AUSTRALIA

PLP (PREFORMED LINE PRODUCTS)

Insulated Conductor Fittings for LV & HV ABC & CCT Systems

The connection you can count on

Contents

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

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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

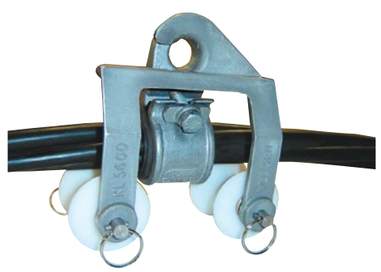
IBSRC

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

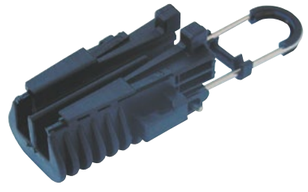
- Glass reinforced nylon clamping block.
- Blocks are spring loaded for ease of cable insertion.
- Available in galvanised steel or glass reinforced nylon straps.
- Available in open hook or closed eye.
- M10 stainless steel fasteners.
- UV Stabilised.

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

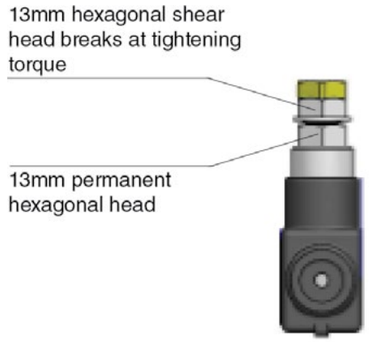
There is no need to disconnect the custumer's power supply because the conductor is not severed to install plugs or sockets. The installation of the SSD can be done at any time, without having to advise the customers.

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

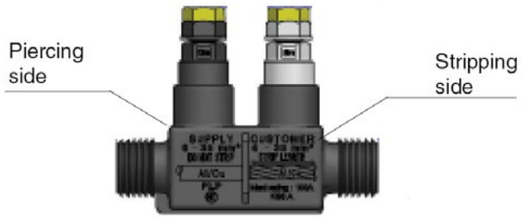


The K96A and K96B House Service Connectors are used to make an electrical connection from an insulated supply cable to an insulated consumer cable.

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.

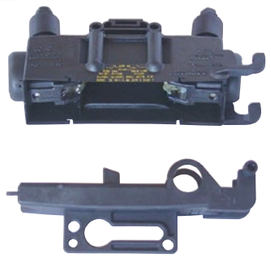
Features

- 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

Low Voltage Fittings

CONTENTS

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

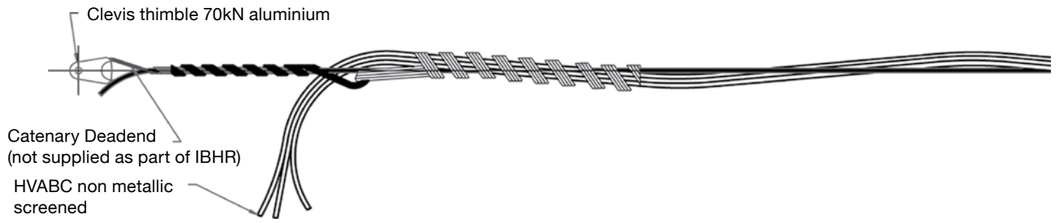
To secure HVABC conductors at strain or tension points, two types of fittings are required to secure both the catenary and the ABC bundle. The catenary is secured at a strain point using a standard PLP helical catenary deadend of applicable size and type, refer to the table below.

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

High Voltage Fittings

Helical Line Splice

LINE SPLICES

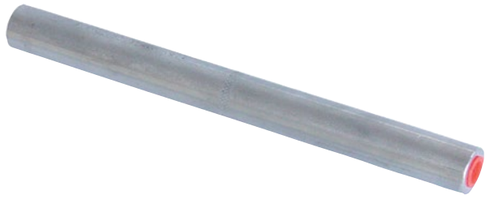
At locations where joints of the catenary on HVABC cables are required, a helical line splice or a compression midspan joint can be used.

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

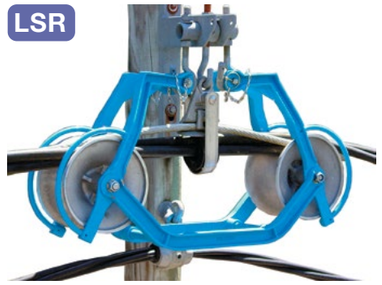
The M16 Hook Bolts are a straight hook design and made of galvanised steel for use with either wood or concrete poles.

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.

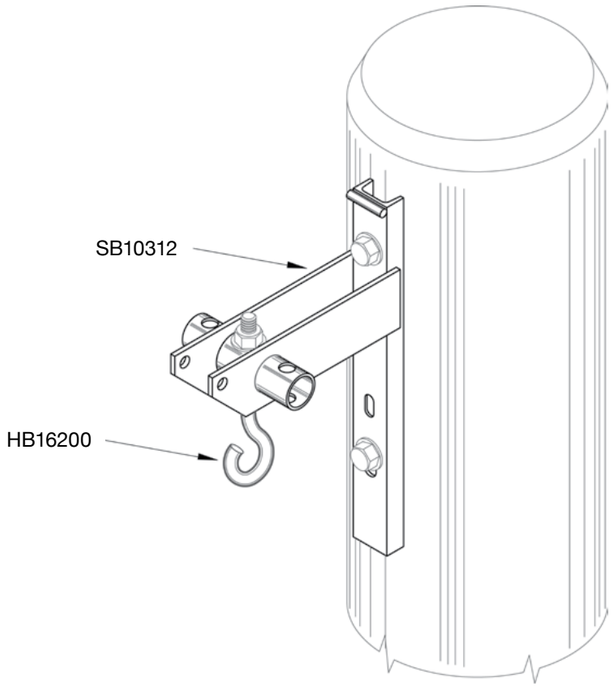
Both the suspension clamp and stringing roller are attached to the tube, using support hooks, HB16200. These hooks are manufactured from galvanised steel, have a minimum failing load of 12kN and are supplied with washers and nuts.

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

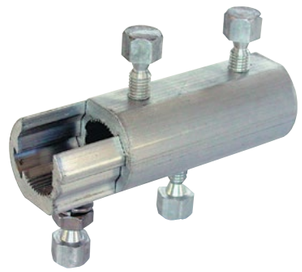
CCWEPC

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

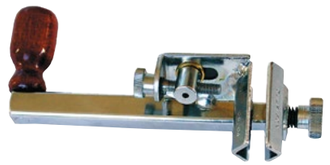
Brackets are available to mount insulators in either a trident 3 phase per bracket, or single phase format.

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

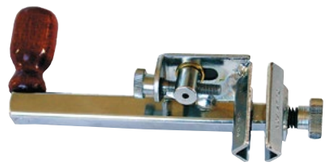
Cable Stripping Tool

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.

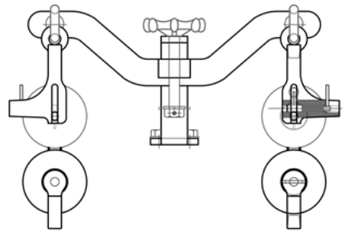
IBST50400



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

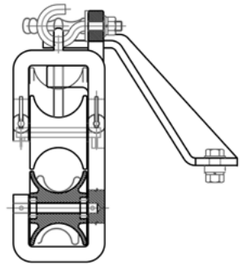
LSR24570



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

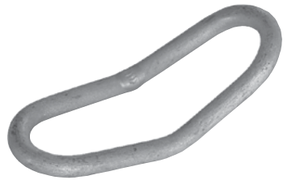
Features

- 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

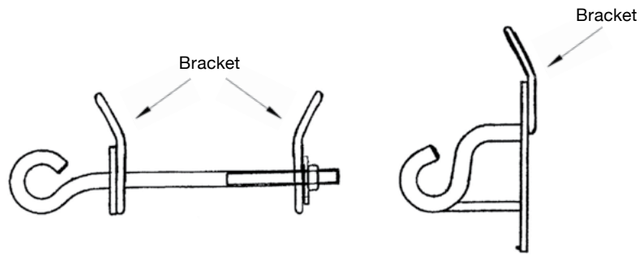
Service Support Bracket

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.

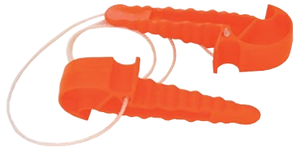
Features

- 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.

PLP's precision-engineered products and technical services provide support for critical energy networks and is trusted by utility providers worldwide for performance and longevity.

Operating as a united global organisation with facilities in more than 20 countries, PLP delivers quality products and unparalleled service for our customers.

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