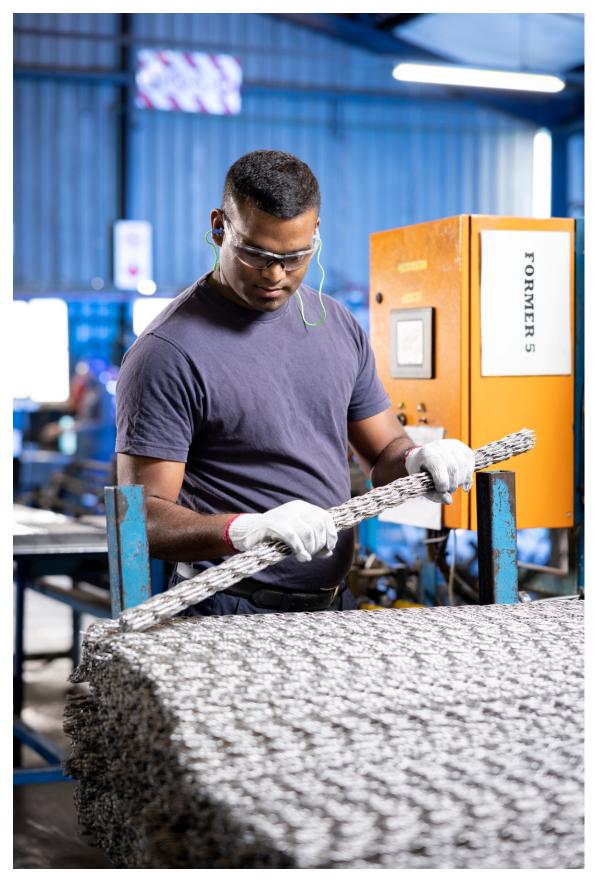






# DISTRIBUTION ASSEMBLIES AND HARDWARE





### STANDARD TERMS AND CONDITIONS OF BUSINESS

#### 1. APPLICATION OF CONDITIONS

These terms and conditions shall govern, and control all offers and sales by PREFORMEDLINE PRODUCTS (SOUTH AFRICA) (PTY) LTD. (herein called "PLP"). Unless expressly accepted in writing signed at its head office in Pietermaritzburg by an authorised signatory, any qualification of these conditions in a customer's order or enquiry, or anything contrary to or conflicting with any of these conditions shall be treated as inapplicable and of no effect.

#### 2. ACCEPTANCE

Any tender or quotation by PLP only applies for thirty days from date thereof; and no order shall bind PLP until the customer shall receive written confirmation thereof from PLP, duly signed on behalf of PLP.

#### 3. PRICES

All prices are nett, F.O.R. Works at Pietermarit burg and subject to change without notice. Value Added Tax (VAT) is not included and will be added-on where applicable.

#### 4. FINANCIAL RESPONSIBILITY

The customer's financial responsibility is at all times subject to approval of PLP's credit department and PLP at any time may require payment in advance for a satisfactory security or guarantee that invoices will be paid promptly when due. If the customer fails to comply with any term of payment, PLP reserves the right to withhold further deliveries or to terminate the agreement and any unpaid amount thereupon shall become due immediately.

#### 5. TERMS OF PAYMENT

Unless otherwise specifically agreed between PLP and the customer in writing, The customer shall pay PLP immediately on presentation of an invoice before delivery, without deduction or set-off, and payments shall not be withheld or deferred on the basis of any claims as alleged by the customer against PLP.

#### 6. DELIVERY

The PLP will use its best endeavours to deliver the products by the time fixed for delivery, but if from any cause other than the wilful default of PLP delivery is delayed, PLP will not be responsible for any loss or damage thereby caused to the customer. Failure of one delivery shall not vitiate the contract as to others. No responsibility is accepted for delays due to loss in manufacturing or for damage and/or other delays due to Act of God, War, Fire, Civil Commotion, Accidents, and for other causes beyond PLP's control. Offers of delivery from stock are subject to the fitting being unsold on receipt of order.

#### 7. DELIVERY CHARGES

Unless otherwise agreed in writing or stated in the confirmation of the order, delivery charges are for the customer's account.

#### 8. WARRANTY

PLP warrants that all products manufactured and /or supplied by PLP are free from defects in material and workmanship under normal and proper usage for a period of one year from the date of delivery. Products must be installed and maintained to PLP's recommended procedures, and subject to the provisions of clause 9 below that in the event of breach of this warranty, PLP's liability will be limited to the freer replacement only of the products provided such defect is proved to be directly attributable to defective materials or workmanship and subject to a claim being received by PLP in writing within 14 (Fourteen) days of of such defect. This warranty is exclusive and in lieu of all other warranties, whether express, implied or otherwise arising by operation of law, trade, or course of dealing. In addition, the remedies set forth herein are the sole and exclusive remedies. PLP shall not be liable for any consequential or incidental damages of any kind.

#### 9. LIABILITY

The liability of PLP for any loss or damage, including special, general, direct or consequential, in respect of any claim arising out of any contract entered into with a customer in connection with the manufacture and /or the sale and/or the supply and/or the delivery of our products, whether such claim shall be for breach of any statutory duty or for any delict (including the negligence of our employees or servants) shall not exceed the sale price of the relevant products sold to the customer. In addition, under no circumstance will PLP be liable for any costs associated with fires and wildfires including costs for clean-up efforts.

#### 10. PACKING

All goods are packed in PLP's standard corrugated cartons, wooden crates and/or suitable alternatives at PLP's discretion.

#### 11. LOSS OR DAMAGE IN TRANSIT

PLP is not responsible for this risk. In the case where PLP has accepted transit risk in terms of clause 1 of these conditions, transit loss or damage must be reported by the customer or consignee immediately in writing to the carrier, and also to PLP. Documentary evidence, as prescribed by the CARRIERS must be given by the consignee to PLP within seven days of receipt of the consignment in question.

#### 12. TESTING AND INSPECTION

When testing and inspection is specified by customers and agreed to by PLP, PLP shall test/inspect at its Works in a suitable area designated by PLP.

#### 13. DEVIATION IN QUANTITIES MANUFACTURED

Products manufactured are subject to a deviation of plus minus 10% in quantity.

#### 14. STANDARD PACKS

PLP reserves the right to supply in increments its standard packs.

#### 15. CANCELLATION

The customer shall not be entitled to cancel or repudiate any order or refuse to accept delivery of any order and/or claim damages or set-off as a consequence of late or short delivery.

### STANDARD TERMS AND CONDITIONS OF BUSINESS

#### 16. RETURNS

No product shall be returned without PLP's prior written authorization. Only non-obsolete standard items in original cartons may be returned. Carriage must be prepaid. Requests for return must be instituted within 90 days of original delivery and returns will be subject to factory inspection before acceptance and credit authorization. PLP reserves the right to apply a minimum servicing charge of 10% of the invoice amount..

#### 17. SPECIFICATIONS

PLP reserves the right to change specifications without prior notice.

#### 18. OWNERSHIP AND RISK

Notwithstanding the delivery of any product to a customer, ownership of the product shall not pass to the customer until PLP has received payment in full of the contract price of the said product. Risk in the product shall pass to the pass to the customer on delivery.

#### 19 COSTS

Should PLP incur legal costs regarding litigation with the customer or for the collection of any amount due by the customer, the customer shall pay such costs on the attorney-and-client scale as well as collection costs calculated at 10% (TEN PERCENT) of each and every payment made.

#### 20. CONFIDENTIALITY

The customer agrees that all information furnished by or obtained from PLP in connection with the sale of goods hereunder will be confidential, and the Buyer agrees not to disclose any such information to any other person, or use such information for any purpose, other than performing this contract.

#### 21. MISCELLANEOUS

The failure of either party to insist upon performance of any term or condition herein or to exercise any right or privilege shall not thereafter waive the future performance of such term, condition, right of privilege or of any other terms, conditions, rights or privileges, whether of the same or similar type. The rights herein and the construction of these Terms and Conditions shall be governed by the laws of the Republic of South Africa, without giving effect to principles of conflict of laws, invalid or unenforceable, the remaining provisions shall not be affected thereby, but shall remain in full force and effect. The paragraph. headings herein are sorely for the convenience of and reference by the parties and do not constitute any part of these Terms and Conditions. The customer may not assign its rights or delegate its obligations hereunder without PLP's prior written consent.

#### 22. FOREIGN LAW

Save for these terms and conditions being governed by the laws of the Republic of South Africa, PLP complies with the Foreign Corrupt Practices Act (FCPA) Customer agrees that it will comply with all relevant laws, and will comply with all laws regarding bribery including, but not limited to, FCPA.

#### 23. PATENT

PLP shall defend the customer against any claim of infringement and shall pay any resulting damages finally awarded, provided that (a) the customer promptly notifies PLP in writing of any claim, and (b) PLP has sole control of the defence and all related settlement negotiations. This obligation does not apply to claims arising out of combinations of goods with goods provided by others, or to claims resulting from compliance of goods with the customer's design or specifications, or which the customer assumes and shall hold PLP harmless for any claims thereof.



# **SALES CONTACTS**



# **CUSTOMER SUPPORT**

### **SUPPORT:**

Tel: (033) 397 5800

Fax: (033) 387 7094

Email: plppmb@plp.com



# **CONTENTS**

®	
ARMOR-GRIP Suspension Unit	
ARMOR-GRIP® Support	
Twin Ties	
ARMORED Road Crossing Twin Ties	
WRAPLOCK® Ties	
Side And Spool Ties	16
ARMOR Rods	
Line Guards-(Protector Rods)	25
Line Splice	27
Full Tension Line Splice	32
Parallel Groove Clamps	34
Dead Ends	36
Aluminium Alloy Thimble Clevis	39
Thimble Regulating Eye	42
Aluminium Bare Dead End	43
Thimble Clevis Malleable	45
Guy- Grip	46
Pole Tops	48
Pulling Eye	50
Double-Wrap Guy-Grip	51
Spiral Vibration Damper	53
Lashing Rod	56
Earth Guard	58
PVC Spacer	59
Pigtail Bolt Assembly	60
Pistol Grip Aluminium Strain Clamp	60
Aluminium Suspension Clamp	61
Shackles	61
Threaded Rod Assemblies	61
Eye Bolts	62
Eye Nuts	62
Conductor Guide	63





# **ARMOR-GRIP® Suspension Unit**

ARMOR-GRIP® Suspension units are made up of an Aluminum pressed strap, aluminum alloy cast housing, neoprene inserts, and ARMOR-GRIP® Suspension rods, all of which can be seen in the photograph. The rods are manufactured from the same basic material as the conductor for which the unit is designed. Units are manufactured for all of the more commonly used aluminium based conductors from Rabbit upwards in size. As demand arises other conductor types and sizes will be added to the range.

### GENERAL RECOMMENDATIONS

ARMOR-GRIP® Suspension is intended for use on aluminium based conductors, aluminum covered steel conductors/strands and galvanized steel strands. It is designed to reduce the static and dynamic stresses at the support point so that the conductor/strand is protected against the effects of oscillations. It also protects the conductor in the support area against impulse and power flash-over ARMOR-GRIP® Suspension is recommended as being superior to Armour-clamp combinations, for protecting conductors from bending stress, compression stress and abrasion.



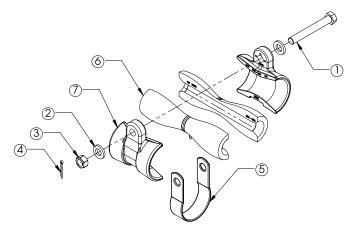
# **ARMOR-GRIP®** Suspension Unit

### **Specifications**

Cat.No.	Conductor	Conductor Name	Rod Colour
- Calliton	Range(mm)	Conductor Hame	Code
AGS 304-315	7.728 - 8.00	Weasel	Brown
AGS 323-333	8.20 - 8.46	35 Fox, Ladybird	Blue
AGS 343-355	8.71 - 9.02	Fir, Ferret	Green
AGS 390-404	9.91 - 10.26	Hazel, Rabbit, Fly	Yellow
AGS 419-434	10.64 - 11.02	Pine, Bluebottle, Mink	Red
AGS 435-450	11.05 - 11.43	Earwig	Blue
AGS 475-485	12.07 - 12.32	Willow Racoon	Green
AGS 500-512	12.70 - 13.00	Skunk	Orange
AGS 549-563	13.94 - 14.30	Oak, Hare, Dog	Brown
AGS 620-645	15.75 - 16.38	Mulberry	Orange
AGS 626-650	15.90 - 16.51	Tiger, Hornet	Red
AGS 674-690	17.12 - 17.53	Ash	Yellow
AGS 711-731	18.06 - 18.57	Wolf	White
AGS 732-750	18.59 - 19.05	Chicadee, Elm	Red
AGS 751-768	19.08 - 19.51	Jaguar	Black
AGS 769-795	19.53 - 20.19	Lynx, Poplar	Green
AGS 815-826	20.70 - 20.98	Pelican, Panther	Brown
AGS 846-870	21.49 - 22.10	Flicker, Cockroach	Blue
AGS 871-893	22.12 - 22.68	Sycamore	Red
AGS 921-937	23.39 - 23.80	Bear	Orange
AGS 938-975	23.83 -24.77	Kingbird, Upas	Green
AGS 1022-1040	25.96 - 26.42	Goat	Black
AGS 1041-1074	26.44 - 27.28	Centipede, Tern	Blue
AGS 1119-1136	28.42 - 28.85	Zebra	Yellow
AGS 1176-1208	29.87 - 30.68	Scorpion	Green
AGS 1395-1416	35.43 - 35.97	Dinosaur, Bersford	White
AGS 1478-1516	37.54 - 38.51	Bull	Red

Please add suffix D or T for split pin requirements. D is for Distribution – humpback split pin. T is for Transmission – straight split pin.





ITEM NO.	DESCRIPTION	MATERIAL	QTY.
1	M16 HDG BOLT	GRADE 8.8	1
2	M16 HDG WASHER	MILD STEEL	1
3	M16 HDG NUT	GRADE 181	1
4	SPLIT PIN	316 STAINLESS STEEL	1
5	AGS STRAP	ALUMINIUM	1
6	NEOPRENE INSERT	NEOPRENE	1
7	AGS HOUSING	ALUMINIUM	1
8	AGS RODS	ALUMINIUM	1

# **Assembling Guideline**

- 1. Fit two halves neoprene insert over conductor, centering correctly, over previously plumbed centre mark on conductor, and apply tape over centre of insert halves to hold them together. Ensure that joining line of insert is in the Horizontal plane.
- Centre the AGS rods over the inserts preferably over the centre of one half and lay sufficient pitches of the rod, both sides of the insert, to ensure it will stay on the conductor. Do not distort rods
- 3. The curvature of the rod should follow the contours of the insert faithfully. The rods must not be wrapped round the insert.
- 4. Using a similar procedure apply the second rod opposite the first rod. The third and fourth rods should be applied at the midpoint of the first two then apply all the remaining rods ensuring that non cross
- 5. Snap the loose ends of all rods into position on the conductor.
- 6. Place the two halves of the AGS Housing on either side of the centre of the rods and insert assembly and slide the strap over the housings using the heel of the hand tap it firmly into position. Do not use tools to hammer the strap.
- 7. Spread the ears of housing and tap the strap into place again.
- 8. Apply the bolt and tighten the nut just sufficiently. Do not over-tighten. The bolt is applied so that the head is always on the outside of the centre line of the overhead line

#### **NOTES**

With AGS units for larger conductors it is recommended that, because of the stiffness of the material, the rods are fully applied under operation 2.

Remember that the AGS unit is designed to be free of corona emission at operating voltage and ensure that his capability is not lost. All components and rods must at all times be properly handled and not scored or damaged in any way by rough handling or use of tools for any purpose other than to tighten nuts. In certain applications "corona bells might be necessary it is therefore essential that your requirements are discussed with PLP.

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# **ARMOR-GRIP®** Support

ARMOR-GRIP® Support, intended for use on aluminium based conductors with a diameter range of 9.9mm to 46mm is designed to be used with clamp-top horizontal and vertical line post insulators. ARMOR-GRIP® Support is designed to reduce static and dynamic stress at the support point, so that the conductor is better able to withstand the effects of vibration than with armor-grip clamp attachments. It also helps protect the conductor in the support area against flashover.

### **DESIGN MODIFICATION**

- ARMOR-GRIP® Support for line repair. For repair of fatigue damaged conductors, a special designed ARMOR-GRIP® Support can be applied over PREFORMED™ type armor rods to extend the life of the conductor. Wrench formed rods must be removed when conductor fatigue occurs under them. A splice is then applied to the fatigue area and the ARMOR-GRIP® Support is applied over the splice. this type of application require special consideration and PLP should be consulted for a technical evaluation.
- EHV applications. To meet the corona onset and RIV requirements for most extra high voltage applications, Parrot Bill® ends are to be used instead of standard rods. Consult PLP for EHV engineering recommendations.



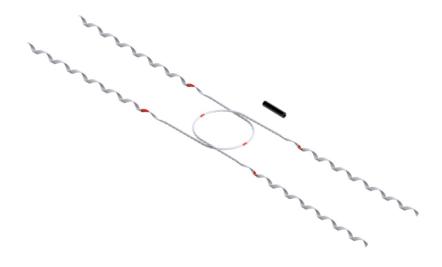
# **INSTALLATION GUIDELINES**

- 1. Conductor compatibility. ARMOR-GRIP® Support should be used only on the size and type of conductor foe which they are designed. ARMOR-GRIP® Support is designed for right-hand lay conductor. Consult PLP when using types and/ or sizes of conductor not mentioned on the catalogue pages.
- 2. During installation of the ARMOR-GRIP® Support keeper to the body, the cap screw should be tightened only until the lockwasher is flat. A relatively low torque value of approximately 10 to 15 foot pounds is sufficient to flatten to washer. The inherent gripping of the rods provides the majority of the unbalanced holding strength of the unit. Further tightening may damage the keeper of the body.
- 3.Consult the ARMOR-GRIP® Support Application Procedure for additional information regarding the correct installation of ARMOR-GRIP Support.
- 4. ARMOR-GRIP Support rods are not interchangeable with either standard armor rods or ARMOR-GRIP® Suspension rods.

### **Specifications**

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Conductor Ranges (mm)	A	В	С	D	Е	F	G	н	1
9.91 - 12.22	64.3	16	19.4	49.6	15.1	50.8	19.1	98.4	19.1
12.24 - 13.77	76.2	16	25.4	60.3	15.1	50.8	19.1	98.4	19.1
13.79 - 15.72	79.4	10.3	22.2	64.3	15.1	50.8	19.1	98.4	19.1
15.75 - 16.38	79.4	10.3	22.2	64.3	15.1	50.8	19.1	97.4	19.1
16.41 - 19.05	95.25	16	21.0	69.9	15.1	50.8	19.1	98.4	19.1
19.08 - 23.04	114.3	19.1	21.4	81.4	15.1	57.2	19.1	98.4	19.1
23.06 - 25.52	127	28.6	16.7	91.3	15.1	57.2	19.1	98.4	19.1
25.56 - 30.68	139.7	33.3	20.6	106.4	15.1	57.2	19.1	98.4	19.1
30.71 - 34.42	152.4	37.1	20.6	117.5	15.1	57.2	19.1	98.4	19.1
34.44 - 39.55	165.1	41.3	23.0	129.8	15.1	57.2	19.1	98.4	19.1
39.57 -46.43	177.8	177.8	19.4	137.3	15.1	57.2	19.1	98.4	19.1





# **TWIN-TIES**

TWIN-TIES are intended for use in securing conductors to the top groove of insulators, the neck configuration of which may not be suitable for WRAPLOCK or DISTRIBUTION-TIES. Twin-Ties provide an improved method of securing conductors when compared to hand-binding or insulator clamps. Protection is provided against conductor abrasion, as occurs with hand-binding, and they provide better RIV characteristics. The pad provides protection for the conductor against abrasion.

### FEATURES AND BENEFITS

- Twin-Ties are made of material compatible with the conductor to which they will be applied.
- Only the section applied to the conductor is helical, the remainder is cabled to ensure a snug firm fit on the insulator.
- For bare conductor a tubular elastomeric pad is supplied which must be placed under the conductor in the top groove of the insulator. The pad is not required with jacketed conductor.
- The lay direction of the tie must be the same as that of the conductor.
- Twin-Ties will perform well on any vertically mounted insulator with a neck groove diameter exceeding 15mm, but is designed to especially to cater for insulators with a shallow lip at the groove.
- Twin-Ties will permit controlled movement of the conductor reducing load on the base of the insulator.



# **Alminium Alloy Twin-Ties**

# **Specifications**

Cat.No.	Conductor	Conductor Strand	Rod Colour
Cat.No.	Range(mm)	conductor Strand	Code
ATT 249-73F	6.18 - 6.33	6/1/2.11	Orange
ATT 255-73F	6.34 - 6.65	-	Green
ATT 270-73F	6.66 - 6.99	_	Black
ATT 280-73F	7 - 7.27	6/1/2.36	Yellow
ATT 300-73F	7.28 - 7.74	-	Red
ATT 310-73F	7.75 - 8.23	6/1/2.59	Brown
ATT 330-73F	8.24 - 8.67	6/1/2.79	Blue
ATT 348-73F	8.68 - 9	-	Green
ATT 354-73F	9.01 - 9.34	6/1/3.30	Orange
ATT 366-73F	9.35 - 9.65	-	Black
ATT 396-73F	9.66 - 10.3	6/1/3.35	Yellow
ATT 415-73F	10.31 - 10.79	-	White
ATT 432-73F	10.8 - 10.98	-	Red
ATT 472-73F	10.98 -11.7	-	Blue
ATT 490-73F	11.7 - 12.51	-	Green
ATT 522-73F	12.52 - 13.3	-	Orange
ATT 558-73F	13.31 - 14.2	6/1/4.72	Brown
ATT 595-73F	14.21 - 15.2	-	Black
ATT 625-73F	15.2 - 15.9	19/3.18	Orange
ATT 650-73F	15.91 - 17	_	Red
ATT 700-73F	17.01 - 18.12	-	Yellow
ATT 714-73F	18.13 - 18.5	30/7/2.59	White
ATT 740-73F	18.51 - 19.6	18/1/3.77	Red
ATT 805-73F	19.61 - 21.3	30/7/2.79	Green
ATT 850-73F	21.31 - 22.31	30/7/3.00	Black
ATT 924-73F	22.89 - 24.33	30/7/3.35	Orange
ATT 1022-73F	24.34 - 25.95	37/3.78	Black

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.



# **Copper Alloy Twin-Ties**

# **Specifications**

Cat.No.	Conductor	Rod Colour
out.ivo.	Range(mm)	Code
CTT 260-73F	6.29 - 6.79	Yellow
CTT 280-73F	6.8 - 7.29	White
CTT 300-73F	7.3 - 7.89	Brown
CTT 320-73F	7.9 - 8.26	Blue
CTT 340-73F	8.27 - 8.79	Black
CTT 360-73F	8.8 - 9.29	Red
CTT 380-73F	9.3 - 9.89	Orange
CTT 400-73F	9.9 - 10.44	Green
CTT 440-73F	10.45 - 11.24	Blue
CTT 460-73F	11.25 - 11.79	White
CTT 480-73F	11.8 - 12.59	Brown
CTT 500-73F	12.6 - 13.5	Red

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.





# ARMORED ROAD CROSSING TWIN-TIES

The Armored Road Crossing Twin-Tie was developed and tested in conjunction with a major electricity supply authority and the original concept approved by the Department of Machinery and Occupational Safety. It fully protects the conductor either side of the insulator top at road crossings.

### **FEATURES AND BENEFITS**

Photographic evidence of insulator flashovers, under laboratory conditions, carried out in the U.S.A. by our principals clearly illustrated that when PLP insulator ties were used the flashover occurred mainly on the tie. The conductor was not involved, and was protected by the PLP tie.

Field tests subsequently carried out proved conclusively that the PLP Road Crossing Tie met the statutory requirements.



# **Armored Road Crossing Twin-Tie**

# **Specifications**

Specification	13		
Cat.No.	Conductor Range(mm)	Conductor Strand	Rod Colour Code
ART 249-73F	6.18 - 6.34	6/1/2.11	Orange
		0/1/2.11	-
ART 255-73F	6.35 - 6.60	-	Green
ART 270-73F	6.61 - 7.00	-	Black
ART 280-73F	7.01 - 7.40	6/1/2.36	Yellow
ART 300-73F	7.41 - 7.84	-	Brown
ART 311-73F	7.85 - 8.26	-	Red
ART 330-73F	8.27 - 8.64	6/1/2.79	Blue
ART 348-73F	8.65 - 9.00	-	Green
ART 354-73F	9.01 - 9.34	-	Orange
ART 366-73F	9.35 - 9.65	-	Black
ART 396-73F	9.66 - 10.40	6/1/3.35	Yellow
ART 432-73F	10.41 -11.30	-	Red
ART 472-73F	11.31 - 12.10	-	Blue
ART 480-73F	12.11 - 12.41	-	Green
ART 520-73F	12.42 -13.51	7/4.65	Orange
ART 558-73F	13.52 - 14.19	6/1/4.72	Brown
ART 595-73F	14.20 - 15.20	-	Black
ART 625-73F	15.21 - 16.24	-	Orange
ART 645-73F	16.25 - 17.39	-	Red
ART 700-73F	17.40 - 18.12	-	Yellow
ART 714-73F	18.13 - 18.79	-	White
ART 740-73F	18.80 - 19.30	-	Red

RIGHT HAND LAY STANDARD.

12





# **WRAPLOCK® TIE**

WRAPLOCK® TIES secure conductors in the top groove of interchangeable head-style insulators. They provide an improved method of securing conductor compared to clamp-top insulators or hand ties over Armor Rods.

WRAPLOCK Ties provide superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation and high frequency aeolian vibration, and galloping.

### **FEATURES AND BENEFITS**

- Superior abrasion protection for the conductor under all types of motion.
- Provides superior protection by eliminating abrasion.
- $\bullet$  Elastomer component surrounds the bare conductor with a resilient cushion.
- The Neoprene pad which is a slit tube is applied around the bare conductor to provide a cushion between the conductor and the insulator groove surface.
- The Neoprene cover center section with the pad surrounds the conductor in a neoprene protective layer.





### **Moderate Vibration:**

Areas where replacement of hand-tie wire has not been required, and damage is minor. WRAPLOCK® Ties provide protection in areas of severe or moderate vibration. For areas experiencing excessive vibration supplemental use of damper is recommended. Spiral Vibration Damper's single purpose is to prevent the unlimited accumulation of aeolian vibration.

### Insulators:

WRAPLOCK® Ties are suitable for use on only those insulators which correspond to C-neck, F-neck, H-neck, and J-neck designs. When an insulator is not suited to the WRAPLOCK® Tie, then the TWIN-Ties can be used. Consult the factory for engineering recommendation when in doubt..

### Conductor Size:

Conductor sizes up to 31.50mm O.D. can be accommodated depending on the insulator's top groove radius. In cases of doubt consult PLP for recommendations.

# **Mechanical Strength:**

Maximum holding strength is usually sufficient to contain the broken conductor to a single span, however the WRAPLOCK® Tie is designed to relieve the load before severe damage is done to the pole's structural components.

The WRAPLOCK® Tie is designed to permit controlled movement of unbroken conductor, reducing cantilever loading at the base of the insulator or bracket, then restore itself. We refer to this unique feature as "resilience".

### Radio Interference:

The RIV characteristics of the WRAPLOCK® Tie are equivalent to those of a well-made hand tie when originally installed. During service life the precontoured Tie assures continued fit which would have better RIV than a loosened tie wire.

# Line Angles:

14

On vertically-mounted insulators, WRAPLOCK® Tie are recommended for running line angles up to 10 degree.

# **Double Support:**

At double cross-arms PREFORMED™ Double-Support Ties can be used to cross major highways and railroad, or turn angles where it is practical to hold the conductor in the top groove during installation.



# **Aluminium Alloy WRAPLOCK® TIES**

### **Specifications**

Specification	Conductor		Rod Colour
Cat.No.	Range(mm)	Colour Strand	Code
AWT 249-73F	6.18 - 6.34	-	Orange
AWT 255-73F	6.35 - 6.60	3/42.11	Green
AWT 270-73F	6.61 - 7.00	-	Black
AWT 280-73F	7.01 - 7.40	6/1/2.36	Yellow
AWT 300-73F	7.41 - 7.90	6/1/2.59	Brown
AWT 310-73F	7.91 - 8.30	-	Red
AWT 330-73F	8.31 - 8.84	6/1/2.79	Blue
AWT 366-73F	8.85 - 9.70	-	Green
AWT 396-73F	9.71 - 10.70	6/1/3.35	Yellow
AWT 432-73F	10.71 - 11.30	-	Red
AWT 472-73F	11.31 - 12.10	7/4.04	Blue
AWT 480-73F	12.11 to 12.40	6/1.4.09	Green
AWT 520-73F	12.41 - 13.51	7/4.39	Orange
AWT 558-73F	13.52 - 14.70	-	Brown
AWT 625-73F	14.71 - 16.00	19/3.18	Orange
AWT 650-73F	16.01 - 17.39	19/3.25	Red
AWT 700-73F	17.40 - 18.12	-	Yellow
AWT 714-73F	18.13 - 18.79	-	White
AWT 740-73F	18.80 - 19.29	-	Red

# Copper Alloy WRAPLOCK® TIES

Cat.No.	Conductor	Rod Colour
	Range(mm)	Code
CWT 224-73F	5.6 - 5.6	Blue
CWT 260-73F	6.4 - 6.79	Yellow
CWT 280-73F	6.8 - 7.34	White
CWT 300-73F	7.35 - 7.79	Brown
CWT 320-73F	7.8 - 8.39	Blue
CWT 340-73F	8.4 - 8.99	Black
CWT 370-73F	9 - 9.69	Red
CWT 400-73F	9.7 - 10.49	Orange
CWT 430-73F	10.5 - 11.29	Green
CWT 460-73F	11.3 - 12.19	Blue
CWT 500-73F	12.2 - 13.2	White





# SIDE AND SPOOL TIES

Side-Ties are designed to permit controlled movement of unbroken conductor, reducing cantilever loading at the base of the insulator or bracket, then restore itself. We refer to this feature as "resilience".

Side Ties are suitable for use on only those insulators which correspond to C-nec, F-neck and H-neck designs.

Side Tie is recommend as being superior to Armor-Rod - Hand tie combinations for protection against abrasion damage.

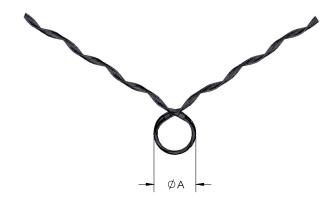
### **FEATURES AND BENEFITS**

16

- Provides superior protection by eliminating abrasion rather than sacrificing outside surfaces to abrasion.
- The Groove-formed design broadens conductor diameter ranges, matching Distribution Tie.
- The formed loop section permits better utilisation of insulator groove space so that larger conductors can be accommodated on a given insulator.
- Provides superior abrasion protection for the conductor under all types of motion.
- Tube component surrounds the bare conductor with a resilient cushion where the conductor would come into contact with the insulator.



# Side and Spool Ties



### **Moderate Vibration:**

Areas where replacement of hand-tie wire has not been required, and damage is minor. Side-Ties provide protection in areas of severe or moderate vibration. For areas experiencing excessive vibration supplemental use of damper is recommended. Spiral Vibration Damper's single purpose is to prevent the unlimited accumulation of aeolian vibration.

### Insulators:

Side Ties are suitable for use on only those insulators which correspond to C-neck, F-neck, and H-neck designs. When an insulator is not suited to the WRAPLOCK® Tie, then the TWIN-Ties can be used. Consult the factory for engineering recommendation when in doubt..

### Conductor Size:

Conductor sizes up to 31.50mm O.D. can be accommodated depending on the insulator's top groove radius. In cases of doubt consult PLP for recommendations.

### **Mechanical Strength:**

Maximum holding strength is usually sufficient to contain the broken conductor to a single span, however the WRAPLOCK® Tie is designed to relieve the load before severe damage is done to the pole's structural components.

The WRAPLOCK® Tie is designed to permit controlled movement of unbroken conductor, reducing cantilever loading at the base of the insulator or bracket, then restore itself. We refer to this unique feature as "resilience".

### Radio Interference:

The RIV characteristics of the Side Tie are equivalent to those of a well-made hand tie when originally installed. During service life the precontoured Tie assures continued fit which would have better RIV than a loosened tie wire.

# Line Angles:

On vertically-mounted insulators, Side Tie are recommended for running line angles up to 10 degree.

### **Tapping:**

Compared to the use of protective rods, placing hot-line clamps directly over the applied leg of the Side-Ties cannot be recommended. Yapping over protective rods will remain



# **Side and Spool Tie**

# **Specifications**

Specification	15		
Cat.No.	Conductor	Colour Strand	Rod Colour
	Range(mm)		Code
CST 200-73F	5.05 - 5.26	-	Orange
CST 210-73F	5.27 - 5.51	-	Blue
CST 220-73F	5.52 - 5.77	-	Red
CST 230-73F	5.78 - 6.02	6/1/2.36	Black
CST 240-73F	6.03 - 6.27	6/1/2.59	Yellow
CST 250-73F	6.28 - 6.59	-	White
CST 260-73F	6.6 - 6.85	6/1/2.79	Orange
CST 270-73F	6.86 - 7.13	-	Blue
CST 280-73F	7.14 - 7.39	6/1/3.35	Red
CST 300-73F	7.4 - 7.7	-	Black
CST 310-73F	7.71 - 7.99	7/4.04	Yellow
CST 320-73F	8 - 8.31	6/1.4.09	White
CST 330-73F	8.32 - 8.65	7/4.39	Orange
CST 354-73F	8.66 - 8.99	-	Blue
CST 360-73F	9 - 9.32	19/3.18	Red
CST 370-73F	9.33 - 9.69	19/3.25	Black
CST 390-73F	9.7 - 10	-	Yellow
CST 400-73F	10.01 - 10.44	-	White
CST 420-73F	10.45 - 11.1	-	Orange
CST 450-73F	11.11 - 11.76	19/3.25	Blue
CST 480-73F	11.77 - 12.69	-	Red
CST 510-73F	12.7 - 13.91	-	Black
CST 570-73F	13.92 - 15	-	Yellow



# **Galvanised Steel Side & Spool Ties for Aluminium based Conductors**

# **Specifications**

Cat.No.	Conductor Range(mm)	Colour Strand	Colour Code
GSST 249-73F	6.24 - 6.34	7/2.08	Orange
GSST 255-73F	6.35 - 6.6	3/4/2.11	Green
GSST 270-73F	6.61 - 7	-	Black
GSST 280-73F	7.01 - 7.7	-	Yellow
GSST 300-73F	7.71 - 8.29	6/1/2.59	Brown
GSST 330-73F	8.3 - 8.84	6/1/2.79	Blue
GSST 366-73F	8.85 - 9.6	-	Green
GSST 396-73F	9.61 - 10.2	6/1/3.35	Yellow
GSST 432-73F	10.21 - 10.99	7/3.61	Red
GSST 472-73F	11 - 11.72	6/1/3.99	Blue
GSST 480-73F	11.73 -12.6	-	Green
GSST 520-73F	12.61 - 13.7	-	Orange
GSST 558-73F	13.71 - 14.7	7/4.65	Brown
GSST 595-73F	14.71 - 16	-	Orange
GSST 650-73F	16.01 - 16.91	19/3.25	Red
GSST 700-73F	16.92 - 17.93	-	Yellow
GSST 714-73F	17.93 - 18.79	30/7/2.59	White
GSST 750-73F	18.8 - 20	-	Red
GSST 842-73F	20.01 - 21.9	-	Brown
GSST 943-73F	22 - 24	30/7/3.35	Orange





# **ARMOR RODS**

PLP Armor Rods are intended to protect against bending, compression, abrasion, and arc-over, and to provide repair. The degree of protection needed on specific line depends on a number of factors such as line design, temperature, tension, and exposure to wind flow, and vibration history on similar construction in the same area. Armor Rods are also used to repair damaged aluminum-based conductors and restore the conductors' mechanical strength and conductivity. Armor Rods are recommended as minimum protection for bolted clamp-type supports or suspensions. Armor Rods are recommended as minimum protection for use with hand-tie spans of 90 meters or more.

### **FEATURES AND BENEFITS**

- Single and Double Support lengths available
- Thermal Rating (Continuous) Within a high temperature Suspension Clamp 250°C, ACSR repair 250°C, ACSR repair 125°C.
- Available PARROT-BILL ends to meet the corona onset and RIV requirements for most EHV applications.
- Armor Rods may be used to restore full conductance and strength to ACSR and aluminium conductors where the damage does not exceed approximately 50 percent of the outer strand layers. Consult PLP for repair capability of specific stranding.



# **Aluminium Alloy Armor Rods**

# **Specifications**

Specification of the second	Conductor	Colour Code	Canduatan Cada
Cat.No.	Range(mm)	Colour Code	Conductor Code
AAR 194	4.93 - 5.26	Blue	Batman
AAR 215	5.27 - 5.7	Brown	-
AAR 230	5.71 - 6.14	White	-
AAR 249	6.15 - 6.34	Orange	Squirrel
AAR 255	6.35 - 6.6	Green	-
AAR 270	6.61 - 7	Black	-
AAR 280	7.01 - 7.4	Yellow	Gopher
AAR 300	7.41 - 7.84	Brown	-
AAR 311	7.85 - 8.26	Red	-
AAR 330	8.27 - 8.64	Blue	Fox
AAR 348	8.65 - 9.15	Green	-
AAR 366	9.16 - 9.65	Orange	-
AAR 396	9.66 - 10.4	Yellow	-
AAR 432	10.41 - 11.2	Red	Pine & Mink
AAR 472	11.21 - 12.1	Blue	-
AAR 480	12.11 - 12.99	Green	Beaver
AAR 520	13 - 13.94	Orange	-
AAR 558	13.95 - 14.7	Brown	Oak & Hare
AAR 595	14.71 - 15.7	Blue	-
AAR 625	15.71 - 16.24	Orange	-
AAR 650	16.25 -17.39	Red	Tiger
AAR 700	17.39 - 18.12	Yellow	Ash
AAR 714	18.13 - 18.7	White	Wolf
AAR 740	18.71 - 19.5	Red	Chickadee/ELM
AAR 780	19.51 - 20.5	Black	Poplar
AAR 825	20.51 - 21.4	Green	-
AAR 850	21.5 - 22.99	Red	Sycamore
AAR 918	23 - 23.61	Orange	Bear/Dove
AAR 950	23.62 - 24.79	Green	Upas/Kingbird
AAR 995	24.8 - 25.85	White	-
AAR 1022	25.83 - 26.99	Black	-
AAR 1036	27 - 27.89	Blue	Centipede/Tern
AAR 1099	27.9 - 29.49	Yellow	Zebra
AAR 1162	29.5 - 30.69	Red	11

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.

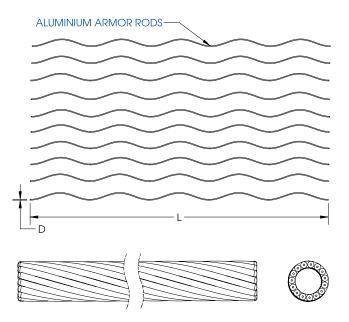


# **Aluminium Alloy Armor Rods**

# **Specifications**

Cat.No.	Conductor Range(mm)	Colour Code	Conductor Code
AAR 1209	30.7 - 32.19	Green	-
AAR 1270	32.2 - 33.7	Black	-
AAR 1350	33.71 - 35.32	Brown	-
AAR 1400	35.33 - 36.59	White	Dinosaur
AAR 1470	36.6 - 38.3	Red	-

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.





# **Copper Alloy Armor Rods**

# **Specifications**

Specifications				
Cat.No.	Conductor	Colour Code		
	Range(mm)			
CAR 315	8 - 8.47	Yellow		
CAR 334	8.48 - 8.96	White		
CAR 353	8.97 - 9.46	Red		
CAR 373	9.47 - 9.97	Blue		
CAR 393	9.98 - 10.38	Green		
CAR 408	10.39 - 10.81	Orange		
CAR 426	10.82 - 11.45	Yellow		
CAR 460	11.46 - 12.11	Brown		
CAR 480	12.12 - 12.82	Black		
CAR 510	12.83 - 13.58	Orange		
CAR 558	13.59 - 14.37	Red		
CAR 570	14.38 - 15.05	Yellow		
CAR 590	15.06 - 15.89	White		
CAR 630	15.9 - 16.93	Red		
CAR 670	16.94 - 17.82	Green		
CAR 710	17.83 - 18.68	Brown		
CAR 736	18.69 - 19.5	Blue		
CAR 768	19.51 - 20.28	White		
CAR 835	20.29 - 21.38	Red		
CAR 850	21.39 - 22.62	Orange		
CAR 900	22.63 - 23.89	Green		
CAR 940	23.9 - 25.29	Black		
CAR 996	25.3 - 26.81	Blue		
CAR 1056	26.82 - 28.46	Yellow		
CAR 1121	28.47 - 30.14	Green		
CAR 1187	30.15 - 31.97	red		
CAR 1259	31.98 - 33.9	Orange		
CAR 1335	33.91 - 36	White		

RIGHT HAND LAY STANDARD.



# **Galvanised Steel Armor Rods**

### **Specifications**

Specification	Conductor	
Cat.No.	Range(mm)	Colour Code
SAR 135	3.43 - 3.60	Brown
SAR 142	3.61 - 3.83	Blue
SAR 151	3.84 - 4.08	White
SAR 161	4.09 - 4.36	Orange
SAR 172	4.37 - 4.61	Blue
SAR 182	4.62 - 4.92	Red
SAR 194	4.93 - 5.27	Yellow
SAR 208	5.28 - 5.60	Green
SAR 221	5.61 - 5.81	Purple
SAR 229	5.82 - 6.19	Orange
SAR 244	6.20 - 6.59	Green
SAR 260	6.60 - 6.95	White
SAR 274	6.96 - 7.36	Blue
SAR 284	7.37 - 7.84	Black
SAR 309	7.85 - 8.30	Brown
SAR 327	8.31 - 8.80	Blue
SAR 347	8.81 - 9.49	Orange
SAR 374	9.50 - 9.90	Black
SAR 396	9.91 - 10.51	Blue
SAR 414	10.52 - 11.09	Brown
SAR 437	11.10 - 11.78	Red
SAR 464	11.79 - 12.46	Green
SAR 491	12.47 - 13.25	Blue
SAR 520	13.26 - 14.01	Orange





# LINE GUARDS-(PROTECTOR RODS)

PLP Line Guards are intended to protect against abrasion and arc-over, and to provide repair. The degree of protection needed on specific line depends on a number of factors such as line design, temperature, tension, and exposure to wind flow, and vibration history on similar construction in the same area. Line Guards are recommended as minimum protection for hand-tied spans of less than 90 meters in urban construction having no experience of vibration.

### **FEATURES AND BENEFITS**

- · Single Support and Double Support Lengths
- Protect against chafing or wear caused by wind sway or unbalanced loading
- Stronger material and greater uniformity than had tie wire
- Line Guards may be used as tap armour to protect conductors from wear and flash-over damage under hot line taps.



# **Aluminium Alloy Line Guards**

# **Specifications**

Catalog Numbers	Cond. Diam.	Colour Code	Rods per Set	Length of Fitting(mm)
ALG 704-740	17.87-18.80	White	16	940
ALG 741-792	18.81-19.86	Black	17	990
ALG 793-840	20.13-21.34	Brown	18	990
ALG 841-890	18.81-20.12	Red	19	1040
ALG 899-954	22.83-24.23	Orange	18	1090
ALG 955-986	24.24-25.04	Blue	17	1140
ALG 989-1016	24.80-25.81	White	18	1140
ALG 1017-1064	27.04-27.27.	89 Black	17	1190
ALG 1065-1098	27.90-29.29	Grey	16	1240
ALG 1099-1153	27.90-29.29	Blue	15	1240
ALG 1154-1208	29.30-30.68	Green	15	1300
ALG 1209-1268	30.69-32.21	Brown	16	1350
ALG 1269-1327	32.22-33.71	Black	16	1350
ALG 1328-1390	33.72-35.31	Grey	17	1400
ALG 1391-1440	35.22-36.58	White	16	1450
ALG 1441-1508	36.59-38.30	Red	16	1500
ALG 1509-1578	38.31-40.08	Green	16	1500

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.





# LINE SPLICE

Conductor Splices are designed as a single-component outer-layer assembly generally for Sub-EHV applications. To assure a reliable electrical connection, all conductors, new or weathered, must be thoroughly scratch brushed until bright and clean immediately prior to installation.

The application of a quality inhibitor, compatible with the conductor material, is strongly recommended to retard oxidation.

### **FEATURES AND BENEFITS**

- On ACSR conductor the will hold a minimum tension amounting to the full strength of the aluminium strands plus 10% of the steel core strength. Conductance will be better than in an equivalent length of unspliced Conductor.
- On all-aluminium alloy and copper conductors of homogeneous stranding, The Line Splice will hold a minimum of 90% of the rated breaking strength of, and provide better conductance than an equal length of unspliced conductor.
- Other PLP products with restorative-repair capabilities are Armor Rods, Line Guards, Splice Shunt, and ARMOR-GRIP® Suspension: for Line Repair.



# Aluminium Alloy Line Splices

# Specifications

Specificati	ons			
Cat.No.	Conductor	Colour Code	Rods per	Rod Lay
	Range(mm)		Set	Direction
ALS 249	6.18 - 6.34	Orange	9	RH
ALS 255	6.35 - 6.6	Green	9	RH
ALS 270	6.61 - 7	Black	10	RH
ALS 280	7.01 - 7.4	Yellow	10	RH
ALS 300	7.41 - 7.84	Brown	10	RH
ALS 311	7.85 - 8.26	Red	10	RH
ALS 330	8.27 - 8.64	Blue	10	RH
ALS 348	8.65 - 9.15	Green	11	RH
ALS 366	9.16 - 9.65	Black	11	RH
ALS 396	9.66 - 10.4	Yellow	11	RH
ALS 432	10.41 - 11.2	Red	11	RH
ALS 472	11.21 - 12.1	Blue	11	RH
ALS 480	12.11 - 12.99	Orange	11	RH
ALS 520	13 - 13.94	Green	12	RH
ALS 558	13.95 - 14.7	Brown	11	RH
ALS 595	14.71 - 15.7	Blue	11	RH
ALS 625	15.71 - 16.24	Orange	12	RH
ALS 650	16.25 - 17.39	Red	12	RH
ALS 700	17.4 - 18.12	Yellow	11	RH
ALS 714	18.13 - 18.7	White	10	RH
ALS 740	18.71 - 19.5	Red	11	RH
ALS 780	19.51 - 20.5	Blue	11	RH
ALS 825	20.51 - 21.49	Green	11	RH
ALS 850	21.5 - 22.69	Red	11	RH
ALS 918	22.7 - 23.61	Orange	12	RH
ALS 950	23.62 - 24.79	Green	11	RH
ALS 995	24.8 - 25.82	White	11	RH
ALS 1022	25.85 - 26.99	Black	11	RH
ALS 1064	27 - 27.89	Blue	12	RH
ALS 1099	27.9 - 29.49	Yellow	11	RH
ALS 1162	29.5 - 30.69	Green	11	RH
ALS 1209	30.7 - 32.19	Orange	11	RH
ALS 1270	31.2 - 32.8	Black	11	RH
ALS 1350	32.81 - 34.38	Red	11	RH
ALS 1400	34.39 - 35.79	White	11	RH



# **Copper Alloy Line Splices**

### **Specifications**

Specifications		
Cat.No.	Conductor	Colour Code
01.0.400	Range(mm)	•
CLS 182	4.62 - 4.79	Orange
CLS 190	4.80 - 4.97	White
CLS 200	4.98 - 5.17	Yellow
CLS 210	5.18 - 5.37	Black
CLS 218	5.38 - 5.55	Blue
CLS 230	5.56 - 5.86	Red
CLS 236	5.87 - 6.01	Green
CLS 247	6.02 - 6.29	Orange
CLS 258	6.30 - 6.57	Yellow
CLS 265	6.58 - 6.85	Blue
CLS 275	6.86 - 7.13	White
CLS 285	7.14 - 7.49	Red
CLS 295	7.50 -7.69	Yellow
CLS 310	7.70 - 7.79	Orange
CLS 320	7.98 - 8.25	Black
CLS 330	8.26 - 8.55	Blue
CLS 340	8.56 - 8.88	White
CLS 350	8.89 - 9.26	Yellow
CLS 370	9.27 - 9.64	Green
CLS 390	9.65 - 10.02	Red
CLS 400	10.03 - 10.49	Black
CLS 415	10.50 - 10.84	Green
CLS 435	10.85 - 11.59	Orange
CLS 456	11.60 - 11.67	Blue
CLS 474	11.68 - 12.49	Green
CLS 492	12.50 - 12.56	White
CLS 500	12.57 - 13.10	Yellow
CLS 525	13.11 - 13.63	Black
CLS 555	13.64 - 14.11	Red
CLS 570	14.12 - 14.49	White
CLS 590	14.5 - 15.03	Orange
CLS 612	15.04 - 15.56	Black
CLS 635	15.57 - 16.09	Green



# **Copper Alloy Line Splices**



# **Specifications**

30

Cat.No.	Conductor Range(mm)	Colour Code
CLS 660	16.1 - 16.8	Blue
CLS 680	16.81 - 17.44	Yellow
CLS 700	17.45 - 18.1	Red
CLS 740	18.11 - 18.84	Black
CLS 770	18.85 - 19.62	Orange
CLS 800	19.63 - 20.34	White
CLS 827	20.35 - 20.54	Green

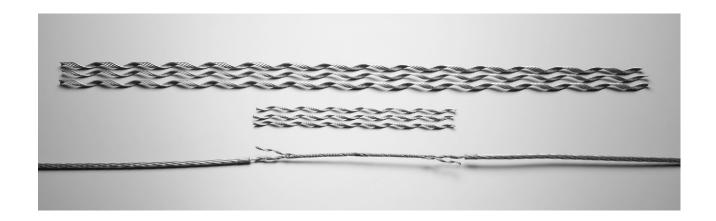


# **Galvinised Steel Line Splices**

### **Specifications**

Specification	Specifications				
Cat.No.	Conductor Range(mm)	Colour Code			
SLS 104	2.54 - 2.64	Brown			
SLS 108	2.65 - 2.85	Green			
SLS 125	2.86 - 3.3	Red			
SLS 144	3.31 - 3.66	Brown			
SLS 150	3.67 - 4	White			
SLS 167	4.01 - 4.41	Orange			
SLS 175	4.42 - 4.82	Blue			
SLS 192	4.83 - 5.31	Yellow			
SLS 224	5.32 - 5.75	Green			
SLS 240	5.76 -6.2	Orange			
SLS 250	6.21 - 6.89	Green			
SLS 284	6.9- 7.32	Black			
SLS 312	7.65 - 8.05	Brown			
SLS 338	8.06 - 8.59	Blue			
SLS 352	8.6 - 8.93	Yellow			
SLS 370	8.94 - 9.68	Orange			
SLS 384	9.68 - 10.03	Black			
SLS 396	10.04 - 10.62	Blue			
SLS 432	110.63 - 11.13	Brown			
SLS 452	11.13 - 11.83	Red			
SLS 472	11.84 - 12.17	Green			
SLS 490	12.18 - 12.94	Blue			
SLS 520	12.95 - 13.59	Orange			





# **FULL TENSION LINE SPLICE**

ACSR Full Tension Splices are Designed as a three component assembly generally for Sub-EHV applications. This splice is recommended when damage to the core itself is suspected, or when joining ACSR.

### **FEATURES AND BENEFITS**

32

- Restores original conductivity and full rated breaking strength to ACSR conductor.
- This splice will hold the full rated breaking strength of, and provide better conductivity than, an equal length of unspliced ACSR.
- All conductors, new or weathered, must be thoroughly wire brushed before the fitting is applied.



### **Aluminium Alloy Full Tension Splices**

#### **Specifications**

Cat.No.	Conductor	Colour Code	Conductor
Cat.ivo.	Code	Cotour Code	Strand
ALSFT-249-SQR	Squirrel	Orange	6/1/2.11
ALSFT-280-GPR	Gopher	Yellow	6/1/2.36
ALSFT-330-FOX	Fox	Blue	6/1/2.79
ALSFT-396-RBT	Rabbit	Yellow	6/1/3.35
ALSFT-432-MNK	Mink	Red	6/1/3.66
ALSFT-471-BVR	Beaver	Green	6/1/3.99
ALSFT-483-RCN	Raccoon	Green	6/1/4.04
ALSFT-510-SKU	Skunk	Orange	12/7/2.59
ALSFT-557-DOG	Dog	Brown	6/4.72 + 7/1.57
ALSFT-558-HRE	Hare	Brown	6/1/4.72
ALSFT-606-AC/120/27	AC 120/27	Orange	-
ALSFT-624-LPD	Leopard	Orange	6/5.28 + 7/1.75
ALSFT-651-TGR	Tiger	Red	30/7/2.36
ALSFT-673-AC/150/24	AC 150/24	Yellow	-
ALSFT-714-WLF	Wolf	White	30/7/2.59
ALSFT-743-CHIC	Chickadee	Red	18/1/3.77
ALSFT-770-LNX	LYNX	Black	30/7/2.79
ALSFT-815-PCN	Pelican	Brown	18/1/4.14
ALSFT-826-PNT	Panther	Brown	30/7/3.00
ALSFT-850-AC/240/32	AC 240/32	Orange	-
ALSFT-854-AFL6	AFL-6	Brown	-
ALSFT-875-LION	LION	Red	30/7/3.18
ALSFT-924-BEAR	Bear	Orange	30/7/3.35
ALSFT-1022-GOAT	Goat	Black	30/7/3.71
ALSFT-1062-BSN	Bison	Blue	54/7/3.00
ALSFT-1064-TERN	Tern	Blue	45/3.38 + 7/2.25
ALSFT-1125-ZBR	Zebra	Yellow	54/7/3.18
ALSFT-1175-DEER	Deer	Red	30/7/4.26
ALSFT-1400-DNR	Dinosaur	White	54/3.95 + 19/2.37
ALSFT-1505-LPW	Lapwing	White	38.15mm





#### PARALLEL GROOVE CLAMPS

PREFORMED™ Universal Parallel Groove Clamps are designed to accommodate three ranges of conductor diameters, 4.11 - 11.8mm (PG 1646) 3.71 - 14.35mm (PG 1556) and 6.63 - 18.92mm (PG 2674). Each of these sizes can be supplied in 1, 2 or 3 bolt types and are available as all-aluminium or bi-metal connectors. All clamps are manufactured of aluminium alloy but the bi-metallic version is a test approved anti-corrosion plated product with a distinctive olive-passivated surface finish which differentiate it from the aluminium version.

#### **FEATURES AND BENEFITS**

34

- A recommended non-oxide grease must be used with all clamps to minimise corrosion.
- the setscrews and washers used on our PG clamps are similar material to the body, thus ensuring that there is equal expansion under all temperature conditions and consequently no tendency on loosen.
- A recommended non-oxide grease must be used with all clamps to minimise corrosion.



### **Parallel Groove Clamps**

#### **Specifications**

Cat.No.	Main & Tap	Number of Bolts	Current
out.ivo.	Dia. Range(mm)	riamber of Botto	Capacity(amps)
PG 1556-1	3.7 - 14.2	1	7
PG 1556-2	3.7 - 14.2	2	7
PG 1556-3	3.7 - 14.2	3	7
PG 1646-1	4.1 - 11.8	1	7
PG 1646-2	4.1 - 11.8	2	8
PG 1646-3	4.1 - 11.8	3	8
PG 2674-1	6.6 - 18.9	1	9
PG 2674-2	6.6 - 18.9	2	9
PG 2674-3	6.6 - 18.9	3	10
PG 65125-1	16.5 - 31.75	1	10
PG 65125-2	16.5 - 31.75	2	10
PG 65125-3	16.5 - 31.75	3	10

<sup>&#</sup>x27;B' denotes all aluminium PG connectors. For bi-metal please replace "B" with "G".





#### **DEAD END**

Distribution Grip DEAD END is recommended for direct application over plastic jacketed (not fabric covered) conductor. Coated Dead-ends are also recommended for jacketed conductor. Dead End: Bare; manufactured from similar basic material to that of the conductor to which it should be applied as used in general distribution construction.

Where conductors are homogeneous stranding the Rated Holding Strength approximates the Rated Breaking Strength of the conductor.

#### **FEATURES AND BENEFITS**

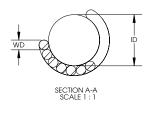
- Tools are not required nor recommended to install Distribution-Grip Dead Ends, except for hot stick applications.
- Designed to grip the conductor uniformly to prevent distortion of the conductor.
- Unique design that eliminates bolts, nuts, washers and other component parts that may become lost or damaged during installation or in service.
- Dead Ends up to Cat No. ADE 270 are manufactured with a cabled loop to ensure ease of application and the minimum of "Stretch" after installation.



### **Aluminium Alloy Dead Ends**

#### Specifications

Cat.No.	Conductor	Conductor	Colour Code
Cat.No.	Code	Strand	cotour code
ADE 249	Squirrel	6.18 - 6.34	Orange
ADE 255		6.35 - 6.60	Green
ADE 270		6.61 - 7.00	Black
ADE 280	Gopher	7.01 - 7.40	Yellow
ADE 300	Weasel	7.41 - 7.84	Brown
ADE 311		7.85 - 8.26	Red
ADE 330	Fox/Ladybird	8.27 - 8.64	Blue
ADE 348	Fir	8.65 - 9.15	Green
ADE 366	Ant	9.16 - 9.65	Black
ADE 396	Rabbit	9.66 - 10.40	Yellow
ADE 432	Mink	10.41 - 11.20	Red
ADE 472	Beaver	11.21 - 12.10	Blue
ADE 480	Willow	12.11 - 12.99	Orange
ADE 520	Wasp	13.00 - 13.94	Green
ADE 558	Hare/Oak	13.94 - 14.70	Brown
ADE 595	Hyena	14.71 - 15.70	Blue
ADE 625	Mulberry	15.71 - 16.24	Orange
ADE 650	Tiger	16.25 - 17.39	Red
ADE 700		17.40 - 18.12	Yellow
ADE 714	Wolf	18.13 - 18.70	White
ADE 740	Elm	18.71 - 19.50	Red









38

### **Copper Alloy Dead Ends**

#### **Specifications**

Specifications			
Cat.No.	Conductor Strand	Colour Code	
CDE 182	4.62 - 5.19	Green	
CDE 203	5.20 - 5.80	Red	
CDE 232	5.81 - 6.40	Blue	
CDE 249	6.41 - 7.36	White	
CDE 290	7.37 - 8.28	Yellow	
CDE 330	8.29 - 8.99	Blue	
CDE 354	9.00 - 10.04	Brown	
CDE 396	10.05 - 10.49	Orange	
CDE 415	10.50 - 10.89	Green	
CDE 445	10.90 - 11.67	Blue	
CDE 498	11.68 - 13.04	White	
CDE 520	13.05 - 14.19	Grey	
CDE 560	14.20 - 15.40	Green	
CDE 606	15.41 - 16.49	Blue	
CDE 650	16.50 - 18.00	Red	





### **ALUMINIUM ALLOY THIMBLE CLEVIS**

Thimble Clevises are used in conjunction with PLP® Dead Ends on suspension-type or Dead End insulators. The Thimble is intended to provide a smooth internal contour to prevent stress concentration within the loop of a PLP® Dead End. The Clevis includes a steel pin which links it through the eye of an insulator and secures it with a humpbacked cotter key.

#### **FEATURES AND BENEFITS**

- It is a distinct advantage to tension the conductors from the Thimble Clevis rather than from the cross-arm which is the alternative method.
- Thimble Clevis ensures insulators are properly sited and placed in tension.
- The complete termination procedure is carried out quickly, efficiently, uniformly and safely.

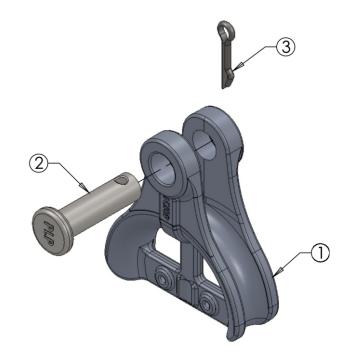


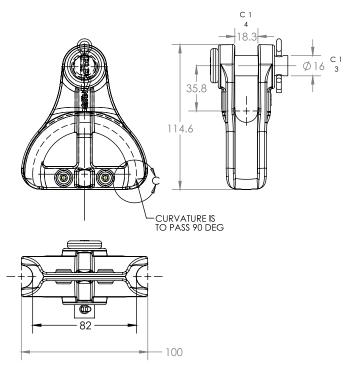
40

## Cast Aluminium Thimble Clevis-40kN Assembly

Catalogue No.: TC40-A

ITEM NO.	DESCRIPTION	QTY
1	Cast Al. Thimble Clevis-40KN	1
2	ø16 X 60mm Clevis Pin	1
3	Stainless Steel Humpback Split Pin	1



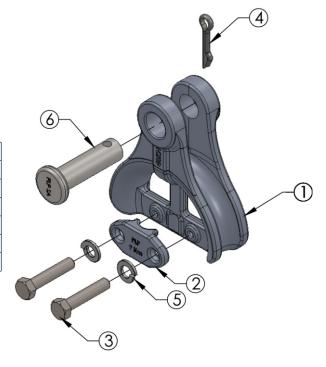


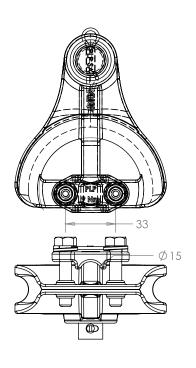


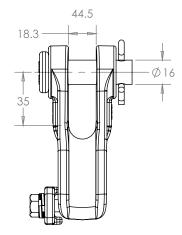
# Cast Aluminium Thimble Clevis with Clamping Assembly

Catalogue No.: TC40-C

ITEM NO.	DESCRIPTION	QTY
1	Cast Al. Thimble Clevis-40KN	1
2	Cast Al. Thimble Clevis Keeper	1
3	M8 X 40 Hex Setscrew Stainless Steel Gr. A4	2
4	Stainless Steel Humpback Stainless Steel 4x16	1
5	M8 Spring Washer Stainless Steel - GR 316	2
6	ø16 x 60mm Clevis Pin	1











### THIMBLE REGULATING EYE

The Thimble Regulating Eye has been designed and developed to facilitate conductor tensioning and easier installation of PLP® Dead Ends. It is designed to fit the PLP® Thimble Clevis as shown in this picture.

#### **FEATURES AND BENEFITS**

42

- The Thimble Regulating Eye is installed over, or under, the Thimble Clevis, with the legs fitting neatly into the "bow" of the Thimble Clevis.
- For safety reasons the Regulating Eye has been designed so that it does not suddenly drop down when tension is released.
- In practice it is preferable to fit it under the Thimble Clevis, so that when the tensioning hoist is released, the Regulating Eye hoist is secured to the loop of the regulating eye and to the conductor.





### **ALUMINIUM BARE DEAD END**

The Aluminium Bare Dead End is intended for use on aluminiumbased conductor, with a diameter range of 6.6 to 9.3mm It is designed to terminate primary, secondary and neutral wire conductors.

#### **FEATURES AND BENEFITS**

- Tools are not required nor recommended to install Aluminium Bare Dead Ends, except for hot stick applications
- Designed to grip the conductor uniformly to prevent distortion of the conductor.
- Unique design that eliminates bolts, nuts, washers and other component parts that may become lost or damaged during installation or in service.



44

#### **Specifications**

Cat.No.	Conductor Strand	Colour Code
ABDE 298	6.6 - 8.5	Blue
ABDE 315	8	Green
ABDE 366	9.3	Black

#### NOTES:

- 1. MATERIAL: 90T STEEL
- 2. ALL DIMENSIONS IN MILLIMETERS (mm)









### THIMBLE CLEVIS MALLEABLE IRON

This fitting is an alternative to the aluminium Thimble Clevis and is designed for use with PLP® copper or steel Dead Ends or Guy Grips.

#### **FEATURES AND BENEFITS**

- Malleable Cast Iron Galvanised to SABS 763
- Minimum failing load is 120kN





### **GUY-GRIP®**

46

The Guy-Grips are generally recommended for wood pole distribution and telecommunication construction. Guy-Grips® should be used on hardware that is held in a fixed position; the fitting should not be allowed to rotate or spin about the axis of the strand.

#### **FEATURES AND BENEFITS**

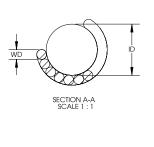
- Guy-Grips® is supplied with a cabled loop to ease application and to prevent stretch.
- Guy-Grip® may be removed and re-applied three times, if necessary, on new construction, for the purpose retensioning stays.
- Lay direction of Guy-Grip® must be the same as that of the strand to which it is applied.
- $\bullet$  Rated holding strengths are at least equal to those of the staywire.



### Galvanised Steel Guy-Grip®

#### **Specifications**

Cat.No.	Strand	Conductor	Colour Code
Cat.No.	Strand	Strand	Colour Code
GSDE 104	1/2.64	2.54 - 2.64	Brown
GSDE 108	-	2.65 - 2.85	Green
GSDE 118	-	2.86 - 3.3	Red
GSDE 144	7/1.22	3.31 - 3.66	Brown
GSDE 150	-	3.67 - 4	White
GSDE 167	-	4.01 -4.41	Orange
GSDE 175	-	4.42 - 4.82	Blue
GSDE 192	7/1.65	4.83 - 5.31	Yellow
GSDE 225	-	5.32 - 5.72	Green
GSDE 240	7/2.03	5.76 - 6.2	Orange
GSDE 250	-	6.21 - 6.89	Green
GSDE 284	3/3.35	6.9 - 7.32	Black
GSDE 312	7/2.64	7.65 - 8.05	Brown
GSDE 338	3/4.00	8.06 - 8.59	Blue
GSDE 352	-	8.6 - 8.93	Yellow
GSDE 370	-	8.94 - 9.68	Orange
GSDE 384	7/3.25	9.68 - 10.03	Black
GSDE 396	7/3.35	10.04 - 10.62	Blue
GSDE 432	5/4.00	10.63 - 11.13	Brown
GSDE 452	-	11.13 - 11.83	Red
GSDE 472	7/4.00	11.84 - 12.17	Green
GSDE 490	-	12.18 - 12.94	Blue
GSDE 520	19/2.65	12.95 - 13.59	Red











### **POLE TOPS**

The PLP® Pole Tops make-off is complimentary fitting to the Guy-Grip, described earlier. It is in effect a built Pole Top Stay, and consists of a single set of 3 galvanised steel wires of 1400 M Pa strength, helically formed with a single unformed 700M Pa core wire.

#### **FEATURES AND BENEFITS**

- Effective 7 strand stay length for Dead-End attachment
- 3 strands plus Kingwire

48

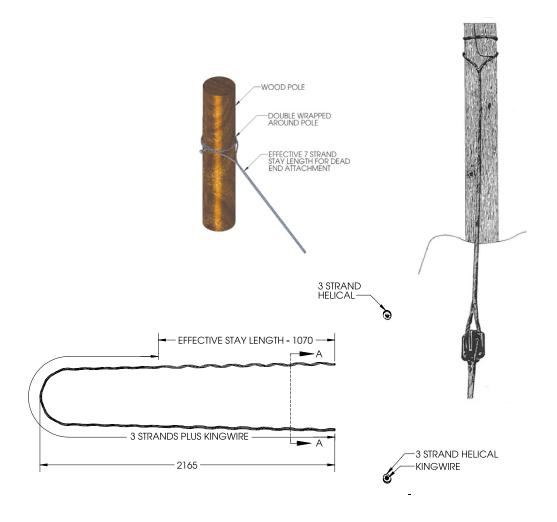
• The central king wire is of sufficient length that the parts above the crossover may be utilised as an earth bond.



### **Galvanised Steel Pole Top Make-offs**

#### **Specifications**

Specifications			
Cat.No.	Strand	Colour Code	
PT 240-6	7/2.03	Orange	
PT 284-6	3/3.35	Black	
PT 312-6	7/2.64	Brown	
PT 330-6	-	Blue	
PT 345-6	3/4.00	Red	
PT 384-6	7/3.25	Black	
PT 396-6	7/3.35	Yellow	
PT 432-6	5/4.00	Brown	
PT 480-6	7/4.00	Green	
PT 520-6	19/2.65	Orange	
PT 640-6	19/3.25	Brown	







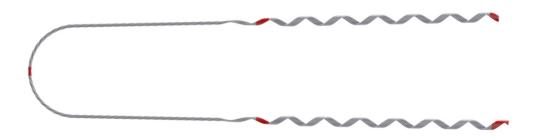
### **PULLING EYE**

Pulling Eye is designed to facilitate safe, fast installation of Guy-Grip dead-ends at the anchor rod. Constructed of corrosion-resistant nodular iron, this re-usable tool has a large eye which is offset to position the hook of the chain hoist safely to one side, and permit easy, uncrowded application of the dead-end. The PLP® Pulling Eye is adjustable for rod size, and is engineered to withstand a 1360kg working load without failure.

#### **FEATURES AND BENEFITS**

- Facilitates safe, fast installation of all dead-ends by a pulling point at the anchor.
- Installs around the anchor hardware in seconds.
- Nodular Iron housing and keeper with EHS steel bolt and nut.
- Corrosion resistant powder coating iron.
- Reusable
- Lightweight





### **DOUBLE-WRAP GUY-GRIP®**

Double-Wrap Guy-Grips® are designed to terminate solid or stranded wire used for stays, catenaries/messengers etc. at pole top positions, when Stay Insulators are NOT used. Suitable for varying pole diameter and for double wrapping, the Double-Wrap Guy-Grip® secures the strand at the top of the pole. A standard Guy-Grip® of the correct size is used to terminate the Staywire at the Stayrod.

#### **FEATURES AND BENEFITS**

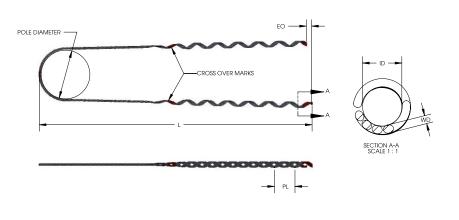
- Positive grip upon the strand that cannot be displaced by bending or vibration.
- Even distribution of pressure along a wide area, eliminating concentrated forces..
- Fast, simple and uniform application.
- Compatibility with the strand to which the fitting is applied.



### Double-Wrap Guy-Grip®

#### Specifications

Cat.No.	Character of	Conductor	Colour Code
Cat.No.	Strand	Strand	Cotour Code
DWGG 104	1/2.64	2.54 - 2.64	Brown
DWGG 108	-	2.65 - 2.85	Green
DWGG 118	-	2.86 - 3.3	Red
DWGG 144	7/1.22	3.31 - 3.66	Brown
DWGG 150	-	3.67 - 4	White
DWGG 167	-	4.01 -4.41	Orange
DWGG 175	-	4.42 - 4.82	Blue
DWGG 192	7/1.65	4.83 - 5.31	Yellow
DWGG 224	-	5.32 - 5.72	Green
DWGG 240	7/2.03	5.76 - 6.2	Orange
DWGG 250	-	6.21 - 6.89	Green
DWGG 284	3/3.35	6.9 - 7.32	Black
DWGG 312	7/2.64	7.65 - 8.05	Brown
DWGG 338	3/4.00	8.06 - 8.59	Blue
DWGG 352	-	8.6 - 8.93	Yellow
DWGG 370	-	8.94 - 9.68	Orange
DWGG 384	7/3.25	9.68 - 10.03	Black
DWGG 396	7/3.35	10.04 - 10.62	Blue
DWGG 432	5/4.00	10.63 - 11.13	Brown
DWGG 452	-	11.13 - 11.83	Red
DWGG 472	7/4.00	11.84 - 12.17	Green
DWGG 490	-	12.18 - 12.94	Blue
DWGG 520	19/2.65	12.95 - 13.59	Red









#### **SPIRAL VIBRATION DAMPER**

PLP's Spiral Vibration Damper reduces Aeolian Vibration (the high frequency, low amplitude vibration caused by horizontal wind passing across the line. It is designed to be used on OPGW and conductors with an outside diameter less than 19.30mm

#### **FEATURES AND BENEFITS**

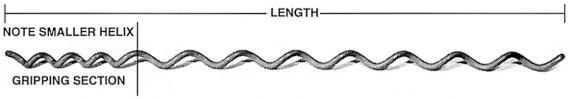
- Spiral Vibration Dampers should be given serious consideration when distribution spans exceed 115M and/or 15% tension at 16 degrees.
- Spiral Vibration Dampers should be used on conductors between 4.4mm and 19.3mm outside diameter in area experiencing or having a history of vibration.
- Two Spiral Vibration Dampers are recommended to be installed one hand's width apart, each side of the support where spans exceed 244M.
- Helically scaled for interplay of damper and conductor, to provide the action/reaction motion that opposes the natural vibration wave
- The material is non-corrosive, has a surface hardness which does not abrade the conductor, and is formulated to resist ultra-violet rays.



### **Spiral Vibration Damper**

#### **Specifications**

Cat.No.	Conductor Diameter	Damping Length
SVD 32	4.35 - 6.32	940
SVD 34	6.33 - 8.28	990
SVD 36	8.29 - 11.71	1040
SVD 38	11.72 - 14.30	1070
SVD 40	14.31 - 19.30	1150



DAMPING SECTION



### **Spiral Vibration Damper High Impact PVC**

NUMBER OF DAMPERS

#### Selection and Placement Guide

SPAN I ENGTH

#### 1. METAL FREE SELF SUPPORTING FIBRE OPTIC CABLE APPLICATIONS

JI AN LLINOTTI	NOMBER OF DAMIFERS
Up to 150 metres	2 dampers per span
150 metres to 350 metres	4 dampers per span (2 subsets of 2)
350 metres to 550 metres	6 dampers per span (2 subsets of 3)
*550 metres to 1 000 metres	9 dampers per span (3 subsets of 3)
*1 000 metres to 1 450 metres	12 dampers per span (4 subsets of 3)

#### 2. OPGW AND METALLIC CONDUCTORS (I.E. AL. BASED DISTRIBUTION CONDUCTORS)

SPAN LENGTH	NUMBER OF DAMPERS
Up to 250 metres	2 dampers per span
250 metres to 500 metres	4 dampers per span (2 subsets of 2)
500 metres to 750 metres	6 dampers per span (2 subsets of 3)
*750 metres to 1 125 metres	9 dampers per span (3 subsets of 3)
*1 125 metres to 1 500 metres	12 dampers per span (4 subsets of 3)

Application and Inspection: The Gripping Section should be installed approximately one hand's width from the ends of Armor Rod or other hardware.

It is not necessary to make engineering calculations as to placement.

Installation may be made with hot-sticks at selected locations, after vibration experience has been obtained through line inspections.

Application Instructions: The SPIRAL VIBRATION DAMPER has a large damping helix at one end and a smaller conductor gripping helix at the other. Determine which end has the small gripping helix.

Take the small gripping helix in one hand and rotate the other large damping end around the conductor feeding it into the span.

When all the large coils or pitches have been applied over the conductor position the smaller gripping pitches so this end of the section is approximately 100mm. or one hands width away from the dead-end, or intermediate support/suspension.

The gripping pitches can now be applied to the conductor which completes the application.

Additional Information: SPIRAL VIBRATION DAMPERS are precision devices and should be handled carefully to prevent distortion and damage.

They should be stored in cartons under cover – preferably shelf storage until used. Tools should not be used to snap the ends into position during hand application. Ensure that the correct size fitting is used.







### **LASHING ROD**

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 and support of power cable into and out of substations.

#### **FEATURES AND BENEFITS**

56

- Lashing Rod are made of the same basic material as the messenger to which they are applied. This pertains to galvanized, copperweld and alumoweld.
- For use in highly corrosive environment, or on extra heavy cables, a neoprene coating can be applied to the galvanized, Copperweld, Aluminium -clad steel or stainless steel Lashing Rod.
- In selecting the proper size Lashing Rod it is necessary to determine the smallest circumscribing circle that enclose the messenger and cables.



### **Lashing Rods**

#### **Application-Inspection**

The smaller inside diameter of the proper size Lashing Rod should exert a low radial pressure on the cables and messenger.

For most installations, one Lashing Rod should be applied, overlapping one pitch length with each successive rod.



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



### **Lashing Rods Neoprene Covered**



For use in highly corrosive environment, or on extra heavy cables, a neoprene coating can be applied to the Galvanized, Copperweld, Alumoweld or Stainless Steel Lashing Rods appearing on the price pages. However, for normal outdoor power installations, the uncoated Lashing Rod will be satisfactory.

In calculating circumscribing diameters for size selection, the thickness of the neoprene coating can be neglected.

Consult the factory for neoprene covered Lashing Rod. Include the minimum circumscribing diameter and the type of messenger material.





#### **EARTH GUARD**

The system caters for both vertical and horizontal low voltage overhead line configurations: 400 volts, 3 phase, 4 wire. The earth bar comprises a guillotined strip of stainless steel developed in South Africa and known as 3CR12 alloy. This inexpensive method of the thermal protection was introduced to cater for excessive rises in temperature of the metal strip due to prolonged fault current intervals.

#### **FEATURES AND BENEFITS**

- Santoprene rubber grommets are used as thermal protection for the PVC rod and are fitted to the metal strip at the point of suspension.
- The basic design of both vertical and horizontal units caters for various conductor spacings and numbers.
- A rectangular bar was chosen in preference to a round earth bar to ensure improved electrical contact especially in the case of badly oxidised conductors.





### **PVC SPACER**

Provides a new, inexpensive way of eliminating mid-span clashing on L.V. up to 4kV Distribution lines or telecommunications, circuits. Applied to parallel or converging lines, they maintain spacing required between adjacent spans. The helically formed legs assure absolute uniformity of each application.

#### **FEATURES AND BENEFITS**

- Made from rigid, solid high impact PVC.
- Designed with a suitable inside diameter for direct application to mid-span locations.
- Easily wrapped onto adjacent wires.



60

### Pigtail Bolt Assembly

Catalog Numbers	<b>Bolt Diameter</b>	Bolt Diameter
PB10/280	10	280
PB12/380	12	380
PB16/380	16	380

Other sizes available on request



### **Pig Tail Bolts**

Catalog Numbers	Horizontal Load Rating (kN)		Thread Length(mm)
PT 16-380	10	M16	380



Pistol Grip Aluminium Strain Clamp (Pistol Type)

Catalog Numbers	Conductor Range(kN)	UTS	No. Of Bolts
STC 5/16	5-16	70	3





### **Aluminium Suspension Clamp (Cradle Type)**

Catalog Numbers	Conductor Range(kN)	UTS
ASC 818	8 - 18	40
ASC 1226	12 - 26	40



#### **Shackles**

Catalog Numbers	Load Rating (kN)	Fastener Type	Thread Length(mm)
SSP-70	70	16mm Pin	16
DSK-120	120	M16 Bolt	16
DSK-210	210	M120 Bolt	20

Compliant with Eskom D-DT-3010 & D-DT-7017



#### **Threaded Rod Assemblies**

Thread Size	Standard Lengths(mm)
M12	350
M16	200, 250, 350
M20	250, 350, 450, 600, 750, 1000
M24	350, 500, 650, 1000, 1200,1300

Supplied with washers, bonding clips and hex nuts as per Eskom D-DT-

Other sizes are available on request.





### **Eye Bolts**

Catalog Numbers	Load Rating (kN)	Thread	Length(mm)
EB 16260	40	M16	260
EB 20250	70	M20	250
EB 20350	70	M20	350

Supplied with washers, bonding clips and hex nuts as per Eskom D-DT-3005. Other sizes are available on request.



### **Eye Nuts**

Catalog Numbers	Load Rating(kN)	Thread
EN 16	40	M16
EN 20	70	M20





### **Conductor Guide**

# All Aluminium Alloy Conductors - AAAC (British Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
ACACIA	13	7/2,08	6,24	23,79
ALMOND	16	7/2,34	7,02	30,10
CEDAR	19	7/2,54	7,59	35,47
35	22	7/2,77	8,31	42,18
FIR	25	7/2,95	8,85	47,84
HAZEL	32	7/3,30	9,90	59,87
PINE	38	7/3,61	10,83	71,65
70	45	7/3,91	11,73	84,05
WILLOW	48	7/4,04	12,12	89,73
80	51	7/4,19	12,57	96,52
90	58	7/4,45	13,35	108,9
OAK	63	7/4,65	13,95	118,9
100	63	19/2,82	14,10	118,7
MULBERRY	80	19/3,18	15,90	150,9
ASH	96	19/3,48	17,40	180,7
ELM	112	19/3,76	18,80	210,9
POPLAR	119	37/2,87	20,09	239,4
225	143	37/3,05	21,35	270,3
SYCAMORE	161	37/3,23	22,61	303,2
UPAS	192	37/3,53	24,71	362,1
350	224	37/3,81	26,67	421,8
YEW	254	37/4,06	28,42	479,0



64

### All Aluminium Conductor - AAC (British Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
MIDGE	14,19	7/2,06	6,18	23,33
APHIS	16,13	3/3,35	7,24	26,44
GNAT	16,13	7/2,21	6,63	26,85
WEEVIL	19,35	3/3,66	7,91	31,56
MOSQUITO	22,58	7/2,59	7,77	36,88
LADYBIRD	25,81	7/2,79	8,37	42,80
ANT	32,26	7/3,10	9,30	52,83
FLY	38,71	7/3,40	10,20	63,55
BLUEBOTTLE	45,16	7/3,66	10,98	73,65
EARWIG	48,39	7/3,78	11,34	78,55
GRASSHOPPER	51,61	7/3,91	11,73	84,05
CLEGG	58,06	7/4,17	12,51	95,60
WASP	64,52	7/4,39	13,17	105,95
BEETLE	64,52	19/2,67	13,35	106,38
BEE	80,64	7/4,90	14,70	132,00
CRICKET	96,77	7/5,36	16,08	157,95
HORNET	96,77	19/3,25	16,25	157,95
CATERPILLAR	112,90	19/3,53	17,65	185,95
CHAFER	129,00	19/3,78	18,90	213,22
SPIDER	145,20	19/3,99	19,95	237,57
COCKROACH	161,30	19/4,22	21,10	265,75
BUTTERFLY	193,50	19/4,65	23,25	322,66
МОТН	225,80	19/5,00	25,00	373,06
DRONE	225,80	37/3,58	25,06	372,44
LOCUST	258,10	19/5,36	26,80	428,72
CENTIPEDE	258,10	37/3,78	26,46	415,22
MAYBUG	290,30	37/4,09	28,63	486,11
SCORPION	322,60	37/4,27	29,89	529,84
CICADA	387,10	37/4,65	32,55	628,34
TARANTULA	483,90	37/5,23	36,61	794,87
BULL	527,87	61/4,25	38,25	865,36



# Aluminium Conductor Steel Reinforced-ACSR (British Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
MOLE	6,45	6/1/1,50	1,50	4,50
SQUIRREL	12,90	6/1/2,11	2,11	6,33
GOPHER	16,30	6/1/2,36	2,36	7,08
WEASEL	19,35	6/1/2,59	2,59	7,77
FOX	22,58	6/1/2,79	2,79	8,37
FERRET	25,81	6/1/3,00	3,00	9,00
RABBIT	32,26	6/1/3,35	3,35	10,05
MINK	38,71	6/1/3,66	3,66	10,98
SKUNK	38,71	12/7/2,59	7,77	12,95
BEAVER	45,16	6/1/3,99	3,99	11,97
HORSE	45,16	12/7/2,79	8,37	13,95
RACCOON	48,39	6/1/4,09	4,09	12,27
OTTER	51,61	6/1/4,22	4,22	12,66
CAT	58,06	6/1/4.50	4,50	13,50
HARE	64,52	6/1/4,72	4,72	14,16
DOG	64,52	6/4,72	4,71	14,15
HYENA	64,52	+7/1,57	5,79	14,57
LEOPARD	80,65	7/4,39	5,25	15,81
СОУОТЕ	80,65	+7/1,93	5,73	15,89
TIGER	80,65	6/5,28	4,72	16,52
WOLF	96,77	+7/1,75	7,77	18,13
LYNX	112,90	26/2,54	8,37	19,53
PANTHER	129,00	+7/1,91	9,00	21,00
LION	145,20	30/7/2,36	9,54	22,26
BEAR	161,30	30/7/2,59	10,05	23,45
GOAT	193,50	30/7/2,79	11,13	25,97
SHEEP	225,80	30/7/3,00	11,97	27,93
ANTELOPE	225,80	30/7/3,18	8,91	26,73
BISON	225,80	30/7/3,35	9,00	27,00
DEER	258,10	30/7/3,71	12,81	29,89
ZEBRA	258,10	30/7/3,99	9,54	28,62
ELK	290,30	54/7/2,97	13,50	31,50
CAMEL	290,30	54/7/3,00	10,05	30,15
MOOSE	322,60	30/7/4,27	10,59	31,77
DINOSAUR	414,63	54/7/3,18	11,80	35,50
BERSFORD	430,70	30/7/4,50	9,96	35,58



66

# Aluminium Conductor Steel Reinforced-ACSR (Canadian Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
CARDINAL	305,00	54/7/3,38	10,14	30,38
ORTLAN	329,40	45/3,85 +7/2,57	7,71	30,81
CURLEW	329,40	54/7/3,52	10,56	31,65
BLUEJAY	354,70	45/4,00 +7/2,66	7,98	31,98
FINCH	354,70	54/3,65 +19/2,19	10,95	32,84
BUNTING	380,00	45/4,14 +7/2/76	8,28	33,07
GRACKLE	380,00	54/3,77 +19/2,27	11,35	33,99
BITTERN	405,40	45/4,27 +7/2,85	8,55	34,16
PHEASANT	405,40	54/3,90 +19/2,34	11,70	35,36
DIPPER	430,70	45/4,40 +7/2,92	8,76	35,18
MARTIN	430,70	54/4,02 +19/2,41	12,05	36,17
BOBLINK	456,00	45/4,53 +7/3,02	9,06	36,25
PLOVER	456,00	54/4,14 +19/2,48	12,40	37,21
NUTHATCH	481,40	45/4,65 +7/3,10	9,30	37,21
PARROT	481,40	54/4,25 +19/2,55	12,75	38,25
LAPWING	506,70	45/4,77 +7/3,18	9,54	38,15
FALCON	506,70	54/4,36 +19/2,62	13,10	39,24
CHUKAR	567,00	84/3,70 +19/2,22	11,10	40,69



# Aluminium Conductor Steel Reinforced-ACSR (Canadian Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
OSPREY	177,40	18/1/4,47	4,47	22,33
PARAKEET	177,40	24/3,87 +7/2,58	7,74	23,22
EAGLE	177,40	30/7/3,46	10,38	24,22
DOVE	177,40	26/3,72 +7/2.89	8,67	23,55
PEACOCK	192,80	24/4,03 +7/2,69	8,07	24,21
SQUAB	192,80	26/3,87 +7/3,01	9,03	24,54
TEAL	192,80	30/3,61 +19/2,16	10,80	25,25
DUCK	192,80	54/7/2,69	8,07	24,21
KINGBIRD	197,04	18/1/4,78	4,78	23,90
ROOK	202,70	24/4,14 +7/2,76	8,28	24,82
EGRET	202,70	30/3,70 +19/2,22	11,10	25,90
GROSBEAK	202,70	26/3,97 +7/3,09	9,27	25,15
G00SE	202,70	54/7/2,76	8,28	24,84
FLAMINGO	212,30	24/4,20 +7/2,82	8,46	25,38
GULL	212,30	54/7/2,82	8,46	25,38
REDWING	228,00	30/3,92 +19/2.35	11,75	27,43
STARLING	228,00	26/4,21 +7/3,28	9,84	26,68
CROW	228,00	54/7/2,92	8,76	26,28
TERN	253,40	45/3,38 +7/2.25	6,75	27,00
MALLARD	253,40	30/4,14 +19/2,48	12,40	28,96
DRAKE	253,40	26/4,44 +7/3,45	10,35	28,11
CONDOR	253,40	54/7/3,08	9,24	27,76
CRANE	278,70	54/7/3,23	9,69	29,11
CANARY	286,80	54/7/3,28	9,84	29,51
RAIL	304,00	45/3,70 +7/2,47	7,41	29,59



68

# Aluminium Conductor Steel Reinforced-ACSR (Canadian Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
WREN	5,26	6/1/1,33	1,33	3,99
WARBLER	6,63	6/1/1,50	1,50	4,50
TURKEY	8,37	6/1/1,68	1,68	5,04
THRUSH	10,55	6/1/1,89	1,89	5,67
SWAN	13,30	6/1/2,12	2,12	6,36
SWALLOW	16,77	6/1/2,38	2,38	7,14
SPARROW	21,15	6/1/2,67	2,67	8,01
ROBIN	26,67	6/1/3,00	3,00	9,00
RAVEN	36,62	6/1/3,37	3,37	10,11
QUAIL	42,41	6/1/3,78	3,78	11,34
PIGEON	53,49	6/1/4,25	4,25	12,75
PENGUIN	67,43	6/1/4,77	4,77	14,31
PARTRIDGE	85,01	26/2,57 +7/2.00	6,00	16,28
OWL	85,01	6/5,36 +7/1,79	5,37	16,09
WAXWING	85,01	18/1/3,09	3,09	15,47
PIPER	95,60	30/7/2,54	7,62	17,78
OSTRICH	95,60	26/2,73 +7/2,12	6,36	17,28
ORIOLE	107,20	30/7/2,69	8,07	18,83
LINNET	107,20	26/2,89 +7/2,25	6,75	18,31
MERLIN	107,20	18/1/3,47	3,47	17,37
CHICADEE	126,70	18/1/3,77	3,77	18,87
LARK	126,70	30/7/2,92	8,76	20,44
IBIS	126,70	26/3,14 +7/2,44	7,32	19,88
PELICAN	152,00	18/1/4,14	4,14	20,70
FLICKER	152,00	24/3,58 +7/2,39	7,17	21,49
HEN	152,00	30/7/3,20	9,60	22,40
HAWK	152,00	26/3,44 +7/2,68	8,04	21,80
HERON	159,40	30/7/3,28	9,84	22,96



# Aluminium Conductor Steel Reinforced-ACSR (South African Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
* 21/3,5	12,8	6/1/2,11	2,11	6,33
* 26/4,4	16,0	6/1/2,36	2,36	7,16
* 37/6,1	22,4	6/1/2,79	2,79	8,45
* 42/7,1	25,8	6/1/3,00	3,00	9,09
* 53/8,8	32,3	6/1/3,35	3,35	10,15
* 63/11	38,5	6/1/3,66	3,66	11,09
105/17	64,0	6/1/4,72	4,72	14,30
105/14	64,0	6/4,75 +7/1.57	4,71	14,29
158/37	96,4	30/7/2,59	7,77	18,31
264/62	161	30/7/3,35	10,05	23,69
429/56	262	54/7/3,18 54/3,95	9,54	28,91
662/84	404	+19/2,37	11,85	35,94

# All Aluminium Conductors - AAC (South African Standard Sizes)

Conductor Name	Equivalent Copper area	Stranding & Wire dia.	Overall Diameter	Aluminium Area
25	15,6	7/2,12	6,42	24,7
39	24,3	7/2,65	8,03	38,6
58	36,6	7/3,25	10,15	58,1
100	62,9	7/4,26	12,91	99,8
* 158	99,4	19/3,25	16,92	157,6
271	171,0	19/4,26	21,52	270,8
* 323	203,5	19/4,65	23,49	322,7
* 415	262,0	37/3,78	26,73	415,2
* 527	332,6	37/4,26	30,12	527,4
† 685	431,8	61/3,78	34,36	684,6
* 869	548,3	61/4,26	38,73	869,4

#### **NOTES:**

#### **NOTES:**



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