forget passive option, PLP can provide a solution for almost any situation.

Our vehicle and marine systems are preproduced and manufactured as a 90% plug and play, complete prewired kit for easy installation allowing

for most systems to be installed by inhouse auto electricians and mechanics. For Gensets, DSPA has options ranging from full integrated systems to passive solutions for smaller machines.

DSPA systems are currently in service with many large heavy vehicle fleet clients, from mining loaders, to diggers, excavators, lift

trucks, fracking trucks, EV trucks and utes, mining fire trucks, land cruiser support vehicles, right through to a KiwiRail certificated system that has been installed in several diesel locomotives.

We welcome your enquiry.



Murray Howell
DSPA Market Manager
Email: murray.howell@plp.com

PRESS RELEASE



PLP ANNOUNCES ACQUISITION OF DELTA CONECTORES, S.A. DE C.V.

CLEVELAND, OHIO – OCTOBER 17, 2022 – Preformed Line Products Company (NASDAQ: PLPC) announced today that it has acquired Delta Conectores, S.A. de C.V.

Founded in 1979 and based out of Aguascalientes, Mexico, Delta designs and manufactures substation connector systems and accessory hardware for high-voltage AC systems and is a market leader in Mexico. The acquisition of Delta will greatly expand PLP's operational and technical capabilities in the region while supporting its overall global substation strategy.

"The addition of Delta to the PLP family expands our existing substation product offering. They bring a high level of design expertise and bolster our manufacturing capabilities in North America. We are excited to welcome the Delta team to PLP," stated Ryan Ruhlman, Vice President of Marketing & Business Development at PLP.

Preformed Line Products New Zealand

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Main: (+64) 9 274 2000 | Email: sales@preformed.co.nz

Website: www.preformed.co.nz

Follow us on social media to get the latest products and support information



Preformed Line Products New Zealand

