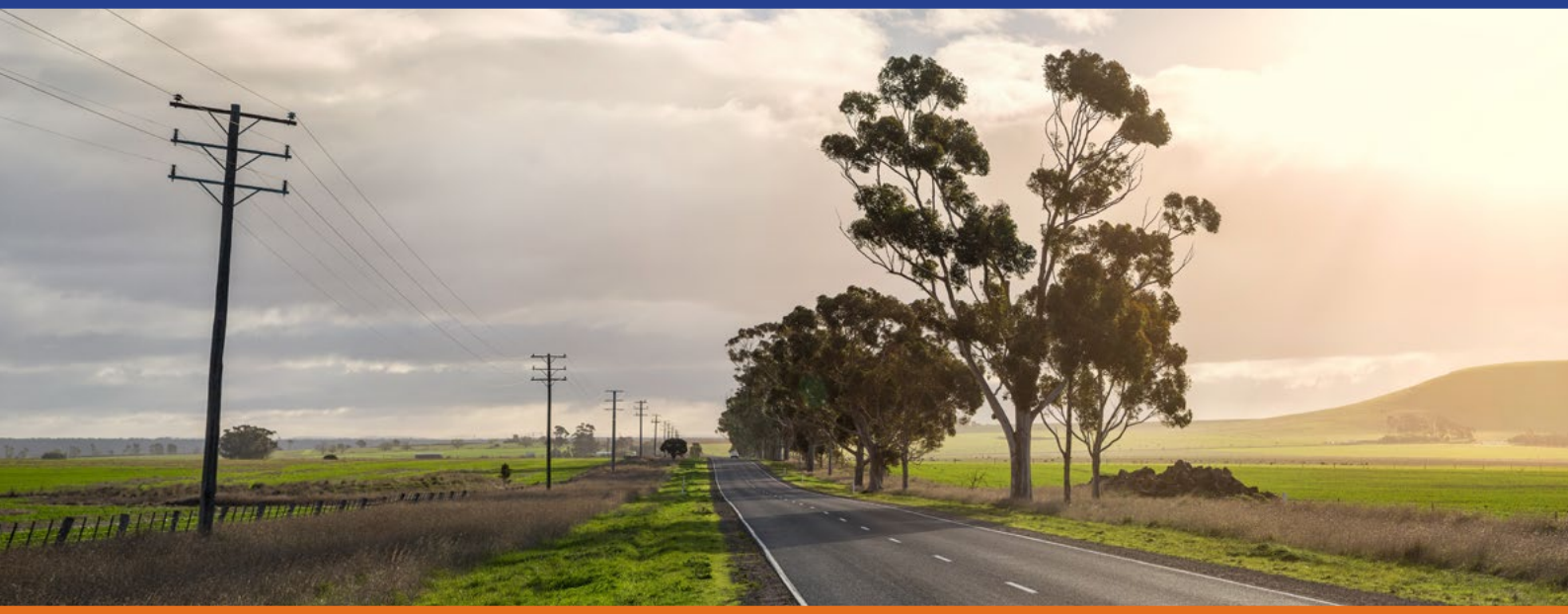
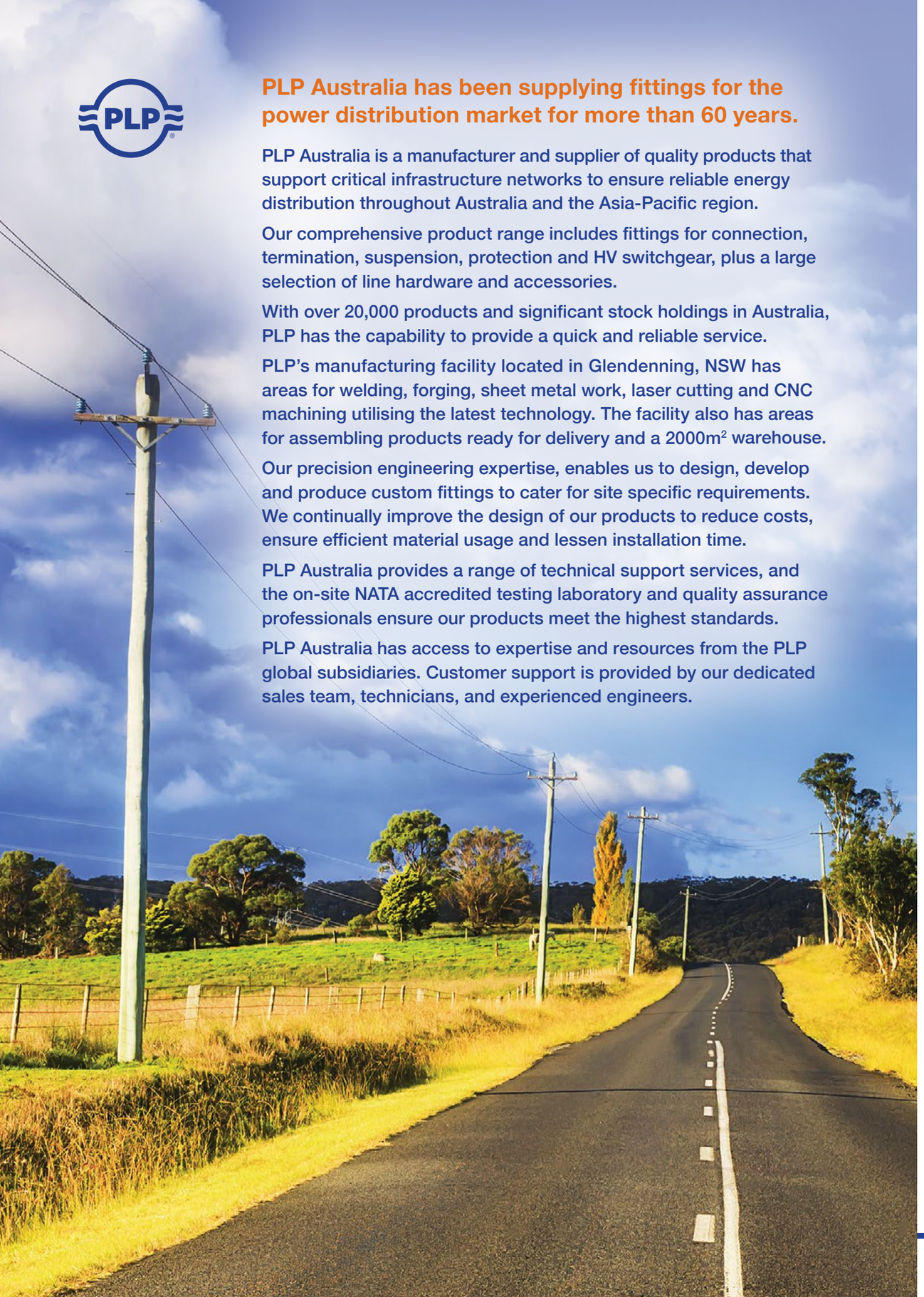
AUSTRALIA



PLP (PREFORMED LINE PRODUCTS)

Energy Distribution

The connection you can count on



PLP Australia has been supplying fittings for the power distribution market for more than 60 years.

PLP Australia is a manufacturer and supplier of quality products that support critical infrastructure networks to ensure reliable energy distribution throughout Australia and the Asia-Pacific region.

Our comprehensive product range includes fittings for connection, termination, suspension, protection and HV switchgear, plus a large selection of line hardware and accessories.

With over 20,000 products and significant stock holdings in Australia, PLP has the capability to provide a quick and reliable service.

PLP's manufacturing facility located in Glendenning, NSW has areas for welding, forging, sheet metal work, laser cutting and CNC machining utilising the latest technology. The facility also has areas for assembling products ready for delivery and a 2000m^2 warehouse.

Our precision engineering expertise, enables us to design, develop and produce custom fittings to cater for site specific requirements. We continually improve the design of our products to reduce costs, ensure efficient material usage and lessen installation time.

PLP Australia provides a range of technical support services, and the on-site NATA accredited testing laboratory and quality assurance professionals ensure our products meet the highest standards.

PLP Australia has access to expertise and resources from the PLP global subsidiaries. Customer support is provided by our dedicated sales team, technicians, and experienced engineers.

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Energy Distribution

Termination

“ PLP Australia manufactures fittings for the power distribution sector and rail networks. ”

PREFORMED™ Deadend Grip

General Information

The PREFORMED™ Deadend Grip is designed to grip uniformly to prevent distortion of the conductor. The design eliminates bolts, nuts, washers and other component parts that may become lost or damaged during installation or in service.

Deadend Grips should only be used on the size and type of conductors for which they are designed. They must have the same lay as the conductor to which they are being applied.

All deadend fittings have colour coded markings to indicate starting point for application and to assist with identification. Colour codes are as per AS1154.3.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

PREFORMED™ Deadend Grip

For AAC, AAAC, and Limited Tension on Large Ø ACSR

AFG

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AFG-053	7/1.75	5.25	Purple
AFG-063	7/2.11	6.33	Yellow
AFG-068	7/2.25	6.75	Brown
AFG-075	7/2.50	7.50	Blue
AFG-083	7/2.75	8.30	White
AFG-090-CL	7/3.00	9.00	Red
AFG-102-CL	7/3.40	10.20	Purple
AFG-105	7/3.50	10.50	Blue
AFG-113-CL	7/3.75	11.25	Black
AFG-118-CL	19/2.36	11.80	Brown
AFG-135-CL	7/4.50	13.50	Green
AFG-143-CL	7/4.75	14.30	Blue
AFG-163-CL	19/3.25	16.30	Orange
AFG-169-CL	19/3.38	16.90	Orange
AFG-175-CL	37/2.50	17.50	Blue
AFG-188-CL	19/3.75	18.80	Black
AFG-210-CL	37/3.00	21.00	Red
AFG-232-CL	19/4.65	23.25	Green
AFG-240-LT-CL	19/4.75	23.80	Blue
AFG-263-LT-CL	37/3.75	26.30	Black

Note: Contact PLP for other sizes.

CL = Cable Loop.

LT = Limited Tension (85% UTS of AAC, 65% of AAAC and ACSR Conductors).

For SC/AC Conductors Left Hand Lay Standard

AWFG

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AWFG-K023	3/2.75	5.91	White
AWFG-K032	3/3.25	6.98	Orange
AWFG-K040	3/3.75	8.06	Black
AWFG-K050	7/2.75	8.25	White
AWFG-K060-8	7/3.05	9.15	Red
AWFG-K070	7/3.25	9.75	Orange
AWFG-K088	7/3.75	11.25	Black
AWFG-K106	7/4.25	12.75	Brown
AWFG-K136	19/2.75	13.75	White

Note: Contact PLP for deadends to suit right hand lay conductors.

PREFORMED™ Deadend Grip

For ACSR – Single Piece

AWFG

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AWFG-053	3/4/1.75	5.25	Purple
AWFG-063-X	6/1/2.11	6.30	Yellow
AWFG-075-X	6/1/2.50 3/4/2.50	7.50	Blue
AWFG-090-X	6/1/3.00 4/3/3.00	9.00	Red
AWFG-101-X	6/1/3.35 3/4/3.37	10.05	Orange
AWFG-113-X	6/1/3.75 4/3/3.75	11.25	Black
AWFG-125-X	12/7/2.50	12.50	Blue
AWFG-143-X	6/4.75+7/1.60	14.30	Blue

For ACSR – Multi Piece (Full Tension)

FTG

Part Number	Conductor Stranding/Name	Conductor Diameter (mm)	Colour Code
FTG-049-SB	Mullet	4.90	Green
FTG-051-SB	Herring	5.10	Green
FTG-059-SB	Goldeye	5.90	Yellow
FTG-064-SB	Flounder	6.40	Black
FTG-075-SB	Greyling	7.50	Blue
FTG-084-SB	Pickerel	8.40	White
FTG-087-SB	Lamprey	8.70	White
FTG-113	6/1/3.75	11.25	Red
FTG-117	12/7/2.34	11.70	Brown
FTG-125-AW	12/7/2.50 12/7/2.59	12.50	Blue
FTG-143	6/4.75/7/1.60	14.30	Blue
FTG-146	7/4.39/7/1.93	14.60	Blue
FTG-150	12/7/3.00	15.00	Red
FTG-155	18/1/3.09	15.54	Black
FTG-157	26/2.54/7/1.91	15.90	Blue
FTG-165	30/7/2.36	16.52	Brown
FTG-175	30/7/2.50	17.50	Blue
FTG-193	18/1/3.86	19.30	Black
FTG-210	30/7/3.00	21.00	Red
FTG-245	30/7/3.50	24.50	Purple

Note: SB = Smooth Body conductors.

PREFORMED™ Deadend Grip

For Galvanised Conductor and Stays SC/GZ

GFG

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GFG-025-CL	1/2.50	2.50	Blue
GFG-031-CL	1/3.15 1/3.25	3.15 3.24	Red/Orange
GFG-038-CL	7/1.25	3.75	Black
GFG-043-CL	3/2.00	4.25	Brown
GFG-048-CL	7/1.60	4.80	Black
GFG-055	3/2.75	5.50	White/Green
GFG-060-CL	7/2.00	6.00	Yellow
GFG-069	7/2.30	6.90	Brown
GFG-075	7/2.75	8.25	Blue
GFG-083-CL	7/2.75	8.25	White
GFG-090	7/3.00	9.00	Red
GFG-100	7/3.25 19/2.00	9.75 10.00	Orange/ Yellow
GFG-113-CL	7/3.75	11.25	Black
GFG-120	7/4.00	12.00	Black
GFG-138	19/2.75	13.75	White
GFG-150	19/3.00	15.00	Red
GFG-163	19/3.25	16.25	Orange
GFG-188	19/3.75	18.80	Black

Note: Contact PLP for other sizes.
CL = Cable Loop.

For Wire Rope

GFG

Part Number	Wire Rope Diameter (mm)	Colour Code
GFG-090-WR	9.00	Green
GFG-100-WR	10.00	Yellow
GFG-120-WR	12.00	Black
GFG-130-WR	13.00	Green
GFG-140-WR	14.00	Yellow
GFG-160-WR	16.00	White
GFG-180-WR	18.00	Blue
GFG-190-WR	19.00	Black

PREFORMED™ Deadend Grip

For Copper Conductor (HDC) – Right Hand Lay Standard

CFG

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
CFG-030	7/1.00	3.00	White
CFG-038	7/1.25	3.75	Green
CFG-043	3/2.00 7/1.35	4.25 4.05	Yellow/Green
CFG-0525	7/1.63 7/1.75 7/1.73	4.80 5.25 5.18	Purple
CFG-060	7/2.00	6.00	Yellow
CFG-075	7/2.50	7.50	Blue
CFG-083	7/2.75	8.25	White
CFG-088	19/1.75	8.75	Purple
CFG-100-CL	19/2.00 7/3.50 19/2.11	10.00 10.50 10.55	Yellow
CFG-113-CL	7/3.75	11.25	Black
CFG-117	19/2.33	11.65	Blue
CFG-125	19/2.56 37/1.75	12.80 12.25	Blue/Purple
CFG-138-CL	19/2.75	13.80	White
CFG-150-CL	19/3.00	15.00	Red
CFG-166	19/3.33 37/2.36	16.65 16.52	Orange
CFG-175-CL	37/2.50	17.50	White
CFG-183-CL	37/2.62	18.30	White
CFG-193-CL	37/2.75	19.30	White
CFG-203-CL	61/2.25	20.25	Brown
CFG-210-LT-CL	37/3.00	21.00	Red
CFG-235-CL	61/2.64	23.50	Orange
CFG-260-LT-CL	91/2.36 61/2.85	25.96 25.65	Black

Note: Cad copper conductors are left hand lay and require LHL grips.

Contact PLP for further information and other available sizes.

CL = Cabled Loop.

LT = Limited Tension.

PREFORMED™ Deadend Grip

For Service Conductors

GSG

This service grip is designed to secure multi-core and neutral screened cables. The fitting is similar to the service conductor grip with the exception of the separate neoprene sleeve.

Part Number	Conductor Stranding	Conductor Area (mm²)	Conductor Type	Colour Code
GSG-NC-030	7/0.91	4.55	2c Twisted, 2c N/S	White
GSG-NC-040	7/0.91 7/1.04 7/1.35 7/1.70	4.55 6.00 10.00 16.00	2c Figure 8, 4c Twisted 2c Figure 8, 2c Twisted 3c Twisted, 2c N/S 2c Figure 8, 2c Twisted 2c N/S 2c Al N/S Compressed	Blue
GSG-NC-050	7/1.04 7/1.35 7/1.70	6.00 10.00 16.00	4c Twisted, 3c N/S Flat 3c/4c Twisted 2c Fig 8, Twisted or N/S	White
GSG-NC-060	7/0.91 7/1.04 7/1.35 7/1.70	4.55 6.00 10.00 16.00	4c N/S 4c N/S 3c N/S Flat 3c Al N/S Compressed	Yellow
GSG-NC-070	7/1.35 7/1.70	10.00 16.00	4c N/S 3c N/S Flat, 4c N/S	Blue
GSG-NC-090	7/2.13	25.00	4c N/S	White

Note: N/S = Neutral Screened, 2c = 2 core.

For Service Conductors

GSG

The house service grip was developed to attach the insulated service conductor bundles to the house just below the roof line.

The fitting has a separate neoprene sleeve providing additional insulation to the assembly. This ensures the grip and the service attachment is well insulated, so persons are not in danger if working in the vicinity.

These part numbers suit PVC insulated copper conductors.

Part Number	Conductor Area (mm²)	Construction (Core)	Colour Code
GSG-160-DI-19	6	2, 3 and 4	Red
GSG-160-DI-19	10	2	Red
GSG-180-DI-19	10	2, 3 and 4	White
GSG-180-DI-19	16	2	White
GSG-220-DI-20	16	3 and 4	Yellow

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PREFORMED™ Deadend Grip

Double Insulated Deadends

DIS

The DIS fitting is designed for terminating insulated aerial service cables of either single, webbed, 2, 3, 4 core twisted or concentric neutral screened construction.

The DIS fitting terminates the service cable directly to the facia attachment on the house without the need for a separate insulator. There is no span limitation in normal urban usage of the DIS fitting.

DIS fittings are composed of two compoments, a galvanised, gritted and black coated Heliformed® fitting, and a non-conductive Neoprene Sheath. The neoprene sheath is wrapped around the service cable prior to attachment of the Heliformed® fitting, to provide the double insulating layer.

The DIS fitting provides excellent resistance to UV attack and corrosion, and has been designed to operate in harsh operating environments where temperature extremes, and vibration difficulties are known to occur.

Area (mm^2)	Stranding	No. of Conductors	Part Number	Std. Pack	Colour Code
Twisted Conductors					
6	7/1.04	2, 3 and 4	DIS1400N	25	Red
10	7/1.35	2, 3 and 4	DIS1400N	25	Red
10	7/1.35	4	DIS1600N	25	White
16	7/1.70	2	DIS1400N	25	Red
16	7/1.35	3 and 4	DIS1600N	25	White
25	7/2.00	2	DIS1600N	25	White
25	7/2.00	3 and 4	DIS1900N	20	Blue
35	19/1.35	2	DIS1600N	25	White
35	19/1.35	4	DIS2200N	25	Green
Webbed Conductors					
6	7/1.04		DIS80610	25	Red
10	7/1.35		DIS80610	25	Red
16	7/1.70		DIS81600	25	White
Neutral Screened Conductors					
6	7/1.04	2	DIS1400N	25	Red
6	7/1.04	3 and 4	DIS1900N	20	Blue
10	7/1.35	2	DIS1400N	25	Red
10	7/1.35	3 and 4	DIS1900N	20	Blue
16	7/1.70	2	DIS1600N	25	White
16	7/1.70	3 and 4	DIS1900N	20	Blue

PREFORMED™ Deadend Grip

Limited Tension Deadends

NDE

The NDE is a coated galvanised steel termination, suitable for application over Polyethylene or Neoprene insulated, aluminium or copper conductors. The coated subsets of each Deadend leg exert a low radial pressure that does not damage the insulation on the conductor.

Because of the number of variables associated with the rating strength of this type of fitting, for example conductor size, number of cores, insulation thickness, it is impractical to imply a rating as a proportion of the UTS of the conductor.

In many applications the strength of the fitting will exceed the UTS of the conductor.

Area (mm^2)	Stranding	No. of Conductors	Part Number	Std. Pack	Colour Code
Twisted Conductors					
6	7/1.04	2 and 3	NDE1036	25	Blue
6	7/1.04	4	NDE1369	25	Red
10	7/1.35	2	NDE1036	25	Blue
10	7/1.35	2 and 3	NDE1369	25	Red
16	7/1.70	2	NDE1369	25	Red
16	7/1.35	2 and 3	NDE1554	20	Black
25	7/2.00	2	NDE1554	20	Black
25	7/2.00	3	NDE1973	15	Yellow
35	19/1.35	4	NDE2216	10	Blue
35	19/1.35	2, 2 and 3	NDE2216	10	Blue
Webbed Conductors					
6	7/1.04		NDE1036	25	Blue
10	7/1.35		NDE1369	25	Red
16	7/1.70		NDE1369	25	Red
25	7/2.00		NDE1554	20	Black
Neutral Screened Conductors					
6	7/1.04	2	NDE1036	25	Blue
6	7/1.04	2 and 3	NDE1554	20	Black
10	7/1.35	2	NDE1036	25	Blue
10	7/1.35	3	NDE1554	20	Black
10	7/1.35	4	NDE1973	15	Yellow
16	7/1.70	2	NDE1369	25	Red
16	7/1.70	3	NDE1554	20	Black
16	7/1.70	4	NDE2216	10	Blue

CONTENTS

Superlock

For SC/GZ Guy Strands

GSC

This range of superlock fittings have been designed as an easy and efficient way of terminating stays back onto themselves in pole-top applications. The finished application has a clean low profile, ensuring a very high quality final assembly.

The superlock range has the same full-rated strength of the stay wire and has been proven to operate under all conditions including high impact motor vehicle collisions.

Superlock fittings:

- will not deteriorate,
- replace cumbersome bolted methods,
- are high strength and impact resistant,
- are quickly and easily applied,
- are neat and cleanly finished.

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GSC-055	3/2.75	5.91	White
GSC-060	7/2.00	6.00	Yellow
GSC-075	7/2.50	7.50	Blue
GSC-083	7/2.75	8.25	White
GSC-100	7/3.25 19/2.00	10.00	Orange/Yellow
GSC-113	7/3.75	11.25	Black
GSC-120	7/4.00	12.00	Brown
GSC-138	19/2.75	13.75	White
GSC-163	19/3.25	16.25	Orange

SAFETY CONSIDERATIONS

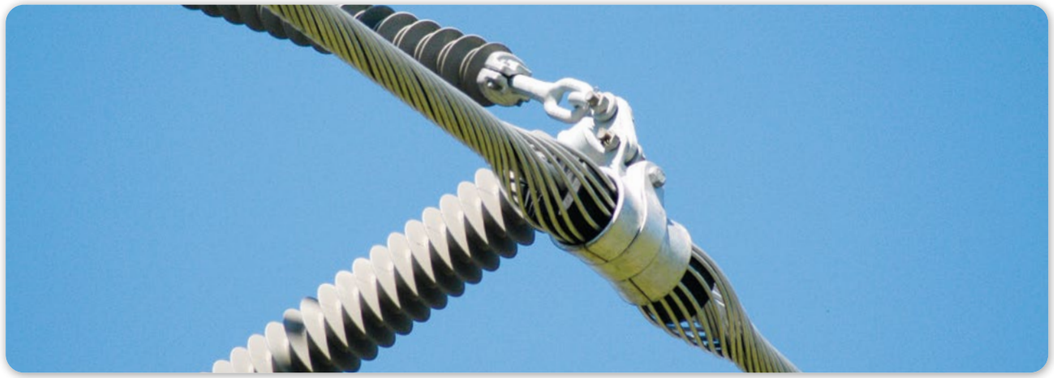
- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

Energy Distribution

Suspension & Support

“ PLP Australia has products for connection, termination, suspension, and protection. ”

General Information



The PLP ARMOR-GRIP® Suspension unit is intended for use on all material types and conductor constructions. It is designed to reduce the static and dynamic stresses at the support point so that the conductor is protected against the effects of conductor motion. It also protects the conductor in the support area against impulse and power flash-over arching.

The PLP ARMOR-GRIP® Suspension is superior to bolted alternating combinations for protecting conductors from bending, compression stress and abrasion.

Line Repairs

Where a conductor has been damaged by a bolted clamp, the PLP ARMOR-GRIP® Suspension can be used in the repair. All ARMOR-GRIP® Suspensions can be applied over preformed type armor rods to restore and extend the life of the conductor.

Line Angle

The maximum recommended line angle for a single support AGS is 30°. For angles between 30° and 60°, the ARMOR-GRIP® Suspension Double Assembly is recommended.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

ARMOR-GRIP®
Suspension

AGS 8 Series for AAC, AAAC, ACSR

AGS-8 Single

Part Number (Single Unit)	Part Number (Double Unit)	Conductor Diameter Range (mm)	Colour Code
AGS-8097	AGS-8797	6.90 - 7.19	Blue
AGS-8098	AGS-8798	7.20 - 7.49	Red
AGS-8099	AGS-8799	7.50 - 7.69	Blue
AGS-8100	AGS-8800	7.70 - 7.99	Brown
AGS-8101	AGS-8801	8.00 - 8.29	White
AGS-8102	AGS-8802	8.30 - 8.69	Orange
AGS-8103	AGS-8803	8.70 - 8.99	Black
AGS-8104	AGS-8804	9.00 - 9.49	Red
AGS-8105	AGS-8805	9.50 - 9.89	Orange
AGS-8106	AGS-8806	9.90 - 10.29	Blue
AGS-8107	AGS-8807	10.30 - 10.59	Brown
AGS-8108	AGS-8808	10.60 - 10.99	Green
AGS-8109	AGS-8809	11.00 - 11.39	Black
AGS-8110	AGS-8810	11.40 - 11.89	White
AGS-8111	AGS-8811	11.90 - 12.19	Green
AGS-8112	AGS-8812	12.20 - 12.80	Blue

Note: 80 and 81 are single units, 87 and 88 are double units, 8 Series use a 16 mm bolt and a pressed metal housing with aluminium rods.

AGS-8 Double

Double AGS Suspension is used where the turning angle is greater than 30° and up to 60°. A triangular Yoke Plate is used with Double AGS.

AGS 5 Series for AAC, AAAC, ACSR

AGS-51

Part Number (Single Unit)	Part Number (Double Unit)	Conductor Diameter Range (mm)	Colour Code
AGS-5102	AGS-5802	13.48 -13.77	Green
AGS-5103	AGS-5803	13.78 - 14.09	Brown
AGS-5104	AGS-5804	14.10 - 14.59	Blue
AGS-5105	AGS-5805	14.60 - 15.09	Red
AGS-5106	AGS-5806	15.10 - 15.39	Orange
AGS-5107	AGS-5807	15.40 - 15.79	Purple
AGS-5108	AGS-5808	15.80 - 16.39	Orange
AGS-5109	AGS-5809	16.40 - 17.09	Black
AGS-5110	AGS-5810	17.10 - 17.59	Blue
AGS-5111	AGS-5811	17.60 - 18.09	Yellow
AGS-5112	AGS-5812	18.10 - 18.59	Black
AGS-5113	AGS-5813	18.60 - 19.09	Black
AGS-5114	AGS-5814	19.10 - 19.59	White
AGS-5115	AGS-5815	19.60 - 20.19	Orange
AGS-5116	AGS-5816	20.20 - 20.99	Brown
AGS-5117	AGS-5817	21.00 - 21.49	Red
AGS-5118	AGS-5818	21.50 - 22.09	Blue
AGS-5119	AGS-5819	22.10 - 22.69	Green
AGS-5120	AGS-5820	22.70 - 23.09	Orange
AGS-5121	AGS-5821	23.10 - 23.39	Yellow
AGS-5122	AGS-5822	23.40 - 23.79	Black
AGS-5123	AGS-5823	23.80 - 24.39	White
AGS-5124	AGS-5824	24.40 - 25.09	Purple
AGS-5125	AGS-5825	25.10 - 25.54	Orange
AGS-5126	AGS-5826	25.55 - 25.99	Purple

For use on: ACSR, AAC, AAAC compacted all aluminium and compacted ACSR. Conductors above 12.8 mm in diameter. Right hand lay standard. 51 Series are single, 58 Series are double.

Note: Contact PLP for required bolt size. Available in M16, M18 and M20.

AGS-58

Double AGS Suspension is used where the turning angle is greater than 30° and up to 60°. A triangular Yoke Plate is used with Double AGS.

ARMOR-GRIP®
Suspension

AGS 6 Series – SC/AC

AGS-61

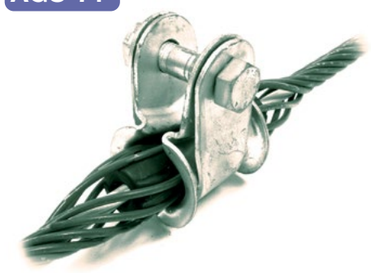
For use on SC/AC conductors. Left hand lay standard. 61 series are single. Contact PLP for other conductor sizes.

Part Number (Single Unit)	Part Number (Double Unit)	Conductor Stranding	Colour Code
AGS-6101-5	AGS-6801	7/2.75	White
AGS-6105	AGS-6805	7/3.25	Orange
AGS-6109	AGS-6809	7/3.75	Black
AGS-6112-16-2	-	7/4.25	Brown

Note: Contact PLP for AGS units to suit right hand lay conductors.

AGS 7 Series – Galvanised Steel SC/GZ

AGS-71



For use on Galvanised steel conductors. Right hand lay standard. 71 series are single, 78 series are double. Contact PLP for other conductor sizes.

Part Number (Single Unit)	Part Number (Double Unit)	Conductor Stranding	Colour Code
AGS-7101	AGS-7801	7/2.75	White
AGS-7105	AGS-7805	7/3.25	Orange
AGS-7106	AGS-7806	19/2.00	Yellow
AGS-7109	AGS-7809	7/3.75	Black

AGS 9 Series – Copper

AGS-91

For use on Copper conductors, right hand lay standard. 91 series are single. Contact PLP for double units.

Part Number	Conductor Stranding	Colour Code
AGS-9101	7/2.75	Blue
AGS-9105	7/1.62	Orange
AGS-9107	19/2.10	Orange
AGS-9109	7/2.00	
AGS-9110	19/2.33	Green
AGS-9112	7/2.64	Blue

ARMOR-GRIP® Support

ARMOR-GRIP® Support

AGS-52

The PLP ARMOR-GRIP® Support is intended for use on aluminium based conductors, and is designed to be used with clamp top horizontal and vertical line post insulators.

The PLP ARMOR-GRIP® Support is designed to reduce static and dynamic stress at the support point, so that the conductor is able to withstand the effect of vibration better than with armour clamp attachments.

PLP ARMOR-GRIP® Support protects against clamping fatigue through bending and compression stress and against flash over arcing.

Part Number	Typical Australian Conductors	Conductor Diameter Range (mm)	Colour Code
AGS-5258	7/2.50	7.50 - 7.69	Blue
AGS-5263	7/3.00	9.00 - 9.49	Red
AGS-5268	7/3.75	11.00 - 11.80	Black
AGS-5269		11.90 - 12.60	Green
AGS-5204	6/4.75/7/1.60	14.10-14.59	Blue
AGS-5205	7/4.75	14.60-15.09	Red
AGS-5206		15.10-15.39	Orange
AGS-5207		15.40-15.79	Purple
AGS-5208	19/3.25	15.80-16.39	Orange
AGS-5209		16.40-17.09	Blue
AGS-5210	30/7/2.50	17.17-17.59	Blue
AGS-5211		17.60-18.09	Yellow
AGS-5212		18.10-18.59	Black
AGS-5213	19/3.75	18.60-19.09	Black
AGS-5214		19.10-19.59	White
AGS-5215		19.60-20.19	Orange
AGS-5216		20.20-20.99	Brown
AGS-5217	30/7/3.00 37/3.00	21.00-21.49	Red
AGS-5218		21.50-22.09	Blue
AGS-5219		22.10-22.69	Green
AGS-5220	30/7/3.25	22.70-23.09	Orange
AGS-5221		23.10-22.69	Yellow
AGS-5222	19/4.75	23.40-23.79	Blue
AGS-5223		23.80-24.39	White
AGS-5224	30/7/3.50	24.40-25.09	Purple
AGS-5226		25.60-25.99	Purple
AGS-5227		26.00-26.49	Purple
AGS-5227	37/3.75	26.50-27.29	Black

Part Number	Typical Australian Conductors	Conductor Diameter Range (mm)	Colour Code
AGS-5228	54/7/3.00	26.50 - 27.29	Red
AGS-5229		27.30 - 26.69	Green
AGS-5230		27.70 - 28.39	Yellow
AGS-5231		28.40 - 28.89	Black
AGS-5232		28.90 - 29.29	Orange
AGS-5233	54/7/3.25	29.30 - 29.89	Brown
AGS-5234	61/3.25	29.90 - 30.69	Orange
AGS-5235		30.70 - 31.19	Purple
AGS-5236	54/7/3.50	31.20 - 31.99	Purple
AGS-5237		31.00 - 32.69	Blue
AGS-5238		32.70 - 33.39	Green
AGS-5239	54/3.75/19/2.25	33.40 - 34.39	Black
AGS-5240	61/3.75	34.40 - 35.39	Black
AGS-5241		35.40 - 35.99	White
AGS-5242		36.00 - 36.59	Brown
AGS-5243		36.60 - 37.49	Orange
AGS-5244		37.50 - 38.49	Purple
AGS-5245		38.50 - 39.59	Red
AGS-5246		39.60 - 40.19	Blue
AGS-5247		40.20 - 40.99	Green
AGS-5248		41.00 - 41.89	Yellow
AGS-5249	54/4.75/19/2.85	41.90 - 42.89	Blue
AGS-5250		42.90 - 43.89	White
AGS-5251		43.90-44.49	Brown
AGS-5252		44.50-45.49	Orange
AGS-5253		45.50-46.40	Purple

TWIN-GRIP®

For Steel Conductor SC/GZ

GTG

Note: Add part number AS-54-17 or AS-54-22 if sheave is required.

Standard part numbers (-54) are designed to suit 54 mm sheaves.

Contact PLP for other sizes.

The PLP TWIN-GRIP® is designed for SC/GZ for earth wire utilising the PLP aluminium sheave. The fitting is used at support positions and is designed to provide superior mechanical strength and resilience during conductor motion.

- Easy application.
- Long life.
- Positive grip.

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GTG-043-54	3/2.00	4.25	Yellow
GTG-048-54	7/1.60	4.80	Green
GTG-060-54	7/2.00	6.00	White
GTG-075-54	7/2.50	7.50	Blue
GTG-083-54	7/2.75	8.25	White
GTG-100-54	19/2.00 7/3.25	10.00 9.75	Yellow Orange
GTG-113-54	7/4.50	13.50	Green
GTG-138-54	19/2.75	13.75	White

For Aluminium Conductor

AWTG

Note: Add part number AS-54-17 or AS-54-22 if sheave is required.

Standard part numbers (-54) are designed to suit 54 mm sheaves.

Contact PLP for other sizes.

The PLP TWIN-GRIP® is designed to support ACSR and SC/AC utilising the PLP Aluminium Sheave. The fitting is designed to be used where a high level of mechanical strength is required. It provides resilience during conductor motion and unbalanced loads.

- Easy application.
- Long life.
- Positive grip.
- Filler rods can be supplied to allow a bond clamp to be attached for earthwire applications.

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AWTG-075-54	7/2.50	7.50	Blue
AWTG-083-54	7/2.75	8.25	White
AWTG-101-54	7/3.35	10.05	Orange
AWTG-113-54	7/3.75	11.25	Black
AWTG-135-54	7/4.50	13.50	Green
AWTG-163-54	19/3.25	16.25	Orange

Suspension Clamps

Suspension Trunnion Clamp

SCAT

Note: Trunnion only (used with support bracket)

PLP recommends the use of Armor Rods with all bolted suspension clamps as a minimum protection at a suspension point.

For aluminium based conductors. The clamp is made from cast aluminium with hot dip galvanised fasteners.

For Suspension assemblies including straps, add “-A” to the part number.

Part Number (Without Strap)	Part Number (With Strap)	Conductor Diameter (mm)
SCAT-1221	-	12.00 - 21.00
SCAT-L011421	-	13.00 - 35.00
SCAT-1520	-	15.00 - 20.00
SCAT-1628	SCAT-1628-A	16.00 - 28.00
SCAT-2838	SCAT-2838A	28.00 - 38.00
SCAT-4652	SCAT-4652-A	46.00 - 52.00

SCAT

Note: Trunnion assembly (with strap)

Offset Suspension Clamp

SCIO

Manufactured from cast iron and hot dipped.
For use on copper and SC/GZ.

Part Number	Conductor Diameter (mm)
SCIO-0517	5.00 - 17.00
SCIO-1727	17.00 - 27.00

Note: Add suffix A to include Socket Clevis.

Suspension Clamps

Clevis Suspension Clamps for Aluminium Based Conductors

ACC

Materials: Aluminium alloy body.

Hardware: Galvanised steel.

Part Number	Minimum Failing Load (kN)	Dimensions		Conductor Diameter Range (mm)	Hardware
		A	B		
ACC0721H	44	152	62	7-21	Hex Pin
ACC0721A	44	152	62	7-21	Bolt
ACC0721Q	44	152	62	7-21	Rivet
ACC1723A	40	200	76	12-28	Bolt
ACC2032A	70	230	84	20-32	Bolt
ACC2032H	70	230	84	20-32	Hex Pin

Note: Diameter allowance should be made for Heliformed® rods if required. Other sizes also available.

Clevis Suspension Clamps for Steel or Copper Conductors

SCC

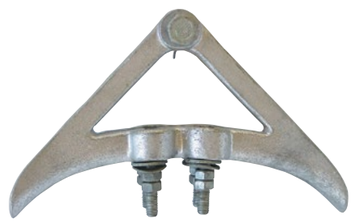
Materials: Cast iron body, hot dipped galvanised.

Hardware: Galvanised steel.

Part Number	Minimum Failing Load (kN)	Dimensions		Conductor Diameter Range (mm)	Hardware
		A	B		
SCC0615H	24	152	71	6 - 15	Hex Pin
SCC0615A	24	152	71	6 - 15	Bolt
SCC0615Q	24	152	71	6 - 15	Rivet

Aluminium Angle Clamp for Aluminium Based Conductors

AAC



Materials: Aluminium alloy body.

Hardware: Galvanised steel.

Part Number	Minimum Failing Load (kN)	Dimensions		Conductor Diameter Range (mm)	Hardware
		A	B		
AAC0616A	34	280	103	6 - 16	Bolt
AAC1025A	34	330	130	16 - 25	Bolt
AAC1025H	34	330	130	16 - 25	Hex Pin

CONTENTS

Distribution Tie

General Information

Distribution Ties are designed and manufactured to secure conductors in the top groove of insulators.

Distribution Ties provide an improved method of securing conductors compared to hand ties. Distribution Ties provide superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation, high frequency aeolian vibration and galloping.

The neoprene component surrounds the bare conductor with a resilient cushioning where the conductor would come into contact with the insulator and with the centre section of the tie.

In the case of Distribution Ties being applied over Armor Rods, the tube is not necessary as contact with the bare conductor is prevented by the Armor Rod.

On vertically mounted insulators, Distribution Ties can normally accommodate line angles of up to 10° depending on insulator orientation. In all cases the conductor should rest in the preferred insulator groove, independently of the tie, so the tie is not required to force the conductor to remain in the groove.

If an impact load is applied to one side of the insulator and then released, the distribution ties retains a memory and will return to its original position.

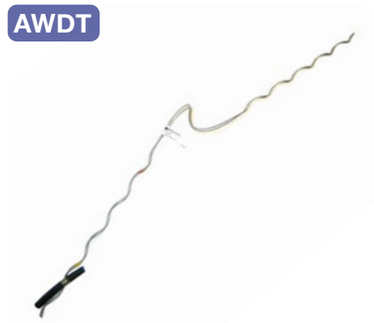
SAFETY CONSIDERATIONS

- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact.
- For proper performance and personal safety, be sure to select
- the proper size PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

Distribution Tie

For Aluminium Based Conductors AAC, AAAC and ACSR

AWDT



Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number	Conductor Diameter Range (mm)	Colour Code
AWDT-053-76	4.80 - 5.49	Purple
AWDT-060-76	5.50 - 6.19	White
AWDT-068-76	6.50 - 7.03	Brown
AWDT-075-76	7.04 - 7.99	Blue
AWDT-090-76	8.00 - 9.06	Red
AWDT-102-76	9.07 - 10.29	Purple
AWDT-113-76	10.30 - 11.65	Black
AWDT-125-76	11.66 - 13.19	Red
AWDT-140-76	13.20 - 14.99	Blue
AWDT-163-76	15.00 - 17.19	Orange
AWDT-180-76	17.20 - 19.19	Black
AWDT-210-76	19.20 - 21.60	Red
AWDT-220-76	21.70 - 22.59	Green
AWDT-240-76	22.60 - 24.59	Blue
AWDT-255-76	24.60 - 25.60	Orange
AWDT-270-76	27.00 - 27.50	Red
AWDT-290-76	27.80 - 31.40	Black

For Galvanised Conductors – SC/GZ

GDT

Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number	Conductor Stranding	Conductor Diameter (mm)
GDT-043-76	3/2.00	4.31
GDT-048-76	7/1.60	4.80
GDT-055-76	3/2.75	5.93
GDT-060-76	7/2.00	6.00
GDT-083-76	7/2.75	8.25
GDT-090-76	7/3.25	9.00
GDT-102-76	7/3.25 19/2.00	9.75 10.00
GDT-113-76	7/3.75	11.30
GDT-120-76	7/4.00	12.00
GDT-138-76	19/2.75	13.80
GDT-145-76	19/2.90	14.50
GDT-150-76	19/3.00	15.00
GDT-163-76	19/3.25	16.30

CONTENTS

Distribution Tie

For Aluminium Based Conductors AAC, AAAC and ACSR over Armoured Conductor

AWDT

These Distribution Ties are designed to be applied over PLP PREFORMED™ Armor Rods. They are the preferred package for the support point on medium to long spans in distribution and medium voltage line designs.

The package gives maximum protection and holding capacity at the support point, where wind sway or arc-over could be considered a problem.

Where there is a known vibration issue, it is recommended that a PLP Spiral Vibration Damper (SVD) be installed.

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number (Distribution Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
AWDT-113A-76	AAR-053	7/1.75	5.25
AWDT-125A-76	AAR-063	7/2.00	6.00
AWDT-140A-76	AAR-075	7/2.50	7.50
AWDT-163A-76	AAR-090	7/3.00	9.00
AWDT-210A-76	AAR-113	7/3.75	11.25
AWDT-220A-76	AAR-135	7/4.50	13.50
AWDT-240A-76	AAR-143	7/4.75	14.25
AWDT-255A-76	AAR-163	19/3.25	16.25
AWDT-270A-76	AAR-175	30/7/2.50	17.50
AWDT-290A-76	AAR-188	19/3.75	18.75

Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Note: Typical Armor-Rods to be used with the below ties.

For Galvanised Conductors – SC/GZ over Armoured Conductor

GDT

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number (Distribution Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
GDT-102A-76	GAR-055	3/2.75	5.93
GDT-104A-76	GAR-060	7/2.00	6.00
GDT-125A-76	GAR-075	7/2.50	7.50
GDT-163A-76	GAR-100	7/3.25	9.75

Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Note: Typical Armor-Rods to be used with the below ties.

Side Tie

General Information

Side Ties are designed and manufactured to secure conductors to the side groove of the insulator. Side Ties provide an improved method of securing conductors compared to hand ties. Side Ties provide superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation, high frequency aeolian vibration and galloping.

The neoprene component surrounds the bare conductor with a resilient cushioning where the conductor would come into contact with the insulator and with the centre section of the tie. In the case of Side Ties being applied over Armor Rods, the tube can be disposed of, as contact with the bare conductor is prevented by the Armor Rod.

On vertically mounted insulators, Side Ties can normally accommodate line angles of up to 40° depending on the angle of the insulator and orientation. In all cases the conductor should rest in the insulator groove, independently of the tie, so the tie is not required to force the conductor to remain in the groove.

If an impact load is applied to one side of the insulator and then released, the side tie retains a memory and will return to its original position.

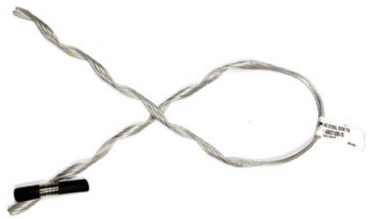
SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

Side Tie

For AAC, AAAC and ACSR over Bare Conductor

AWST



Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number	Conductor Diameter Range (mm)	Colour Code
AWST-053-76	4.80 - 5.49	Purple
AWST-060-76	5.50 - 6.19	Brown
AWST-068-76	6.20 - 7.03	Brown
AWST-075-76	7.04 - 7.99	Blue
AWST-090-76	8.00 - 9.06	Red
AWST-102-76	9.07 - 10.29	Purple
AWST-113-76	10.30 - 11.65	Purple
AWST-125-76	11.66 - 13.19	Orange
AWST-140-76	13.20 - 14.99	Blue
AWST-163-76	15.00 - 17.19	Orange
AWST-180-76	17.20 - 19.19	Black
AWST-210-76	19.20 - 21.69	Red
AWST-220-76	21.70 - 22.59	Green
AWST-240-76	22.60 - 24.59	Red
AWST-255-76	24.60 - 25.60	Orange
AWST-290-76	27.80 - 31.40	Black

For SC/GZ Conductors over Bare Conductor

GST

Insulator Colour Codes:
54 mm neck - Red
76 mm neck – Yellow
112 mm neck – Blue

These Side Ties are designed to be applied over PREFORMED™ Armor Rods. These are the preferred package for the support point on medium to long spans in distribution and medium voltage line designs. The package gives maximum protection and holding capacity at the support point, where wind sway or arc-over could be considered a problem.

Fittings to suit 76 mm and 112 mm neck insulators are available, substitute suffix -54 for -76 or 112 respectively.

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GST-043-54	3/2.00	4.31	Yellow
GST-048-54	7/1.60	4.80	Black
GST-055-54	3/2.75	5.93	White
GST-060-54	3/2.75 7/2.00	5.91 6.00	White Yellow
GST-083-54	7/2.75	8.25	White
GST-098-54	7/3.25	9.75	Orange
GST-102-54	19/2.00	10.00	Yellow
GST-113-54	7/3.75	11.30	Black
GST-120-54	7/4.00	12.00	Black
GST-138-54	19/2.75	13.80	White

CONTENTS

Side Tie

For AAC, AAAC and ACSR over Armoured conductor

AWST

Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Insulator Colour Codes:
76 mm neck – Yellow
112 mm neck – Blue

Fittings to suit 112 mm neck insulators are available, substitute suffix -76 for -112.

Part Number (Side Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
AWST-113A-76	AAR-053	7/1.75	5.25
AWST-125A-76	AAR-063	7/2.00	6.00
AWST-140A-76	AAR-075	7/2.50	7.50
AWST-163A-76	AAR-090	7/3.00	9.00
AWST-210A-76	AAR-113	7/3.75	11.25
AWST-220A-76	AAR-135	7/4.50	13.50
AWST-240A-76	AAR-143	7/4.75	14.25
AWST-255A-76	AAR-163	19/3.25	16.25
AWST-270A-76	AAR-175	30/7/2.50	17.50
AWST-290A-76	AAR-188	19/3.75	18.75

Note: Typical Armor-Rods to be used with the below ties.

For Galvanised Steel Conductors (SC/GZ)

GST

Note: The range of a tie for armoured conductor is the diameter with armouring not the bare conductor.

Insulator Colour Codes:
54 mm neck - Red
76 mm neck – Yellow
112 mm neck – Blue

Fittings to suit 76 mm and 112 mm neck insulators are available, substitute suffix -54 for -76 or -112 respectively.

Part Number (Side Tie)	Part Number (Armor Rods)	Conductor Stranding	Conductor Diameter (mm)
GST-083A-54	GAR-038	3/2.00	4.31
GST-090A-54	GAR-043	7/1.60	4.80
GST-102A-54	GAR-055	3/2.75	5.93
GST-104A-54	GAR-060	7/2.00	6.00
GST-138A-54	GAR-083	3/4/2.50	7.50
GST-160A-54	GAR-098 GAR-100	7/3.25 19/2.00	9.75 10.00

Note: Typical Armor-Rods to be used with the below ties.

Covered Conductor Ties

Plastic Angled Tie for Covered Conductors

SSF

The plastic angle Side Tie is used with pin type or post type on cross-arms. Alternatively it may be used with pole top mounted insulators and side mounted insulators on armless construction. Turning angles from 11° to 40° are recommended.

Part Number	Conductor Diameter Range (mm)	Neck Diameter (mm)
SSF-2201sc	13.73 - 18.54	73
SSF-2202sc	18.55 - 23.37	73
SSF-2203sc	23.38 - 27.94	73
SSF-2204sc	27.95 - 33.00	73

Non Metallic Helical Top and Side Ties (CCT)

At suspension locations, whether they be at pin or post type insulators, a series of non metallic top and side ties are available. The ties are installed over the insulation of the conductor, and therefore stripping is not required.

Ties are manufactured from UV stabilised PVC and are available for 76 mm insulator neck size. Ties are easily applied by hand, as with other helical ties. Ties are suitable for angular deviations up to 30 degrees. The standard colour is grey and ties are available in a colour to suit the conductor insulation.

PST

Part Number (Side Ties Deadend)	Cable Size (mm^2)	Voltage kV	Cable Outer Diameter (mm)
PST14307G	80	11	17.9 - 19.4
PST18307G	120	11	20.9 - 22.4
PST23407G	180	11	24.1 - 25.7

PTT

Part Number (Top Tie)	Cable Size (mm^2)	Voltage kV	Cable Outer Diameter (mm)
PTT14307G	80	11	17.9 - 19.4
PTT18307G	120	11	20.9 - 22.4
PTT23407G	180	11	24.1 - 25.7

SAFETY CONSIDERATIONS

- **Intended Use:** Plastic Line Ties and Plastic Side Ties are intended for use with plastic jacketed conductors. Consult PLP about voltage limitations with Plastic Ties.
- **Caution:** Plastic Line Ties and Plastic Side Ties are intended for use on lines which have been designed electrically for jacketed conductors and insulated ties. Under certain field conditions, burning and tracking may occur on the tie; therefore, the product must be evaluated by the intended user to determine if it is suitable for use in a particular area.
- **Mechanical:** Testing has shown Plastic Line Ties and Plastic Side Ties will develop unbalanced and lift-off loads equivalent to, or in excess of, a well-made hand tie over jacketed conductor.
- **Caution:** The performance of plastic ties is significantly influenced by the line design and the environmental conditions; consequently, under certain situations tracking can occur. The individual utility must determine if the product is safe for their intended use.

PREFORMED™ Tygard

Galvanised Steel Tygard for Earthwire

GTY

The PREFORMED™ Tygard is designed for earthwire connections at suspension points. It is constructed from galvanised steel and utilises the cast iron sheave.

The product provides superior mechanical strength during conductor motion. The fitting can be used with or without filler rods. The filler rods are utilised where an earth-bonding connection is required.

Part Number (Without Filler Rods)	Conductor Stranding	Colour code
GTY-083-54	7/2.75	White
GTY-098-54	7/3.25	Orange
GTY-113-54	7/3.75	Black
GTY-120-54	7/4.00	Black
GTY-140-54	19/2.75	White
GTY-150-54	7/3.25	Orange
GTY-163-54	19/3.25	Red

PREFORMED™ Lashing Rod



Lashing Rod

GLR

PREFORMED™ Lashing Rods can be used on all types of messengered overhead cables. They are particularly adaptable to spans obstructed by trees, short spans over traffic intersections, or repairing existing installations.

Once applied they provide a permanently snug and secure fit. The factory preformed helical rods are low cost with simple installation that requires no special tools or lashing machines.

Part Number (Standard)	Part Number (Coated)	Conductor Diameter Range (mm)	Colour Code
GLR-10-11	GLR-10-11C	10.00 - 11.00	Yellow
GLR-15-17	GLR-15-17C	15.00 - 17.00	Red
GLR-171190	GLR-171190C	17.10 - 19.00	Black
GLR-191213	GLR-191213C	19.10 - 21.30	Red
GLR-214239	GLR-214239C	21.40 - 23.90	White
GLR-240266	GLR-240266C	24.00 - 26.60	Orange
GLR-267297	GLR-267297C	26.70 - 29.70	Green
GLR-298332	GLR-298332C	29.80 - 33.20	Yellow
GLR-333371	GLR-333371C	33.30 - 37.10	Purple
GLR-372414	GLR-372414C	37.20 - 41.40	Red
GLR-415462	GLR-415462C	41.50 - 46.20	White
GLR-463518	GLR-463518C	46.30 - 51.80	Orange

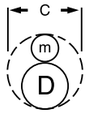
Size Selection

In selecting the proper size lashing rod it is necessary to determine the smallest circumscribing circle that will enclose the messenger and cables.

For most installations, one Lashing Rod is required, overlapping one pitch length with each successive rod.

Two Lashing Rods, applied 180° apart, are recommended when the cable-messenger assembly weighs more than 12 kg per metre, or at installation where the angle of sag exceeds 20° from the horizontal.

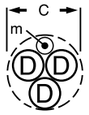
One Cable



For grouping one cable with a messenger, add the diameters and multiply by a factor of 0.850.

C = (D + m) x 0.85

Three Cables



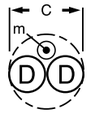
For grouping three equal diameter cables; multiply the diameter of one cable by a factor of 2.155. Then to find the diameter of the maximum messenger that will fit in the interstices of the cables, multiply the diameter of one cable by a factor of 0.483.

C = D x 2.155
m = D x 0.483

Unequal Diameter Cables

For grouping unequal diameter cables, or messengers too large to fit into the interstices above, the minimum diameter grouping can best be determined by a graphic layout to scale.

Two Cables

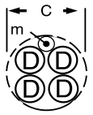


For grouping two equal diameter cables; multiply the diameter of one cable by a factor of 2.00.

Then find the diameter of the maximum messenger that will fit in the interstices of the cables, and multiply the diameter of one cable by a factor of 0.666.

C = D x 2.00
m = D x 0.666

Four Cables



For grouping four equal diameter cables; multiply the diameter of one cable by a factor of 2.414.

Then find the diameter of the maximum messenger that will fit in the interstices of the cables, multiply the diameter of one cable by a factor of 0.414.

C = D x 2.414
m = D x 0.414

Energy Distribution
Jointing

“ PLP Australia supplies a large range of protective fittings for the distribution network. ”

General Information

Whenever two ends of a wire or a strand are to be joined, or a damaged area is to be restored to give the full and original mechanical and electrical properties, a PREFORMED™ Splice is the answer. It offers one of the most economical and highly efficient conductor splicing methods.

A PREFORMED™ Splice has the best obtainable combinations of mechanical and electrical properties for its application.

On all-aluminium, aluminium alloy and copper conductors of homogeneous stranding, a PREFORMED™ Splice will hold a minimum of 90% of the rated breaking strength.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

For AAC, AAAC and Smaller Ø ACSR Conductors

AFS

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AFS-053	7/1.75	5.25	Purple
AFS-068	7/2.25	6.75	Brown
AFS-075	7/2.50	7.50	Blue
AFS-078	7/2.60	7.80	Orange
AFS-083	7/2.75	8.25	Red
AFS-090	7/3.00	9.00	Red
AFS-090-AW	4/3/3.00	9.00	Red
AFS-102	7/3.40	10.20	Purple
AFS-105	19/2.10	10.50	Blue
AFS-113	7/3.75	11.25	Black
AFS-113-AW	4/3/3.75	11.25	Black
AFS-135	7/4.50	13.50	Green
AFS-143	7/4.75	14.25	Blue
AFS-163	19/3.25	16.25	Orange
AFS-175	37/2.50	17.50	Blue
AFS-188	19/3.75	18.75	Black
AFS-210	37/3.00	21.00	Red
AFS-238	19/4.75	23.75	Blue

Note: Contact PLP for ACSR suitability.

For ACSR Conductors – Multi piece

FTS

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour code
FTS-071	6/1/2.36	7.08	Black
FTS-100	12/7/2.00	10.00	Yellow
FTS-113	6/1/3.75	11.25	Black
FTS-117	12/7/2.34	11.70	Brown
FTS-125	12/7/2.50	12.50	Blue
FTS-143	6/4.75/7/1.60	14.30	Blue
FTS-146	7/4.39/7/1.93	14.60	Blue
FTS-150	12/7/3.00	15.00	Red
FTS-155	18/1/3.09	15.50	Black
FTS-157	26/2.54/7/1.91	15.90	Blue
FTS-175	30/7/2.50	17.50	Blue
FTS-181	30/7/2.59	18.13	Blue
FTS-193	18/1/3.86	19.30	Black
FTS-199	26/3.14/7/2.44	19.90	Brown
FTS-210	30/7/3.00	21.00	Red
FTS-245	30/7/3.50	24.50	Purple

Note: An FTS is a full-tension fitting and will hold 100% of the conductor UTS.

PREFORMED™ Splice

For Galvanised Steel Conductor – SC/GZ

GFS

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GFS-025	1/2.50	2.50	Blue
GFS-038	7/1.25	3.80	Green
GFS-040	1/4.00	4.00	Brown
GFS-043	3/2.00	4.30	Yellow
GFS-048	7/1.60	4.80	Black
GFS-055	3/2.75	5.91	White
GFS-060	7/2.00	6.00	Yellow
GFS-075	7/2.50	7.50	Blue
GFS-083	7/2.75	8.30	White
GFS-100	7/3.25 19/2.00	9.75 10.00	Orange Yellow
GFS-113	7/3.75	11.30	Black
GFS-120	7/4.00	12.00	Black
GFS-138	19/2.75	13.80	White
GFS-163	19/3.25	16.30	Orange

For SC/AC Conductors – Left Hand Lay Standard

AWFS

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AWFS-K023	3/2.75	5.91	White
AWFS-K032	3/3.25	6.98	Orange
AWFS-K040	3/3.75	8.06	Black
AWFS-K050	7/2.75	8.25	White
AWFS-K070	7/3.25	9.75	Orange
AWFS-K088	7/3.75	11.25	Black
AWFS-K106	7/4.25	12.75	Brown
AWFS-K136	19/2.75	13.75	White

Note: Contact PLP for splices to suit right hand lay conductors.

CONTENTS

PREFORMED™ Splice

For Copper Conductor – Right Hand Lay Standard

CFS

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
CFS-038	7/1.25	3.75	Green
CFS-043	3/2.00	4.30	Yellow
CFS-048	7/1.63	4.80	Black
CFS-053	7/1.75	5.25	Purple
CFS-060	7/2.00	6.00	Yellow
CFS-066	7/2.21	6.60	Brown
CFS-075	7/2.50	7.50	Blue
CFS-083	7/2.75	8.25	White
CFS-088	19/1.75	8.75	Purple
CFS-096	7/3.25	9.60	Orange
CFS-100	19/2.00	10.00	Yellow
CFS-105	7/3.50	10.50	Purple
CFS-113	7/3.75	11.30	Black
CFS-117	19/2.34	11.68	Brown
CFS-123	37/1.25	12.25	Purple
CFS-125	19/2.56 37/1.75	12.80 12.25	Purple
CFS-138	19/2.75	13.75	White
CFS-150	19/3.00	15.00	Red
CFS-158	37/2.25	15.75	Brown
CFS-175	37/2.50	17.50	Blue
CFS-183	37/2.62	18.31	Blue
CFS-193	37/2.75	19.25	White
CFS-210	37/3.00	21.00	Red
CFS-235	37/3.35	23.47	Orange

Note: Cad copper conductors are left hand lay and require LHL splices. Contact PLP for further information and other available sizes.

Compression Sleeves

Non Tension – AAC, AAAC and ACSR

CMNT

- Tubular aluminium alloy.
- Pre-packed with jointing compound.
- Individually packed in sealed plastic bags.
- Suitable for overhead and underground joints in industrial or commercial situations.
- Suitable for AAC, AAAC and ACSR.
- Use hexagonal crimp.

Part Number	Conductor Code	Conductor Type	Conductor Stranding	A/F Die Size (mm)
CMNT36	Leo Chlorine Almond Raisin	AAC AAAC ACSR ACSR	7/2.50 7/2.50 6/1/2.50 3/4/2.50	14
CMNT44	Libra Fluorine Sultana	AAC AAAC ACSR	7/3.00 7/3.00 4/3/3.00	18
CMNT50	Mars Helium Banana Walnut	AAC AAAC ACSR ACSR	7/3.75 7/3.75 6/1/3.73 4/3/3.75	18
CMNT61	Mercury Hydrogen Moon Iodine Cherry	AAC AAAC AAC AAAC ACSR	7/4.50 7/4.50 7/4.75 7/4.75 6/4.75/7/1.6	22
CMNT68	Neptune Krypton	AAC AAAC	19/3.25 19/3.25	22

For SC/AC and SC/GZ

CMS

Made from 304 stainless steel, these are single piece fittings for SC/AC and SC/GZ conductors.

Designed and manufactured to meet Australian Standards, each fitting is stamped according to conductor stranding size and the recommended compression die A/F size.

Part Number	Conductor Stranding
CMS-083-1	7/2.75
CMS-098-1	7/3.25
CMS-105-1	19/2.00
CMS-113-1	7/3.75
CMS-128-1	7/4.25

Compression Sleeves

Full Tension – AAC, AAAC and ACSR*

CMFT

- PLP FT fittings have been designed to suit AAC and AAAC distribution lines up to 66kV to give full tension under load to AS1154.
- The FTA sleeves are suitable for ACSR but as a limited tension fitting carrying a maximum of 50% of the conductor UTS.
- Pre-packed with jointing compound, individually packed in sealed plastic bags.
- Suitable for AAC, AAAC and ACSR.
- Uses hexagonal dies.

Part Number	Conductor Code	Conductor Type	Conductor Stranding	A/F Die Size (mm)
CMFT36A	Leo Chlorine Almond* Angling*	AAC AAAC ACSR ACSR	7/2.50 7/2.50 6/1/2.50 6/1/2.50	14
CMFT44A	Libra Fluorine Apricot* Apple* Archery*	AAC AAAC ACSR ACSR ACSR	7/3.00 7/3.00 6/1/2.75 6/1/3.00 6/1/3.00	18
CMFT50A	Mars Helium Banana* Cherry* Bowls* Baseball*	AAC AAAC ACSR ACSR ACSR ACSR	7/3.75 7/3.75 6/1/3.75 6/4.75/7/1.60 6/4.75/7/1.60 6/1/3.75	18
CMFT61A	Mercury Hydrogen Moon Iodine	AAC AAAC AAC AAAC	7/4.50 7/4.50 7/4.75 7/4.75	22
CMFT68A	Neptune Krypton	AAC AAAC	19/3.25 19/3.25	22

Note: * 50% U.T.S. for ACSR conductors.

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Energy Distribution

Protection

“ PLP engineers and manufactures a wide range of protective fittings for the distribution network. ”

General Information

PREFORMED™ Armor Rods protect against bending, abrasion, compression, arc-over whilst also being capable of providing a repair function. Armor rods are recommended as a minimum protection for clamp type supports or suspension.

The degree of protection needed on a specific line depends upon a number of factors such as line design, temperature, tension, exposure to wind flow and vibration history on a similar construction in the same area.

Armor Rods may be used to restore full conductance and strength to AAC, AAAC and ACSR conductors, except high strength ACSR, where damage does not exceed 50% damage for 7 and 19 strand conductors or 25% damage for 37 and 61 strand conductors.

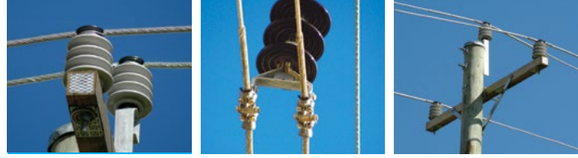
PREFORMED™ Armor Rods are extremely effective in relieving or suppressing conductor strains and therefore extending conductor service life.

PREFORMED™ Armor Rods are chamfered and over a certain size are ball ended to create a smooth uniformed finish to minimise corona.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

PREFORMED™
Armor Rods



For AAC, AAAC and ACSR Conductors

AAR

Part Number	Conductor Diameter Range (mm)	Colour Code
AAR-053	5.10 - 5.49	Purple
AAR-059	5.50 - 5.99	Red
AAR-063	6.00 - 6.39	Green
AAR-068	6.40 - 6.99	Brown
AAR-075	7.00 - 7.59	Blue
AAR-078	7.60 - 7.99	Orange
AAR-084	8.00 - 8.49	White
AAR-087	8.50 - 8.84	Blue
AAR-090	8.85 - 9.39	Red
AAR-096	9.40 - 9.89	Orange
AAR-102	9.90 - 10.39	Purple
AAR-105	10.40 - 10.89	Blue
AAR-113	10.90 - 11.59	Black
AAR-118	11.60 - 12.19	Orange
AAR-125	12.20 - 12.69	Blue
AAR-130	12.70 - 13.19	White
AAR-135	13.20 - 13.99	Green
AAR-143	14.00 - 14.89	Blue
AAR-157	14.90 - 15.89	Purple
AAR-163	15.90 - 16.64	Orange
AAR-169	16.65 - 17.39	Green
AAR-175	17.40 - 18.29	Blue
AAR-188	18.30 - 18.89	Black
AAR-192	18.90 - 19.49	Yellow
AAR-196	19.50 - 19.89	Brown
AAR-201	19.90 - 21.40	Red
AAR-210	20.90 - 21.79	Red
AAR-220	21.80 - 22.59	Blue
AAR-230	22.60 - 23.59	Blue
AAR-240	23.60 - 24.79	Blue

PREFORMED™ Armor Rods Subsetted

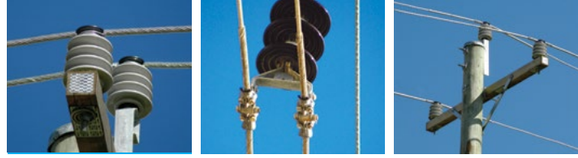
For AAC, AAAC and ACSR Conductors

AARS

AARS Rods are subset for quick and easy installation by a linesman. Subsetting greatly reduces installation time and ensures that the correct number of armor rods are applied.

Part Number	Conductor Diameter Range (mm)	Colour Code
AARS-053	5.10 - 5.49	Purple
AARS-059	5.50 - 5.99	Red
AARS-063	6.00 - 6.39	Green
AARS-068	6.40 - 6.99	Brown
AARS-075	7.00 - 7.59	Blue
AARS-078	7.60 - 7.99	Orange
AARS-084	8.00 - 8.49	White
AARS-087	8.50 - 8.84	Blue
AARS-090	8.85 - 9.39	Red
AARS-096	9.40 - 9.89	Orange
AARS-102	9.90 - 10.39	Purple
AARS-105	10.40 - 10.89	Blue
AARS-113	10.90 - 11.59	Black
AARS-118	11.60 - 12.19	Orange
AARS-125	12.20 - 12.69	Blue
AARS-130	12.70 - 13.19	White
AARS-135	13.20 - 13.99	Green
AARS-143	14.00 - 14.89	Blue
AARS-157	14.90 - 15.89	Purple
AARS-163	15.90 - 16.64	Orange
AARS-169	16.65 - 17.39	Green
AARS-175	17.40 - 18.29	Blue
AARS-188	18.30 - 18.89	Black
AARS-192	18.90 - 19.49	Yellow
AARS-196	19.50 - 19.89	Brown
AARS-201	19.90 - 21.40	Red
AARS-210	20.90 - 21.79	Red
AARS-220	21.80 - 22.59	Blue
AARS-230	22.60 - 23.59	Blue
AARS-240	23.60 - 24.79	Blue

PREFORMED™ Armor Rods



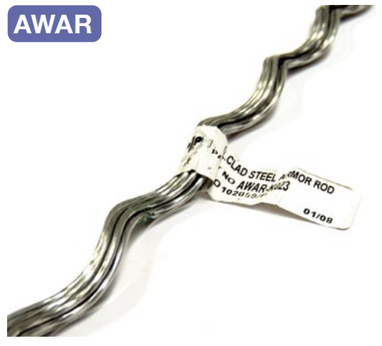
For Galvanised Steel Conductors SC/GZ

GAR

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
GAR-038	7/1.25	3.75	Green
GAR-043	3/2.00	4.31	Yellow
GAR-048	7/1.60	4.80	Black
GAR-055	3/2.75	5.93	White
GAR-060	7/2.00	6.00	Yellow
GAR-075	3/4/2.50	7.50	Blue
GAR-083	7/2.75	8.25	White
GAR-098	7/3.25	9.75	Blue
GAR-100	19/2.00	10.00	Yellow
GAR-113	7/3.75	11.30	Black
GAR-120	7/4.00	12.00	Black
GAR-138	19/2.75	13.80	White
GAR-163	19/3.75	16.30	Orange

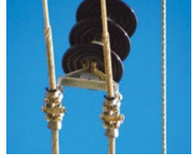
For SC/AC Conductors – Left Hand Lay Standard

AWAR



Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
AWAR-K023	3/2.75	5.93	White
AWAR-K031	3/3.25	7.00	Orange
AWAR-K040	3/3.75	8.00	Black
AWAR-K050	7/2.75	8.25	White
AWAR-K106	7/4.25	12.80	Brown
AWAR-K136	19/2.75	13.80	White

PREFORMED™ Armor Rods

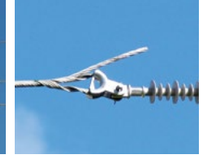




For Copper Conductor

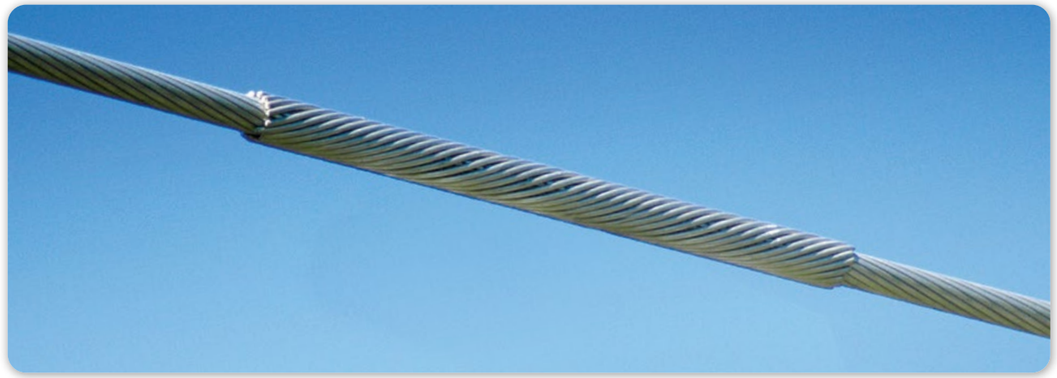
CAR

Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
CAR-030	7/1.00	3.00	Black
CAR-038	7/1.25	3.75	Green
CAR-053	7/1.75	5.25	Purple
CAR-060	7/2.00	6.00	Yellow
CAR-083	7/2.75	8.25	White
CAR-088	19/1.75	8.75	Purple
CAR-090	7/3.00	9.00	Red
CAR-100	19/2.00	10.00	Yellow
CAR-105	7/3.50	10.50	Purple
CAR-118	19/0.92	11.80	Black
CAR-123	37/1.25	12.25	Green
CAR-125	19/2.57	12.85	Blue/Purple
CAR-138	19/2.75	13.75	White
CAR-150	19/3.00	15.00	Red
CAR-175	19/3.50	17.50	Purple
CAR-183	37/2.62	18.30	Blue

PREFORMED™ Lineguards


General Information



PREFORMED™ Lineguards provide economical conductor protection at points of support and taps in urban distribution systems where low working tensions and short conductor spans are common. They are also cost-effective and virtually eliminate the possibility of conductor mechanical failure at support points.

PREFORMED™ Lineguards are intended to protect against abrasion, arc-over and may be used as patch rods designed to restore full conductivity and strength to conductors where damage is located outside the support area and does not exceed 25% of the outer strand layer.

PREFORMED™ Lineguards are recommended as a minimum protection for hand-tied insulators and may be used as tap armour to protect conductors from wear and flash-over damage under hot-line taps.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

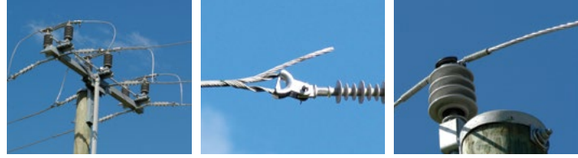
PREFORMED™ Lineguards

For AAC, AAAC, and ACSR

ALG

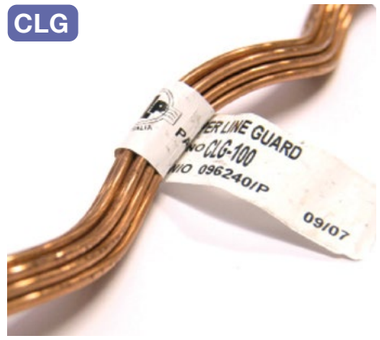
Part Number	Conductor Diameter Range (mm)	Colour Code
ALG-059	5.50 - 5.90	Red
ALG-063	6.00 - 6.39	Green
ALG-068	6.40 - 6.99	Brown
ALG-075	7.00 - 7.59	Blue
ALG-078	7.60 - 8.84	Orange
ALG-083	8.10 - 8.84	Red
ALG-090	8.85 - 9.39	Red
ALG-096	9.40 - 9.89	Yellow
ALG-102	9.90 - 10.39	Purple
ALG-105	10.40 - 10.89	Blue
ALG-113	10.90 - 11.59	Black
ALG-118	11.60 - 12.19	Orange
ALG-125	12.20 - 12.69	Blue
ALG-130	12.70 - 13.19	White
ALG-135	13.20 - 13.99	Green
ALG-143	14.00 - 14.89	Blue
ALG-150	14.90 - 15.39	Orange
ALG-157	15.40 - 15.89	Yellow
ALG-163	15.90 - 16.64	Orange
ALG-169	16.65 - 17.39	Green
ALG-175	17.40 - 18.29	Blue
ALG-188	18.30 - 18.89	Black
ALG-192	18.90 - 19.49	Yellow
ALG-196	19.50 - 19.99	Brown
ALG-201	20.00 - 20.89	Orange
ALG-210	20.90 - 21.79	Red
ALG-220	21.80 - 22.59	Yellow
ALG-230	22.60 - 23.59	Orange
ALG-240	23.60 - 24.79	Blue

PREFORMED™ Lineguards



Copper Lineguards

CLG



Part Number	Conductor Stranding	Conductor Diameter (mm)	Colour Code
CLG-060	7/2.00	6.00	Yellow
CLG-075	7/2.50	7.50	Blue
CLG-083	7/2.75	8.25	Red
CLG-088	19/1.75	8.75	Purple
CLG-100	19/2.00	10.00	Yellow
CLG-105	7/3.50	10.50	Purple
CLG-125	19/2.57	12.85	Purple
CLG-138	19/2.75	13.75	White
CLG-150	19/3.00	15.00	Red
CLG-166	37/2.36	16.54	Orange
CLG-175	37/2.50	17.50	Blue
CLG-183	37/2.62	18.30	Blue

CONTENTS

PREFORMED™ Repair Rods

General Information

PREFORMED™ Repair Rods are designed to repair damage to aluminium conductors mid-span in a quick and efficient manner.

They are ideal for emergency and breakdown situations. Also for repair of mid-span damage in some instances where the outer stranding of the conductor does not exceed 50% damage for 7 and 19 strand conductors or 25% damage for 37 and 61 strand conductors.

Aluminium Repair Rods are not suitable as an alternative to Armor Rods. They are not designed as an under-clamp protection device.

Repair Rods are also available for copper conductors, please contact PLP for more information.

SAFETY CONSIDERATIONS

- This product is intended for a single (one-time) use and for the specified application, although it may be re-applied twice for retensioning within 90 days from initial installation.
- Do not modify this product in any way.
- This product is intended for use by qualified linesmen only.
- When working in the area of energised line with this product, extra care should be taken to prevent accidental electrical contact
- For proper performance and personal safety, be sure to select the proper sized PREFORMED™ products before application.
- PREFORMED™ products are precision devices. To ensure proper performance, they should be stored in cartons under cover and handled carefully.

PREFORMED™ Repair Rods

For Aluminium Conductors – AAC, AAAC, ACSR and SC/AC

ARR

Part Number	Conductor Stranding	Conductor Diameter (mm)	Conductor Type	Colour Code
ARR-075	7/2.50	7.50	AAC, ACSR	Blue
ARR-090	7/3.00	9.00	AAC, ACSR	Red
ARR-128	7/4.25	12.75	SC/AC	Brown
ARR-135	7/4.50	13.50	AAC, AAAC	Green
ARR-143	7/4.75	14.30	AAC, ACSR	Blue
ARR-163	19/3.25	16.30	AAC, AAAC	Orange
ARR-175	30/7/2.50	17.50	ACSR	Blue
ARR-188	19/3.75	18.75	AAAC	Black
ARR-210	37/3.00	21.00	AAC, ACSR	Red
ARR-245	37/3.50	24.50	AAAC, ACSR	Purple

LV Conductor Spreader Rods

Spreader Rod

FGSR

The PLP LV Conductor Spreader Rod is an economical multi-phase spacer and is available for use on low voltage (415 volt) systems to prevent conductors clashing which may cause bush or grass fires in remote rural areas and damage conductors.

Part Number	Overall Length (mm)	Diameter (mm)
FGSR-125-2	2000	12.50
FGSR-125-2.1	2100	12.50
FGSR-125-2.3	2300	12.50
FGSR-125-2.5	2500	12.50
FGSR-125-2.7	2700	12.50
FGSR-125-2.8	2800	12.50
FGSR-125-3	3000	12.50
FGSR-125-3.7	3700	12.50
FGSR-190-2.4	2400	19.00

Stainless Steel Spreader Rod Springs

FGSS

For Securing Spreader Rods to conductor.

Part Number
FGSS-125-B

Spiral Vibration Dampers

Spiral Vibration Dampers

SVD

Made from high impact, UV resistant, polyvinyl chloride (PVC), they are non-corrosive and do not abrade the conductor or require engineering calculations for positioning.

Vibration dampers are designed to reduce cable vibration at tangent supports and deadend positions.

The degree of protection needed on a specific line depends upon a number of factors such as line design, temperature, tension, exposure to the wind flow and vibration history on similar constructions in the same area.

Part Number	Conductor Diameter Range (mm)	Colour Code
SVD-0102	4.42 - 6.34	Red
SVD-0103	6.35 - 8.29	Blue
SVD-0104	8.30 - 11.74	Black
SVD-0105	11.75 - 14.30	Yellow
SVD-0106	14.31 - 19.30	Green

SAFETY CONSIDERATIONS

Span Length (m)	Standard SVD Quantities
0 - 244	2
245 - 488	4
489 - 732	6
733 - 976	8
977 - 1220	10

1. SVD's may be subset together in sets of up to 3 pieces. Do not place more than 3 SVDs together in a subset as this can cause them to bind and reduce their overall effectiveness.
2. SVD's have the advantage of being placement independent and may be placed at either end of the span, or on both ends if desired.
3. Please note that SVD's are designed to be placed directly on to the conductor or shield wire and not on to rods or attachment hardware. It is recommended to place SVD's on the bare conductor or shield wire approximately one hand's width away from suspension rods, deadend rods and ties.
4. Please consult PLP for recommendations regarding the following:
   • Flat open terrain, river or gully crossings,
   • Tensions greater than 20% UTS,
   • Where Aerial Warning Spheres are installed.

VORTX™ Stockbridge Damper

General Information

Aeolian Vibration is a high frequency low amplitude motion caused by smooth laminar winds passing across the line.

When conductors or cables are exposed to this wind a phenomenon known as eddy shedding occurs. Eddy or Vortex shedding creates an alternating pressure imbalance inducing the conductor to move up and down at right angles to the direction of air flow.

These vibrations take the form of discrete standing waves that can cause support hardware breakdown, conductor fatigue, abrasion and eventually conductor failure.

The VORTX™ Stockbridge Damper exceeds the performance with a multi-response design that effectively reduces vibration over a wider range of imposing frequencies.

This is accomplished by a design that has unequal messenger strand lengths enhanced in most cases with unequal weights. The weight sizes and messenger strand lengths are matched to specific conductor/cable impedance and line operating conditions that achieve optimum performance.

PLP uses a proprietary computer program to make product recommendations for maximising damper performance. The program input considers many variables specific to individual lines, their designs, construction, and local operating conditions. The output recommendations include specific model VORTX™ Damper, quantity and their placement location on the span.

Features

- **Contoured Clamp** – Aluminum alloy extrusions offer a more precise fit to evenly capture the conductor. As a result, tightening the bolt brings the clamp components together with evenly distributed pressure along the conductor surface.
- **Clamp Profile** – The clamp profile is configured to hang from the conductor or cable during installation in accordance with IEC standards. Hands are free to wrench tighten and reach proper torque.
- **Messenger Strand** – Galvanised steel messenger strand absorbs the vibration energy efficiently with optimum manufacturing techniques.
- **Weight** – Galvanised modular iron weights hug the sides of the messenger strand, not enclosing it. The possibility of corrosion is reduced.
- **Weight Attachment** – PLP offers a collet type or crimped attachment to secure the weights to the messenger. Both meet pull-off strength requirements in accordance with IEC and AS1154.1 standards without changing properties of the adjoining messenger.

VORTX™ Stockbridge Damper

VORTX™ Damper Selection Chart for AAC, AAAC, ACSR and OPGW

VSD

Note: Final selection for weight combination at merging ranges are determined from conductor type and tension.

Contact PLP technical support for further recommendations.

STEP 1 Choose conductor diameter from the range below.		STEP 2 Choose clamp size from the range below. Total diameter including armor rods if applicable.		STEP 3 Choose the corresponding part number.
Conductor Selection Choose Conductor Diameter		**Clamp Range** Choose Overall Diameter		**Part Number**
min (mm)	**max (mm)**	**min (mm)**	**max (mm)**	
9.7	11.9	9.7	12.3	VSD-1012
		15.5	20.0	VSD-1020*
12.0	18.2	12.3	15.5	VSD-2016
		15.5	20.0	VSD-2020
		20.0	25.0	VSD-2025*
		25.0	32.0	VSD-2032*
18.3	21.7	15.5	20.0	VSD-2520
		20.0	25.0	VSD-2525
		25.0	32.0	VSD-2532*
21.8	24.9	20.0	25.0	VSD-3525
		25.0	32.0	VSD-3532*
		32.0	40.1	VSD-3540*
		40.1	50.0	VSD-3550*
25.0	33.9	25.0	32.0	VSD-4032
		32.0	40.1	VSD-4040
		40.1	50.0	VSD-4050*
		50.0	61.0	VSD-4061*
32.1	44.7	32.0	40.1	VSD-5040
		40.1	50.0	VSD-5050
		50.0	61.0	VSD-5061*

Note: * Represent dampers that are placed over Armor Rods or Structural Rods.

VORTX™ Damper Structural Rods

VDSR

For OPGW and high temperature conductors.

Part Number	Conductor Diameter Range (mm)	Rod Length (mm)	Colour Code
VDSR-110	10.5 - 11.49	500	Green
VDSR-120	11.5 - 12.49	500	Purple
VDSR-130	12.5 - 13.79	500	Orange
VDSR-140	13.8 - 14.89	500	Blue
VDSR-150	14.9 - 15.49	500	Brown
VDSR-160	15.5 - 16.49	500	Yellow
VDSR-170	16.5 - 17.49	500	Red
VDSR-180	17.5 - 18.49	500	Yellow
VDSR-190	18.5 - 19.49	500	Yellow
VDSR-200	19.5 - 20.49	500	Yellow
VDSR-210	20.5 - 21.49	500	Blue
VDSR-320	31.5 - 32.49	700	Purple

CONTENTS

Dogbone Vibration Damper

General Information

Dogbone Vibration Dampers are designed to eliminate conductor fatigue damage and line maintenance costs by effectively diminishing aeolian vibration, thereby allowing increased line tensions.

The messenger cable and unique dogbone shape of the masses are designed to achieve optimal energy dissipation for minimal clamp movement. The messenger cable and dogbone weights are matched to give additional resonant modes and wider effective frequency response. The mechanical impedance of the damper is matched to the conductor to optimise performance.

The offset dogbone shaped masses introduces a torsional mode of vibration damping not present in conventional Stockbridge type dampers.

The range of Dogbone Vibration Dampers is a result of PLP's extensive experience along with research and development in the field of conductor vibration control.

The Dogbone concept is based on the known and proven principles of the Stockbridge Damper but embodies improvements which increase both power dissipation and range of frequency response beyond those of a Stockbridge Damper.

The performance of the Dogbone Damper has been further improved using the latest CIGRE and IEEE recommended methods including I.S.W.R. Power Dissipation and Mechanical Impedance Testing.

Features

- **Radio Interference Voltage (RIV)** – Dogbone Dampers are designed to be corona free at all operating voltages.
- **Placement** – Due to the many parameters involved and the exhaustive tests conducted for optimum damper placement and performance, it is recommended that PLP be consulted for exact damper requirements.
- **Options Available** – Armor Rods can be supplied for added protection to OPGW Cables.

Dogbone Vibration Damper

Dogbone Vibration Damper Selection Chart for AAC, AAAC, ACSR and SC/GZ

CONTENTS

DB

Materials

- **Clamp** – cast of high strength aluminium alloy
- **Bolt** – stainless steel
- **Flat Washer** – stainless steel
- **Spring Washer** – stainless steel
- **Messenger** – Heliformed® 19 strand EHS galvanised steel
- **Masses** – high grade zinc

See table below for part numbers and conductor suitability.

Part Number	Clamp Diameter Range	Conductor Type			
		AAC	AAAC	ACSR	SC/GZ
DB05B07SS	7.1-10.0				7/2.75 7/3.25
DB05B10SS	10.1-12.0			Banana	7/3.75 7/4.00
DB05B12SS	12.1-15.0	Mercury Moon	Hydrogen Iodine Jade Jasper	Cherry	19/2.75
DB05B15SS	15.1-18.0	Neptune	Krypton Opal	Grape	19/3.25
DB05B18SS	18.1-21.0	Pluto	Neon Pearl		
DB05B21SS	21.1-24.0	Only used for OPGW			
DB05B24SS	24.1-27.0	Only used for OPGW			
DB1B18SS	18.1-21.0	Saturn	Nitrogen Ruby	Lemon	
DB1B21SS	21.1-24.0	Taurus	Oxygen Rutile		
DB2B21SS	21.1-24.0				
DB2B24SS	24.1-27.0	Triton	Phosphorus Sapphire	Lime Mango	
DB2B27SS	27.1-31.0	Uranus	Spinel Selenium Sulphur		
DB3B31SS	31.1-34.0	Venus	Silicon Topaz	Olive Paw Paw	

Energy Distribution

Earthing

“ PLP supplies a large range of earthing solutions for domestic, commercial and industrial applications. ”

General Information

The purpose of earthing is to provide protection for people and animals against the danger of electric shock, and maintain a reliable electrical power distribution system.

PLP has extensive experience in the design and production of a variety of copper and stainless steel earth rods for domestic, industrial and substation applications.

Types of earth rods

At one time or another, all manner of conductor materials and shapes have been installed in the ground to provide an electrical earth.

Taking into account conductivity, high resistance to atmospheric corrosion and soil attack, ease and economy of installation and overall reliability, the steel rod clad with either copper or stainless steel has proven to be superior over other materials.

The copper bonded steel rod is simple to install and the connection to the earthing system is easy. The installation is also accessible for inspection and testing.

Extendable earth rods have been developed to reach underlying strata of low permanent resistivity unaffected by seasonal drying.

Steel core earth rods

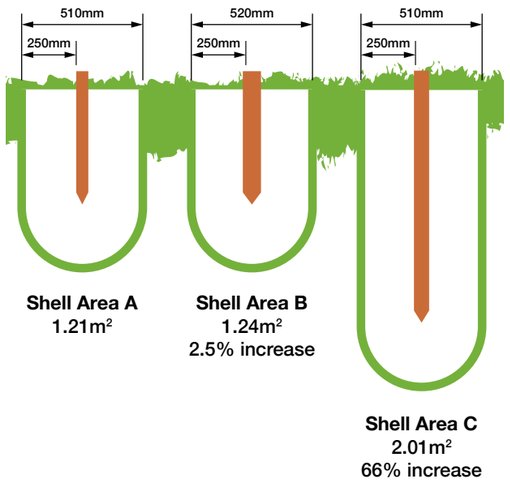
Electrically, a high quality earth rod should have a low intrinsic resistance and have a sufficient cross-section to carry high electrical currents without damage when required.

Mechanically, a high quality earth rod should exhibit strength, have a rigid core for easy driving and be constructed from durable and corrosion resistant material.

Earth rod length is more important than diameter and quantity

The combined resistance of parallel rods is a complex function involving the number of rods, rod diameter, rod length, rod separation, the configuration of earth rods and soil resistivity.

The recommended practice is to use an earth rod with a diameter that has enough strength to be driven into the soil without bending or splitting. Large diameter rods may be more difficult to drive into the earth than smaller diameter rods.



Fewer rods coupled together for deep driving will achieve a lower resistance than the same number in parallel. The installation of multiple earth rods at sufficient distances apart takes up a large area, requiring long cables and many connections that add to increased installation time, higher labour and equipment costs.

Electrical resistance

The depth to which an earth rod is driven into the earth has much more influence on its electrical resistance characteristics than its diameter.

It is not the actual area of contact with the soil that counts but the total resistance area of the sheath or shell surrounding the earth rod.

There is a dramatic change in resistance when the length of the earth rod is increased.

Good earthing requires low soil resistivity

Soil resistivity varies greatly from one location to another. For example, soil around the banks of a river have very low resistivity and dry sand in elevated areas can have very high resistivity.

The resistance of the earth path is determined by the resistivity of the soil surrounding the earth rod, its contact resistance between the earth rod and the surrounding soil, and the resistance of the earth rod and connecting conductors.

Factors affecting soil resistivity

The factors affecting soil resistivity include the types of soil, climate conditions and seasonal weather patterns. The effects of heat, moisture, drought and frost can introduce wide variations in soil resistivity.

Soil resistivity usually decreases with depth, and an increase of only a few percent of moisture content in a normally dry soil will significantly decrease the soil resistivity.

Conversely, soil temperatures below freezing greatly increase soil resistivity, requiring earth rods to be driven to even greater depths.

Other soil properties conducive to low resistivity are chemical composition, soil ionisation, grain distribution and homogeneous grain size.

All these factors relate to the retention of soil moisture, and provide good conditions for a closely packed soil and good contact with the earth rod.

In view of all the above factors, there is a large variation of soil resistivity between different soil types and moisture contents.

If the soil resistivity increases with depth, earth rods should be installed parallel to obtain a lower resistance reading. Best results are achieved when the spacing of the parallel earth rods is greater than their depth.

Non-Extendable Bonded Earth Rod – Domestic

Each earth rod incorporates an integral driving point, machined not ground to preserve the strength and rigidity of cold-drawn steel.

Part Number	Description
CBE-127-1400-DOM	Domestic earth rod assembly (includes earthing clips and tags)

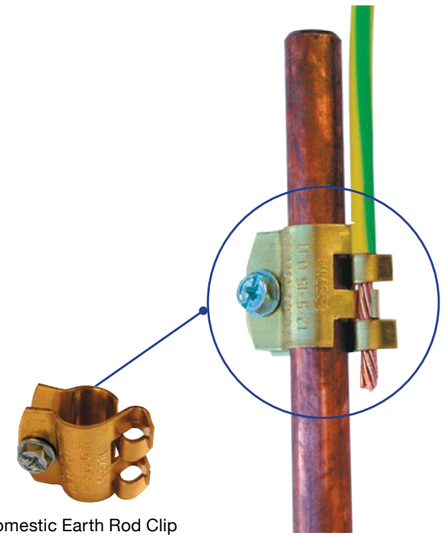
Note: Non-extendable earth rods are supplied with rod and tag.

Copper Bonded Earth Rod – Domestic and Commercial

The CBE Copper Bonded Earth Rod provides an effective solution for domestic as well as commercial earthing applications.

Manufactured from low carbon high tensile steel with pure copper plating at >250 microns, molecularly bonded onto the steel rod.

All Copper Bonded Earth Rods supplied by PLP are tested in accordance with IEC62561-2 : 2018.



Domestic Earth Rod Clip

Earth Rod Range

Copper Bonded Earth Rod – Pointed

CBE

Rod Diameter (mm)	Part Number	Length (mm)
12.7	CBE-127-1400	1400
12.7	CBE-127-1800	1800
12.7	CBE-127-3000	3000
14.2	CBE-142-1500	1500
14.2	CBE-142-1800	1800
14.2	CBE-142-2400	2400
19	CBE-190-1800	1800
19	CBE-190-2400	2400
19	CBE-190-3000	3000

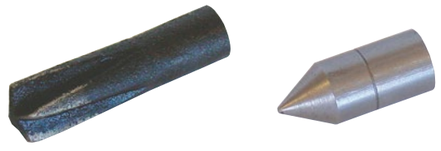
CBE Rods based on Imperial Diameter

Rod Diameter (mm)	Part Number
17.2	CBE-190-xxxx

Couplers for Pointed Rod

Rod Diameter (mm)	Part Number
12.7	CBE-127-COUPLER
14.2	CBE-142-COUPLER
19	CBE-190-COUPLER

Driving Points



Part Number	Description
CBE-127-DP	Standard Driving Point
CBE-127-SDP	Star Driving Point
CBE-142-DP	Standard Driving Point
CBE-142-SDP	Star Driving Point
CBE-190-DP	Standard Driving Point
CBE-190-SDP	Star Driving Point

Driving Heads

Rod Diameter mm	Part Number
12.7 / 13 mm	DHT15
14.8 / 15 mm	DHT15
17.2 / 19 mm	DHT19

Note: CBE and CBET based on Imperial Diameter.

Earth Rod Range

Copper Bonded Earth Rod – Threaded

CBET

Rod Diameter (mm)	Part Number	Length (mm)
13	CBET-130-1400	1400
13	CBET-130-1800	1800
15	CBET-150-1800	1800
15	CBET-150-2400	2400
15	CBET-150-3000	3000
19	CBET-190-1400	1400
19	CBET-190-1800	1800
19	CBET-190-3000	3000

CBET Rods based on Imperial Diameter

Rod Diameter (mm)	Part Number
12.7	CBET-130-xxxx
14.2	CBET-150-xxxx
17.2	CBET-190-xxxx

Couplers for Threaded Rod

Rod Diameter (mm)	Part Number
13	CBET-130-COUPLER
15	CBET-150-COUPLER
19	CBET-190-COUPLER

Driving Stud for Threaded Rod

Rod Diameter (mm)	Part Number
13	DS-13
15	DS-15
19	DS-19

CONTENTS

Earth Rod Range

STE Series Stainless Steel Clad Rods

STE

Rod Length	13 mm Diameter	Pack/ Bulk Quantity	14 mm Diameter	Pack/ Bulk Quantity
1200	STE1312	10/500	STE1412	10/500
1440	STE1314	10/500	STE1415	10/500
1800	STE1318	5/500	STE1418	5/500
2400	STE1324	5/500	STE1424	5/500
3000	STE1330	1/50	STE1430	1/40

Stainless Steel Earth Rod Accessories

Coupling	SCT13	10/100	SCT15	10/100
Point	DPT12	50/200	DPT15	50/200
Star Point	SDP12T	10/100	SDP15T	10/100

Driving Points

Part Number	Description
DPT12	Average Driving Point 13 mm
DPT15	Average Driving Point 19 mm
SDP12T	Hard Driving Point 13 mm
SDP15T	Hard Driving Point 19 mm

Earth Rod Range

Connection Boxes

These enclosures provide a tidy means of protecting the connection of the main earth conductor to the earth rod. Manufactured from high strength aluminium alloy or polymer concrete, they are well suited to use in high traffic areas. Hinged covers allow easy access for inspection or testing.

ERB

ERB1– Aluminium alloy casting

ERB3 – Polymer concrete

ERBP3 – Plastic

Part Number	Material	Dimensions	Entry holes	Load rating
ERB1	Aluminium	138 x 144 x 74 mm	2 x 19 mm	5000 kg
ERB3	Polymer Concrete	220 x 220 x 150	1 x 40 mm	Pedestrian
ERBP3	Plastic	300 x 300 x 207	1 x 70 mm	5000 kg

Earthing Enhancement Compounds

EEC

Features

- Stable, high conductivity providing long term low ground resistance.
- High expansion, low shrink characteristics.
- Non-toxic and non-corrosive.

Packaging

20kg non-tear, plastic lined bags.

Installation

1. Apply as a dry mix or pourable slurry.
2. Dry mix will yield a volume of approximately 0.0176 m^3 (roughly 57 bags to the cubic metre).
3. Slurry will yield a volume of approximately 0.030 m^3 when mixed with 20 to 25 litres of water (roughly 33 bags to the cubic metre).

Description	Composition	Standard
EARTHRITE	Bentonite, Gypsum, Sodium Sulphate	N/A
EARTH5050	Calcium, Bentonite, Natural Gypsum	Conforms to AS2239

Earth Rod Clamps

Single Conductor Clamps – Parallel

The Pinch and U-Bolt clamps are simple, robust and have a 'V' groove in the casting to accommodate the earthing cable.

Material: Copper alloy casting, bronze set screw or stainless steel U-Bolt and nuts.

ERC

Type GRC5

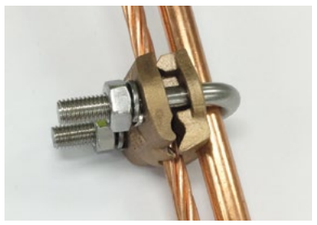
Clamp 210

			Conductor Size	
Part Number	Pack Quantity	Rod Diameter (mm)	CSA (mm²)	Diameter (mm)
GRC5	100	13 - 15	10 - 35	4.05 - 7.65
CLAMP210	10/50	13 - 15	16 - 120	5.10 - 14.21
EP1	40	17 - 19	16 - 120	5.10 - 14.21

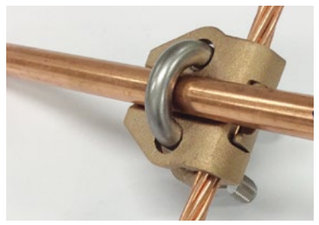
Single Conductor Clamps– Versatile

The Single Conductor clamps are designed for either parallel or right angle connections.

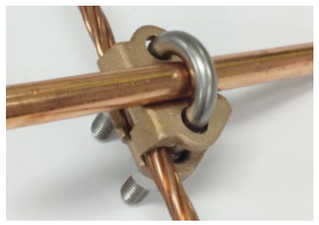
Material: High copper content alloy castings with stainless steel U-Bolt, spring washers and nuts.



Parallel Connection



Right Angle Connection



Right Angle Connection

Type GB1

Type GB2

			Conductor Size	
Part Number	Pack Quantity	Rod Diameter (mm)	CSA (mm²)	Diameter (mm)
GB1	25	13 - 19	16 - 35	5.1 - 7.7
GB2	20	13 - 19	50 - 120	8.9 - 14.2
GB3	10	13 - 19	150 - 185	15.7 - 17.6
EL21090	10	12 - 15	35 - 120	7.6 - 14.2

Earth Rod Range

CONTENTS

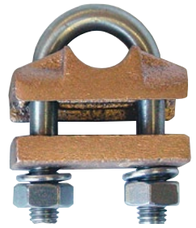
Multi-conductor Clamps

The EP and ET series clamps are useful for multiple conductor earthing installations.

Suitable for two earth conductors parallel to a rod and two or three earth conductors at right angles to a rod.

Material: High copper content alloy castings with stainless steel U-Bolt, spring washers and nuts.

EP3



ET1

Earth rod clamp configurations

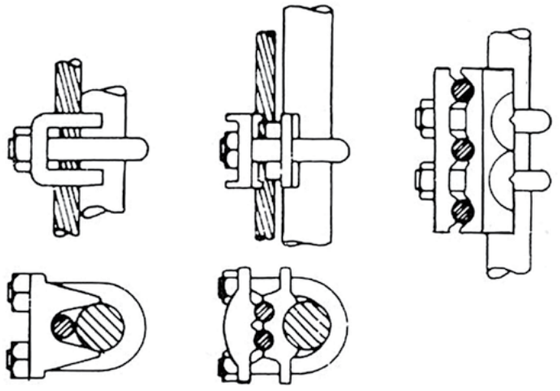
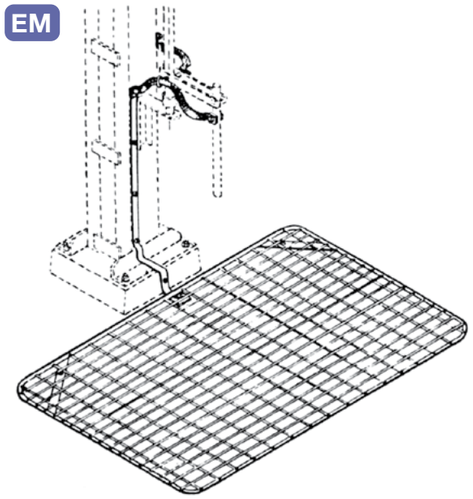


Image No. 1 Image No. 2 Image No. 3

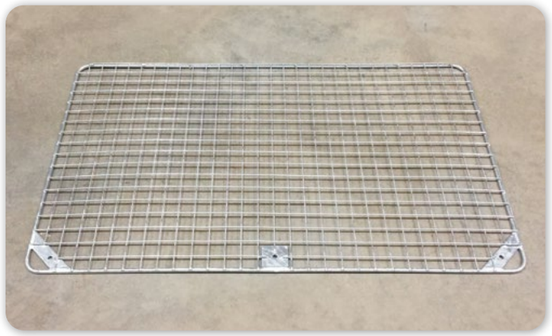
			Conductor Size			
Part Number	Pack Quantity	Rod	CSA (mm²)	Diameter (mm)	No. Of Conductors	Image No.
EP3	20	13 - 19	16 - 35	5.1 – 7.7	2	1
EP4	20	13 - 19	50 - 120	8.9 – 14.2	2	1
ET1	25	13 - 19	16 - 35	5.1 – 7.7	2	2
ET2	15	13 - 19	50 - 120	8.9 – 14.2	2	2
ET4	10	13 - 19	50 - 120	8.9 - 14.2	3	3

Earth Mats and Installation Kits

EM



Earth Mat and Kit



Earth Mat

Part Number	Material	Size (mm)	Mesh Size (mm)
Earthmat	Galvanised Steel	1500 x 900	75 x 60
Earthmat-1	Galvanised Steel	2500 x 1200	75 x 50 x 5
Earthmat-2	Galvanised Steel	2500 x 1000	75 x 50 x 5
Earthmat-3	Galvanised Steel	1500 x 1000	75 x 50 x 5
Earthmat-4	Galvanised Steel	1800 x 1200	75 x 50 x 5
Note: Contact PLP for other earth mat sizes available.			
KITY	Installation kit for type RDB rotary switches with earth switch.		

Installation of galvanised steel earth mat and kit

Kit for type RDB rotary switches

Earthing Bond

For commercial earthing installations, the Earthing Bond system provides an earth connection welded to the steel reinforcement, providing a stable and low resistance path to earth.

EB

Earthing Bond

Earthing Bond on Ribar

Part Number	Bonding Conductor (mm^2)	Length of Bonding Conductor	Lug Diameter	Fault Rating kA for 1 Sec	Terminal Thread and Depth
C70-*	70	3m	Ø12 mm	5	M10 x 20 mm
C70-1-*	70	1m	Ø12 mm	5	M10 x 20 mm
C95-*	95	3m	Ø16 mm	8.5	M10 x 20 mm
C95-1-*	95	1m	Ø16 mm	8.5	M10 x 20 mm
C120-*	120	3m	Ø20 mm	10.5	M10 x 20 mm
C120-1-*	120	1m	Ø20 mm	10.5	M10 x 20 mm

Note: * Add -12 for 12 mm terminal thread.

Earth Bonding Clamp – For Permanent Earth Bonds

EBC

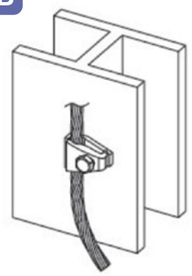
- Aluminium body
- Stainless fasteners

Part Number	Diameter Range (mm)
EBC-0719	17 - 19
EBC-1937	19 - 37

Earth Rod Range

Tower Bond

TB



Tower Earth Bond with Plate

Tower Bond for bonding copper cables or wires to steel structures.

Material: High Grade Copper Alloy, Bolt: Stainless Steel – SS304

Conductor Range (mm^2)	Channel Thickness (mm)	Bolt Size	Part Number
16 – 35	10	M10	TEB1635
50 – 70	10	M10	TEB5070
95 – 120	10	M10	TEB95120
185 – 240	10	M10	TEB185240

Earth Stubs

ESB

Earth Stubs Brass

Part Number	Length	Diameter	A/F	Thread Depth	Thread Size
ESB-M12-1	80 mm^2	25 mm	30 A/F	40 mm	M12
ESB-M16-120	120 mm^2	25 mm	30 A/F	50 mm	M16

Other custom versions are available upon request.

Earth Rod Range

Copper Clad Steel Wire Conductor

SC/CU

Copper Clad Steel Wire Conductor

Copper Clad Steel (CCS) wire conductor comprises strands of single copper clad steel wire.

CCS has the strength of steel and the conductivity and corrosion resistance of copper. Other advantages include low density and low cost.

The copper clad steel conductor is an excellent replacement for traditional pure copper wire and there is also less theft as the copper cannot be recovered by scrap dealers.

Advantages of Copper Clad Steel Conductors

- Higher tensile strength than pure copper wire conductor
- 13% lighter than pure copper wire conductor
- Less expensive than pure copper wire conductor
- Reduced incidence of copper theft
- Reduced production costs while ensuring the same quality

Part Number	CSA (mm^2)	Stranding	Overall Diameter	Weight (kg/km)
SC/CU-070-19	70 mm^2	19/2.14 mm	10.60 mm	550
SC/CU-095-19	95 mm^2	19/2.52 mm	12.60 mm	766
SC/CU-120-19	120 mm^2	19/2.84 mm	14.00 mm	980

Compression Earth Connectors

A heavy duty compression connector for earth rods and conductors

CEC

CEC 6

CEC070

CEC095

PLP Compression Earth Connectors (CEC) were specifically developed to dissipate surges of high fault current quickly and effectively to limit any potential damage to equipment, and to safeguard personnel close to that equipment.

Manufactured from pure wrought copper, the CEC connector is fitted with standard compression tools to form a dependable, tamper-proof joint from conductor to earth rod or buried earthing cable.

Earthing Grid Applications

By joining two Compression Connectors with the same or different part numbers, various combinations of conductor size and grid connections are possible. This enables a quick and economical assembly.

Features and Benefits

- Simple installation – one crimp from a standard compression tool.
- Connector design – current carrying capacity greater than that of the conductor.
- Corrosion resistant – identical material to the conductor eliminates problems caused by electrolytic corrosion and the corrosive effects to some soil.
- Pre-coated with Coppalube – a specially formulated jointing compound heavily laden with copper particles to increase the mechanical and electrical integrity of the connection, exclude moisture and resist rotation of the connector on the earth rod.
- All weather application – this connector may be installed in damp or fire risk areas with no adverse effects on the joint or the environment.
- Easy identification – each CEC connector is clearly stamped with the appropriate catalogue number, conductor size and installation die reference.
- Individually packed – for cleanliness and ease of handling.

Earth Rod Range

CONTENTS

Installation Notes

Standard “C” head compression tool of minimum 12 tonne capacity is recommended.

Full compressive force of the tool is utilised as application is not limited by die halves meeting, but the pressure release valve in the tool.

Regular use of a load test cell to check compression performance of the tool is recommended.

C Style Crimps

Part Number	Conductor Combination (mm^2)		Die Set Part Number	Profile
CEC070	35	35	DUOT	C
	50	35	DUOT	C
	50	50	DUOT	C
	70	50	DUOT	C
	70	70	DUOT	C
CEC095	70	95	DU1315	C
	95	95	DU1315	C
CEC12070	120	70	DU1315	C
CEC120	95	120	DU1315	C
	120	120	DU1315	C

Profile 6 Crimps

Part Number	Open Section	Tap Conductor Diameter (mm)	Tap Conductor (mm^2)	Profile
CEC15035	Conductors 50-120 mm^2 OR Earth Rods 13-15 mm Diameter	8.4	25-40	6
CEC15070		11	50-70	6
CEC15120		15	95-120	6
CEC15150		16.5	120-150	6
Die Set Part Number for Profile 6 Crimps is DU1315				

E Style Crimps

Part Number	Conductor Combination (mm^2)		Die Set Part Number	Profile
CEE3535	25	35	DUOT	E
CEE7070	50	70	DUOT	E
CEE120120	95	120	DU1315	E
CEE240240	185	240	DU1315*	E

Exothermic Welding

Exothermic connections are the best bond for copper and steel as they provide an irreversible molecular bond that is far superior to any other type of connection.

Although the temperatures reached to achieve this weld are extremely high, the process is instant when compared to brazing, soldering and all types of mechanical connections.

Exothermic welding connections provide:

- Permanent connection, unaltered throughout the facility's lifetime.
- A cross-sectional area that in most cases is twice that of the conductors.
- A connection without contact pressures that tend to loosen and corrode over time.
- High electrical current, equal to or higher than the conductors. On short-circuit tests, the conductors melt before the exothermic connection.
- Capability to withstand repeated high electrical currents without any wear or erosion
- Quick and easy visual inspection.

The Exothermic system is suitable for welding copper to the following materials:

- Mild steel
- Stainless steel
- Copper clad steel
- Galvanised steel
- Copper
- Bronze
- Brass
- Monel Metal

Earth Rod Range

CONTENTS

Apliweld® Secure+

PLP supplies the Apliweld® Secure+ exothermic system that uses a unique tablet compound for every weld type, eliminating the traditional multiple powders required for different welds.

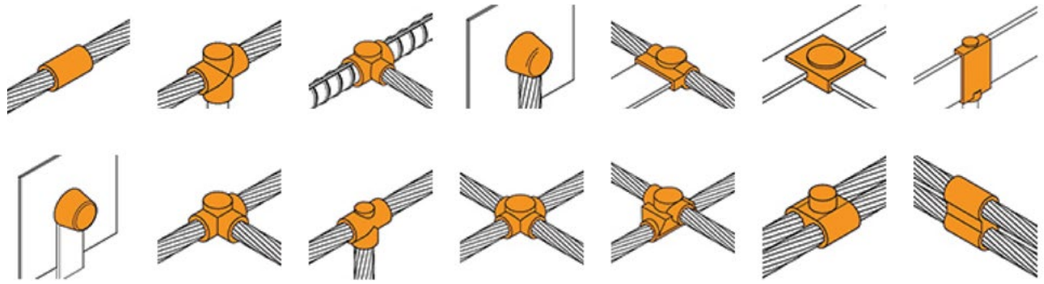
This unique tablet eliminates all explosive and flammable materials, whilst the robust electronic ignition with remote Bluetooth activation offers the user the safest exothermic welding system on the market.

Apliweld® Secure+ is the safe, versatile and reliable exothermic system for:

- Electrical systems earthing
- Busbar connections
- Energy transport and communications
- Industrial equipment earthing

Apliweld® Secure+ exothermic connections are:

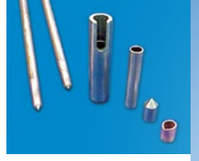
- Self-contained
- Use zero flammable and explosive materials
- Does not require flammable and explosive gas cylinders
- Does not require external power source



Illustrated above are the various types of connections used in earthing systems above and below ground. Contact PLP for more information.

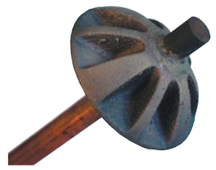
Earth Rod Range





Airport Earthing Terminal

AET

Part Number: AET1918 (Surface)
Part Number: AET1918F (Flush)

Static electricity earthing terminals

Type AET electrodes provide for the earthing of airport tarmac areas where any generation of static electricity could be hazardous, for example aircraft refuelling, servicing and cargo loading areas.

The heavy duty capping on the terminal has a ribbed design providing a fast and positive earthing connection by means of earth lead connector clips.

Material: Solid steel core overlaid with copper bonding and a heavy bronze cap.

Length: The standard length is 1800 mm, other lengths are available via special order.

Installation Procedure: Drive electrode into ground to required depth. Remove protruding portion of rod above cap and finish flush.

Methods of installing Earth Rods

Earth rods can be driven into the ground by either a hand held hammer or mechanically operated hammer. When driving is difficult, the only option is to drill a hole to take the earth rod.

Where holes are drilled, the gap between the earth rod and wall of the drilled hole is commonly filled with a water expanding earthing compound such as EARTHRITE. This is a mixture of Bentonite and Gypsum with a small amount of Sodium Sulphate to reduce the resistivity of the backfill.

Driving Methods

Earth rods up to 3 m long can be driven satisfactorily in one length. Where rods have to be longer than 3 m, it is preferable to use one of the PLP extendable series earth rods.

There are a variety of methods for driving earth rods into the ground from the simple hand held hammer to power operated mobile rigs. The method used is dictated by the nature of the soil and terrain, the length of drive needed to secure minimum resistance, and the number of rods to be driven.

The Hand Held Hammer is an effective method for most domestic installations. The earth rod should be driven lightly using a hammer of around 1.5 to 3 kgs, keeping the force of the blows axial to the rod to obviate the risk of whipping.

A large number of light hammer blows are more effective, and preferable, to heavy blows which are destructive to the metal and can cause deformation to the rod end as well as bending and possible splitting. The fitting of a guide to the rod will assist rigidity and reduce whipping when the rod comes up against resistance to penetration.

The Mechanical Hammer can be one of three types, electric, pneumatic or petrol engine driven. These power operated aids are used when soil conditions are not suited to hand driving and when long earth rods have to driven to great depths.

Driving Method Precautions

Driving an earth rod with a mechanical hammer calls for special care to ensure the force of the blows are axial to the rod. While it may be possible to maintain this when manually using a light type hammer such as an electric Kanga, it is advisable to use rig mounting to ensure correct driving, especially when it comes to driving the longer earth rods.

Energy Distribution
ABC & CCT Systems

“ PLP supplies a comprehensive range of LV and HV aerial bundled cables, covered conductor suspension and termination fittings, and accessories. ”

For Aerial-Bundled Conductors (ABC)

BCSC

The Australian Standard series of LVABC Suspension Clamps are intended for use on straight runs and for line deviation angles up to 25º.

These suspension clamps are suited to coastal environments and are manufactured from high strength corrosion-resistant aluminium alloy and incorporate neoprene bushes and stainless steel hardware. An optional failure link is built into the fitting.

The clamps are designed as one complete unit, eliminating the problem of dropping components whilst installing the clamp.

The suspension clamp greatly assists linesmen by supporting the cable in the open position, and enabling fast installation by simply closing the clamp and tightening the fastener.

Features

- Corrosion resistant cast aluminium body.
- Suitable for coastal and highly polluted environments.
- Neoprene bushes.
- Stainless steel hardware.
- Fast and simple installation.
- Optional failure link feature.
- Complies with Australian Standard AS3766.

Part Number	Conductor Construction (mm²)
BCSC-2050-2S	2 x 50
BCSC-2050-2SWL	2 x 50
BCSC-2050-2SHD	2 x 50
BCSC-2095-2S	2 x 95
BCSC-2095-2SWL	2 x 95
BCSC-2095-2SHD	2 x 95
BCSC-4050-2S	4 x 50
BCSC-4050-2SWL	4 x 50
BCSC-4050-2SHD	4 x 50
BCSC-4095-2S	4 x 95
BCSC-4095-2SWL	4 x 95
BCSC-4095-2SHD	4 x 95

Note:
WL = Weak Link (5kN)
HD = Heavy Duty (stainless wear ring)

For Aerial-Bundled Cables (ABC)

BCSC

This Australian Standard series of LVABC Suspension Clamps have been developed to protect the integrity of the cable insulation by controlling the cable slip during impact loads.

The built-in failure link allows the undamaged cable to drop to the ground, thus providing a coordinated failure mechanism. The clamps are intended for use on straight runs and line deviation angles up to 25º.

The installation features of the clamps have been designed following extensive field trials carried out in conjunction with the major electricity distribution utilities.

These suspension clamps are suited to coastal environments and are manufactured from high strength corrosion-resistant aluminium alloy and incorporate neoprene bushes and stainless steel hardware. A failure link is built into the clamp.

The clamps are designed as one complete unit, eliminating the problem of dropping components whilst installing the clamp.

The suspension clamp greatly assists linesmen by supporting the cable in the open position, and enabling fast installation by simply closing the clamp and tightening the fastener.

Features

- Corrosion resistant cast aluminium alloy body.
- Suitable for coastal and highly polluted environments.
- Neoprene bushes.
- Stainless steel hardware.
- Fast and simple installation.
- Built-in failure link for greater system protection.
- Eliminate cable damage during major impacts on the line.
- Complies with Australian Standard AS3766.

Part Number	Conductor Construction (mm²)	Weak Link Faling Load (kN)
BCSC-4095-3S	4 x 95	6
BCSC-4095-3SHD	4 x 95	N/A
BCSC-4150-3S	4 x 150	8
BCSC-4150-3SHD	4 x 150	N/A

Note:
HD = Heavy Duty (stainless wear ring)

Roller Assembly

BCSCRA

This Suspension Clamp is a light weight device to support and suspend aerial-bundled cables from pole hooks without damage. With the assistance of an integrated and reusable cable-stringing roller, the system enables easy installation of conductors.

A Weak Link (WL) is supplied to allow the eye to break away from the body if the load exceeds 6.5kN.

Features

- Rounded eye edges.
- Hinged jaw for easy installation.
- Stainless hinge pin.
- Extra long retaining screw enabling seat and nut to remain captive during installation.

Part Number	Conductor Construction (mm²)
BCSCRA-2095-WL	2 x 95 and 4 x 50
BCSCRA-2095	2 x 95 and 4 x 50
BCSCRA-4095-WL	4 x 95
BCSCRA-4095	4 x 95
BCSCRA-4150	4 x 150
BCSCRA-4150-WL	4 x 150
BCSRA-Roller	Roller bracket to support Clamp

Note: WL = Weak Link (6.5kN)

Yoke Bar for ABC Suspension

YABCOF

This double suspension yoke bar provides up to 60˚ line deviation by using two suspension clamps of 30˚ each.

Part Number	Diameter (mm)	Length - Hook to hook (mm)	Standard Pack Quantity
YABCOF-150	16	150	25
YABCOF-300	16	300	25
YABCOF-410	20	410	1

Suspension Clamps and Integrated Stringing Roller

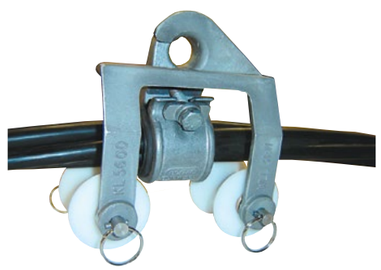
IBSRC

Features

- Type IBSRC.
- Cast aluminium body.
- Integrated stringing roller design.
- UV Stabilised split elastomer bush.
- Controlled release of conductor.
- Complies with Australian Standard AS3766.

Part Number	2 Core (mm²)	3 Core (mm²)	4 Core (mm²)
IBSRC250	50	-	-
IBSRC450	95	-	50
IBSRC495	-	-	95
IBSRC4150	-	-	150

IBSRA



Part Number	Description
IBSRA	Auxiliary stringing roller 50 - 95 mm²
BSRA-4150	Auxiliary stringing roller 150 mm²

String Roller - IBSRA with IBSRC installed.

Suspension Clamp

IBSC

Features

- EPDM UV stabilised rubber insert.
- Galvanised body - with captive bolt slot.
- Galvanised steel hardware - oversize wing nut.
- Suitable for line deviation up to 30 degrees.
- Complies with Australian Standard AS3766.

Part Number	2 Core (mm²)	3 Core (mm²)	4 Core (mm²)
IBSC425	-	-	25
IBSC435	50	50	35
IBSC450	-	-	50
IBSC470	95	-	70
IBSC495	-	-	95

Main Strain Clamp

IBT25095

IBT5095

Main Strain Clamps are available for both mains and service aerial bundled cables, capable of clamping from 1 to 4 cores. If an uneven number of cores are clamped, use filler cables in other locations.

Features

- Glass reinforced UV stabilised clamping blocks.
- High strength aluminium alloy tensions straps.
- All hardware is stainless steel, lubricated to eliminate binding as standard.
- Optional galvanised steel hardware on request. MOQ applies.
- Jaws are spring loaded to facilitate easy insertion of cores.
- Complies with Australian Standard AS3766.

Part Number	Number of Cores	Cable Range (mm^2)
IBT25095	2	50 - 95
IBT5095	4	50 - 95
IBT95150	4	50 - 150

AS Series Strain Clamp

BCTC

The Australian Standard Strain Clamp is light and easy to handle and intended for use on low voltage aerial bundled conductors (LVABC) for in-line or angle termination and tested to Australian Standard AS3766.

The standard clamps are supplied with stainless steel clamp bolts and a galvanised steel clevis pin. A stainless steel clevis pin can also be supplied for special applications.

Features

- Glass reinforced nylon clamping wedges, UV stabilised.
- Aluminium alloy straps.
- Incorporates a large window for easy cable exit.
- Standard with stainless steel fasteners.
- R clip for fast installation.
- Complies with Australian Standard AS3766.

Part Number	Conductor Construction (mm^2)	Clamp Hardware Material
BCTC-4050-2	4 x 50	Galvanised
BCTC-4150-3G	4 x (95 -150)	Galvanised
BCTC-4150-3S	4 x (95 -150)	Stainless Steel Clevis Pin

Service Clamps

BCST

Service Clamps are a bolted service strain and suspension clamp.

Features

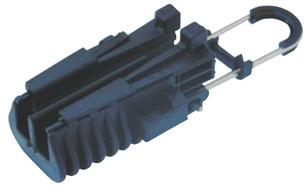
- Glass reinforced nylon clamping block.
- Blocks are spring loaded for ease of cable insertion.
- Available in galvanised steel or glass reinforced nylon straps.
- Available in open hook or closed eye.
- M10 stainless steel fasteners.
- UV Stabilised.

Part Number	Conductor Construction (mm^2)	Length (mm)
BCST-2025-3G	2 x (10 - 35)	170
BCST-2025-3GA	2 x (10 - 35)	170
BCST-2025-3P	2 x (10 - 35)	170
BCST-2025-3PA	2 x (10 - 35)	170
BCST-2025-3GLS	2 x (10 - 35)	250
BCST-2025-3GAL	2 x (10 - 35)	250
BCST-2025-3GL	2 x (10 - 35)	250
BCST-4035-3G	4 x (10 - 35)	170
BCST-4035-3GA	4 x (10 - 35)	170
BCST-4035-3P	4 x (10 - 35)	170
BCST-4035-3PA	4 x (10 - 35)	170
BCST-4035-3GLS	4 x (10 - 35)	250
BCST-4035-3GAL	4 x (10 - 35)	250
BCST-4035-3GL	4 x (10 - 35)	250

Note:
G = Galvanised Strap
GA = Galvanised Strap (Closed Eye)
GLS = Galvanised Latching Strap (Long)
GL = Galvanised Strap (Long)
GAL = Glavanised Strap (Closed Eye Long)
P = Glass-Filled Nylon Strap
PA = Glass-Filled Nylon Strap (Closed Eye)

Wedge Service Clamp

IBST435-2



Wedge Service Clamps are a wedge type strain clamp with sliding jaws. Designed for 2, 3 and 4 core ABC twisted cables. Manufactured from UV stabilised glass reinforced nylon and a stainless steel strap.

Features

- Stainless steel bail arm - detachable.
- Wedge action created by sliding jaws.
- No loose components, jaws are attached to the body.
- Complies with Australian Standard AS3766.

Part Number	Number of Cores	Range of Cable (mm^2)	Hook or Eye	Min. Failing Load
IBST435-2	2 up to 4	4 - 35	Detachable	2.5kN

Safety Service Disconnector

SSD

Part Number	Conductor Size (mm²)
SSD-2X25AL19	2 x 25 mm AL XLPE

The PLP Safety Service Disconnector (SSD) is designed with safety in mind and ensures controlled disconnection of electrical service under dynamic impact loading.

The SSD severs the conductor after a high impact load, ensuring the span falling to the ground is in an un-energised state. The energised cable remains at the pole attachment point, insulated and well away from the general public.

The SSD can be installed on existing services with no interruption to the consumers power supply.

Fully Insulated Body

The SSD is manufactured from UV stabilised and fibre reinforced nylon providing a casing that is insulated and strong. All the components are contained within the casing so there are no loose parts to fall to the ground during installation or activation.

No On-Site Setting Required

The product is pre-set in the factory to the required breaking load. The setting arrangement for the load is totally tamper proof.

Only Activates On Impact

The SSD will only activate above a specified load, approximately 1.9 kN and will not activate due to an increase of tension to the cable such as an animal or bird walking along the service.

Accurate and reliable failure is guaranteed by the shear pin being specifically sized to the failure load.

Installation Within 5 Minutes

Simply place the cable into the clamp and push it into the slots along the body. Tighten the nuts on the bolted clamp till secure and bring the bridle around. Clip onto the bollard and snap the cover in place. Installation is now complete. No special equipment is required.

No Disruption to Customer's Power Supply

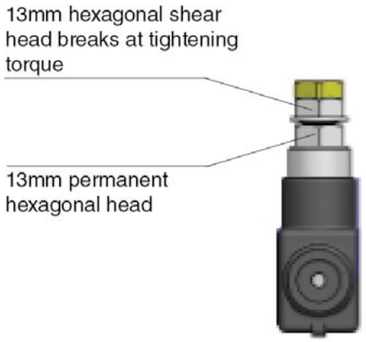
There is no need to disconnect the custumer's power supply because the conductor is not severed to install plugs or sockets. The installation of the SSD can be done at any time, without having to advise the customers.

No Possibility of Service Failure

There are no active electrical components within the SSD which eliminates the possibility of an electrical service failure or hot joints.

House Service Connector

K96A & K96B

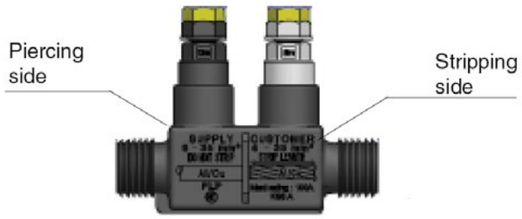


The K96A and K96B House Service Connectors are used to make an electrical connection from an insulated supply cable to an insulated consumer cable.

A fully overmolded and waterproof connection designed with solid internal chambers. It also includes a shearcap indicator system.

Features

- Bi-metal corrosion resistance accepting both copper and aluminium cables.
- Completely overmolded cable assembly design.
- Multiple rib sealing system to ensure integrity of seal on all cable sizes including fully ribbed aerial bundled cables.
- Central solid barrier dividing each chamber.
- Fully insulated and waterproof.
- Overmolded shearhead bolt.
- Fits existing Main Connection Box (MCB).
- Connectors are marked with cable sizes and strip requirements.
- Consumers and mains sides are clearly differentiated with markings and bolt colour.
- Consumers cable can be disconnected and reconnected.
- K96B has fully tinned internal connections.
- Tested and complies with AS/NZS4396.



Part Number	Supply Cable Range (mm²)	Supply Connection Type	Supply Bolt Colour	Customer Cable Range (mm²)	Customer Connection Type	Customer Bolt Colour
K96A	6 - 35	Ins Piercing	Black	4 - 35	Strip Cable	White
K96B	6 - 35	Ins Piercing	Black	4 - 35	Strip Cable	White

Bare Mains to Service Connectors – R Series

R235

R235-4

R236

R236-4

This product range provides for XPLE or PVC copper or aluminium service cable connection to bare copper and bare aluminium mains in a complete moisture free environment. The service connection is made with insulation piercing technology where there is no need to strip the cable.

Features

- Copper connector has a forged body for added strength.
- Both mains and tap bolts incorporate shearhead technology for use with a standard M8 socket.
- Polycarbonate windows employed on all tap facilities to ensure the operator can see the connection.
- Connectors can be disconnected and reconnected from the mains with ease.
- Tested and complies with AS/NZS4396.

Insulated cable to multiple insulated cables (Aluminium or Copper)					
Part Number	**Material Type**	**Bare Mains Range**	**Area (mm²)**	**O.D. (mm)**	**Tap Range (mm²)**
R235	Copper	7/1.00 - 19/3.00	5.5 - 135	3 - 15	6 - 35
R235-4	Copper	7/1.00 - 19/3.00	5.5 - 135	3 - 15	6 - 35
R236	Aluminium	7/1.75 - 19/3.75	16 - 210	5 - 19	6 - 35
R236-4	Aluminium	7/1.75 - 19/3.75	16 - 210	5 - 19	6 - 35

Insulation Piercing Connectors (IPC)

K440 to K445

Fig. 1

This Insulation Piercing Connector (IPC) is used to establish a tap connection from low voltage Aerial Bundled Conductors (ABC). Available in aluminium or copper.

Insulated cable to insulated cable (Aluminium or Copper)				
Part Number	**Fig No.**	**Cable Range Run**	**Cable Range Tap**	**Shear Head Bolts – AF (mm)**
K440	1	10 - 95	1.5 - 6	1 x 13
K441	1	25 - 95	6 - 35	1 x 13
K442	1	35 - 150	1.5 - 25	1 x 13
K443	1	35 - 150	6 - 35	1 x 13
K445	1	25 - 95	25 - 95	1 x 17
K446	2	50 - 150	50 - 150	2x 17

K446

Fig. 2

This Insulation Piercing Connector (IPC) is used to establish a tap connection from low voltage Aerial Bundled Conductors (ABC) to a low voltage aluminium alloy or copper bare main conductor.

Bare cable to insulated cable (Aluminium or Copper)						
Part Number	**Fig No.**	**Bare Cable Material**	**Bare Cable Range Run**	**Insulated Cable Range Tap**	**Shear Head Bolts – AF (mm)**	**Type of Piercing Connection**
K470	3	CU	7 - 95	6 - 35	1 x 13	Standard
K472	4	CU	7 - 120	25 - 95	1 x 17	Standard
K474	5	CU	50 - 240	35 - 150	2 x 17	Standard
K471	3	AL	7 - 95	6 - 35	1 x 13	Standard
K473	4	AL	7 - 120	25 - 95	1 x 17	Standard
K475	5	AL	50 - 240	35 - 150	2 x 17	Standard
K235	6	CU	7 - 95	6 - 35	1 x 13	Two Stage*
K236	6	AL	7 - 95	6 - 35	1 x 13	Two Stage*

Installation Notes: 2 bolt IPC's must be tightened alternately to apply uniform pressure until shear head is operated. Implementation can be carried out on live-line but without load on the tap conductor.

***Important:** Two stage IPC's, are able to be installed whilst tap conductor is under load, up to 100A maximum.

K470

Fig. 3

K472

Fig. 4

K475

Fig. 5

K235

Fig. 6

Insulation Piercing Connectors (IPC)

K394

Fig. 1

This Insulation Piercing Connector (IPC) is used to establish a tap connection of 2 insulated conductors to a low voltage Aerial Bundled Conductor (ABC). When the main conductor connection is performed by insulation piercing, the connection of the tap is performed by insulation stripping.

Insulated cable to multiple insulated cables (Aluminium or Copper)					
Part Number	Fig No.	Cable Range Run	Cable Range Tap	No. of Taps	Shear Head Bolts – A/F (mm)
K394	1	16 - 95	6 - 35	2	3 x 13
K389	1	35 - 150	6 - 35	2	3 x 13

K363

Fig. 2

This Insulation Piercing Connector (IPC) is used to short-circuit or earth low voltage Aerial Bundled Conductor (ABC) networks. It also enables voltage measurements.

Insulated cables (Aluminium or Copper) Short Circuit or Test				
Part Number	Fig No.	Cable Range Run	No. of Bolts	Shear Head Bolts – A/F (mm)
K362	1	16 - 25	1	13
K363	2	16 - 70	1	13
K364	2	16 - 150	1	13

Pre-Insulated Compression Lugs

K159

Pre-Insulated Compression Lugs are used to terminate Aerial Bundle Insulated Conductors, onto switchgear, busbars or isolators. The products are available in bi-metallic form.

Features

- Totally Insulated and waterproof.
- Colour coded to applicable cable size.
- Labelled with cable size, die size, strip length, and compression locations.
- Permanently engraved with traceability data.

Bi-Metallic - Aluminium Body - Copper Palm								
Part Number	Cable Size (mm^2)	Diameter (mm^2)	Length of Sleeve	Palm Size (mm)	Hole Diameter (mm)	Die Part Number	Die Size (mm)	End Cap Colour
K159	16	16	72	Ø 20	10.3	111-140173AL	14.0	Blue
K160	25	16	72	Ø 20	10.3	111-140173AL	14.0	Orange
K163	35	20	92	Ø 25	12.8	111-140173AL	17.3	Red
K164	50	20	92	Ø 25	12.8	111-140173AL	17.3	Yellow
K166	70	20	92	Ø 25	12.8	111-140173AL	17.3	Grey
K167	95	20	92	Ø 25	12.8	111-140173AL	17.3	Grey

Pre-Insulated Compression Sleeves

K101

Pre-Insulated Compression Sleeves are used to make an electrical joint, between two Aerial Bundle Insulated Conductors. The products are supplied for full tension or non tension applications.

Features

- Totally insulated and waterproof.
- Colour coded to applicable cable size.
- Labelled with cable size, die size, strip length and compression locations.
- Permanently engraved with traceability data.

Full Tension Sleeves						
Part Number	Fig No.	Cable Size (mm^2)	Diameter (mm^2)	Length of Sleeve	Die Part Number	End Cap Colour
K101	1	16	20	104	17.3	Blue
K103	1	25	20	104	17.3	Orange
K106	1	35	20	104	17.3	Red
K110	1	50	20	104	17.3	Yellow
K170	1	95	25	137	21.5	Grey
K185	1	150	25	178	21.5	Violet

K30

K40

Non Tension Sleeves						
Part Number	Fig No.	Cable Size 1 (mm^2)	Cable Size 2 (mm^2)	Diameter (mm)	Length of Sleeve	Die Size (mm)
K30	2	6	6	16	71	14
K31	2	6	10	16	71	14
K32	2	6	16	16	71	14
K33	2	6	25	16	71	14
K35	2	10	10	16	71	14
K36	2	10	16	16	71	14
K37	2	10	25	16	71	14
K39	2	16	16	16	71	14
K40	2	16	25	16	71	14
K53	2	16	35	16	71	14
K42	2	25	25	16	71	14
K54	2	25	35	16	71	14
K55	2	35	35	16	71	14

Fuse Switch Connector – Independent Tightening

K210

Features

- Insulated piercing of the main line and the tap line is independently carried out.
- Tightening efficiency is ensured by shear head screws.
- Dielectric strength in water is over 6kV.
- Spring holding the fuse cartridge is designed to leave it on the customer side when opening the cutout (without voltage).
- When the cartridge is implemented, the cutout can be locked by using the closing ring.
- 100 Amp fuse capacity with 22 x 58 mm barrel type fuse.

Type Fuse Switch Connector 100A / 6 - 35 mm²			
Part Number	**Designation**	**Main Line (mm²)**	**Tap Line Insulated Al/Cu (mm²)**
K210	Fuse connector piercing	Insulated Al/Cu 35 - 150	6 - 35

Fuse Switch Connectors

K223

This fuse is designed to use a 10.3 x 38 mm size fuse cartridge or neutral tube. It provides electric protection to insulated service or street light conductors connected to low voltage Aerial Bundled Conductors (ABC). Maximum rating is 20A.

Type Fuse Switch Connector 20A / 1.5 - 16 mm²			
Part Number	**Designation**	**Main Line (mm²)**	**Tap Line Insulated Al/Cu (mm²)**
K223	Fuse connector piercing 20A/ 95 - 10	Insulated Al/Cu 16 - 95	1.5 - 10
K224	Fuse connector piercing 20A/ 95 - 16	Insulated Al/Cu 16 - 95	6 - 16
K228	Fuse connector bare 20A/Cu 95 - 10	Bare Cu 16 - 95	1.5 - 10
K229	Fuse connector bare 20A/Al 95-10	Bare Al 16-95	1.5 - 10

K224

K228

K229

Pillar Fuse

K220

The K220 Pillar Fuse sleeve is designed to use a 14 x 51 mm AD fuse cartridge or neutral tube. It is used without mechanical load. Mechanical tightening terminals allow implementation in the Aerial Bundled Conductors (ABC) using a simple spanner.

Features

- Terminals suit 2.5 - 16 mm² Al/Cu.
- Dielectric strength in water is over 6kV.
- Connection is established by stripping the outer insulation.
- Can be supplied with or without a fuse.

Part Number	Designation
K220	Aerial Cutout Sleeve 14 x 51 / 50A

K221

The K221 Pillar Fuse sleeve is designed to use a 22 x 58 mm AD fuse cartridge or neutral tube. It is used without mechanical load. Mechanical tightening terminals allow implementation in the Aerial Bundled Conductors (ABC) using a simple spanner. Opening and closing of the sleeve can be performed under a load of 63A maximum.

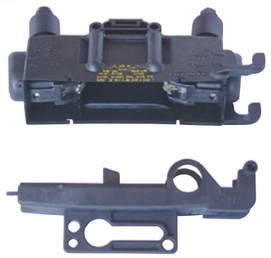
Features

- Connection is established by insulation piercing technology. Tightening is ensured by a shear head screw.
- Terminals suit 6 - 35 mm² Al/Cu or 16M-50M Al cables.
- Dielectric strength in water is over 6kV.
- A spring holding the fuse cartridge is designed to leave it on the customer side when opening the sleeve without voltage.
- A seal cap allows temporary protected access to the network side.
- When the cartridge is implemented, the sleeve can be locked by using the sealing ring.

Part Number	Designation
K221	Aerial Cutout Sleeve 22 x 58 / 100A

Fuse Switch Disconnectors – Pole Fuse

K292



Features

- 160A Size 00 DIN fuse links or 250A solid link.
- Hinged fuse carrier, extraction via hot stick - type LOS3.
- UV stabilised body with waterproof seals.
- Torque controlled shear head screws.
- Insulation piercing on all cable sizes and types.
- Large application range: 6 - 95 mm² - Copper or Aluminum.
- Facility to be gang mounted.
- Self supported whilst being mounted.
- Angled cable entry ports to eliminate moisture ingress.

Part Number	Number of Fittings in Assy	Fuse Rating	Fuse Type	Shear Head A/F (mm)
K292	N/A	160 / 250	DIN00	13

Gang Mounted K292

K292GANG

Triple Pole FSD

Gang FSD to suit 160A				
Part Number	Number of Fittings in Assy	Fuse Rating	Fuse Type	Shear Head A/F (mm)
K292GANG	3	160 / 250	DIN00	13
K292GANG4	4	160 / 250	DIN00	13

Mounting Accessories

IPSNG

COMBHOOK

PIGTAIL

Part Number	Description
IPSNG	Swan Neck Bracket Pattern B
COMBHOOK	Combination Bracket Pattern B
PIGTAIL	Combination Loop Bracket Pattern B

Fuse Switch Disconnectors – Pole Fuse

K490 & K491

A Fuse Switch Disconnector is a single-phase device that is installed on a pole or on a wall. It provides electrical protection to an individual customer. It is designed to receive maximum 100A 22 x 58 size fuse cartridge or neutral tube. It is bi-metallic suiting aluminium or copper insulated cables 6-35 mm².

Features

- Accepts 100A barrel type fuse 58 x 22 mm.
- Pig tail type extraction - type FEHBX.
- UV stabilised body and waterproof seals.
- Torque controlled shear head screws.
- Insulation piercing on all cable sizes and types.
- K291 application range: 6 - 95 mm² - copper or aluminum.
- K491 application range: 6 - 35 mm² - copper or aluminum.
- Facility to be gang mounted.
- Self supported whilst being mounted.
- Cable entry ports designed to eliminate moisture ingress.

K291

Part Number	Description
K490	1 Phase FSD 100A G2 + House Number
K491	1 Phase FSD 100A G2 (Without House Number)
K492	House Numbering System for FSD K 491 / Cable
K291	Single Phase FSD 100A (Size 22 x 58)

Mounting Accessories

K295

The K295 adaptor is designed to fix the FSD on a bracket type ‘swan neck’. It can also be fixed using a stainless steel strap or 2 screws.

FSDSNAB

The FSDSNAB mounting bracket is glass reinforced and UV stabilised for K490 and K491 screw mounting option or swan neck adaptor.

Pit Fuse Underground (FSD)

K199

These fully waterproof, insulated connectors are suitable for installation in a pit and enable underground services to be connected quickly and safely by one person using a ratchet spanner. The connectors have been rigorously tested and avoid the need for stripping, compression tooling or heat shrinking.

Features

- Terminals incorporate insulation piercing technology.
- Simple, quick, fail safe three step installation.
- Terminals accept a wide range of cables from 6 - 50 mm^2.
- The K199 terminal has 2 cable entry points to suit phase connections and 100 AMP fuse capacity with a 22 x 58 barrel type.
- The tapered flexible cable seal enables the connector to remain waterproof, even when cables are not in straight alignment with the connector.
- Terminals suit XLPE and PVC insulated single core and multi-core cables.
- Connector is able to be separated with the fuse remaining in the dead side.
- Plug provided to cap live side after connector is separated.

Part Number	Designation	Range (mm^2)
K199	Fuse Insulation Piercing Pit Connector	6 - 50

Ring Connector

K459IPC

The Ring Connector is used to establish 1 or 2 service tap connections from a low voltage underground network.

Features

- Contact is performed simultaneously with the insulation piercing technology on main and tap sides.
- Earthing device is available as an option
- Body is made of synthetic materials to ensure safety while working under voltage.
- Ergonomic design to meet the particular constraints of the underground work.
- Tightening efficiency is achieved by shear head screws.
- Underground box and resin kit available on request.

Connectors are composed of:

- 2 identical IP2X bipolar tightening parts enabling a non-oriented setting and a symmetric tightening from top.
- 1 wedge to lock both parts of the connector on the cable.

Part Number	Designation	Main Line (mm^2)	Tap Line Insulated Al-Cu (mm^2)
K459	4 Poles Service Connector (ring connector)	50 - 240	2 x 10 - 50

Flexible End Caps

K01

K02

K03

K247

Flexible UV resistant and water resistant end caps for ABC conductors.

Flexible End Caps			
Part Number	**Length (mm)**	**Cable Entry Diameter (mm)**	**Application Range (mm^2)**
K01	32	7	10 - 35
K02	40	10.5	35 - 95
K03	50	13	95 - 150
K247	67.2	31	Round: 50 - 150 Sectoral: 95 - 240

Facade Mounting Brackets (Cable Saddle)

BRPF1

BRPF6

Features

- Made from UV stabilised glass reinforced polymer.
- Brackets include 6 mm drive nail.
- Cables can be supported on bracket during installation.

Part Number	Drill Size (mm)	Offset from Structure	Installs Into	Cable Capacity (mm)
BRPF1	12	10	Masonry	2 x Ø25 - 56
BRPF1T	None	10	Timber	2 x Ø25 - 56
BRPF6	12	60	Masonry	2 x Ø25 - 56

Strain Assembly and Bundle Restraints

STRAIN GRIPS

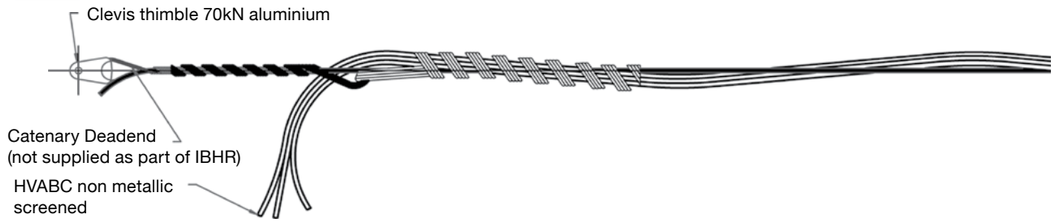
To secure HVABC conductors at strain or tension points, two types of fittings are required to secure both the catenary and the ABC bundle. The catenary is secured at a strain point using a standard PLP helical catenary deadend of applicable size and type, refer to the table below.

Part Number	HVABC Cable Type AS3599.1 or AS3599.2	HVABC Cable Size (mm²)	Catenary Stranding	Catenary Material	Colour Code
GFG-060	Metallic Screened	35	7/2.00	Gal Steel	Yellow
GFG-100	Metallic Screened	35 - 185	19/2.00	Gal Steel	Yellow
AFG-136CL	Non Metallic Screened	35 - 95	7/5.00	Alum Alloy	Blue
AFG-175CL	Non Metallic Screened	120 - 185	19/3.65	Alum Alloy	Black

The HVABC bundle assembly, must be secured to the catenary so it does not drift into the middle of the span. This eliminates bird caging, or spreading of the cores. PLP have developed a helical bundle restraint for this purpose, which is simple to apply and designed to avoid damage to the phase cores.

The assembly is comprised of two helical deadends which interlock to tie the catenary to the bundle. The deadend used to retain the catenary, is designed to be applied over the catenary deadend.

IBHR



Part Number	HVABC Cable Type AS3599.2	11kV Cable (mm²)	22kV Cable (mm²)
IBHR1450	Non Metallic Screened	35 - 50	-
IBHR1455	Non Metallic Screened	70	35
IBHR1460	Non Metallic Screened	95	50
IBHR1465	Non Metallic Screened	120 - 185	70 - 95
IBHR1765	Non Metallic Screened	120 - 150	-
IBHR1770	Non Metallic Screened	185	-
IBHR1775	Non Metallic Screened	-	120 - 150
IBHR1780	Non Metallic Screened	-	185

Helical Line Splice

LINE SPLICES

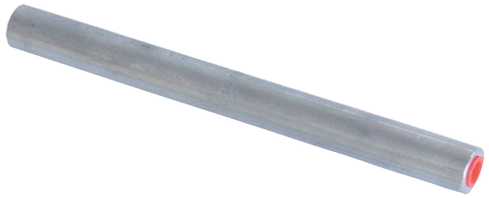
At locations where joints of the catenary on HVABC cables are required, a helical line splice or a compression midspan joint can be used.

Part Number	HVABC Cable Type AS3599.1 or AS3599.2	Catenary Stranding	Catenary Diameter (mm)	Catenary Material	11kV (mm²) or 22kV
GFS-060	Metallic Screened	7/2.00	6.0	Gal Steel	35
GFS-100	Metallic Screened	19/2.00	10.0	Gal Steel	35 - 185
AFS-143	Non Metallic Screened	7/5.00 Compacted	14.3	Alum Alloy	35 - 95
AFS-175	Non Metallic Screened	19/3.65 Compacted	17.5	Alum Alloy	120 - 185

Compression Midspan Joints

HM804

HM750



Part Number	HVABC Cable Type AS3599.1 or AS3599.2	Catenary Stranding	Catenary Diameter (mm)	Catenary Material	11kV or 22kV (mm²)
HM804	Metallic Screened	7/2.00	6.0	Gal Steel	35
HM808	Metallic Screened	19/2.00	10.0	Gal Steel	35 - 185
HM750	Non Metallic Screened	7/5.00 Compacted	14.3	Alum Alloy	35 - 95
HM751	Non Metallic Screened	19/3.65 Compacted	17.5	Alum Alloy	120 - 185

Suspension Clamps

IBSH

The HVABC Suspension Clamp is suitable for use on metallic and non metallic screened HVABC cables, for voltages up to 22kV. It is designed to accommodate line deviations up to 45 degrees. It can be used at both intermediate suspension locations, as well as a secondary means of securing a bundle to the catenary at strain locations. If used in this manner, an IBHR bundle restraint, is not required.

These Suspension Clamps incorporates a UV stabilised semi-conductive elastomeric insert, aluminium alloy strap, high strength cast aluminium clamp, and stainless steel hardware. The clamp design minimises the amount of conductor lifing during installation. Minimum failing load of clamp - 40kN.

Part Number	HVABC Cable Type AS3599.2	Catenary Diameter (mm)	11kV Cable (mm²)	22kV Cable (mm²)
IBSH1050	Metallic Screened	6 - 10	35	-
IBSH1055	Metallic Screened	6 - 10	50	-
IBSH1060	Metallic Screened	6 - 10	70	35
IBSH1065	Metallic Screened	6 - 10	95 - 120	50
IBSH1070	Metallic Screened	6 - 10	150	70 - 95
IBSH1075	Metallic Screened	6 - 10	185	120
IBSH1080	Metallic Screened	6 - 10	-	150
IBSH1085	Metallic Screened	6 - 10	-	185
IBSH1840	Non Metallic Screened	14 - 18	35 - 50	-
IBSH1845	Non Metallic Screened	14 - 18	70	-
IBSH1850	Non Metallic Screened	14 - 18	95 - 120	35 - 50
IBSH1855	Non Metallic Screened	14 - 18	150	70
IBSH1860	Non Metallic Screened	14 - 18	185	95 - 120
IBSH1865	Non Metallic Screened	14 - 18	-	150
IBSH1870	Non Metallic Screened	14 - 18	-	185

High Voltage ABC Pole Support Clamp

BCHVPC

Used for supporting HVABC conductor bundle down the pole.

- Stainless M12 fasteners
- Slot to allow banding to pole or structure.

Part Number	Bundle Diameter (mm)	Mounting Hole Diameter (mm)
BCHVPC-035-3	35	5.5
BCHVPC-040-3	40	5.5
BCHVPC-050-3	45 - 50	5.5
BCHVPC-050-3A	45 - 50	12
BCHVPC-060-3	55 - 60	5.5
BCHVPC-060-3A	55 - 60	12
BCHVPC-070-3	65 - 70	5.5
BCHVPC-070-3A	65 - 70	12

High Voltage Fittings

M16 Galvanised Hook Bolts

GEB

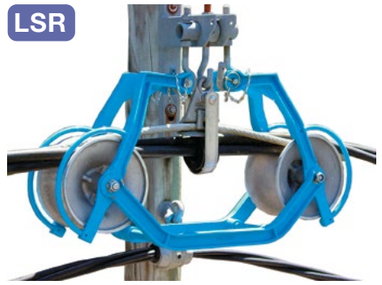
The M16 Hook Bolts are a straight hook design and made of galvanised steel for use with either wood or concrete poles.

Part Number	Length (mm)	Bolt Size (mm)
GEB-16150-T	150	16
GEB-16250-T	250	16
GEB-16350-T	350	16
GEB-16450-T	450	16

Note: Other lengths available on request.

String Roller – Type LSR23379

LSR



The LSR23379 String Roller is versatile, lightweight and safe. It is suitable for use on line deviations up to 45 degrees and accommodates HVABC cables up to 185 mm² – 22kV.

The deep profile rollers secure the conductors so they do not stick or jam during stringing. The frame design ensures that the conductor is guided and retained at all times.

The wide entry allows for easy application of suspension clamps with plenty of working space. Mounting on support hooks allows for vertical height adjustment, eliminating the dangerous practice of lifting conductors to secure the suspension clamps. With a weight of just 9 kg, it is safe for one person to handle.

The standard assembly is used in conjunction with support hooks and associated brackets at suspension clamp locations.

With the addition of a Yoke Assembly, part number LSR23857, the String Roller can be attached to a hook bolt or bracket at the start of a stringing run, where a suspension point is not required. This allows the cable to be temporarily supported at termination or strain points, until tensile loads are applied and strain clamps are fitted.

High Voltage Fittings

Pole Brackets

SB10312

The two most widely used Pole Brackets are SB10312 and IBHPBV. These items are manufactured from galvanised steel and can be either bolted or strapped to either concrete or timber poles.

Both brackets incorporate a cylindrical mounting tube, complete with 3 hook mounting holes, which are used for two purposes. The middle hole is used to locate and mount a suspension clamp. The outer two holes each side are used to locate and mount a string roller assembly, LSR23379, and to adjust its height whilst stringing.

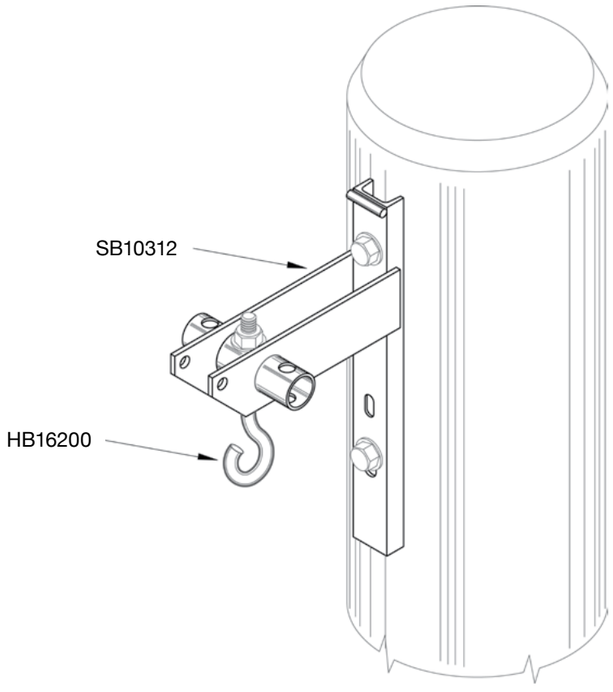
Both the suspension clamp and stringing roller are attached to the tube, using support hooks, HB16200. These hooks are manufactured from galvanised steel, have a minimum failing load of 12kN and are supplied with washers and nuts.

HB16200

The two outer hooks that locate the stringing roller, are used to adjust its mounted height for stringing. This adjustment allows the rollers to be located at a height that eliminates any necessity to lift either the conductor bundle or catenary for attachment into the suspension clamp.

The SB10312 bracket is normally utilised at a point below the top of the pole, whereas the IBHPBV is normally installed at the top of the pole.

The IBHPBV bracket has the facility to mount an insulator on its tope surface to support a bare conductor during retrofit work, to minimise customer outages.



Covered Conductor Fittings (CCT)

Strain Clamps and Covers

CCS

To secure CCT conductors at strain or tension points, the most common method is utilising a rack driven wedge assembly. The clamp incorporates a clevis attachment point, and stringing eye, as well as a clamping bar, to lock the conductor in position once tensioned. The contoured design, eliminates stresses on the conductor as it exits the clamp.

The UV stablised cover completely protects the strain assembly. The cover assembly is designed for standard insulators. The assembly is suitable for use on conductor voltages from 11kV up to 33kV.

Part Number	Cover Part Number	Cable Size (mm^2)	Cable Stranding
CCS80	CCC80120	80	7/3.75
CCS120	CCC80120	120	7/4.75
CCS180M	CCC80120	180	19/3.50

Uncovered Strain Connections

CCT Deadend

In areas where a fully covered system is not required for example at termination points where tree proximity is not an issue, an aluminium helical deadend may be used over the conductor insulation, to eliminate the need for stripping the conductor. This system is utilised on 11kV networks only.

Part Number	Cable Size (mm^2)	Cable Outer Diameter (mm)
AFG-188-CL	80	17.9 - 19.4
AFG-210-CL	120	20.9 - 22.4
AFG-238-CL	180	24.1 - 25.7

Compression Joints and Covers

CCT

At locations where CCT conductors must be joined midspan, a series of compression joint kits are available. All kits are supplied complete with Raychem heatshrink mastic lined sleeves, to ensure the joint area is both insulated and sealed. The added sealing slows the onset of corrosion and decreases resistance in the joint, preventing oxidation of the connection.

Compression joints are suitable for all voltages of CCT from 11kV up to 33kV and are compatible with the material of the conductor.

Part Number	Cable Size (mm^2)	Cable Stranding
HM704CCT	80	7/3.75
HM704CCT	120	7/4.75
HM718CCT	180	19/3.50

Covered Conductor Fittings (CCT)

Insulator Top Clamp

CCT

At suspension locations where stresses at the connection point or line angle deviations do not allow for installation of plastic ties, a rigid clamp top can be installed to secure the conductor.

The clamps are manufactured from aluminium alloy, and have an application range of 7 mm up to 32 mm. The clamp can be applied over the conductor insulation. Covers can be provided to protect the clamp from accidental contact.

Part Number	Material Type	Minimum Conductor Diameter (mm)	Maximum Conductor Diameter (mm)
Y11195	Aluminium	7	32

Covered Conductor Fittings (CCT)

Parallel Groove Clamps for Line Taps and Non Tension Joints

LTD

CCPGC154

Parallel Groove clamps can be utilised in non tension applications as conductor joints, as well as line taps to either insulated or bare conductors. Both aluminium and bi-metallic clamps are available, and both items can be covered using an applicable cover.

Part Number	Material Type	CCT Cable Size (mm^2)	Line Tap Cable Size (mm^2)	Line Tap Cable Size (mm)	Suitable Cover Part Number
LTD75-1	Aluminium	80 up to 180	35 - 180	7.5 - 18.8	CCPGC154

Working Earth Point Covers

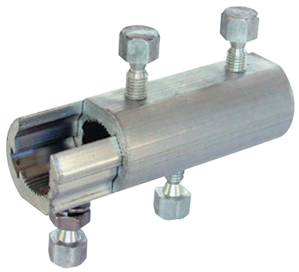
CCWEPC

Working earth point covers are designed to cover a stripped area of conductor which would be used as a local earthing location. The cover is manufactured from UV stabilised material and is designed so that it can be opened, moved and reapplied using hot sticks. The cover can be easily trimmed to fit all sizes of CCT at all voltages.

CONTENTS

Insulation Piercing Connectors – Lightning Protection

CCIPC11120



For applications where Surge Arrestors are used for lightning protection, a connection from the arrestor to the conductor can be made using an Insulation Piercing Connector (IPC).

This connector CCIPC11120 (11kV 80/120 mm^2) utilises shear head bolts, which remain proud of the connector after shearing.

An earth lead with lug, can be attached to this additional length of bolt on the top of the connector. At the bottom of the connector, a stirrup type 25705F01 can also be used to attach a temporary earth.

25705F01

Mounting Bracket Insulators

CCB05

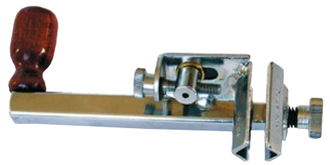
Brackets are available to mount insulators in either a trident 3 phase per bracket, or single phase format.

All brackets are manufactured from galvanised steel. Brackets are not supplied with pole attachment hardware, due to the variety and type of mounting possibilities.

CCB45

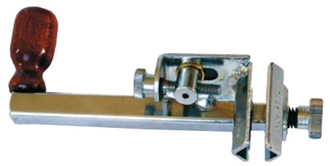
Cable Stripping Tool

IBST5024



Features
- Used for removal of core insulation.
- Removes insulation up to 5.5 mm thick.
- Cable range from 12 mm - 32 mm.
- Long life blade.

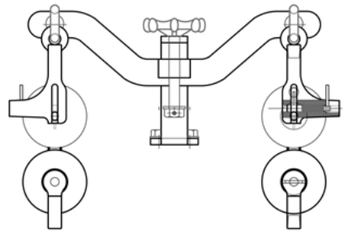
IBST50400



Features
- Used for removal of core insulation.
- Removes insulation up to 5.5 mm thick.
- Cable range from 12 mm - 38 mm.
- Long life blade.

Stringing Roller Assemblies

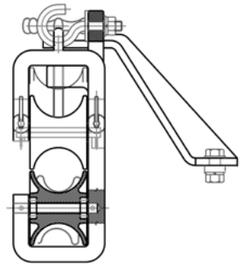
LSR24570



A unique Stringing Roller assembly, enabling quick, safe and trouble free installation of all sizes of CCT conductors. The assembly has been designed to attach to the CCB brackets.

Features
- Vertical height adjustment, raising and lowering cables with no lifting required.
- Movable top roller for easy insertion of conductors.
- Top roller locks in position, so conductor cannot disengage whilst being strung.
- Lightweight design, able to be installed and removed by one person.
- Durable aluminium rollers with bearings.
- Suitable for stringing angles up to 30 degrees.
- Rollers can also be used to string LVABC up to 150 mm^2.
- LSRUNI is a stringing roller only. It does not include attaching bracket.

LSRUNI



Roller Only

Mechanical Weak Links

IBWL

Features

- Installed between suspension fitting on pole support fitting.
- Will withstand normal loading, but will fail under impact loads.
- Eliminates damage to suspension fitting and cables.

Part Number	Diameter of Material	Total length	Material Type	Min Failing Load (kN)
IBWL02	6	81	S/Steel	2
IBWL04	10	100	Gal/Steel	4
IBWL08	12	100	Gal/Steel	8

Eye Nuts

ENG-16

Features

- Screwed onto threaded device to produce eye attachment.

Part Number	Thread size	Thread Length	Material Type	Diameter of Eye material
ENG-16	M16	30	Gal/Steel	12
ENG-20	M20	40	Gal/Steel	20
ENG-24	M24	45	Gal/Steel	20

Hook Nuts

ENGO-16

Features

- Screwed onto threaded device to produce hook attachment.

Part Number	Thread size	Diameter of Eye material	Material Type	Failing Load (kN)
ENGO-16	M16	16	Gal/Steel	12
IBHN24	M20	20	Gal/Steel	24

Hook Brackets

IBHB12

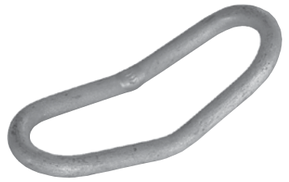
Features

- Designed for facade mounted strain clamps.
- Can be strapped to concrete poles with stainless steel strap.
- Used as temporary hooks for attachment of stringing rollers.

Part Number	Mounting Centres	Diameter of Eye Material	Material Type	Failing Load (kN)
IBHB12	150	16	Gal/Steel	12
IBHB24	150	20	Gal/Steel	24

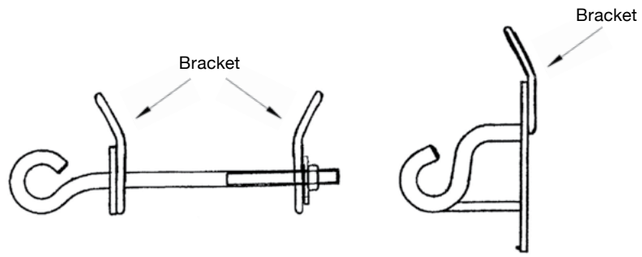
Service Support Bracket

IBSSB



Features

- Used as a service strain clamp attachment point.
- Used in conjunction with a hook bolt or a hook bracket.
- Galvanised Steel.



Assembly and Stringing Tools

J-Hook Driver

TOOL HD-01

Designed with safety in mind, the PLP J-Hook Driver will make the installation of J-Hooks into timber poles quick and easy.

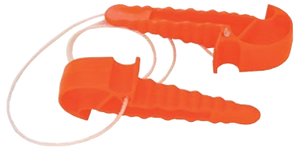
Features

- Spring loaded ball so the hook snaps into place with ease.
- Indication mark, showing the alignment of the hook.
- The conical shape allows the user to safely guide the hook.
- Suits 12 mm J-Hooks and Round Eye Screw Hooks.

Part Number	Description	Range
Tool-HD-01	J-Hook Driver	12 mm J-Hooks Round Eye Screw Hooks

Core Separating Tools

IBSW95



K005

K007

Features

- Suitable for LVABC.
- Supplied in a pair on a metre of rope.
- Impact resistant material.

Part Number	Cable Size (mm²)
IBSW95	Up to 150 mm²
K005	Up to 150 mm²
K007	80 - 240 mm² (round and sector)

Ratchet Spanners

IBLS6

Features

- Used on all overhead shear bolt connectors.
- 13 mm and 17 mm across flats in one spanner.
- Reversible ratchet.
- Fits stainless steel nuts used in strain and suspension clamps.
- Fixed socket that cannot be lost or dropped during installation.

Part Number	Size (mm²)
IBLS-6	Overall length 190 mm²
IBLS-6LONG	Overall length 260 mm²

Assembly and Stringing Tools

Come-along Tensioning Device

EM5095

Features

- Rugged steel plated construction.
- Cast aluminium clamping jaws.

Part Number	Cable Application Range (mm²)	Holding Strength (kN)	Weight kg
EM35	2 x 25 - 35 and 4 x 16 - 50	5.9	3.2
EM5095	4 x 50 - 95	7.8	5.8

ABC Come-along Clamp AS Series

BCCA

The AS series of Come-along Clamps are manufactured in Australia and are intended for use on LVABC cables of 4 x 95 and 4 x 150 sq mm bundles.

Manufactured with aluminium clamping blocks, the Come-along Clamps are designed to suit the maximum stringing tensions consistent with these cables.

Features

- Aluminium alloy, clamping block.
- Painted steel frame.
- Galvanised steel shackle.

Part Number	Conductor Size (mm²)
BCCA-225495	2 x 25 - 4 x 95
BCCA-495150-3	4 x (95 - 150)

Cable Stripping Tool

IBST1342

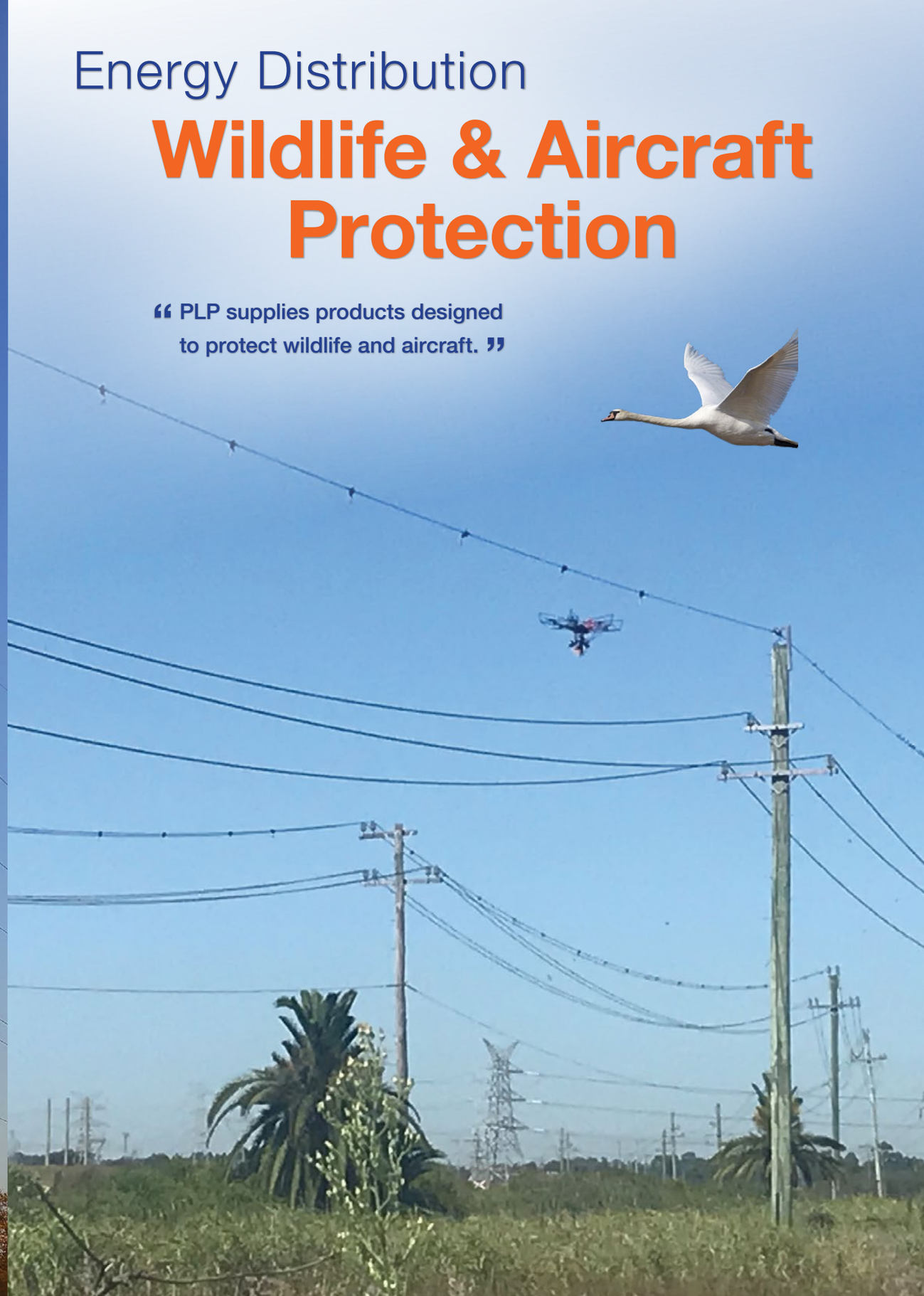
Features

- Two types of stripping tools are available for use on HVABC cables.
- Used for removal of semiconductor screen.
- Cut depth adjustable in 0.1 mm increments.
- Spiral scoring function.
- Durable design.

Energy Distribution

Wildlife & Aircraft Protection

> “ PLP supplies products designed to protect wildlife and aircraft. ”



Spiral Bird Flight Diverter – Swan

SBFDS

The Bird Flight Diverter is designed to make overhead power lines visible to birds and provide a low-cost product to reduce the hazard to both.

The fitting is lightweight, offers little wind resistance and is easily and quickly attached by hand or by hot stick. The positive grip on the conductor ensures that the Spiral Bird Flight Diverter remains in the applied position and cannot move along the span under aeolian vibration or other conditions.

The diverter section increases the visible profile of the cable or conductor to a degree necessary to ensure bird safety and avoids an undesirable bulky outline.

Features

- Increased conductor profile where bird flight paths are present.
- Lightweight with no concentrated mass.
- Long lifespan with no deterioration of material properties.

Part Number	Conductor Diameter Range (mm)	Overall Length (mm)
SBFDS445634-#	4.42 - 6.34	675
SBFDS635829-#	6.35 - 8.29	675
SBFDS830117-#	8.30 - 11.74	725
SBFDS118143-#	11.75 - 14.30	725
SBFDS194235-#	14.40 - 19.30	1150
SBFDS236278-#	23.60 - 27.82	1150
SBFDS279350-#	27.83 - 35.00	1150

Note: # Substitute either W for White or G for Grey.

Spiral Bird Flight Diverter

SBFD

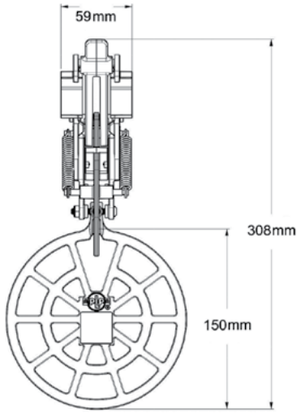
Part Number	Conductor Diameter Range (mm)	Overall Length (mm)
SBFD445634-#	4.4 - 6.34	178
SBFD635829-#	6.35 - 8.29	216
SBFD830117-#	8.30 - 11.74	241
SBFD118143-#	11.75 - 14.30	279
SBFD144193-#	14.40 - 19.30	330
SBFD194235-#	19.40 - 23.50	380

Note: # Substitute either W for White, Y for Yellow, O for Orange or G for Grey.

RAPTOR CLAMP™ Diverter

YEL

LED



RAPTOR CLAMP™ Diverters are designed to increase the visibility of overhead power lines and reduce the incidence of bird collisions with overhead cables.

Extensive field studies have shown that when installed properly, diverters significantly decrease bird strikes.

PLP's RAPTOR CLAMP™ technology is suitable for cables from 2.54 mm to 44.45 mm in diameter.

The clamp's trigger mechanism is simple to open and set, instantly latching onto the cable, enabling quick installation.

The clamp is easily installed by hand, hot stick or drone, utilising PLP's patented installation system.

The installed clamp grips the cable tightly, ensuring the diverter remains in position during severe wind conditions or when subjected to aeolian vibration.

The rugged diverter features a large 150 mm diameter yellow flag with a reflective centre, securely attached to the clamp, providing excellent visibility.

PLP also offers the RAPTOR-LED™ Diverter with a flashing LED module that provides a visible indication of overhead lines in dark and low-light conditions.

Features

- Drone (UAV) installation is available through PLP's Installation Services
- Easy 'bump and snap' installation on the cable
- No special tools required
- Simple, cost-effective design
- Lightweight (total weight = 129 grams)
- Manufactured from UV-stabilised polycarbonate and polyethylene materials
- All metal hardware is corrosion-resistant stainless steel
- Optional flashing RAPTOR-LED™ available

Catalogue Number	Diameter Range (mm)		Weight (grams)	Carton Quantity
	Minimum	Maximum		
RAPTOR-YEL	2.5	44.5	159	16
RAPTOR-LED			500	

Note: For optimum results, the recommended spacing distances are 5 metre intervals depending upon local conditions.

Aircraft Warning Markers



General Information

Aircraft Warning Markers are commonly used as a visual indicator of a power line, adjacent to airports, across river crossings, and on mining sites.

All markers are manufactured from UV stabilised homogenous materials (not coated). Markers are intended for use in accordance with CAA, FAA and Australian Standards.

Markers are available in four colours, to enable a colour choice that does not blend in with adjacent or line of sight countryside.

These Aircraft Warning Markers should not be installed on energised power lines above 150kV. Please consult PLP for more information.

Features

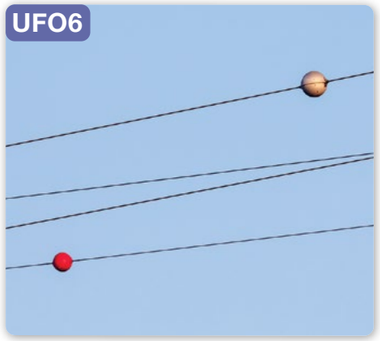
- Polyethylene Sphere
- 300 mm Diameter or 600 mm Diameter
- Sphere attached to conductor using Heliformed® fittings
- Heliformed® fittings are supplied with marker

Aerial Warning Sphere – UFO3 300 mm Diameter

Part Number	Conductor Application Range (mm)
UFO3060*	6.00 - 7.99
UFO3080*	8.00 - 9.99
UFO3100*	10.00 - 11.99
UFO3120*	12.00 - 13.99
UFO3140*	14.00 - 15.99
UFO3160*	16.00 - 18.99
UFO3190*	19.00 - 22.49
UFO3225*	22.50 - 26.49

Note: * Add suffix for colour W = White, Y = Yellow, R = Red, O = Orange

Aerial Warning Sphere – UFO6 600 mm Diameter



Part Number	Conductor Application Range (mm)
UFO6060*	6.00 - 7.99
UFO6080*	8.00 - 9.99
UFO6100*	10.00 - 11.99
UFO6120*	12.00 - 13.99
UFO6140*	14.00 - 15.99
UFO6160*	16.00 - 17.99
UFO6180*	18.00 - 19.99
UFO6200*	20.00 - 21.99
UFO6220*	22.00 - 23.99
UFO6240*	24.00 - 25.99
UFO6260*	26.00 - 27.99
UFO6280*	28.00 - 29.99
UFO6300*	30.00 - 31.99
UFO6320*	32.00 - 33.99

Note: * Add suffix for colour W = White, Y = Yellow, R = Red, O = Orange

Energy Distribution

Hardware & Accessories

“ PLP has an extensive range of standard fittings that are available off the shelf. ”

Shackles – Galvanised Forged Steel

S

Part Number Shackle	Tension Rating (kN)	Bolt Size (mm)
S-070-1	70	M16
S-120-1	120	M16
S-160-1	160	M20
S-210-1	210	M20

Part Number Twisted Shackle	Tension Rating (kN)	Bolt Size (mm)
TS-070-1	70	M16

Aluminium Sheave – 54 mm

AS

Bolt holes to suit M16 and M20 bolts.

Part Number	Bore Diameter (mm)	Colour Code
AS-54-17	17	Red
AS-54-22	22	Green

Sheave – Machined Steel

THGR

Part Number	Hole Size (mm)	Sheave Diameter (mm)
THGR-57	21	57
THGR-75	26	75
THGR-146A-C	50	146
THGR-146B-C	26	146
THGR-150	32	150
THGR-150-25	25	150
THGR-150-36	38	150
THGR-80	32	80
THGR-80-36	38	80

Clevis Thimble – Galvanised Cast Iron

CTH

- MFL 70kN.
- Used for small GZ or copper grips.

Part Number	Maximum Grip Size	Thimble Bend Radius (mm)
CTH-070-MCI	GFG-083 CFG-100-CL	20

Clevis Thimble – Galvanised Cast Iron

GCT

- MFL 120 kN.
- Used for medium to large GZ and copper grips.

Part Number	Maximum Grip Size	Thimble Bend Radius (mm)
GCT-120-TC5F	GFG-163 CFG-260-LT-CL	28.5

Clevis Thimble – Aluminium

ACT

For use with aluminium and aluminium clad steel deadends.

Features

- Corrosion resistant aluminium alloy.
- Galvanised steel pin.
- Stainless steel split pin.
- ACT-27-16 rated at 70 kN.
- ACT-37-16 rated at 80 kN.

Part Number	Maximum Grip Size	Thimble Bend Radius (mm)
ACT-27-16	AFG-188-CL	36
ACT-27-16HP	AFG-188-CL	36
ACT-37-16	AFG-240-LT-CL	31.5
ACT-37-16HP	AFG-240-LT-CL	31.5
ACT-45-16	AFG-338-LT-CL	30

Note: HP = Hex Pin.

Wire Rope Thimble – Closed

THWC

Part Number	Bend Radius (mm)	Seat Width (mm)	Threaded Length (mm)
THWC-10	12.5	11	150
THWC-12	15	13	150
THWC-16	20	18	150
THWC-20	25	22	150

Wire Rope Thimble – Open

THWO

Part Number	Bend Radius (mm)	Seat Width (mm)	Opened Width (mm)
THWO-10	12.5*	11	14
THWO-12	15*	13	17
THWO-16	20*	18	21
THWO-20-4	25*	22	24
THWO-22	27.5*	24	28

Note: Bend radius will be slightly larger on open thimbles.

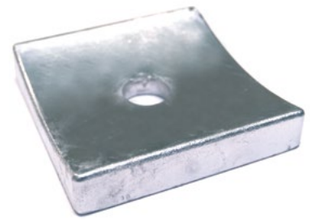
Safety Hook Plate

GSHP

Part Number	Hook Size (mm)	Hole Size (mm)	Tension Rating (kN)
GSHP-16	M16	14	3

Aluminium Gain Block – Type 1

AGB



Type 1 is used for pole top transformer mounting.

Part Number	Length x Width (mm)	Hole Diameter (mm)
AGB-100-22	100 x 100	22

Aluminium Gain Block – Type 2

AGB

Gain Block for mounting cross-arm onto concrete or wooden poles.

Part Number	Cross Arm Size (mm)
AGB-100	100
AGB-125	125
AGB-150	150

Stainless Steel Conical Spring Washer

SSCW

When a Stainless Steel Conical Spring Washer is compressed by a bolt into timber, the coils compact into each other until the entire form is flat.

The volute tapered washer maintains a constant pressure on the bolt ensuring any shrinkage of the timber does not affect the torque of the bolt.

Part Number	Bolt Size (mm)
SSCW-12	M12
SSCW-16/20	M16 / M20
SSCW-24	M24

Socket Clevis – Galvanised Forged Steel

SC

Available with ‘W’ or ‘R’ clip security pin.

Part Number	Tension Rating (kN)	Socket Size (mm)	Bolt Size (mm)
SC-070-1	70	16	M16
SC-120-1	120	16	M16
SC-160-1	160	20	M20
SC-210-1	210	20	M20

Socket Thimble – Galvanised Cast Iron

STH

‘W’ clip security pin.

Part Number	Tension Rating (kN)	Thimble Bend Radius (mm)
STH-070-1	70	20

Socket Tongue

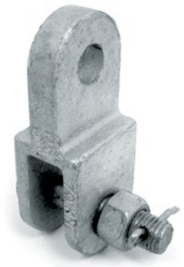
ST

Available with ‘W’ or ‘R’ clip security pin.

Part Number	Tension Rating (kN)	Bolt Size (mm)
ST-070-1	70	M16
ST-160-1	160	M20
ST-210-1	210	M20

Tongue Clevis – Galvanised Cast Iron

TC



Part Number	Tension Rating (kN)	Bolt Size (mm)
TC-070-1	70	M16
TC-120-1	120	M16

Ball Clevis – Cast Iron

BC

Part Number	Tension Rating (kN)	Bolt Size (mm)	Ball Size (mm)
BC-070-1	70	M16	16
BC-120-1	120	M16	16
BC-160-8	160	M20	20
BC-210-1	210	M20	20

Y Clevis Tongue – Forged

CTY

Part Number	Tension Rating (kN)	Bolt Size (mm)	Hole Size (mm)
CTY-070-1	70	M16	18
CTY-160-44-8	160	M20	21.5

Link Eye – Galvanised Forged Steel

LE

Part Number	Tension Rating (kN)
LE-070-1	70
LE-120	120
LE-160-1	160
LE-210-1	210
LE-320	320

Eye Tongue – Forged

ET

Part Number	Tension Rating (kN)	Bolt Size (mm)
ET-070-1	70	M16
ET-070-22	70	M20
ET-120-1	120	M16
ET-160-1	160	M20

Twisted Eye Tongue – Forged

TET

Part Number	Tension Rating (kN)	Bolt Size (mm)
TET-070	70	M16
TET-120-1	120	M16
TET-160-1	160	M20

Ball Eyes – Galvanised Forged Steel

BE

Part Number	Tension Rating (kN)	Ball Size (mm)
BE-070-1	70	16
BE-120-1	120	16
BE-160-1	160	20
BE-210-8	210	20

Ball Hook Long Shank – Galvanised Forged Steel

BHL

Part Number	Tension Rating (kN)
BHL-070-1	70

Note: Safety Latch available. Substitute -1 for -2.

Ball Hook Short Shank – Galvanised Forged Steel

BHS

Part Number	Tension Rating (kN)
BHS-070-1	70

Tongue Hook – Galvanised Forged Steel

TH

Part Number	Tension Rating (kN)
TH-070-1	70

Tongue Hook/Latched – Galvanised Forged Steel

THL

Part Number	Tension Rating (kN)
THL-070-1	70

Open Hook Nut – Galvanised Steel

ENGO

- To suit 16 mm and 20 mm threaded rods.
- Can be attached to thimble eye bolts or standard bolts where it is necessary to connect to a structure.

Part Number	Thread Size (mm)
ENGO-12	M12
ENGO-16	M16

Hardware and Accessories

CONTENTS

Link – Single Plate

LSP

Link plates are available in 70, 120 and 160kN. Substitute -070 for -120 or -160 respectively.

Part Number	Rating (kN)	Hole Separation (mm)
LSP-070-100	70	100
LSP-070-150	70	150
LSP-070-200	70	200
LSP-070-250	70	250
LSP-070-300	70	300
LSP-070-350	70	350

Link – Double Plate

L

Link plates are available in 70, 120 and 160kN. Substitute -070 for -120 or -160 respectively.

Part Number	Rating (kN)	Hole Separation (mm)
L-070-100	70	100
L-070-150	70	150
L-070-200	70	200
L-070-250	70	250
L-070-300	70	300
L-070-350	70	350

Link – Double Plate Y

YPT

120 kN and 160 kN tension ratings are also available. Replace -070 with -120 or -160 respectively.

Part Number	Tension Rating (kN)	Hole Centre Spacing (mm)
YPT-070-070	70	70
YPT-070-100	70	100
YPT-070-125	70	125
YPT-070-150	70	150
YPT-070-200	70	200
YPT-070-250	70	250
YPT-070-380	70	380
YPT-070-460	70	460

Screw Anchor

ANCHOR

- Designed in Australia to outperform the competition with high holding capacity.
- One piece high strength steel casting.
- No welding to fracture or fail.
- Suits both 24 mm and 1” guy rod applications.
- Specially designed tip with multiple cutting faces allowing positive entry into all soil types.

Part Number	Blade Diameter	Thread Size (mm)
Single Flight – Internal Drive		
ANCHOR-150-24-IN	150	M24
ANCHOR-200-1-IN	200	1”
ANCHOR-200-24-IN	200	M24
ANCHOR-250-24-IN	250	M24
ANCHOR-300-1-IN	300	1”
ANCHOR-300-24-IN	300	M24
ANCHOR-350-24-IN	350	M24
Twin Flight – External Drive		
ANCHOR-100-TWIN-EX	100	M24
ANCHOR-250-TWIN-EX	250	M24

Screw Anchor Rod

ANCHOR-ROD

Use with Stay Tensioner or Thimble Eyenut.

Part Number	Thread Size (mm)	Overall Length (mm)	Thread Length (mm)	Description
ANCHOR-ROD-20A	M20	2140	60	Assembly includes 2 x M20 nuts
ANCHOR-ROD-20BLA	M20	2140	60	Assembled for buried log applications
ANCHOR-ROD-24A	M24	2140	60	Assembly includes 2 x M24 nuts
ANCHOR-ROD-24BLA	M24	2140	60	Assembled for buried log applications
Forged Type				
ANCHOR-ROD-F-2133-M24	M24	2133	30	Complete with forged nut
ANCHOR-ROD-F-2133-1”	1”	2133	30	Complete with forged nut

Hardware and Accessories

Thimble Eyenut

THEN

- Medium duty.
- Manufactured for high strength applications.
- Suitable for 16 mm, 20 mm and 24 mm rods.

Part Number	Tension Rating (kN)	Thimble Bend Radius	Thread Size (mm)
THEN-16	30	20	M16
THEN-20	144	30	M20
THEN-24	144	30	M24
THEN-UNC1	144	30	1"

U-Bolt Stay Tensioner

GADJ

Made from galvanised steel for use on staywires and anchors. Used when loads exceed 140 kN.

Part Number	Tension Rating (kN)	Suites Anchor Rod Ø (mm)	Length Total (mm)	Thread Length (mm)	U-Bolt Ø (mm)
GADJ-144-350	144	M24	320	240	M20
GADJ-308-530	308	M30	530	250	M30
GADJ-320-530	320	M36	530	250	M30

CONTENTS

M20 and M24 Elongated Eye Bolt

GEBE

- This fitting used with the PLP Anchor.
- Other lengths available on request.

Part Number (M20)	Part Number (M24)	Length (mm)	Threaded Length (mm)
GEBE-20150	GEBE-24150	150	150
GEBE-20200	GEBE-24200	200	150
GEBE-20250	GEBE-24250	250	150
GEBE-20300	GEBE-24300	300	150
GEBE-20350	GEBE-24350	350	150
GEBE-20400	GEBE-24400	400	150
GEBE-20420	GEBE-24420	420	150
GEBE-20450	GEBE-24450	450	150
GEBE-20500	GEBE-24500	500	150
GEBE-20550	GEBE-24550	550	150
GEBE-20600	GEBE-24600	600	150
GEBE-20650	GEBE-24650	650	150
GEBE-20700	GEBE-24700	700	150
GEBE-20750	GEBE-24750	750	150
GEBE-20800	GEBE-24800	800	150
GEBE-202500	GEBE-242500	2500	150

M16 Safety Hook Bolts

GSHB

Made of galvanised steel for use with either wood or concrete poles.

Part Number	Length (mm)	Pole Diameter Range (mm)	Threaded Length (mm)	Bolt Size (mm)
GSHB-16200	200	61 - 160	150	16
GSHB-16300	300	160 - 260	150	16
GSHB-16400	400	261 - 360	150	16
GSHB-16500	500	361 - 460	150	16

M16 Galvanised Hook Bolts

GEB

Made of galvanised steel for use with either wood or concrete poles. Straight hook.

Part Number	Length (mm)	Threaded Length (mm)	Bolt Size (mm)
GEB-16150-T	150	150	16
GEB-16250-T	250	250	16
GEB-16350-T	350	350	16
GEB-16450-T	450	450	16

Note: Other lengths available on request.

M16 and M20 Round Eye Bolt

GEBR

Made of galvanised steel for use with either wood or concrete poles.

Part Number	Length (mm)	Threaded Length (mm)
GEBR-16150	150	100
GEBR-16200	200	100
GEBR-16250	250	100
GEBR-16300	300	100
GEBR-16350	350	100
GEBR-16400	400	100
GEBR-16450	450	100
GEBR-16500	500	100

Part Number	Length (mm)	Threaded Length (mm)
GEBR-20190	190	150
GEBR-20200	200	150
GEBR-20250	250	150
GEBR-20300	300	150
GEBR-20350	350	150
GEBR-20400	400	150
GEBR-20450	450	150
GEBR-20500	500	150
GEBR-20600	600	150

Note: Other lengths available on request.

M20 Round Eye Bolt – Special Assembly

GEBR

Made of galvanised steel for use with wood poles.

Part Number	Length (mm)	Threaded Length (mm)
GEBR-20400-SQW	400	100
GEBR-20425-SQW	425	100
GEBR-20450-SQW	450	100
GEBR-20475-SQW	475	100
GEBR-20500-SQW	500	100
GEBR-20525-SQW	525	150
GEBR-20550-SQW	550	150
GEBR-20575-SQW	575	150
GEBR-20600-SQW	600	150
GEBR-20650-SQW	650	150

M16 Galvanised Pole Step – For Concrete Poles

GPSC

Part Number	Bolt Size (mm)	Length (mm)
GPSC-16180	M16	180

Galvanised Pole Step – For Wooden Poles

GPSW

Part Number	Bolt Size (mm)	Length (mm)
GPSW-16250	M16	250

Wire Rope Grip

WRG

Part Number	Conductor Diameter (mm)	Bolt Size (mm)
WRG-08	8.00	M8
WRG-10	9.00 - 10.00	M10
WRG-12	11.00 - 12.00	M12
WRG-14	13.00 - 14.00	M12
WRG-16	16.00	M16
WRG-18	18.00	M16
WRG-21	20.00 - 22.00	M16
WRG-26	24.00 - 26.00	M20
WRG-28	28.00	M20
WRG-32	32.00	M20
WRG-36	36.00	M24
WRG-40	40.00	M24

Parallel Groove Clamps – Aluminium

APG

Many Parallel Groove Clamps are available tin plated for use with copper conductors. Please contact PLP for your specific requirements.

Part Number	Clamp Diameters (mm)	Material
APG-135	5.25 - 13.5	Al
APG-188DG	8.0 - 19.0	Al
APG-188SG	9.0 - 19.0	Al
APG-263104-T	10.4 - 26.3	Tinned Al
APG-163105-T	10.5 - 16.3	Tinned Al
APG-210DG	12.0 - 22.0	Al
APG-315-315-2	16.3 - 33.8	Al
APG-263165-T	16.5 - 26.3	Tinned Al
APG-338165-T	16.5 - 33.8	Tinned Al
APG-238-238	22.0 - 24.0	Al
APG-293-293-1	27.0 - 30.0	Al
APG-315-338-1	31.5 - 33.8	Al

Parallel Groove Clamps – Type LTDP with Parallel Sides

LTDP

A universal aluminium line tap for equal and unequal combinations of aluminium and ACSR conductors.

Made of die cast aluminiuim.

Part Number	Conductor Range		Length (mm)	Hardware Material
	Run and Tap			
	Stranding	Overall Ø (mm)		
LTDP58-2	7/1.75 to 7/4.50	5.25 to 13.50	70	Aluminium
LTDP58-3	7/1.75 to 7/4.50	5.25 to 13.50	70	Galv Steel
LTDP75-2	7/2.50 to19/3.75	7.50 to 19.00	95	Aluminium
LTDP75-3	7/2.50 to19/3.75	7.50 to 19.00	95	Galv Steel

Note: For aluminium to copper connections add ‘P’ for plating e.g. LTDP75-2P.

Not recommended for polluted or coastal locations.

Parallel Groove Clamps – Type LT, LTD, LTX with Interlocking Fingers

LT

A universal aluminium line tap for equal and unequal combinations of aluminium and ACSR conductors.

The clamp has interlocking fingers for maximum conductor contact.

Made of die cast aluminiuim.

Part Number	Conductor Range		Length (mm)	Hardware Material
	Run and Tap			
	Stranding	Overall Ø (mm)		
LT43-1	7/1.70 - 7/3.75	5.10 - 11.30	35	St Steel
LT43-2	7/1.70 - 7/3.75	5.10 - 11.30	35	Aluminium
LT43-3	7/1.70 - 7/3.75	5.10 - 11.30	35	Galv Steel
LT75-1	19/1.78 - 19/3.75	8.90 - 18.80	48	St Steel
LT75-2	19/1.78 - 19/3.75	8.90 - 18.80	48	Aluminium
LT75-3	19/1.78 - 19/3.75	8.90 - 18.80	48	Galv Steel
LTD58-1	7/1.75 - 7/4.50	5.25 - 13.50	70	St Steel
LTD58-2	7/1.75 - 7/4.50	5.25 - 13.50	70	Aluminium
LTD58-3	7/1.75 - 7/4.50	5.25 - 13.50	70	Galv Steel
LTD75-1	19/1.78 - 19/3.75	8.90 - 18.80	95	St Steel
LTD75-2	19/1.78 - 19/3.75	8.90 - 18.80	95	Aluminium
LTD75-3	19/1.78 - 19/3.75	8.90 - 18.80	95	Galv Steel
LTX75-1	7/3.00 - 19/3.75	9.00 - 18.80	110	St Steel
LTX75-2	7/3.00 - 19/3.75	9.00 - 18.80	110	Aluminium
LTX75-3	7/3.00 - 19/3.75	9.00 - 18.80	110	Galv Steel
LTX126-1	19/3.25 - 61/3.75	16.30 - 33.80	191	St Steel
LTX126-3	19/3.25 - 61/3.75	16.30 - 33.80	191	Galv Steel

LTD

LTX

Note: For aluminium to copper connections add 'P' for plating e.g. LTDP75-2P.

Not recommended for polluted or coastal locations.

Kover Guards

PKG

PLP Kover Guards are available for all types of cable including earthwire and fibre optic cables and offer protection from both impact and accidental damage. They are a better alternative to steel or wooden earth wire cover strips.

With many advantages such as high strength, light weight and insulation protection, matched with ease of installation, the cost savings are a real benefit.

Features

- UV stabilised material.
- Impact resistant.
- Insulation properties.
- The option of fire retardant material.
- Available in three designs, U-shaped, circular fully enclosed or flared.
- Corrosion, rot and termite proof.

Advantages

- Easy installation.
- Low cost.
- Electrically safe.
- Long life expectancy.
- Lightweight.

Part Number	Internal Diameter (mm)	Length (m)	Material Colour	Profile
PKG-019-1.2-G	19	1.2	Grey	
PKG-019-2.8-G	19	2.8	Grey	
PKGFR-020-2.7	20	2.7	Black	
PKGFR-025-2.7	25	2.7	Black	
PKGFL-020-2.0-B	20	2	Black	
PKGFL-020-2.0-G	20	2	Grey	
PKGFL-020-3.0-G	20	3	Grey	
PKGFL-050-2.0-G	50	2	Grey	
PKGFL-050-3.0-G	50	3	Grey	
PKGFL-075-3.0-G	75	3	Grey	

Guy and Stay Guards

PSG

PLP Stay Guards are for identifying guy and stay wires or other wire and cable installations. They clearly identify stays in residential, industrial and rural situations, safeguarding against accidental collision.

Features

- Smooth surface with no jagged or sharp edges.
- Resilient, bounces back to shape when bumped.
- Withstands blows without shattering or cracking, even in sub-zero temperatures.
- Lightweight and compact, easy to store and transport.
- No corrosion.
- Self extinguishing.

Part Number	Internal Diameter (mm)	Length (Mtr)
PSG-025-2U	22	2
PSG-025-2U-FH	22	2
PSG-025-2S-FH	22	2
PSG-025-2.5U	22	2.5
PSG-025-2.5U-FH	22	2.5
PSG-025-2.5S-FH	22	2.5
PSG-030-2U	28	2
PSG-030-2U-FH	28	2
PSG-030-2S-FH	28	2
PSG-030-2.5U	28	2.5
PSG-030-2.5S	28	2.5
PSG-030-2.5U-FH	28	2.5
PSG-030-2.5S-FH	28	2.5
PSG-036-2U	32	2
PSG-036-2U-FH	32	2
PSG-036-2S-FH	32	2

Note: FH = Fixing Holes, S = Slit and U = Unslit.

Split Bolt

HB

Designed to join or tap arial hard drawn or insulated copper conductors while applying an evenly distributed load to ESAA specifications. Available in natural brass or electro tinned.

Part Number		Conductor Size (mm^2)	Conductor Diameter (mm)
Natural Brass	Electro Tinned		
HB22-I	HB22T-I	16	5.10
HB24-I	HB24T-I	35	7.65
HB25-I	HB25T-I	70	10.70
HB26-I	HB26T-I	95	12.46
HB28-I	HB28T-I	185	15.75

Hardware and Accessories

Band Lock

BL

The PLP Band Lock uses a unique system to attach fittings safely and securely to steel or concrete poles.

Supplied as one unit, it does not require any special tools.

Quick and easy installation accepts 12, 16 or 19 mm stainless steel strapping.

Part Number
BL-10A

Stainless Steel Strap

SSS

Stainless steel strap comes in a 30 m roll and is available in a number of widths.

Part Number	Reel Length (mm)	Strap Width (mm)
SSS-1030	30	10
SSS-1230	30	12
SSS-1630	30	16
SSS-1930	30	19

Stainless Steel Buckles

SSSB

Stainless steel buckles are the standard method of fastening straps.

Part Number	Description	Box Quantity
SSSB-12	Suits 12 mm strap	100
SSSB-16	Suits 16 mm strap	100
SSSB-19	Suits 19 mm strap	100
SSSB-32	Suits 32 mm strap	25

Cable Stockings

CS

Cable Stockings have many uses in the areas of construction, hauling and pulling. As the type of stocking design varies with each type of cable used, PLP can supply a range of stockings to meet your requirements.

Five designs are available in sizes to cover a wide range of distribution cables to suit bare overhead, aerial bundled cables and covered conductors. Any special requirements can be met.

Five Cable Stocking Designs

1. One open end and one closed single eye.
2. Both ends open, but with a double eye at one end of the stocking.
3. Flat stocking with double eye.
4. Both ends open with no eyes.
5. Both ends open with one eye.

Nylon – Low Voltage ABC Conductors

CSN

Part Number	Conductor Construction (mm^2)	Tension Rating (kN)	Length Total (mm)
CSN-0225	2 x 25	15	600
CSN-0235	2 x 35	15	600
CSN-0250	2 x 50	15	600
CSN-0295	2 x 95	15	600
CSN-0335	3 x 35	15	600
CSN-0395	3 x 95	25	600
CSN-0425	4 x 25	15	600
CSN-0435	4 x 35	15	600
CSN-0450	4 x 50	15	600
CSN-0470	4 x 70	17	800
CSN-0495	4 x 95	25	800
CSN-4150	4 x 150	25	800

Nylon – High Voltage ABC Conductors

CSN

Part Number	Conductor Construction (mm^2)	Tension Rating (kN)	Length Total (mm)
CSN-0335-HV	3 x 35	25	800
CSN-0350-HV	3 x 50	25	800
CSN-0370-HV	3 x 70	25	800
CSN-0395-HV	3 x 95	31	900
CSN-3120-HV	3 x 120	31	900
CSN-3150-HV	3 x 150	31	900
CSN-3185-HV	3 x 185	31	900

Hardware and Accessories

Steel Construction – Aluminium & Steel Based Conductors

CSS

Part Number	Conductor Diameter Range (mm)	Tension Rating (kN)	Length Total (mm)
CSS-1014	10 - 14 mm	5	350
CSS-1419	14 - 19 mm	9	400
CSS-1928	19 - 28 mm	15	500
CSS-2840	28 - 40 mm	24	600
CSS-4055	40 - 55 mm	35	800

Steel Construction – Thimble Eye Aluminium & Steel Based Conductors

CSS

Part Number	Conductor Diameter Range (mm)	Tension Rating (kN)	Length Total (mm)
CSS-1014TH	10 - 14 mm	5	350
CSS-1419TH	14 - 19 mm	9	400
CSS-1928TH	19 - 28 mm	15	500
CSS-2840TH	28 - 40 mm	24	600
CSS-4055TH	40 - 55 mm	35	800

Heavy Duty Steel Construction – Aluminium & Steel Based Conductors

CSS

Part Number	Conductor Diameter Range (mm)	Tension Rating (kN)	Length Total (mm)
CSS-0407HD	4 - 7 mm	5	300
CSS-0611HD	6 - 11 mm	8	350
CSS-1014HD	10 - 14 mm	15	350
CSS-1419HD	14 - 19 mm	20	400
CSS-1928HD	19 - 28 mm	37	500
CSS-2840HD	28 - 40 mm	54	600
CSS-4055HD	40 - 55 mm	62	800



Swivels

SWIVEL2

Features

- For use with pulling socks, to eliminate twist.

Part Number	Length (mm)	Diameter (mm)	Maximum Cable Diameter (mm)	Safe Working Load (kN)
SWIVEL1	122	28.5	10.0	1000
SWIVEL2	178	50.0	18.5	2000

Energy Distribution

Index & Tables

> “Although PLP Australia supplies products to suit Australian standard cable sizes, we also stock products that suit American, Canadian, Great Britain, and European cable sizes.”

Product Selection Chart

Conductor Type

AAAC AAC ACSR

1 **Step 1** – Choose the conductor by code, stranding and type from the table.

CONTENTS

Code	Stranding	Type	O/D (mm)	Helical Grip	Compression Deadend	Helical Splice	Compression Midspan	Distribution Tie 76 mm	Distribution Tie 112 mm
Agate	7/1.75	AAAC	5.25	AFG-053		AFS-053			
Diamond	7/2.50	AAAC	7.5	AFG-075, AWFG-075-X		AFS-075		AWDT-075-76	AWDT-075-112
Emerald	7/3.00	AAAC	9	AFG-090-CL, AWFG-090-X		AFS-090		AWDT-090-76	AWDT-090-112
Garnet	7/3.75	AAAC	11.25	AFG-113-CL, AFG-113-L, AFG-113-X		AFS-113	CMSAAAC-113	AWDT-113-76	AWDT-113-112
Jade	7/4.50	AAAC	13.5	AFG-135-CL	CDEAAAC-135T	AFS-135		AWDT-140-76	AWDT-140-112
Jasper	7/4.75	AAAC	14.25	AFG-143-CL, AFG-143-ER, AWFG-143-X	CDEAAAC-143	AFS-143	CMSAAAC-143-1	AWDT-140-76	AWDT-140-112
Opal	19/3.25	AAAC	16.3	AFG-163-CL, AFG-163-ER	CDEAAAC-163-2	AFS-163	CMSAAAC-163-1	AWDT-163-76	AWDT-163-112
Pearl	19/3.75	AAAC	18.8	AFG-188-CL, AFG-188-ER	CDEAAAC-188-2	AFS-188	CMSAAAC-188-1	AWDT-180-76	AWDT-180-112
Ruby	37/3.00	AAAC	21.0	AFG-210-CL, AFG-210-ER	CDEAAAC-210-1	AFS-210	CMSAAAC-210-1	AWDT-210-76	AWDT-210-112
Sapphire	37/3.75	AAAC	26.3	AFG-263-LT-CL	CDEAAAC-263-4		CMSAAAC-263-1		
Spinel	61/3.25	AAAC	29.25	AFG-293	CDEAAAC-293-1		CMSAAAC-293		
Topaz	61/3.75	AAAC	33.75		CDEAAAC-338-1	ARSS-338	CMSAAAC-338-1		
Boron	7/2.25	AAAC/1120	6.75	AFG-068		AFS-068			
Chlorine	7/2.50	AAAC/1120	7.5	AFG-075, AWFG-075-X		AFS-075	CMFT36A	AWDT-075-76	AWDT-075-112
Fluorine	7/3.00	AAAC/1120	9	AFG-090-CL, AWFG-090-X		AFS-090	CMFT44A, CMSAAAC-090	AWDT-090-76	AWDT-090-112
Helium	7/3.75	AAAC/1120	11.25	AFG-113-CL, AFG-113-L, AFG-113-X		AFS-113	CMFT50A, CMSAAAC-113	AWDT-113-76	AWDT-113-112
Hydrogen	7/4.50	AAAC/1120	13.5	AFG-135-CL	CDEAAAC-135T	AFS-135	CMFT61A, CMSAAAC-135	AWDT-140-76	AWDT-140-112
Iodine	7/4.75	AAAC/1120	14.25	AFG-143-CL, AFG-143-ER, AWFG-143-X	CDEAAAC-143	AFS-143	CMFT61A, CMSAAAC-143	AWDT-140-76	AWDT-140-112
Krypton	19/3.25	AAAC/1120	16.3	AFG-163-CL, AFG-163-ER	CDEAAAC-163-2	AFS-163	CMFT68A, CMSAAAC-163	AWDT-163-76	AWDT-163-112
Neon	19/3.75	AAAC/1120	18.8	AFG-188-CL, AFG-188-ER	CDEAAAC-188-2	AFS-188	CMSAAAC-188-1	AWDT-180-76	AWDT-180-112
Nitrogen	37/3.00	AAAC/1120	21.0	AFG-210-CL, AFG-210-ER	CDEAAAC-210-1	AFS-210	CMSAAAC-210-1	AWDT-210-76	AWDT-210-112
Nobelium	37/3.25	AAAC/1120	22.8		CDEAAAC-228-1		CMSAAAC-228-1	AWDT-240-76	AWDT-240-112
Oxygen	19/4.75	AAAC/1120	23.8	AFG-240-ER, AFG-240-LT-CL	CDEAAAC-238-1	AFS-238	CMSAAAC-238-1	AWDT-240-76	AWDT-240-112
Phosphorus	37/3.75	AAAC/1120	26.3	AFG-263-LT-CL	CDEAAAC-263-4		CMSAAAC-263-1		
Gemini	7/1.75	AAC	5.25	AFG-053		AFS-053			
Leo	7/2.50	AAC	7.5	AFG-075, AWFG-075-X		AFS-075	CMFT36A,	AWDT-075-76	AWDT-075-112
Ladybird	7/2.79	AAC	8.37	AFG-083		AFS-083		AWDT-090-76	AWDT-090-112
Libra	7/3.00	AAC	9	AFG-090-CL, AWFG-090-X		AFS-090	CMFT44A, CMSA-090	AWDT-090-76	AWDT-090-112
Fly	7/3.40	AAC	10.2	AFG-102-CL, AFG-102-L-CL		AFS-102	CMSA-102		
Mars	7/3.75	AAC	11.25	AFG-113-CL, AFG-113-L, AFG-113-X		AFS-113	CMFT50A, CMSA-113	AWDT-113-76	AWDT-113-112
Mercury	7/4.50	AAC	13.5	AFG-135-CL		AFS-135	CMFT61A, CMSA-132	AWDT-140-76	AWDT-140-112
Moon	7/4.75	AAC	14.25	AFG-143-CL, AFG-143-ER, AWFG-143-X	CDEA-143-1	AFS-143	CMFT61A, CMSA-143	AWDT-140-76	AWDT-140-112
Cricket	7/5.36	AAC	16.08					AWDT-163-76	AWDT-163-112
Hornet	19/3.25	AAC	16.3	AFG-163-CL, AFG-163-ER	CDEA-163-1	AFS-163	CMSA-163	AWDT-163-76	AWDT-163-112
Neptune	19/3.25	AAC	16.3	AFG-163-CL, AFG-163-ER	CDEA-163-1	AFS-163	CMFT68A,	AWDT-163-76	AWDT-163-112
Pluto	19/3.75	AAC	18.8	AFG-188-CL, AFG-188-ER	CDEA-188-1	AFS-188	CMSA-188, CMSA-188-NT	AWDT-180-76	AWDT-180-112
Saturn	37/3.00	AAC	21.0	AFG-210-CL, AFG-210-ER	CDEA-210-1	AFS-210	CMSA-210, CMSA-210-NT	AWDT-210-76	AWDT-210-112
Cockroach	19/4.22	AAC	21.1	AFG-210-CL	CDEA-210T-1		CMSA-211-FT	AWDT-210-76	AWDT-210-112
Taurus	19/4.75	AAC	23.8	AFG-240-ER, AFG-240-LT-CL	CDEA-238-1	AFS-238	CMSA-238-3, CMSA-238-NT	AWDT-240-76	AWDT-240-112
Triton	37/3.75	AAC	26.3	AFG-263-LT-CL	CDEA-263-1		CMSA-263-3, CMSA-263-NT		
Quince	3/4/1.75	ACSR	5.25	AWFG-053					
Skating	3/4/1.75	ACSR	5.25	AWFG-053					
Squirrel	6/1/2.11	ACSR	6.33	AWFG-063-X		AFS-063			
Magpie	3/4/2.12	ACSR	6.36	AWFG-063-X		AFS-063-AW			
Almond	6/1/2.50	ACSR	7.5	AWFG-075-X				AWDT-075-76	AWDT-075-112
Angling	6/1/2.50	ACSR	7.5	AWFG-075-X				AWDT-075-76	AWDT-075-112
Barley	6/1/2.50	ACSR	7.5	AWFG-075-X				AWDT-075-76	AWDT-075-112
Raisin	3/4/2.50	ACSR	7.5	AWFG-075-X			CMSJ-075-X	AWDT-075-76	AWDT-075-112
Apple	6/1/3.00	ACSR	9	AWFG-090-X		AFS-090, FTS-090		AWDT-090-76	AWDT-090-112
Sultana	4/3/3.00	ACSR	9	AWFG-090-X		AFS-090-AW	CMSA-090-NT, CMSJ-090-X	AWDT-090-76	AWDT-090-112
Snipe	3/4/3.37	ACSR	10.11	AWFG-101-X		AFS-101-AW			
Banana	6/1/3.75	ACSR	11.25	AFG-113-L, AWFG-113-X, FTG-113	CDE-113T-1	AFS-113-AW, FTS-113	CMSJ-113-4, CMSA-113-X	AWDT-113-76	AWDT-113-112
Walnut	4/3/3.75	ACSR	11.3	AFG-113-L, AWFG-113-X, FTG-113	CDE-113T-1	AFS-113-AW, FTS-113		AWDT-113-76	AWDT-113-112
Dog	6/4.72/7/1.57	ACSR	14.15	FTG-143	CDE-143-1-A	FTS-143		AWDT-140-76	AWDT-140-112
Cherry	6/4.75/7/1.60	ACSR	14.3	AWFG-143-X, FTG-143	CDE-143-1	FTS-143	CMSJ-143-2, CMSJ-143-X	AWDT-140-76	AWDT-140-112
Cockatoo	12/7/3.00	ACSR	15.00	FTG-150		ARSS-150, FTS-150		AWDT-163-76	AWDT-163-112
Grape	30/7/2.50	ACSR	17.5	FTG-175	CDE-175-1	AFS-175, FTS-175	CMSA-175-NT, CMSJ-175	AWDT-180-76	AWDT-180-112
Wolf	30/7/2.59	ACSR	18.13		CDE-181-1		CMSJ-181	AWDT-180-76	AWDT-180-112
Ibis	26/3.14/7/2.44	ACSR	19.88		CDE-199-1		CMSJ-199	AWDT-210-76	AWDT-210-112
Ibis (Super)	26/3.14/7/2.50	ACSR	20.1					AWDT-210-76	AWDT-210-112
Lemon	30/7/3.00	ACSR	21.0	FTG-210	CDE-210-1	ARSS-210-2, FTS-210	CMSJ-210	AWDT-210-76	AWDT-210-112
Hen	30/7/3.20	ACSR	22.4		CDE-224-1			AWDT-220-76	AWDT-220-112
Bear	30/7/3.35	ACSR	23.45		CDE-235-1		CMSJ-235	AWDT-240-76	AWDT-240-112
Lime	30/7/3.50	ACSR	24.5	FTG-245	CDE-245-1	FTS-245	CMSJ-245	AWDT-240-76	AWDT-240-112
Gannet	26/4.07/7/3.16	ACSR	25.8						
Goat	30/7/3.71	ACSR	25.97		CDE-260-1	ARSS-260	CMSJ-260		

Product Selection Chart

2 **Step 2** – Select the product type required and the corresponding PLP product number.

3 **Step 3** – Contact PLP if your required product is not listed or your conductor size is not present.

CONTENTS

Armor Rods	Armor Rods Subset	Distribution Tie Over Armor 76 mm	Distribution Tie Over Armor 112 mm	Side Tie 54 mm	Side Tie 76 mm	Side Tie 112 mm	Side Tie Over Armor 54 mm	Side Tie Over Armor 76 mm	Side Tie Over Armor 112 mm	Armor Grip Suspension AGS, Single, Double
AAR-053	AARS-053	AWDT-113A-76	AWDT-113A-112				AWST-113A-54			
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-090	AARS-090	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8104, AGS-8804
AAR-113	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112	AGS-8109, AGS-8809
AAR-135	AARS-135	AWDT-220A-76	AWDT-220A-112					AWST-220A-76		AGS-5102, AGS-5802
AAR-143	AARS-143	AWDT-240A-76	AWDT-240A-112					AWST-240A-76	AWST-240A-112	AGS-5104, AGS-5804
AAR-163	AARS-163	AWDT-255A-76	AWDT-255A-112				AWST-255A-54	AWST-255A-76		AGS-5108, AGS-5808
AAR-188	AARS-188	AWDT-290A-76	AWDT-290A-112					AWST-290A-76	AWST-290A-112	AGS-5113, AGS-5813
AAR-210										AGS-5117, AGS5817
AAR-250										AGS-5127, AGS-5827
AAR-293										AGS-5132, AGS-5832
AAR-338										AGS-5139, AGS-5839
AAR-068										
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-090	AARS-090	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8104, AGS-8804
AAR-113	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112	AGS-8109, AGS-8809
AAR-135	AARS-135	AWDT-220A-76	AWDT-220A-112					AWST-220A-76		AGS-5102, AGS-5802
AAR-143	AARS-143	AWDT-240A-76	AWDT-240A-112					AWST-240A-76	AWST-240A-112	AGS-5104, AGS-5804
AAR-163	AARS-163	AWDT-255A-76	AWDT-255A-112				AWST-255A-54	AWST-255A-76		AGS-5108, AGS-5808
AAR-188	AARS-188	AWDT-290A-76	AWDT-255A-112					AWST-290A-76	AWST-290A-112	AGS-5113, AGS-5813
AAR-210			AWDT-290A-112							AGS-5117, AGS-5817
AAR-230										AGS-5120, AGS-5820
AAR-240										AGS-5123, AGS-5823
AAR-250										AGS-5127, AGS-5827
AAR-053	AARS-053	AWDT-113A-76	AWDT-113A-112				AWST-113A-54			
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-084	AARS-084	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8109, AGS-8804
AAR-090	AARS-090	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8104, AGS-8804
AAR-102	AARS-102									AGS-8106, AGS-8806
AAR-113	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112	AGS-8109, AGS-8809
AAR-135	AARS-135	AWDT-220A-76	AWDT-220A-112					AWST-220A-76		AGS-5102, AGS-5802
AAR-143	AARS-143	AWDT-240A-76	AWDT-240A-112					AWST-240A-76	AWST-240A-112	AGS-5104, AGS-5804
AAR-163	AARS-163									AGS-5108, AGS-5808
AAR-163	AARS-163	AWDT-255A-76					AWST-255A-54	AWST-255A-76		AGS-5108, AGS-5808
AAR-163	AARS-163	AWDT-255A-76					AWST-255A-54	AWST-255A-76		AGS-5108, AGS-5808
AAR-188	AARS-188	AWDT-290A-76						AWST-290A-76	AWST-290A-112	AGS-5113, AGS-5813
AAR-210										AGS-5119, AGS5819
AAR-210										AGS-5119, AGS5819
AAR-240										AGS-5123, AGS-5123
AAR-250										AGS-5127, AGS-5827
AAR-053	AARS-053	AWDT-113A-76	AWDT-113A-112				AWST-113A-54			
AAR-053	AARS-053	AWDT-113A-76	AWDT-113A-112				AWST-113A-54			
AAR-063		AWDT-125A-76	AWDT-125A-112							
AAR-063		AWDT-125A-76	AWDT-125A-112							
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-075	AARS-075	AWDT-140A-76	AWDT-140A-112		AWST-075-76	AWST-075-112	AWST-140A-54	AWST-140A-76	AWST-140A-112	AGS-8099, AGS-8799
AAR-090	AARS-090	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8104, AGS-8804
AAR-090	AARS-090	AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112	AGS-8104, AGS-8804
AAR-102	AARS-102									AGS-8106, AGS-8806
AAR-113	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112	AGS-8109, AGS-8809
AAR-113	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112	AGS-8109, AGS-8809
AAR-143	AARS-143	AWDT-240A-76	AWDT-240A-112					AWST-240A-76	AWST-240A-112	AGS-5104, AGS-5804
AAR-143	AARS-143	AWDT-240A-76	AWDT-240A-112					AWST-240A-76	AWST-240A-112	AGS-5104, AGS-5804
AAR-157										AGS-5105, AGS-5805
AAR-175	AARS-175	AWDT-290A-76						AWST-290A-76	AWST-290A-112	AGS-5110, AGS-5810
AAR-175	AARS-175	AWDT-290A-76						AWST-290A-76	AWST-290A-112	AGS-5112, AGS-5812
										AGS-5115, AGS-5815
AAR-201										AGS-5115, AGS-5815
AAR-210										AGS-5117, AGS-5817
AAR-220										AGS-5119, AGS-5819
AAR-230										AGS-5122, AGS-5822
AAR-240										AGS-5124, AGS-5824
AAR-250										AGS-5126, AGS-5826
AAR-250										AGS-5126, AGS-5826

Product Selection Chart

Stranding	Type	O/D (mm)	Helical Grip	Compression Deadend Earthwire	Helical Splice	Vibration Damper	Armor Grip Suspension AGS, Single, Double	Compression Midspan
3/2.75	SC/AC	5.93	AWFG-K023, AWFG-K023-R		AWFS-K023	SVD-0102		CMS-060-NT
7/2.06	SC/AC	6.18				SVD-0102		
3/3.00	SC/AC	6.47				SVD-0103		
3/3.25	SC/AC	7	AWFG-K032		AWFS-K032	SVD-0103		
3/3.75	SC/AC	8.08	AWFG-K040		AWFS-K040	SVD-0103		
7/2.75	SC/AC	8.25	AWFG-K050, AWFG-K050-R	CDST-083	AWFS-K050	SVD-0103	AGS-6101, AGS-6801	
7/3.00	SC/AC	9		CDST-090		SVD-0104		
7/3.05	SC/AC	9.15	AWFG-K060-8			SVD-0104		
7/3.25	SC/AC	9.75	AWFG-K070, AWFG-K070-8, AWFG-K070-ER	CDST-098	AWFS-K070	SVD-0104	AGS-6105, AGS-6805	CMS-098-1
7/3.75	SC/AC	11.3			AWFS-K088	SVD-0104	AGS-6109, AGS-6805	CMS-113-1
7/4.25	SC/AC	12.8	AWFG-K106, AWFG-K106-R	CDST-128	AWFS-K106, AWFS-K106-R	SVD-0105	AGS-6112	CMS-128-2
19/2.75	SC/AC	13.8	AWFG-K136		AWFS-K136	SVD-0105		
19/3.00	SC/AC	15.00				SVD-0106		
19/3.25	SC/AC	16.3	AWFG-K189			SVD-0106		
19/3.75	SC/AC	18.8				SVD-0106		
19/4.25	SC/AC	21.3				VORTX		
1/3.00	SC/GZ	3.10	GFG-031-S		GFS-031S			
1/4.00	SC/GZ	4.00			GFS-040			
3/2.00	SC/GZ	4.31	GFG-043		GFS-043			
7/1.60	SC/GZ	4.80	GFG-048-CL		GFS-048	SVD-0102		
3/2.75	SC/GZ	5.93	GFG-055		GFS-055, GFS-055-L	SVD-0102		
7/2.00	SC/GZ	6.00	GFG-060-CL		GFS-060, GFS-060-LH	SVD-0102		
7/2.50	SC/GZ	7.5	GFG-075		GFS-075	SVD-0103		
7/2.75	SC/GZ	8.25	GFG-083-CL	CDS-083-1	GFS-083	SVD-0103	AGS-7101, AGS-7801	CMS-083-1
7/3.00	SC/GZ	9	GFG-090		GFS-094-S	SVD-0104		
7/3.25	SC/GZ	9.75	GFG-100	CDS-098-1	GFS-098-2	SVD-0104	AGS-7105, AGS-7805	
19/2.00	SC/GZ	10.00	GFG-100		GFS-100, GRSS-100	SVD-0104	AGS-7106	CMS-105-1
7/3.75	SC/GZ	11.3	GFG-113-CL	CDS-113-1	GFS-113, GRSS-113	SVD-0104	AGS-7109	
7/4.00	SC/GZ	12.00	GFG-120		GFS-120	SVD-0105		
19/2.55	SC/GZ	12.75		CDS-128-2	GFS-126-S	SVD-0105		
19/2.75	SC/GZ	13.8	GFG-138		GFS-138	SVD-0105		
19/3.20	SC/GZ	16.0	GFG-160-WR-CL		GFS-160-WR	SVD-0106		
19/3.25	SC/GZ	16.3	GFG-163		GFS-163	SVD-0106		
7/1.00	HDC	3.00	CFG-030					
7/1.25	HDC	3.75	CFG-038					
3/2.00	HDC	4.31	CFG-043		CFS-043, CFS-043-L	SVD-0102		
7/1.63	HDC	4.89	CFG-048		CFS-048	SVD-0102	AGS-9105	
7/1.75	HDC	5.25	CFG-053		CAS-053, CFS-053	SVD-0102		
7/2.00	HDC	6.00	CFG-060		CAS-060, CFS-060	SVD-0102	AGS-9109	
7/2.50	HDC	7.5	CFG-075		CFS-075	SVD-0103		
7/2.75	HDC	8.25	CFG-083		CFS-083, CFS-083-L	SVD-0103	AGS-9101	
19/1.75	HDC	8.75	CFG-088		CFS-088	SVD-0104		
7/3.00	HDC	9	CFG-088		CFS-088	SVD-0104		CMSC-090-FT
7/3.25	HDC	9.75	CFG-096		CFS-096, CFS-096-L	SVD-0104		
19/2.00	HDC	10.00	CFG-100-CL		CFS-100, CFS-100-L	SVD-0104		CMSC-100-FT
7/3.50	HDC	10.5	CFG-105-8-CL		CFS-105	SVD-0104	AGS-9107	CMSC-105-FT
7/3.75	HDC	11.3	CFG-113-CL		CFS-113	SVD-0104		CMSC-113-4
19/2.34	HDC	11.7	CFG-117		CFS-117	SVD-0104		
37/1.75	HDC	12.3	CFG-125		CFS-125	SVD-0105		
19/2.56	HDC	12.8	CFG-125		CFS-125	SVD-0105		
19/2.75	HDC	13.8	CFG-138-CL		CFS-138	SVD-0105		
19/3.00	HDC	15.00	CFG-150-CL		CFS-150	SVD-0106		CMSC-150-FT
37/2.25	HDC	15.75			CFS-158	SVD-0106		
19/3.33	HDC	16.64	CFG-166		CFS-166	SVD-0106		
37/2.50	HDC	17.5	CFG-175-CL		CFS-175	SVD-0106		
37/2.62	HDC	18.34	CFG-183-CL		CFS-183	SVD-0106		
37/2.75	HDC	19.3	CFG-193		CFS-193	SVD-0106		
37/2.93	HDC	20.51	CFG-203-CL		CFS-205			
37/3.00	HDC	21.0	CFG-210-CL		CFS-210			
37/3.35	HDC	23.47	CFG-235-CL		CFS-235			
61/2.75	HDC	24.8						

Product Selection Chart

CONTENTS

Distribution Tie 76 mm	Armor Rods	Armor Rods Subset	Distribution Tie Over Armor 76 mm	Distribution Tie Over Armor 112 mm	Side Tie 54 mm	Side Tie 76 mm	Side Tie 112 mm	Side Tie Over Armor 54 mm	Side Tie Over Armor 76 mm	Side Tie Over Armor 112 mm
	AWAR-K023		AWDT-102A-76	AWDT-102A-112					AWST-125A-76	
			AWDT-125A-76	AWDT-125A-112					AWST-125A-76	
	AWAR-K031		AWDT-113A-76	AWDT-113A-112						
	AWAR-K040		AWDT-125A-76	AWDT-125A-112						
	AWAR-K050		AWDT-125A-76	AWDT-125A-112						
			AWDT-163A-76	AWDT-163A-112	AWST-090-54	AWST-090-76	AWST-090-112	AWST-163A-54	AWST-163A-76	AWST-163A-112
	AWAR-091							AWST-163A-54	AWST-163A-76	AWST-163A-112
	AWAR-K088-8	AARS-113	AWDT-210A-76	AWDT-210A-112				AWST-210A-54	AWST-210A-76	AWST-210A-112
	AWAR-K106									
			AWDT-255A-76					AWST-255A-54	AWST-255A-76	
			AWDT-290A-76						AWST-290A-76	AWST-290A-112
	GAR-043									
	GAR-048									
	GAR-055									
	GAR-060									
	GAR-083									
	GAR-098									
	GAR-100									
	GAR-113									
	CAR-038									
	CAR-053									
	CAR-060									
	CAR-083									
	CAR-088									
	CAR-090									
	CAR-100, CARS-100									
	CAR-105									
	CAR-118									
	CAR-125									
CDT-140-76	CAR-138									
CDT-140-76	CAR-150									
	CAR-175									
	CAR-183									
CDT-250-76										

Conductor Type

SC/AC SC/GZ HDC

1 **Step 1** – Choose the conductor by stranding and type from the table.

2 **Step 2** – Select the product type required and the corresponding PLP product number.

3 **Step 3** – Contact PLP if your required product is not listed or your conductor size is not present.

Thimble Selection Chart

Copper Formed Grip

Part Number	Conductor Stranding	Closed Wire Rope Thimble	Open Wire Rope Thimble	Galvanised Clevis Thimble	Socket Thimble	Thimble Eye Nut	Cast Iron Sheave
							
CFG-030	7/1.00	THWC-10	THWC-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-038	7/1.25	THWC-10	THWC-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-043	3/2.00 7/1.35	THWC-10	THWC-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-048	7/1.63	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-053	7/1.75 7/1.73	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-060	7/2.00	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-075	7/2.50	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57
CFG-083	7/2.75	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-20 / THEN-24	THGR-57
CFG-088	19/1.75	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-20 / THEN-24	THGR-57
CFG-100-CL	19/2.00 7/3.50 19/2.11	THWC-16	THWO-16	CTH-070-MCI	STH-070-1	THEN-20 / THEN-24	THGR-75
CFG-113-CL	7/3.75	THWC-16	THWO-16	GCT-120-TC5F	STH-070-1		THGR-75
CFG-117	19/2.33	THWC-16	THWO-16	GCT-120-TC5F	STH-070-1		THGR-75
CFG-125	19/2.56 37/1.75	THWC-16	THWO-16	GCT-120-TC5F			THGR-75
CFG-138-CL	19/2.75	THWC-20	THWO-20	GCT-120-TC5F			THGR-75
CFG-150-CL	19/3.00	THWC-20	THWO-20	GCT-120-TC5F			THGR-75
CFG-166	19/3.35 37/2.36	THWC-20	THWO-20	GCT-120-TC5F			THGR-75
CFG-175-CL	37/2.50	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-183-CL	37/2.62	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-193-CL	37/2.75	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-203-CL	61/2.25	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-210-LT-CL	37/3.00	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-235-CL	61/2.64	THWC-22	THWO-22	GCT-120-TC5F			THGR-75
CFG-260-LT-CL	91/2.36 61/2.85	THWC-22	THWO-22	GCT-120-TC5F			THGR-75

Thimble Selection Chart

Galvanised Steel Formed Grip

Part Number	Conductor Stranding	Closed Wire Rope Thimble	Open Wire Rope Thimble	Galvanised Clevis Thimble	Socket Thimble	Thimble Eye Nut	Cast Iron Sheave	Guy Strain Insulator
								
GFG-025-CL	1/2.50	THWC-10	THWO-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-031-CL	1/3.15 1/3.25	THWC-10	THWO-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-038-CL	7/1.25	THWC-10	THWO-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-043-CL	3/2.00	THWC-10	THWO-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-048-CL	7/1.60	THWC-10	THWO-10	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-055	3/2.75	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-060-CL	7/2.00	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-069-CL	7/2.30	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-16	THGR-57	
GFG-075	7/2.75	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-20 THEN-24	THGR-57	
GFG-083-CL	7/2.75	THWC-12	THWO-12	CTH-070-MCI	STH-070-1	THEN-20 THEN-24	THGR-57	I-GY2
GFG-090	7/3.00	THWC-16	THWO-16	GCT-120-TC5F	STH-070-1	THEN-20 THEN-24	THGR-75	I-GY2
GFG-100	7/3.25 19/2.00	THWC-16	THWO-16	GCT-120-TC5F	STH-070-1	THEN-20 THEN-24	THGR-75	I-GY2
GFG-113-CL	7/3.75	THWC-16	THWO-16	GCT-120-TC5F	STH-070-1	THEN-20 THEN-24	THGR-75	I-GY2
GFG-120	7/4.00	THWC-20	THWO-20	GCT-120-TC5F			THGR-75	I-GY3
GFG-138	19/2.75	THWC-20	THWO-22	GCT-120-TC5F			THGR-75	I-GY3
GFG-150	19/3.00	THWC-22	THWO-22	GCT-120-TC5F			THGR-75	I-GY3
GFG-163	19/3.25	THWC-22	THWO-22	GCT-120-TC5F			THGR-75	I-GY3
GFG-188	19/3.75	THWC-22	THWO-22				THGR-75	I-GY4

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Thimble Selection Chart

Aluminium Formed Grip

Part Number	Conductor Stranding	Aluminium Clevis Thimble	Aluminium Sheave	Spool Insulator
				
AFG-053	7/1.75	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-059	#4 AWG	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-063	7/2.11	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-068	7/2.25	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-075	7/2.50	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-083	7/2.75	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-090-CL	7/3.00	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-102-CL	7/3.40	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-105	7/3.50	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-113-CL	7/3.75	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-118-CL	19/2.36	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-123	7/4.22	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-135-CL	7/4.50	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-143-CL	7/4.75	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-163-CL	19/3.25	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-169-CL	19/3.38	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-175-CL	37/2.50	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-188-CL	19/3.75	ACT-27-16	AS-54-17 / AS-54-22	SH.LV.2
AFG-210-CL	37/3.00	ACT-37-16		
AFG-232-CL	19/4.65	ACT-37-16		
AFG-240-LT-CL	19/4.75 37/3.75	ACT-37-16		



Conductor Reference Tables

Conductor Protection and Repair Data

	Protecting a new or old undamaged conductor	Repairing a new or old conductor	
Product	**Location**	**Location**	**Solution**
Repair Rods	Support or suspension point (A) (B) (C) (D)	Support, suspension point or mid-span	50% of outer layer of aluminium or copper stranding for 7 and 19 strand conductors.
Armor Rods	Support or suspension point (A) (B) (C) (D)	Support point or mid-span	25% of outer layer of aluminium or copper stranding for 37 and 61 strand conductors.
Line Guard	Support point (B) (C) (D)	Mid-span	25% of outer layer of aluminium or copper conductors.

Type of Protection

(A) Vibration damage

(B) Chafing damage

(C) Arc-over burning

(D) Clamping stresses

To identify the correct fitting, the following information is required:

1. Is the requirement for protection or repair?
2. Is the position of use at the support point or mid-span?
3. Degree of damage?

Conductor Jointing Data

	Joining a new conductor	Repairing a new or old conductor	
Product	**Location**	**Location**	**Solution**
Line Splice	Mid-span (Homogeneous conductor)	Mid-span (Homogeneous or ACSR)	100% of aluminium or copper stranding.
Splice ACSR Full Tension	Mid-span (ACSR)	Mid-span (ACSR)	100% of aluminium and steel stranding.

Cleaning and Preparation

Optimum electrical performance from current carrying repair fittings can only be achieved if the following instructions are observed.

1. Wire Brushing – All conductors, new or weathered, MUST be thoroughly wire brushed before the fitting is applied.

2. Inhibitors – All conductors, new or weathered, MUST be coated with a quality inhibitor along the area where the fitting is to be applied.

ACSR/GZ – Aluminium Conductor / Steel Reinforced (Galvanised)
Australian Standard – AS1220 Part 1

Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	(kN)	Mass (kg/km)
Almond	6/1/2.50	7.50	29.00	34.36	10.5	119.0
Apple	6/1/.00	9.00	41.80	49.48	14.9	171.0
Banana	6/1/3.75	11.30	65.20	77.31	22.8	268.0
Cherry	6/4.75-7/1.60	14.30	105.00	120.40	33.0	404.0
Grape	30/7/2.50	17.50	144.00	181.60	63.7	675.0
Lemon	30/7/3.00	21.00	207.00	261.50	90.1	973.0
Lime	30/7/3.50	24.50	282.00	365.00	121.0	1320.0
Mango	54/7/3.00	27.00	373.00	431.20	118.0	1440.0
Orange	54/7/3.25	29.30	483.00	506.00	137.0	1690.0
Olive	54/7/3.50	31.50	508.00	586.90	159.0	1960.0
Paw-Paw	54/3.75-19/2.25	33.80	583.00	671.70	179.0	2250.0
Peach	54/4.75-19/2.85	42.80	936.00	1085.00	292.0	3660.0
Extra High Strength						
Quince	3/4/1.75	5.25	8.77	16.85	12.7	95.90
Raisin	3/4/2.50	7.50	17.90	34.36	24.4	193.0
Sultana	4/3/3.00	9.00	31.60	49.48	28.3	242.0
Walnut	4/3/3.75	11.30	49.40	77.31	43.9	379.0

SC/AC – Steel Conductors / Aluminium Clad
Australian Standard – AS1222 Part 2

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass kg/km
3/2.75	5.93	5.91	17.82	22.70	118.00
3/3.00	6.47	7.03	21.21	27.00	141.00
3/3.25	7.02	8.26	24.89	31.60	165.00
3/3.75	8.08	11.00	33.13	40.00	220.00
7/2.75	8.25	13.70	41.58	50.10	277.00
7/3.00	9.00	16.30	49.48	59.70	330.00
7/3.25	9.75	19.20	58.07	69.80	387.00
7/3.75	11.30	25.50	77.31	88.30	515.00
7/4.25	12.80	32.80	99.30	106.00	662.00
19/2.75	13.80	37.10	112.90	136.00	755.00
19/3.00	15.00	44.10	134.40	162.00	899.00
19/3.25	16.30	51.80	157.60	189.00	1060.00
19/3.75	18.80	68.90	209.80	240.00	1410.00
19/4.25	21.30	88.60	269.50	289.00	1800.00

SC/GZ – Steel Conductor / Galvanised
Australian Standard – AS1222 Part 1

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
3/2.00	4.31	1.56	9.43	11.70	75.50
3/2.75	5.93	2.95	17.82	22.20	139.00
7/2.00	6.00	3.62	21.99	27.40	177.00
7/2.75	8.25	6.85	41.58	51.80	326.00
7/3.25	9.75	9.56	58.07	72.30	460.00
7/3.75	11.30	12.70	77.31	96.20	609.00
19/2.00	10.00	9.79	56.96	74.40	483.00
19/2.75	13.80	18.50	112.90	141.00	888.00
19/3.25	16.30	25.80	157.60	196.00	1250.00

AAAC – All Aluminum Alloy Conductor 1120 Alloy
Australian Standard – AS1531 Part 2

Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Argon	7/1.75	5.25	16.10	16.84	4.00	46.10
Boron	7/2.25	6.75	26.50	27.83	6.61	75.90
Chlorine	7/2.50	7.50	32.80	34.36	8.18	94.30
Fluorine	7/3.00	9.00	47.20	49.48	11.80	135.00
Helium	7/3.75	11.30	73.70	77.31	17.60	211.00
Hydrogen	7/4.50	13.50	106.00	111.30	24.30	304.00
Iodine	7/4.75	14.30	118.00	124.00	27.10	339.00
Krypton	19/3.25	16.30	150.00	157.60	37.40	433.00
Neon	19/3.75	18.80	199.00	209.80	47.80	576.00
Nitrogen	37/3.00	21.00	248.00	261.50	62.20	721.00
Oxygen	19/4.75	23.80	320.00	336.70	73.60	924.0
Phosphorous	37/3.75	26.30	387.00	408.70	93.10	1120.00
Selenium	61/3.25	29.30	478.00	506.00	114.00	1400.00
Sulphur	61/3.75	33.80	637.00	673.70	145.00	1860.00
Xenon	91/4.50	49.50	1360.00	1447.00	300.00	4000.00

Conductor Reference Tables

AAAC – 6201 Aluminum Alloy Conductor
Australian Standard – AS1531 Part 2

Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Agate	7/1.75	5.25	14.30	16.84	4.71	46.10
Amethyst	7/2.25	6.75	23.70	27.83	7.78	75.90
Diamond	7/2.50	7.50	29.30	34.36	9.64	94.30
Emerald	7/3.00	9.00	42.10	49.48	13.90	135.00
Garnet	7/3.75	11.30	65.80	77.31	21.70	211.00
Jade	7/4.50	13.50	94.80	111.30	31.20	304.00
Jasper	7/4.75	14.30	106.00	124.00	34.80	339.00
Opal	19/3.25	16.30	134.00	157.60	44.20	433.00
Pearl	19/3.75	18.80	178.00	209.80	58.80	576.00
Ruby	37/3.00	21.00	221.00	261.50	73.50	721.00
Rutile	19/4.75	23.80	285.00	336.70	94.40	924.0
Sapphire	37/3.75	26.30	345.00	408.70	115.00	1120.00
Spinel	61/3.25	29.30	426.00	506.00	135.00	1400.00
Topaz	61/3.75	33.80	568.00	673.70	179.00	1860.00
Zircon	91/4.50	49.50	1220.00	1447.00	384.00	4000.00

HDC – Hard Drawn Copper Conductor
Australian Standard – AS1746 1975

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
7/1.00	3.00	8.68	5.49	2.31	49.30
7/1.25	3.75	13.60	8.59	3.61	76.90
7/1.75	5.25	26.60	16.84	6.89	151.00
7/2.00	6.00	34.70	21.99	9.02	197.00
7/2.75	8.25	65.30	41.58	16.70	375.00
7/3.50	10.50	106.00	67.35	26.60	607.00
19/1.75	8.75	71.70	45.70	18.30	413.00
19/2.00	10.00	93.70	59.69	23.90	538.00
19/2.75	13.80	177.00	112.90	44.50	1020.00
19/3.00	15.00	211.00	134.30	52.80	1210.00
37/1.75	12.30	139.00	89.00	35.60	806.00
37/2.50	17.50	284.00	181.60	72.90	1640.00
37/2.75	19.30	344.00	219.80	86.60	1990.00
37/3.00	21.00	409.00	261.50	103.00	2370.00
61/2.75	24.80	566.00	362.30	143.00	3280.00

Conductor Reference Tables

ACSR/AC – Aluminium Conductor/Steel Reinforced (Alum. Clad)
Australian Standard – AS1220 Part 3

Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Angling	6/1/2.50	7.50	30.70	34.36	10.70	113.00
Archery	6/1/3.00	9.00	44.10	49.48	15.00	163.00
Baseball	6/1/3.75	11.30	68.90	77.31	22.40	255.00
Bowls	6/4.75-7/1.60	14.30	109.00	120.40	32.60	385.00
Cricket	30/7/2.50	17.50	155.00	181.60	64.60	635.00
Darts	30/7/3.00	21.00	244.00	261.50	91.30	913.00
Diving	30.7/3.50	24.50	305.00	365.00	121.00	1240.00
Golf	54/7/3.00	27.00	390.00	431.20	119.00	1380.00
Gymnastics	54/7/3.25	29.30	475.00	506.00	138.00	1620.00
Hurdles	54/7/3.50	31.50	530.00	586.90	159.00	1880.00
Lacrosse	54/3.75-19/2.25	33.80	608.00	671.70	181.00	2150.00
Rugby	54/4.75-19/2.85	42.80	978.00	1085.00	295.00	3500.00
Extra High Strength						
Skating	3/4/1.75	5.25	10.40	16.85	12.30	83.50
Soccer	3/4/2.50	7.50	21.20	34.36	24.90	170.00
Swimming	4/3/3.00	9.00	35.20	49.48	28.80	217.00
Tennis	4/3/3.75	11.30	54.90	77.31	42.80	339.00

AAC – All Aluminium Conductor
Australian Standard – AS1531 Part 1

Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Gemini	7/1.75	5.25	16.60	16.84	3.01	46.10
Jupiter	7/2.75	6.75	27.50	27.83	4.76	75.90
Leo	7/2.50	7.50	33.90	34.36	5.75	94.30
Libra	7/3.00	9.00	48.80	49.48	7.91	135.00
Mars	7/3.75	11.30	76.30	77.31	11.90	212.00
Mercury	7/4.50	13.50	110.00	111.30	16.80	305.00
Moon	7/4.75	14.30	122.00	124.00	18.80	340.00
Neptune	19/3.25	16.30	155.00	157.00	24.70	433.00
Pluto	19/3.75	18.80	206.00	209.80	32.30	578.00
Saturn	37/3.00	21.00	256.00	261.50	41.80	721.00
Taurus	19/4.75	23.80	331.00	336.70	50.90	926.00
Triton	37/3.75	26.30	400.00	408.70	62.90	1130.00
Uranus	61/3.25	29.30	493.00	506.00	75.20	1400.00
Venus	61/3.75	33.80	659.00	673.70	98.30	1860.00
Virgo	91/4.50	49.50	1410.00	1447.00	207.00	1410.00

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Notes

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