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Low voltage ABC fittings (Aerial Bundle Conductor)

- › Insulation Piercing Connectors (IPC's)
- › House Service Connectors
- › Full Tension – Pre-Insulated Sleeves
- › Non Tension – Pre-Insulated Sleeves
- › Pre-Insulated Lugs
- › Tooling for Pre-Insulated Sleeves and Lugs
- › Strain Clamps – Mains and Service
- › Suspension Clamps
- › Roller Clamps
- › Pole Fuse (Fused Switch Disconnect)
- › Pole Hardware
- › Façade Mounting Brackets
- › Stripping Tools
- › Assembly and Stringing Tools

Insulation Piercing Connectors

Dulmison, through its partnership with Michaud in France, provide a comprehensive range of Insulation Piercing Connectors - IPC's. Michaud's dedication to product quality and technical performance makes them a market leader in the manufacture of IPC's - worldwide.

The range of Michaud IPC products available include;

- Insulated Mains to Insulated Mains
- Insulated Mains to Insulated Service
- Bare Mains to Insulated Mains
- Bare Mains to Insulated Service
- 2 Stage Connectors, for Live Line Connections
- Insulated Mains to Multiple Insulated Service
- Short Circuiting - Test

Features of all Michaud IPC's are;

- Insulated types suit both Aluminium and Copper Cables - Bi-Metallic
- Conform to the requirements of AS/NZS4396
- Plastic Components are UV Stabilized Glass reinforced Polymer
- All Fasteners are Stainless Steel
- All Connections are made using Torque controlled Shear Off screw
- Connectors are completely water tight to prevent corrosion
- Di-electric Strength in water is over 6kV
- Flexible End sealing caps
- Fastener thread is shielded from cable area, to eliminate cable damage whilst tightening
- Bare connections are made through contact plates compatible to conductor type
- Permanently engraved with Traceability information
- Clearly labelled with Application ranges.

Please see the following pages for full details of available products.



Low Voltage ABC Fittings

Insulation Piercing Connectors

Insulated cable to insulated cable (Aluminium or Copper)

Cat No.	Fig No.	Cable Range 1 mm ²	Cable Range 2 mm ²	No. of Bolts	Shear Head A/F mm
K440	1	10 - 95	1.5 - 6	1	13
K441	1	25 - 95	6 - 35	1	13
K442	1	35 - 150	1.5 - 25	1	13
K443	1	35 - 150	6 - 35	1	13
K445	1	25 - 95	25 - 95	1	17
K446	2	50 - 150	50 - 150	2	17



Fig. 1



Fig. 2

Bare cable to insulated (Aluminium or Copper) cable

Cat No.	Fig No.	Bare Cable Material	Bare Cable Size mm ²	Insulated Cable Size mm ²	No. of Bolts	Shear Head A/F mm	Type of Piercing Connection
K470	3	Copper	7 - 95	6 - 35	1	13	Standard
K472	4	Copper	7 - 120	25 - 95	1	17	Standard
K474	5	Copper	50 - 240	35 - 150	2	17	Standard
K471	3	Aluminium	7 - 95	35 - 150	1	13	Standard
K473	4	Aluminium	7 - 120	25 - 95	1	17	Standard
K475	5	Aluminium	50 - 240	50 - 150	2	17	Standard
K235	6	Copper	7 - 95	6 - 35	1	13	Two Stage*
K236	6	Aluminium	7 - 95	6 - 35	1	13	Two Stage*

* Two Stage IPC's, are able to be installed whilst conductor is under load, up to max of 100A.



Fig. 3



Fig. 4



Fig. 5



Fig. 6

Low Voltage ABC Fittings

Insulation Piercing Connectors

Insulated cable to multiple insulated cables (Aluminium or Copper)

Cat No.	Fig No.	Cable Range 1 mm ²	Cable Range 2 mm ²	No. of Taps	No. of Bolts	Shear Head A/F mm
K390	1	35 - 150	6 - 25	2	1	13



Fig. 1

Insulated cables (Aluminium or Copper) - Short circuiting - Test

Cat No.	Fig No.	Cable Range 1 mm ²	Cable Range 2 mm ²	No. of Bolts	Shear Head A/F mm
K362	2	16 - 25	16 - 25	1	13
K363	2	35 - 70	16 - 70	1	13
K364	2	54 - 150	16 - 150	1	13

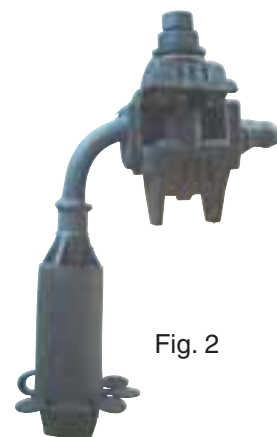


Fig. 2

Flexible End Caps

Cat No.	Fig No.	Length mm ²	Cable Entry Dia. mm	Application Range mm ²
K01	3	32	7	10 - 50
K02	3	40	10.5	35 - 95
K03	3	50	13	95 - 150



K01



K02



K03

Fig. 3

House Service Connectors

The House service connector is used to make an electrical connection from an Insulated Supply cable to an Insulated Consumers cable. Due to the construction of most consumers mains, this side of the connector is a stripped connection, whereas the supply connection is by means of Insulation Piercing.

Major Features of the connectors include;

- The connectors are bi-metallic and will accept both Copper and Aluminium Cables.
- The connectors are fully insulated and Water Proof
- Multiple rib sealing system, to ensure integrity of seal on all cable sizes - even ribbed.
- Consumers cable can be disconnected and reconnected
- Tested to applicable requirements of AS/NZS4396
- Connector is marked with cable sizes, and stripping requirements
- Customers and Mains sides are clearly differentiated with both marking and Bolt Colour
- Incorporates Shear Head on all contact screws.
- Available with Test Point, to eliminate need for removal of screws for continuity tests.
- Temporary plug available until customers side is connected.
- Available with Neutral Bonding Tail

Cat No.	Fig No.	Supply Cable Range mm ²	Supply Connection Type	Supply Bolt Colour	Customer Cable Range mm ²	Customer Connection Type	Customer Bolt Colour	Neutral Bonding Tail	Test Point
K28	1	6 - 35	Ins Piercing	Black	4 - 35	Strip Cable	White	No	Yes
K96	2	6 - 35	Ins Piercing	Black	4 - 35	Strip Cable	White	No	No
K97	3	6 - 35	Ins Piercing	Black	4 - 35	Strip Cable	White	775mm	No



Fig. 1



Fig. 2



Fig. 3

Pre-Insulated Compression Sleeves

Pre-Insulated 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 of all Pre-Insulated Sleeves are -

- Totally Insulated and Water Proof
- Colour Coded to applicable cable size
- Labelled with Cable size, Die size, Strip Length, Compression locations
- Permanently engraved with Traceability data



Utilux Tool #111

Full Tension Sleeves

Cat No.	Fig No.	Cable Size mm ²	Diameter mm	Length of Sleeve	Die Size mm	Die Part No.	End Cap Colour
K101	1	16	20	104	17.3	111-140173AL	Blue
K103	1	25	20	104	17.3	111-140173AL	Orange
K106	1	35	20	104	17.3	111-140173AL	Red
K110	1	50	20	104	17.3	111-140173AL	Yellow
K170	1	95	25	137	21.5	111-215AL	Grey
K185	1	150	25	178	21.5	111-215AL	Violet

* Sleeves to connect cables of differing sizes are also available. Refer Tyco for details

Non Tension Sleeves

Cat No.	Fig No.	Cable 1 Size mm ²	Cable 2 Size mm ²	Diameter mm	Length of Sleeve	Die Size mm	Die Part No.
K30	2	6	6	16	71	14	111-140173AL
K31	2	6	10	16	71	14	111-140173AL
K32	2	6	16	16	71	14	111-140173AL
K33	2	6	25	16	71	14	111-140173AL
K35	2	10	10	16	71	14	111-140173AL
K36	2	10	16	16	71	14	111-140173AL
K37	2	10	25	16	71	14	111-140173AL
K39	2	16	16	16	71	14	111-140173AL
K40	2	16	25	16	71	14	111-140173AL
K53	2	16	35	16	71	14	111-140173AL
K42	2	25	25	16	71	14	111-140173AL
K54	2	25	35	16	71	14	111-140173AL
K55	2	35	35	16	71	14	111-140173AL

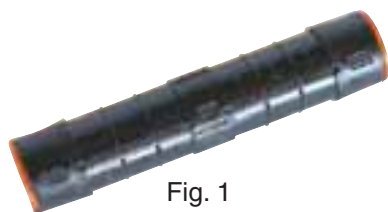


Fig. 1



Fig. 2

Pre-Insulated Compression Lugs

Pre-Insulated lugs are used to terminate aerial bundle insulated conductors, onto switchgear, busbars or isolators. The products are available in either Aluminium or Bi-Metallic form.

Features of all Pre-Insulated Lugs are -

- Totally Insulated and Water Proof
- Colour Coded to applicable cable size
- Labelled with Cable size, Die size, Strip Length, compression locations
- Permanently engraved with Traceability data



Utilux Tool #111

Bi-Metallic - Aluminium Body - Copper Palm

Cat No.	Fig No.	Cable Size mm ²	Diameter mm	Total Length mm	Palm Size mm	Hole Dia. mm	Die Part No.	Die Size mm	End Cap Colour
K159	1	16	16	73	Ø20	10.3	111-140173AL	14.0	Blue
K160	1	25	16	73	Ø20	10.3	111-140173AL	14.0	Orange
K163	1	35	20	93	Ø25	12.8	111-140173AL	17.3	Red
K164	1	50	20	93	Ø25	12.8	111-140173AL	17.3	Yellow
K167	1	95	20	93	Ø25	12.8	111-140173AL	17.3	Grey
K158	1	150	25	112	Ø30	12.8	111-215AL	21.5	Violet



Fig. 1



Fig. 2

Aluminium - Aluminium Body - Aluminium Palm

Cat No.	Fig No.	Cable Size mm ²	Diameter mm	Total Length mm	Palm Size mm	Hole Dia. mm	Die Part No.	Die Size mm	End Cap Colour
K140	2	16	16	107	32.5 x 40.5	14	111-140173AL	17.3	Blue
K141	2	25	20	107	32.5 x 40.5	14	111-140173AL	17.3	Orange
K142	2	35	20	107	32.5 x 40.5	14	111-140173AL	17.3	Red
K143	2	50	20	107	32.5 x 40.5	14	111-140173AL	17.3	Yellow
K148	2	95	20	118	32.5 x 40.5	14	111-215AL	21.5	Grey
K150	2	150	25	118	32.5 x 40.5	14	111-215AL	21.5	Violet

Strain Clamps

Strain clamps are available for both Mains and Service Aerial Bundled Cables. Capable of clamping from 1 to 4 cores. If uneven number of cores are clamped, use filler cables in other locations.

Mains Strain Clamps

- Glass Reinforced UV Stabilized clamping blocks
- High Strength Aluminium Alloy tensions straps
- Conforms to requirements of AS3766
- All Hardware is stainless steel - lubricated to eliminate binding
- Jaws sprung loaded to facilitate easy insertion of cores.

Cat No.	Fig No.	Number of Cores	Range of Cable mm ²
IBT25095	1	2	50 - 95
IBT5095	2	4	50 - 95
IBT95150	2	4	95 - 150



Fig. 1 - IBT25095

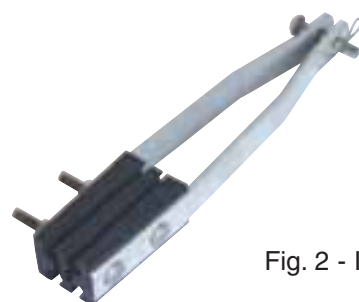


Fig. 2 - IBT5095

Service Strain Clamps

Type IBT

- Glass Reinforced UV Stabilized clamping blocks
- High Strength Aluminium Alloy Strap
- Hardware is stainless steel
- Can also be rotated to act as suspension clamp
- Is supplied in Eye and Hook Form
- Conforms to requirements of AS3766.

Type IBS

- Stainless Steel Bail arm - detachable
- Conforms to requirements of AS3766
- Wedge action created by sliding jaws
- No loose components, jaws attached to body.

Cat No.	Fig No.	Number of Cores	Range of Cable mm ²	Hook or Eye
IBST435	3	2 up to 4	4 - 35	Detachable
IBTH21635	4	2	16 - 35	Hook
IBTH41635	4	4	16 - 35	Hook
IBTC21635	5	2	16 - 35	Eye
IBTC41635	5	4	16 - 35	Eye



Fig. 3 - IBST435



Fig. 4 - IBTH21635



Fig. 5 - IBTC21635

Suspension Clamps

Type IBSC

- EPDM UV Stabilized Rubber Insert
- Galvanized body - With captive bolt slot
- Galvanized steel hardware - Oversize wing nut.
- Suitable for Line Deviation up to 30 degrees
- Conforms to requirements of AS3766.

Cat No.	Fig No.	2 Core mm ²	3 Core mm ²	4 Core mm ²
IBSC425	1			25
IBSC435	1	50	50	35
IBSC450	1			50
IBSC470	1	95		70
IBSC495	1			95



Fig. 1 - IBSC425



Fig. 2 - IBSL150F

Type IBSL

- Cast Aluminium Body
- Conforms to requirements of AS3766
- Stainless Steel Hardware
- Increased Slip Strength
- Optional Weak Link Feature - Sawcut through eye.

Cat No. with Weak Link	Cat No. without Weak Link	Fig No.	Number of Cores	Cable Size mm ²
IBSL50F	IBSL50N	2	4	50
IBSL95F	IBSL95N	2	4	95
IBSL150F	IBSL150N	2	4	150

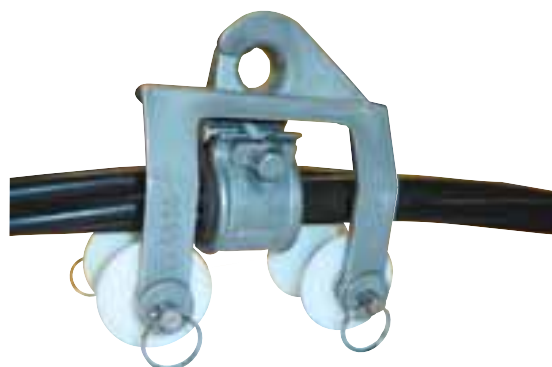


Fig. 3 - IBSRC495

Type IBSRC

- Cast Aluminium Body
- Conforms to requirements of AS3766
- Integrated Stringing Roller Design
- UV Stabilized split elastomer bush
- Controlled release of conductor.

Cat No.	Fig No.	2 Core mm ²	3 Core mm ²	4 Core mm ²
IBSRC250	3	50		
IBSRC450	3	95		50
IBSRC495	3			95
IBSRA		Auxiliary Stringing Roller		



IBSRC with IBSRA installed

Fused Switch Disconnects (Pole Fuse)

Fused Switch Disconnects (FSD), is a single-phase device that is normally installed at the pole. It provides electrical protection to either an aerial service supplying an individual customer or for a low voltage circuit of a pole mounted transformer.

Type - K291

- Accepts 100A Barrel type fuse (58 x 22mm)
- Pig Tail type extraction - Type **FEHBX**
- UV Stabilized Body - Fully waterproof seals
- Torque controlled shear head screws
- Insulation Piercing on all cable sizes and types
- Large Application range - 6-95mm² - Copper or Alum
- Facility to be gang mounted (See fig. 3)
- Self Supported whilst being mounted
- Angled cable entry ports to eliminate moisture ingress.



Fig. 1 - K291

Type - K292

- 160A Size 00 Din Fuse links or 250A Solid link
- Hinged fuse carrier, extraction via hot stick - Type **LOS3**
- UV Stabilized Body - Fully water proof seals
- Torque controlled shear head screws
- Insulation Piercing on all cable sizes and types
- Large Application range - 6-95mm² - Copper or Alum
- Facility to be gang mounted (See fig 3)
- Self Supported whilst being mounted
- Angled cable entry ports to eliminate moisture ingress.

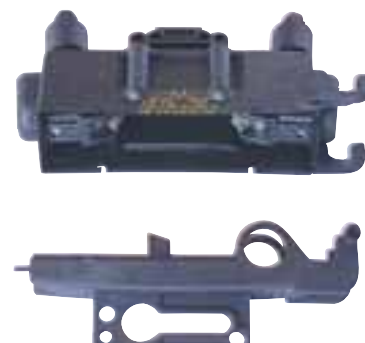


Fig. 2 - K292

Available Cat No.'s and associated hardware

Cat No.	Fig No.	Number of Fittings in Assy	Fuse Rating	Fuse Type	Shear Head A/F mm
K291	1	N/A	100	HRC58x22	13
K292	2	N/A	160 / 250	DIN00	13
K292GANG	3	3	160 / 250	DIN00	13
K292GANG4	3	4	160 / 250	DIN00	13
IBSB1PH	4	Single-Phase Bracket			
IBSB3PH	5	Three Phase Bracket			
IBSB4PH	6	Three Phase plus Neutral Bracket			



Fig. 3 - K292GANG



Fig. 4 - IBSB3PH

Fused Switch Disconnects (Cont'd)

Type - NHP

- UV Stabilized Glass Reinforced body
- Double Circlip retention of fuse
- Comes with integral attachment bracket - Pattern B
- Extraction with Tee Tool - Type - **FEHBX**

Cat No.	Fig No.	Cable Range mm ²	Fuse Rating	Fuse Type
NHP100AD	7	6 - 35	100	HRC58x12
IPSNG	8	Swan Neck Bracket Pattern B		
COMBHOOK	9	Combination Bracket Pattern B		
PIGTAIL	10	Combination Loop Bracket Pattern B		



Fig. 7 - NHP100AD



Fig. 8 - IPSNG

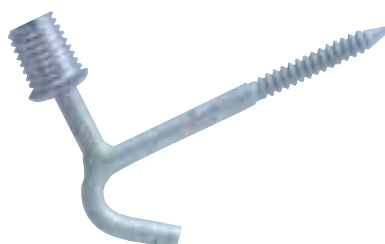


Fig. 9 - COMBHOOK



Fig. 10 - PIGTAIL

Pole Hardware

A variety of brackets, hooks, and weak links are available, as mounting fixtures for LVABC suspension and strain clamps. All brackets are fabricated from high strength steel, and are galvanised to either AS1214 or AS4680 respectively. All brackets meet the requirements as defined in AS3766.

Hook Bolts

- Shaped locating plate to lock onto pole
- Supplied with nut and washer.

Cat No. 16mm Diameter	Cat No. 20mm Diameter	Fig No.	Mounting Length	Thread Length
IBH16250	IBH20250	1	250	150
IBH16300	IBH20300	1	300	150
IBH16325	IBH20325	1	325	150
IBH16350	IBH20350*	1	350	150
IBH16400	IBH20400	1	400	150
IBH16450	IBH20450*	1	450	150

* Long Hook - 200mm available



Fig. 1

Double Suspension Clamp Bracket

- Use when line deviations exceed 30 degrees
- Two suspension clamps fitted to reduce lead in and exit angles
- For IBSL suspensions clamps, use IBYB12A only.

Cat No.	Fig No.	Diameter of Material	Hanging Depth	Hook Centres	Min Failing Load kN
IBYB12	2	16	106	174	12
IBYB12A	2	16	125	300	12
IBYB24	2	20	100	200	24

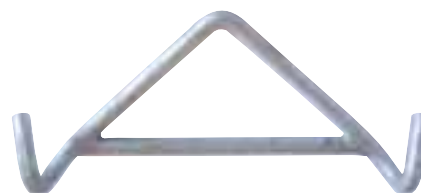


Fig. 2 - IBYB12A

Mechanical Weak Link

- 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.

Cat No.	Fig No.	Diameter of Material	Total Length	Material Type	Min Failing Load kN
IBWL02	3	6	81	S/Steel	12
IBWL04	3	10	100	Gal Steel	12
IBWL08	3	12	100	Gal Steel	24

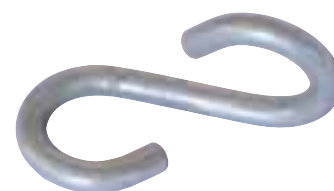


Fig. 3 - IBWL08

Pole Hardware (Cont'd)

Eye Nut

- Screwed onto threaded device to produce Eye attachment.

Cat No.	Fig No.	Thread Size	Thread Length	Material Type	Diameter of eye Material
EN16	4	M16	30	Gal Steel	12
EN20	4	M20	40	Gal Steel	16
EN2020	4	M20	40	Gal Steel	20
EN24	4	M24	45	Gal Steel	20



Fig. 4 - EN16

Hook Nut

- Screwed onto threaded device to produce Hook attachment.

Cat No.	Fig No.	Thread Size	Diameter of eye Material	Material Type	Failing Load kN
IBHN12	5	M16	16	Gal Steel	12
IBHN24	5	M20	20	Gal Steel	24

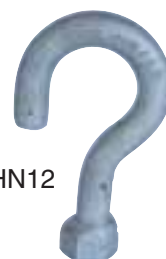


Fig. 5 - IBHN12

Hook Bracket

- Designed for Façade mounted strain clamps
- Can be strapped to concrete poles with Stainless Steel strap
- Used as temporary hook, for attachment of stringing rollers.

Cat No.	Fig No.	Mounting Centres	Diameter of eye Material	Material Type	Failing Load kN
IBHB12	6	150	16	Gal Steel	12
IBHB24	6	150	20	Gal Steel	24



Fig. 6 - IBHB12

Service Support Bracket - Cat No. IBSSB

- Used as a service strain clamp attachment point
- Used in conjunction with hook bolts or hook brackets
- Galvanized Steel

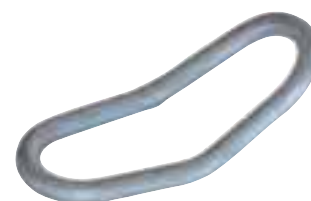


Fig. 7 - IBSSB

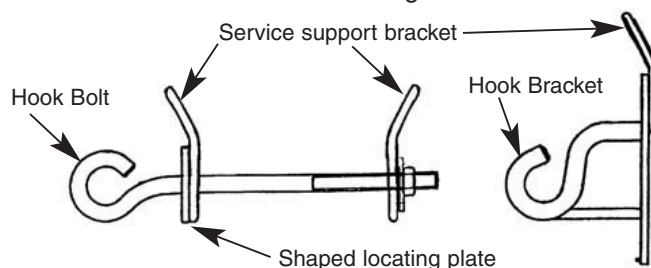


Fig. 7a - Cat IBSSB application

Facade Mounting Brackets

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

Cat No.	Fig No.	Drill Size mm	Offset from Structure	Installs Into	Cable Capacity mm
BRPF1	8	12	10	Masonry	2 x ø25 - 56
BRPF1T	8	None	10	Timber	2 x ø25 - 56
BRPF6	9	12	60	Masonry	2 x ø25 - 56

Fig. 8 - BRPF1

Fig. 9 - BRPF6



Assembly and Stringing Tools

Cable Stripping Tools

The IBLST Stripping tool, is designed to remove the tough cross linked polyethylene insulation from low voltage aerial cables. The length of insulation removed is able to be controlled to suit stripping for lugs and sleeves.

Cat No.	Fig No.	Cable Size mm ²
IBLST50	1	50
IBLST95	1	95
IBLST150	1	150
IBLSTB		Spare Blade

Fig. 1 - IBLST150 Tool



Fig. 3 - 5930



Running Sheaves - Cat No. 5930

- Attaches to standard hardware, using Socket Tongue supplied
- Accommodates cables up to 4 x 150mm²
- Provides clear working space for linesmen
- Suitable for stringing angles up to 60 degrees - SWL - 10.8kN
- No lifting of cables required.

Ratchet Straps - Cat No. RATSTRAP

- Used to temporarily attach brackets for stringing
- 1.2 metre long webbed strap - 5mm thick hook
- Safe Working Load - 21.6kN.

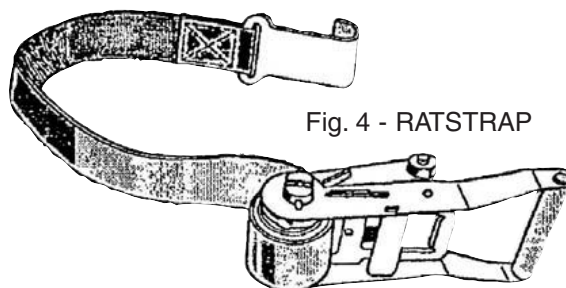


Fig. 4 - RATSTRAP

Core Separating Tools - Cat No. - IBSW95

- Suitable for LVABC up to 150mm²
- Supplied in pair - on metre of rope
- Impact resistant material.

Fig. 5 - IBSW95



Core Separating Tools - Cat No. - IBSW2

- Suitable for LVABC up to 150mm²
- Enables separation of cores close to adjacent equipment
- Durable separation wedges, able to used under tension loadings.

Fig. 6 - IBSW2



Fig. 7 - IBLS6

Ratchet Spanners - Cat No. IBLS-6

- Used on all overhead Shear bolt connectors
- 13mm and 17mm 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.



Low Voltage ABC Fittings

Assembly and Stringing Tools (Cont'd)

Swivels

- For use with pulling socks, to eliminate twist.

Cat No.	Length mm	Diameter mm	Maximum Cable Diameter mm	Safe Working Load kN
SWIVEL1	122	28.5	10.0	1000
SWIVEL2	178	50.0	18.5	2000

SWIVEL2

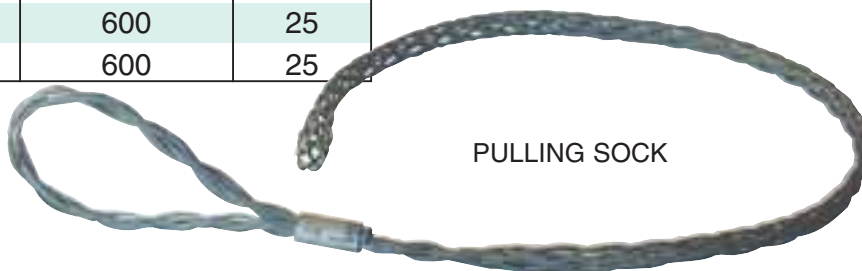


Pulling Socks

- Nylon Stranding, Alloy Ferrule, Soft Double Eye.

Cat No.	Cable Size mm ²	No. of Plys	Net Grip Length mm	Ultimate Tensile kN
LV425	4 x 25	2	550	15
LV435	4 x 35	2	550	15
LV495	4 x 95	3	600	25
LV4150	4 x 150	3	600	25

PULLING SOCK



Cable Cutter - Cat No. #109/1

- Ratchet operation Forged Construction.
- For cables up to 300mm².

#109/1



Come-alongs - Tensioning Devices

- Rugged Steel Plated Construction
- Cast Aluminium Clamping jaws

Cat No.	Cable Application Range mm ²	Holding Strength kN	Weight kg
EM35	2 x 25 - 35 & 4 x 16 - 50	5.9	3.2
EM5095	4 x 50 - 95	7.8	5.8
EM95150	4 x 95 - 150	9.0	6.5

EM5095

