



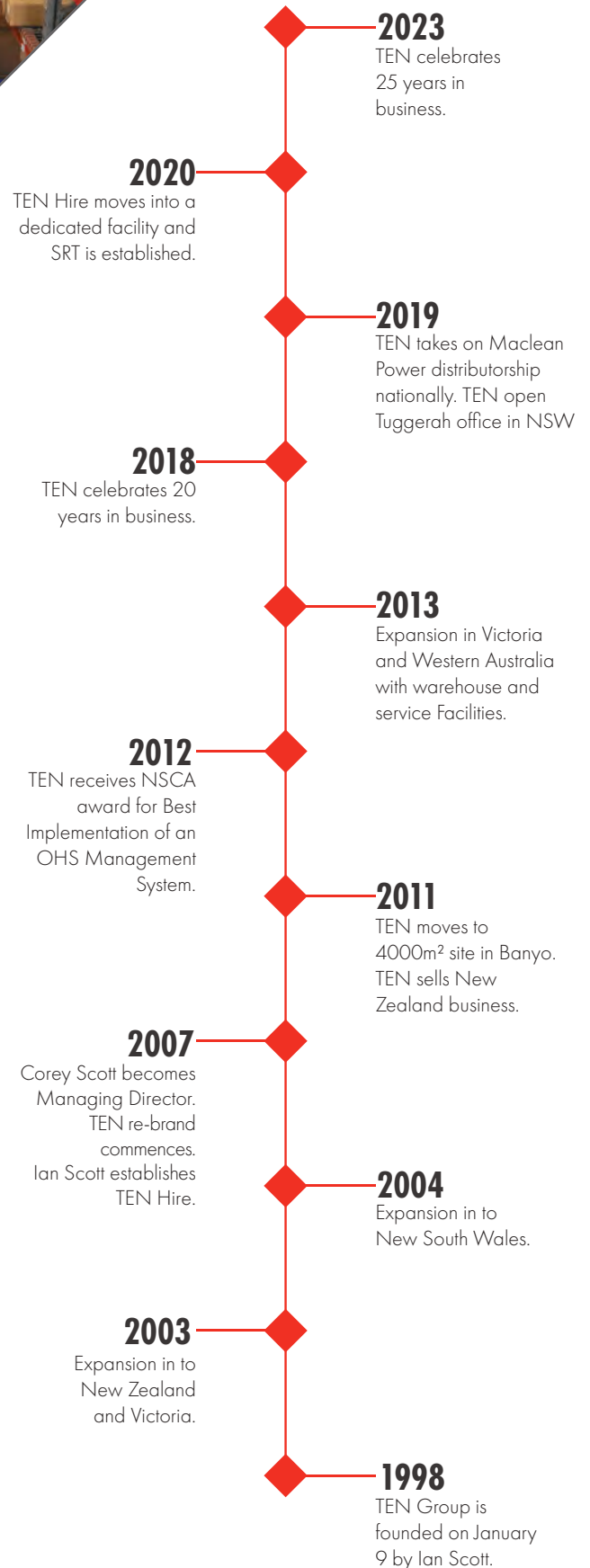


The Energy Network (TEN) is a specialised supplier of tooling, equipment and line materials for the construction and maintenance of overhead and underground electricity networks. Our range covers applications in Power utility (Transmission, Distribution and Generation), Mining, Oil and Gas, Rail, Industrial and Transport infrastructure projects.

TEN is ISO9001, ISO14001 and ISO45001 certified and the safety of our staff and our customers is at the core of what we do. It's the depth and diversity of our product and service capabilities, matched with our technical expertise in providing fit for purpose tooling and innovative solutions that deliver positive experiences for our customers.

It's not just our Australia wide experience that our customers benefit from, but our network of international suppliers that are meeting the needs of a global industry experiencing many of the same changes we see here in Australia. TEN exclusively imports and distributes for many of the leading global utility brands, many of which are proudly entrenched and supported by Australia's Lines community. In July 2019, TEN took on the exclusive distribution of Maclean Power Products in the Australian and Pacific Island region and we are pleased to bring TEN's customer centric approach to the Line Materials market. In recent years we have increased our product focus to extending the life of Australian Transmission and Distribution assets through our Asset Life Extension solutions and we look forward to supporting our industry's changing needs for many years to come.

We are pleased to provide this edition of our product catalogue for 2023-24 and should you have any questions, needs or challenges, please get in touch with your local TEN sales representative or TEN's Head Office.





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## OVERHEAD STRINGING EQUIPMENT



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# NAGAKI



**SD-L-GRIPL/W**



**AL-2TON-GRIP-L\***  
Locking Option

## Grips, Come-a-long - Wire / Conductor

Used to grip Conductors (AL, Cu, ACSR), Wire Rope, Steel, ABC, Amokabel and CCT during tensioning.

### Grips - Nagaki (NGK)

- Manufactured from high tensile alloy steel, hot forged, heat-treated, precision machined and zinc-plated
- Safety latch on all models
- "L" suffix denotes Locking Grip
- Add "TB" suffix for Bent Eye option



**AL-10TON-GRIP**



**ABC-GRIP**

### Grip Selection Chart - Nagaki (NGK)

Part No.	Min - Max Dia. (mm)	WLL (kN)	Jaw Length (mm)	Jaw Type	Wt (kg)	Safety Latch	Suitable for Wire/Cable	Eye Width (mm)	Notes
MINI-GRIP	1 - 10	5	NA	Serrated	0.3	No	Steel Rod, Barbed & Catenary Wire	16	Curved Jaw
SD-L-GRIPL/W	2.6 - 15	10	34	Serrated	0.6	Yes	Steel Rod/Wire, Bare Cu & Catenary Wire	26	Large Eye
MESSEN-L-GRIP-L	4 - 12	10	50	Serrated	0.7	Yes	Bare Cu & Catenary Wire	26	Double Lock Nut
1TON-L-GRIP	4 - 22	10	60	Serrated	1.4	Yes	Bare Cu, Covered Conductor & Catenary Wire	32	Large Eye
2TON-L-GRIP	4 - 22	20	60	Serrated	1.4	Yes		32	Large Eye
MIDDLE-L-GRIP	5 - 25	20	110	Serrated	1.8	Yes		32	Large Eye
CCT-GRIP	5 - 25	20	110	Serrated	1.8	Yes	CCT Up to 180mm <sup>2</sup> (11kV) Up to 80mm <sup>2</sup> (22kV)	32	Large Eye
2TON-W-GRIP	5 - 16	20	100	Serrated	1.8	Yes	Bare Cu, Wire Rope, Catenary Wire & Rail Contact Wire	32	Large Eye
3TON-GRIP	8 - 22	30	120	Serrated	3.1	Yes		34	-
4TON-GRIP	13 - 28	40	150	Serrated	5.0	Yes		50	-
6TON-GRIP	13 - 28	60	150	Serrated	5.2	Yes		25	-
10TON-GRIP	18 - 32	100	180	Serrated	10.0	Yes	Wire rope, Catenary Wire	60	-
AL-L-GRIP	5 - 22	10	60	Smooth	1.1	Yes	ACSR & Bare AL	32	Fine smooth jaw, less chance of conductor damage
AL-2TON-GRIP-L	5 - 20	20	100	Smooth	1.7	Yes		32	
AL-MIDDLE-GRIP*	5 - 25	20	110	Smooth	1.8	Yes		32	
AL-MIDDLE-GRIP-L	5 - 25	20	110	Smooth	2.9	Yes		32	
AL-LARGE-GRIP*	16 - 32	20	110	Smooth	2.0	Yes		32	
AL-3TON-GRIP	8 - 22	30	120	Smooth	3.0	Yes		34	
AL-4TON-GRIP	20 - 35	40	140	Smooth	3.7	Yes		34	
HOT-M-GRIP	5 - 25	20	110	Smooth	2.0	Yes		ACSR & Bare AL	
HOT-L-GRIP	16 - 32	20	110	Smooth	2.0	Yes	32		
AL-10TON-GRIP	32-46	100	300	Smooth	14	Yes	63		Smooth jaw
TROLLEY-GRIP1L-S	5 - 16	20	100	Serrated	1.5	Yes	Rail Contact Wire, Bare Cu, Catenary Wire, Guy & Wire Rope	32	Large Eye
TROLLEY-GRIP-2-L	8 - 20	20	150	Serrated	2.8	Yes		25	Large Eye
TROLLEY-GRIP-4-L	13 - 28	40	150	Serrated	5.2	Yes		32	Large Eye
ABC-GRIP-S	2x16 & 4x35mm <sup>2</sup>	6.0	130	Serrated	1.8	Yes	ABC - 2 x 16mm <sup>2</sup> to 4 x 35mm <sup>2</sup>	32	Large Eye
ABC-GRIP-M	4x35 & 4x95mm <sup>2</sup>	8.5	190	Serrated	3.3	Yes	ABC - 4 x 35mm <sup>2</sup> to 4 x 95mm <sup>2</sup>	35	Large Eye
ABC-GRIP-L	4x95 & 4x150mm <sup>2</sup>	20	190	Serrated	3.3	Yes	ABC - 4 x 95mm <sup>2</sup> to 4 x 150mm <sup>2</sup>	35	Large Eye



### KLEIN TOOLS



- Klein wire grips are suitable for pulling various conductors and cables
- All Klein Grips are manufactured from drop-forged steel that is machined and heat treated for excellent durability

### Grips - Klein

#### Part No. Various

Part No.	Min - Max Ø (mm)	WLL (kg)	Jaw Type	Jaw Length (mm)	Suitable for	Wt (kg)
S1613-40H	3 - 9.4	2041		106	Aircraft Cable, EHS, Messenger and Guy Strand. With hot latch and spring	1.4
1604-20L	3.2 - 12.7	2268		-	Messenger and Guy Strand (Knurled Jaw may damage cable)	1.0
1685-20	4 - 22	2041		64	Bare AL, Cu, ACSR	1.3
1625-20	7.1 - 19	3636		-	Wire Rope - where damage is not an issue	1.8

### RIGANTI

Made in Switzerland by Powercom



Refer Transmission Section for further information on Grips and Liners

IR-3112 with 15.8mm AL to AL Liners (IR311215.8AL) is suitable for CCSX62 Amokabel

### Grips and Liners - Riganti

#### Part No. Various

Riganti's self-gripping comealongs are available for aluminium, ACSR, steel earth-wire, anti-twisting rope, copper and OPGW conductors.

- High tensile alloy steel, hot forged, heat-treated, and zinc-plated
- Complete range of interchangeable liners
- Liners are available in aluminium and bronze for copper conductors, steel anti-twisting rope and steel earth-wire
- OPGW lower liner is made of Adiprene, the upper liner is made of aluminium.
- Special clamps with exact diameters available on request with or without liners

Part No.	Working Load Limit (kN)	Min Breaking Load (kN)	Liners	Al, ACSR & Cu (mm)		wSteel, Earth-wire (mm)		Anti-twist Steel Rope (mm)		Wt (kg)
				Min	Max	Min	Max	Min	Max	
IR-3109	19.6	49	✗	2.5	15	2.5	15	2.5	15	1.5
IR-3111 *	21.2	64	✓	7	16	7	13	7	13	2.5
IR-3108 *	39.5	110	✓	Lifting suspension conductors 7 - 38mm						5.5
IR-3106	50	125	✗	7.5	18	7.5	18	7.5	13	7
IR-3107 *	49	180	✓	6	23	6	16	6	16	7
IR-3112 *	49	180	✓	OPGW 6 - 23mm						7
IR-3105-S *	88	275	✓	8	35.2	8	22	8	24	13.5
IR-3104-S *	117	310	✓	10	45	10	34	8	28	17

\* Exact size required for manufacture of liners

## IMPORTANT

The "SAFETY" of your personnel and the longevity of your equipment depends on the Correct use, Inspection, Cleaning and Maintenance.



For more information on the care and maintenance of your Grips, CLICK or SCAN the QR-Code

#### Correct use

- Operators should be trained in the relevant job at hand
- Read and understand the Instruction/ Operators Manual
- Ensure you have selected the correct grip for the conductor type, size and tension, as well as the ancillary equipment. (e.g. max tension of hoist).

#### Manufacturers Grips Supported by TEN



Contact TEN for cleaning equipment



N-1500P-EX

**Favoured by line crews for its compact size and weight**

## Hoists

### Web Strap Ratchet Hoists - Nagaki NGK

#### Part No. Various

Nagaki web strap hoists feature insulated super-strength 32mm wide web straps, insulated Fibreglass handles and a special handle neck that will bend if the unit is overloaded to prevent damage to the puller and injury to the operator.

- Convertible series with 3 hooks
- Lightweight
- Insulated handles rotate 360°
- Controlled smoother release of load
- Made in Japan from Japanese components



#### NEW Patented Handle

Constructed solid one piece section, and provides exceptional durability and performance

- Interchangeable with previous Handles
- Available for Web-strap N-1000, N-1500 models



N-1500-P Shown with NEW patented Handle

Part No.	WLL (T)	Min Pull (mm)	Max Pull (mm)	Handle Length (mm)	Wt (kg)	Spare Strap Part No.
N-1000P	1.0	440	1940	400	3.3	PNGK-N-1000P-20
N-1500P	1.5	470	1970	460	4.6	PNGK-N-1500P-20
N-1500P-EX	0.75 Single 1.5 Double	500	2000 Double 3500 Single	460	4.5	PNGK-N-1500PEX22
N-1500P-EX-L	Pulling: 0.75 Single 1.5 Double *Lifting: 200kg Single 400kg Double	500	2000 Double 3500 Single	460	5.0	PNGK-N-1500PEX22



P-1500-EX

### Wire Rope Hoists - Nagaki NGK

#### Part No. Various

- Steel handle rotates 360°
- Made in Japan from Japanese components
- Convertible and Standard Configuration available

Part No.	WLL (T)	Min Pull (mm)	Max Pull (mm)	Handle Length (mm)	Wt (kg)
P-1500-C (Convertible)	0.75 Single 1.5 Double	460	1870 Double 3280 Single	430	4.3
P-1500-EX	0.75 Single 1.5 Double	500	3500 Double 6500 Single	430	5.0

### LUG-ALL<sup>®</sup> THE ORIGINAL & THE BEST



### Web Strap Hoists - Lug-All

#### Part No. Various

- Positive Load Holding in all Environments – Interlocking pawl mechanism, no load brakes to slip or foul
- Ease of Operation – Self lubricating bearings throughout housing and on pulley assures smooth operation
- Stress Link – Signals operator by breaking replaceable link before overloading hoist
- Double Flanged Drum – Prevents web strap from coming in contact with ratchet teeth
- All Lug-All's meet the current (2014) ANSI/ASME B30.21-2014 standard for "manually operated lever hoists"



See chart below for replaceable Stress Link



35-A-1300-ANZ  
Medium Frame  
Lightweight



### Lug-All Standard & Lightweight Models

Part No.	Frame Size	Feature	Single Line		Double Line		Handle Length (mm)	Net Wt (kg)	Stress Link
			Capacity (kg)	Max (m)	Capacity (kg)	Max (m)			
2-A-1300-ANZ	Small	Standard	450	2.9	900	1.3	420	4.6	PLA-614
25-A-1300-ANZ	Small	Lightweight	680	2.1	1360	1.1	330	4.5	PLA-636
3-A-1300-ANZ	Medium	Standard	680	3.4	1360	1.7	510	6.3	PLA-572
35-A-1300-ANZ	Medium	Lightweight	680	4.7	1360	2.2	760	5.8	PLA-572
40-A-ANZ	Medium	Lightweight	900	2.8	1814	1.2	910	6.0	PLA-572

CLICK or SCAN the QR-Code to check out Lug-All's Company Profile



### Cable Hoists - Lug-All

LUG-ALL® Cable Hoists have been the most popular product for the last 6 decades as the leading tool for industrial uses.

Ideal for hundreds of tasks, including lifting, lowering, pulling, tensioning, stretching and bending, Construction & Renovation, Road & Bridge Construction & Repair, Structural Steel Erection, Welding Alignment, Pump & Motor Installation & Overhaul, Rigging, HVAC, Conveyor Repairs, Fence Tensioning, Tree Service, and Landscaping.

Super flexible, 133-strand aircraft cable and fast-connecting, 360° swiveling hooks with safety latches for quick, positive, loading and unloading.

- Lug-All wire rope hoists for lifting or pulling applications
- Reversible handle designed to bend on overload

- Use the entire cable length! The exclusive LUG-ALL swagged, ball-shank anchor locks the cables end into the drum
- Self lubricating bearings
- Quick release will not function when the cable is under load
- Non-slip interlocking pawl system
- Open Design – Easily inspected
- Aluminium alloy frame and drop forged steel hooks



2250-20-ANZ  
Small Frame



3000-30-ANZ  
Medium Frame



4000-20-ANZ  
Medium Frame



6000-15-ANZ  
Large Frame

Part No.	Frame Size	Single Line		Double line		Net Wt (kg)
		Capacity (kg)	Lift /Pull Distance (m)	Capacity (kg)	Lift /Pull Distance (m)	
<b>Standard Model</b>						
2250-20-ANZ	Small	500	6.0	1000	3.0	4.2
3000-30-ANZ	Medium	680	9.0	1360	4.5	6.3
4000-20-ANZ	Medium	900	6.0	1800	3.0	7.0
6000-15-ANZ	Large	1360	4.5	2720	2.2	15.4



# NAGAKI



RICKY-2

### Chain Hoists 0.75 and 1.5T - Nagaki (NGK)

#### Part No. RICKY-2 & RICKY-3

- Lightweight aluminium housing with 5mm OD alloy chain link & forged hooks
- 1.5m pull
- 360° rotating handle of 230mm length
- Safety hook attachment
- All models manufactured under ISO9001 and ISO14001 standards

Suitable for Pulling/Tensioning

Part No.	Style	WLL (T)	Chain length (m)	Min Pull (mm)	Max Pull (mm)	Handle Length (mm)	Wt (kg)
RICKY-2	Safety Hook	0.75	1.5	300	1800	230	4.0
RICKY-3	Safety Hook	1.5		350	1850	230	5.0

### Chain Hoists 3, 4 and 6T - Nagaki (NGK)

#### Part No. Various

- Lightweight aluminium housing with 5mm OD alloy chain link & forged hooks
- 360° rotating handle of 430mm length
- Safety hook attachment
- Special length chains available on request

Suitable for Pulling/Tensioning



MODEL3000

Part No.	Style	WLL (T)	Chain length (m)	Min Pull (mm)	Max Pull (mm)	Handle Length (mm)	Wt (kg)
MODEL2000C-1.5	Safety Hook	2	1.5	480	2000	430	6.6
MODEL3000-1.5	Safety Hook	3		480	2000	430	9.0
MODEL4000H-1.5	Safety Hook	4		580	2180	430	12
MODEL6000-1.5	Clevis	6		650	2250	430	19

Other chain lengths available - Contact TEN for further information

Model 4000 lightweight & ideal for Transmission tensioning

### Cable Hoist 500 to 3200kg - Yaletrac ST

#### Part No. Various

The portable Yaletrac ST cable puller is a versatile tool for pulling, lifting, lowering, tensioning and securing loads over long distances

- Rope diameters from 6 to 16mm
- Various wire rope lengths available
- Contact TEN for further information



500kg Unit shown

USA MANUFACTURED QUALITY

### VITAL®



### Chain Hoists - Vital

- Manufactured in Japan using high quality steel
- All Vital models are manufactured to comply with AS1418.2
- Unique design of bottom hook prevents slipping and ensures safe operation
- Easy two-step operation to prevent accidental free-wheeling
- Hardened alloy steel load chain with embossed identification, marked to relevant standards
- Standard lift height 1.5, 3.0 & 6.0m
- Load Chain Exceeds Australian Standards with 5:1 Safety Factor

Part No.	Rated Capacity (T)	Pull to Lift Load (kg)	Dimensions (mm)					Chain Falls	Wt (kg)
			A	B	C	D	G		
VLB107L	0.8	15	148	128	295	260	27	1	6.9
VLB115L	1.6	18	163	148	355	370	34	1	9.7
VLB130L	3.2	38	191	181	405	370	43	1	16.3
VLB160L	6.3	39	191	244	550	370	47	2	26.7

### KITO



### Chain Hoists - KITO

- Unique patented 'Free Wheeling Hub' mechanism.
- Smaller, lighter, high grade, alloy steel frame construction.
- All KITO models are manufactured to comply with AS1418.2
- Double brake pads with four braking surfaces.
- Double Pawl & Double Spring Assemblies
- KITO manufactured Nickel plated Grade 100 load chain
- Needle and Ball roller bearings allow maximum mechanical efficiency with minimum effort.
- Also available with overload limiter which prevents hoist overload and protects the operator

**Suitable for Pulling & Lifting Applications**

Part No.	WLL (T)	Chain length (m)	Max Pull (mm)	Handle (mm)	Wt (kg)
44202	0.8	1.5	1800	245	5.7
44204	1.6		1850	265	8.0
44206	3.2		2000	415	15.0
44207	6.3			415	26
45890	0.8	3.0	2180	245	6.8
45891	1.6		2250	264	9.7
45892	3.2		2250	415	18.5
45893	6.3			415	26

**9T Capacities available in 1.5m & 3.0m Chain Lengths  
Contact TEN for further information**

### DILLON QUICK CHECK



Quick Check "T" shown testing tower guy with phone APP

### Dynamometers

#### Tension Meter - Quick-Check "T" - Dillon

The Dillon Quick Check-T Tension Meter quickly measures tension in cable tower guy wires, overhead lines and road barrier cables. It reduces time on the job site by not having to change sheaves.

- Custom mobile app
- Automatic report generation
- Calibration check rod
- Supplied with HD Case



Part No.	AWT05-100370	QC-T
No. of Calibrations	16 Tower guy + Test Rod	1 x Test Rod
Calibrations (") Up to 20	(1x7) 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 (1x19) 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1	1 only, for test rod. Specify wire sizes
Capacities (kN/kg)	45 /4500 in Kilogram force & Newtons Units	
Wire sizes mm (")	4.75 to 25.4 (3/16 to 1)	
Weight (kg)	5	

# OVERHEAD STRINGING EQUIPMENT

## CONTENTS



# NAGAKI



AS-30 Model



Leather Case (Included)

## Mechanical Dynamometers - Nagaki (NGK)

NGK Dynamometers are lightweight, compact and plated to resist corrosion. All models feature a large face dial for easy reading of measurements.

- Made in Japan from Japanese components
- Precise measurement of tension and loads
- Kilogram/force (kN) dial display
- Accuracy  $\pm 3\%$
- Supplied with In-Service Date sticker



Part No.	Capacity (kN/T)	Graduation (Gauge Increments) (N)	Attachments	Dimensions (mm)			Wt (kg)
				A	B	C	
AS-3	3/0.3	50	Eye-Clevis	110	65	16	0.7
AS-10L	10/1	200	Eye-Eye**	135	65	28	1.2
AS-20L	20/2	500	Eye-Eye**	135	65	28	1.6
AS-30	30/3	500	Eye-Eye	150	80	28	2.0
AS-50	50/5	1000	Eye-Eye	260	95	28	3.0
AS-100	100/10	2000	Eye-Eye	360	100	38	7.2

\*\*1 & 2 Tonne versions also available with Eye-Clevis attachments. Use Part No's AS-10 & AS-20

## Mechanical Dynamometers - Dillon

It is used for such diverse jobs as suspended weighing, mounting cables for bridges, adjusting tension on guy wires, tensioning conductor.

- Accuracy  $\pm 0.5\%$  of full range
- Max hold feature
- Accurate readings from varying sight lines with fog and scratch resistant dial
- All units include calibration certificate, manual & In-Service Date sticker
- Option of 125mm or 250mm dial size

# DILLON



Part No.	Capacity (T)	Kg Division	Ultimate Safety Factor
125mm Dial			
30006-0134	0.5	5	5:1
30006-0159	1.0	10	5:1
30006-0126	2.0	20	5:1
30006-0167	4.0	25	5:1

# BLUEMAX USA

## Digital Bluetooth Dynamometers - BlueMax

BluemaxUSA dynamometers, the smallest, lightest & most reliable dynamometers. High viewable accuracy - Reliable wireless communication. View on your mobile device. Long life wireless rechargeable battery offering up to 20,000 hrs operation.

- Material: Titanium Ti6Al4V
- Battery: Lithium Polymer
- Accuracy:  $\pm 1\%$  at full scale
- Environmental Rating: IP67
- Communications: Bluetooth LE - BLE broadcasting or direct GAT connection up to 100m
- Supplied with hard case

Part No.	Capacity (t)	Range (kg)	Dimensions (mm)	Weight (g)
2000SL	1	in increments of 0.5kg from 25kg	97 x 52 x 17	160
4400SL	2		97 x 52 x 17	160
11000SL	5		120 x 66 x 19	210
22000SL	10		140 x 73 x 28	360



2T unit size comparison to mobile phone



### DILLON

### Digital Dynamometers - EDJunior - Dillon

#### Part No. EDJ Series

- Easy to read wide angle 26mm Back-lit LCD with max hold feature
- Soft key interface with programmable functions
- Manufactured from aircraft grade aluminium alloy
- 7:1 safety factor for all capacities

Part No.	Capacity (T) (0.2% Accuracy)	Increments (kgf)	Dimensions (LxWxDmm)	Wt (kg) with Shackles
EDJR-1T	1	1	312 x 127 x 52	1.8
EDJR-2T	2	2	269 x 127 x 75	3.9
EDJR-5T	5	5	289 x 135 x 102	6.5

Other sizes available. Contact TEN for further information

**EDX & EDJ  
IP55**

### Digital Dynamometers - EDXtreme Red - Dillon

#### Part No. EDX Series

- High-resolution dot-matrix back-lit LCD display offers large 26mm numbers
- All units include calibration certificate, manual and batteries
- Radio or Hardwire Communication (RS-232 or RS-485)
- Include Remote Configuration, Data Acquisition & Single Point Monitoring of Multiple Units.
- Units available up to 250Ton

Part No.	Capacity (T)	Increments (kgf)	Dimensions (mm)	Wt (kg) with Shackles
EDX-1T*	1	1	269 x 127	3.9
EDX-2T*	2	2	269 x 127	3.9
EDX-5T*	5	5	289 x 135	6.0
EDX-10T*	10	10	291 x 133	17.0
<b>Communicator II - (Includes case &amp; batteries)</b>			241 x 127	2.0

\* EDX-Models are supplied Radio Ready and include Rated Shackles

### Digital Dynamometers - EDXtreme Blue - Dillon

#### Part No. EDX Blue Series

The EDXtreme Blue is the latest Dillon dynamometer, allowing for wireless use through a Bluetooth® connection with an Android or iOS device. Utilisation of the Dillon EDX free mobile app allows for remote monitoring, data logging and exporting, and remote configuration of the EDXtreme Blue dynamometer.

- 7:1 factor of safety
- Superior strength and corrosion resistance
- Retained hardware
- Environmental Rating: IP68
- Accuracy: 0.1% of capacity up to EDX-10T
- Battery Life: Stand up to 400+ hours

Part No.	Capacity (T)	Increments (kgf)	Dimensions (mm)	Wt (kg) with Shackles
EDXB-1T*	1	1	406 x 178	3.9
EDXB-2T*	2	2	406 x 178	3.9
EDXB-5T*	5	5	406 x 178	6.0
EDXB-10T*	10	10	553 x 279	17.0

\* EDX Blue - Models are supplied with Rated Shackles



EDJ & EDX Supplied with ABS plastic carry case



Communicator II



**EDX-Blue  
IP68**







## Non-conductive Aramid Fibre



Recommended  
for stringing ABC

## Socks and Grips, Cable Overhead

### Non-Metallic Aramid Socks - Slingco

#### Part No. Various

Non-metallic cable socks are made of plastic coated Aramid fibres that are light weight, yet much stronger than steel wires. Aramid are a class of heat-resistant and strong synthetic fibres used in aerospace and military applications. These grips are traditionally used in overhead ABC applications or when pulling fibre optic cable.

- Non conductive
- Much lighter yet stronger than steel grips
- Easier to apply and remove
- No frayed wires
- UV Resistant
- Strong enough to last in salt water

Part No.	Cable Range (mm)	UTS (kN)	Mesh Length (mm)	OAL (mm)
ZCS1040	10-20	11.16	552	725
ZCS1022	20-30	15.89	600	696
ZCS1023	30-40	43.84	642	840
ZCS1024	40-50	52.86	523	775
ZCS1179	50-65	70.71	636	817
ZCS1180	65-76	70.71	908	1086
ZCS1181	76-101	70.71	1029	1239

### Non-Conductive Nylon Socks - NCG

#### Part No. Various

- Double or Triple ply
- Soft Eye
- LV models for LV ABC - Single Eye with Alloy Ferrule
- HV models for HV ABC - Double Eye with Alloy Ferrule



Scan or Click to View or  
Download Grip Inspection  
Selection & Application

Part No.	Suits	Grip Length (mm)	UTS (kN)	Working Load Limit (kN)
LV225	2x25mm <sup>2</sup> LV	600	15	5
LV235	2x35mm <sup>2</sup> LV	600	15	5
LV250	2x50mm <sup>2</sup> LV	600	15	5
LV295	2x95mm <sup>2</sup> LV	600	15	5
LV335	3x35mm <sup>2</sup> LV	600	15	5
LV395	3x95mm <sup>2</sup> LV	600	25	8.3
LV425	4x25mm <sup>2</sup> LV	600	15	5
LV435	4x35mm <sup>2</sup> LV	600	15	5
LV450	4x50mm <sup>2</sup> LV	600	15	5
LV470	4x70mm <sup>2</sup> LV	600	17	5.6
LV495	4x95mm <sup>2</sup> LV	800	25	8.3
LV4150	4x150mm <sup>2</sup> LV	800	25	8.3
HV335	3x35mm <sup>2</sup> HV	800	25	8.3
HV350	3x50mm <sup>2</sup> HV	800	25	8.3
HV370	3x70mm <sup>2</sup> HV	800	25	8.3
HV395	3x95mm <sup>2</sup> HV	900	31	10.3
HV3120	3x120mm <sup>2</sup> HV	900	31	10.3
HV3150	3x150mm <sup>2</sup> HV	900	31	10.3
HV3185	3x185mm <sup>2</sup> HV	900	31	10.3



### Cable Pulling Grips - Slingco

#### Part No. ZCS-Range

For the installation of overhead conductors and cable in conduits, ducts and trenches. The MU Type grip's triple-weave construction is ideal for heavy loads.

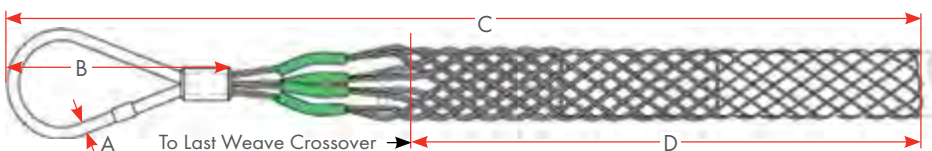
- Hand-Woven with quality Galvanised Steel
- Perfect for stringing overhead transmission and distribution lines and heavy load pulls of any kind and ideal for new or old conductors
- The flexible eye connects with line pulling swivels for trouble free pulling applications

#### Key Features

- Heavy duty multi-weave construction
- High strength grip used for heavy duty pulling
- Suitable for bare steel, AL, CU & covered conductor
- Colour coded for easy identification

**IDEAL FOR STEEL & AMOKABEL CONDUCTOR**

\*Type tested on 3/4/2.5 ACSR and 3/2.75 SC/AC & SC/GZ as per AS1154.3-2009 Section 2.3.3 (Mechanical Strength Type Tests)



Dimensions: The figures shown are indicative only. Fully dimensioned data-sheets are available upon request. Nominal figures/actuals are as per data-sheet with tolerances of +/-5%.

Part No. Colour Code	Conductor Range (mm)	Amokabel Conductor	A (mm)	B (mm)	C (mm)	D (mm)	Breaking Load (T)
ZCS1710	6-12	CCSX25	7	102	965	720	3.17
ZCS1711	12-19	CCSX62	8	127	1263	978	4.76
ZCS1712	19-25	CCSX159	9	156	1537	1162	6.39
ZCS1713	25-32	-	13	165	1909	1470	11.34
ZCS1714	32-38	-	13	165	1725	1291	14.06

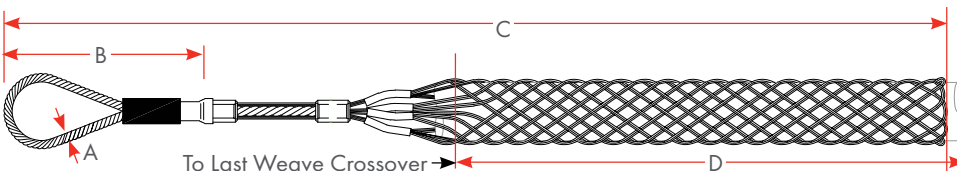
Important Note: Ensure fitting instructions are followed and always apply the recommended Steel Band for maximum grip of the conductor  
SCAN or CLICK the QR Code above for fitting instruction. Refer Hand Tool Section for Banding Tools & Accessories.

### High Strength Cable Grips - Slingco

#### Part No. ZCS-Range

The strongest grip we produce; can be used for metal wire and synthetic rope pulls. Perfect for overhead transmission and distribution line pulling or any applications with heavy load ratings.

- Double-weave construction
- Colour coded for ease of identification
- Protective shoulders to prevent abrasion
- Suitable for bare or insulated conductors
- Flexible eye compatible with line swivels



Part No. Colour Code	Rope Diameter (mm)	Conductor Range (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Breaking Load (T)
ZCS1799	6-16	5-10	6	150	975	665	3180
ZCS1800	13-23	9.7-16	9	150	1326	966	6360
ZCS1801	19-28	16-22	11	170	1760	1355	9072
ZCS1802	25-38	22-29	13	175	2041	1558	13955
ZCS1803	32-43	29-35	16	230	2660	2072	21360
ZCS1804	38-53	35-50	18	320	3017	2265	30455

### TESMEC

## Heavy Duty Large Eye Cable Socks - Tesmec

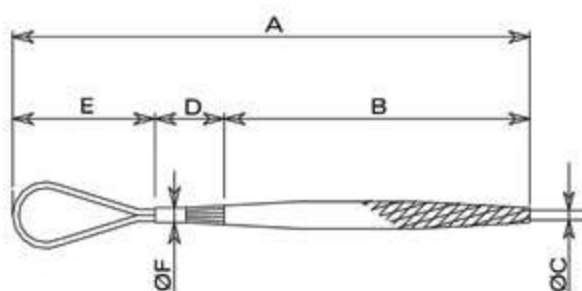


### Part No. Various

- Ideal for underground and overhead work
- Suitable for Transmission & Distribution AL, CU & ST
- Colour coded plastic bands at ferrule to identify range and capacity
- Steel wires with protective finish and alloy ferrule
- Long mesh length provides additional gripping surface area

### Part No. GCT001 to GCT030

The head-type temporary mesh sock joints are specifically designed to temporarily connect the aluminium, steel or copper conductor to the pulling rope. They consist of variable pitch steel wires, which effectively distribute the gripping effect on the conductor

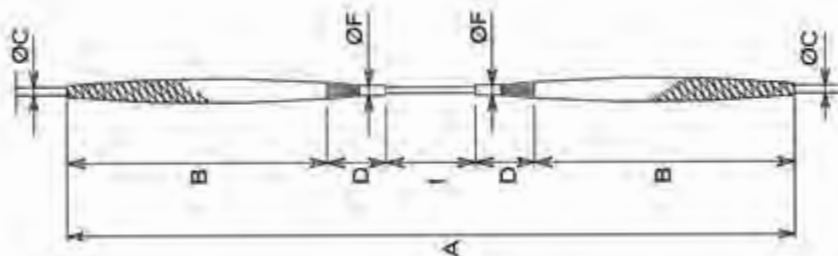


Part No.	Suitable Swivel	Conductor OD C (mm)	Colour	UTS (kN)	A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	Wt (kg)
GCT001	GGT001	8 - 17	Yellow	35	1400	1100	140	160	22	0.7
GCT010	GGT010	17 - 29	Red	85	1700	1360	160	180	28	1.3
GCT020	GGT020	29 - 38	Green	130	1900	1470	200	230	30	2.1
GCT030	GGT020, GGT030	38 - 50	Black	180	2270	1820	200	250	34	2.7

## Double Head Socks - Tesmec

### Part No. GCT500 to GCT530

The double head-type temporary mesh sock joints are specifically designed to temporarily connect the aluminium, steel or copper conductors. They consist of variable pitch steel wires, which effectively distribute the gripping effect on the conductor



Part No.	Conductor OD C (mm)	Colour	UTS (kN)	A (mm)	B (mm)	D (mm)	OD F (mm)	I (mm)	Wt (kg)
GCT500	8 - 17	Yellow	35	2680	1100	140	22	200	1.15
GCT510	17 - 29	Red	85	3240	1360	160	28	200	2.3
GCT520	29 - 38	Green	130	3540	1470	200	30	200	3.6
GCT530	38 - 50	Black	180	4240	1820	200	34	200	4.8

Determining Working Load Limit is dependent on your application and company/client safety factors



### Joists and Swivels

#### Standard Swivels - Tesmec

##### Part No. Various

- Swivels for connecting pulling rope to cable sock
- For Overhead or Underground application
- Made from high tensile galvanised and corrosion protected steel
- Chamfered edges allowing smooth passing through rollers or conduit
- Special design can bear high radial loads. Thrust bearings designed to avoid torsion strain accumulation

Part No.	Max Rope Size OD (mm)	Break Load (kN)	Diameter OD (mm)	Overall Length (mm)	Wt (kg)
GGT001	10	70	28	106	0.3
GGT010	13	110	40	143	0.9
GGT020	18	220	54	184	2.1
GGT030	24	360	60	234	3.4
GGT040	28	750	77	322	8.2

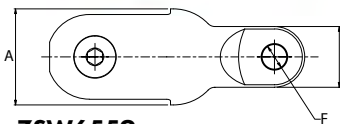


#### Rope to Swivel Connector - Slingco

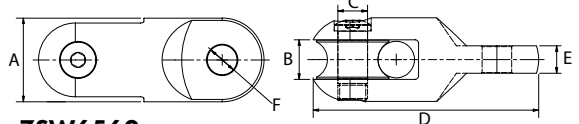
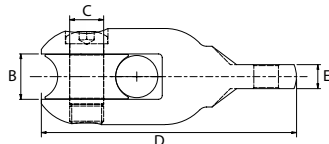
##### Part No. Various

Use to connect rope, swivels and other objects. With high strength pin and smooth roller you can safely connect rope without fear of fraying or damage.

- Fitted with high strength pins and smooth rollers
- No fraying or damage to the rope
- Fitted with high strength hex pins



ZSW6559



ZSW6560

Part No.	Safe working load (kg)	Max. rope Dia. (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Wt (kg)
ZSW6559	3170	22.2	50.8	24	18	135	12.7	13.5	1.23
ZSW6560	6800	22.2	50.8	24	18	137	16.7	18	0.91

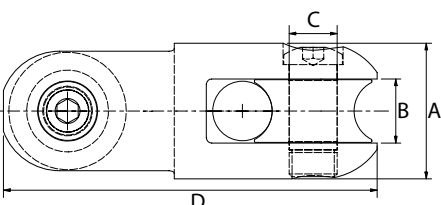


#### Rope to Rope Connector - Slingco

##### Part No. Various

Use to connect rope to rope. With high strength pins and smooth rollers you can safely connect rope without fear of fraying or damage. The rope to rope connector has two rollers to protect rope from becoming frayed.

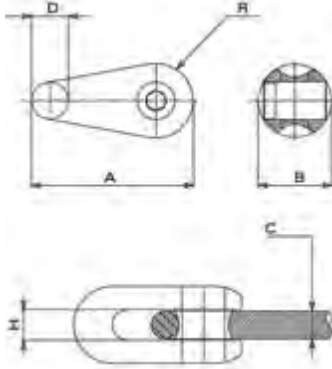
- Fitted with high strength pins and smooth rollers
- No fraying or damage to the rope
- Fitted with high strength hex pins



Part No.	Safe working load (kg)	Max. rope Dia. (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Wt (kg)
ZSW6558	6800	22.2	50.8	24	18	140	1.23



### TESMEC



### Fixed Joints - Tesmec

#### Part No. Various

The connectors are specifically designed to connect pilot rope lengths or pulling rope lengths and to pass over the puller or puller-tensioner bull wheels. The special profile minimises the overload on the rope spliced eyes during this passage.

- High tensile steel with galvanised finish, for joining steel draw wire

Part No.	Break Load (kN)	A (mm)	B (mm)	Rope Size C (mm)	D (mm)	H (mm)	R (mm)	Wt (kg)
GFT001	70	59	28	10	15	11	11	0.1
GFT010	110	74	40	13	19.5	14	15	0.3
GFT020	160	91	48	16	20	19	18	0.5
GFT030	220	102	54	18	22	19	20	0.8
GFT040	360	121	60	24	27	26	22	1.0

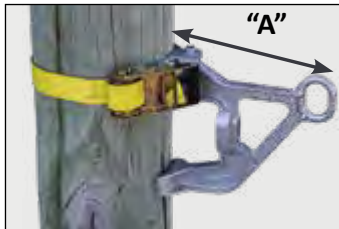



### Anchor Rod Pulling Eye - SPP

#### Part No: SPP-PE1

- Designed to assist in tensioning guy wires
- Offset eye for 3 tonne hook or shackle, allows easy dead end attachment
- Adjustable wedge allows for maximum rod diameter
- Body and wedge made from ductile iron with high strength bolt
- WLL 5:1 - 26kN
- Breaking Load 133kN
- Suits Anchor Rods 13mm - 32mm OD er

- Weight 2.3kg

### Lifting Gin - Hastings

#### Part No. 5800-5-V1

- For lifting transformers and heavy objects
- High strength aluminium alloy
- Stamped with load rating (WLL)
- High strength web attachment strap

Part No.	Strap Length (mm)	Dimension "A" (mm)	WLL (kg)	Wt (kg)
5800-5-V1	1100	270	860	4



### Cross-Arm Slings - Miller

#### Part No. Various

- Load Rated Flat Webbing Sling
- Steel "D" Rings both ends

Part No.	Length (mm)	WLL /WLL in Choke (kg)	Wt (kg)
CAS1	1000	750/600	0.65
CAS-680	680	750/600	1.00

### Stringing Rollers and Attachment Brackets

#### Angle Insulator Roller - SPP



This unique angle insulator roller has 2 adjustable angle rollers and 2 support rollers that allow the conductor to be brought in at final installation height and adjusted to any required angle alongside the insulator.

The conductor is fully enclosed at all times during the stringing operation and cannot fall out. When stringing & tensioning is complete, the locking pins are opened and the roller removed, leaving the conductor in its correct position on the insulator.

- The sealed bearing assists smooth running of the conductor.
- The clamps are specially treated with rubber so as not to damage the insulator.
- The roller fits all styles of ceramic insulators. See below table for suitable neck diameters.

SCAN or CLICK for application video



#### Specifications

Part No.	Insulator Neck diameter range		Max Conductor Diameter (mm)	Conductor Type	WLL (kg)	Weight (kg)
	Min (mm)	Max (mm)				
SPP-1E-AR	46	86	50	AL/CU/ACSR/ST*/ABC/CCT	300	7.4



SPP-AR50-60



SPP-BCR50-60

#### ABC Rollers - SPP

Hanging style roller

- Suits LV ABC
- Max 50mmOD conductor

Part No.	Roller Material	Roller OD (mm)	WLL (kg)	Wt (kg)
SPP-AR50-60	Aluminium	145	2000	1.7
SPP-BCR50-60	Plastic	175	400	5.0



SPP-CARR-100



SPP-CARR-080

#### Cross-arm Roller - SPP

Part No. SPP-CARR-Series

In-line Cross-Arm roller

- Suitable for Wood, Steel & Composite cross-arm
- Ratchet strap attachment
- Rubber mounts will not damage composite material
- Zinc plated mild steel

Part No.	Description	Suits Cross Arm (mm)	Wt (kg)
SPP-CARR-080	1 Large Horizontal roller	Wood, Steel & Composite up to 150	4.0
SPP-CARR-100	2 x Vertical & 2 x Horizontal rollers	Wood, Steel & Composite up to 150	5.7



Part No. SPP-TCAR-Series

In-line Cross-Arm roller

- Suitable for Wood cross-arm

- "T" Screw handle
- Zinc plated mild steel

Part No.	Description	Suits Cross Arm (mm)	Wt (kg)
SPP-TCAR-100	2 x Vertical & 2 x Horizontal rollers with "T" Screw handle	Wooden up to 100	4.2
SPP-TCAR-150		Wooden up to 150	6.0

# OVERHEAD STRINGING EQUIPMENT

## CONTENTS



### Universal Stringing Roller - SPP

#### Part No. SPP-1A

- Suitable for distribution and ABC
- Aluminium sheave
- Lightweight high strength heat treated aluminium
- Versatile attachment fittings include side and bottom tags and top ball socket fitting
- Side gate latch can be locked open
- Sheave is profile machined permitting precise sagging of conductor
- High quality permanently lubricated high temperature precision bearings



#### Part No. SPP-1A-DI

- Same Specifications as SPP-1A
- Ductile Iron sheave (SPP-1A-DI)
- Ideal for Pulling Steel conductor (e.g. 3/12 Steel) or steel catenary



\*Ball Socket



SPP-1A-DI



\*Centre Tab

Part No.	Sheave Material	Maximum Conductor OD (mm)	WLL* (kg)	Weight (kg)	Bottom of Groove Diameter (mm)	Overall Height (mm)	Overall Width (mm)
SPP-1A	Aluminium	50	1130	4	110	370	205
SPP-1A-DI	Ductile Iron	50	1130	5	110	370	205

\*WLL 1130kg when suspended from ball socket fitting or mounted on centre tab

### Universal Roller Bracket - SPP

#### Part No. SPP-1A-BKT

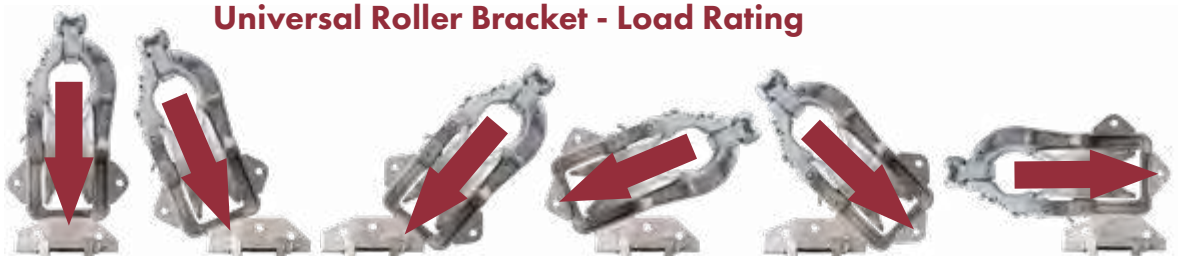
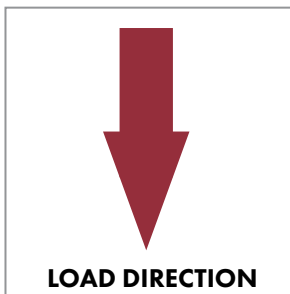
- Versatile mounting bracket for cross-arms and poles
- Frame made from Cast Aluminium
- Lightweight, easy to install
- Heavy Duty Strap and Zinc Plated Ratchet Assembly
- 3 Mounting holes for various configurations
- Ball pin to secure roller
- Suits SPP-1A & SPP-1A-DI Rollers



Part No.	Min Cross Arm (mm)	Poles OD (mm)	WLL (kg)	Wt (kg)
SPP-1A-BKT	100 x 100	200-470	Refer Load ratings below*	2.0

SPP-1A & SPP-1A-DI Rollers sold separately to SPP-1A-BKT Roller Bracket

### Universal Roller Bracket - Load Rating



SPP-1A-BKT* (WLL - kg)	500	500	500	500	500	500
1A-2A* (WLL - kg)	1130	1130	1130	500	500	500
SPP-1A-CAB* (WLL - kg)	1130	1130	1130	500	500	500



### Universal Stringing Roller - SPP

#### Part No. SPP-1A-SB

- "Pull & Turn" style release gate
- Suitable for distribution & ABC
- Sealed ball bearings



Click to view  
Pull & Turn  
Release Gate

Shown mounted on  
SPP-1A-CAB  
Cross Arm Bracket

Part No.	Maximum OD Conductor (mm)	WLL (kg)	Wt (kg)	Bottom of Groove Diameter (mm)
SPP-1A-SB	50	1130	4.1	110



### Cross Arm bracket - SPP

#### Part No. SPP-1A-CAB

- Crossarm mount bracket to suit up to 127mm wide x 152mm deep Cross-arms
- Includes pin for securing universal roller
- NOTE: Refer Load ratings on adjacent page\*



### Ball Clevis Socket Fittings

#### Part No. Various



Part No.	BC-70	BEL-70	BHL-70	BYC-120
Description	Ball Clevis	Oval Eye Ball	Safety Hook	Y Ball Clevis
WLL (kN)	70	70	70	70
Weight (kg)	0.55	0.4	0.55	0.85



BHL-70 Safety Hook



### Tie Top Post Insulator Bracket - SPP

- Manufactured from cast aluminium with urethane jaws
- Easy to operate reverse twist knobs
- Suits maximum insulator 123mm OD neck



Part No.	Max Insulator Throat (mm)	WLL** (kg)	Wt (kg)
SPP-1A-2A	123	Refer Load ratings on adjacent page*	2.6

\*\*Refer Insulator minimum failure load when considering the WLL

### Pin Insulator Roller - SPP

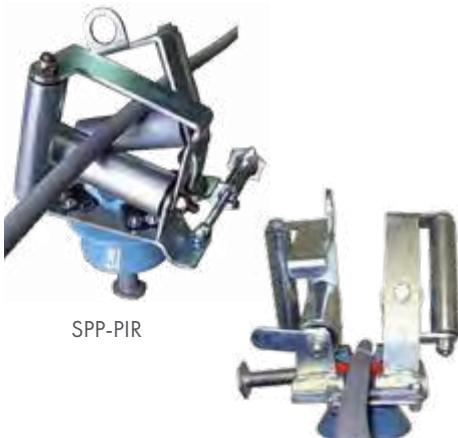
#### Part No. SPP-PIR Series

- Easily lower the conductor into the insulator after stringing
- Simply rotate 90° and loosen tension screw to "open" the rollers
- Prevents workers manually lifting conductor in to place
- Suits Conductors up to 50mm OD
- Moulded PVC inserts prevent damage to insulator

Part No.	Insulator** Throat (mm)	Horizontal Roller (mm)	WLL (kg)	Wt (kg)
SPP-PIR*	55-100	40 OD	250	6.1
SPP-PIR-080*	55-100	50 OD	250	6.5

\*SPP-PIR Rollers are designed for use when stringing in a straight run on intermediate poles

\*\*Refer Insulator minimum failure load when considering the WLL



SPP-PIR



Raising or lowering equipment



Snubbing - Lowering Mains



Rescue



## Hand Line and Rope Blocks - Multipurpose

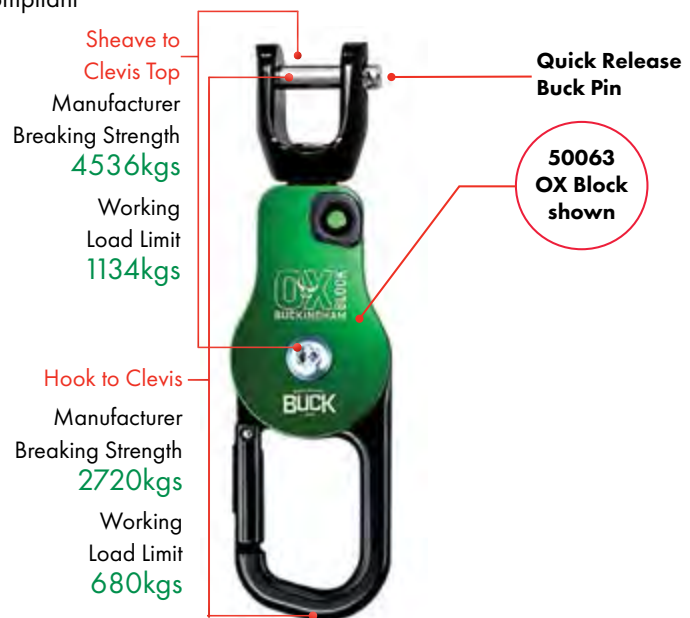
### Multipurpose snatch-block - OX BLOCK™

The OX BLOCK™ is a rope snatch-block with an integrated friction bar used for:

- Raising and lowering Equipment (Hauling Line Block)
- Rescue
- Snubbing loads

It allows the rigging professional to handle loads with greater control. When lowering loads, tension is transferred from the worker to the OX BLOCK™.

- The patented OX BLOCK™ replaces standard hand-line blocks, parted blocks and various snatch blocks.
- Has a greater WLL than blocks of similar size.
- When configured with optional pulleys, the OX BLOCK™ can be used to create a 2:1 up to 6:1 mechanical advantage reducing the amount of force needed to lift heavy loads.
- The advantage of the pulleys used by Buckingham is the swivel side plate that allows for quick and easy rope installation without removing the pulley from the connecting device.
- ASME B30 Compliant



Replace many of the older style pulleys and tackle with the lighter Ox Block system, making rescue, lowering and raising and snubbing workloads easier

Part No.	Attachment	Material	Rope Dia. (mm)	Length (mm)	Width (mm)	Wt (kg)
50061	Swivel Eye	6061 Alloy	16 (max)	267	51	1
50063	Clevis					

Ox Block includes metric markings to comply with relevant Australian Standards



Click or Scan above to see the OX BLOCK™ Video



**Our OX BLOCK Clevis Top hand-line assembly features a 1.2m x 19mm adjustable sling, hook and a 16mm hand-line at 24 or 30 meters**

#### Ordering Information

Part No.	Hand-line Length (m)
50062K14-4-80	24
50062K14-4-100	30

For further Ox-Block options and information, contact TEN





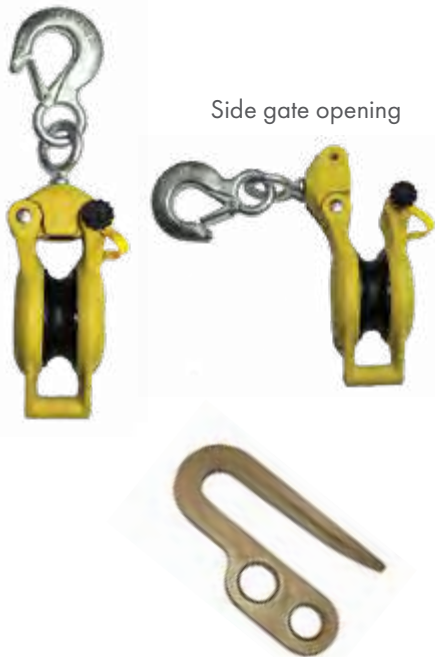
### Hand Line Blocks

#### Part No. Various

- Hand rope blocks used for hauling and lifting
- Made of high strength aluminum alloy
- Side gate opening with detent pin
- High strength steel rotating swivel hook with safety latch
- Free running sheaves with shielded bearings

**High Strength Steel**

Part No.	Max Rope Ø (mm)	Sheave Size (mm)	Wt (kg)	WLL (kg)
SPP-HLB	14	75	1.4	560
AHB-4	22	100	2.8	1130



### Single Non-Conductive Hand-line Block

#### Part No. 3550

- Non-conductive hand-line rope block used for hauling or lifting
- Side gate opening with captive screw pin
- High strength forged steel swivel hook
- 75mm diameter free running sheave with shielded bearings
- Block and sheave constructed of rugged nylon Fibreglass reinforced high dielectric material
- Suits Rope >15.8mmOD
- 450kg WLL
- Weight 0.8kg

**Contact TEN for available hand-lines**

### Hand-line Hook

#### Part No. 10060

- Used in hauling line assemblies
- Bronze alloy hook
- WLL - 272kg
- Weight - 227g

### Service Line Tensioners

#### Part No. Various

- Used to tension ABC house services
- Made with high quality yachting components
- Sold with detailed tag including WLL

Part No.	Rope Diameter (mm)	Rope Length (m)	WLL (kg)	Pulley System	Wt (kg)
ID015458-ROPEKIT	8	5	100	3:1	2.2
ID017049-ROPEKIT	12	5	300	2:1	2.5

### Pole Platform - Steel, Concrete & Wooden

#### Part No. Various

- For wood, concrete or steel poles
- Steel painted frame and support bar
- Locking chain and zinc plated hardware
- Wooden deck with anti-slip grooving and tread bars
- Suits poles 300mm - 600mm

Part No.	WLL (kg)	Deck Length (mm)	Wt (kg)
KL-2	200	700	8.1
KL-4	200	1100	12.1
KL-15	Chain assembly		3.1







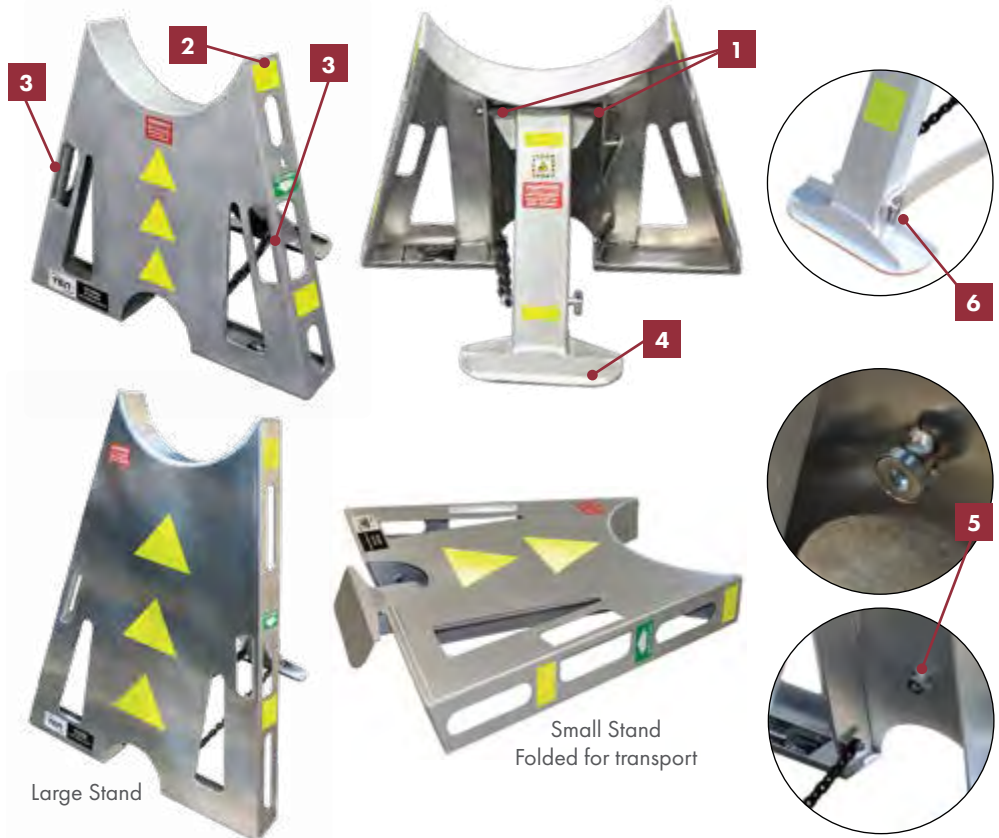
## Pole Handling

### Pole Stands - Flat Stack - TEN

#### Part No. Various

- Foldable for easy storage
- Brushed aluminium
- All stands come with load rating tags and serial numbers
- Reflective tape for improved visibility
- Position locking arm - improved stability
- Safer with reduced pinch points

Part No.	PS-AF-4T-S	PS-AF-4T-L
WLL (kg)	4000	4000
Dimensions (mm)	500 (H) x 100 (D)	850 (H) x 100 (D)
Finish	Aluminium	Aluminium
Weight (kg)	10.4	16.2



Large Stand

Small Stand  
Folded for transport

- 1 Reduction of potential pinch points through design
- 2 Day and night reflective tape for improved customer safety on public sites
- 3 Balanced and ergonomic built in handles for gloved hands
- 4 Large rear foot for stability and load spread
- 5 Magnetic latch for leg stowage. Prevents inadvertent swinging out of leg while maneuvering on site
- 6 Lock leg with positive locking mechanism

### Easy storage and portability



### Strong & Durable

### Pole Stands - Lightweight

#### Part No. Various

- Lightweight aluminium construction with no moving parts minimises the risk of manual handling injuries
- Powder Coated finish
- Unique data plate on each stand.

Part No.	FSLPSP-01-2	FSTPSP-02
WLL (kg)	4000	4000
Dimensions (mm)	500 (H) x 700 (D)	900 (H) x 1000 (D)
Finish	Powder Coated Yellow	Powder Coated Yellow
Weight (kg)	7.1	7.9

### Cant Hooks - Fibreglass Section



See our range of Cant Hooks in the Fibreglass section

### Conductor Handling Equipment

#### Temporary Crossarm - Termination & Intermediate

- Advantages over other temporary crossarms
  - "CAN" be used for Terminations
  - "CAN" be used in HV situations
- Chemically Inert:
  - Cross-Arm will not RUST, ROT or CORRODE
- Lightweight: (15kg)
  - Composite Cross-Arm - Approximately 1/3 the weight of timber
  - Bracket - Manufactured with high strength Aluminium
- Cross-arm provides additional protective layer of insulation (BIL rating 673kV/m)
- Takes 3 time longer to ignite and does not sustain a flame

**See Fibreglass Section for full details**

#### Triple Line Lifter - "T" Style - LineWise

The phase lifter is an insulated crane attachment used to support up to three energized lines. The Triple Line Lifter replaces the need for temporary structures and tag lines while giving positive control of the live lines.

##### Part No. TLL-300

- TLL-300B direct replacement for competitor's Three phase lift assembly
- TLL-300B mounts to material handling jib of bucket truck
- No cross bracing required
- Crossarm is pinned to the mast
  - crossarm can rotate 15 degrees each direction from 0 degrees (in line with the boom) and also 15 degrees each direction from 90 degrees
- 10 minute set up time = 2 lineman and no tools required

Wire holder spacing can be easily adjusted with no tools in 3" increments

Gravity gate for easy capture & release of wire. Wear pads protect the fibreglass

Part No.	Voltage (kV)	Phase spacing Max (mm)	Phase spacing Min (mm)	Capacity per phase / total (kg)	Mounting
TLL-300B	34.5	2286 Outside-Outside	559 Outside-Outside	136 / 408	Bucket truck handling jib
		1143 Centre-Outside	280 Centre-Outside		
TLL-300D	34.5	2794 Outside-Outside	559 Outside-Outside	136 / 408	Digger derrick or crane
		1397 Centre-Outside	280 Centre-Outside		

#### Triple Line Lifter - Articulated Style - LineWise

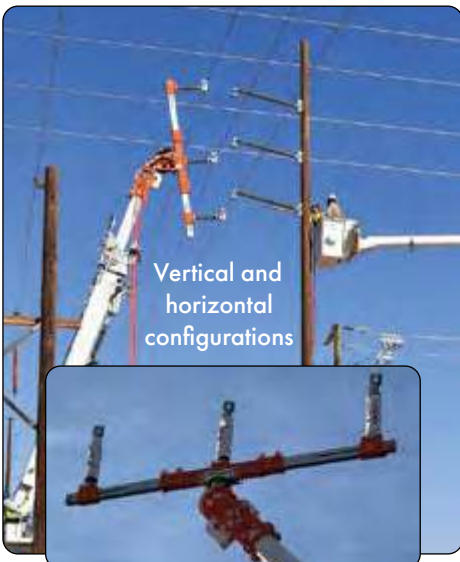
##### Part No. TLL-500A (series 1 & series 2 models)

- Hydraulic articulation, extension & retraction
- Conductor spacing: 2.4 –4.8m
- Quick Attach Insulators & Wire Holders
- Insulator spacing adjustable with torque gun (Series 2)
- Vertical and horizontal construction
- High Strength Steel fabrication
- Holding valves on all cylinders
- Manual override control valve
- Handheld Radio Remote Control
- Installed at ground level
- Unit weight: 524kgs.
- Mounted in skid: 941kgs

Voltage (kV)	Conductors	Phase spacing Max (mm)	Phase spacing Min (mm)	Capacity per phase / total (kg)
33	3	4877 Outside-Outside	2388 Outside-Outside	227 / 680
66		2438 Centre-Outside	1194 Centre-Outside	227 / 680



SCAN or CLICK for application video



Vertical and horizontal configurations



## CONTENTS



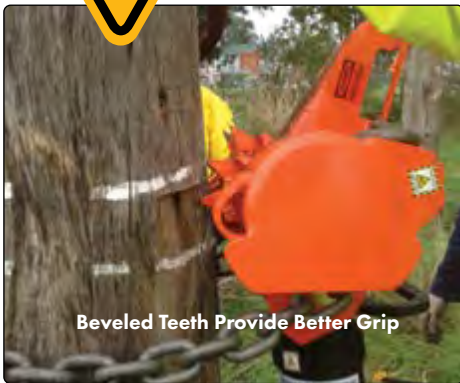
## Hydraulic Pole Pullers

### Pole Puller - Hydraulic - 56T

**Part No. PP-60-XHD**

- Dual Cylinder Pole Puller
- 600mm hydraulic cylinder stroke
- High capacity, hydraulic powered
- Pulling utility poles up to 700mm diameter
- Force of 56 Tonne
- Grips the pole with cam-action heads with beveled teeth to provide a better grip
- Use with open-centre or closed-centre hydraulic systems
- Fitted with 7.5m hydraulic hose
- Built-in fork pockets, 2 lifting points on the head & high strength alloy chains
- Increased stability due to larger footprint
- Increased gripping capability ensures chain does not slip up pole
- Utilises existing low pressure tool circuit on lifter borer-crane
- Hydraulics: Required flow rate 5-15gpm @ 2,250 psi max.

<b>Performance</b>	Pull 56 Tonne at 155 bar
<b>Maximum Pole Size (mm)</b>	710 Diameter, 2230 Circumference
<b>Cylinder (mm)</b>	Stroke 600
<b>Head (mm)</b>	Chain 2 x 20mm Grade 100
<b>Footprint (mm)</b>	Exterior 1168 x 1168, Interior 711 x 711
<b>Height (mm)</b>	Retracted 1500, Extended 2100
<b>Weight (kg)</b>	680
<b>Lifting Points (mm)</b>	830 x 184 x 1168



Beveled Teeth Provide Better Grip



### Pole Puller, Hydraulic 22T - Reliable

**Part No. REL-PL-P**

The REL-PL-P will make Pole Pulling with a Lifter Borer a thing of the PAST. Reduce damage and potential for injury related to pole pulling. Simple installation and operation.

**Kit Includes:**

- Hydraulic Cylinder with Flush Face Coupler Set
- Swivel Chain Hook Assembly
- Chain (12.7mm x 1830mm Alloy)
- Base Plate & Back Plate

<b>Operating Pressure (PSI)</b>	2800
<b>Recommended Flow</b>	15-30 lpm
<b>Lift at Max Pressure</b>	22734kg

Part	Wt (kg)
<b>Cylinder</b>	25.85
<b>Base Plate</b>	11.34
<b>Back Plate</b>	11.34
<b>Swivel Chain Hook Assy</b>	16.32
<b>Chain</b>	6.8

**Part No. REL-PL-PAD (sold separately)**

Optional Base Pad provides a strong, stable surface under soft ground conditions, and distributes the extreme force of the pulling







## Transformer Oil Containment

### BOB® - ABG

Bigger & Stronger Safety Orange Transformer Containment Bags

Safely Contain, Lift, Transport & Store all sizes of LEAKING TRANSFORMERS

- Helps to reduce preventable spills that release unwanted oils into the environment
- Easy to store on truck solution for safe transport and storage of faulty transformers
- Reduce costs of transporting large steel containers as well as the cost to clean up leaks



**PREVENT OIL SPILLS INTO THE ENVIRONMENT**



CLICK or SCAN to watch the BOB in action.

### BOB® Replacement Pole-Mounted Transformer Bag (Round)

BOB Part No.	Dimensions (m) (D) x (H)	Capacity (kg)	Old Part No.	Dimensions (m) (D) x (H)	Capacity (kg)
BOB-26	0.66 x 0.76	567	PT-22	0.55 x 0.65	635
BOB-32	0.81 x 0.96	630	PT-30	0.75 x 0.90	860
BOB-42	1.07 x 1.22	907	PT-42	1.00 x 1.20	1020

### BOB® Replacement Pad-Mounted Transformer Bag (Rectangular)

BOB Part No.	Dimensions (m) (D) x (W) x (H)	Capacity (kg)	Old Part No.	Dimensions (m) (D) x (W) x (H)	Capacity (kg)
BOB-48	1.22 x 1.22 x 0.91	1361	PMT-48	1.20 x 1.20 x 0.90	1360
BOB-60	1.52 x 1.52 x 0.91	1814	PMT-60	1.52 x 1.52 x 0.90	1814

### FLEXTRAY® - ABG

A flexible spill tray for the easiest, safest way to transport and store oil filled apparatus

- Lightweight Design For Easy Storage & Setup
- Easily Stored on Truck
- Safely Contain PCB's and Other Contaminants
- Avoid Preventable Spills
- Universal Portable Containment Tray
- Easily Secure Tray To Transformer With Cam Buckles & Webbing
- Recyclable
- Available in 3 Sizes

**PREVENT OIL SPILLS INTO THE ENVIRONMENT**



CLICK or SCAN to watch the FlexTray in action.



Part No.	Folded Size (mm)	Open Size (mm)	Wt (kg)
CT-084	1067 (L) x 559 (W) x 254	2134 (L) x 2134 (W) x 457 (H)	8
CT-096	1143 (L) x 635 (W) x 305	2438 (L) x 2438 (W) x 457 (H)	14.5
CT-108	1219 (L) x 771 (W) x 381	2743 (L) x 2743 (W) x 381 (H)	16

### Pole Setting

#### Dirt Tarps - Slingco



Slingco's range of heavy-duty, re-usable dirt tarps have been created with safety in mind. Keeping workers out of awkward, injury-prone positions is better for their long-term health and the company's bottom line. Dirt tarps have become a must-have product at utility construction sites.

You can find Slingco Dirt Tarps being used at pole change-outs, transformer terminations, as well as underground gas, telephone, and other underground utility applications.

The Dirt Tarp has the ability to move crushed rock, sand, dirt, wet cement, dig spoils, and other contaminated soil.

- Heavy-duty webbing and lifting loops
- Double stitched for reinforcement and durability
- Simply clean, dry, store, and re-use!
- Compact enough to store on truck when folded



**Time saved filling holes, moving materials and cleaning up**



SCAN or CLICK to watch tarp in use

Part No.	Size (m)	WLL (kg)	Dirt/Gravel (m <sup>3</sup> )
ZLD10792	1.8 x 1.8	1814	2
ZLD10793	2.1 x 2.1	1814	3
ZLD10016	2.4 x 2.4	2268	4
ZLD10015	3.0 x 3.0	2268	6

### POLESETTER ROCKBAG

#### POLESETTER ROCKBAG - ABG

The safest and fastest way to re-set poles and back filling



- 5:1 Safety Factor
- Self-Standing Rugged Design
- Flow Control Discharge Spout
- Quick Fill & Rapid Release
- Top-Lift Safety Rated 5x Capacity
- Compact For Easy Storage
- Reusable & Recyclable



CLICK or SCAN to watch the Polesetter bag in action.

Part No.	Capacity (kg)	Open Size (mm)	Volume (lt)
PS-01	680	610 (D) x 813 (H)	208
PS-02	907	762 (D) x 914 (H)	416



More sizes available Contact TEN

### Characteristics

- Extremely high strength
- Light weight
- Abrasion resistant
- Low stretch
- Neutral buoyancy
- Splicable
- Flexible

### Applications

- Alternate to wire rope
- Winch lines
- Tow lines
- Rigging lines
- Utility line



- Higher breaking strength
- Abrasion resistance
- Excellent shock absorption
- Better grip
- Minimal elongation
- Durable and ultraviolet stabilized
- Excellent shape retention
- Strength: wet/dry 100%
- Floats/sinks: Floats
- Elongation: Moderate
- Water absorption: None
- Chemical Resistance
  - Acids: Excellent
  - Alkalis: Excellent
  - Oil/Gas: Very Good



### Characteristics

- High strength
- High UV resistance
- Flexible & Splicable

### Applications

- Winch, Tow & Rigging lines
- Pulling and stringing line

## Pulling Rope

### ROBUS Dyneema Rope - Hampidjan

#### Part No. Various

ROBUS rope is an ultra-high strength rope developed to meet the need for light but ultra strong ropes.

ROBUS ropes are made from quality HMPE fibre.

- High performance 12 strand braided HMPE rope
- Can be used everywhere where optimal strength vs diameter is required and temperature is normally below 40°C

Polyester Cover available on request

Part No.	OD (mm)	Wt per 100 m (kg)	Max Break Force (T)
H-54-006*	006	2.3	4.2
H-54-008*	008	3.9	7.0
H-54-0010*	010	7.2	13.1
H-54-0012*	012	9.0	16.3
H-54-0014*	014	10.3	19.5
H-54-0016*	016	13.8	26.0

\*Specify Length in meters

### Polypropylene Rope - 3 Strand - Hampidjan

#### Part No. Various

Part No.	OD (mm)	Wt per 100 m (kg) 250m (Coil)	Max Break Force (T)
PPR-12*	12	7.0	2.84
PPR-14*	14	9.0	3.91
PPR-16*	16	12.0	4.90
PPR-18*	18	15.0	5.50
PPR-20*	20	18.0	7.52
PPR-22*	22	22.0	8.45
PPR-24*	24	26.0	10.20
PPR-26*	26	31.0	11.87

\*Specify Length in meters

Lifting Rope with Clevis eyes available Contact TEN for further information

### Double Braided Hauling Rope - Hampidjan

#### Part No. DBPR-Series

- Manufactured in Australia with a braided polyester cover over a braided Polyester core
- Ideal for use as winch and tow lines and for pulling cable

Part No.	OD (mm)	Wt per 100 m (kg)	Max Break Force (T)
DBPR-12*	12	11.10	3.49
DBPR-14*	14	13.90	4.36
DBPR-16*	16	18.25	5.75
DBPR-18*	18	22.20	6.98
DBPR-20*	20	27.30	8.59
DBPR-22*	22	33.30	10.48
DBPR-24*	24	41.60	13.10
DBPR-26*	26	46.30	14.56





Meets or exceeds the dry or wet electrical requirements of: IEC 62192:2009  
Arc-Flash rated: Resistant to 40 cal/cm<sup>2</sup> (category 4)

**ARC-FLASH  
RATED**



Tag Line & included Storage bag



Live Line Rope



Optional Storage bag for Live Line and Rescue Ropes



Rope Link & included Storage bag



## Dielectric Ropes

### D.E.W Line™ - Barry

Insulating Live Line Rope offers a unique coating and excellent dielectric properties and can be knotted. This live line rope is designed for performing live work on or near AC or DC energized lines and apparatus.

#### Features

- Unique insulating properties
- Fully sealed and hydrophobic
- Knottable
- Smooth surface
- Cleanable and easy to maintain and test
- High abrasion resistance
- Exceptionally low leakage current, whether dry or wet
- Easy to deploy
- Protection from high fault current
- Excellent resistance to changing weather conditions, UV, corona effect and temperature extremes
- High strength
- Sealed termination at each end
- Low elongation
- Easy storage in optional transport bag with desiccant
- Lightweight and low volume

### Tag Line

#### Part No. HL-NK1000

Insulating Rope Tool serves as a Fibreglass tool replacement during temporary installations on or near AC or DC energized lines and apparatus.

#### Ordering Information

PART No.	OD (mm)	WLL (kg)	Standard lengths (m)	Colour
HL-NK1000**	6	90	6.1-9.1-12.2**	Black w/orange terminations

Other lengths, diameters and WLL available. Contact TEN for further information

### Live Line Rope

#### Part No. HL-NP

Insulating Live Line Ropes offers a unique coating and excellent dielectric properties and can also be knotted. This live line rope is designed for performing live work on or near AC or DC energized lines and apparatus.

#### Ordering Information

PART No.	OD (mm)	Breaking Load (T)	Standard Lengths (m)	Colour
HL-NP2800**	13	2.85*	15-30-45**	Orange
HL-NP4500**	14	4.53*	15-30-45**	Orange

### Live Line Rope Link

#### Part No. HL-NK1900

Insulating Rope link serves as a Fibreglass tool replacement during temporary installations on or near AC or DC energized lines and apparatus.

#### Ordering Information

PART No.	OD (mm)	WLL (T)	Lengths (m)	Colour
HL-NK1900**	22	3.175	Nominate**	Black

\*\*Nominate Length Required

Other diameters and lengths available. Contact TEN for further information.

### Rescue Rope

**Part No. HL-NF3400**

High Angle Rescue Rope for evacuation of workers in energised fields on AC or DC.



Rescue Rope

#### Ordering Information

PART No.	OD (mm)	Breaking Load (T)	Length (m)	Colour
HL-NF3400**	12	3.4*	Nominate**	Orange w/tracer

\*Reduce the Break Load by 50% when using knots

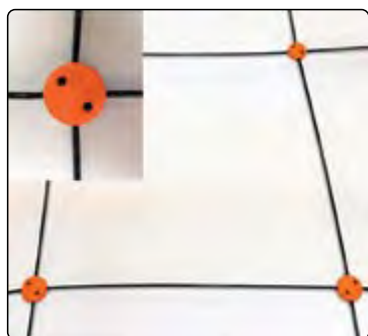
\*\* Nominate Length Required

### Safety Nets

**Part No. HL-NK1000C**

Insulating safety nets are constructed using Barry's proprietary D.E.W. Line® rope and their specially designed clips. They have excellent dielectric properties and are designed to serve as a safety barrier or guard structure installed on hurdle poles or infrastructures for power lines, road and railway crossings.

Protects and secures apparatus while performing hot/live work under AC or DC condition.



#### Ordering Information

PART No.	OD (mm)	Mesh Breaking Load (T)	Standard Sizes (m)	Colour
HL-NK1000C	6	2.85	21 x 30.5 21 x 45.7 21 x 61.0	Black Rope with Orange Junction Clips

Other widths, lengths and mesh sizes available. Contact TEN for further information.

The dielectric safety nets are extremely durable and offer reliable dielectric properties similar to those of Fibreglass tools and hot sticks. They are completely jacketed and sealed in order to eliminate contamination of the fibres which could otherwise permanently trap conductive dirt and moisture. They are easy to inspect and maintain.



**Extensive range of Barry Rope Products available  
Contact TEN for further information**

Helicopter longlines

Lifting beams

Barry d.E.W. Line® dielectric winch lines

Barry d.E.W. Line® lineman rescue kit with retrievable anchor strap

### Insulating - Live Line Rope

#### Insulating Rope - 3 Strand

**Part No. Various**

- Dry tested to 100kV/300mm in humid conditions
- To IEC 62 912, European Directive 98/37/EC
- Technical specification HTB-71B-2
- Manufactured under ISO9001 & ISO9002
- Low water absorption coefficient

**Rope Tester also available  
See Test and Measurement  
section for details**



See Test Section for  
Rope Tester

Part No.	OD (mm)	Wt per meter (g)	Break Force (kg)
13400-08*	8	30	929
13400-10*	10	50	1421
13400-12*	12	70	2111
13400-14*	14	90	2903
13400-16*	16	120	3483
13400-18*	18	150	4630
13400-20*	20	180	5588

\* Specify length in meters

Eye splices available



## Petrol Portable Capstan Winch

### Portable Petrol Capstan Winch - Docma

Part No. VF900-4

Docma Portable Capstan Winch equipped with the Honda 4-stroke engine  
Designed for all your Pulling, Hauling & Lifting projects

#### Features

- Made in Italy from high quality materials
- Honda 4-Stroke GX50 Engine, meets Australian Emission Standards
- Variable speed controlled by rope tension
- High quality reducer with helical tooth gears

#### Used For

- Underground Cable Hauling
- Overhead conductor stringing
- Lifting equipment on pole and towers
- Tree lopping and felling, including directional felling
- Ground clearing & firewood collection
- Camping, hunting & 4X4

**LOW NOISE  
LOW EMISSION**



### Winch Specifications

Part No.	Capacity (kg)			Engine type	Pull Speed (m/pm)	Engine (kw/hp)	Rope		Wt (kg)
	Pulling	Double Rope	Lifting				Size (mm)	Wraps on Drum	
VF900-4	865	1730	200	Honda 4 Stroke GX50	14	1.47/2.0	10 / 12**	4/5	10.85

\*\* 10 and 12mm Double Braid Polyester Hauling Rope available in a variety of lengths.

### Winch Mounting Accessories - Docma

#### Accessory Mount

Part No. VF310500

Utilised to mount all Winch accessories

#### Vertical Lift/Brake Mount

Part No. VF310503

Set on a pole or tower with Pole Mount VF310501 for controlled lifting

#### Hook/Sling Attachment

Part No. VF310211

Used in conjunction with a sling to attach winch to pole, tree or tower





### Winch Mounting Accessories - Docma (cont.)

#### Ground Mount

Part No. VF310504

Attached the winch and bolt or clamp to the ground or concrete pad for operating winch at ground level



#### Hayman Reece Adaptor

Part No. VF310506

Standard Hayman Reece socket adaptor for winch operation from the back or your vehicle



#### Pole-Tree-Tower Mount

Part No. VF310501

Attach to a Pole, Tower or tree and hook the winch or lift bracket

## TESMEC

Part No. PL1150

Performance	
Max pull (kN)	30
Speed at max. pull (km/hr)	1
Max speed (km/hr)	3.2
Pull at max. speed (kN)	10
Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

The PL1150 Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel.



MAX PULL

35kN



MAX SPEED

3.6km/h

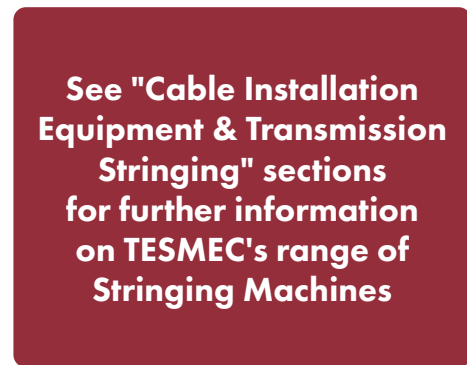
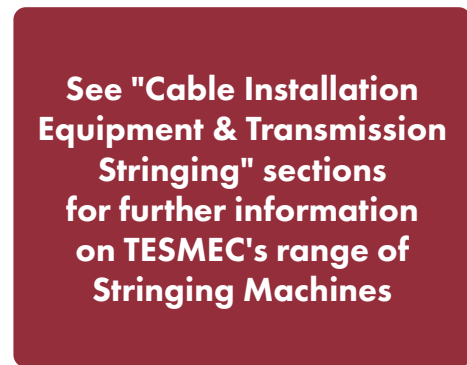
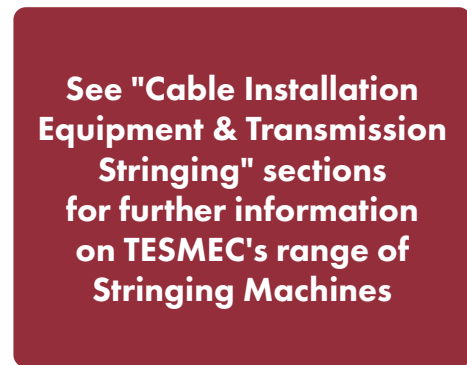


ROPE DIAMETER

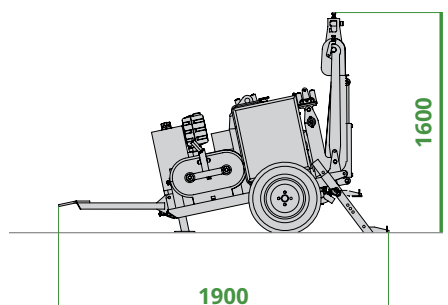
13mm



See "Cable Installation Equipment & Transmission Stringing" sections for further information on TESMEC's range of Stringing Machines



Characteristics	
Bull Wheel dia. (mm)	350
Max. rope dia. (mm)	13
Mass (without rope) (kg)	980
Engine	
Diesel (kW)	19 (26hp)
Cooling System	Water
Electrical System (V)	12
Configuration	
<ul style="list-style-type: none"> <li>• New Digital HMI 127mm (5") display</li> <li>• Negative self-acting hydraulic brake</li> <li>• On board automatic reel winder</li> <li>• Pull recorder &amp; Digital meter counter</li> </ul>	



## CONTENTS



To Watch the CM3K in action, SCAN or CLICK the QR-Code



## Battery Capstan Winches

### Battery Capstan Winches - 1360kg - iTOOLCO

#### Part No. CM3K

Ideal for Industrial/Commercial applications. Pulling from remote locations is no longer a challenge. This portable 1360kg puller is intuitively designed to handle all of your day-to-day pulls.

Speed, Versatility, and Performance are all yours with iToolco's Battery Capstan Winch. The built-in capstan switch automatically turns the puller on and off. Simply tug on the rope to start the pull and back off to shut it down.

Delivers dynamic performance in remote locations or areas where power is not yet available.

**Powered by Milwaukee Batteries**

Versatile Dual Capstan



Part No	Ordering information	Dimensions Collapsed (mm)	Dimensions Extended (mm)	Wt (kg)
CM3K	Winch, Conduit Adaptors & Rack Motor, 2 x Batteries, Charger	914 (W) x 686 (H) x 2120 (L)	914 (W) x 686 (H) x 2900 (L)	62.3
Pull Speed		Max Pulling Capacity (kg)		Pull at Max Speed (kg)
Small Capstan	Large Capstan	1360		682
Up to 15.2m/pm - 1360kg	Up to 32.9m/pm - 682kg			



To Watch the UMP3K in action, SCAN or CLICK the QR-Code



### Battery Capstan Winch - 1360kg - iTOOLCO

#### Part No. UPM3K

Ideal for Utility Applications

Includes Tow-bar Mount

Get high-speed performance and a unique set-up with iTOOLCO's 3K Utility Puller™.

Designed for quick set-up, the 3K Utility Puller's articulating receiver adapter can be positioned 180 degrees vertically or horizontally at the precise angle needed to get the job done.

With this hardworking puller you can transfer heavy pulling loads to the ground within centimeters of the conduit you're pulling through.

For overhead pulls, line guide rollers keep the rope centered on the capstan.

**Powered by Milwaukee Batteries**

Versatile Dual Capstan



Part No	Ordering information	Dimensions Collapsed (mm)	Dimensions Extended (mm)	Wt (kg)
UPM3K	Winch, Milwaukee Motor, 2 x Batteries, Charger	508 (H) x 508 (W) x 1900 (L)	508 (H) x 508 (W) x 2900 (L)	74.1
Pull Speed		Max Pulling Capacity (kg)		Pull at Max Speed (kg)
Small Capstan	Large Capstan	1360		682
Up to 15.2m/pm - 1360kg	Up to 32.9m/pm - 682kg			





### Battery Capstan Winches - 2727kg - iTOOLco

#### Part No. CD6K

Ideal for Industrial/Commercial or OH & UG applications. . When 2T is not quite enough and you don't want to drag a big puller around on your vehicle, this iTOOLco winch is the ideal puller.

Speed, versatility, and performance are all yours with iTOOLco's Cordless Cannon 6K™.

This portable 2727kg puller is intuitively designed to handle all of your day-to-day wire pulls.

The built-in capstan switch automatically turns the puller on and off. Simply tug on the rope to start the pull and slack off the rope to shut it down.

Delivers dynamic performance in remote locations or areas where power is not yet available.

**Powered by  
Dewalt  
Batteries**



To Watch the CD6K in action, SCAN or CLICK the QR-Code



Part No	Description	Dimensions Collapsed (mm)	Powered by	Wt (kg)
CD6K	Winch, Conduit Adaptors & Rack Motor, 2 x Batteries, Charger	1220H x 546W x 546L	Battery operated 4 speed Dewalt motor	62
Pull Speed		Max Pulling Capacity (kg)	Pull at Max Speed (kg)	
Small Capstan	Large Capstan			
Up to 4.9m/pm - 2727kg		2727	1360	



### Electric Capstan Winches

#### Electric Capstan Winch - 5450kg - iTOOLco

#### Part No. C12K-230

Fully self-contained, compact Cannon 12K™ wire puller has a 6-speed 230V reversible motor.

Designed specifically for easy set up to meet job site demands with all parts store on the puller. No large storage box of parts needed.

When extra extensions are used, the wire puller is capable of pulling out 3.9m of wire from the conduit opening.

This cable puller is easy to maneuver, and can be changed quickly from side pulls to overhead or underground.

iTOOLco's Cannon 12K™ pulls at speeds up to 11m per minute.



**Pulls at  
11 m  
Per Minute**



Part No	Description	Dimensions Collapsed (mm)	Powered by	Wt (kg)
C12K-230	Winch, Conduit Adaptors, Rack & 230V Motor	1730 (L) x 762 (W) x 1450 (H)	230V motor	183
Pull Speed		Max Pulling Capacity (kg)	Pull at Max Speed (kg)	
Small Capstan	Large Capstan			
Up to 4.5m/pm - 5450kg		5450	2720	







# CABLE INSTALLATION EQUIPMENT



- Wire Grips, Socks & Swivels
- Cable Pullers & Winches
- Underground Trench, Corner & Manhole Rollers
- Conduit Proving & Cleaning
- Cable Pulling Lubricant
- Duct Rodders
- Cable Stand & Reel Rollers

## CABLE INSTALLATION EQUIPMENT

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Pull-Planner™ 4.0 .....	B30	Hydraulic Winch - 700bar (10,000psi) - Chance .....	B42
<b>Lubricant Pump / Applicator</b> .....	<b>B31</b>	Rope Lock Device - Chance .....	B43
Lubricant Pump - Polywater .....	B31	Universal Mounting Bracket - Chance .....	B43
<b>Conduit / Duct Adhesive</b> .....	<b>B31</b>	Chain Clamp - Chance .....	B43
BondDuit - Polywater .....	B31	Swivel Base Truck Mount - Chance .....	B43
<b>Conduit / Duct Sealant Systems</b> .....	<b>B32</b>	Swivel Base Truck Mount & Hitch Mount - Chance .....	B43
AFT Sealant System - Polywater .....	B32	Foot Switch - Hydraulic - Chance .....	B43
FST Sealing System - Polywater .....	B33	All Purpose Mounting Bracket - Chance .....	B43
FST-250KIT1 Duct Sealant - Polywater .....	B33	Mounting Accessories - Docma .....	B44
FSTBP™ Duct Sealant Burst Pack - Polywater .....	B33	<b>Petrol Capstan Winch</b> .....	<b>B44</b>
FST MINI Duct Sealant - Polywater .....	B33	Portable Petrol Capstan Winch - Docma .....	B44
<b>Hydraulic Pullers</b> .....	<b>B34</b>	<b>Petrol Drum Winch</b> .....	<b>B45</b>
15kN Hydraulic Puller - Tesmec .....	B34	Portable Petrol Drum Winch - Docma .....	B45
30kN Hydraulic Puller - Tesmec .....	B34	Capstan & Drum Winch Accessories - Docma .....	B45
35kN Hydraulic Puller - Tesmec .....	B35		
70kN Hydraulic Puller - Tesmec .....	B35		
30 & 50kN Battery Puller - Tesmec .....	B36		
70kN Hydraulic Puller - Tesmec .....	B36		
30kN Hydraulic Puller - Tesmec .....	B37		
50kN Hydraulic Puller - Tesmec .....	B37		

### TESMEC



## Joists and Swivels

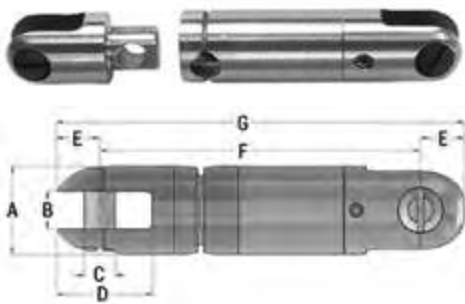
### Standard Swivels - Tesmec

#### Part No. Various

- Swivels for connecting pulling rope to cable sock
- For Overhead or Underground application
- Made from high tensile galvanised and corrosion protected steel
- Chamfered edges allowing smooth passing through rollers or conduit
- Special design can bear high radial loads. Thrust bearings designed to avoid torsion strain accumulation

Part No.	Max Rope Size OD (mm)	Break Load (kN)	Diameter OD (mm)	Overall Length (mm)	Wt (kg)
GGT001	10	70	28	106	0.3
GGT010	13	110	40	143	0.9
GGT020	18	220	54	184	2.1
GGT030	24	360	60	234	3.4
GGT040	28	750	77	322	8.2

### DCD Design & Manufacturing Ltd.



### Breakaway Swivels & Replacement Pins - DCD

#### Part No. Various

- Ensure fibre optic or coaxial is not pulled in excess of rating
- Break loads from 90kg to 800kg
- Replacement pins available
- Swivels not supplied with pins (SEE BELOW TABLE)

Part No.	Dimensions (mm)							Max Pin Load (kg)	Pin Type*	Wt (g)
	A	B	C	D	E	F	G			
00550-005	15.9	7.1	4.7	17.4	6.3	69.8	82.5	306	A	80
00550-010	22.2	9.5	7.9	24.6	11.1	80.9	103.2	454	B	190
00550-020	31.8	13.5	10.3	32.5	13.5	114.3	141.3	1818	C	550

\*See Below

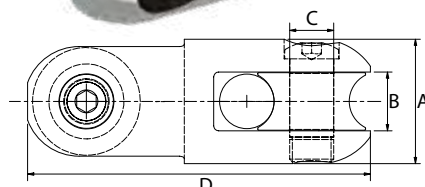
Break-Away Swivels "Do Not" include Pins (select pin below)

#### Replacement Pin kits



Part No. (10 Pins)	Break Point +/- 10% (kg/kN)	Colour Code	Part No. (10 Pins)	Break Point +/- 10% (kg/kN)	Colour Code	Part No. (5 Pins)	Break Point +/- 10% (kg/kN)	Colour Code
Type A (Swivel 00550-005)			Type B (Swivel 00550-010)			Type C (Swivel 00550-020)		
00555-002	91.0/0.89	White	00535-002	91.0/0.89	White	00555-013	622/6.09	White
00555-0034	136/1.33	Red	00535-004	181/1.77	Yellow	00555-018	818/8.00	Green
00555-004	181/1.77	Yellow	00535-006	272/2.66	Orange	00555-020	909/8.89	Blue
00555-0045	204/2.00	Blue	00535-008	363/3.55	Grey	00555-027	1227/12.01	Black
00555-006	272/2.66	Orange	00535-010	454/4.45	Red	00555-036	1636/16.01	Yellow
00555-007	306/3.00	Black				00555-040	1818/17.79	Red

### slingco



### Rope to Rope Connector - Slingco

#### Part No. Various

Use to connect rope, swivels and other objects. With high strength pins and smooth rollers you can safely connect rope without fear of fraying or damage. Connectors have high strength hex pins. The rope to rope connector has two rollers to protect rope from becoming frayed.

- Fitted with high strength pins and smooth rollers
- No fraying or damage to the rope
- Fitted with high strength hex pins

Part No.	Safe working load (kg)	Max. rope Dia. (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Wt (kg)
ZSW6558	6800	22.2	50.8	24	18	140	1.23



### Quick Links

- Suitable for connection of rope to rope, socks, pulling eye or accessories
- Zinc Plated Steel

Part No.	Diameter (mm)	Rope Capacity(mm)	Break Load (T)	OAL (mm)
MRGOZ08.0	8	17.5	3.25	88
MRGOZ10.0	10	20.5	5.00	105
MRGOZ12.0	12	23.5	6.25	124
MRGOZ16.0	16	29.5	12.50	161



### Cable Socks and Grips

#### Heavy Duty Underground Cable Socks - Tesmec

- Suitable for single and multiple core underground cables
- Longer socks give extra pulling force - larger surface area gives better grip
- Steel wires with protective finish and alloy ferrule offering durability and longevity

Part No.	Conductor OD Ø (mm)	Length (mm)	UTS (kN)	Wt (kg)
GCL180	46-60	1600	50	2.0
GCL194	61-80	1800	80	2.5
GCL200	81-100	2000	100	3.0
GCL210	101-140	2000	100	3.5

#### Heavy Duty Large Eye Cable Socks - Tesmec

- Ideal for underground and overhead work
- Suitable for AL, CU & ST
- Colour coded plastic bands at ferrule to identify range and capacity
- Steel wires with protective finish and alloy ferrule
- Long mesh length provides additional gripping surface area

Part No.	Suitable Swivel	Conductor OD Ø (mm)	Colour	UTS (kN)	Mesh Length (mm)	Wt (kg)
GCT001	GGT001	8 - 17	Yellow	35	1100	0.7
GCT010	GGT010	17 - 29	Red	85	1360	1.3
GCT020	GGT020	29 - 38	Green	130	1470	2.1
GCT030	GGT020, GGT030	38 - 50	Black	180	1820	2.7

#### Heavy Duty Cable Socks - NCG

- Suitable for heavier cable hauling
- Soft eye for fitting in tight spaces
- Made from durable galvanised wire and swagged with an aluminium alloy ferrule.

Part No.	To suit cable O.D (mm)	Grip Length (mm)	Min Breaking Load (kN)	Working Load Limit (kN)
CHD1006	6-11	350	8	2.6
CHD1010	10-14	350	15	5.0
CHD1014	14-19	400	20	6.6
CHD1019	19-28	500	37	12.3
CHD1028	28-40	600	54	18.0
CHD1040	40-55	800	62	20.6
CHD1055	55-75	900	80	26.6
CHD1075	75-95	1000	180	60.0
CHD1095	95-120	1000	215	71.6
CHD1120	120-150	1800	287	95.0
CHD1150	150-190	1800	287	95.0





### Lace-up Offset Eye - NCG

Part No. Various



Part No.	Size Range (mm)	Grip Length (mm)	Ultimate Tensile Strength (kN)	Unit Weight (kg)
S1014	14-19	500	9	0.07
S1019	19-28	600	15	0.13
S1028	28-40	800	24	0.26
S1040	40-55	900	35	0.50
S1055	55-75	1000	62	1.00
S1075	75-95	1200	98	1.90
S1095	95-120	1400	98	2.90
S1120	120-150	1600	141	4.60
S1150	150-190	1800	141	5.18

### Lace-up Double Eye - NCG

Part No. Various




Part No.	Size Range (mm)	Grip Length (mm)	Ultimate Tensile Strength (kN)	Unit Weight (kg)
SA014	14-19	500	9	0.07
SA019	19-28	600	15	0.13
SA028	28-40	800	24	0.26
SA040	40-55	900	35	0.50
SA055	55-75	1000	62	1.00
SA075	75-95	1200	98	1.90
SA095	95-120	1400	98	2.90
SA120	120-150	1600	141	4.60
SA150	150-190	1800	141	5.18

### Standard Duty Cable Socks - NCG

Part No. Various

- Suitable for general hauling applications
- Soft eye for fitting in tight spaces
- Made from durable galvanised wire and swagged with an aluminium alloy ferrule.



Part No.	To suit cable OD (mm)	Grip Length (mm)	Min Breaking Load (kN)	Working Load Limit (kN)
C1006	6-12	350	5	1.6
C1010	10-14	350	5	1.6
C1014	14-19	400	9	3.0
C1019	19-28	500	15	5.0
C1028	28-40	600	24	8.0
C1040	40-55	800	35	11.0
C1055	55-75	900	62	20.0
C1075	75-95	1000	98	32.0
C1095	95-120	1200	133	44.0
C1120	120-150	1400	187	62.0
C1150	150-190	1600	283	94.0

### Triplex Socks - NCG

**Part No. Various**

- Three socks swagged into a single eye
- For hauling multiple and Triplex cables

**All references of 3:1 safety factors are a guide only, consult your work practices**

Part No.	To suit cable OD - each leg (mm)	Grip Length (mm)	UTS (kN)	Working Load Limit (kN)
C1019X3-1000	19-28	1000	15	5
C1028X3-1000	28-40	1000	24	8
C1040X3-1000	40-55	1000	35	11



### Non-Metallic Aramid Socks - Slingco

**Part No. Various**

Grips are traditionally used in, but not limited to overhead ABC applications or when pulling fibre optic cable.

- Non conductive
- Much lighter yet stronger than steel grips
- Easier to apply and remove
- No frayed wires = no wire cuts or contusions
- UV Resistant
- Strong enough to last in salt water

**Ideal for light & Fibre-optic cables**

**Non-conductive Aramid Fibre**

Part No.	Cable Range (mm)	UTS (kN)	Mesh Length (mm)	OAL (mm)
ZCS1040	10-20	11.16	552	711
ZCS1022	20-30	15.89	600	724
ZCS1023	30-40	43.84	642	1245
ZCS1024	40-50	52.86	523	1245

Larger sizes available - Contact TEN for details



SCAN or CLICK to View or Download Grip Inspection Selection & Application



**Determining Working Load Limit is dependent on your application and company/client safety factors**



## Rollers - Underground

### Flat Trench Roller - SPP

#### Part No. Various

- Flat trench roller with 140mm nylon or aluminium roller
- Can be pinned on side for corner bends
- Galvanised finished frame
- Replacement nylon and aluminium rollers available

Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-2A-140	Nylon	150	500	330	170	180	1.2
SPP-2A-140A	Aluminium	150	1000	330	170	180	2.6

### Flat Trench / Cable Tray Roller - SPP

#### Part No. Various

- Zinc plated frame
- Nylon and Aluminium rollers available
- Legs can be attached for cable tray / ladder work
- Replacement rollers available

Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-3A-140	Nylon	150	500	210	260	150	2.2
SPP-3A-140A	Aluminium	150	1000	210	260	150	3.2

### Flat Trench Roller - SPP

#### Part No. SPP-2A-FTR-205

- Quality aluminium roller complete with bearings
- Galvanised steel frame
- Replacement rollers available

Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-2A-FTR-205	Aluminium	195	1000	410	280	230	11

### Raised Trench Rollers - SPP

#### Part No. SPP-2A-RTR

- Quality aluminium roller complete with bearings
- Galvanised steel frame
- Can be arranged over existing cables in trench
- Replacement rollers available

Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-2A-RTR	Aluminium	150	1000	290	230	260	2.6

### Raised Trench Rollers - Nylon - Lancier

#### Part No. 14211

- Lightweight and impact resistant
- Can be secured and connected using anchor pins (SPP-PIN)
- Maintenance free sealed ball bearings to stop water and dirt ingress
- Frame made of hard wearing polypropylene



Easily stackable

Part No.	Max Load (kg)	Max Cable (mm)	Dimensions (mm)			Wt (kg)
			Length	Width	Height	
14211	500	132 od	345	229	195	2.2





### Corner & Curve Rollers - SPP

#### Part No. Various

- Solid construction trench roller guides
- Provisions to peg units down and join units together
- Supplied with internal bearings
- Zinc plated finish
- Aluminium Replacement rollers available

SPP-2D-4C90



Versatile 90° four corner roller with dual radius capabilities by simply moving bolts to other positioned holes on frame

Part No.	Dimensions (mm)	Angle	Bend Radius (mm)	No. of Rollers	Weight (kg)	Max. Cable OD (mm)
SPP-2D-4C90	700 (L) x 170 (W)	90°	350, 600 & 700	4	22.5	150
SPP-2D-3C45	550 (L) x 170 (W)	45°	500	3	13.0	150
SPP-2D-4C45	800 (L) x 170 (W)	45°	900	4	14.0	150



SPP-2D-3C45



SPP-2D-4C45

### Corner Rollers - SPP

#### Part No. Various

- Trench cable laying corner roller/ trench roller
- Corner guide trench roller
- 1 x Horizontal & 2 x Vertical 60mmOD rollers
- Easily pinned together with star pickets or pins
- 1000kg WLL
- Inverted model also available (SPP-2B-TCR-IN)



SPP-2B-TCR

SPP-2B-TCR

SPP-2B-TCR-IN

Part No.	WLL (kg)	Dimensions (mm)	Wt (kg)
SPP-2B-TCR	1000	450 (L) x 300 (W) x 310 (H)	12.0
SPP-2B-TCR-IN			14.0

### Corner Roller - SPP

#### Part No. SPP-2B-TCR-205

- Trench cable laying corner roller/ trench roller
- Corner guide trench roller
- 1 x Horizontal & 2 x Vertical rollers



Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-2B-TCR-205	Aluminium	195	1000	570	340	340	28

## CONTENTS



SPP-2B-1000



SPP-2B-2x45



SPP-2B-FIR-45



SPP-MRG-1



SPP-MRG-3



## Trench Feed In Rollers - SPP

### Part No. Various

- Feed-in roller guides for underground applications
- Sealed roller bearings
- All units have fixing points

Part No.	Roller & Frame	Roller Length (mm)	Dimensions (mm)			Wt (kg)
			Length	Width	Height	
SPP-2B-1000	Zinc Plated Steel	1000	1105 x 220 x 125			15.71
SPP-2B-2X45	Zinc Plated Steel	2 x 600	1040 x 220 x 520			14.7

### Part No. SPP-2B-FIR-45

- Feed-in roller guides for underground applications
- Sealed roller bearings

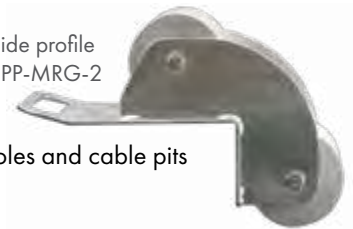
Part No.	Roller Material	Max cable Dia. (mm)	WLL (kg)	Dimensions (mm)			Wt (kg)
				Length	Width	Height	
SPP-2B-FIR-45	Zinc Plated Steel	195	500	1050	600	450	22

## Manhole Roller Guides - SPP

### Part No. Various

- Right angle corner to assist with laying cables into manholes and cable pits
- Anchoring points in base plates if required
- 140mm aluminium rollers

Side profile  
SPP-MRG-2



Part No.	Roller Configuration	Bend Radius (mm)	Wt (kg)
SPP-MRG-1	Single Fixed	-	6.5
SPP-MRG-2	Double Fixed	260	8.5
SPP-MRG-3	Triple Fixed	320	12.7
SPP-MRGP-3	Triple Pivoting	320	13.0

## Sheave, Cable Feeding - Lockable

### Part No. Various

- Made from Zinc Plated Steel with Aluminium Roller
- Split design allows easy removal after cable installation
- Designed to suit Cable Exit or Entry
- Lockable to conduit by expansion screw



Part No.	Neck OD (mm)	Suits Conduit ID (mm)	Split Feature	Dimensions (mm)	Wt (kg)
SPP-LFS-080	74	80	Hinged	375 (L) x 190 (W) x 160 (H)	4.15
SPP-LFS-100	98	100		365 (L) x 190 (W) x 190 (H)	5.30
SPP-LFS-125	118	125		390 (L) x 195 (W) x 200 (H)	6.05
SPP-LFS-150	138	150		380 (L) x 225 (W) x 220 (H)	6.60
SPP-LFS-200	190	200		460 (L) x 310 (W) x 300 (H)	14.85



### Feeding Sheave Guide with rollers - SPP

#### Part No. Various



Lockable feeding sheaves with 90 degree bend also available - contact TEN for details

Part No.	Description	Max Cable Dia. (mm)	Dimensions (mm)	Wt (kg)
SPP-SRG080-4R	Lockable multiple roller guide for 80mm Telstra and electrical conduit	80	360 x 200 x 170	5.2
SPP-SRG100-4R	Feeding sheave guide with 4 x tubular rollers for 100mm conduits	100	380 x 220 x 180	6.5
SPP-SRG125-4R	Feeding sheave guide with 4 x tubular rollers for 125mm conduits	125	390 x 230 x 260	7.0
SPP-SRG150-4R	Feeding sheave guide with 4 x tubular rollers for 150mm conduits	150	390 x 260 x 280	7.9

### Conduit Slippers & Bell-Mouths

#### Bellmouths Lockable - SPP

##### Part No. Various

- Made from Zinc Plated Steel
- Split design allows easy removal after cable installation
- Designed for cable entry applications
- Allows multi-direction entry into the conduit



Part No.	Neck OD (mm)	Suits Conduit Diameter (mm)	Split Feature	Dimensions (mm)	Wt (kg)
SPP-BM-050E	42	50 Electrical	Dual Wingnut	255 (L) x 120 (W) x 115 (H)	1.1
SPP-BM-050T	48	50 Telco		255 (L) x 130 (W) x 115 (H)	1.3
SPP-BM-063E	48	63 Electrical		255 (L) x 140 (W) x 115 (H)	1.3
SPP-BM-063T	60	63 Telco	Hinged	250 (L) x 117 (W) x 110 (H)	1.3
SPP-BM-080	74	80		250 (L) x 130 (W) x 140 (H)	1.6
SPP-BM-100	98	100		250 (L) x 177 (W) x 155 (H)	2.8
SPP-BM-125	118	125		250 (L) x 200 (W) x 165 (H)	3.4
SPP-BM-150	138	150		250 (L) x 220 (W) x 175 (H)	3.8
SPP-BM-200	190	200		300 (L) x 297 (W) x 260 (H)	9.4

#### Conduit Slipper Guides - SPP

##### Part No. Various

Cable slippers protect cables from sharp corners of conduit during laying. They are robust and economical. Zinc plated finish.



Part No.	Description	Dimensions (mm)	Conduit Nom. OD (mm)	Bending Radius	Wt (kg)
SPP-CS-080	Conduit slipper guide for 80mm conduit	465 x 90 x 150	80	-	1.3
SPP-CS-100	Conduit slipper guide for 100mm conduit	560 x 110 x 180	100	150	2.5
SPP-CS-125	Conduit slipper guide for 125mm conduit	720 x 140 x 230	125	200	4.9
SPP-CS-150	Conduit slipper guide for 150mm conduit	750 x 160 x 250	150	270	5.3
SPP-CSL-080	Conduit lockable slipper guide for 80mm conduit	410 x 160 x 250	80	150	2.5
SPP-CSL-100	Conduit lockable slipper guide for 100mm conduit	550 x 190 x 340	100	200	4.6
SPP-CSL-125	Conduit lockable slipper guide for 125mm conduit	680 x 220 x 410	125	270	6.8
SPP-CSL-150	Conduit lockable slipper guide for 150mm conduit	720 x 250 x 450	150	270	7.2



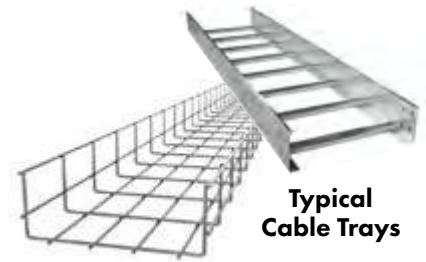


## Rollers - Cable Tray

### Box Style Cable Tray Roller - SPP

**Part No. SPP-3A-100**

- Quick mount box style cable tray roller
- 42mm x 100mm roller



Typical Cable Trays

### Cable Tray Roller - SPP

**Part No. SPP-3A**

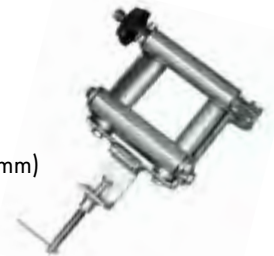
- Quality aluminium or Nylon roller complete with bearings
- Easily adaptable for a variety of uses, low profile
- Ideal for cable or ladder tray work
- Remove legs to convert to "Flat Trench Rollers"

Part No.	Roller Material	Max cable Dia. (mm)	Dimensions (mm)	Wt (kg)
SPP-3A-140L	Nylon	150	600 (L) x 260 (W) x 150 (H)	3.8
SPP-3A-140AL	Aluminium	150	600 (L) x 260 (W) x 150 (H)	4.7

### 4-Way Cable Tray Roller - SPP

**Part No. SPP-TR-605R**

- 5 bar rollers with sealed bearings
- Mounting bracket suits cable ladder and cable tray (1mm to 50mm)
- Large wind in dials for easy opening and closing
- Zinc plated



Part No.	Max cable Dia (mm)	Dimensions (mm)	WLL (kg)	Wt (kg)
SPP-TR-605R	80	125 (L) x 260 (W) x 360 (H)	200	4.45



### 90° Cable Tray Trapping Roller - iTOOLco

iTOOLco's 90° Trapping Tray Rollers install in three easy steps and are compatible with most trays. Navigating difficult corners is a snap with 90° Trapping Tray Rollers.

Two Trapping Tray Rollers of the same size combine to encase conductors and handle elevation changes. Opens and closes from either side providing the utmost job-site flexibility.

Part No.	Description	Dimensions (mm)	Weight (kg)
TR9005	127mm - 90° Tray Roller	241L x 140W x 254H	4
TR9010	245mm - 90° Tray Roller	356L x 140W x 254H	6.4

Replacement Underpins - SP-181

### Cable Tray Roller - iTOOLco

iTOOLco's 127mm Cable Tray Rollers install in three easy steps and are compatible with most trays. Secures in place with two locking underpins.

- Withstands cable pulling loads of up to 909kg\*
- Each roller rides on rated bearings
- Steel welded frame
- Handle a variety tray types
- Can install above or below the tray

Part No.	Description	Dimensions (mm)	Weight (kg)
TRST05	127mm Roller, ½ inch Bolt with 2 Locking Underpins	165(L) x 51(W) x 216(H)	1.8
TRST10	254mm Roller, ½ inch Bolt with 2 Locking Underpins	317.5(L) x 51(W) x 216(H)	3.9

Replacement Underpins - SP-181





### Cable Tray Threaded Rod Mount - iTOOLCO

Mount two brackets above or below your tray on the threaded rod, install the framing member, and attach the tray roller. (Sold in pairs)

- 3/8" and 1/2" or 5/8" and 3/4" sizing with all thread slots for easy setup
- Mounting clamp ensures safe & secure feeding
- Clamping bolt keeps bridge secure
- Mounting pocket allows for a quick and simple connection



Part No.	Description	Dimensions (mm)	Weight (g)
TRM500	Suits 3/8 & 1/2" Threaded Rod	100 (H) x 89 (W) x 76 (L)	910
TRM750	Suits 5/8 & 3/4" Threaded Rod		



### 4-Way Cable Tray Roller - Current Tools

Current Tools 4-Way trapping roller mounts quickly and easily to the cable tray with the quick release ratchet strap. 100mm opening and flip-top head allows for easy access for cable setting.

- Quickly and easily mounts to cable tray with included ratchet strap
- Securely attaches to most styles of cable tray from 300 to 900mm wide
- Roller assembly has 100mm opening and can be quickly repositioned
- Designed for multi-directional pulling
- Provides low friction wire pulling to ease the load on cable puller
- No loose parts
- Made in the USA

Part No.	WLL (kg)	Suits Tray (mm)	Wt (kg)
9544CR	90	300 to 900	9.1

### Straight Cable Tray Roller - Current Tools

Current Tools straight cable tray rollers mount quickly and easily to the cable tray with the 2 supplied J-hooks.

- Installs through bottom of tray for easy removal after installation
- Individual rollers keep rolling with each cable even after several cables have been installed
- Welded steel frames
- Length adjustment slots
- Long life steel ball bearing rollers
- Each roller supplied with 2 each J-hooks and hardware
- Made in the USA

Part No.	Opening (mm)	Suits Tray (mm)	Wt (kg)
9518SR	160	300 to 450	3.4
9524SR	315	510 to 610	4.1

Other sizes available upon request

### Radius Cable Tray Roller - Current Tools

Current Tools radius cable tray rollers are ideal for tray corners and junctions. They mount quickly and easily to the cable tray with the 2 supplied J-hooks.

- Multiple Individual rollers keep rolling with each cable even after several cables have been installed
- Welded steel frames
- Long life steel ball bearing rollers
- Length adjustment slots for different tray widths
- Each roller supplied with 2 J-hooks and hardware
- Made in the USA

Part No.	Opening (mm)	Suits Tray (mm)	Wt (kg)
9518RR	138	300 to 450	4.6
9524RR	138	510 to 610	4.8

Other sizes available upon request





**MADE IN THE USA**



## Sheaves and Guides - Hook Style

### Hook Type Sheaves - Current Tools

#### Part No. Various

- 1814kg (2000lb) capacity
- Forged steel hooks with 25mm opening
- Welded steel frames
- 127mm wide aluminium sheaves with self-lubricating bearings
- EZ\* opening - Scan or Click QR-Code

Part No.	Diameter (mm)	Width (mm)	Wt (kg)
406	152	127	5.2
412EZ*	305		8.4
418EZ*	457		12.7
424EZ*	610		17.2

#### Part No. 812/818/824/836

- 3628kg (4000lb) capacity
- Forged steel hooks with 35mm opening
- Heavy duty welded steel frames
- Self-lubricating bearings

Part No.	Diameter (mm)	Width (mm)	Wt (kg)
812	305	127	10.9
818	457	152	20.9
824	610	165	31.4
836	914	171	45.9

**EZ Opening for easy cable installation & removal. See QR-Code below**



### Right Angle Twin Yoke Sheave - Current Tools

#### Part No. 4424

- 1814kg capacity
- Forged steel hooks with 25mm opening
- Yokes rotate independently for various setups
- Welded steel yoke frames
- 127mm wide aluminium sheave with self-lubricating bearings
- Weight 22.7kg



### Triangle Sheave Cable Guide- Current Tools

#### Part No. 333

- 2950kg capacity
- Adjustable center sheave to vary pulling radius from 495mm - 915mm
- Pinned steel yoke for easy removal
- Aluminum frame for light weight
- Weight 11.8kg
- EZ\* opening - See QR-Code



### Radius Twin Yoke Sheaves - Current Tools

#### Part No. Various

- 1814kg capacity
- Heavy duty design with aluminium sheaves and frame for light weight
- Sheaves spaced to prevent cable damage
- Aluminum sheaves 127mm wide with self-lubricating bearings
- EZ\* opening - See QR-Code

Scan or Click to View EZ\* opening video

Part No.	Sheave Radius (mm)	Number of Sheaves	Wt (kg)
9224	610	6	30
9236	915	9	39
9248	1220	12	47





### Duct / Conduit Rodders

#### Traceable Duct Rodder - 4.5, 6, 9 & 11 mm - SPP

##### Part No. SPP-DR-Series

Utilised to prepare for cable installations in Electrical & Telecommunication conduits ranging from 20 to 200mm OD. The tough flexible rod is ideal for pushing or pulling draw ropes and small cables through conduits / ducts.



11 mm Rod & Reel



9 mm Rod & Reel



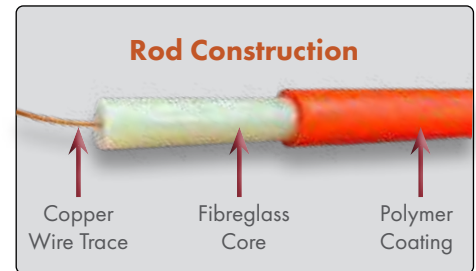
6 mm Rod & Reel



4.5 mm Rod & Reel

#### Features

- Quality Fibreglass rod coated with abrasion resistant UV stable polymer
- All sizes supplied standard with an internal copper wire for traceability.
- Supplied with Stainless Steel End Fitting & Removable Pulling Eyes for 6, 9 & 11 mm
- Brass End Fitting & Removable Pulling Eyes for 4.5 mm
- 9 & 11 mm Reels are Powder-coated and fitted with a Drag Brake and Wheels
- 4.5 & 6 mm Reels are Galvanised
- All Rodders include a Jointing/Repair Kit in pouch attached to the Reel (details below)
- Full range of Accessories available (detail below)



#### Rod Construction

Copper Wire Trace, Fibreglass Core, Polymer Coating

#### Jointing Kit Components (Included with Rodder)



#### Ordering Information

Rodder Part No.	Rod OD (mm)	Rod Length (m)	Jointing Kit Part No.	Jointing Kit Components
SPP-DR4.5-60	4.5	60	SPP-JK4.5	1 x Joiner 1 x Rod End 1 x Pulling Eye 2 x Allen Keys - 6, 9, 11 mm Rod 1 x Glue 1 x Rubber Rod Grip
SPP-DR6-60	6	60	SPP-JK6	
SPP-DR6-100	6	100	SPP-JK6	
SPP-DR9-100	9	100	SPP-JK9	
SPP-DR9-200	9	200	SPP-JK9	
SPP-DR11-200	11	200	SPP-JK11	
SPP-DR11-300	11	300	SPP-JK11	

\*Nominate Length of rod required - Supplied with Rod Ends



#### Accessory & Jointing Kit Pouch (Included with Rodder)

#### Accessories

Part No.	Rod Grip	Rod End	Pulling Eye	Swivel Rod End	Rod Joiner	Flexible Guide	Roller Guide
	SPP-RG	SPP-RE-*	SPP-PE-*	SPP-SRE-*	SPP-RJ-*	SPP-FG-*	SPP-RG-*
Image							

\*Nominate Rod Size

Other Accessories Available, Contact TEN for further information

## Conduit Cleaning - Wire Brushes and Squeegees

### Wire Brushes - SPP

#### Part No. Various

- Clean debris from the inside of conduits or ducts (50 to 200mm) before cable hauling/pulling
- Welded eyes for rope attachment
- Galvanised

Part No.	Description	Approx Equipment OD (mm)	Suit Conduit Size (mm)
SPP-WB-050	Wire Brush	55	50 Electrical
SPP-WB-063		70	63 Electrical
SPP-WB-080		90	80
SPP-WB-100		110	100
SPP-WB-125		130	125
SPP-WB-150		160	150
SPP-WB-200		230	200



Contact TEN for Telecommunications Duct Cleaning Needs

### Rubber Conduit Cleaner - SPP

#### Part No. Various

- Cleans finer dirt and debris from conduits or ducts (50 to 200mm). For larger or stubborn debris, use wire brush (SPP-WB) first
- Welded eyes for rope attachment.
- Galvanised finish with 5 rubber squeegees

Part No.	Description	Approx Equipment OD (mm)	Suit Conduit Size (mm)	Wt (kg)
SPP-RCC-050E	Rubber Conduit Cleaner	46	50 Electrical	0.35
SPP-RCC-063E		58	63 Electrical	0.40
SPP-RCC-080		85	80	0.95
SPP-RCC-100		105	100	1.50
SPP-RCC-125		130	125	2.35
SPP-RCC-150		155	150	2.90
SPP-RCC-200		205	200	5.05



### Rubber Lubricant Spreader - SPP

#### Part No. Various

- Used to spread Lubricant through conduits or ducts (50 to 200mm)
- Galvanised finish with rubber squeegees

Part No.	Description	Approx Equipment OD (mm)	Suit Conduit Size (mm)	Wt (kg)
SPP-RLS-050E	Rubber Lubricant Spreader	46	50 Electrical	0.15
SPP-RLS-063E		58	63 Electrical	0.20
SPP-RLS-080		85	80	0.45
SPP-RLS-100		105	100	0.60
SPP-RLS-125		130	125	0.75
SPP-RLS-150		155	150	0.95
SPP-RLS-200		205	200	1.30



See pages B28 & B29 for the range of Polywater Lubricants

### Conduit Proving Mandrels

#### DUCT Proving Mandrels - SPP

##### Part No. SPP-PM-Series

Used for testing circular integrity of Conduits before cable Hauling

##### Features

- Manufactured standard with Stainless-Steel Wire Rope and Thimbles or Stainless-Steel Eye Nuts & Threaded Rod attachments to secure ropes for cable hauling
- Ideal for testing NBN & Telstra ducts or conduits
- Tests electrical and communications conduits
- Made from high quality HDPE material for long life and lubricity



50mm Proving Mandrel  
SPP-PM-50E



80mm Proving Mandrel  
SPP-PM-080



Stainless Steel Eye Nut & Threaded Rod



Stainless Steel Wire Rope, Thimble & Ferrule

Supplied with Stainless Steel Fittings

### STAINLESS STEEL eye fittings means extended service life

Part No.	Conduit Size (mm)	Conduit Type	Mandrel Length (mm)	Mandrel OD (mm)	Overall Length (mm)	Wt (kg)	Eye Fitting (mm)
SPP-PM-18		Telco	40	18	115	0.05	2 <sup>1</sup>
SPP-PM-24		Telco	40	24	115	0.05	2 <sup>1</sup>
SPP-PM-28		Telco	60	28	160	0.05	3.2 <sup>1</sup>
SPP-PM-32		Telco	60	32	180	0.05	3.2 <sup>1</sup>
SPP-PM-38		Telco	60	38	180	0.07	3.2 <sup>1</sup>
SPP-PM-50T	50	Telco	80	47	145	0.15	6*
SPP-PM-63T	63	Telco	100	60	180	0.30	8*
SPP-PM-50E	50	Electrical	80	40	200	0.10	3.2 <sup>1</sup>
SPP-PM-63E	63	Electrical	100	52	180	0.25	8*
SPP-PM-080	80	Electrical	180	74	260	0.75	8*
SPP-PM-100	100	Electrical	180	90	275	1.10	10*
SPP-PM-125	125	Electrical	245	113	340	2.20	10*
SPP-PM-150	150	Electrical	245	130	340	2.85	10*
SPP-PM-200	200	Electrical	280	184	375	5.80	10*

1 = Stainless Steel Wire & Thimble - \* = Stainless Steel Eye-Nut



## Conduit Blowing

### Electric Blower Kit

#### Part No. EBK2-1300

This high volume, low pressure blowing system is used to blow a balloon type bag attached to a draw line or string down a conduit. The draw line is then used to pull a heavier hauling rope back to your start position. This system can easily rope a 100mm conduit 300-500 metres. Dual stage motors, 230VAC/50Hz Electric Power Blower. 1300W delivering approximately 3.5 cubic metres of air per minute.

Kit includes:

- 1 x Blower EBK2-1300
- 5m x 50mm hose EBP-5M50
- 1 x Hand-Gun EBH-30
- 1 each Conduit Seal off



Part No.	Description
EBK2-130K	Complete blowing kit
EBK2-1300	Blower unit only (11.9kg)
ECS-12	Conduit seal off for 12-40mm
ECS-50	Conduit seal off for 40-70mm
ECS-110	Conduit seal off for 70-160mm
EG-3, EG-5, EG-7	Rope grommets 3/5/7mm



## Condux Power Dart Blower

#### Part No. 08030004

The Condux Power Dart Blower is a pneumatic rodding system especially suited for long duct runs.

A three-motor system allows you to choose the correct pressure output for your needs. With all three motors engaged, the Power Dart Blower will deliver a market leading 300cfm (8.5m<sup>3</sup>/min) of air at 3psi maximum pressure.



- Compressed air system for long duct runs in up to 152mm diameter conduit
- Blow 13mm line or measuring tape over 610m
- Three-motor system allows choice of speed
- Can deliver up to 300cfm/8.5m<sup>3</sup>/min of air at 3psi/0.2bar maximum pressure
- Main unit weighs only 14kg
- Operates at 220V



**3 Motor System  
for complete control  
and maximum distance**



### Line Carriers - Rubber

**Part No. Various**

Flexible rubber duct projectile cones are durable for many repeated uses. These projectiles are fast & efficient for long runs with easy pull back.



### Line Carriers - Plastic

Fast and efficient plastic missile line carriers for conduit fishing with high speed blowers even in/out of round duct.



### Foam Carriers

**Part No. Various**

Lightweight foam conduit line carrier easily blows through duct. Best suited for short runs and runs with multiple bends.



### Chute Carriers

**Part No. Various**

Tie a line or webbing to a chute, insert the chute into the conduit or duct, and blow compressed air propelling the chute to the end of the duct.



### Accessory Bag

A convenient canvas bag holds the power dart hose, and an additional inner bag holds the Line Carriers, Foam Carriers, Seal-off Body and Seal-offs.

### Poly Blowing Line

**Part No. Various**

Blow through conduit attached to darts

Duct Projectile Options	
Part No.	Size (mm)
08031820	51
08031830	76
08031840	102
08031850	127
08031860	152
08031880	203

Line Carrier Options	
Part No.	Size (mm)
08067900	51
08030100	76
08030300	102
08030400	127
08030500	152

Foam Carrier Options	
Part No.	Size (mm)
08032200	25
08033600	30
08039800	38
08032400	51
08032500	76
08032100	90
08032600	102
08059100	127
08059200	152

Chute Carrier Options	
Part No.	Chute (mm)
08033532	51 Nylon
08033548	76 Nylon
08033564	102 Nylon
08033580	127 Nylon
08033596	152 Nylon

Part No.	Description
08030060	Power dart blower accessory bag

Part No.	Description
08561285	Poly Line Pail 1981m, 890N BL
08561297	Poly Line Pail 762m, 2002N BL
08073900	Poly Tape 914m, 578N BL

## Cable Installation & Handling Equipment

### Drum Jack Stands - Scissor - SPP

Part No. SPP-DJ-Series

2T Jack shown  
Part No. SPP-DJ-2T



#### Features

- Collapsible design for easy transport and storage
- Bolt-down points for secure and permanent fixing
- Can be set-up on uneven ground, as drum can be leveled with by adjusting one side
- Nylon wheels and handle for easy maneuverability
- Significant reduced pinch points
- Reinforced retaining cup and sealed bearing for threaded spindle
- Jacks labeled with ratings
- Easy wind up design with handle or hex head for fast winding with rattle gun
- Powder-coated finish
- Supplied with two spindles
  1. Jack joining spindle for rigidity during operation
  2. Drum spindle and placement collars to hold drum during operation



Wheels and handle for easy maneuverability

Bolt-down points for secure and permanent fixing



Easy wind design with handle and hex head for a faster winding action with rattle gun



Jack shown folded for storage & transport

#### Ordering Information

Part No.	Spindle OD & Wall thickness (mm)	Min/Max Drum Diameter (mm)	Max Drum Width (mm)	WLL (kg)	Suitable for	Wt per Set (kg)
SPP-DJ-2T	60 / 5	1800	1180	2000	1 to 2T Drums	90
SPP-DJ-4T	70 / 8	1400/2400	1180	4000	2 to 4T Drums	180



### Reel Jacks™ Drum Stand - iTOOLco

#### Part No. RJ6K

iTOOLco's Reel Jacks™ make cable pulls run smooth and easy. These innovative drum jack stands have four sealed bearings that capture the axle to prevent the drum from traveling during the pull.

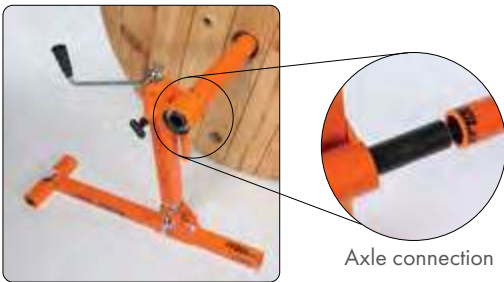
#### Features

- Closed head traps axle preventing it from falling out or traveling horizontally
- Separate sides allow the jacks to be used safely on uneven ground
- Easily folded for storage and transportation
- Can be used with 560 to 1675mm drums
- Easy to carry at 16kg per side
- For use with iTOOLco Axles - see below "Axle Specs" for details
- Set up in less than 1 minute
- Four bearings make wire pulling smooth and easy
- No drills or extra tools required



Supplied as a set of 2

Capacity  
**RJ6K-AX02**  
 2.7 Tonne  
**RJ6K**  
 1.3 Tonne



Axle connection



CLICK or SCAN  
 for Reel Jack  
 Stand Video



Separate Stands and height adjustment allows for use on uneven ground

### Real Jacks™ Stand Specifications

Part No.	Description	Spindle	WLL (kg)	Min/Max Drum Diameter (mm)	Dimensions per side (mm)	Wt per Set (kg)
RJ6K-AX02*	Real Jack Drum Stand	AX02	2700	560 to 1675	940L x 254W 290H (Folded) 978H (Assembled)	32 (Without Axle)
RJ6K		AX08	1300			

\*RJ6K-AX02 Includes axles AX02 & AX08

### Jack Rack™ For Reel Jacks - iTOOLco

#### Part No. JR01

Transport multiple sets of Real Jacks jack stands & Real Axles easily.

- Transport 5 Sets of Jacks and Axles at Once
- Fits Through 30 inch Doorways
- Made From Sturdy US Steel
- Convenient Fixed Handle for Hand Trucking About The Job Site
- Heavy Duty Caster with Brakes



Part No.	Length (mm)	Height (mm)	Width (mm)	Weight (kg)	Capacity
JR01	1041	1143	711	38.5	Up to 5 sets of Real Jacks™

**iTOOLCo.**



### Reel Tender™ Rope Tender - iTOOLCo

**Part No. RT01**

The iTOOLCo Reel Tender is a smarter rope tender. Light and maneuverable, it's easy for one person to set up and transport. It can also be used horizontally or vertically making it flexible on the job.

- Saves time
- Crank handle for faster re-spooling
- Prevents injuries from lifting and handling rope
- No more lifting heavy wire spools
- Axle-less technology
- Multi-directional
- Rolls over rough terrain on job site
- Keeps expensive rope high & dry
- Stores 1 x set of Real Jack Drum Stands

Part No.	Length (mm)	Width (mm)	Weight (kg)	Spool Widths (mm)	Spool Dia.	Weight limit (kg)
RT01	1243-1524	584	173	304-889	304-813	136



### Reel Spool™ - iTOOLCo

**Part No. RS01**

The iTOOLCo Reel Spool is an innovative lightweight steel spool for pulling ropes.

- Holds up to 300 Lbs
- Made from US14 gauge steel
- Stronger than wood spools
- Won't splinter and fall apart
- Works great with iTOOLCo Reel Tender™
- Stores 1 x set of Real Jack Drum Stands

Part No.	Length (mm)	Height (mm)	Width (mm)	Weight limit (kg)
RS01	724	610	610	136

\*Rope not included \*See page B27 for available Rope



### Reel Pallet Jack™ - iTOOLCo

**Part No. RPJ10K**

Deliver and place reels to your final installation point safely and effortlessly. iTOOLCo's Real Pallet Jack are a portable, heavy-duty solution for transporting spools up to 4,545kg (10,000 lb).

Made with all welded steel construction, loading and unloading the Real Pallet Jack is easy. Loading from the drum side minimizes the potential of wire damage from forks. The dual sided gates enable you to

load spools from either side of the jack. Whatever their size, spools automatically center the arbor hole with the spindle—ensuring the spool is perfectly positioned for a quick, smooth payout every time. Maneuverability on the job-site is a snap using a forklift.

- Folded up height of 457mm

**Added Bonus:** Real Pallet Jacks collapse and stack for easy compact storage.



**4.5T Capacity**

RPJ10K shown with side gates open for Drum placement



CLICK or SCAN for Real Pallet Jack Video



Transport Frame Sold Separately



RPJ10K shown with Transport Frame & Castor Set Sold Separately

Part No.	Includes	Max Drum size (mm)	Stored Dimensions (mm)	Jack Extended (mm)	Weight (kg)
RPJ10K	Pallet Jack, Axles & Arbors	990 W x 2150 H	457 H x 1219 W x 1219 D	1410 x 1219 x 1219	127
RPJF01	Pallet Jack Transport Frame	-	330 H x 1295 W x 1270 D	-	59
BCP04	Castor Pack - Heavy Duty	-	485 H x 330 W x 330 D	-	33





### Reel Big Jack™ - iTOOLco

Part No. RBJ20K

iTOOLco's Reel Big Jacks™ are an innovative jack stand for transporting and feeding heavy spools of wire. Real Big Jacks™ feature fork lift slots for easy lifting and movement about the site and can accommodate spools up to 3.05m (10') diameter x 1.83m (6') wide (standard unit), and weighing 9090kg (20,000lb). with a uniquely patented design that allows these heavy spools to spin easily, a power feeding unit is typically not needed.

With the addition of the Real Big Jacks™ Expansion & Axle Kit, Real Big Jacks™ will accept spools up to 2.24m (88") wide & 3.05m (10') Tall.

- Forklift from all 4 sides
- Pull Cable from almost anywhere including a trailer
- Axle rides on 4 rated bearings

**9.0T Max Capacity**



RBJ20K shown with axle set-up



RBJ20K pockets for forklift tynes



RBJ20K jack lifting point

Part No.	Description	Includes	Dimensions (mm)	Drum Dimensions (mm)/ Capacity (kg)	Weight (kg)
RBJ20K	Reel Big Jacks	Pallet Jack & 2 x Axle Collars	1473L x 1676W x 1753H on wheels x 1676H off wheels	On Wheels - 2134H x 1524W / 4545 Off Wheels - 3048H x 1524W / 9090	255
AX04	Reel Big Jacks Axle (Sold Separately)	Axle (Uncoated)	2133L x 76.2D	1829W / 4545	57
RBJA01	Reel & axle Kit (Sold Separately as Kit)	1 x Inner telescopic tube 1 x Solid Axle 2 x Axle Collars	-1830 to 2286L - 3048L x 76.2D - NA	Max 2235W / 9090	NA

### Reel Axles™ - iTOOLco

Part No. AX-Series

iTOOLco's Real Axles are the industry's best axles for wire pulling jobs. With high chromium content, Real Axles are durable and work perfectly with the Real and Roll Jacks.



Part No.	Description/Suits	OD x Length (mm)	Weight (kg)	Capacity (kg)	Max Reel Width (mm)
AXS01	Solid - Powder Coated / RJ6K	30 x 1829	16.3	1360	1448
AX02	Tube - Powder Coated / RJ6K	70 x 1829	20.4	2721	1448
AX03	Tube - Powder Coated / RJ6K	70 x 1524	20.4	2721	1143
AX04	Tube - Galvanised / RJ6K / RBJ20K	76 x 2133	57.6	4545	1829
AX08	Tube - Galvanised / RJ6K	60 x 1015	6.0	1360	560

Custom length Axles available. Contact TEN for further information.



**iTOOLCO's All Jack™ Lifts and Hold your workpiece in place to free up your hands, increasing productivity**



One handed gas shock holds work piece in place



Perfect for overhead work support conduits and cable tray

## Material Handling Equipment

### iToolco All Jack™ - iTOOLCO

Part No. AJ01

#### Features

Increase productivity and decrease fatigue using iTOOLCO's All Jack™. Install conduits & pipe, cable tray, lights, switchboard cabinets and panels, gyprock and much more with this innovative jack designed to lift and support the weight of your workpiece while you anchor it into position. High ceilings and ladder work are not a problem for this dynamic tool. Reach from 1.47m to a staggering height of 4.15m.

The industrial gas shock ensures a snug, stable support that stays in place while you complete the installation. Once your workpiece is secured into place, simply remove the All Jack™ by releasing the shock. More powerful than a typical support pole, the All Jack's gas shock can handle your most challenging jobs.

#### VERSATILE HEAD WITH BUILT IN SCREW JACK

Pre-drilled holes for field customization & a built in V-groove to capture conduit or pipe

**GAS SHOCK LEVER**  
For quick one handed lifting operation up to 9kg

CLICK or SCAN for All Jack Instruction Video



**120MM EXTENSION**  
Stores on cart

**LOCKING PINS**  
When locked All Jack™ can be used as a screw jack to support 79kg

**EXTENSION HOLDER**  
is also a universal bracket for mounting to ladders or lifts

**Includes Support Rods, Extra Holding Bands & Carry Bag**

**ANIT-SLIP PADDING**  
with anchoring holes in base

**FAST ADJUSTMENT**  
to meet your angle requirement

**SUPPORT RODS**  
for Dome Fixtures



AJA01



AJA02



AJA03

#### All Jacks™ & Accessory Ordering Information

Part No.	Description	Capacity (kg)	Height (mm)	Weight (kg)
AJ01	Workpiece support	Quick Lift 9 Locked as screw jack 79	Collapsed - 1.47 Extended - 4.15	11.34
AJA01	Drywall support		310L x 107W	0.91
AJA02	Pipe & Stud Holder		203L x 42W	0.61
AJA03	Adjustable Fence Support		407L x	1.6
AJAK01	All Jack Accessory Kit (AJA01-02-03)			3.12

### Cable Drum Handling Equipment

#### A Frame Cable Drum Stands



- Various sizes, styles available
- 1.5 Tonne up to 30 Tonne
- Power pack and braking options
- Contact TEN with your requirements



#### Reel Roller - Current Tools

##### Part No. 610



Sold individually  
Two required

- Easy set-up for ground level cable reel payout
- Integral ramp for reel loading
- Roller lock for reel removal
- 5-position roll adjustment for various reel diameters
- Heavy duty permanently lubricated ball bearing rollers
- Made in the USA

Part No.	Dimensions (mm)	Max Drum Dia. (mm)	Max Drum Width (mm)	Max Drum Wt (kg)	Reel Roller Wt (kg)
610	267 x 642	-	1065	900per pr	18.2 ea



#### Reel Roller - Current Tools

##### Part No. 613

- Easy set-up for ground level cable reel payout
- Integral ramp for reel loading
- Roller lock for reel removal
- 5-position roll adjustment for various reel diameters
- Heavy duty permanently lubricated ball bearing rollers
- Made in the USA

Part No.	Dimensions (mm)	Max Drum Dia. (mm)	Max Drum Width (mm)	Max Drum Wt (kg)	Reel Roller Wt (kg)
613	806 x 940	-	762	1100	34



#### Cable Reel Roller - Current Tools

##### Part No. 615

- Heavy duty all welded construction
- Handles up to 13.6 Tonne cable reels
- One roller adjusts for various reel sizes
- Speed control adjustment
- Foot control for remote operation
- Heavy duty 10 amp. motor\* for long service life
- Convenient fork sockets on sides
- Made in the USA

Part No.	Dimensions (mm)	Max Drum Dia. (mm)	Max Drum Width (mm)	Max Drum Wt (kg)	Unit Wt (kg)
615	3100 x 1550	3650	2400	13,600	1275

\* 110v motor - Transformer required



### LANCIER



EKR350



EKR700



## Cable Pusher - Lancier

### Part No. Various

- Used for underground cable pushing
- Installation forces are applied evenly across cable with caterpillar track pusher, rather than being pushed via wheel
- Suitable for narrow trenches
- Can be linked in series
- Optional multiple unit control available

### Benefits

- Providing supplementary pulling and pushing force when laying heavy cables
- Optimum and gentle transmission of power to the cable
- Suitable for narrow trenches
- No cabling winches necessary in cascade connection
- Length measuring device
- Electric switch for reversing direction of push
- Integrated Disc brake

### Field of use

The caterpillar cable-roller is used for laying delicate underground cables which are sensitive to pulling-tension and surface pressure. It may be used as a cable forward feeding roller either in association with a cabling winch, to reduce the pulling tension on the cable, as a cable-laying roller on its own or to assist in drum payout.

Several EKR's are needed at intervals along the cable track to provide an effective reduction in the pulling tension experienced by the cable. The number required will depend upon how sensitive the cable is to pulling tension and the difficulty of the track.

Part No.	EKR 350	EKR 700
Max Pulling/Pushing (kN)	3.5	7kN
Max Speed (m/min)	10	10
Cable Ø (mm)	30 - 150	30 - 150
Engine Type	Electric	Electric
Engine Output (kW)	1.1	1.5
Operating Voltage	400 V, 3-phase, 50Hz 220 V, 50Hz (optional)	400 V, 3-phase, 50Hz
Dimensions (mm)	1100 (L) x 450 (W) x 930 (H)	1720 (L) x 550 (W) x 1100 (H)
Options	Series connection with switch board + cable remote control Cable length measuring device	
Weight (kg)	115	185

**7 & 10kN Hydraulic and 7kN Petrol versions available**  
**Contact TEN for further information**

### Current Tools FOR THE PROFESSIONAL ELECTRICIAN



## Electric Cable Feeder - Current Tools

- Hinged upper drive to allow for easy side loading
- Dual drive motors for maximum grip on cables
- Cable separator guides cables to ensure positive grip on tires
- Heavy duty transport caster with quick release mechanism
- Variable speed control
- Operate with remote pendant or optional foot switch
- Self-lubricating drive chains

Part No.	Model 99
Cable Capacity (mm)	6.3 to 88.9
Total width of all cables (mm)	152.4
Maximum Pushing Force (kg)	Single cable: 113 All cables: 452
Feeding speed (m/min)	0.0 to 11
Wt (kg)	156.5

Requires 110v Transformer



### Rope - Overhead and Underground

#### Telstra - Parramatta Hauling Rope

Part No. Various



- Polypropylene rope, Telstra approved / certified
- 6mm in diameter with 2 Blue and 1 Yellow strand
- Tangle free uncoiling to coil end, no waste



Part No.	OD (mm)	Length (m)	Colour	Break Force (kN)
ROS0614	6	400	Blue/ Yellow	602
ROS0652	6	500		

ROS0652 48 Roll MOQ

#### High Strength Pulling Rope - ROBUS

Part No. Various



More sizes available Contact TEN

ROBUS rope is an ultra-high strength rope developed to meet the need for light but ultra strong ropes.

ROBUS ropes are made from quality HMPE fibre.

- High performance 12 strand braided HMPE rope
- Can be used everywhere where optimal strength vs diameter is required and temperature is normally below 40°C

#### Characteristics

- Extremely high strength
- Light weight
- Abrasion resistant
- Low stretch
- Neutral buoyancy
- Splicable
- Flexible

#### Applications

- Alternate to wire rope
- Winch lines
- Tow lines
- Rigging lines
- Utility line

Polyester Cover available on request

Part No.	OD (mm)	Wt per metre (Per 100m/kg)	Max Break Force (T)
H-54-006*	006	2.3	4.2
H-54-008*	008	3.9	7.0
H-54-0010*	010	7.2	13.1
H-54-0012*	012	9.0	16.3
H-54-0014*	014	10.3	19.5
H-54-0016*	016	13.8	26.0

\*Specify Length in metres

#### Double Braided Hauling Rope - Hampidjan

Part No. DBPR-Series



- Manufactured in Australia with a braided polyester cover over a braided Polyester core
- Ideal for use as winch and tow lines and for pulling cable

#### Characteristics

- High strength
- High UV resistance
- Flexible & Splicable

#### Applications

- Winch, Tow & Rigging lines
- Pulling and stringing line

Lifting Rope with Clevis eyes available - Contact TEN

Part No.	OD (mm)	Wt per 100 m (kg)	Max Break Force (T)
DBPR-12*	12	11.10	3.49
DBPR-14*	14	13.90	4.36
DBPR-16*	16	18.25	5.75
DBPR-18*	18	22.20	6.98
DBPR-20*	20	27.30	8.59
DBPR-22*	22	33.30	10.48
DBPR-24*	24	41.60	13.10
DBPR-26*	26	46.30	14.56

\*Specify length in metres

#### 3 Strand Polypropylene Rope - Hampidjan

Part No. Various



- Higher breaking strength
- Abrasion resistance
- Excellent shock absorption
- Better grip
- Minimal elongation
- Durable and ultraviolet stabilized
- Excellent shape retention
- Strength: wet/dry 100%
- Floats/sinks: Floats
- Elongation: Moderate
- Water absorption: None
- Chemical Resistance
  - Acids: Excellent
  - Alkalis: Excellent
  - Oil/Gas: Very Good

Part No.	OD (mm)	Wt per 100 m (kg) 250m Standard (Coil)	Max Break Force (T)
PPR-12*	12	7.0	2.84
PPR-14*	14	9.0	3.91
PPR-16*	16	12.0	4.90
PPR-18*	18	15.0	5.50
PPR-20*	20	18.0	7.52
PPR-22*	22	22.0	8.45
PPR-24*	24	26.0	10.20
PPR-26*	26	31.0	11.87

\*Specify Length in metres

**Polywater**<sup>®</sup>  
Solutions at work.

## Specific Lubricants Available

- **Fibre Optic**
- **Low-Smoke Zero Halogen**
- **High Water Environments**
- **Cable Blowing**
- **Winter Conditions**

## FULL RANGE OF CABLE LUBRICANTS TO SUIT ALL APPLICATIONS

**Polywater**<sup>®</sup>  
Solutions at work.



### Cable Pulling Lubricant

#### J Lubricant - Polywater

##### Part No. Various

Polywater Lubricant J is a high performance, clean, slow-drying, water-based gel lubricant. Lubricant J provides maximum tension reduction in all types of cable pulling. It is especially recommended for long pulls, multiple-bend pulls and pulls in a hot environment. Lubricant J dries to form a thin lubricating film which retains its lubricity for months after use.

Polywater Lubricant J is a specification-grade lubricant that does not promote flame propagation when used with fire-retardant cables and systems. It is harmless to humans, environmentally safe, compatible with common Australian cable jacket materials, and can be easily applied as part of the unique Polywater® Lubricant Application System.

##### Features

- High performance cable lubricant for heavy cable installations
- Maximum Friction Reduction
- High Cling Factor
- Compatible with common Australian cables
- Temperature Stable
- Non-Combustible Residue
- Specification Grade "J" - The lubricant contain no waxes, greases, silicones, or polyalkylene glycol oils
- Application System available in 'Front End Packs'
- Complete cleanup is possible with water

#### J Front End Pack™ Lubricant - Polywater

##### Part No. J-99 & J-110

The front end pack is a conduit-sized polyethylene bag of lubricant. The Front End Pack™ travels through the conduit on the winch line prelubricating the conduit ahead of the cable being pulled.

Part No.	Description
J-128	3.8L Bucket
J-640	19L Drum
J-DRUM	208L Drum
J-99	950ml Front End Pack Suits 40mm - 75mm Conduits
J-110	1.9L Front End Pack Suits 75mm+ Conduits



CLICK or SCAN for Polywater J Application Video

#### Polywater® Front End Packs lubricate ahead of the cable during the pull





### Universal, Pourable Underground Cable Pulling Lubricant

## PR Lubricant - Polywater

### Part No. Various

Polywater® PR Power Cable Lubricant is a complex polymer liquid lubricant that provides excellent friction reduction.

Perfect for installing cables from the transformer to the service entrance of businesses or homes.

Polywater PR is a stringy, silicone-enhanced liquid that can be poured or pumped into duct.



Bulk 208 litre Drum  
PR-DRUM



19litre Drum  
PR-640

Pourable 3.8litre Bottle  
PR-128



### Features

- Field Friendly: Packaging designed for the installer
- High Shear Resistance: Allows friction reduction even under high sidewall pressure in bends
- Slow Drying: The residue is a thin, slippery film that retains lubricity for months after use
- Compatible with Common Cables: Suitable for use on many cable jackets

Part No.	Description
PR-128	3.8 litre bottle
PR-640	19 litre drum
PR-DRUM	208 litre drum

## LZ Lubricant - Polywater

### Part No. Various

Polywater® LZ offers proven cable compatibility, superior combustion resistance, and an inherently low coefficient of friction.

Polywater LZ should be specified for installations of LSZH/LSHF cable in ducts and where fire propagation is a concern.



Bulk 208 litre Drum  
LZ-DRUM



Suitable for use on  
CPE and CSPE Fire-Retardant  
Cable Jacket

### Features

- Low Friction Coefficient: Maximum tension reduction on all types of cable jackets
- Universal: Suitable for all types of jackets and cable
- Specification Grade: Meets the performance requirements of power and petrochemical plants, mass transit systems, airports, and high-occupancy buildings
- Compatible: Tested on LSZH/LSHF thermoplastic and thermo-set jackets
- Safe: Suitable for use on CSPE and CPE fire-retardant cable jackets



See page 31 for LP-D5 Lubricant Pump

Part No.	Description
LZ-640	19L Drum
LZ-DRUM	208L Drum

Tested on Low Smoke - Zero  
Halogen Thermoplastic &  
Thermoset jackets

**CALCULATE  
AMOUNT of  
LUBE  
REQUIRED**

Click the above to calculate  
the quantity of lube  
required for your project





## Cable Pull Planning Software - Polywater

### Pull-Planner™ 4.0

#### Design Safe and Efficient Cable Pulls with Pull-Planner™ 4.0

Pull-Planner 4.0 makes the planning of small or complex, large-scale cable pulling projects easier and more efficient.

Providing coefficient of friction (COF) guidance to reduce risks during cable pulls.

Calculates maximum pulling and sidewall tensions to reduce joints and avoid cable damage

#### Benefits

- Calculate pulling tensions and sidewall loadings during your job planning
- Provide a detailed pull plan to your client for sign off
- Understand your coefficient of friction and maximise the length of run, based on using a high quality or specification grade lubricant\*
- See the difference in varying coefficients of friction and determine the significant value created using a specification grade lubricant from Polywater
- Resource your job with the most suitable equipment
- Designers can minimise the number of pulling pits required in a cable run, saving considerable time and money
- Calculate the impact of bends, multiple cables, rollers/sheaves, pushing devices and back tension off drums and direction of pull
- Ability to provide a field based COF once the cable pull is complete



### Typical Pull-Planner™ Report

Pull-Planner™ Report

Pull Name: 1C 630mm2 132kV HDPE Cable 150mm Conduit Conduit ID: 150 millimeter(s)      Conduit Fill: 42.4% Total of 1 cable(s) of 1 different type(s) being pulled. Type #1 1 Cable(s)    O.D. of 97.6 mm    weight of 12.8 kgs/m Total cable weight: 12.8 kgs/m Weight correction factor set to: 1 Configuration: Single Cable Jam/Clearance Analysis: Jamming Not Possible	Polywater® J with Jacket: HDPE and Conduit: PVC Pull Detail Summary Total (Cumulative) Bend: 211.6 degrees Total Length Including Bends: 909 meters Conduit Fill 42.4 % Total Cable Weight: 12.8 kgs per meter Conduit Condition: Good	Recommended Quantity : 185 Liters Lubricant Notes Lubricant Best COF Value: 0.090 Un-Lubricated COF Value: 0.390 * Additional lubricant in recommended quantity based on long pull length. * Additional lubricant in recommended quantity based on total degree of bend.
---	--	---

Incoming Tension: 0 kN      Pull COF: 0.11

Seg #	Straight Section Slope (°)	Slope Direction	Straight Section Length (m)	Straight Section COF	Tension (kN)	Bend Type	Bend Direction	Bend Radius (m)	Bend Angle (°)	Bend Length (m)	Bend COF	Tension (kN)	Sidewall Pressure (kN/m)
1	--	--	100.0	0.11	1.38	Horizontal	--	6.00	11.3	1.2	0.11	1.42	0.24
2	--	--	55.0	0.11	2.17	Horizontal	--	6.00	90.0	9.4	0.11	2.61	0.43
3	--	--	212.0	0.11	5.53	Horizontal	--	6.00	33.0	3.5	0.11	5.90	0.98
4	--	--	115.0	0.11	7.49	Horizontal	--	6.00	33.0	3.5	0.11	7.98	1.33
5	--	--	80.0	0.11	9.08	Horizontal	--	6.00	33.0	3.5	0.11	9.68	1.61
6	--	--	215.0	0.11	12.65	Horizontal	--	6.00	11.3	1.2	0.11	12.93	2.15
7	--	--	110.0	0.11	14.45	None	--	--	--	--	0.11	14.45	--

The Pull-Planner™ 4.0 Software uses the cable pulling (tension estimation) equations common in technical studies and included in a number of industry standards. The friction coefficients in the software database are laboratory measurements. A number of field factors can influence the effective coefficient of friction. Engineering judgement and experience should be used in the selection of appropriate friction coefficients for use in the calculations.

### Program for Cable Pulling Tension Calculation and Conduit System Design



\* See previous pages for Polywater's range of Cable Lubricants

SCAN or CLICK to view Polywater's Cable Jacket Coefficient of Friction Test methods



Contact TEN for further information on how the Planner can help your cable pull work better.

## Lubricant Pump / Applicator

### Lubricant Pump - Polywater

**Part No. LP-D5**

Makes Cable Lubricating Clean and Efficient.

A clean and efficient way to pump all types of cable pulling lubricant from 19 to 208L drums. Polywater® LP-D5 Lubricant Pump is a drill-operated, self-priming gear pump. It pumps all varieties of Polywater lubricants directly into conduit or onto cable at optimal rates for different conduit sizes and pulling speeds.

**Features & Benefits**

- **CLEAN**  
Eliminates hand scooping, hand pouring and lengthy clean-ups
- **EFFICIENT**  
Provides labor savings with consistent lubricant and less effort when pulling cable
- **VERSATILE**  
Lubricants can be pumped into vertical or horizontal conduits
- **ADJUSTABLE**  
Works with a 12mm variable-speed drill (not included) to pump at appropriate rate based on cable size and pulling speed
- **CORROSION RESISTANT**  
Solid brass body with stainless steel shaft, which is not affected by water-based lubricants



Part No.	Description	Includes	Pump Rate	Weight (kg)
LP-D5	Drill Powered Lube Pump	1 x Lube Pump 1 x 4.7m discharge hose 1 x Extension tube for 208L drums 2 x lubricant applicators	6L per min.	3

## Conduit / Duct Adhesive

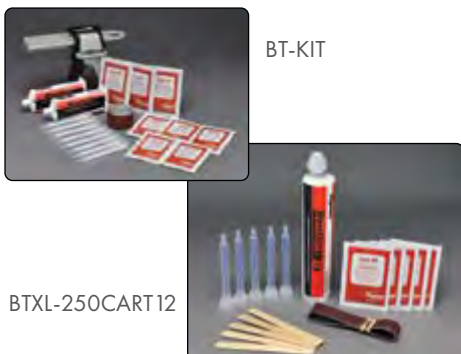
### BonDuit - Polywater

Creates Strong, Watertight and Airtight Bonds with HDPE and Fiberglass Conduit

Polywater® BonDuit® joins polyethylene duct (PE pipe) to PVC, fiberglass, or metal conduits. It is a superior, easy-to-apply alternative to joining conduits with mechanical couplings. The rapid-cure, twopart resin adhesive forms a strong watertight and airtight seal and delivers a durable bond that can withstand movement and vibration. Ideal for installation along roadsides or near electrical equipment like transformers or switchgear.

**Features & Benefits**

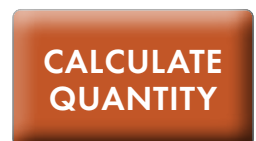
- **VERSATILE**  
Bonds HDPE to PVC, rigid steel, fiberglass conduits and fittings, and transition couplings
- **SUPERIOR**  
Stronger pullout strength than most mechanical couplings
- **COST EFFECTIVE**  
Less expensive than mechanical couplings
- **CONVENIENT**  
Kits contain all application components required for a quick installation



Part No.	Description
BT-KIT	2 x 50 ml Adhesive Cartridges 8 x Mixing Nozzles 1 x Strip Sanding Cloth 8 x Type RP™ Cleaning Wipes (cat# RP-1)
BTXL-250CART12	12 x 250 ml Adhesive Cartridges 12 x Mixing Nozzles 1 x Strip Sanding Cloth 12pr x Gloves 1 x Instruction Sheet



To Watch the BonDuit Application Video SCAN or CLICK the QR-Code



Click the above to calculate the number of cartridges required for your project



## Conduit / Duct Sealant Systems

### AFT Sealant System - Polywater

Polywater® AFT closed-cell sealant provides 10 feet of water-blocking performance in electrical and telecommunication environments. The two-part, closed-cell AFT Sealant is durable and easy to install. AFT has excellent adhesion to a variety of conduits. AFT seals conduits with quicker installation and higher performance compared to duct putty or single-part insulating hardware store foams. The two-part aerosol foam seals any size void and cures without exposure to air. AFT expands and cures to a rigid, closed-cell structure in minutes.

AFT creates an airtight, watertight seal. AFT can be used to seal service entrances, conduit, inner-ducts, inverters and combiners for solar installations, and riser poles for the electrical grid. AFT protects against insects, rodents, moisture, dust, and gases. The package is reusable, and the fire-retardant seal is self-extinguishing.

#### Polywater™ AFT Features

- Quick Installation: 2-minute application time or less.
- Multiple-Use Can: Creates numerous seals in all types of ducts.
- Reliable: Holds 10 feet of continuous water head pressure.
- Durable: Withstands cold temperature applications.
- Removable: Product can easily be removed to replace cable.

**Cable Compatibility:** AFT two-part foam sealant is compatible with common cable jacket materials. It does not change physical or electrical properties of cable, based on tensile/elongation and volume resistivity testing. The cured foam is an inert solid that does not affect cable components.

**Approvals:** AFT is a UL recognized component and passed UL94 with a Class HBF fire retardant rating.

**Cure Rate:** AFT two-part foam sealant can be used at temperatures down to 7°C (45°F). At lower temperatures the reaction slows, but the sealant will completely foam and cure with time. AFT foam expands two times its volume as it is dispensed. Full expansion is complete in under 2 minutes at 21°C (70°F). It will take 3 to 5 minutes to be tack free. During this time do not move cables or touch foam.

**For sealing conduits and risers from moisture, gases and vermin**



To Watch the AFT Application Video SCAN or CLICK the QR-Code

Part No.	Description
AFT-16	1 x 16oz (473ml) can - 2 actuators per
AFT-16P4	4 x 16oz (473ml) can - 2 actuators per
AFT-SAE10	10 pack of actuators with STANDARD extension tube
AFT-FAE10	10 pack of actuators with FLEXIBLE extension tube





To Watch the FST Application Video SCAN or CLICK the QR-Code



# CABLE INSTALLATION EQUIPMENT

## CONTENTS

### FST Sealing System - Polywater

FST™ Duct Seal is a “closed cell foam”, with high density properties, this keeps water, acids, greases, gases, insects and rodents out of the conduit.

The foam has good wetting and adhesion to metals, plastics, and concrete.

#### Features

- FST Duct Sealant™ has 98% closed-cell content for increased strength and resiliency
- FST Duct Sealant™ resists 6.7m of water-head pressure
- FST Duct Sealant™ is compatible with cable and duct materials
- FST Duct Sealant™ is chemically resistant to gasoline, oils, dilute acids and bases, and most unsaturated hydrocarbons
- Prevents the passage of gas; does not sag; will not dry out; and is re-alterable
- Quick: Foam expands and cures quickly even when water is present
- Multi-Use: Packages are resealable

### FST-250KIT1 Duct Sealant - Polywater

#### Part No. FST-250KIT1

FST™ Quick setting Duct Sealant in a 2 part 250ml field ready cartridge kit.

Recommended for conduits 50 to 200mm

Part No.	Kit Includes
FST-250KIT1	1 x 240g two-part Foam Sealant caulking tube style with resealing cap 3 x Mixing nozzles, 4 x 600m Foam damming strips 1 x Position rod, 1 x Pre-treating wipe, Instruction Sheet



Click the below to calculate the number of cartridges required for your project

**CALCULATE QUANTITY**

### FSTBP™ Duct Sealant Burst Pack - Polywater

#### Part No. FSTBP-200KIT1

FSTBP Duct Sealant comes in an easy to use, self-dispensing burst pack.

Ideal for the protection of conduits 125mm to 200mm.

Part No.	Kit Includes
FSTBP-200KIT1	1 x FSTBP-200KIT1-200 Burst Pack 1 x Pair of gloves, 1 x Sanding cloth 4 x Foam Strips, 1 x Prep. Wipes, 1 x Instructions

### FST MINI Duct Sealant - Polywater

#### Part No. Various

#### Effectively Seals Small Conduits and Inner-ducts

Polywater® FST™ MINI is 50ml field ready kit.

Recommended for small conduits 20 to 50mm.



Mixing Nozzle

Part No.	Description
FST-MINI	1 x 50ml FST Cartridge, 2 x Mixing Nozzles, 6 x Foam Discs 1 x Pair of gloves, 1 x Instructions
TOOL-50-11	Application Tool

## TESMEC



### Hydraulic Pullers

#### 15kN Hydraulic Puller - Tesmec

##### Part No. ARS200

The **ARS200** Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of heat treated steel.

Configuration	
•	Negative self-acting hydraulic brake
•	Hydraulic dynamometer with set-point and automatic control of maximum pull
•	On board reel winder with automatic level wind and special reel BOF370 for 500m of 8mm rope

Characteristics	
Bull Wheel dia (mm)	200
Max rope dia (mm)	8.0
Weight (without rope) (kg)	500

Engine	
Petrol (kW)	13 (18hp)
Cooling System	Air
Electrical System (V)	12

Performance	
Max pull (kN)	15
Speed at max pull (km/hr)	0.7
Max speed (km/hr)	3.6
Pull at max speed (kN)	4
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	



MAX PULL

15kN



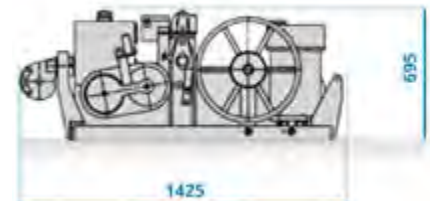
MAX SPEED

0.7km/h



ROPE DIAMETER

8mm



#### 30kN Hydraulic Puller - Tesmec

##### Part No. PL1150

The **PL1150** Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel.

Configuration	
•	New Digital HMI 127mm (5") display
•	Negative self-acting hydraulic brake
•	On board automatic reel winder
•	Pull recorder & Digital meter counter

Characteristics	
Bull Wheel dia. (mm)	350
Max. rope dia. (mm)	13
Mass (without rope) (kg)	980

Engine	
Diesel (kW)	19 (26hp)
Cooling System	Water
Electrical System (V)	12



Performance	
Max pull (kN)	30
Speed at max. pull (km/hr)	1
Max speed (km/hr)	3.2
Pull at max. speed (kN)	10
Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	



MAX PULL

35kN



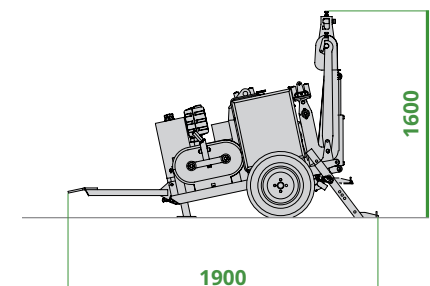
MAX SPEED

3.6km/h



ROPE DIAMETER

13mm



**35kN Hydraulic Puller - Tesmec**

**Part No. ARS403**

The **ARS403** Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel.



Configuration	
•	Negative self-acting hydraulic brake
•	Hydraulic dynamometer with set-point and automatic control of maximum pull
•	On board reel winder with automatic level wind suitable for standard reel BOF010 and BOF020 (AXR001 included)

Characteristics	
Bull Wheel dia (mm)	325
Max rope dia (mm)	13
Weight (without rope) (kg)	980

Engine	
Gasoline (kW)	25 (34hp)
Cooling System	Water
Electrical System (V)	12

Performance	
Max pull (kN)	35
Speed at max pull (km/hr)	1.2
Max speed (km/hr)	3.6
Pull at max speed (kN)	12
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	



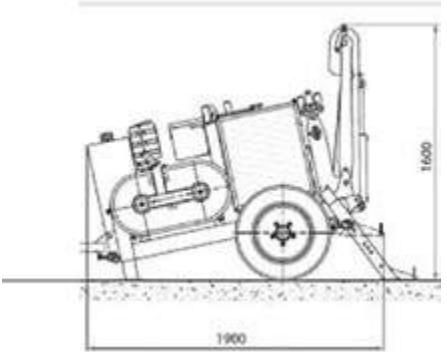
**MAX PULL**  
35kN



**MAX SPEED**  
3.6km/h



**ROPE DIAMETER**  
13mm



**Ideal for Overhead & Underground Projects**

**70kN Hydraulic Puller - Tesmec**

**Part No. ARS523**

The **ARS523** is a light and simple completely electronically controlled Hydraulic Puller.



Configuration	
•	Negative self-acting hydraulic brake
•	Hydraulic dynamometer with set-point and automatic control of maximum pull
•	On board reel winder with automatic level wind suitable for standard reel BOF010 and BOF020 (AXR001 included)

Characteristics	
Bull Wheel dia. (mm)	400
Max. rope dia. (mm)	16
Mass (without rope) (kg)	2100
Number of grooves	7
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	55 (75hp)
Cooling System	Water
Electrical System (V)	12

Performance	
Max pull (kN)	70
Speed at max. pull (km/h)	1.2
Max speed (km/h)	4
Pull at max. speed (kN)	21
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	



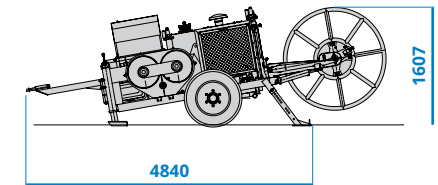
**MAX PULL**  
70kN



**MAX SPEED**  
4.0km/h



**ROPE DIAMETER**  
16mm





### TESMEC

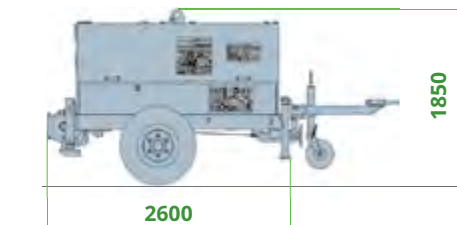
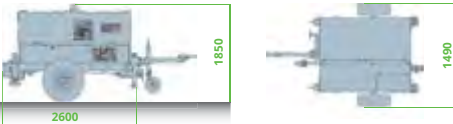


#### NEW DIGITAL HMI\*

The 178mm (7") color display indicates machine working parameters, maintenance records and has integrated pull and speed recorder.

#### REMOTE CONTROL

The radio remote control provides total user machine control while integrating with the new digital user interface.



## All Electric Winch | Cleaner | Quieter | Greener

### 30 & 50kN Battery Puller - Tesmec

#### Part No. PE1150 & PE1250

The Tesmec PE1150 & PE1250 Battery powered pullers are an industry exclusive. With an electric motor, they eliminate the need for hydraulic components such as hydraulic motors, pump and valves, and requires no oil. The unit's silent operation makes it ideal for almost any location, while the electric power system generates zero emissions. The PE1150 & PE1250 delivers a maximum pull force of 30kN & 50kN respectively and offer an advanced user interface and remote control.

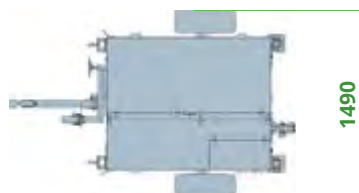
#### Features

- Setting pull value
- Setting reel winder value
- Control of direction and speed of bull-wheels
- Display to check stringing parameters
- Stop Operation push button
- Negative self-acting electrical brake
- Lockable sound proof integrated covers
- Automatic reel winder with automatic level wind
- Earthing connection point
- Mechanical front and rear stabilizers
- Free-wheel device
- Electronic pull value limitation control
- Integrated warm-up system

### 70kN Hydraulic Puller - Tesmec

#### Part No. PM1300

- New Tesmec digital HMI. Automatic re-winder.
- Full sound proof cover. Negative hydraulic brake with automatic intervention.
- Rigid axle 30 km/h.
- Connection point for grounding. Hydraulic front share.
- Neutral system.
- Electronic fire limitation control Integrated heating system.



The perfect Machine for Urban Underground Pulling

Performance	PE1150	PE1250
Max pull (kN)	30	50
Speed at max pull (m/min)	15	10
Max speed (m/min)	70	70
Pull at max speed	5	5
Free wheel max speed (m/min)	70	70

Characteristics	PE1150	PE1250
Bull-wheel diameter (mm)	250	300
Max rope diameter (mm)	11	13
Weight (without rope) (kg)	2350	2500
Number of grooves	8	8
Suitable for	1 rope	1 rope
Layout	Single	Single

Electric Power Pack	PE1150	PE1250
Battery Pack (V)	96	350
Charge Time (Hr @ 230V)	5	5

BATTERY STORAGE CAPACITY	PE1150	PE1250
Rope length recovered		
Working Cycle (Average) (m)	5000	7000
Working Cycle (Max Pulling Force) (m)	1300	1400

Performance	
Max pull (kN)	70
Speed at max. pull (m/min)	7
Max speed (m/min)	70
Pull at max. speed (kN)	5
Free wheel max speed (m/mm)	70

Characteristics	
Bull Wheel dia. (mm)	300
Max. rope dia. (mm)	15
Mass (without rope) (kg)	2500
Number of grooves	8
Suitable for	1 rope
Layout	Single

Electric Power Pack	
Battery Pack (V)	350
Charge Time (Hr @ 208V)	4

## 30kN Hydraulic Puller - Tesmec

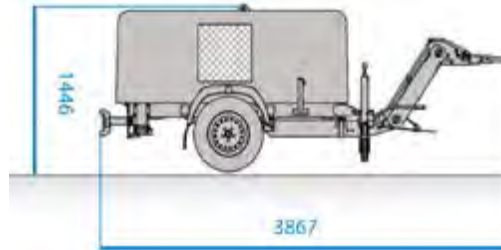
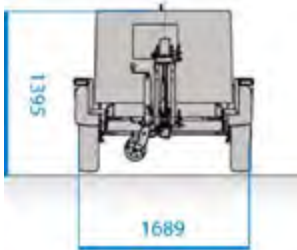
Part No. PM1150

### Features

- Lockable sound proof integrated covers
- Negative self-acting hydraulic brake
- Rigid axle 30 km/h
- Grounding connection point
- Digital metre counter
- Control instruments
- Diesel engine
- Mechanical front and rear stabilisers
- Onboard reel winder with automatic level wind and reel for 1000m of d. 10mm rope



(with ALL112)



Performance	
Max pull (kN)	30
Speed at max. pull (m/min)	13
Max speed (m/min)	42
Pull at max. speed (kN)	9

Characteristics	
Max. rope dia. (mm)	12
Mass (without rope) (kg)	1100
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	18.8 (25.5hp)
Emission level	tier 4f/Stage V
Cooling System	Water
Electrical System (V)	12

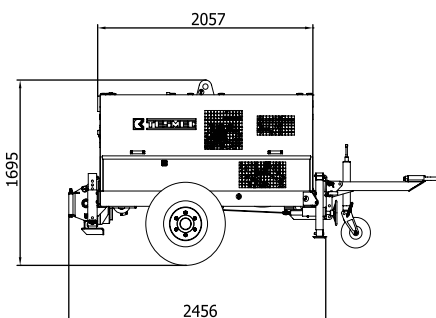
## 50kN Hydraulic Puller - Tesmec

Part No. PM1250

The PM1250 Hydraulic Puller is suitable to string one rope and operates using the latest in technology from Tesmec.

### Features

- Utilises New Tesmec digital HMI\*
- Automatic reel winder
- Lockable sound proof integrated covers
- Negative self-acting hydraulic brake
- Rigid axle - 30km/h
- Earthing connection point
- Mechanical front and rear stabilizers
- On board reel winder with automatic level wind and reel for 700m of 14mm dia. rope
- Free wheel device
- Electronic pull value limitation control
- Hydraulic Transmission: Closed hydraulic system for stepless speed variation in both directions



Performance	
Max pull (kN)	50
Speed at max. pull (m/min)	17
Max speed (m/min)	67
Pull at max. speed (kN)	12.5
Free wheel max speed (m/min)	150

Characteristics	
Bull Wheel dia. (mm)	350
Max. rope dia. (mm)	14
Mass (without rope) (kg)	2000
Number of grooves	7
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	42 (56hp)
Emission level	tier 4f/Stage IIIB
Cooling System	Water
Electrical System (V)	12

\*See Transmission Stringing for further information on "Digital HMI"



## CONTENTS

### iTOOLCo

To Watch the CM3K in action, SCAN or CLICK the QR-Code



## Battery Capstan Winches

### Battery Capstan Winch - 1360kg - iTOOLCo

#### Part No. CM3K

Ideal for Industrial/Commercial applications. Pulling from remote locations is no longer a challenge. This portable 1360kg puller is intuitively designed to handle all of your day-to-day pulls.

Speed, Versatility, and Performance are all yours with iToolco's Battery Capstan Winch.

The built-in capstan switch automatically turns the puller on and off. Simply tug on the rope to start the pull and back off to shut it down.

Delivers dynamic performance in remote locations or areas where power is not yet available.

**Powered by Milwaukee Batteries**



Part No	Ordering information	Dimensions Collapsed (mm)	Dimensions Extended (mm)	Wt (kg)
CM3K	Winch, Conduit Adaptors & Rack Motor, 2 x Batteries, Charger	914 (W) x 686 (H) x 2120 (L)	914 (W) x 686 (H) x 2900 (L)	62.3
Pull Speed		Max Pulling Capacity (kg)		Pull at Max Speed (kg)
Small Capstan	Large Capstan	1360		682
Up to 15.2m/pm - 1360kg	Up to 32.9m/pm - 682kg			

### iTOOLCo

To Watch the UPM3K in action, SCAN or CLICK the QR-Code



### Battery Capstan Winch - 1360kg - iTOOLCo

#### Part No. UPM3K

Ideal for Utility Applications  
Includes Tow-bar Mount

Get high-speed performance and a unique set-up with iTOOLCo's 3K Utility Puller™.

Designed for quick set-up, the 3K Utility Puller's articulating receiver adapter can be positioned 180 degrees vertically or horizontally at the precise angle needed to get the job done.

With this hardworking puller you can transfer heavy pulling loads to the ground within centimeters of the conduit you're pulling through.

For overhead pulls, line guide rollers keep the rope centered on the capstan.

**Powered by Milwaukee Batteries**

Versatile Dual Capstan



Part No	Ordering information	Dimensions Collapsed (mm)	Dimensions Extended (mm)	Wt (kg)
UPM3K	Winch, Milwaukee Motor, 2 x Batteries, Charger	508 (H) x 508 (W) x 1900 (L)	508 (H) x 508 (W) x 2900 (L)	74.1
Pull Speed		Max Pulling Capacity (kg)		Pull at Max Speed (kg)
Small Capstan	Large Capstan	1360		682
Up to 15.2m/pm - 1360kg	Up to 32.9m/pm - 682kg			



**iTOOLco.**



To Watch the CD6K in action, SCAN or CLICK the QR-Code



### Battery Capstan Winch - 2720kg - iTOOLco

#### Part No. CD6K

Ideal for Industrial/Commercial or OH & UG applications. . When 2T is not quite enough and you don't want to drag a big puller around on your vehicle, this iTOOLco winch is the ideal puller.

Speed, versatility, and performance are all yours with iTOOLco's Cordless Cannon 6K™.

This portable 2720kg puller is intuitively designed to handle all of your day-to-day wire pulls.

The built-in capstan switch automatically turns the puller on and off. Simply tug on the rope to start the pull and slack off the rope to shut it down.

Delivers dynamic performance in remote locations or areas where power is not yet available.

**Powered by  
Dewalt  
Batteries**



Part No	Description	Dimensions Collapsed (mm)	Powered by	Wt (kg)
CD6K	Winch, Conduit Adaptors & Rack Motor, 2 x Batteries, Charger	1220H x 546W x 546L	Battery OPERATED 4 speed Dewalt motor	62
Pull Speed		Max Pulling Capacity (kg)	Pull at Max Speed (kg)	
Small Capstan	Large Capstan			
Up to 4.9m/pm - 2720kg	Up to 15.9m/pm - 1360kg	2720	1360	

**iTOOLco.**



To Watch the C12K-230 in action, SCAN or CLICK the QR-Code



**Pulls at  
11m  
Per Minute**

### Electric Capstan Winch

#### Electric Capstan Winch - 5450kg - iTOOLco

#### Part No. C12K-230

Fully self-contained, compact Cannon 12K™ wire puller has a 6-speed 230V reversible motor.

Designed specifically for easy set up to meet job site demands with all parts store on the puller. No large storage box of parts needed.

When extra extensions are used, the wire puller is capable of pulling out 3.9m of wire from the conduit opening.

This cable puller is easy to maneuver, and can be changed quickly from side pulls to overhead or underground.

iTOOLco's Cannon 12K™ pulls at speeds up to 11m per minute.



Part No	Description	Dimensions Collapsed (mm)	Powered by	Wt (kg)
C12K-230	Winch, Conduit Adaptors, Rack & 230V Motor	1730 (L) x 762 (W) x 1450 (H)	230V motor	183
Pull Speed		Max Pulling Capacity (kg)	Pull at Max Speed (kg)	
Small Capstan	Large Capstan			
Up to 4.5m/pm - 5450kg	Up to 11m/pm -2720kg	5450	2720	

## Winches Accessories



### Tripod For 3K and 6K Pullers - iTOOLco

**Part No. TP01**

- Use over manholes and pull boxes/vaults
- Attaches to the Cannon 3 & 6K Cable Pullers
- Utilises Pullers integrated roller system for vertical pulls
- No tools required



Part No.	Description	Dimensions	Wt (kg)
TP01	Tripod Support for 3 & 6K Pullers	914 (L) x 152 (W) x 1651 (H)	16

Puller not included

## Running Line Tension Gauge

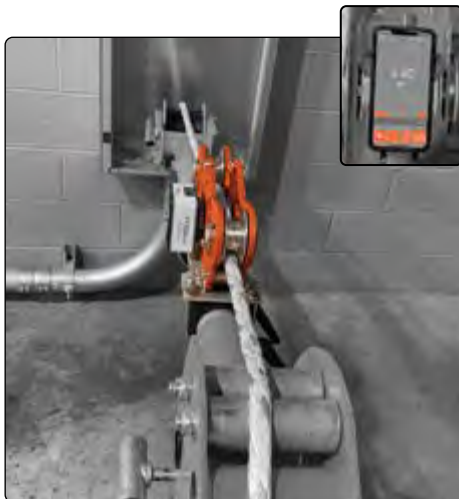
### Running Line Tension Gauge - Safe Pull - iTOOLco

**Part No. SPRLT20K**

**Accurately Monitor Cable Tension & Customer Overload Limits**

- Measure loads up to 88kN (9T).
- Easy Rope Installation with quick release pins
- Accepts rope sizes 4mm to 19mm
- Overhead & Right Angle Pulls
- Smart-Phone App available for Apple and Android platforms
- Light-weight and Durable - Constructed from anodized aluminium.
- No structural Plastic parts
- Mounting Kit Included
- Reads in kN - kg - t - lb
- Accepts AA Batteries (500hr battery life)
- IP67 Rated

**Contact TEN for information on the Smart Phone APP**



To Watch the Tensioner in action, SCAN or CLICK the QR-Code



Part No	Description	Dimensions (mm)	Wt (kg)
SPRLT20K	Running Line Tensioner	422 (L) x 35 (W) x 152(H)	4.6

## Electric Drill Operated Capstan Winch

### Drill Operated Cable Puller - 454kg - Current Tools

**Part No. 11**

This small but powerful Drill Operated Cable Puller offer a maximum pulling capacity of 455kg, weighing in at under 7kg

**Features**

- Designed for one person set-up and operation
- 455kg max capacity with 270kg continuous
- Accepts most 18v cordless drills
- Telescoping boom easily extends over 1 m in length
- Quickly unload poly-line with removable capstan plate
- For use with any size conduit from 13 to 100mm
- Adapter coupling for adding stabilizing leg



Part No	Description	Capacity (kg)	Powered by	Wt (kg)
11	Drill Operated Capstan Winch	454 Max - 270 Continuous	Most 18V Battery Drills	6.8

## Battery Operated Capstan Winch

### Battery Cable Puller - 1500kg - Current Tools

**Part No. 33BAT**

The 33BAT is a compact and versatile Battery operated Cable Puller mounted on its own mobile cart. Speed and performance at your fingertips. Keep your hands free with the built-in foot switch.

**Features**

- Mobile cart for easy mobility around job-site
- Folds for compact transport and storage
- 2.4m reach when fully extended
- Full set of quick release conduit couplings included
- Integral heavy duty 18 volt, 2-speed motor
- Integral foot switch
- Complete system – no extra parts to purchase
- Flat free wheels
- Extra battery storage for quick power change
- Pulls up to 22m per minute High Speed (no load)
- Attach to a vehicle via Hayman Reece adaptor



**Powered by Milwaukee Batteries**

Part No	Description	Dimensions Collapsed (mm)	Powered by	Weight (kg)	Weight (kg)
33BAT	Battery Powered Capstan Winch	1220H x 559W x 584D	Battery Operated Milwaukee motor	38 Winch	59 Complete
Pull Speed		Max Pulling Capacity (kg)		Rope	
Low	High				
Up to 4.9m/pm	Up to 22m/pm	1500		13mm or larger Double Braid	



# CHANCE®

## Capstan Winches and Accessories

### Capstan Winches - 454kg - Chance

Chance Capstan Winches are available for all on-site situations.

**Hydraulic** - Powered by 700bar (10,000psi) Hydraulic Pump

**230V AC** - Plug into any single phase power outlet or a truck inverter

**Petrol** - Utilise independently of all other power supplies

Improved design features a multi-planetary drive/backstop clutch, assembled on the centre shaft of the steel gear-case with full-length internal teeth.

This design handles more rugged conditions, extends life and reduces maintenance

For improved load control, steel capstan drum features nickel-plated rope surface, larger radius at load-line wrap and rope hook.



Hydraulic Winch shown with Rope Lock (sold separately)

### Versatile Application

Lightweight, powerful portable winches move heavy weights and tackle difficult to access tasks, including:

- Pulling underground and indoor cable
- Stringing and tensioning conductors
- Lifting transformers



Honda 35cc 4 Stroke Engine

- Hoisting heavy insulator strings
- Tower erection
- Pulling wheeled equipment over obstacles



Petrol Winch shown with Foot Switch (included)

### Petrol Winch - Honda 35cc 4-Stroke - Chance

Part No. C308-1190

Capacity (kg)	Speed at Max Load (m)	Source required for speed	Wt (kg)
454	12.2	7,000rpm	20.9

Includes Foot Switch

### Electric Winch - 230V AC - Chance

Part No. C308-1171

Included Foot switch



Capacity (kg)	Speed at Max Load (m)	Source required for speed	Wt (kg)
454	6.4	7 amps motor current	22.5

Includes Foot Switch

### Hydraulic Winch - 700bar (10,000psi) - Chance

Part No. C308-1180

Capacity (kg)	Speed at Max Load (m)	Source required for speed	Wt (kg)
454	28.3	30lt per min @ 10,000psi	12.9

Foot Switch not Included - see accessories page (B43)

See following page for available accessories





### Rope Lock Device - Chance

**Part No. C308-0856**

- Automatically supports load if rope is released
- Accepts 12.7mm to 19.0mm rope
- Includes 2 mounting bolt, washers and lanyard



### All Purpose Mounting Bracket - Chance

**Part No. C308-1335**

- Fits all 454kg Capacity winches
- Includes two chain clamps for poles



### Universal Mounting Bracket - Chance

**Part No. C308-0925**

- Recommended for petrol Winch
- Can be bolted down or uses two C417-0346 Chain Clamps (below) for mounting on poles, angles and beams



### Chain Clamp - Chance

**Part No. C417-0346**

- Recommended for above Universal Bracket
- Use two Chain Clamps for Universal Bracket (above)
- 2.15m long



### Swivel Base Truck Mount - Chance

**Part No. T308-1506**

- Recommended for Electric and Hydraulic Winches
- Weight: 10.4kg



### Swivel Base Truck Mount & Hitch Mount - Chance

**Part No. PSC3081563**

- Recommended for Electric and Hydraulic Winches
- Weight: 28.1kg



### Foot Switch - Hydraulic - Chance

**Part No. C308-0685**

- Use for Hydraulic Winch
- Weight: 10.9kg





## CONTENTS



## Petrol Capstan Winch

### Portable Petrol Capstan Winch - Docma

Part No. VF900-4

Docma Portable Capstan Winch equipped with the Honda 4-stroke engine  
Designed for all your Pulling, Hauling & Lifting projects

#### Features

- Made in Italy from high quality materials
- Honda 4-Stroke GX50 Engine, meets Australian Emission Standards
- Variable speed controlled by rope tension
- High quality reducer with helical tooth gears

#### Used For

- Underground Cable Hauling
- Overhead conductor stringing
- Lifting equipment on pole and towers
- Tree lopping and felling, including directional felling
- Ground clearing & firewood collection
- Camping, hunting & 4X4
- AND MUCH, MUCH MORE

**LOW NOISE  
LOW EMISSION**



Click or Scan to view Rope set-up

#### Winch Specifications

Part No.	Capacity (kg)			Engine type	Pull Speed (m/pm)	Engine (kw/hp)	Rope		Wt (kg)
	Pulling	Double Rope	Lifting				Size (mm)	Wraps on Drum	
VF900-4	865	1730	200	Honda 4 Stroke GX50	14	1.47/2.0	10 / 12**	4/5	10.85

\*\* 10 and 12mm Double Braid Polyester Hauling Rope available in a variety of lengths.

#### Mounting Accessories - Docma

Contact TEN for a full layout of Accessories



Ground Mount  
Part No. VF310504



Accessory Mount  
Part No. VF310500



Pole-Tree-Tower Mount  
Part No. VF310501



Vertical Lift/brake Mount  
Part No. VF310503



Hayman Reece Adapter  
Part No. VF310506



Hook/Sling Attachment  
Part No. VF310211



### Petrol Drum Winch

#### Portable Petrol Drum Winch - Docma

Docma offer a highly innovative range of Winches for Pulling loads for the Power Utilities, Telecommunication, Railway, Mining, Oil & Gas industries.

They combine Italian quality materials, modern and functional design to achieve excellent Performance, Speed and Portability. Perform these tasks in remote locations or areas where power is not available.

The portable Drum winches are designed to handle all of your day-to-day pulls from loads of up to 1485kg (2970kg via single pulley)



VF155-AUTO

#### Features

- Italian Quality
- Pulling from remote locations no longer a challenge
- Ready for immediate use on site
- Quickly mobilised and placed in working position
- Over 1.4 tonne capacity
- Innovative quick release system for free-wheel unwinding
- Textile rope
- Balanced Carry Handle
- Wide range of accessories
- Steel Rope version available upon request



Auto Rewind Guide



Hook or Tow-Ball Attachment

Part No.	Pull Capacity (kg)	Dimensions (mm)	Pull Speed	Engine (cc)	Rope Dia & Length	Rope Type	Wt (kg)
VF155-AUTO	1485	595 x 385 x 360	20m/min	50.8	5mm x 80m	Textile	25.0

#### Capstan & Drum Winch Accessories - Docma

Docma offers a wide range of accessories to handle all of your day-to-day pulling, from poles, trees and towers to vehicle tow-balls.

#### Slings & Ratchet Strap



Double Ended Sling



Ratchet Strap

#### Redirection or double capacity Pulleys



16kN Steel Pulley



16kN Steel Pulley



40kN AL Pulley



40kN AL Pulley

#### Hooks & Shackles



Rated Hooks and Shackles

#### Replacement Ropes for Drum Winches



Textile Rope



Steel Rope

Wide range of other accessories available including equipment bags & back-packs and, pole, tree & equipment sleighs & trolleys



## NOTES

A series of horizontal dotted lines for taking notes, spanning the width of the page.

- 
- Long Reach Foam Filled Chainsaws
  - Pole Pullers & Tampers
  - Hydraulic Impact Wrench
  - Battery Powered, Hand Operated & Remote Head Crimpers
  - Battery Powered, Hand Operated & Remote Head Cutters
  - Compression Dies & Metal Hole Punches & Dies
  - Wood Augers
  - Hydraulic Pumps & HP & LP Hoses
  - Deep & Long Tube Impact Sockets

## **HYDRAULIC EQUIPMENT**



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**Klauke®**

## Crimping Tools, Battery Powered

### 12 Tonne Crimper - Klauke

Part No. EK12042FSCFM



**Australia OH&S  
Pinch point free ram**

- Crimp range from 6 to 400mm<sup>2</sup>
- Head rotates 360°
- 2 speed unit which advances the dies at high speed until crimping force is encountered - then low speed to allow positioning of tool
- Manual return possible in all positions
- Bright LED illuminates work area
- Shock resistant plastic housing
- Accepts standard Australian and International 12 tonne die sets
- Makita 18V DC Lithium-Ion battery with high capacity output and quick charging time
- Battery level indicator
- Operating pressure 10,000PSI

Red LED display with acoustic signal for tool status

#### Features

- C-Head with 42mm opening and wide crimping range up to 400mm<sup>2</sup>
- Crimps Lugs, Links, Full & Non-Tension sleeves to a variety of conductors, including Copper (CU), Aluminium (AL), ACSR, ABC and a variety of other cables
- All tool crimping data can be viewed on the tool LED display and can be read via Bluetooth connection

#### Order Information

Part No.	Description
EK12042FSCFM-O	Tool skin and case
EK12042FSCFM-K	Crimping Tool, 2 x 4.0Ah batteries, charger and case*

- Visual and audible signals
- One-button operation, controlling all tooling functions
- Balanced centre of gravity for easy handling and effortless operations
- High-performance Makita 18V 4.0Ah Li-Ion battery\* with high capacity for extended operating time
- Quick motor stop for high user safety
- Automatic retraction when operation is complete.
- Automatic Retraction Stop (ARS) for positioning control in case of multiple crimping

**Full Range of 12T Dies available  
see pages C10 & C11**



Crimps (mm <sup>2</sup> )	Cu 400, Al 300, ACSR 185
Crimping Force (kN)	120
Stroke/Opening Width (mm)	42
Crimping Range (mm <sup>2</sup> )	6 - 400
Charging Time (min)	36
Weight (kg)	7.1 including battery

\* See page C37 for battery and charger information

### 12 Tonne Dies

Part No. K12-AF

- Crimping dies to suit battery, remote head and hand hydraulic 12T "C" type crimpers.
- Commonly referred to as "C" or "U" type dies.
- Dies colour coded to material type for easy identification.
- Across Flats diameter marked on die face for size identification on crimped lug or sleeve.



## 13.5 Tonne Crimper - Klauke

Part No. EK135FTCFM

**Crimping Range**  
**10 to 630mm<sup>2</sup>**

- Crimp range from 10 to 630mm<sup>2</sup>
- Powerful crimping force of 13.5t
- All tool data can be viewed using on-tool display and i-press app



SCAN or CLICK to View Operation Video

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Closed Bolt interlock head, rotatable 360°
- Visual and audible signals
- One-button operating controlling all tool functions
- Automatic retraction after operation completed
- 2 stage hydraulic system with fast feed and power stroke
- Automatic retract stop saving time for multiple crimps
- Balanced centre of gravity
- LED for work area illumination
- LED display for showing tool data
- Battery charge and service display

**Also suitable for 12T Dies with the below adaptor (included)**



Part No. UA15T Die Adaptor Included

### Order Information

Part No.	Description
EK135FTCFM-O	Tool skin, 12T Die Adaptor and case
EK135FTCFM-K	Crimping Tool, 12T Die Adaptor, 2 x 4.0Ah batteries, charger and case

<b>Crimps (mm<sup>2</sup>)</b>	Cu 630, AL 500
<b>Crimping Force (kN)</b>	135
<b>Stroke opening Width (mm)</b>	50.8
<b>Crimping Range (mm<sup>2</sup>)</b>	10-630
<b>Number of Crimps</b>	approx. 85 at 240
<b>Battery</b>	Makita 18V 4.0Ah, Li-Ion*
<b>Charging Time (min)</b>	36
<b>Weight (kg)</b>	8.15 including battery

\*See page C37 for battery and charger information

Note: 13.5T crimper will not crimp all AL lugs up to 500mm<sup>2</sup>. Check with your lug/link manufacturer for specifications

**Full Range of 12T Dies available - see pages C10 & C11**

## Dies - 15 Tonne

Part No. VARIOUS

- Various styles available, compatible with most brand tools, contact TEN for more information

### Copper

Part No.	Type	Across Flats (mm)	Size (mm <sup>2</sup> )	Crimp Width (mm)
<b>For 300 &amp; 400mm<sup>2</sup> CU Dies see equivalent 12T Dies on page C10 &amp; C11</b>				
K15-31.0-CU	Cu	31.0	500	7
K15-37.0-CU	Cu	37.0	630	7

### Aluminium

Part No.	Type	Across Flats (mm)	Size (mm <sup>2</sup> )	Crimp Width (mm)
K15-39.0-AL	Al	39.0	400/500	15



15T Crimping Dies

## Klauke®

Takes 6T Round Dies

Interchangeable heads - easily change from crimping to cutting

Head Rotates 360°

Ergonomic single push button operation

LED Illumination of workspace

Genuine Makita Li-Ion Battery

Red LED display and acoustic signal in case of error

6T Dies available see page C9



### 5 Tonne Crimper & Cutter - Klauke

Part No. EK425CFM

- Suitable for ABC, 6 to 240mm<sup>2</sup> Cu & 10 to 300mm<sup>2</sup> Al
- One handed ergonomic design with single push button operation
- Automatic retraction once crimp is completed
- Auto-stop function
- LED Light Illuminates working space
- Red LED display and acoustic signal
- High performance 18V Lithium-Ion battery
- Crimp head rotates 360°
- Multi-functional LED indicates maintenance and battery control
- Manual retraction does not rely on battery power

**Ideal for ABC**

#### Order Information

Part No.	Description
EK425CFM-O	Tool skin and case
EK425CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

**Multi-function lightweight tool only 2.6kg**

Crimps (mm <sup>2</sup> )	Cu/Al 240, ACSR 185
Crimping Force (kN)	50
Stroke/Opening Width (m)	40
No of crimps per charge	140 @ 70
Battery	Makita 18V, 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	2.6 including battery

\*See page C37 for battery and charger information

#### Available Interchangeable cutting heads

Part No.	Capacity (mm)	Length (mm)	Weight (kg)	Cuts
CJACSR	17.5 OD	145	1	ACSR/Steel
CJCU	20 OD	140	1	CU/AL



Also Available in 1000V Insulated Version - For more information see page C36

Uses 4 Series interchangeable dies

Flip top Head Rotates 360°

See page C9 for Series 4 Die information

Single push button operation

LED Illumination of workspace

Genuine Makita Li-Ion Battery



### 3.5 Tonne Crimper - Klauke

Part No. EK354CFM

- Crimps 6 to 150 mm<sup>2</sup>
- Slim design - ideal for confined spaces
- Tool data view on display and ipress app

#### Features

- All data can be easily read via Bluetooth
- Closed head, flip top style, rotatable 330°
- Visual and audible signals in case of error
- One-button controlling all tool functions

#### Order Information

Part No.	Description
EK354CFM-O	Tool skin and case
EK354CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

- LED for work area illumination
- Always ready-to-use thanks to battery charge and service display
- Simple and safe: Automatic retraction when operation is complete

Crimping Force (kN)	35
Crimping Range (mm <sup>2</sup> )	6-150
Stroke/Opening Width (mm)	9
Number of Crimps	approx. 145 at 120 Cu
Battery	Makita 18V 1.5Ah*
Charging Time (min)	15
Weight (kg)	2.4 including battery

\*See page C37 for battery and charger information

## Klauke®

"NO DIES" Required

Head rotates 350°

Single push button operation

LED Illumination of workspace

Klauke Li-Ion battery



### 4 Tonne Square Crimper - Klauke

**Part No. EKWF120ML**

- Crimps 6 to 120mm<sup>2</sup>
- ARS means faster crimp cycles (Automatic Retraction Stop)
- All tool data in view thanks to display and ipress app

**Features**

- All data can be easily read via Bluetooth
- Open head, rotatable 330°
- Visual and audible signals
- One-button controlling all tool functions

**Order Information**

Part No.	Description
EKWF120ML-0	Tool skin and case
EKWF120ML-K	Tool, 2 x 2.5Ah batteries, charger and case

- LED for work area illumination
- Simple and safe: Automatic retraction when operation is complete
- Always ready-to-use thanks to battery charge and service display

<b>Crimping Range (mm<sup>2</sup>)</b>	6 - 120
<b>Stroke/Opening Width (mm)</b>	19
<b>Battery</b>	Klauke 10.8V - 2.5Ah*
<b>Charging Time (min)</b>	45
<b>Weight (kg)</b>	1.96 including battery

**Lightweight!**  
Less than  
**1 kg**



\*IS501 Die  
Included with tool



### 50 Series Mini Crimper, Electromechanical - Klauke

**Part No. EK50MLAU**

- Lightweight Compact design
  - ideal for high volume work
  - switchboard manufacturers
  - automotive wiring harnesses
- High speed crimping time <1.5 seconds
- Automatic retraction

**Order Information**

Part No.	Description
EK50MLAU	Tool, case, battery, charger and IS501 die

<b>Crimping Force (kN/T)</b>	15/1.5
<b>Crimping Range (mm<sup>2</sup>)</b>	0.1 - 50
<b>Crimping Time (s)</b>	<1.5
<b>Battery</b>	Klauke 1.5Ah/10.8V Li-ion (RAML)*
<b>Crimps per Charge</b>	300 @ 10 Cu
<b>Charging Time (min)</b>	40
<b>Weight (kg)</b>	0.96 incl. battery

\* See page C37 for battery and charger information

Contact TEN for a list of available Series 50 Crimping Dies

**Kit Included**

Part No.	Description
RAML	1.5Ah, 10.8V Battery
LGML1AU	230V Charger for Klauke Batteries
*IS501	Series 50 Die 0.5 to 6mm <sup>2</sup>



Battery (RAML)



Charger (LGML1AU)

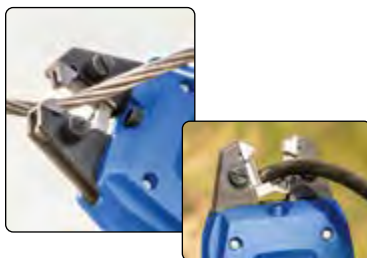


Die \*IS501 for RYB terminals



Protective Carry Case

### Cutting Die Part No. S502



Scan or Click the QR Code to view video



**Order Information**

Part No.	Description	Jaw opening (mm)	Capacity (mm)
S502	Cutting Die	19	CU-6.5 / ACSR-5.0



## Klauke® Lite

### 12 Tonne Crimper - LITE

Part No. EK12642FSAP



**OH&S**  
Compliant Pinch  
point free ram

**Rotatable Head**  
350 Degrees

**One-click Operation**  
All operation via one button

**Ergonomic Design**  
More comfortable,  
less work load

**18V Lithium-ion Battery**  
Genuine Makita Battery

**Balanced Points**  
Tool strap & Spring points

**Pressure Monitor**  
Pressure monitor ensures  
output force every cycle

**Anti Slip Handle**  
Anti-slip rubber grip

LED Illumination  
of workspace



#### Features

- 42mm opening allows a crimp range from 6 to 400mm<sup>2</sup>
- Crimps Lugs, Links, Full & Non-Tension sleeves to a variety of conductors
- Bright LED illuminates work area
- Shock resistant plastic housing with rubber ANTI-SLIP Grip
- Accepts standard Australian & International 12 tonne dies
- Battery level indicator (on battery)
- Operating pressure 10,000PSI
- Visual signals when pressure is reached
- One-button operation, controlling all tooling functions
- Automatic retraction when operation is complete.
- Manual retract button
- Balanced centre of gravity for easy handling and effortless operations

#### Order Information

Part No.	Description
EK12642FSAP-0	Tool skin and case
EK12642FSAP-K	Crimping Tool, 2 x 4.0Ah batteries, charger and case

#### Specifications

Crimps (mm <sup>2</sup> )	Cu 400, Al 300, ACSR 185
Crimping Force (kN)	120
Stroke/Opening Width (mm)	42
Crimping Range (mm <sup>2</sup> )	6 - 400
Charging Time (min)	36
Weight (kg)	6.7 including battery

12T Dies available -  
see pages C10 & C11

### 5.5 Tonne Crimper - Indent - Klauke

Part No. EK60VPCFM

- Crimps 10 to 240mm<sup>2</sup>
- Crimps optimised at all times due to the patented centering system
- All tool data in view thanks to display and ipress app

#### Features

- All data can be easily read via Bluetooth
- Quad-point indent crimping feature, no dies required
- Visual and audible signals
- One-button controlling all tool functions

#### Order Information

Part No.	Description
EK60VPCFM-0	Tool skin and case
EK60VPCFM-K	Tool, 2 x 4.0Ah batteries, charger and case*

- Open head, rotatable
- LED light
- Ergonomic balanced centre of gravity
- Fast 2-stage hydraulic system
- Automatic retraction when operation is complete

Crimping Force (kN)	55
Crimping Range (mm <sup>2</sup> )	10-240
Charging Time (min)	36
Weight (kg)	4.8 including battery

\* See page C37 for battery and charger information



Centred Material

**QUAD POINT  
CRIMPING**

No Separate Dies required

## Dies, Various

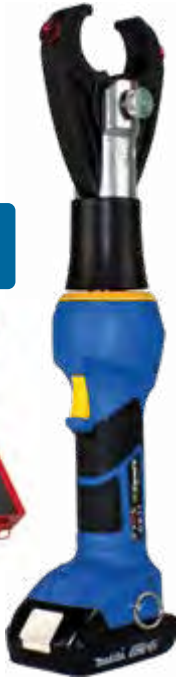
### 6 Tonne Dies Suits EK425CFM



6 Tonne Die Kits  
available



18 Compartment  
Metal Die Box  
Part No. K12-CASE-MB



### Series 4 Dies Suits EK354CFM



### Cembre Style Dies Suits EK50CFM

\*Tool no longer available



MB52-50  
Cutting Die



Cembre  
Style Die



Part No.	Size (mm <sup>2</sup> )	Across Flats (mm)	Crimp Width (mm)
<b>Copper</b>			
K6-04.4-CU	6	4.4	5.0
K6-05.7-CU	10	5.7	5.0
K6-06.3-CU	16*	6.3	6.0
K6-07.7-CU	25*	7.7	12.0
K6-09.2-CU	35*	9.2	12.0
K6-10.4-CU	50*	10.4	9.0
K6-11.5-CU	70*	11.5	9.0
K6-14.2-CU	95*	14.2	6.0
K6-16.5-CU	120*	16.5	6.0
K6-18.3-CU	150*	18.3	5.0
K6-20.0-CU	185*	20.0	5.0
K6-23.1-CU	240*	23.1	5.0
K6CUSET-16-240	* 16 to 240 (10 Dies) including 20 compartment metal box		

#### Aluminium

K6-09.0-AL	10-35	9.0	5.0
K6-13.2-AL	50-70	13.2	12.0
K6-17.3-AL	95-120	17.3	12.0
K6-18.0-AL	150	18.0	12.0
K6-22.0-AL	150-185	22.0	9.0
K6-28.4-AL	240-300	28.4	5.0

#### ABC

K6-14.0-ABC	25	14.0	9.0
K6-17.3-ABC	35-70	17.3	9.0
K6-21.5-ABC	95-150	21.5	9.0

Part No.	Size (mm <sup>2</sup> )	Across Flats (mm)	Crimp Width (mm)
<b>Copper</b>			
K3.5-C6	6	4.4	5.0
K3.5-C10	10	5.7	5.0
K3.5-C16	16	6.3	5.0
K3.5-C25	25	7.7	5.0
K3.5-C35	35	9.2	5.0
K3.5-C50	50	10.4	5.0
K3.5-C70	70	11.5	5.0
K3.5-C14	Insulated Sleeve	14.0	5.0
K3.5-C95	95	14.2	5.0
K3.5-C120	120	16.5	5.0
K3.5-C150	150	18.3	5.0

Aluminium K3.5 Dies available - Contact TEN for further information

Part No.	Size (mm <sup>2</sup> )	Across Flats (mm)	Die Style
<b>Copper</b>			
M57-50	10	5.7	Cembre
M63-50	16	6.3	Cembre
M77-50	25	7.7	Cembre
M92-50	35	9.2	Cembre
M104-50	50	10.4	Cembre
M115-50	70	11.5	Cembre
M142-50	95	14.2	Cembre
M165-50	120	16.5	Cembre
M200-50	185	20.0	Cembre

#### ABC

M173-50	35-70	17.3	Cembre
M215-50	95-150	21.5	Cembre

#### Cutting Die

MB52-50	Cutting Die	10.0	Cembre
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## 12 Tonne Dies, Aluminium - K12 Series

### Aluminium

Part No.	Size (mm <sup>2</sup> )	Across Flats (mm)	Crimp Width (mm)
K12-09.0-AL	6-35	9.0	22.0
K12-13.2-AL	50-70	13.2	22.0
K12-17.3-AL	95-120	17.3	22.0
K12-22.0-AL	150-185	22.0	18.0
K12-28.4-AL	240-300	28.4	18.0



Aluminium Die



ABC Die

### Overhead

K12-14.0-AL	7/2.25	14.0	22.0
K12-14.5-AL	7/2.50	14.5	22.0
K12-14.8-AL	19/2.00-19/2.11	14.8	22.0
K12-18.0-AL	7/3.00-7/3.75	18.0	22.0
K12-19.0-AL	7/4.50	19.0	22.0
K12-22.0-AL	19/3.25	22.0	18.0
K12-25.4-AL	19/3.75 Cabac	25.4	18.0
K12-26.2-AL	19/3.75 Utilux	26.2	18.0
K12-30.3-AL	19/4.75	30.3	18.0

### ABC

K12-14.0-ABC	10-35	14.0	9.0
K12-17.3-ABC	50-70	17.3	9.0
K12-21.5-ABC	95-120-150	21.5	9.0

### Special

K12-16.6-AL	SPECIAL	16.6	22.0
K12-21.5-AL	SPECIAL	21.5	18.0
K12-23.1-AL	SPECIAL	23.1	18.0
K12-24.2-AL	SPECIAL	24.2	18.0
K12-24.9-AL	SPECIAL	24.9	18.0
K12-25.0-AL	SPECIAL	25.0	18.0
K12-30.0-AL	SPECIAL	30.0	18.0

### Steel

K12-06.8-ST	Inner Steel ACSR	6.8	10
K12-07.5-ST	Inner Steel ACSR	7.5	10
K12-09.5-ST	Inner Steel ACSR	9.5	10

Custom 12 Tonne Die Kits available. Contact TEN for further information

Material Capture Half



Cutting Half

## 12 Tonne Cutting Die

### Part No. 00949

Material	Size (mm) OD
Guy Wire/Soft Steel/ Steel Rod	16.0
ACSR/AL/CU	17.5

### Features

- Can be used on all 12 Tonne "C-Head" style Crimpers
- Heavy duty design

### Benefits

- Lower cost than standard dedicated cutting tools



Suitable for all brands of 12T battery, manual and remote head hydraulic compression tools

12Tonne Manual Crimper  
Part No. HK12042



12Tonne Battery Crimper  
Part No. EK12042FSCFM



12Tonne Crimp Head  
Part No. TP-420H



Please Note: This die selection chart is produced as a guide only. Please check with your Lug/Link manufacturer for AF sizes and tonnage.



## 12 Tonne Dies, Copper - K12 Series

### Copper

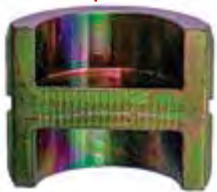


Copper Die

**12 Tonne Die Kits available  
Contact TEN  
for further information**



18 Compartment Metal Die Box  
Part No. K12-CASE-MB



**Flat Face Half  
K12-CSFLAT9**

Part No.	Size (mm <sup>2</sup> )	Across Flats (mm)	Crimp Width (mm)
K12-04.4-CU	6	4.4	6.35
K12-05.7-CU	10	5.7	6.35
K12-06.3-CU	16*	6.3	17.5
K12-07.7-CU	25*	7.7	17.5
K12-09.2-CU	35*	9.2	17.5
K12-10.4-CU	50*	10.4	17.5
K12-11.5-CU	70*	11.5	17.5
K12-14.2-CU	95*	14.2	17.5
K12-16.5-CU	120*	16.5	14.0
K12-18.3-CU	150*	18.3	14.0
K12-20.0-CU	185*	20.0	14.0
K12-23.1-CU	240*	23.1	10.0
K12-26.0-CU	300*	26.0	10.0
K12-28.1-CU	400*	28.1	10.0

Copper Die Set \* Indicates Dies included in the set below

<b>K12CUSET-16-400</b>	16mm <sup>2</sup> to 400mm <sup>2</sup> (12 Dies) Including 18 Compartment Metal Box
<b>K12CUSET16-400NB</b>	16mm <sup>2</sup> to 400mm <sup>2</sup> (12 Dies) No Box

### Overhead

K12-08.3-CU	7/1.63 & 7/1.70	8.3	9.0
K12-09.2-CUOH	7/2.00 - 7/2.03	9.2	9.0
K12-11.5-CUOH	7/2.62	11.5	9.0
K12-13.0-CU	37/.064 - 19/2.11	13.0	17.5
K12-13.2-CU	19/1.70	13.2	17.5
K12-14.8-CU	19/2.00 - 19/2.11	14.8	9.0
K12-19.3-CU	19/2.75	19.3	14.0

### Special

K12-08.2-CU	SPECIAL	8.2	9.0
K12-19.0-CU	SPECIAL	19.0	22.0
K12-22.0-CU	SPECIAL	22.0	10.0
K12-CSFLAT9	FLAT Face half only	**Determined by lug size	9.9

\*\* Contact Lug manufacturer for hex half dimensions

### Copper Screen

Part No.	Across Flats (mm)	Crimp Width (mm)
K12-07.5-CS	7.5	16.0
K12-12.7-CS	12.7	14.0
K12-14.0-CS	14.0	18.0

Please Note: These die selection charts are produced as a guide only. Please check with your Lug/Link manufacturer for AF sizes and tonnage.

**See following pages for a full range of  
Nest & Indent Copper Earth Connector Dies**



## 12 Tonne Nest and Indent Dies - K12 Series

Used for crimping Under Ground sector cable Lugs and Links

Select the die half combination according to the chart below

### Nest Die Halves



K12-ANEST12



K12-ANEST14



K12-ANEST15

### Indent Die Halves



K12-AINDENT-16



K12-AINDENT-18

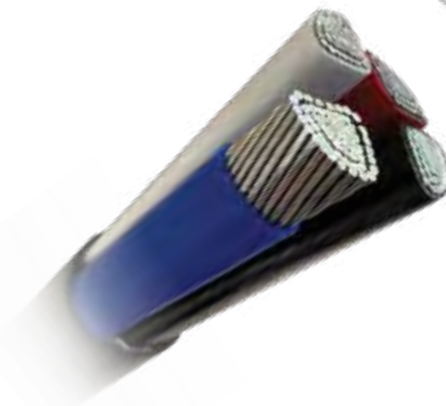


K12-AINDENT-19

### Example Sector Cable Lug & Links



K12-ANEST15 & K12-AINDENT-19  
Combination (Sold Separately)



4 Core AL Sector  
UG Cable



K12-ANEST12 & K12-AINDENT-16  
Combination (Sold Separately)

### Ordering information

Conductor Size (mm <sup>2</sup> )	3 Core AL Sector Cable		Conductor Size (mm <sup>2</sup> )	4 Core AL Sector Cable	
	Nest Part No.	Indent Part No.		Nest Part No.	Indent Part No.
120mm <sup>2</sup>	K12-ANEST12	K12-A-INDENT-16	120mm <sup>2</sup>	K12-ANEST14	K12-A-INDENT-16
150mm <sup>2</sup>	K12-ANEST12	K12-A-INDENT-18	150mm <sup>2</sup>	K12-ANEST14	K12-A-INDENT-18
185mm <sup>2</sup>	K12-ANEST12	K12-A-INDENT-18	185mm <sup>2</sup>	K12-ANEST15	K12-A-INDENT-18
240mm <sup>2</sup>	K12-ANEST12	K12-A-INDENT-19	240mm <sup>2</sup>	K12-ANEST15	K12-A-INDENT-19
300mm <sup>2</sup>	K12-ANEST12	K12-A-INDENT-19	300mm <sup>2</sup>	K12-ANEST15	K12-A-INDENT-19

**NOTE: Sector Rounding Dies available - Contact TEN for further information**

Please Note: This die selection chart is produced as a guide only. Please check with your connector manufacturer for confirmation of die type & size.

## 12 Tonne Copper Earth Connector Dies - K12 Series

Selecting the correct "C" type earth connector Compression Die is directly related to the style of "C" connector and the sizes of copper earth wire and/or earth rod being connected. Below are the most common types of "C" Connectors and the corresponding 12T Dies. These connectors are specifically designed for applications requiring corrosion resistant, high current jointing or tapping of buried copper earth grids, or to earth rods in zone substation and for pole and pad mounted transformers, therefore die selection is extremely important. The most common ranges of connectors are typically dimensionally identical in the Australian market.



"C" Style \*



"E" Style\*



"6" Style\*

### Dies for "C" Style Earthing Connectors

12T Die Part No. Die	Cable (mm <sup>2</sup> )	Tap (mm <sup>2</sup> )	Connector
K12-U997	95	70	"C" Style
	95	95	
	70	70	
	70	95	

### Dies for "E" Style Earthing Connectors

12T Die Part No. Die	Cable (mm <sup>2</sup> )	Tap (mm <sup>2</sup> )	Connector		
K12-UO	35	35	"E" Style		
	35	50			
	50	50			
	70	50			
	70	70			
K12-U997	95	120	"E" Style		
	95	95			
	120	120			
	70	95			
	70	120			
K12-UC	10	35	"E" Style Wide Jaw		
K12-UO	35	70			
K12-U997	95	120			
K12-U1011	150	240			
12T Die Part No. Die	Min	Max	Min	Max	Connector
K12-UO	35	70	10	35	"E" Style Multi-Fit
K12-U997	95	120	10	70	
K12-U1011	150	240	10	70	
K12-U1011	150	240	95	120	

### Dies for "6" Style Earthing Connectors

12T Die Part No. Die	Earth Rod (mm)	Tap (mm <sup>2</sup> )	Connector
K12-U997	13-15	16	"6" Style
		25	
		35	
		50	
		70	
		95	
		120	

### Corresponding Dies Part No's for "C" Connector Manufacturers

TEN Part No.	Fulton Ind/Burndy Part No.	Cabac Part No.	TE/Dulmison
K12-U1011	U1011	HT130-C1011	
K12-U997	U997	HT130-C997	DU1315
K12-UC	UC	HT130-CC	
K12-UO	UO	HT130-CO	DUOT

Please Note: This die selection chart is produced as a guide only. Please check with your connector manufacturer for confirmation of die type.

\* Images are a guide only and may not represent actual connector.



**Klauke®**



HK6022



HK12042

## Crimpers, Hand Operated - Hydraulic 6 & 12 Tonne Crimpers, Hand Operated - Hydraulic

- Two stage double acting hydraulics
- Manual pressure release at any stage
- Ram extends during up & down operation
- Tools supplied with case

Part No.	HK6022	HK12042	REL-510
Head Rotation	360°	360°	180°
Crimping Force (T)	6	12	10.8
Pressure (PSI)	10,000	10,000	10,000
Safety Valve	Yes	Yes	Yes
Length (mm)	460	560	635
<b>Max Crimp (mm<sup>2</sup>)</b>			
Cu	300	400	380
Al	240	240	380
Specific Features	Auto-Retract, Locking Handle Mechanism	Auto-Retract, Locking Handle Mechanism	Magnetic Reservoir Traps Contaminants
Accepts Die Type	Standard 6 T "C"/"U" Type dies	Standard 12 T "C"/"U" Type dies	Standard 12 T "C"/"U" Type dies
Storage Device Supplied	Steel Box with Die Compartments	Steel Box with Die Compartments	Steel Box with Die Compartments
Weight (kg)	3.3	5.9	6.6

**RELIABLE EQUIPMENT**



REL-510

See page C38 for Hydraulic Pumps & page C47 for Hoses



## Crimpers, Remote Head - Hydraulic 12 Tonne Crimpers, Remote Head - Hydraulic

	12T Crimping Head	Multi Head	12T Crimping Head
Part No.	TP-420H	PK60UNVC	LPK1240-A
Force (T)	12	6	12
Head Type	"C"	Flip Top	"C"
Pressure (PSI)	10,000	10,000	2,250
Jaw Opening (mm)	42	42	42
Length (mm)	302	350	515
Accepts Die Type	Standard 12T "C"/"U"	Standard 6T "C"/"U"	Standard 12T "C"/"U"
<b>Die Capacity (mm<sup>2</sup>)</b>			
Cu	400	240	400
Al	300	300	300
Specific Features	Easy access die retaining Pin	See Page C31 for Multi Tool adaptors	Low Pressure
Weight (kg)	4.4	2.4	8.9



**LOW PRESSURE**

## 25 Tonne Crimp Head - Single Acting - Klauke

### Part No. HP25T-SA

- Crimps CU to 630mm<sup>2</sup> & AL to 500mm<sup>2</sup>
- Twist-lock die retaining pin hold die in place
- Strap on pin prevents loss of die retainer
- High Pressure Coupler included



Force (T)	25
Head Type	"U"/"H"
Pressure (PSI)	10,000
Length (mm)	335
Accepts Die Type	25T Dies
Weight (kg)	5.3
<b>Die Capacity (mm<sup>2</sup>)</b>	
Cu	630
Al	500

## 25 Tonne Dies

### Aluminium Dies

Part No.	Type	Across Flats (mm)	Conductor	Crimp Width (mm)
K25-30.0-AL	Al	30.0	19/3.75 AAAC	25
K25-39.0-AL	Al	39.0	400/500	25

### Copper Dies

Part No.	Type	Across Flats (mm)	Conductor	Crimp Width (mm)
K25-18.3-CU	Cu	18.3	150	16.0
K25-20.0-CU	Cu	20.0	185	16.0
K25-23.1-CU	Cu	23.1	240	16.0
K25-26.0-CU	Cu	26.0	300	16.0
K25-28.1-CU	Cu	28.1	400	16.0
K25-31.0-CU	Cu	31.0	500	16.0
K25-37.0-CU	Cu	37.0	630	12.2



25T Crimping Dies

### ACSR Dies

Part No.	Type	Across Flats (mm)	Crimp Width (mm)	Conductor
K25-28.5-AL	ACSR	28.5	27.0	30/7/2.50 GRAPE

### ACSR Dies Inner Steel Dies

Part No.	Type	Across Flats (mm)	Crimp Width (mm)	Conductor
K25-16.0-ST	ACSR	16.0	17.0	Inner for GRAPE

### Rounding Dies

Part No.	Type	Rounding Dia (mm)	Conductor (mm <sup>2</sup> )	Crimp Width (mm)
K25-22.5-CU	Cu	22.5	300	40
K25-26.0-CU-RD	Cu	26.0	400	40
K25-29.0-CU	Cu	29.0	500	40



12T Die Adaptor

## 25T to 12T Die Adapter

Part No.	Description
AU230-130D	Adaptor for 25T crimpers to suit 12T Dies

See pages C10 & C11 for 12T Dies

Please Note: This die selection chart is produced as a guide only.  
Please check with your Lug/Link manufacturer for AF sizes and tonnage.

## 45 Tonne Crimp Head - Single Acting

Part No. HP45T-SA-A

This lightweight head is utilised for crimping larger overhead joints, terminations and underground lugs or connectors.

(Supplied with leather die locating pin strap - not a carry handle)



### Features

- High pressure 10,000PSI, Single Acting
- Spring Return
- 20mm Stroke
- Quick coupler for easy disassembly
- Dimensions 360 x 175 x 210mm
- Crimping capacity
  - Cu: 800mm<sup>2</sup>
  - Al: 630mm<sup>2</sup>
  - Steel: AF Ø 20mm

Output Force (T)	45
Crimping Capacity (mm <sup>2</sup> )	800 Cu/630 Al
Working Pressure (PSI)	10,000
Weight (kg)	11.0

## 45 Tonne Dies

### Aluminium

Part No.	Across Flats (mm)	Conductor	Crimp Width (mm)
K45-28.3-AL	28.3	240/300	50.0
K45-39.0-AL	39.0	400/500	50.0
K45-43.2-AL	43.2	630	50.0

### ACSR/AAC/AAAC

Part No.	Across Flats (mm)	Conductor	Crimp Width (mm)
K45-22.0-AL	22.0	ACSR/AAC/AAAC	50.0
K45-28.5-AL	28.5	ACSR/AAC/AAAC	50.0
K45-30.0-AL	30.0	ACSR/AAC/AAAC	50.0
K45-34.5-AL	34.5	ACSR/AAC/AAAC	50.0
K45-40.0-AL	40.0	ACSR/AAC/AAAC	50.0
K45-44.5-AL	44.5	ACSR/AAC/AAAC	50.0
K45-47.5-AL	47.5	ACSR/AAC/AAAC	50.0
K45-48.0-AL	48.0	ACSR/AAC/AAAC	45.0

### Inner Steel - ACSR

Part No.	Across Flats (mm)	Conductor	Crimp Width (mm)
K45-9.5-ST	9.5	Inner Steel	19.0
K45-16.0-ST	16.0	Inner Steel	19.0
K45-17.0-ST	17.0	Inner Steel	19.0
K45-19.0-ST	19.0	Inner Steel	19.0
K45-18.0-ST	18.0	Inner Steel	19.0
K45-20.0-ST	20.0	Inner Steel	19.0

### Copper

Part No.	Across Flats (mm)	Conductor	Crimp Width (mm)
K45-23.1-CU	23.1	240	25.0
K45-26.0-CU	26.0	300	25.0
K45-28.1-CU	28.1	400	25.0
K45-31.0-CU	31.0	500	25.0
K45-37.0-CU	37.0	630	25.0
K45-43.2-CU	43.2	800	25.0



45T Copper Die



45T Aluminium Die

Please Note: This die selection chart is produced as a guide only. Please check with your Lug/Link manufacturer for AF sizes and required tonnage.



## 60 Tonne - Crimp Head - Single Acting

Part No. HP60TC-SA

Lightweight, single acting 60T press head/crimper for use with standard 60T C Dies

### Features

- Crimping capacity Cu/Al 1000mm<sup>2</sup>
- Crimping capacity Steel AF Ø 26mm High pressure 10,000PSI, Single Acting
- Spring Return
- Quick coupler for easy disassembly
- Top of the head rotates 90 degrees and can be lifted off to remove completed connection



Output Force (T)	60
Working Pressure (PSI)	10,000
Crimping Capacity	Cu/Al 1000 mm <sup>2</sup> & Steel 26mm Across Flats
Crimping Stroke (mm)	60.0
Length (mm)	450
Weight (kg)	30.5
Storage	Steel case

## 60 Tonne Dies

- Commonly referred to as "C" or "U" type dies
- Rectangular Dies also available

### Copper

Part No.	Type	Conductor	Across Flats (mm)	Width (mm)
K60-23.1-CU	Cu	240	23.1	25.0
K60-26.0-CU	Cu	300	26.0	25.0
K60-28.1-CU	Cu	400	28.1	25.0
K60-31.0-CU	Cu	500	31.0	25.0
K60-37.0-CU	Cu	630	37.0	25.0
K60-43.2-CU	Cu	800	43.2	25.0
K60-48.0-CU	Cu	1000	48.0	25.0

### Aluminium

Part No.	Type	Conductor	Across Flats (mm)	Width (mm)
K60-28.3-AL	Al	240-300	28.3	50.0
K60-39.0-AL	Al	400-500	39.0	50.0
K60-43.2-AL	Al	630	43.2	50.0
K60-52.5-AL	Al	800-1000	52.5	40.0

### AAC/AAAC/ACSR

Part No.	Type	Across Flats (mm)	Width (mm)
K60-28.5-AL	Al	28.5	50.0
K60-34.5-AL	Al	34.5	50.0
K60-40.0-AL	Al	40.0	50.0
K60-44.5-AL	Al	44.5	50.0
K60-47.5-AL	Al	47.5	45.0
K60-48.0-AL	Al	48.0	45.0

### ACSR Steel Inner

Part No.	Type	Across Flats (mm)	Width (mm)
K60-16.0-ST	Steel Inner	16.0*	19.0
K60-17.0-ST	Steel Inner	17.0	19.0
K60-18.0-ST	Steel Inner	18.0	19.0
K60-19.0-ST	Steel Inner	19.0	19.0

\*16mm AF 60T steel die suitable for AMOKABEL



60T Aluminium Die



60T Steel Die

Please Note: This die selection chart is produced as a guide only. Please check with your Lug/Link manufacturer for AF sizes and required tonnage.

## TESMEC

### 100 Tonne Crimp Head - Double Acting - TESMEC

Part No. PRT510

Lightweight, double acting high pressure 100T press head/crimper for use with 100T Dies. Includes Directional Valve and pressure gauge, which allows the operator to control the crimp at the crimp head.

Operated by double acting hydraulic pump.

Part No. PRT510  
Shown with "C"  
style die adapter



See page C19 for 100T Dies

#### Features

- Excellent power/weight ratio
- Very short pressing cycle
- Includes adaptor for Izumi Dies

### Lightweight

See page C19 for 100T Dies

Output Force (T)	100
Rated Pressure (PSI)	10,000
Crimping Capacity (mm <sup>2</sup> )	Max Cu/Al 1000 Max Steel AF 36(mm)
Dimensions (mm)	480H x 255W x 405L
Weight (kg)	34.5 Including Valve & Frame

See page C38 for TESMEC Double Acting Hydraulic Pumps

### 100 Tonne Crimp Head - Double Acting

Part No. HP100T-DA-A

Double acting high pressure 100T press head/crimper for use with 100T Dies



#### Features

- High pressure 10,000PSI, Double Acting Hydraulic
- Accepts 100T Izumi Style Dies
- Quick couplers for easy hydraulic assembly and disassembly
- Top of the head rotates 90 degrees and can be lifted off to remove completed connection

Output Force (T)	100
Rated Pressure (PSI)	10,000
Crimping Capacity (mm <sup>2</sup> )	Max Cu/Al 1000 Max Steel AF 36(mm)
Weight (kg)	31 Crimp body only
Packing	Steel case

## 100 Tonne Crimp Head - Single Acting

### Part No. HP100T-SA

- Single acting crimping head for connection with hydraulic drive units
- Crimps cable lugs and connectors of up to a maximum cross section of 1600mm<sup>2</sup>
- The nickel plated surface of the crimping head is resistant against environmental conditions
- Quick coupling
- Robust and compact design
- Lightweight with excellent stability even under load



<b>Crimping Capacity (mm<sup>2</sup>)</b>	Up to 1600
<b>Output Force (T)</b>	100
<b>Rated Pressure (PSI)</b>	10,000
<b>Stroke (mm)</b>	25
<b>Weight (kg) without dies</b>	27
<b>Weight with dies (kg)</b>	33

## 100 Tonne Dies

- Commonly referred to as "C" or "U" type dies
- Rectangular Dies also available

### Aluminium

Part No.	Type	Across Flats (mm)	Crimp Width (mm)
K100-21.0-AL	Al	21.0	75.0
K100-25.6-AL	Al	25.6	75.0
K100-28.3-AL	Al	28.3	75.0
K100-28.5-AL	Al	28.5	75.0
K100-30.0-AL	Al	30.0	75.0
K100-34.5-AL	Al	34.5	75.0
K100-36.22-AL	Al	36.22	75.0
K100-37.0-AL	Al	37.0	75.0
K100-39.0-AL	Al	39.0	75.0
K100-40.0-AL	Al	40.0	75.0
K100-40.21-AL	Al	40.21	75.0
K100-43.2-AL	Al	43.2	75.0
K100-44.5-AL	Al	44.5	75.0
K100-47.5-AL	Al	47.5	75.0
K100-48.0-AL	Al	48.0	75.0
K100-49.71-AL	Al	49.71	75.0

### Steel

Part No.	Type	Across Flats (mm)	Crimp Width (mm)
K100-07.5-ST	Steel Inner	7.5	35.0
K100-09.5-ST	Steel Inner	9.5	35.0
K100-11.0-ST	Steel Inner	11.5	35.0
K100-16.0-ST	Steel Inner	16.0*	35.0
K100-17.0-ST	Steel Inner	17.0	35.0
K100-18.0-ST	Steel Inner	18.0	35.0
K100-19.0-ST	Steel Inner	19.0	35.0
K100-20.0-ST	Steel Inner	20.0	35.0
K100-20.22-ST	Steel Inner	20.22	35.0
K100-26.0-ST	Steel Inner	26.0	35.0

\*16mm AF 100T steel die suitable for AMOKABEL

Please Note: This die selection chart is produced as a guide only. Please check with your Lug/Link manufacturer for AF sizes and tonnage.



100T Aluminium Die

Custom Sizes available upon request





## Cutters Selection Matrix

CUTTER PART No.	DESCRIPTION	Page No.	JAW OPENING	CONTAINER SEAL	BARE AL/CU	ACSR	GUY WIRE	WIRE ROPE	REBAR GROUND ROD	CABLE TRAY SOFT STEEL	SWA
<b>BATTERY</b>											
EBS6LGKS	Bolt Cutter	C21	6	✓					✓	✓	
EBS8CFM	Bolt Cutter	C21	8	✓					✓	✓	
EBS12CFM	Bolt Cutter	C21	12	✓					✓	✓	
ES20CFM/ ES20ISM/ ES20RMCCFM	Scissor Style Cutter	C22 / C34 /C22	20		✓	✓					
ESG25CFM	Guillotine Style Cutter	C23	25		✓	✓	✓		✓	✓	✓
ESM25CFM/ESM25ISM	Parrot Beak style Cutter	C23 / C34	25		✓	✓					
ES32CFM/ ES32ISM/ ES32RMCCFM	Scissor Style Cutter	C24 / C35 /C24	32		✓						
ESGM452CFM	Guillotine Style Cutter	C25	45		✓	✓	✓		✓	✓	✓
ESG45CFM	Guillotine Style Cutter	C25	45		✓	✓	✓		✓	✓	✓
ESM50CFM/ ESM50ISM	Parrot Beak style Cutter	C26 / C35	50		✓						
ESG55CFM	Guillotine Style Cutter	C26	55		✓	✓	✓		✓	✓	✓
ESST55AP-AL	Ratchet Style Cutter	C27 & H6	55		✓	✓					
ESU55AP-AL	Ratchet Style Cutter	C27 & H6	55		✓						
RCB-50Y	Ratchet Style Open Jaw Cutter	C27 & H6	50		✓						
RCB-65N	Ratchet Style Cutter	C27 & H6	65		✓						
ESG65RMCCFM	Guillotine Style Safety Cutter	C40	65		✓	✓	✓		✓	✓	✓
ES85CFM	Parrot Beak style Cutter	C28	85		✓						
ESG85CFM	Guillotine Style Cutter	C28	85		✓						✓
ES105CFM	Parrot Beak style Cutter	C28	105		✓						✓
ESG105CFM/ ESG105RMCCFM	Guillotine Style Cutter & Safety Cutter	C28 / C40	105		✓						✓
EK425ISM EK425CFM	CJACSR	Parrot Beak style Cutter Attachment	C36	17.5		✓					
	CJCU	Parrot Beak style Cutter Attachment	C6	20		✓					
EK120UNVCFM EK60UNVCFM EKM60UNVCFM	UCACSR	Guillotine Style Cutter Attachment	C31	40		✓					
	UC40	Guillotine Style Cutter Attachment	C32	40		✓					
<b>HAND HYDRAULIC</b>											
HC-20A	Guillotine Style Cutter	C29	20		✓	✓	✓	✓	✓	✓	
REL-58MC	Guillotine Style Cutter	C29	25		✓	✓	✓	✓	✓	✓	
HC-40A	Guillotine Style Cutter	C29	40		✓	✓	✓	✓	✓	✓	
<b>REMOTE HEAD - HYDRAULIC</b>											
SDG45C	Guillotine Style Cutter	C29	45		✓	✓					
SDG852C	Guillotine Style Cutter	C29	85		✓						✓
SDK85C	Parrot Beak style Cutter	C29	85		✓						✓
SDG105C	Guillotine Style Cutter	C29	105		✓						✓
<b>RATCHET HAND</b>											
9009	Ratchet Style Cutter	H5 (Hand Tools)	18		✓	✓				✓	
63607	Ratchet Style Cutter	H5 (Hand Tools)	22		✓	✓				✓	
RC-32ACSR	Ratchet Style Cutter	H5 (Hand Tools)	32		✓	✓				✓	
K1062	Ratchet Style Cutter	H5 (Hand Tools)	52		✓						
K683T	Ratchet Style Cutter	H5 (Hand Tools)	32		✓						
REL-R-HC	Ratchet Style Parrot Beak Cutter	H5 (Hand Tools)	30		✓	✓					
REL-R-SC	Ratchet Style Parrot Beak Cutter	H5 (Hand Tools)	50		✓	✓					
<b>HAND</b>											
Various	Cable, Bolt & Side Cutters	H7 (Hand Tools)	-		✓					✓	

## Cutters - Battery Powered

### 6, 8 & 12mm Bolt Cutters - Klauke

#### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Open head, rotatable 330°
- One-button controlling all tool functions

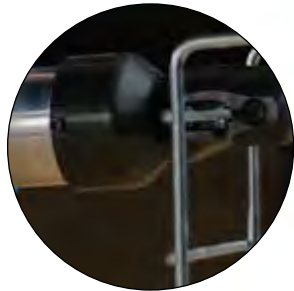
- Ergonomic balanced centre of gravity
- LED for work area illumination
- LED display for showing tool data
- Battery charge and service display

#### Part No. EBS6LGKS

- Burr-free cutting
- The cut is made in less than 1 second
- Maintenance required only after 20,000 cuts (renew hydraulic shock absorber system)
- Always ready to cut thanks to easily replaceable blades

#### Order Information

Part No.	Description
EBS6LGKS-0	Tool skin and case
EBS6LGKS-K	Tool, 2 x 1.5Ah batteries, charger and case



**Burr-free cutting of wire cable tray**



**FAST Ideal for cutting cable tray**



#### Part No. EBS8CFM

- For cutting cable trays, bolts and medium-hard steel wire
- Ideal in confined areas: narrow cutting head
- All tool data can be viewed using on-tool display and i-press app

SCAN or CLICK to View Operation Video



#### Order Information

Part No.	Description
EBS8CFM-0	Tool skin and case
EBS8CFM-K	Tool, 2 x 1.5Ah batteries, charger and case



**Ideal for cutting shipping container seals**



#### Part No. EBS12CFM

- For cutting, shipping container seals, cable trays, bolts and medium-hard steel wire
- Ideal in confined areas: narrow cutting head
- All tool data can be viewed using on-tool display and i-press app

SCAN or CLICK to View Operation Video



#### Order Information

Part No.	Description
EBS12CFM-0	Tool skin and case
EBS12CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

Part No.	Cutting Force (kN)	Cutting Range (mm)	Cutting Time (s)	No. of Cuts	Battery	Charging Time (min)	Weight (kg)
EBS6CFM	24	Max 6 dia.	approx. 1 (depending on material thickness)	approx 300 for bolts 5mm diameter	Makita 18V 1.5Ah, Li-Ion*	15	1.9 including battery
EBS8CFM	15	Max 8 dia.					1.55 including battery
EBS12CFM	45	Max 12 dia.					2.05 including battery

\* See page C37 for battery and charger information

**Klauke®**

## 20mm Cutter, ACSR/AL/CU - Klauke

**Part No. ES20CFM**

- For cutting Al/St conductors (ACSR), solid Cu cables and laminated copper bus bars
- Extremely robust design and lightweight
- Slim cutting head - ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- One-button controlling all tool functions
- Ergonomic balanced centre of gravity
- Open head, rotatable 330°

### Technical Data

Cutting Force (kN)	23
Cutting Range (mm)	Max 20 dia. dependent on cable type
Battery	Makita 18V 1.5Ah, Li-Ion*
Charging Time (min)	15
Weight (kg)	2.15 including battery

\* See page C37 for battery and charger information

Compact  
Ideal for confined  
work areas  
i.e switchboard &  
domestic UG pits



Also Available in 1000V  
Insulated Version -  
For more information  
see page C34

Suitable for  
**ACSR,  
Al & Cu**

### Order Information

Part No.	Description
ES20CFM-O	Tool skin and case
ES20CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

- LED Display
- Automatic retraction when operation is complete
- LED for work area illumination
- Visible and audible signals
- Battery charge and service display

## 20mm Remote Control Cutter, ACSR/AL/CU - Klauke

**Part No. ES20RMCCFM**

When cutting overhead lines, there is always the risk of coming into contact with the tool or an electric arc from a live adjacent conductor. With the new Klauke remote controlled cutting tool you remain on the ground at a safe distance.

### Features

- Sunrise Adaptor suits universal heads & telescopic sticks
- Can be switched between manual & remote
- Open head is rotatable 330°
- Ergonomic balanced centre of gravity, even when used with a telescopic hot-stick pole
- LED for work area illumination
- Quick motor stop for high user safety
- Automatic retraction when operation is complete
- Saves energy: motor stops after the operation
- Simple one-hand control via remote control
- Powerful Makita battery enables longer on-site operation between charges

### Order Information

Part No.	Description
ES20RMCCFM-O	Tool skin and case
ES20RMCCFM-K	Tool, 2 x 1.5Ah batteries, charger and case

### Technical Data

Head Type	Open
Battery	Makita 18V 1.5Ah, Li-Ion*
Bluetooth Range (m)	20
Weight (kg)	2.15 including battery

\* See page C37 for battery and charger information

Perfect for cutting  
away lightning  
arrester leads



Remote



SCAN or CLICK  
to see the  
Remote Cutter  
in action



**Klauke®**

## 25mm Cutter, ACSR/Stay Wire/AL/CU - Klauke

**Part No. ESG25CFM**

- Suitable for cutting Stay Wire, Al/St cables (ACSR), Cu, Al, St as well as armoured cables & solid structural steel
- Lightweight robust design
- Slim cutting head - ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app

### Order Information

Part No.	Description
ESG25CFM-0	Tool skin and case
ESG25CFM-K	Tool, 2 x 1.5Ah batteries, charger and case



SCAN or CLICK for correct use video



Suitable for Stay wire & ACSR



### Features

- All data can be easily read via Bluetooth
- Closed flip top head style, rotatable 350°
- One-button controlling all tool functions
- Balanced Centre of Gravity
- Automatic retraction when operation is complete
- LED Display
- LED for work area illumination
- Manual retract stop (MRS) for efficient operations
- Visible and audible signals
- Battery charge and service display

### Technical Data

Cutting Force (kN)	60
Cutting Range (mm)	Max 25 dia. dependent on cable type
Battery	Makita 18V 1.5Ah, Li-Ion*
Charging Time (min)	15
Weight (kg)	2.35 including battery

\* See page C37 for battery and charger information

**Klauke®**

## 25mm Cutter, ACSR/AL/CU - Klauke

**Part No. ESM25CFM**

- For cutting open wires AL/CU/ACSR & stay wires
- Slim Parrot Beak cutting head
- Ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app

### Order Information

Part No.	Description
ESM25CFM-0	Tool skin and case
ESM25CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

Suitable for ACSR, Al & Cu



SCAN or CLICK to see the Cutter in action



### Features

- All data can be easily read via Bluetooth
- One-button controlling all tool functions
- Balanced Centre of Gravity
- Parrot Beak Head, rotatable 350°
- LED Display
- Automatic retraction when operation is complete
- LED for work area illumination
- Visible and audible signals

### Technical Data

Cutting Force (kN)	67
Cutting Range (mm)	ACSR Max 25 dia. Stay wires Max 12 dia.
Battery	Makita 18V 1.5Ah, Li-Ion*
Charging Time (min)	15
Weight (kg)	2.9 including battery

\* See page C37 for battery and charger information



Also Available in 1000V Insulated Version - For more information see page C34

**Klauke®**

## 32mm Cutter, AL/CU - Klauke

**Part No. ES32CFM**

- Extremely robust design and lightweight
- Slim cutting head - ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app
- Suitable for Al and CU conductors only

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- One-button controlling all tool functions
- Effortless working due to balanced centre of gravity
- Open head, rotatable 330°

### Order Information

Part No.	Description
ES32CFM-0	Tool skin and case
ES32CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

- Automatic retraction when operation is complete
- LED for work area illumination
- LED display for showing tool data including visible and audible signals
- Battery charge and service display

### Technical Data

Cutting Force (kN)	15
Cutting Range (mm)	Max 32 dia. dependent on cable type
Battery	Makita 18V 1.5Ah, Li-Ion*
Charging Time (min)	15
Weight (kg)	2.15 including battery

\* See page C37 for battery and charger information

## 32mm Remote Control Cutter, AL/CU - Klauke

**Part No. ES32RMCCFM**

When cutting overhead lines, there is always the risk of coming into contact with the tool or an electric arc from a live adjacent conductor. With the new Klauke remote controlled cutting tool you remain on the ground at a safe distance.

### Features

- LED Display
- Sunrise Adaptor suits universal & telescopic sticks
- Operation can be switched between manual / remote
- Open head is rotatable 330°
- Ergonomic balanced centre of gravity, even when used with a telescopic hot-stick pole
- LED for work area illumination
- Quick motor stop for high user safety
- Automatic retraction when operation is complete
- Saves energy: motor stops after the operation
- Simple one-hand control via remote control
- Powerful Makita battery enables longer on-site operation between charges

### Order Information

Part No.	Description
ES32RMCCFM-0	Tool skin and case
ES32RMCCFM-K	Tool, 2 x 1.5Ah batteries, charger and case

### Technical Data

Head Type	Open
Cutting Range (mm)	Max 32 dia.
Battery	Makita 18V 1.5Ah, Li-Ion*
Bluetooth Range (m)	20
Weight (kg)	2.30 including battery

\* See page C37 for battery and charger information



Suitable for Al & Cu conductors



Scan or Click below to see the Remote Cutter in action



Perfect for cutting away lightning arrester leads



Suitable for Al & Cu conductors



Also Available in 1000V Insulated Version  
For more information see page C35

**Klauke®**

## 45mm Cutter, ACSR/Stay/Armoured/AL/CU - Klauke

**Part No. ESGM452CFM**

- High cutting force cuts armoured CU and AL cables, ACSR & Stay Wires
- Cuts stranded copper cables
- Extremely robust design and lightweight
- Slim cutting head - ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app

### Features

- All data can be easily read via Bluetooth
- Closed head with bolt interlock, flip top style, rotatable 330°
- One-button controlling all tool functions
- Effortless working due to balanced centre of gravity
- Automatic retraction when operation is complete
- Manual Retract Stop (MRS) for efficient operations
- Battery charge and service display
- 2 stage hydraulic system with fast feed and power stroke
- LED for work area illumination
- LED display for showing tool data including visible and audible signals

### Order Information

Part No.	Description
ESGM452CFM-0	Tool skin and case
ESGM452CFM-K	Tool, 2 x 1.5Ah batteries, charger and case

### Technical Data

Cutting Force (kN)	70
Cutting Range (mm)	Max 45 diameter
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	4.6 including battery

\* See page C37 for battery and charger information

## 45mm Cutter, ACSR/Stay/AL/CU - Klauke

**Part No. ESG45CFM**

- High cutting force cuts armoured CU and AL cables, ACSR & Stay Wires
- Also suitable for round material made of Al, Cu and steel
- Extremely robust design and lightweight
- Slim cutting head - ideal when space is critical
- All tool data can be viewed using on-tool display and i-press app

### Features

- All data can be easily read via Bluetooth
- Closed head with bolt interlock, flip top style, rotatable 350°
- One-button controlling all tool functions
- Effortless working due to balanced centre of gravity
- Manual Retract Stop (MRS) for efficient operations
- 2 stage hydraulic system with fast feed and power stroke
- Automatic retraction when operation is complete
- LED for work area illumination
- LED display for showing tool data including visible and audible signals
- Battery charge and service display

### Order Information

Part No.	Description
ESG45CFM-0	Tool skin and case
ESG45CFM-K	Tool, 2 x 4.0Ah batteries, charger and case

### Technical Data

Cutting Force (kN)	70
Cutting Range (mm)	Max 45 diameter
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	5.9 including battery



Quick release  
Flip Top Cutting Head

**The most powerful  
cutter in its class.  
Armoured/Al/  
ACSR/Cu  
up to 45mm**



SCAN or CLICK  
to see the Cutter  
in action



**Suitable for  
ACSR**



SCAN or CLICK  
to see the Cutter  
in action



**Klauke®**

Suitable for  
Al & Cu

Streamline design  
makes the ESM50  
ideal for cutting  
larger cables in  
confined spaces



## 50mm Cutter, AL/CU - Klauke

Part No. **ESM50CFM**

- For cutting copper and aluminium cables
- Very high cutting capacity thanks to innovative cutting geometry
- All tool data can be viewed using on-tool display and i-press app

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Open head, rotatable 350°
- One-button controlling all tool functions
- Ergonomic balanced centre of gravity
- Automatic retraction when operation is complete
- Manual Retract Stop (MRS) for efficient operations

SCAN or CLICK  
to see the  
Cutter in action



- LED for work area illumination
- LED display for showing tool data including visible and audible signals
- Battery charge and service display

### Order Information

Part No.	Description
ESM50CFM-0	Tool skin and case
ESM50CFM-K	Tool, 2 x 4.0Ah batteries, charger and case

### Technical Data

Cutting Force (kN)	38
Cutting Range (mm)	Max 50 diameter
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	3.0 including battery

\* See page C37 for battery and charger information

Suitable  
for Al & Cu  
& ACSR

## 55mm Cutter, ACSR/AL/CU - Klauke

Part No. **ESG55CFM**

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Closed head with bolt interlock, flip top style, rotatable 350°
- One-button controlling all tool functions
- Effortless working due to balanced centre of gravity
- Automatic retraction when operation is complete
- Manual Retract Stop (MRS) for efficient operations

- 2 stage hydraulic system with fast feed and power stroke
- LED for work area illumination
- LED display for showing tool data including visible and audible signals
- Battery charge and service display

### Order Information

Part No.	Description
ESG55CFM-0	Tool skin and case
ESG55CFM-K	Tool, 2 x 4.0Ah batteries, charger and case

### Technical Data

Cutting Force (kN)	120
Cutting Range (mm)	Max 55 diameter
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	8.2 including battery

\* See page C37 for battery and charger information



120kN Cutting Force

**Klauke®**

## 55mm Ratchet Cutter, ACSR/AL/CU - Klauke

Battery Operated Ratchet Cutters, designed for cutting a variety of OH Conductors & UG cables, including CU, AL & ACSR.



### Features

- Ergonomically designed
- One handed operation
- LED light to illuminate work area
- Forward & Reverse switch
- Versatile Makita platform

Canvas Carry Bag included



### Order Information

Part No. ACSR	Part No. AL/CU	Description
ESST55AP-AL	ESU55AP-AL	Tool skin & canvas bag
ESST55AP-AL-K	ESU55AP-AL-K	Tool, 2 x 3.0Ah* Makita batteries, charger and canvas bag

### Technical Data

Part No.	Head Style	Cuts	Jaw opening (mm)	Capacity (mm)			Dimensions (mm) (L x W x H)	Wt (kg) Inc. Battery
				CU	AL	ACSR		
ESST55AP-AL	Ratchet	ACSR	55	-	-	OLIVE*	391 x 110 x 186	3.6
ESU55AP-AL	Ratchet	AL / CU		29	33	-	388 x 110 x 198	3.4

\*OLIVE Conductor stranding 54/7/3.50

## 50 & 65mm Ratchet style Cutters - AL/CU

Battery Operated Ratchet Cutters, designed for cutting a variety of OH & UG Conductors, including CU & AL



### Part No. RCB-50Y

- Scissor Style Head
- Ideal for Confined spaces
- Max Cut 630mm<sup>2</sup>
- 50mm Jaw opening



### Part No. RCB-65N

- 65mm Jaw opening
- Max 1000mm<sup>2</sup>
- Ideal for larger UG cables
- Forward & Reverse mechanism



### Order Information

Part No.		Description
RCB-50Y-0	RCB-65N-0	Tool skin & case
RCB-50Y-K	RCB-65N-K	Tool, 2 x 3.0Ah* Makita batteries, charger & case

\*See page C37 for battery and charger information

### Technical Data

Part No.	Head Style	Cuts	Jaw opening (mm)	Capacity (mm)			Dimensions (mm) (L x W x H)	Wt (kg) Inc. Battery
				CU	AL	ACSR		
RCB-50Y	Scissor Ratchet	AL / CU	50	33	33	-	160 x 110 x 370	4.4
RCB-65N	Ratchet	AL / CU	65	41.5	41.5	-	175 x 110 x 320	3.5

## Klauke®

### Cutters, Battery Operated - 85mm & 105mm - Klauke

#### Features

- Powerful Makita battery system
- All data can be easily read via Bluetooth
- Open style head, rotatable 350°
- One-button controlling all tool functions
- Effortless working due to balanced centre of gravity
- Automatic retraction when operation is complete
- Manual Retract Stop (MRS) for efficient operations
- 2 stage hydraulic system with fast feed and power stroke
- LED for work area illumination
- LED display for showing tool data including visible and audible signals
- Battery charge and service display

### 85mm Battery Cutters

#### Part No. ES85CFM

- Large cutting capacity up to 85mm diameter
- Scissor style cutting head

Cuts  
AL/CU

#### Order Information

Part No.	Description
ES85CFM-0	Tool skin and case
ES85CFM-K	Tool, 2 x 4.0Ah* batteries, charger and case

#### Part No. ESG85CFM

- Large cutting capacity up to 85mm diameter
- Suitable for CU, AL & SWA

Cuts  
AL/CU/SWA

#### Order Information

Part No.	Description
ESG85CFM-0	Tool skin and case
ESG85CFM-K	Tool, 2 x 4.0Ah* batteries, charger and case

### 105mm Battery Cutters

#### Part No. ES105CFM

- Extremely large cutting area up to 105mm diameter
- Suitable for CU, AL & Lightweight SWA

Cuts AL/CU/  
Lightweight SWA

#### Order Information

Part No.	Description
ES105CFM-0	Tool skin and case
ES105CFM-K	Tool, 2 x 4.0Ah* batteries, charger and case

#### Part No. ESG105CFM

- Extremely large cutting area up to 105mm diameter
- Guillotine style cutting head
- Suitable for CU, AL & SWA



SCAN or  
CLICK  
to see the  
ESG105 Cutter  
in action

#### Order Information

Part No.	Description
ESG105CFM-0	Tool skin and case
ESG105CFM-K	Tool, 2 x 4.0Ah* batteries, charger and case



ES85CFM



ESG85CFM



ES105CFM



ESG105CFM

Cuts AL/CU/SWA

#### Technical Data

Part No.	ES85CFM	ESG85CFM	ES105CFM	ESG105CFM
Cutting Force (kN)	30	60	74	120
Cutting Range (mm)	Max 85 OD AL & CU	Max 85 OD AL, CU & SWA	Max 105 OD AL, CU & Lightweight SWA	Max 105 OD AL, CU & SWA
Battery	Makita 18V 4.0Ah, Li-Ion*			
Charging Time (min)	36			
Weight (kg)	6.9 including battery	6.8 including battery	9.6 including battery	10.7 including battery

\* See page C37 for battery and charger information



## Cutters, Hand Operated, Hydraulic

### 20, 25 & 40mm Hand Operated Cutters

- Two stage double acting hydraulics
- Ram extends on both open & closed operation
- Manual pressure release at any stage
- Flip top latch head
- Replaceable blades

Part No.	HC-20A	REL-58MC	HC-40A
Brand/Manufacturer	TEN	Reliable	TEN
Head Rotation (°)	180	180	180
Cutting Force (T)	6.0	5.3	8.0
Safety Valve	Yes	Yes	Yes
Length (mm)	390	400	560
	Maximum Cutting Capacity OD (mm)		
Cu / Al	20	25	40
ACSR	20	25	28
Wire Rope	16	25	22
Standard Guy Wire	16	22	15
ReBar, Ground & Anchor Rods	13	16	13
Soft Steel Bolts	16	16	13
Specific Features	Double Stage Hydraulic design	Auto-Retract, No Disassembly to Replace Moving Blade	Double Stage Hydraulic design
Storage Supplied	Carry Bag	Carry Bag	Carry Bag
Weight (kg)	2.8	1.8	6.0



Protective Carry Case (Included)

## Cutters, Remote Head, Hydraulic

### 40 to 105mm Cutters, Remote Head



Canvas carry bag (Included)

Part No.	SDG105C	SDG852C	SDG45C	PK60UNVC	SDK85C
Type	AL/CU/SWA	AL/CU/SWA	ACSR/AL/CU	ACSR/AL/CU	AL/CU/SWA
Cutting Range (mm)	max. 105 OD	max. 85 OD	max. 45 OD	max. 40 OD	max. 85 OD
Cutting Force (T)	12	6	6	6	3
Operating Pressure (PSI)	10,000	10,000	10,000	10,000	10,000
Length (mm)	432	445	340	350	450
Weight (kg)	7.7	4.3	3.8	2.4	5.2

# Klauke Next Generation Universal Tools - One tool for all your needs

Crimping, cutting or punching: Replaceable adapter and dies quickly adapt the tool to individual tasks. Lightweight and powerful: Crimping up to 400 mm<sup>2</sup>, cutting up to 40 mm diameter or punching up to 92 x 92 mm, no problem at all for the Klauke Multi.

## Crimping

- Can be used with Series 5, 18 and 22 Series dies (6T)
- Wide range crimping with Series 13 dies (12T)
- Cross sections up to 400mm<sup>2</sup>
- Simple adapter replacement

## Cutting

- A wide range of materials can be cut including aluminium, copper, threaded rods, profile rails, railway catenary wires
- Cutting dies available for each application
- Cutting range up to 40mm

## Punching

- Versatile punching with hole punch adapters available
- Punch holes up to 64mm diameter (EK60 & EKM60)

**NEXT  
GENERATION**

All your  
hydraulic  
battery tools in  
one box



SCAN or CLICK  
to see Universal  
Tool in action





## 12 Tonne Universal Tool - Pistol Grip - Klauke

Part No. EK120UNVCFM

- One head for crimping, cutting and punching - one tool for all
- Ideal for field operations where all common jobs can be carried out with just one tool
- Very large crimping range



### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Universal head with flip top style, rotatable
- One-button controlling all tool functions
- Automatic retraction after operation completed
- 2 stage hydraulic system with fast feed and power stroke
- Effortless working due to balanced centre of gravity
- LED for work area illumination
- LED display for showing tool data
- Battery charge and service display

### Order Information

Part No.	Description
EK120UNVCFM-0	Tool skin, 12 Tonne Die Adapter and case
EK120UNVCFM-K	Tool, 12 Tonne Die Adapter, 2 x 4.0A batteries, charger and case

### Technical Data

Crimping Force (kN)	108
Crimping Range (mm)	10-400
Number of Crimps	approx. 110 at 150mm Cu DiN
Cutting Range (mm)	max. 40 diameter
Punching Capacity (mm)	Up to 144 dia. round**
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	7.35 including battery

\*See page C37 for battery and charger information

**10-400mm<sup>2</sup> Crimping capacity  
40mm dia. Cutting Range  
144mm dia. round punching**

## Universal Tool Adaptors

Accessories/Tool	EK120UNVCFM	EK60UNVCFM	EKM60UNVCFM
12 Tonne Die Adaptor (included)	UA12T	Not Applicable	Not Applicable
6 Tonne Die Adaptor (included)	Not Applicable	UA22	UA22
Cutter 40mm ACSR	UCASR	UCASR	UCASR
Cutter 40mm Al/Cu	UC40	UC40	UC40
Punch Adaptor	UA12P (Up to 144mm)	UA12P (Up to 64mm)	UA12P (Up to 64mm)
Cutter - Rail Catenary	Upon Request	Upon Request	Upon Request
Cutter - Threaded Rod	Upon Request	Upon Request	Upon Request

\*\*Square Punch & Dies available upon request

**12T Die Adaptor**  
Part No. UA12T



**Cutting Die**  
Part No. UCACSR



**Cutting Die**  
Part No. UC40

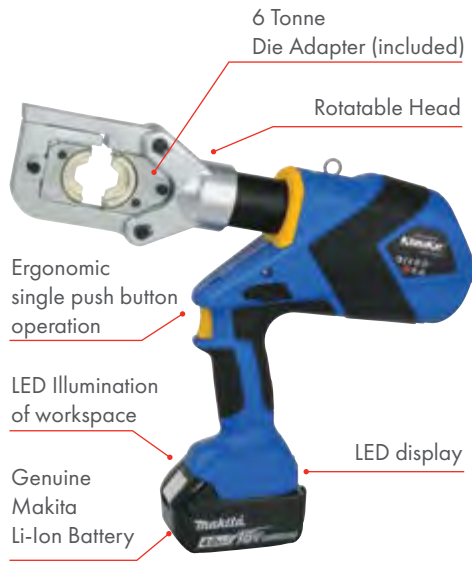


**Punch Adaptor**  
Part No. UA12P

**Punch Dies and Draw studs  
available - See Page C50**



**Klauke®**



**6-300mm<sup>2</sup> Crimping Capacity  
40mm OD. Cutting Range  
64mm dia. Round punching**

## 6 Tonne Universal Tool - Pistol Grip - Klauke

**Part No. EK60UNVCFM**

- One head for crimping, cutting and punching
- Ideal for field operations where all common jobs can be carried out with just one tool
- All tool data can be viewed using on-tool display and i-press app

### Features

- Makita battery system
- All data can be easily read via Bluetooth
- Universal head with flip top style, rotatable 350°
- One-button controlling all tool functions
- Safety: Automatic retraction after operation completed
- 2 stage hydraulic system with fast feed and power stroke

### Order Information

Part No.	Description
EK60UNVCFM-0	Tool skin and case
EK60UNVCFM-K	Tool, 2 x 4.0Ah batteries, charger, and case

- Balanced centre of gravity
- LED for work area illumination
- Battery charge and service display
- LED Display

### Technical Data

Crimping Force (T)	6
Crimping Range (mm <sup>2</sup> )	6-300
Cutting Range (mm)	max. 40 diameter (See page C31 for adapter)
Punching Capacity (mm)	Up to 64 dia. round (See page C31 for adapter)
Battery	Makita 18V 4.0Ah, Li-Ion*
Charging Time (min)	36
Weight (kg)	4.8 including battery

\*See Page C31 for Accessories

## 6 Tonne Universal Tool - In-Line - Klauke

**Part No. EKM60UNVCFM**

- One head for crimping, cutting and punching 330°
- Ideal in the assembly field where all common jobs can be carried out using one tool
- All tool data in view thanks to display and i-press

### Features

- All data can be easily read via Bluetooth
- Quality assurance via visual and audible signals
- One-button controlling all tool functions
- Universal head flip top style, rotatable
- Balanced centre of gravity

### Order Information

Part No.	Description
EKM60UNVCFM-0	Tool skin and case
EKM60UNVCFM-K	Tool, 2 x 1.5Ah batteries, charger, and case

- LED for work area illumination
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when operation is complete
- LED Display

### Technical Data

Crimping Force (T)	6
Crimping Range (mm <sup>2</sup> )	6-300
Cutting Range (mm)	max. 40 dia. (See page C31 for adapter)
Punching capacity (mm)	up to 64 dia. round (See page C31 for adapter)
Battery	Makita 18V 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	3.0 including battery

\*See page C37 for battery and charger information

6 Tonne  
Die Adapter (included)

**6-300mm<sup>2</sup> Crimping  
Capacity 40mm OD  
Cutting Range  
64mm dia. round  
punching**



## Insulated Battery Tools

### Your Safety is our priority

Klauke's Orange Line series of battery powered hydraulic cutting and crimping tools are the world's first of their kind, offering protection from electric shocks up to 1000 V. The TRI-INSULATION BARRIER, developed in-house, prevents voltage discharging between tool head and tool body. Every single tool is tested for compliance with the electrical requirements of IEC 60900 in their production process. This guarantees voltage protection up to 1000V.

#### TRI-INSULATION BARRIER



- 1. CREEPAGE DISTANCE**  
CLEVER DESIGN ENSURES MINIMUM 12.5MM DISTANCE BETWEEN NON INSULATED PARTS
- 2. PA6 INSULATION**  
PLASTIC HOUSING MATERIAL WITH EXCELLENT INSULATING PROPERTIES
- 3. DIELECTRIC OIL**  
HYDRAULIC OIL WITH HIGH DIELECTRIC INSULATING PROPERTY

- VDE tested and certified up to 1000V in accordance to the electrical requirements of IEC 60900.
- Insulation from the head provides protection for the operator.
- Bright Orange rubberised body provides non slip protection and differentiates from standard tools.

Working on or near live low-voltage parts up to 1000V is often part of every day work in certain sectors. The use of insulated manual hand tools in tight workspaces and exerting the force required to operate insulated manual hand tools poses a safety risk to the operator.

Klauke Orange tools offers battery-powered cutting and crimping that can significantly reduce operator risk by improving precision and safety in these hazardous work conditions.

**Klauke Insulated Tools provide a safer option**



**Klauke®**

## 1000V Insulated Battery Powered Tools - Klauke

### 20mm Cutter, ACSR/AL/CU - Klauke

**Part No. ES20ISM**

- Orange body for easy differentiation
- Insulated and VDE certified to 1000V for increased safety
- For cutting Al/St conductors (ACSR), Al/Cu cables and laminated copper bus bars
- All tool data in view thanks to the LCD display and Klauke i-press software

#### Features

- All data can be easily read via Bluetooth
- Visual and audible signals
- One-button controlling all tool functions
- Balanced centre of gravity
- Endless Rotatable head
- LED for illuminating work area
- Automatic retraction when operation is complete
- LED Display

#### Order Information

Part No.	Description
ES20ISM-0	Tool skin and case
ES20ISM-K	Tool, 2 x batteries, charger and case

**MEETS  
IEC 60900**

#### Technical Data

Cutting Force (kN)	23
Cutting Range (mm)	Up to 20 dia (dependent on cable/wire type)
Battery	Makita 18V 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	2.1 including battery

\* See page C37 for battery and charger information

Endless Rotating Head

**Cuts  
Cu, Al  
& ACSR**



### 25mm Cutter, ACSR/AL/CU - Klauke

**Part No. ESM25ISM**

- Orange body for easy differentiation
- Insulated and VDE certified to 1000V for increased safety
- For cutting Al/St wires (ACSR), (Cu, Al, St) cables as well as armoured cables, and stay wires
- All tool data in view thanks to the LCD display and Klauke i-press software

#### Features

- All data can be easily read via Bluetooth
- Visual and audible signals
- One-button controlling all tool functions
- Balanced centre of gravity
- Endless Rotatable head
- LED for illuminating work area
- Automatic retraction when operation is complete
- LED Display

#### Order Information

Part No.	Description
ESM25ISM-0	Tool skin and case
ESM25ISM-K	Tool, 2 x batteries, charger and case

**MEETS  
IEC 60900**

#### Technical Data

Cutting Force (kN)	67
Cutting Range (mm)	Open wire (ACSR) to 25 dia., stay wires to 16 dia., high-tensile stay wires to 12 dia.
Battery	Makita 18V, 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	2.9 including battery

\* See page C37 for battery and charger information

Endless Rotating Head

**Cuts  
Cu, Al,  
ACSR &  
Stays**





## 32mm Cutter, AL/CU - Klauke

**Part No. ES32ISM**

- Orange body for easy differentiation
- Insulated and VDE certified to 1000V for increased safety
- Slim cutting head - ideal when space is critical
- All tool data in view thanks to the LCD display and Klauke i-press software

### Features

- All data can be easily read via Bluetooth
- Visual and audible signals
- One-button controlling all tool functions
- Balanced centre of gravity
- Endless Rotatable head
- LED for illuminating work area
- Automatic retraction when operation is complete
- LED Display

### Order Information

Part No.	Description
ES32ISM-0	Tool skin and case
ES20ISM-K	Tool, 2 x batteries, charger and case

**MEETS  
IEC 60900**

### Technical Data

Cutting Force (kN)	15
Cutting Range (mm)	max. 32 dia
Battery	Makita 18V, 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	2.1 including battery

\* See page C37 for battery and charger information

## 50mm Cutter, AL/CU - Klauke

**Part No. ESM50ISM**

- Orange body for easy differentiation
- Insulated and VDE certified to 1000V for increased safety
- High cutting force for cutting copper and aluminium cables
- Saves time due to innovative opening mechanism design
- All tool data in view thanks to display and i-press

### Features

- All data can be easily read via Bluetooth
- Visual and audible signals
- One-button controlling all tool functions
- Balanced centre of gravity
- Endless Rotatable head
- LED for illuminating work area
- Automatic retraction when operation is complete
- LED Display

### Order Information

Part No.	Description
ESM50ISM-0	Tool skin and case
ESM50ISM-K	Tool, 2 x batteries, charger and case

**MEETS  
IEC 60900**

### Technical Data

Cutting Force (kN)	38
Cutting Range (mm)	max. 50 dia
Battery	Makita 18V, 1.5Ah, Li-ion*
Charging Time (min)	15
Weight (kg)	3.1 including battery

\* See page C37 for battery and charger information

Endless Rotating Head

**Cuts  
Cu & Al**



Endless Rotating Head

**Cuts  
Cu & Al**



**Klauke®**

## 5 Tonne Crimper & Cutter - Klauke

Part No. EK425ISM

- Orange body for easy differentiation
- Insulated and VDE certified to 1000 V for increased safety
- All tool data in view thanks to the LCD display and Klauke i-press software

### Features

- All data can be easily read via Bluetooth
- Visual and audible signals in case of error
- One-button controlling all tool functions
- Balanced centre of gravity
- Endless Rotatable head
- LED for illuminating work area
- Automatic retraction when operation is complete
- LED Display

### Order Information

Part No.	Description
EK425ISM-O	Tool skin and case
EK425ISM-K	Tool, 2 x batteries, charger and case

**MEETS  
IEC 60900**

Endless Rotating Head

**Crimps  
up to  
240mm<sup>2</sup>  
Cuts up to  
20mm**



### Technical Data

Crimping Force (kN)	53
Application	5 Tonne Crimping
Crimping Capacity (mm <sup>2</sup> )	Cu/Al 240, ACSR 185
Battery	Makita 18V, 1.5Ah, Li-ion*
Charging Time (min)	15
Stroke/Opening Width (mm)	40
No of crimps per charge	140 @ 70mm <sup>2</sup>
Dimensions (mm)	430(H) x 110(W) x 80(D)
Weight (kg)	2.6 including battery

\*See page C37 for battery and charger information

**53kN force in a lightweight tool of only 2.6kg**

**6T Style Dies  
Available see page C9**



### Available cutting heads

	CJACSR	CJCU
Capacity (mm)	17.5 OD	20 OD
Length (mm)	145	140
Weight (kg)	1	1
Cuts	ACSR/Steel	CU/AL



CJACSR

CJCU



## Batteries, Chargers and Accessories

### Makita 18V Charger

Part No. DC18RC

#### Features

- Integrated L.E.D.
- Battery charge level indicator allows user to monitor battery charge.
- Impact-resistant outer case and shock-absorbing inner-liner are engineered to protect the battery.
- Sixteen contact terminals maintain a constant connection with the tool to help prevent power loss or fluctuation, even during high-vibration applications.
- Battery resists self-discharge and remains ready for use even after long periods of storage.
- Star protection computer controls

- includes overload protection, over-discharge protection and over heat protection.
- If the battery reaches a certain level of heat it will cut power to the tool, protecting the tool and battery from overheating.
- Forced air cooling fan - cools the battery to minimise charging time.
- Digital power display identifies the condition of the battery and charging condition.
- Warranty: 2 Years Warranty Covered By Makita Australia.

Makita 230VAC Rapid Charger  
Part No. DC18RC



### Klauke 10.8V Charger

Part No. LGML1AU

Charger for Klauke Battery RAML1

#### Features

- 230VAC Charger
- Charges Klauke 10.8V batteries

EK50MLAU  
Mini Crimper



Older Style KLAUKE Batteries available on request

### Makita & Klauke Batteries

Battery	Makita BL1815N-L	Makita BL1830B	Makita BL1840B	Makita BL1850B	Klauke RAML
Voltage (V)	18	18	18	18	10.8
Amp (Ah)	1.5	3.0	4.0	5.0	1.5
Charge Time (min)	15	22	36	45	40
Weight (g)	300	605	610	615	300

### Adaptor, Makita Platform to Milwaukee Battery

Part No. MMA18



Makita Battery Platform

Adaptor

Milwaukee Battery



### Tool Strap

Part No. TENM703

- Quality Tool Strap Ideal for Battery Tools
- 2m Web Strap complete with Snap Hook





## Pumps, HP Hydraulic 700bar (10,000psi)

### Electric - Single Acting

**Part No. PH240V-SA-A**

- High pressure electric hydraulic pump gives the operator portability and complete control with simple push button operation.
- 700Bar/10,000PSI
- Corded Pendant Remote
- Single phase (230V)



#### Technical Data

Engine	Single phase electric - 230V 50Hz
Motor Power (kW)	0.75
Max Pressure (PSI)	700 bar (10000)
Flow Rate (lt/min)	Low pressure: 6
	High pressure: 0.7
Oil tank Capacity (lt)	5
Weight (kg)	Approx. 28 Inc. Oil
Dimensions (mm)	315 (L) x 255 (W) x 460 (H)

## TESMEC



### Petrol - Double Acting - TESMEC

**Part No. CPP001050**

- A high pressure petrol motor driven hydraulic pump suited for use where compact, efficient, portable machinery is required.
- High pressure - 700Bar/10,000PSI
- Compact size for portable use.
- Tesmec build quality

#### Technical Data

Engine	4 stroke petrol
Motor Power (HP)	5.5
Max Speed (rpm)	3600
Max Pressure (PSI)	700 bar (10000)
Low Pressure (lt/min)	(0-60 bar) 5
Max Delivery (min)	1.8
Tank Capacity (lt)	10
Weight (kg)	54
Dimensions (mm)	530 (W) x 340 (L) x 370 (H)



### Electric - Double Acting - TESMEC

**Part No. CPP004010**

- A high pressure electric motor driven hydraulic pump suited for use where compact, efficient, portable machinery is required.
- High pressure - 700Bar/10,000PSI
- Compact size for portable use.
- Tesmec build quality

#### Technical Data

Engine	Single phase electric - 230V 50Hz
Motor Power (kw)	2.2
Max Speed (rpm)	2880
Max Pressure (PSI)	700 bar (10000)
Low Pressure (lt/min)	(0-60 bar) 5
Max Delivery (min)	1.8
Tank Capacity (lt)	10
Weight (kg)	50
Dimensions (mm)	530 (W) x 340 (L) x 370 (H)

See page C47 for  
Hydraulic Hoses

## Battery Pump - Single Acting - Klauke

**One Pump - Multiple Heads**

Compact and lightweight Single Acting Hydraulic Pump for operating remote cutting and crimping heads (As shown below)



**5.5kg**  
incl. Battery & Hose

### Part No. RHP700LK

- Compact and lightweight design
- Suitable for operating high pressure single acting 700 bar crimping and cutting tools
- Fibreglass reinforced polyamide shock proof housing
- Pendant Remote control (Standard)
- All high pressure hoses are supplied with coupling plug and sleeves, filled with hydraulic oil

### Technical Data

Battery Voltage (V)	18
Battery Capacity	2 x 4.0Ah. Li-ion*
Charging Time (min)	22
Weight (kg)	5.5 inc battery & hose
Operating Pressure (PSI)	max. 700bar (10000)
Max Oil Volume (ml)	approx. 760ml
Dimensions (mm)	265 (L) x 130 (W) x 250 (H)



Pump shown above with optional cutting head and a hydraulic hose



Pump shown above with optional crimping head and a hydraulic hose

### Order Information

Part No.	RHP700LK-K	RHP700RMCLK-K
Kit Includes	Pump, Corded Pendant, 2m Conductive Hose, 2 x batteries, charger & a bag	Pump, Remote & Corded Pendant, 2m Conductive Hose, 2 x batteries, charger & a bag



Makita Charger  
Part No. DC18RC



Makita 4Ah Batteries  
Part No. BL1840B



2m Hose  
c/w Male Couplers



Padded  
Carry Strap

Available Heads - See page information below for further detail on remote heads

Cutting



7.7kg

**105mm Armoured Cutting Head**  
Part No. SDG105C



3.8kg

**45mm Armoured Cutting Head**  
Part No. SDG45C

Page  
C29



4.3kg

**85mm Armoured Cutting Head**  
Part No. SDG852C



5.2kg

**85mm Cutting Head ACSR/Steel**  
Part No. SDK85C

Multi Tools



2.4kg

Head Page C14  
Accessories Page C31

**Multi Head Crimping/Cutting/Punching**  
Part No. PK60UNVC

Crimping



4.5kg

**12T Crimping Head**  
Part No. TP-420H



5.3kg

**25T Crimping Head**  
Part No. HP25T-SA



30.5kg

**60T Crimping Head**  
Part No. HP60TC-SA

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C16



11.0kg

**45T Crimping Head**  
Part No. HP45T-SA-A



**Klauke®**

## Spiking/Cutting, Cable Systems - Klauke

### 1000V Insulated Pump & Cutting Head - Remote Control

Part No. ASSGG-Series Pump



SCAN or  
CLICK  
to View  
Operation  
Video



#### Technical data

Battery Voltage (V)	18
Battery	2 x 4.0Ah, Li-ion*
Charging Time (min)	36
Weight (kg)	6.4 inc battery
Operating Pressure (PSI)	700bar (1000)
Usable Oil (ml)	800
Dimensions (mm)	330 (L) x 160 (W) x (H) 280



#### Order Information

Part No.	Description/Components
ASSGG105LC	Safety Pump (ASSGL), Remote Kit, 2 x Batteries, 10m Non-conductive Hose, 105mm Cutting Head ** (SDG105C), & Earth Spike with copper lead
ASSGG852LC	Safety Pump (ASSGL), Remote Kit, 2 x Batteries, 10m Non-conductive Hose, 85mm Cutting Head ** (SDG8525C), & Earth Spike with copper lead

\* See page C37 for battery and charger information

\*\* See page C29 for specifications



Safely perform your cutting/spiking operations on unproven cables from



ESG105RMCCFM

### Pistol Style Cutters 65 & 105mm - Remote Controlled

Part No. ESG105RMCCFM - ESG65RMCCFM

- Large (105mm) & Medium (65mm) diameter remote controlled cable cutter
- Same performance as the standard (105) counterpart but adds a safe work environment
- Ideal for hard to access trenches and manholes by creating adequate distance between possible live conductors and the operator

#### Features

- Unique End Position Control - Emits a sound on the remote to indicate a successful cut. Safer than relying on the Maximum Hydraulic pressure indicator or gauge
- Remote control will only operate when the tool trigger is locked by the Spring Ring

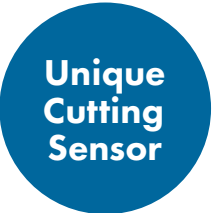
#### Order Information

Part No.	Description
ESG105RMCCFM-K ESG65RMCCFM-K	Tool, Remote Control, 2 x Batteries, Charger and case

- Double Click on the remote to start the cut (safety feature against unintended operation)
- Single Click on the remote for retraction

#### Technical Data

Part No.	ESG105RMCCFM	ESG65RMCCFM
Cutting Force (T)	120	60
Cable Type	AL/CU/SWA	AL/CU/SWA
Cutting Range (mm)	Max 105 dia. dependent on cable type	Max 65 dia. dependent on cable type
Battery	Makita 18V 4.0Ah, Li-Ion	Makita 18V 4.0Ah, Li-Ion
Charging Time (min)	36	36
Weight (kg)	10.5 including battery	6.0 including battery





## Wrench, Hydraulic Impact - Low Pressure



### Part No. Various

- Lightweight aluminium alloy
- Feather trigger allows control of speed
- Larger clearance trigger guard for high voltage gloves
- Ergonomic balanced design with finger moulds in trigger
- Easily changeable forward/reverse push shaft
- EZ selector valve allows change between open and closed centre without tools
- Fixed Tools also available
- Supplied with trigger guard and flush face couplers
- Heat insulated handle
- Lifetime warranty on motor only
- Operating pressure 1,000 - 2,000PSI

Part No.	Chuck Type	Pressure (PSI)	Flow (l/min)	Torque (kN-m)	RPM	Weight (kg)
REL-425CG-TEN	7/16"	1,000 - 2,000	19-30	0.50	3,600	3.9 with coupler
REL-425CG-1.2	1/2"					

See page C47 for Hydraulic Hoses

## Adaptor - 7/16" Hex to 1/2" Square Drive



### Part No. TEN-716-12

- 7/16" hex shaft adaptor for 1/2" square drive sockets
- Convert your 7/16" utility impact wrench to a 1/2" drive for your impact sockets
- Designed for high torque Impact wrenches
- Superior wear resistance and durability for utility grade use
- Made from high strength, shock proof steel

## "J" Hook Driver - Slot Socket PLUS

### Part No. SS-2

#### Features

- High Visibility ID Band
- Improved Fit on Large J Hooks (Off-Set & Centre)
- Cross-Arm Hardware
- Earthing Clamps
- Hot Line Clamps
- Impact Rated

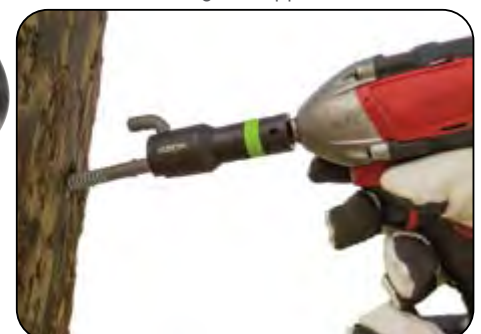


Suits  
Off-Set &  
Centred  
J-Hooks



1/2"  
Drive

Multi-Use Eye Bolt Type Clamp  
and Wing Nut Applications:



## Sockets Sets 1/2" Drive

### Deep Impact Socket Set - 26 & 29 Piece Kits

**Part No. 658272601** - 26 Piece 1/2" Drive, 12-Point Deep Impact Socket Set  
Includes: 10 to 36mm (Excluding 31 mm) stored in a Blow Mould Case.

**Part No. 84935N** - 29 Piece 1/2" Drive, 6-Point Deep Impact Socket Set  
Includes: 8 to 36mm stored in a Blow Mould Case.

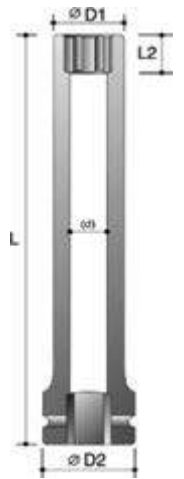
Part No.	Description	Type
658272601	26 piece Socket Set - Deep Impact	12 Point
84935N	29 piece Socket Set - Deep Impact	6 Point

### Extra Deep Tube Socket Set - 7 Piece Kit

**Part No. 605290701**

7 Piece 1/2" Drive, 6-Point "TUBE" Deep Impact Socket Set  
Includes: 19, 21, 24, 27, 30, 32 and 36mm @ 250mm Long Moulded Case

Part No.	Size (mm)	D2 (mm)	D1 (mm)	L2 (mm)	L (mm)	Hole Clearance (mm)
60529019	19	28	28	13	250	14
60529021	21	28	31	13	250	16
60529024	24	28	35	15	250	18
60529027	27	32	38.5	17	250	22
60529030	30	32	42	17	250	22
60529032	32	34	44	19	250	24
60529036	36	36	49	19	250	26



## METRINCH



The Metrinch 6 wall drive system means that one tool set is all you need to service your equipment, whether it's made in Germany, the USA or Australia.

### METRINCH Socket Set - 15 Piece Kit

**Part No. MET-2450**

#### Get More Use Out of Fewer Tools

Metrinch means fewer tools and easier selection as each tool can be used for both metric and inch, plus damaged nuts and bolts. This eliminates switching back and forth from imperial to metric.

- Unique Patented Design
- More Torque, Less Wear
- Non Slip Hold
- Quality



#### Included sizes in Socket Set\*

Fit	1/2" Drive							
Metric (mm)	11	12	13	14	15	16	17	18
SAE/AF (Inch)	7/16	15/32	1/2	9/16	19/32	5/8	11/16	23/32
Length (mm)	80							
Fit	1/2" Drive							
Metric (mm)	19	20	21	22	23	24	25	
SAE/AF (Inch)	3/4	25/32	13/16	7/8	29/32	15/16	1	
Length (mm)	80				86			

**Unique 6 Wall Drive System**  
This 15 Piece socket set equals a 42 piece conventional set

#### Individual sizes available

Fit	1/2" Drive	
Metric (mm)	30	32
SAE/AF (Inch)	1 3/16	1 1/4
Length (mm)	86	

\*All sizes available individually





## Augers, Impact - Woodpecker

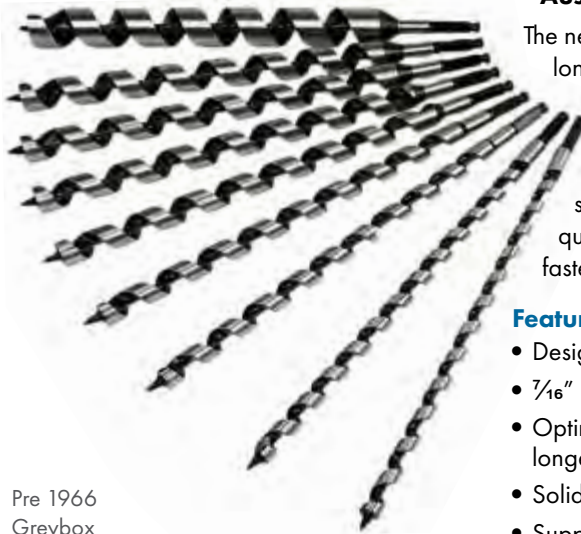
**Woodpecker Impact Auger Bits are engineered to deliver fast, clean cut holes in Australian hardwood power poles.**

The new, improved high grade steel alloy is designed for a longer bit life, staying sharper longer. Featuring a single, heat treated and tempered cutting edge for fast, effortless boring in hardwood. The clean cut of these bits allows easier removal from the pole and helps bolts to slide through with less resistance.

The design is optimised to cut quickly through hardwood with an aggressive lead screw pulling the bit through the material more easily while the wider flute design quickly ejects the chips to clear the hole. This helps to reduce heat, leading to overall faster drilling speeds and longer tool life.

### Features

- Designed to drill cleaner and faster holes in Australian hardwood poles
- 7/16" Quick change hex shank – suitable for electric drills or impact wrenches
- Optimum shaped wide cutting flute ensures a faster chip ejection, less friction and a longer lasting cutting edge
- Solid core for added strength, auger stability and extended tool life
- Supplied in a protective storage case



Pre 1966  
Greybox  
Hardwood



**Designed to drill the  
Toughest Australian  
Hardwoods**

**PROTECTIVE  
STORAGE CASE**



Part No.	Length (mm)	Dia (mm)
WP-225-08	225	8
WP-225-10	225	10
WP-225-11	225	11
WP-225-12	225	12
WP-225-14	225	14
WP-225-16	225	16
WP-225-18	225	18
WP-455-14	455	14
WP-455-16	455	16
WP-455-18	455	18
WP-455-20	455	20
WP-455-22	455	22
WP-455-24	455	24
WP-455-26	455	26
WP-455-28	455	28
WP-455-40	455	40
WP-610-16	610	16
WP-610-18	610	18
WP-610-22	610	22
WP-610-24	610	24
WP-610-26	610	26

## Chuck, Quick Change 7/16" Female to 1/2" Female

**Part No. 2403**

- Super Heavy Duty 7/16" (1/2" Square Drive) Quick-Change Chuck.
- Three ball bearing system to firmly secure your auger bits and adapters.
- Designed to be used with high torque 1/2" square drive impact wrenches.





**THE ONLY 62" (1.6m) LONG REACH CHAINSAW AVAILABLE**

## Chain Saw, Long Reach - Foam Filled

### Part No. REL-LR-Series

Reliable's REL-LR-62-TEN-A long reach hydraulic chainsaw are intended for safely cutting and trimming trees from the ground or an aerial bucket. The powerful hydraulic drive motor can easily make cuts up to 330mm in diameter. With an overall length of 1600mm (Also available 1900 & 2250mm), the operator may easily reach areas not possible with a standard chain saw.

Features include a trigger guard and safety trigger to prevent accidental movement of the chain, a covered sprocket guard, and a rubber collar hand stop. A quick set spool can be turned 180 degree for closed center/open center operations.

### Features

- Powerful hydraulic drive motor
- EZ selector valve allows change between open and closed centre systems without tools
- Foam filled fibreglass shaft to prevent ingress of moisture and provide additional electrical safety protection
- Trigger guard, sprocket guard, rubber hand guard and scabbard
- Flush face couplers fitted

**Available in 3 Lengths**

### Technical Data

Part No.	REL-LR-62-TEN-A	REL-LR-75-TEN-A	REL-LR-88-TEN-A
OAL (mm)	1600	1900	2250
Insulated Section Length (mm)	845	1175	1515
Cut Capacity (mm)	330		
System	Open or Closed		
Flow Range (lpm)	19-30		
Operating Pressure (PSI)	(1,000-2,000) 68.9-137.8 Bar		
Pressure Port Thread	9/16" -18 SAE O-Ring		
Return Port Thread	3/4" -16 SAE O-Ring		
Chain Pitch (mm)	8.25/25.4		
Chain Gauge (mm)	1.47/25.4		
Plastic Scabbard	SCAB-PS		
Weight (kg)	3.6	4.3	5

Adjustable Chain Oiler

Insulated section length

Foam Filled

Safety trigger

EZ OC to CC Selector

Trigger guard



**Foam filled for added electrical safety protection**

**Boom Mount Long Reach Saw Scabbard also available Part No. REL-LR-SS**



## Tamper, Pole Hydraulic - Reliable

### Part No. REL-TMP-Series

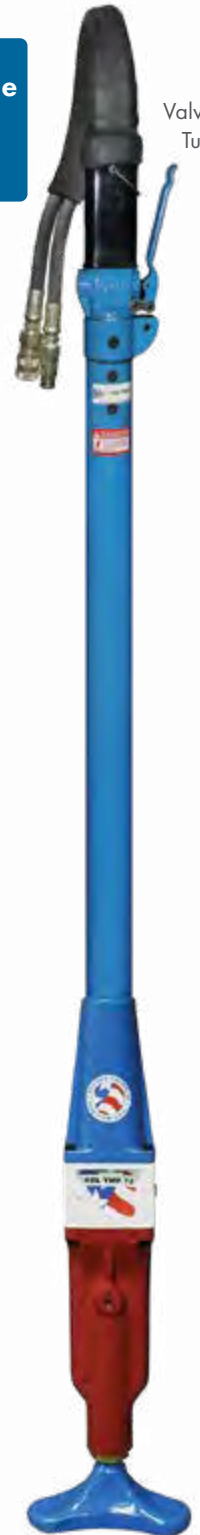
Makes quick work of setting poles, asphalt patch and general construction backfill compacting. Only 3 moving parts for low maintenance.

Reversible On/Off valve for Open and Closed-Center systems (hose-end models). Standard with kidney-shaped foot. Rotate trigger selector for Open and Closed-Center systems (valve on tube models). Used for setting poles and general backfill compacting

- Standard kidney shaped foot included on all models
- Only three moving parts reduces servicing time
- Change between open and closed centre systems
- Flush face couplers fitted
- Hose End Valve & Valve on Tube options available

Hoses available with Burst protection

Valve on Tube



Kidney Shaped Tamping Foot

Power in your hands, pressure off your back



Valve on Hose

TAMP-SAFE TS2001R



The Tamp-Safe handle was designed by a professional linesman for the safety of utility workers.

Tamp-Safe handles are built with safety in mind. It puts the operator's hand in a safe position away from the hydraulic hoses.

Our innovative handle is designed to attach to most hydraulic tampers, including Reliable, Greenlee/Fairmont, and Stanley tampers.

### Technical Data

Part No.	Type	Length (m)	Width (mm)	Flow Range (lt/min)	Pressure Port Thread	Return Port Thread	Foot Size (mm)	Blows (lt/min)	Approx Weight (kg)	Tamp-Safe Part No.
REL-TMP-60VT-TEN	Valve on Tube	1.5	100	15-23	3/16" - 18 SAE O-Ring	3/4" - 16 SAE O-Ring	60 x 200	1160	9.5	TS-2001R
REL-TMP-72VH-TEN	Valve on Hose	1.8							11	
REL-TMP-72VT-TEN	Valve on Tube	1.8							11	
REL-TMP-85VH-TEN	Valve on Hose	2.1							12.1	





## Pole Pullers, Hydraulic

### 56 Tonne Hydraulic Pole Puller

**Part No. PP-60-XHD**

- Dual Cylinder Pole Puller
- 600mm hydraulic cylinder stroke
- High capacity, hydraulic powered
- Pulling utility poles up to 700mm diameter
- Force of 56 Tonne
- Grips the pole with cam-action heads
- Cam action head has bevelled teeth to provide a better grip
- Use with open-centre or closed-centre hydraulic systems
- Fitted with 7.5m hydraulic hose
- Features built-in fork pockets, 2 lifting points on the head and high strength alloy chains
- Increased stability due to larger footprint
- Increased gripping capability ensures chain does not slip up pole
- Utilises existing low pressure tool circuit on lifter borer-crane
- Hydraulics: Required flow rate 5-15 gpm @ 2,250PSI max.

**56 Tonne Hydraulic Pulling Power**



SCAN or CLICK to View Operation Video

**Reduce Risks  
Increased Safety**



#### Technical Data

<b>Performance</b>	Pull 56 Tonne at 155 bar (2250)
<b>Maximum Pole Size (mm)</b>	710 Diameter 2230 Circumference
<b>Cylinder</b>	Stroke 600, Bore 150, Rod 125
<b>Head Chains</b>	2 x 22mm Grade 100
<b>Footprint (mm)</b>	Exterior 1168 x 1168 Interior 711 x 711
<b>Height (mm)</b>	Retracted 1500 Extended 2100
<b>Weight (kg)</b>	680
<b>Lifting Points</b>	2 lifting eyes on the head Fork Pockets 83 x 184 x 1168



### 22 Tonne Hydraulic Pole Puller

**Part No. REL-PL-P**

The REL-PL-P will make Pole Pulling with a Lifter Borer a thing of the PAST. Reduce damage and potential for injury related to pole pulling. Simple installation and operation combined with RELIABLE performance makes this Pole Puller a "Must Have Accessory" for all of your pole pulling operations.

**Kit Includes:**

- Hydraulic Cylinder with Flush Face Coupler Set
- Swivel Chain Hook Assembly
- Chain (12.7mm x 1830mm Alloy)
- Base Plate & Back Plate

#### Technical Data

<b>Operating Pressure (PSI)</b>	2800 (193bar)
<b>Recommended Flow (lpm)</b>	15-30
<b>Lift at Maximum Pressure (kg)</b>	22,734kg
<b>Part</b>	<b>Weight (kg)</b>
<b>Cylinder</b>	25.85
<b>Base Plate</b>	11.36
<b>Back Plate</b>	3.2
<b>Swivel Chain Hook Assembly</b>	16.32
<b>Chain</b>	6.8
<b>Base Pad (Optional)</b>	11.36





## Compression Test Gauge - 12 Tonne

### Part No. REL-CG-12TN

For testing compression output of 12 Tonne crimpers. Portable hydraulic fault identification tool complete with R12-TD "U" style test dies.

<b>Max Gauge Reading</b>	15,000PSI 1034 Bar
<b>Weight (kg)</b>	2

R12-TD Test die (included)



## Couplers, HP Hydraulic

TC Series couplings are used in high pressure applications with hydraulic and mechanical shock. Steel coupler sleeves and nipple bodies are hardened for resistance to damage. Fluorocarbon seals along with PTFE back up rings provide reliable sealing in high pressures. Available in 3/8 inch size only, with sleeve lock to guard against accidental disconnection.

### Technical Data

- Body Size: 3/8
- Rated Pressure (psi): 10,000
- Rated Flow (gpm): 6
- Temp Range (C): -26° - 204°

Coupler TC-371



Nipple TC-372



Part No.	TC-371	TC-372
<b>Description</b>	HP Hyd. Coupler	HP Hyd. Nipple
<b>Fitting</b>	Remote Hyd. Tools & Pumps	Standard & Non-Conductive
<b>Thread</b>	3/8-18 NPSF	
<b>Overall Length (mm)</b>	63	46
<b>Weight (g)</b>	195	63

## Hoses, Hydraulic

### Low Pressure Hydraulic Hoses - Twin-Line - NRP Jones

- Twin low pressure flexible hydraulic hose
- Strain relief sleeve over crimped connections
- Temperature: -4°C to 93°C
- Certified non-conductive rubber
- Flush face couplers both ends
- Neoprene inner tube with nitrile outer, reinforced two textile braid



Part No.	Length (m)	ID (mm)	OD (mm)	Rated Pressure (PSI)	Min Burst (PSI)	Min Bend (mm)	Weight (kg)
B098-FF	3	3/8	3/4	2250	9000	127	1.9

### High Pressure Hydraulic Hoses

#### Part No. Black - Standard

#### Part No. Orange - Non-Conductive

- High pressure - 700Bar/10,000PSI
- 3m standard and non-conductive hose available

Contact TEN for other lengths and coupler combinations



### Single and Twin Hydraulic Hose Assemblies Available

## Pressure Gauge, In-line Flow

### Part No. REL-FPG

- Protect workers, valuable equipment, and property from damage caused by excess hydraulic pressure or flow
- Install between tool and hydraulic power source to test system output pressure and hydraulic flow
- Allows you to determine correct system pressure and hydraulic flow to the tool, reducing seal wear and extending the life and performance of your low pressure hydraulic tools
- Ideal for fleet and depot workshops

Contact TEN for fitting and coupler type



**Protect Equipment and Workers**



## Punch Drivers - Punch & Dies

### Punch Driver, Battery Powered - Greenlee

Part No. LS100FLEXCFM

#### Inteli-PUNCH™ Driver – Greenlee - Made in Germany

The 11-Tonne Battery powered Punch Driver from Greenlee is the fastest, most powerful knockout driver available on the market today.



- Auto-Retract Technology Patent-Pending - Pressure-sensing technology accurately detects punch completion and automatically retracts the ram, for longer tool life
- Time Saver - maximum cycle time of 8 seconds
- Punch up to 161.9mm size holes in mild steel and 115.4mm holes in stainless steel
- 360° Rotating Head - Rugged, patent-pending swivel design to punch at any angle
- Compact, Ergonomic Design - Ergonomic tapered grip for easy one-handed operation
- Gator Eye® Compatible - with i-Press™ software, monitor tool performance including peak forces and number of cycles
- Compatibility - Works with all Greenlee knockouts. Same draw studs used with other Greenlee Hydraulic punches
- Lightweight - 2.63kg
- Led light for dark areas

#### Technical Data

Output Force (kN)	11
Battery	Makita 18V - 4.0Ah*
Charging Time (min)	36
Weight (kg)	2.8 with Battery

\* See page C37 for battery and charger information

#### Punching Capacity

Material	Punch Size (mm) OD	Material Thickness (mm)
Mild Steel	12.7 to 115.4	3.4
	12.7 to 89.9	3.4
Stainless Steel	12.7 to 115.4	2.6

#### Order Information

Part No.	Description
LS100FLEXCFM-K	1 x Punch Driver 2 x 18v Makita Batteries 1 x Charger Draw Stud 19mm to 9.5mm (52042827) & Short Spacer (50032488)

\* Draw Stud 19mm 52045298 is required for punch sizes 50.8mm (ISO50) & 63.5mm (ISO60)

NOTE: Above draw stud suits standard punch & dies and are not compatible with the Speed Punch & Dies on opposite page.

See opposite page for Speed Punch™





**SAVE TIME & MONEY WITH EVERY PUNCH**



**Punch Holes in Mild & Stainless Steel**

**UP TO 3X FASTER**



Punch & Dies Kit ISO 16-40



SCAN or CLICK to View Operation Video



Stainless Steel Standard and square Punch & Dies Option Available. Contact TEN for further Information

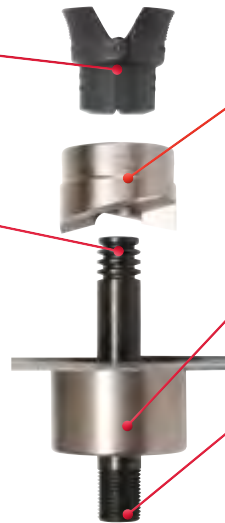
## Speed Punch & Dies - Greenlee

### SPEED LOCK

Quickly secures the system in place - more holes, less time.

### RUGGED GROOVES

Holds up on the job – no more damaged threads.



### NO THREAD PUNCH

Easily slides on/off draw stud.

### EXTENDED DIE HEIGHT

No need for spacers.

### STANDARD DRAW STUD END

Works with existing hydraulic and battery-operated punch drivers.

## Speed Punch Knock-Out Kit - Metric ISO16 - 40

### Part No. 52055439SET

For punching holes in mild steel, aluminium, fiberglass, and plastic

**Capacity:** Mild Steel Max 3.0 mm

**Diameter:** Actual hole sizes: 16.2mm to 40.5mm (ISO)

**Driver:** Use with Greenlee Punch Drivers: LS100 - Battery-Powered Driver, or Hydraulic Drivers

(REQUIRES ALTERNATE LONG DRAW STUDS (7212SP13 & 7212SP12))

**Kits Includes:** 1 x each (Punch & Die) ISO-16, ISO-20, ISO-25, ISO-32, and ISO-40  
 1 x 3/8" Speed Lock & 1 x 3/4" Speed Lock  
 1 x 3/8" x 97mm Std. Draw Stud  
 1 x 3/4" x 122mm Std. Draw Stud  
 1 x Plastic Storage Case.

**ISO:** ISO-16 to ISO-63 Diameter

**Material:** Black Oxide Finish

**Pilot Hole:** 3/8" Draw Studs: 12.7mm PILOT HOLE

3/4" Draw Studs: 22.2mm PILOT HOLE

**Package:** Plastic Storage Case

**Weight:** 3.39 kg

### Kit Replacement Parts for ISO 16 to 40mm (52055439SET)

Punch Part No.	Description/Hole Size (mm)
52055431	Punch & Die - ISO-16 / 16.2
52055432	Punch & Die - ISO-20 / 20.4
52055434	Punch & Die - ISO-25 / 25.4
52055435	Punch & Die - ISO-30 / 32.5
52055436	Punch & Die - ISO-40 / 40.5

### Accessories

Part No.	Description
52055439	3/8" SPEED LOCK & 3/8" Draw Stud (12.7mm Pilot Hole)
52055440	3/4" SPEED LOCK & 3/4" Draw Stud (22.2mm Pilot Hole)
KKSPISO16B63	Plastic Storage Case

### Larger ISO Punch & Dies Sizes

Die Part No.	Description/Hole Size (mm)
52055437	Punch & Die - ISO-50 / 50.8
52055438	Punch & Die - ISO-63 / 63.5



## Part No. ISOPD16-50 Mild and Stainless steel Punch and Dies

Punch & Dies Set (ISOPD16-50) includes:

- 7 x Round, 3 Crown ISO type, Punch & Dies (\*Indicated in table below)
- 1 x 9.5 x 80mm & 1 x 19 x 138mm Draw studs
- 1 x 20, 1 x 34 & 1 x 44mm Spacers

### Punch & Draw Stud Part No's

Part No.	Hole Size (mm)	Draw Stud (mm)	Part No.
ISOPD-16	16*	3/8" (9.5)	DS3-8
ISOPD-20	20*	3/8" (9.5)	DS3-8
ISOPD-22.5	22.5*	3/8" (9.5)	DS3-8
ISOPD-25	25*	3/8" (9.5)	DS3-8
ISOPD-32	32*	3/4" (19)	DS3-4
ISOPD-40	40*	3/4" (19)	DS3-4
ISOPD-50	50*	3/4" (19)	DS3-4
PD-63.5	63.5	3/4" (19)	DS3-4
PD-75	75	3/4" (19)	DS3-4
PD-90	90	3/4" (19)	DS3-4

### Spacer Part No's

Part No.	Spacer (mm)
DSS-20	20
DSS-34	34
DSS-44	44



## Punch Driver, Hand Hydraulic

### Part No. SB-10B

The SB-10B is a Hand Pump with a Remote Punching Head attached to a flexible Hose Lead. Often referred to as a Chassis Punch, this Unit is a Premium Quality Punch Kit.

- 1 x SB-10B Hand Hydraulic Punch kit
- 1 x Steel Carrying Case

SB-10B Punch Driver shown with Punch/dies, draw-studs & spacers. (sold separately)



### Technical Data

Part No.	SB-10B
Output Force (kN)	8.8
Pressure (PSI)	10,000 (700bar)
Dimensions (mm)	370 x 220 x 130
Weight (kg)	9.0

### Punching Capacity

Material	Punch Size (mm) OD	Material Thickness (mm)
Mild Steel	115.5	3.2
Stainless Steel	63.5/115.5	3.2/1.6

**Square Punch & Dies available upon request**

## Punch Driver, Battery Powered - iToolco

### Part No. GP122

Operates with most model 230vAC and Battery drills, new or old, with no special add-on tools required. Punches mild and stainless steel up to 152mm. The punches and dies are clearly marked with Centre Point™ marks for perfect alignment, no matter what direction you punch from. Lightweight and easy to use, the Gear Punch™ tool is compatible with other punch and die offerings.

### Features

- Gear Punch, SS 2.4mm rated
- Knockout punch & Dies 12.7 through 152mm
- Draw Stud
- Step Bits Helical TiAn Coated
- 3/8" Nut Drivers
- Centre Point Knockout Layout Tool
- Fast and Easy compatible with Corded or Cordless Drill
- No Leaking Hydraulics
- No Hydraulic Seals to Replace

### Kit Includes

Part No.	Description	Hole Size (mm)	Qty
GP01	Punch Tool	-	1
CP02	Centre Point Knockout Layout Tool	-	1
DS716	7/16" x 3/4" Draw studs	-	2
DS034	3/4" x 3/4" Draw Stud	-	2
ND038	3/8" Nut Driver	-	2
SB78	7/8" Step Bit	-	2
PD01	1/2" Punch and Die	22.5	1
PD02	3/4" Punch and Die	28.4	1
PD03	1" Punch and Die	34.5	1
PD04	1-1/4" Punch and Die	43.2	1
PD05	1-1/2" Punch and Die	49.6	1
PD06	2" Punch and Die	61.5	1
GPD02	1/2" - 2" Case		1

\*Imperial sizes mentioned above refer to actual conduit sizes (Larger size Punch and Die kits available upon request)



## Punch Head, Hydraulic

### Part No. SB-80C

The SB-80C Tower & Busbar punch is ideal for punching through steel tower legs & busbar, with a max hole diameter of 20.5mm.

#### Features

- Body manufacture from high strength steel
- Quick smooth punching with no burring
- Positioning plate for precise punch location

The punch is sold standard with 4 punch & dies (10.5, 13.5, 17.5 & 20.5mm)

Additional accessories include die fixing tool, Allen key and Steel Carrying Case

- Include quick coupler for easy pump assembly
- Operate with a single acting hydraulic pump

#### Technical Data

Part No.	SB-80C
Output Force (T)	31
Pressure (PSI)	10,000 (700bar)
Tool Dimensions (mm)	250 x 100 x 370
Case Dimensions (mm)	440 x 380 x 160
Throat Depth (mm)	80
Weight (kg)	13.5

#### Punching Capacity

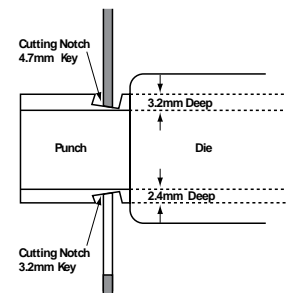
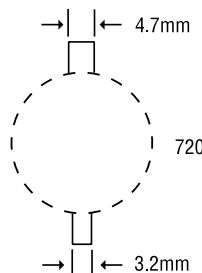
Material	Punch Size (mm) OD	Material Thickness (mm)
Mild Steel	20.5	10
CU/AL	20.5	13

NOTE: Optional punch & dies sold separately - 8.5, 11.5, 15.5 & 18.5mm

## Keyway Punch - Hand operated - Greenlee

### Part No. 720

Eliminates time-consuming hand sawing and filing making keyways for push-button switches  
Use as a nibbler to make wider or deeper keyways in up to 3.2mm mild steel  
Punches 3.2mm or 4.7mm keyways for 22.5mm or 30.5mm push-button holes



#### Ordering information

Part No.	Description	Weight (kg)
720	Keyway Punch	1.27
26536	Replacement Punch	-
26538	Replacement Die	-

Contact TEN for further information on the Busbar Cutters & Benders

## Busbar Bender, Hydraulic

### Part No. BB-200C

#### Features

- Output force: 20T
- Pressure: 10,000psi
- Bending Capacity: 200 x 12mm
- Weight: 28kg



## Busbar Cutter, Hydraulic

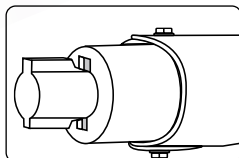
### Part No. BC-200V

#### Features

- Output force: 30T
- Pressure: 10,000psi
- Cutting Capacity: 200 x 12mm
- Weight: 35kg



Punch and Die









- Tel-O-Pole® Triangular Telescopic Operating & Measuring Sticks
- Round Telescopic Operating & Measuring Sticks
- Sectional, Telescopic & Single Shotgun Sticks & Kits
- Fibreglass Sectional Sticks & Kits
- Universal Head Adaptors & Live Line Tools
- LV & HV Temporary Cross-Arms
- Fibreglass Cleaning & Maintenance Products

## **FIBREGLASS EQUIPMENT**

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SECV & SAPN  
Operating &  
Disconnect sticks



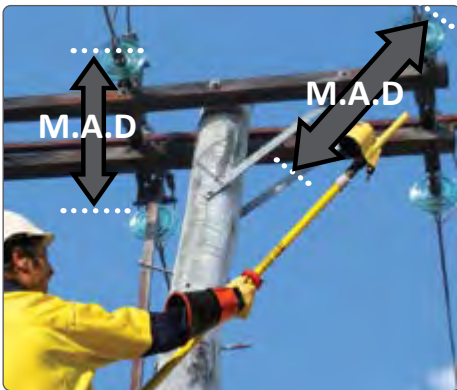
Customised Sticks, Stick Kits & Lifting Jibs



## Approach & Insulation Distance Information

**MAD** = Minimum Approach Distance is the minimum air gap or summation of air gaps measured between any part of the operator and live electrical apparatus.

Detailed information can be found in AS 5804 and a small extraction from this standard is adjacent for minimum standard distances based on ideal circumstances.



### Tool Ratings

Recommended voltage ratings of products within this catalogue section should be used as a guide only. The product specifications are mainly to US (OSHA and ASTM) standards which may not be applicable to your situation. Contact your local network provider for specific clearances required.

## Introduction

### TEN Manufacturing

TEN can customise fiberglass sticks and stick kits, end fittings and tools to suit your requirement. Utilising Hastings Fibreglass and components, you can be assured of a quality product.

### Live Line Working MAD's

#### General Information

Live working tools are generally fiberglass tubes with solid unicellular foam filled cores. In most cases factory tested to 100kV/300mm of insulation.

Where stated the sticks comply with ASTM F711, IEC 60855 or OSHA standards. Minimum approach distances for Australia and New Zealand are stipulated by AS 5804, the actual distance is ultimately determined and specified by the local network provider.

A live line tool only achieves its insulation rating when the stick surface is clean, free of moisture, in good condition and hydrophobic. Hydrophobic means tending to repel and not absorb water. See from page D32 for cleaning instructions.

Live Working		
Nominal Voltage AC (kV)	Minimum Approach Distance (MAD)*	
	Phase to Earth	Phase to Phase
	Auto-reclose OFF	Auto-reclose OFF
	Distance (mm)	Distance (mm)
11	350	400
22	400	500
33	450	550
50	550	700
66	600	800
88	700	1000
110	800	1200
132	900	1300
220	1300	2000
275	1600	2400
330	1900	3000
400	2400	3900
500	2400	3900

<sup>1</sup>The above information is for reference only and is incomplete. Subject to numerous contributing factors such as environmental, etc.

Refer to local network providers and reference AS 5804 standard for specific area regulations.

\* Based on minimum 300mm ergonomic distance

### Hand-guards & Warning Markers

Australian standard AS 5804 states that "clearance markers shall be placed on hand sticks to define the insulated section and define the separation from the hand held section". It also states that the "markers shall be secured to the live work stick to prevent their movement".

TEN can provide a range of marker and hand-guard solutions. The A30002 and A30003 from Hastings (Refer to page D11) are the most popular as they are a safety red colour.

# HASTINGS FIBREGLASS

When it comes to making safe and dependable live line tools and equipment, Hastings is the number one choice for line-workers around the world. Helping line-workers get home safely since 1959.

## WHY HASTINGS

Unique **FEATURES** set Hastings Sticks apart from their competition

### Foam Filling

- Foam Uniquely Encased and heat treated ensuring a water-tight structure without voids which allows complete adhesion between fibreglass/resin and foam

### Easy to Read Markings

- Heat impregnated "EASY TO READ" markings pass IEC-62193 abrasion tests. Will not Chip, Peel or Rub Off

### Rigorously Tested

- Low Deflection, great when locating Fuse Rings etc
- Manufactured with rigorously tested material, ensuring the production of the highest quality electrical and mechanical fibreglass tube in the world
- Meet all applicable ASTM F711, ASTM F1826, IEC-60885 and IEC-62193 standards and specifications
- Every stick is electrically tested in the factory

### Plug & Play

- Replace sections in seconds - Plug & Play
- Replacement Sections "IN-STOCK"
- Remove and utilise only the sections required for the job at hand
- Easily dismantled for cleaning and maintenance

### Sunrise Head

- Double Sided Sunrise Disconnect Hook. For left or right facing applications

### Push Button Quick Connect

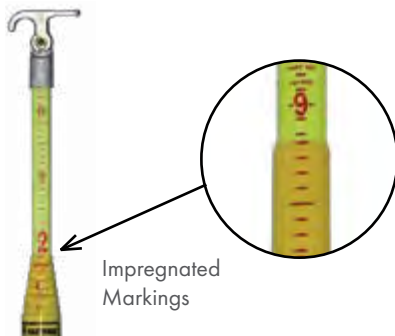
- Connect & Disconnect Universal Tools with a press of a button.



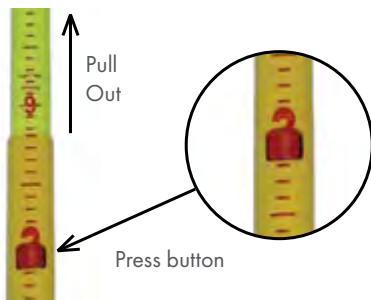
Hastings



Competitor



Impregnated Markings



Press button



Double sided Sunrise Disconnect Hook



Quick disconnect head



SCAN or CLICK the QR-Code for Quick Disconnect operation video



## Telescopic Measuring & Operating Sticks

### Triangular Telescopic Measuring & Operating Sticks

#### Part No. MV Series

- Open and close switches, EDO's and service fuses
- Replaceable sections, no disassembly tools required
- Fluoro lime green tip section is foam filled
- Tested to ASTM F711 & OSHA
- Stick includes double sided Universal Disconnect Hook #P10431-2
- Measure elevated heights
- Supplied in metre/centimetre measuring graduations
- Eye level reading feature with measurement markings in large, red numbers
- Markings will not chip, peel or rub off

#### Ordering Information

Part No.	Stick c/w Quick release head	Extended Length (m)	Retracted Length (m)	Base OD (mm)	Wt (kg)	Add "-K" for Storage Bag
MV-25	MV-25-Q	7.8	1.6	48.5	3.7	TENM301
MV-30	MV-30-Q	9.2	1.7	52.5	4.5	
MV-35	MV-35-Q	10.6	1.7	56.0	5.5	
MV-40	MV-40-Q	12.0	1.8	60.4	6.5	



Scratch proof Markings!

**Triangular Profile = NO Twist**



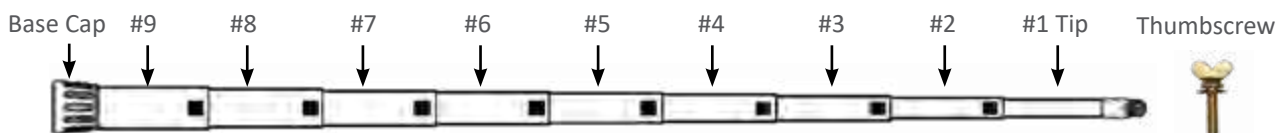
**NO TOOLS ARE REQUIRED TO REPLACE SECTIONS**



Storage Bag

### MV-Series Replacement Parts

- Refer to MV Matrix for replacement part numbers
- No tools are required for replacing as sections sold complete with lock assembly
- Order base cap separately if replacing base section



MV Series	Replacement Sections & Parts #										
Part No.	Base Cap	#9	#8	#7	#6	#5	#4	#3	#2	#1 Tip Section	Thumbscrew
MV-25	P18029	-	-	-	A20348	A20356	A20355	A20354	A20353	A20352	P16055
MV-25-Q	P18029	-	-	-	A20348	A20356	A20355	A20354	A20353	A20462	Not Required
MV-30	P18030	-	-	A20349	A20357	A20356	A20355	A20354	A20353	A20352	P16055
MV-30-Q	P18030	-	-	A20349	A20357	A20356	A20355	A20354	A20353	A20462	Not Required
MV-35	P18031	-	A20350	A20358	A20357	A20356	A20355	A20354	A20353	A20352	P16055
MV-35-Q	P18031	-	A20350	A20358	A20357	A20356	A20355	A20354	A20353	A20462	Not Required
MV-40	P18026	A20263	A20359	A20358	A20357	A20356	A20355	A20354	A20353	A20352	P16055
MV-40-Q	P18026	A20263	A20359	A20358	A20357	A20356	A20355	A20354	A20353	A20462	Not Required





**Triangular Profile = NO Twist**



Storage Bag TENM301

## Triangular Telescopic Operating Sticks

### Part No. HV Series

- Suitable for HV operations
- Open and close switches, EDO's and service fuses
- Replaceable sections, no disassembly tools required
- Fluoro lime green tip section is foam filled
- Tested to ASTM F711 & OSHA
- Stick includes double sided Universal Disconnect Hook #P10431-2

### Ordering Information

Part No.	Extended Length (m)	Retracted Length (mm)	Base Diameter (mm)	Wt (kg)	*Add "-K" for Storage Bag
<b>Switching Telescopic Stick (No Measurement Markings)</b>					
HV-208	2.4	0.7	44.5	1.4	TENM308
HV-212	3.8	1.5	36.8	1.7	TENM309
HV-216	5.0	1.5	40.9	2.3	TENM301
HV-220	6.4	1.6	44.5	2.9	
EX2-1848 <sup>1</sup>	4.4	0.94	44.5	3.0	TENM309

<sup>1</sup>EX2-1848 does not include disconnect hook (P10431-2)

## HV-Series Replacement Parts

- Refer to HV Matrix for replacement part numbers
- No tools are required for replacing as sections sold complete with lock assembly
- Order base cap separately if replacing base section

HV Series	Replacement Sections & Parts #					
Part No.	Base Cap	5	4	3	2	1 - Tip Section
HV-208	P14037	A20264	A20258	A20259	A20260	A20296
EX2-1848	P14037	A20376	A20270	A20269	A20268	A20267
HV-212	P18020	-	-	A20254-B	A20255	A20256
HV-216	P18027	-	A20253-B	A20254	A20255	A20256
HV-220	P18028	A20252-B	A20253	A20254	A20255	A20256



LVDP



4440

## Triangular Telescopic Operating Stick/Kit

**Retracts to 940mm - Fits under lip of EWP**

Ideal for removing & installing House-service fuses

Choose the short Tele-stick or a kit including fuse puller and carry bag

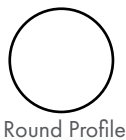
Part No.	Extended Length (m)	Retracted Length (m)	Wt (kg)
EX2-1848	4.4	0.94	3
EX2-1848-K	Kit includes 1 x EX2-1848/ 1 x LVDP/ 1 x TENM309		

## Talon Hook Kit with Tele-Stick

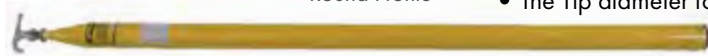
**Reduce the drop risk by securing drop out fuses**

### Part No. MV-35-K1

Part No.	Kit Includes
MV-35-K1	1 x MV-35/ 1 x 4440/ 1 x TENM301



Round Profile



### Round Telescopic Operating Sticks - Tip Lock feature

#### Part No. ST Series

- Tip retracts and locks into larger section for extra stability
- Double button version available for easy locating when extending pole
- The Tip diameter for ST models (extended) is 22mm or (retracted) is 27.8mm

Part No.	Extended Length (m)	Retracted Length (m)	Base diameter (mm)	Bag	Wt (kg)
ST-225	5.1 - 6.4 - 7.8	1.52	55.5	TENM301	3.2
ST-230	5.1 - 6.4 - 7.9 - 9.1	1.57	60.3	TENM301	4.0
ST-235	5.1 - 6.4 - 7.9 - 9.1 - 10.6	1.61	68.3	TENM301	5.0
ST-240	5.1 - 6.4 - 7.9 - 9.1 - 10.6 - 12.1	1.66	81.0	TENM301	6.3

Sections and spare parts available for ST Series Telescopic sticks. Contact TEN for more information.

### Extension Section

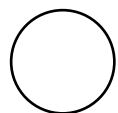
- Suits MV, HV & ST sticks to extend the tip length

Part No.	Length (mm)	Wt (kg)
839-2	1420mm	0.9

### Round Telescopic Measuring Sticks

#### Part No. M Series

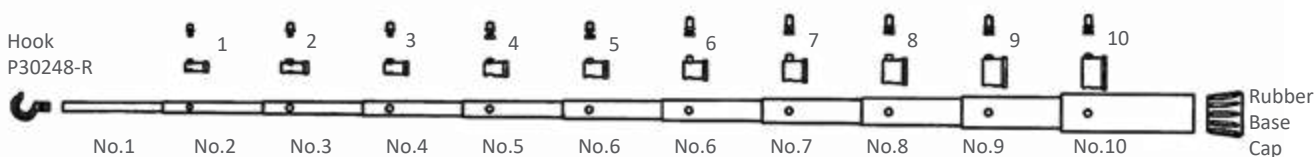
- Measure elevated heights
- Foam filled tip section
- Tested to ASTM F711 & OSHA
- Kit with Storage Bag
- Meter/centimeter measuring graduations
- Eye level reading with measurement markings in large, red, easy to read numbers
- Markings will not chip, peel or rub off



Round Profile



Part No.	Stick Head	Extended Length (m)	Retracted Length (m)	*Add "K" for Storage Bag	Wt (kg)
M-25*	Hook	7.5	1.7	TENM301	1.5
M-35*	Hook	10.5	1.7	TENM301	2.7
M-40*	Hook	12.0	1.7	TENM301	3.4
M-50*	Hook	15.0	1.8	TENM301	6.0



### M-Series Replacement Parts

Part No. (# Sections)	1	2	3	4	5	6	7	8	9	10	11	Base Cap
M-25 (6)	P21606	P21446	P21447	P21448	P21449	P21419	-	-	-	-	-	P18020
M-35 (8)	P21606	P21446	P21447	P21448	P21449	P21450	P21451	P21423	-	-	-	P18029
M-40 (9)	P21606	P21446	P21447	P21448	P21449	P21450	P21451	P21452	P21425	-	-	P18030
M-50 (11)	P21607	P21454	P21455	P21456	P21457	P21458	P21459	P21460	P21461	P21462	P21426	P18035
Complete Lock Assembly #	A14011	A14012	A14013	A14014	A14015	A14031	A14032	A14029	A14030	A14028	-	-
Drive Pin/Roll Pin #	P16513	P12022	P12022	P12022	P12022	P12022	P12022	P12022	P12022	P12022	-	-
Pin & Spring Assembly #	A12018	A12004	A12023	A12027	A12020	A12012	A12013	A12015	A12014	A12015	-	-
Hook	For M25, M30, M35, M40, M50 use P30248-R											

Replacement parts available. Contact TEN for further information.

Refer to  
Hydraulics section for  
Impact Wrenches &  
Accessories



## Socket Accessories for Live Line

### Hydraulic Impact Wrench Extension

#### Part No. 10- Series

- Heat treated end with male end pin retainer for sockets
- Foam filled fibreglass insulating section tested to ASTM F-711 and OSHA

Part No.	Insulation Distance (mm)	OAL (mm)	Wt (kg)
10-199	455	695	1.2
10-200	760	1000	1.7
10-201	1070	1305	1.8
10-167	1675	1960	2.4

### Flexible Head Socket Wrench & Driver

- ½" square drive
- Foam filled fibreglass insulating section tested to ASTM F-711 and OSHA

Part No.	Description	Drive	OAL (mm)	Wt (kg)
10765	Socket Wrench	½"	1830	2.4
10768	Socket Wrench	½"	2440	2.7
SA50A	Ratchet Handle - ½" Female suits base of Socket Wrench & Extension	½"	-	0.7

## Pole Handling Tools - Insulated

### Ratchet Strap style - Hastings

#### Part No. 6856 Series

- Suits wood, concrete, metal and fibreglass poles
- Foam filled stick handle tested per OSHA & ASTM F-711
- Nylon strap specially designed for gripping
- Heavy duty ratchet binder with extra wide handle
- Neoprene pad on base prevents damage to poles
- Two way turning feature - can turned in both positions without reinstalling the tool

Part No.	Length of Strap (m)	Dimensions (mm)		Wt (kg)	Suits pole Approx. Size (mm)
		Stick OD	Stick Length		
6856	1.8	50	1220	4.5	450
6856-3	2.4			4.6	650

### Cant Hook style - Hastings

- Suits Wood Poles
- High strength forged steel hook
- Heavy duty protective steel sleeve on head end

Part No.	Dimensions (mm)		Wt (kg)
	Stick OD	Stick Length	
6705	45.0	915	3.4

### Strap Friction style - Chance

- The two-in-one tool performs the functions of both a cant hook and a pole tong without spiking the pole.
- Latex-impregnated nylon-web strap
- Epoxiglas® handle

Part No.	Stick OD (mm)	Length (mm)	Working Load	Wt (kg)
C305-0021	51	1828	Strap rated at 3400kg	3.6





## Shotgun Sticks

### Part No. 81 Series

- Full open side hook offers unobstructed view
- Precision cast slide gives complete control and extra firm grip
- Hook release trigger shielded to avoid accidental operation
- Hanger hook moulded into head
- Foam filled fiberglass main shaft
- Tested to ASTM F711 & OSHA
- Fixed shotguns tested to IEC 60855
- Solid fiberglass operating rod with guide
- Non-conductive polycarbonate head



### Fixed

Part No.	Type/Model	Over All Length (mm) <sup>1</sup>	Bag	Wt (kg)
8104	Fixed	1370	TENM309	2.0
8106	Fixed	1980	TENM301	2.35
8108	Fixed	2590	TENM310	2.95
8110	Fixed	3200	Custom	3.3

### Telescopic

Part No.	Type/Model	Retracted Length (mm) <sup>*</sup>	Extended/OAL (mm) <sup>1</sup>	Bag	Wt (kg)
8158	Telescopic	1550	1550, 1980, 2440	TENM309	2.6
81611	Telescopic	1980	1980, 2440, 2895, 3350	TENM301	3.0
81-811	Telescopic	2440	2440, 2895, 3350, 3810	TENM310	3.3
81-814	Telescopic	2440	2440, 3050, 3655, 4265	TENM310	3.5

\* Collapsed lengths for storage or transport    <sup>1</sup> Lengths which can be locked for operating    # Custom Made

### Sectional

#### Part No. 81 Series

- Same features as Fixed and Telescopic shotguns
- Select Base & Head then required extension sections for height
- Contact TEN for storage bag solutions



Part No.	Section	OAL/ Base & Head (mm)	Wt (kg)
81-704	Base & Head	1524 (1219 & 304)	2.2
81-706	Base & Head	2133 (1828 & 304)	2.5
81-708	Base & Head	2743 (2438 & 304)	4.3
81-710	Base & Head	3352 (3048 & 304)	5.1
EX2-1464	Extension	600	0.6
81-604	Extension	1219	1.1
81-606	Extension	1828	1.6
81-608	Extension	2438	2.3
81-610	Extension	3048	2.7
81-4023-5	Head	304	0.7

Kits including hand guards, cleaning accessories & carry bag available. Contact TEN for further information.



### Shotgun Stick Kits

#### Part No. 18280

- Fixed sectional shotgun kit (other options)
- Complete range of adaptors & accessories
- Customised versions available



Part No.	Item Description	Qty in Kit
8106	Shotgun Fixed 1.8m	1
10-090	Cloth Silicone	1
10-188-1	Wipes Silicone Single Sachet	2
MET GUARD	Met Guard Warning Ring	1
PLEGAAM1	Adaptor Shotgun to Universal Head	1
LVDP	Fuse Extraction Head	1
LLCR	Live Line Clamp Remover	1
P10431-2	Universal Disconnect Hook	1
TENM311	Carry Bag Red	1

See from page E36 to E40 of the Safety & PPE section for fiberglass stick Cleaning

### Shotgun Stick Package

Part No.	Length of Sections (mm)	No of Sections	Operating Lengths (m)	Description	Wt (kg)
81-544	1200	4	1.5 - 2.7 - 3.9 - 5.2	Sectional shotgun stick package complete with base, head, intermediate sections and carry case	7.1

Contact TEN to Design Your own Stick Package

### Hand Guards

#### Part No. A3000 Series

- High visibility safety red for visual warning of approach distance
- Provides hand guard or barrier
- Split and double flat head screw design makes installation easy
- A30002 suits shotgun operating rod
- Non-conductive delrin



Part No.	Suits Stick OD (mm)	Weight (grams)
A30002	32	20
A30003	38	25
A30005	50	30

### Stick Mounts for truck boxes & compartments



Part No.	SM25	SM32-38	SM45	SM63-76	SM32-ETS	A10009	10-151-2
Suits Sticks (mm) OD	25	32-38	45	63-75	32-38	32-38	32
Description	Stick Mount with Screw Holes				No Mount Holes	Hanger Hook	
Use	Mounting Stick in Truck or on Wall					Hanging Stick	
Material	Polyurethane					S/S Hose Clamp & Bronze Hook	S/S Hose Clamp & PU Hook



### Optional Extras

## Universal "Spiral" Hook

Part No. 10-106



- Used for grabbing and holding branches or wire during tree trimming

## Debris Removal Tool

Part No. DV-1



- Universal aluminium base
- Two-prong angled tapered design for quick vegetation removal
- Can also be used to remove tree limbs and break ice

## Rope Insulator

Part No. Various Sizes



## Tree Trimming Equipment

### Tree Trimming Kits - Hastings

Part No. 4141 & 4142

- For line clearance crews, trouble shooting and emergency call outs
- Complete kit with sticks, cutter, saw and adaptors in Protective carry bag
- Tested to ASTM F-711, IEC 60855 & OSHA
- Refer to local network provider procedures for live line use

Part No	Stick OD (mm)	Length of Sections (m)	Maximum Height (m)	Description	Weight (kg)
4141	32	1.2	4.8	Tree Trimming Kit (Refer below for contents list)	6.8
4142	32	1.8	7.2		8.6

Open the bag and you have choice of tree trimming tools in the length required, all in a convenient heavy-duty vinyl tool bag that offers maximum protection for the tools



### Spare parts & accessories available at TEN

Part No.	Item Description	Qty in Kits	
		4141	4142
546-4	Stick Sectional Extension 1.2m	4	-
546-6	Stick Sectional Extension 1.8m	-	4
4125	Cutter - Tree Pruner 600mm FG	1	1
A18007	Base Cap 32mm Female	1	1
A10012	Adaptor Male Universal 32mm	1	1
P10046	Universal "S" Hook	1	1
A11000	Universal Pruning Saw	1	1
A10016	Universal Saw Handle	1	1
A30007	Pruning Saw Scabbard	1	1
TENM305	Bag Tree Trim to suit 1.2m	1	-
TENM315	Bag Tree Trim to suit 1.8m	-	1

- For insulating ropes used around energised lines
- Add one to your Tree Trimming Kit
- Blank fibreglass middle section with eyes each end

Part No	Fibreglass Length (mm)
4010	1100
4004-1	305
4005	860

Rope Insulator not included in Tree Trimming kits



### Tree Trimming Equipment & Adaptors - Hastings



Part No.	10-019	A11002	A11004	A10033
Description	Tree Pruning Head Insulated with Rope	Tree Pruning Head	Replacement Head	Replacement Rope Pulley
Details	Drop Forged Steel Blades cut to 38mm Ø. 300mm Fibreglass Shaft – Twin Pulley with 7.6m Polypropylene Rope and Universal Head	Drop Forged Steel Blades cut to 38mm Ø. Single Pulley with Universal Head	Drop Forged Steel Blades cut to 38mm Ø	Cast Aluminium Pulley
Weight (kg)	1.3	0.88	0.79	0.11



Part No.	A11000	P11004	A30007	A11000-K
Description	Universal Pruning Saw	Replacement Blade	Saw Scabbard	Universal Pruning Saw & Scabbard
Details	Teflon Coated Fast Cutting. Curved Blade 400mm long with 7 Teeth per 25mm and Universal Head	Teflon Coated Fast Cutting. Curved Blade 400mm long with 7 Teeth per 25mm	For Safe Storage of # A11000 Saw, Heavy Duty Stitching	Kit Includes A11000 + A30007
Weight (kg)	0.36	0.14	0.45	0.79



Part No.	P10032	A10016	10-106	P10046
Description	Pruning Saw Casting	Saw Handle	Universal Spiral Hook	Universal "S" Hook
Details	Aluminium Casting replacement for A11000	Handle for # A11000 Saw, Cast Aluminium with Wingnut	Used for Grabbing/Holding Branches/Wires	Used for Lifting Overhead Wires
Weight (kg)	0.22	0.22	0.34	0.10



## Sectional Sticks & Adaptors

### Universal Head - Extension - Base Section

Sectional sticks - Foam filled tested per OSHA, ASTM F-711 - 32mm and 38mm OD sticks tested to IEC 60855

#### Universal Head



#### Extension Section



#### Base Section



Universal Head with Removable Base Adaptor				
Length (m)	OD (mm) 32	Wt (kg)	OD (mm) 38	Wt (kg)
0.6	5467-2*	0.47	-	-
1.2	5467-4	0.90	5547-4	1.08
1.8	5467-6	1.07	5547-6	1.56
2.4	5467-8	1.41	5547-8	2.04

Extension Section				
Length (m)	OD (mm) 32	Wt (kg)	OD (mm) 38	Wt (kg)
0.6	546-2	0.45	-	-
1.2	546-4	0.56	5546-4	0.90
1.8	546-6	0.93	5546-6	1.39
2.4	546-8	1.13	5546-8	1.87

Base Section with Glued Rubber Base Cap				
Length (m)	OD (mm) 32	Wt (kg)	OD (mm) 38	Wt (kg)
0.6	-	-	-	-
1.2	552-4	0.68	5553-4	0.85
1.8	552-6	0.90	5553-6	1.25
2.4	552-8	1.30	5553-8	1.64

\*Base Adaptor not included with 5467-2

\*Use 552-2-TEN - for 600mm Universal head with fixed base cap

### Adaptors & Base Caps



Part No.	A10012	A10025	A10011	A10026	A18007	A18008	A14019
Suits Sticks (mm) OD	32	38	32	38	32	38	38
Description	Male Universal Button Adaptor		Female Universal Adaptor		Female Base Cap		Snap-In Male
Suits Stick Head	Universal head, sectional button type adaptors and base caps						
Material	FG, Al Alloy & Plastic				FG & Rubber		FG

## Fixed Length Universal Sticks

### Triangular Double-End universal

### Round Single & Double-End universal



Universal Head each End - Triangular with Hanger Hook		
Length (m)	OD (mm) 28	Wt (kg)
1.8	4679-6	1.45
2.4	4679-8	1.72
3.0	4679-10	1.90
3.6	4679-12	2.13

- Adapts to all standard universal fit tools
- Includes hanger hook
- Universal Head each end



Severe Weather Tool with 2 Rain Sheds* and Hanger Hook				
Length (m)	OD (mm) 32	Wt (kg)	OD (mm) 38	Wt (kg)
1.8	6801	1.45	-	-
2.4	6802	1.81	-	-
3.0	6803	2.18	-	-
3.6	6804	2.54	6811	3.22
4.2	-	-	6812	3.54
4.8	-	-	6813	3.95
5.4	-	-	6814	4.36
6.0	-	-	6815	4.72



Universal Head each End - Circular with Hanger Hook				
Length (m)	OD (mm) 32	Wt (kg)	OD (mm) 38	Wt (kg)
1.2	4678-4	1.27	-	-
1.8	4678-6	1.47	-	-
2.4	4678-8	1.86	4680-8	2.59
3.0	4678-10	2.25	4680-10	2.90
3.6	4678-12	2.63	4680-12	3.72
4.2	-	-	4680-14	4.54

\*Rain Sheds also available separately

Part No. P30773 - 32mm

Part No. P30772 - 38mm





## Sectional Stick Kits

- Customised stick kits made to customer specification or specific utility industry kits
- Below examples of current industry kits



Component Part No.	Item Description	Kit Part No.	
		TENK026	TENK908
546-4	Stick Sectional Extension 1.2m, 32mm OD	4	-
546-6	Stick Sectional Extension 1.8m, 32mm OD	-	4
LVDP	Fuse Extraction Head	1	1
A10012	Adaptor Male Universal Head 32mm	1	1
A18007	Base Cap 32mm Female	1	1
A30002	Hand Guard to Suit 32mm	1	1
P10431-2	Universal Disconnect Hook	1	1
TENM302	Bag Sectional Kit, 4 x 1.2m & Acc Pock	1	-
TENM313	Bag Sectional Kit, 4 x 1.8m & Acc Pock	-	1
10-188-1	Disposable Silicon Cleaning Wipe	2	2
10-090	Silicon Wiping Cloth	1	1

Customisable substation kits available

## Stick Parts & Components

### Blank Poles

- Foam filled fibreglass tested per OSHA, ASTM F-711
- 32mm OD sticks tested to IEC 60855



Length (m)	32mm OD		38mm OD	
	Part No.	Wt (kg)	Part No.	Wt (kg)
1.2	464	0.56	534	0.90
1.8	466	0.93	536	1.39
2.4	468	1.13	538	1.87
3.0	4610	1.29	5310	2.41
3.6	4612	1.53	5312	2.95
4.2	-	-	5314	3.49
4.8	-	-	5316	4.01
5.4	-	-	5318	4.57
6.0	-	-	5320	5.11

50, 63 & 76mm poles available. Contact TEN for more information.

### Stick Ends & Components

Components to repair or modify sticks



Part No.	P18006	P18008	A10017-R	A10018-R	5455-10	P10037	P10038	P10036
Suits Sticks (mm) OD	32	38	32	38	n/a	32	38	32
Description	Rubber Base Cap	Rubber Base Cap	Universal Head	Universal Head	Chuck Blank	Nema Disconnect Head	Nema Disconnect Head	Nema Disconnect Head - Notched
Material	Rubber	Rubber	Al Alloy	Al Alloy	Bronze Alloy	Manganese Bronze	Manganese Bronze	Manganese Bronze





DNOBHOOK  
sold separately



10-094  
Fuse Cup

A10-094DNOB  
Hook Danger  
Tag Applicator

## Universal Head Tools and Adaptors

### Fuse Cup

- Installation, removal and changing EDO's
- Reduces flash over hazards & chance of dropping fuse barrel
- Made from fibreglass reinforced nylon
- A10-094 DNOB version has grooved inner surface for hanging 'Do Not Operate' markers
- Fuse barrels (suits most 100A & 200A)

Part No.	Description
10-094	Fuse Cup - EDO's install/removal Tool - Universal head
A10-094DNOB	Fuse Cup - with grooved inner for hanging DNOB markers - Universal head
DNOBHOOK	"DO NOT OPERATE" Hook danger tag, (Sold separately)

### House Service Fuse Remover/Installer



EX2-1824-K



LVDP



A5455-10-PTU



LVFP

Part No.	Description	Material	Wt (kg)
EX2-1824-K	Fits Tri-Angular Telescopic Stick 200mm Stick Section + LVDP*	One piece plastic universal fitting & pigtail + 200mm Stick Section	0.70
LVDP	Pigtail Fuse Puller	One piece plastic universal fitting & pigtail	0.25
A5455-10-PTU	Pigtail Fuse Puller	Brass universal fitting & plastic pigtail	
LVFP	Pigtail Fuse Puller	One piece aluminium universal fitting & pigtail	



Spray Can Shroud

### Remote Spray Can Holder with Universal Fitting

- Insert any size spray paint can - Rust Inhibitor/CRC/WD40, Degreaser and Wasp or Insect Killer.
- Supplied with 9m of 6mm OD Polypropylene Rope (Use with Rope Insulator when working near live lines)
- Loosen rusted bolts and corroded pole line hardware
- Spray switched prior to opening
- Eliminate bee and wasp nests
- Products supplied in pressurized spray cans can be safely applied around energized apparatus from the ground, pole, or bucket truck
- Reduce conductive surface exposure with the optional spray can shroud

Part No.	Description	Material	Wt (kg)
10-115	Spray Can Holder	Al Alloy, S/S, Polypropylene & Delrin	0.70
10-115-SH	Shroud for Spray Can	Polymer	0.25

### GoPro™ Camera Stick Mounting Accessories

Modelled after the HASTINGS Tel-O-Pole series, this specially engineered hot stick allows for a GoPro™ Action Camera to be mounted and utilized for quick, easy, and safe inspection of and around energized lines, transformers, insulators, poles, buildings, bridges & other assets

The hot stick may even allow inspections to be completed without the use of a bucket truck, lift, or climbing gear.

**See Test & Measure section for detailed information**

- Fibreglass Stick Tested at 100kV per 300mm
- Camera Assembly Tested up to 40kV
- Extended 9.15m / Retracted 1.6m
- The camera mount adapter can be used in any position included with the R-30-G stick.
- The Clamp Claw Mount, sold separately, clamps to any hot stick.
- Camera Light, sold separately can be used on Camera Mounting Insulated Stick or the Clamp Claw Mount.
- Smart Phone Mount, sold separately, has adjustable strap to fit on most hot sticks.

Part No.	Description	Wt (kg)
R-30-G	Camera Mounting & Insulated 9.2m (30') Hot Stick	1.8
A30413	Smart Phone Mount	0.11
A30414	Clamp Claw Mount	0.22
10-150	Camera Light	0.11
C-35	Carry Case	0.26
5455-10-GOPRO	Rising sun attachment for camera	0.67

GoPro Action Camera and phone not included



### Conductor Diameter Sliding Gauge - TEN

#### Part No. CG-430-AU

HDPE slide gauge quickly & easily identify conductor OD

**Reduce Incorrect Conductor Identification**

- Designed for Australian AL, CU & ACSR conductors
- Measure Live Conductors
- For conductors 4.0 - 30mm Ø
- Fits universal sunrise fitting

Part No.	Dimensions (mm)	Weight (kg)
CG-430-AU	104 (W) x 287 (L) x 10 (D)	0.26



### Conductor Diameter Gauge - AL, CU & ACSR - TEN

#### Part No. CG-EQL Series

Quickly & easily identify common overhead electrical distribution conductor or wire sizes in AL, CU & ACSR. Markings include conductor name, stranding and overall diameter.

- Hole in base for use with a shotgun stick and hanging storage
- Imperial and metric sizes included
- Precision machined from lightweight aluminium alloy

Part No.	Conductor Range	Dimensions (mm)	Wt (kg)
CG-EQL-ALCU	Copper 7/.064 – 4.87mm to 19/2.75 – 13.8mm	257 (L) x 91 (W) x 14 (D)	0.75
	Aluminium Locust – 7/.093 - 7.08mm to Taurus - 19/4.75 - 23.80mm		
CG-EQL-ACSR	ACSR Quince - 5.25mm to Wolf – 18.13mm	209 (L) x 91 (W) x 14 (D)	0.65





LitLink

LitFinger

### LitFinger/LitLink

Both products have a built-in, high intensity LED light for safe and efficient operations in dark or low light areas. Connect to all hot sticks with a Universal sunrise fitting.

- 94 Lumens/4 Hr
- Bright, unbreakable 1-watt LED light
- Lightweight aluminium body
- HI-LOW switch for increased battery life
- Water resistant battery compartment with sealed silicone rubber push button
- Easy access battery compartment door
- Runs on three (3) AAA batteries
- Waterproof to 1 meter

#### LitLink

- Passed 3000V, 8000A, ½ sec (30 cycles) arc blast test

#### LitFinger

- Machined aluminium Notched straight arm to secure fuse while lowering or raising fuse barrel
- Pointed head for breaking off of ice or debris

### Fixed Head Stick - SAPN

#### Part No. AKL

Part No.	Description	Dia (mm)	Length (m)	Head Type
AKL1711	ABS Operating Handle	32	0.75	14 TPI UNF Thread
AKL546-4	Sectional/Single end	32	1.2	Bayonet
AKL7294	Fixed Stick/Double end	32	2.5	Male bayonet/Universal
AKL7296	Fixed Stick/Double end	38	3.6	Male bayonet/Universal
AKL7298	Fixed Stick/Double end	38	4.5	Male bayonet/Universal
AKL7299	Fixed Stick/Double end	38	6.0	Male bayonet/Universal
AKL7300	Fixed Stick/Double end	38	6.0	Universal/Universal
AKL7301	Fixed Stick/Single end	50	6.0	Bayonet



ABS Operating Head

SAPN Bayonet Head

Universal Head

### Sectional Stick - SECV

#### Part No. Various

Part No.	Description	Fibreglass Length (m)
LLSP	Operating Stick SECV Female to disconnect podger	1.5
LLSPL	Operating Stick SECV Female to disconnect podger	3
LLSPI	Operating Stick SECV Female to SECV male - extension for LLSPL	1.5

\* See opposite page for SECV tool adaptors

### Stick & Tools Adaptors - Various

#### Stick & Tools Adaptors



Part No.	AD06/AD07	AD03/AD02	AD14	MOD-C	MOD-E	MOD-EV	MOD-K
Suits Sticks	32mm stick extension	38mm stick extension	-	-	-	-	-
Top Adaptor	Bayonet AL/Nylon	Bayonet AL/Nylon	Bayonet (Al)	Modiewark	Modiewark	Modiewark	Modiewark
Suits Stick Head	Button Extension	Button Extension	Universal	Hex	Bayonet	Taplin	Universal
Use	Bayonet Earth Clamps (14.5mm Spindle, 24mm Long Pin)	Bayonet Earth Clamps (14.5mm Spindle, 24mm Long Pin)	Bayonet Earth Clamps (14.5mm Spindle, 24mm Long Pin)	Modiewark Holder Hexagon Fitting	Modiewark Holder Bayonet Fitting	Modiewark Holder with Taplin 40mm T-Bar	Modiewark Holder Universal Fitting
Material	FG, Al & Plastic	FG, Al & Plastic	FG, Bronze Alloy & Al	-	-	-	-



### Stick & Tools Adaptors - cont.



Part No.	CI-7-E	CI-4-E	CI-4-K	CI-5-K	AD
Top Adaptor	Bayonet	Bayonet	Universal	Universal	Bayonet (14.5mm Spindle)
Suits Stick Head	Universal	Hex	Hex	Shotgun	Universal
Use	For Bayonet Earthing Clamps (Specs)	For Bayonet Earthing Clamps (Specs)	Standard Universal Head	Standard Universal Head	Convert Universal to Bayonet
Material	FG & Al Alloy	FG & Al Alloy	FG & Al Alloy	FG & Al Alloy	Al Alloy



Part No.	*SECV-C	*SECV-K	*LLCR-SECV	LLCR	CI-6-C-2	CI-5-C
Description	SECV to Catu Adaptor	SECV to Universal Head	SECV to Live Line Clamp Remove	Universal to Live Line Clamp Remove	Universal to Adaptor for Catu Tools	Shotgun to Catu Tools
Use	Tool Adaptor For SECV sticks	Tool Adaptor For SECV sticks	Suits SECV stick for Taplin Clamps	Applies & removes Live Line Clamps	Universal to Catu Tool adaptor	Shotgun to Catu tool adaptor

\* See opposite page for Sectional Sticks

### Universal Head Accessories - Various

#### Universal Head Accessories

Line specific universal head adaptors and accessories



Part No.	5556	5558	P10431-2	A10400	P10046	MT-630-K	A10111
Description	Disconnect Hook	Disconnect Hook	Disconnect Hook	Disconnect Hook, Fluoro	"S" Hook	MT-613 application	Disconnect Pigtail, Fluoro
Use	Operating Fuse Switches suits Hastings 32mm Sectional stick	Operating Fuse Switches suits Hastings 38mm Sectional stick	Double sided sunrise for left and right facing Operating Fuse Switches	Operating Fuse Switches, Night Use	Lifting Conductors	MT-630-K (above) Universal Mount MT-630-C Hex Mount	Operating/ Installing/ Removing Fuse Switches, Night Use
Material	Male F/Glass / Bronze	Male F/Glass / Bronze	Chromed Bronze	Bronze Alloy Painted	Brass	Bronze Alloy	Bronze Alloy
Weight (kg)	-	-	0.2	0.2	0.1	1.0	0.2



Part No.	4440	A10022	PLEGAAM1	A10019	DH-1	5454-6	A10023
Description	Talon Hook	Clamp Stick Head	Shotgun - Universal Head	Shotgun - Universal Head	Double Header Universal Attachment	90° Universal Adaptor	Wire Tong
Use	Installing/ Removing/ Operating Fuses, EDO's & Switches	Operating Shotgun Ring Clamps	Convert Shotgun to Universal Head	Convert Shotgun to Universal Head	Attached two different Universal tools on one Hot-Stick	Change Angle of Universal Head	Light Tong for Holding, Max Ø 35mm
Material	Bronze Alloy	Al Alloy	Al Alloy	Bronze Alloy	Al Alloy	Bronze	Bronze/ Al Alloy
Weight (kg)	0.2	0.5	0.1	0.2	0.35	0.1	0.9



### Universal Head Accessories - cont.

Line specific universal head adaptors and accessories



Part No.	5455-21	13489	12737	5455-2	5455-15	5455-29
<b>Description</b>	Cotter Key Puller	NX Fuse Puller/Disconnect	Cotter Key Pusher	Bolt Holder	Locking Pin	Ball Socket Adjuster
<b>Use</b>	For 3/16" Cotter Keys on Clevis Type Fittings	For removing and Installing NX Sand Fuses on URD Switchgear	For Transmission Insulator Strings, Pushes Legs on Cotter Key partially out of Socket so Ball can be Disconnected, Slot can Face to Either Side or Rear	For Replacing Pins on Clevis Type Hardware, Jaw Spring Actuated	For Lining Up Joints on Clevis Type Suspension Insulators and Hardware to Replace Pins	Supporting & Aligning Ball Socket Adaptor between Ball Fitting on Disc Insulator & Clevis Fitting on Suspension or Strain Clamp
<b>Weight (kg)</b>	0.4	0.1	0.8	0.3	0.2	0.3



Part No.	5455-1	5454-2	10-096	5455-37	5455-57	5455-93
<b>Description</b>	Insulator Controller 254mm (10")	Ball Socket Fork	Armour Rod Applicator	Self Aligning Fuse Puller, Small	Adjustable Fuse Puller Large	Adjustable Fuse Puller Extra Large
<b>Use</b>	Clamps around 254mm (10") Disc Insulator between Porcelain & Cap for Removing Single Unit or Holding Insulator in Alignment as Cotter Key is Replaced.	Aligning & Holding Ball Socket Fittings for Cotter Key Removal	Installation & Removal of Conductor Ties & Armour Rods	For Fuse Tubes 12.7-38.1mm OD, Plastic Coated Jaws	For Fuse Tubes 22.22-50.8mm OD, Plastic Coated Jaws	For Fuse Tubes 38.1-92mm OD, Plastic Coated Jaws
<b>Weight (kg)</b>	1.1	0.2	0.2	1.0	1.1	1.3



Part No.	A10020	A10021	P10055	P10056	12425	5455-8	A30152
<b>Description</b>	Rotary Prong Tie	Rotary Blade Tie	Prong Tie	Blade Tie	Cotter Key Replacer/Puller	Cotter Key Puller	Tie Wire Assist
<b>Use</b>	Loop End Tie Wire, Self Aligning & Swivels Freely	Removal of Ties without Looped Ends	Looped End Tie Wires	Tie Wires without Looped Ends	Cotter Key 3.22mm (1/8) in Clevis Pins of Distribution Hardware	Removal of Cotter Keys in Clevis Type Suspension Insulators & Hardware, Adjustable for Compound Angles	Attach on 32/38mm Universal & Tie End Sticks. Aid to remove Tie Wires, also Useful as Hanger
<b>Weight (kg)</b>	0.20	0.20	0.10	0.20	0.40	0.20	0.10

### Universal Head Accessories - cont.

Line specific universal head adaptors and accessories



Part No.	9785	USSK-1	5454-3	5454-7	5455-28	C4030177	5455-46	5455-35
Description	Mirror	Universal Skinning Knife	Ball Peen Hammer	Hacksaw, Light	Screw Drive Flat	All Angle Pliers	Socket Wrench	Universal Insulator Controller
Use	Inspection of Line Hardware, Rubber Trimmed with Ball Swivel Adjustment	Skinning Insulation Includes Sheath (Replaceable Blades)	Light Impact around Energised Equipment	Cutting Metal, 254mm Blade	Screwing Flat Head Bolts 9.5mm Wide Tip	Designed to grasp bolts and hardware from any angle	1/2" Square Drive for Sockets	Grips cap of suspension insulator. Adjustable jaws
Weight (kg)	0.36	0.18	0.59	0.45	0.18	0.68	0.45	1.50



Part No.	5455-25	5455-99	5455-98	TEO81RW-U	5455-6	M4455-87	M4455-97	10-178/10-179
Description	Paint Brush	Vice Grips 177mm	Vice Grips 254mm	Insulated Ratchet Wrench 1/2" Drive	Ratchet Wrench 1/2" Drive	Universal Ball Socket Adjuster	Universal Tool for W Keys	Scratch V-Brush Conductor Cleaner
Use	Painting near Energised Lines	Holds Cotter Pins, etc,	Holds Split Bolts & Parrallel Groove Clamps, etc	Use with 1/2 drive sockets Reversible	Sockets, Reversible	For socket clevises, where suspension and deadend clamps are attached to ball and socket insulators.	This tool is used for handling the "W" shaped keys used in suspension insulators	For use with Hand or Shot-Gun stick for cleaning conductors prior to connecting (Part No. 10-179 10 x Replacement Brushes)
Weight (kg)	0.31	0.54	0.72	0.45	0.86	0.30	0.40	0.30



Part No.	5455-74	M4455-22	M4455-103	M4455-19	M4455-2	5455-31	M4455-67
Description	Bolt Head Wrench	Universal Ball Socket Adjuster	Cotter Key Holder	Cotter Key Pusher	Pin Holder	Universal Shepherd Hook	Universal Adjustable Insulator Fork
Use	Tightening Through Bolts, Head Wedges Against Bolt Head to keep it from Turning	Useful in controlling the adapter between clevis clamps and ball and socket insulator pins	For holding Split pins closed during installation and easily releases after installation	Straight End pushes the Insulator Cotter to disengage. Curved end forces cotter key back into position	For replacing Pins & Bolts. Bolt head fit into a slot and is held tight by the spring action	Fits around the cap of suspension insulators to aid control during removal	Designed to grasp 9 & 10" disk insulators
Weight (kg)	0.50	0.25	0.22	0.27	0.30	1.05	0.70





## Cutters - Various

### Emergency Wire Cutters

#### Part No. Various

- Universal head with fibreglass insulating shaft & conductor capture hook
- Long lever arm and double pulley reduces pulling requirement on rope
- Shear drop forged cutter blade

**Ideal for cutting away Lightning Arrester leads**

Part No.	Description	Cuts	Max Cable OD	Wt (kg)
4186	Universal Cutter with 7.6m Poly Rope	ACSR/Al/Cu	14.3mm	2.1
10-019		Branches	38.0mm	1.3
		Al/Cu	50mm <sup>2</sup>	

Refer to page D12 for information on rope insulators and tree cutter heads

### Emergency Wire Cutting Kit

#### Part No. 4186-K

- Designed for emergency cutting of lines or conductors
- Ideal for cutting away Lightning Arrester leads
- Cutting head attaches to standard universal head operating stick

Part No.	Item Description	Qty
4186	Cutter with Universal Head, Cuts up to 14mm OD ACSR, 28mm OD Al/Cu	1
4010	Insulator for Rope with 1100mm of Fibreglass and Eyes each end	1
TENM413	Carry Bag for above	1

### Lever Handle Ratchet Wire Cutter

#### Part No. Various

- Range of cable cutters for ACSR/Al/Cu
- Parrot Beak style
- Foam filled fibreglass main shaft with solid operating rod tested to ASTM F711 & OSHA
- Lever operation
- Cuts clean leaving no burrs, UG or OH operation
- Lightweight with fold up handle for easy storage

Part No.	Type	Duty	Cuts	Max Cable OD (mm)	Stick OD (mm)	OAL (mm)	Wt (kg)	Replacement Blade	
								Prior to Oct 2006	Since Oct 2006
11-005	Ratchet Lever	Standard	ACSR	20.7	32	1525	4.1	A11001	A11055
11-006						1830	4.5	A11001	A11055
11-008						2440	4.8	A11001	A11055
11-010						3050	5.2	A11001	A11055
11-015			Al / Cu	25.5 / 18.0		1525	4.1	A11041	A11056
11-016						1830	4.5	A11041	A11056
11-018	2440	4.9			A11041	A11056			



### Bolt & Steel Cutters

#### Part No. Various

- For cutting hard material such as high tensile steel, bolts, wire, rods, links and hardened chains
- Replaceable foam filled fibreglass handles tested to ASTM F711 & OSHA
- Comply with USA-F.S. No. GGG-C-740d Type II
- Great for everyday regular use



Part No.	Handle Length (mm)	OAL (mm)	Reinforcement Steel (HRC Brinell 140 49.6kg/mm)	Bar Steel (HRC 20 Brinell 230 77.5kg/mm)	Steel Wire (HRC 40 Brinell 370 133kg/mm)	Music Wire (HRC 48 Brinell 450 162kg/mm)	Replacement Heads
10-667	405	609	10	8	8	7	A11012
10-665	610	812	10	8	8	7	A11012

Other sizes available. Contact TEN for more information.



### Cable & Guy Wire Cutters

#### Part No. 10-202

- Range of cable cutters for ACSR/Al/Cu/Guy Wire
- Insulating handles tested to ASTM F711

Part No.	Type	Cuts	Max Cable OD (mm)	OAL (mm)	Handle Length (mm)	Wt (kg)	Replacement	
							Blade	Handles
10-202	Parrot Beak	ACSR / Al / Cu	16 ACSR/Cu, 25 Al	787	685	2.7	10-203 (Handle & Blade)	-

Other sizes available. Contact TEN for more information.



### Mighty Cutter - Nagaki NGK

- Precision machined blades from high quality Japanese Steel
- Blades suitable for Cu and AL, as well as ACSR and Steel
- Reliable ratchet mechanism for durability and ease of use
- Fibreglass handles
- Half the weight of comparable cutters
- Weight: 2.8kg
- Stranded cable only

Part No. - MIGHTY-CUTTER	
Material	Cutting Capacity (mm)
ACSR/Cu	22
AL	30
St	12

Refer to HYDRAULICS section for Battery and Hydraulic cutters and hand tools for other cutters.

### Pliers Handles

- Foam filled fibreglass handles for attaching to standard electrical pliers or cutters, pliers/cutters not included

Part No.	Dimensions (mm)	Wt (kg)
1961-2 *	32 OD x 1220 L	2.0

\* Supplied as pair only

### Cable Handling & Probe Tools

#### Part No. 6751 Series

- Tools for probing soil and lifting or moving cables
- 32mm OD foam filled stick handle tested per OSHA & ASTM F711

Part No.	Tool Model & Description	Maximum Cable OD (mm)	Length of Fibreglass Shaft (m)	Wt (kg)
6751-01	Cable Tool with Permanent Hook	89	0.6	0.9
6751-04			1.2	1.4
6751-15	Probe Tool	n/a	0.3 (Spike 1.06)	1.1
6751-8	*Fibreglass Shaft with Sunrise head	-	0.61	0.67
6751-9	*Fibreglass Shaft with Sunrise head	-	0.91	0.85
6751-10	*Fibreglass Shaft with Sunrise head	-	1.2	1.04
6751-16	*Fibreglass Shaft with Sunrise head	-	1.82	1.23

\*Used with 10-106 Spiral Hook

Part No.	Description	Details	Wt (kg)
10-106	Universal Spiral Hook	Used for Grabbing/Holding Branches/Wires	0.34



### Temporary Conductor Support

#### Part No. Various

- This Conductor Support clamps to the crossarm, adjusting to crossarms from 82.5mm x 100mm to 150mm x 150mm
- The C-clamp is made of heat treated aluminum and can be installed with a Grip-All shotgun

PSC4000517009



Part No.	Description	Working Load (kg)	Height from Cross-arm (mm)	Insulated Length (mm)	Wt (kg)
C400-0517	Conductor Support	68	200	200	1.6
PSC4000517011	Conductor Support	68	800	600	1.9
PSC4000517009	Conductor Support - Replacement for PSC4000517011 (No Cross-Arm Brkt)			600	1.6

### Wire Holding Stick

#### Part No. C403-3068 Series

- Foam filled shaft and solid fibreglass operating rod tested per ASTM F-711 and OSHA
- Three position locking head

The Chance Epoxiglas® Wire-Holding Stick is used on or around energised lines for forming, bending and positioning jumper wires; and for holding conductors during splicing operations. The gripper, equipped with an eye so that other sticks can assist with heavy bending, will handle (4.5mm OD solid copper through 34mm ACSR).



Part No.	Pole OD (mm)	Length OAL (mm)	Conductor Capacity (mm)	Wt (kg)
C403-3068	32	1955	4.0 – 38.0	2.7





**Will not RUST, ROT or CORRODE**



**Ideal for changing Live HV and LV Strain and Termination Cross-Arms**



## Temporary Composite Fibreglass Cross-Arm

### Part No. TENK007

#### Features

- Advantages over other temporary crossarms
  - "CAN" be used for Terminations
  - "CAN" be used in HV situations
- Chemically Inert:
  - Cross-Arm will not RUST, ROT or CORRODE
- 2Tonne WLL
- Lightweight: (15kg)
  - Composite Cross-Arm - Approximately  $\frac{1}{3}$  the weight of timber
  - Bracket - Manufactured with high strength Aluminium
- Cross-arm provides additional protective layer of insulation (BIL rating 673kV/m)
- Takes 3 time longer to ignite and does not sustain a flame

**2 Tonne WLL**

#### Specifications

##### Composite Strain Arm

- 2580mm OAL
- 125mm x 125mm (Square)
- 22mm OD attachment holes

##### Lightweight

- Rating – 10kN per attachment point
- Non slip tape top and bottom "To prevent slippage on EWP baskets"
- Use as termination or strain crossarm

##### Bracket

- Lightweight (Aluminium)
- Ratchet style web-strap attachment
- WLL 2T

##### Eye Bolts

- Double Ended (for strain arms)
- WLL 12kN (marked not for lifting)



#### Kit Includes

Part No.	Description	Qty
AEC047-00005	Cross-Arm 2.5 Wagner composite	1
FSXARMB1	Aluminium mounting bracket & ratchet strap	1
CCA20	20mm rated eye bolt & eye nut	4
TENM710	Carry bag (Cross-Arm) - Canvas RED (2640 x 170 x 100mm)	1
TENM426	Carry bag (Accessories) - Canvas RED	1

## Temporary Cross-arm Storage Bag

### Part No. TENM710

- Included in TENK007 Temp. Crossarm kit
- Made from durable tear stop canvas with reinforced edges
- Webbing carry straps
- Webbing carry handles, reinforced stitched on both ends of bag
- Fold over corner velcro flaps
- 3 reinforced adjustable webbing straps for closing bag
- Bag easily unwraps to access Cross-arm



Swivel Eye Safety Hook

Swivel Eye Both Ends

"-1" Models supplied with hot stick operated safety latch (as above)

## Link Sticks

### Swivel Eye & Safety Hook

#### Part No. Various

- Provides insulation protection when using ratchet hoists on energised lines
- Foam filled fiberglass shafts
- Tested to ASTM F711 and OSHA, Pretested in factory to 2265kg
- Clevis Roller accepts up to 40mm wide strap
- Forged hooks
- Not to be used in place of insulators, rubber gloves or sleeves

Part No.	Type	OD (mm)	Fibreglass Length (mm)	WLL (kg)	Wt (kg)
3414	Swivel Eye – Safety Hook	25	300	1815	1.0
3414-1			300		1.1
3415 <sup>2</sup>	Swivel Eye Both Ends		150		1.0
3416	300		1.1		

<sup>2</sup> For LV only



### Strain, Roller & Spiral Link Stick

#### Part No. Various

Provides insulation between energised conductors and pulling devices at different potential.

- Tested to ASTM F711 and OSHA
- Foam filled fiberglass shafts



Model	Strain	Roller	Spiral
Hardware	Heat treated aluminium or bronze alloy. Eye screws are plated steel. Ball bearing eye swivels.		Heat treated aluminium or bronze alloy. Eye screws are plated steel. Ball bearing eye swivels. High strength heat treated steel spiral hook

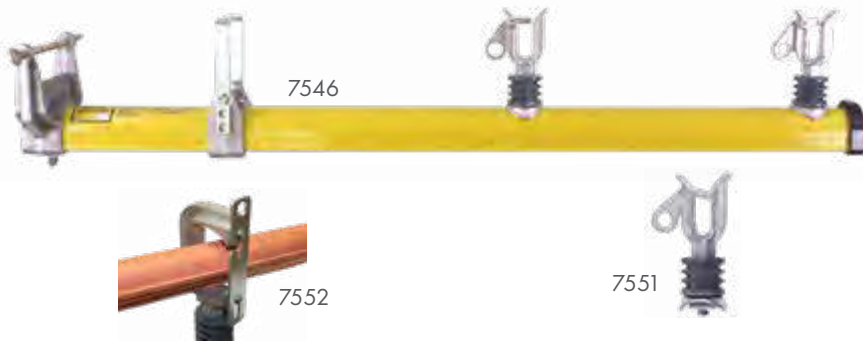
Part No.	Type	OD (mm)	Pole Length (mm)	OAL (mm)	Max Wire Size Ø (mm)	WLL (kg)	Wt (kg)
PSC4004372	Strain	32	546	1016	120 Max Crossarm	1588	3.6
5708-3	Strain	32	610	915	35.05	1360	2.0
9466	Roller	32	610	1065	31.75	450	1.8
9467		32	1220	1675	31.75	450	2.1
9468		32	1830	2285	31.75	450	2.4
3480	Spiral	25	305	610	28.19	905	1.3
3481		25	610	915	28.19	905	1.5
3482		25	915	1220	28.19	905	1.7
3483		25	1220	1525	28.19	905	1.9
H4722		32	390	700	31.75	1587	1.7

Additional sizes available see Hastings Catalogue.

### Extension Arms

#### Super "U" Extension Arms

##### Part No. Super "U" Series



- Used for temporary support, reconducting and line maintenance
- Fixed conductor holders
- Great strength and durability "U" shape design
- Interchangeable hanger loop kits available for various size X-Arms
- Super "U" Arms include insulators
- Tested per OSHA & ASTM F-711
- FRP laminate resists weathering

Part No.	Description	Rating Ø - Ø (kV)	Wire Holders	Max Conductor (mm)	WLL (kg)	Max X-Arm Size (mm)	Wt (kg)
7546	Standard w/Lrg Hanger Loop	35	2	27	181	150 x 150	9.3
Accessories and Replacement Parts							
7551	Conductor Holder - Standard	-	1	27	90	-	0.5
7552	Conductor Holder - Large Capacity	-	1	67	90	-	0.7
A30008	Insulator	-	-	-	-	-	0.5

#### Adjustable conductor holders

### Standard Extension Arms

##### Part No. Standard Series

5006-F Bracket for Composite Arms  
Insulators not included.

- Used for temporary support, reconducting and line maintenance
- Can be used for obtaining clearances in congested areas
- Easy to install

- Adjustable conductor holders
- Foam filled fibreglass shaft
- Tested per OSHA & ASTM F-711
- Eye bolts and nuts are silicone bronze to resist seizing



63mm OD Arms									
Maximum X-Arm Size = 100W x 175H (mm)					Maximum X-Arm Size = 125W x 150H (mm)				
Part No.	Arm Length (m)	# Cond Holders	WLL (kg) per Cond Holder	Wt (kg)	Part No.	Arm Length (m)	# Cond Holders	WLL (kg)	Wt (kg)
5000	1.52	1	68	5.1	5036	1.5	1	68	5.5
5001		1 + Insulator		5.2	5037		1 + Insulator		5.7
5006	1.82	2		6.6	5016	1.8	2		6.7
5006-F		2		6.6	5016-1		2 + Insulators		7.0
5007		2 + Insulators	7.0						

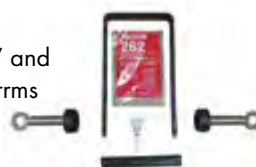
### Composite Cross-Arm Retrofit Bracket

##### Part No. 7560

Suitable for Super "U" and Standard Extension Arms

Kit Includes

- 2 x Threaded Eye Bolts c/w composite tips
- 1 x Cross-Arm Hanger
- 1 x Lip Cover
- 1 x 626 Locktite







### Conductor Holder

#### Super U and Standard, Pole Mounted

- Used for temporary support, reconducting and line maintenance
- Easy to install, large control handles and knobs for gloved hands
- Tested per OSHA & ASTM F-711



Model	Super "U" Ratchet Strap	Super "U" Chain	Standard Ratchet Strap	Standard Chain
Features	Great strength and durability "U" shape design	Great strength and durability "U" shape design	Adjustable conductor holders	Adjustable conductor holders
Hardware	Aluminium alloy base. Steel alloy grab hook. High strength FRP	Aluminium alloy base	Aluminium alloy base	Aluminium alloy base

#### Super "U" style temp arm - fixed wire holders

Part No.	Tightener	Suits Poles OD (mm)	Max Use $\phi - \phi$ (kV)	Conductor Holders	Max Cond $\phi$ (mm)	Insulator	Arm OD (mm)	OAL (mm)	WLL Per Holder (kg)	Wt (kg)
5045	Strap	Strap length 1120	34.5	1	27	Yes	n/a	880	91	6.9
5047				2				1265		
5049	Replacement Strap with Hook Only							1.10	N/A	0.5
5046	Chain	355*	34.5	1	27	Yes	-	880	91	7.7
5048				2			1265			

#### Standard style temp arm - adjustable wire holders

Part No.	Tightener	Suits Poles OD (mm)	Max Use $\phi - \phi$ (kV)	Conductor Holders	Max Cond $\phi$ (mm)	Insulator	Arm OD (mm)	OAL (mm)	WLL Per Holder (kg)	Wt (kg)
5038	Strap	Strap length 1120mm	15.0	1	27	No	63	865	91	5.5
5039			34.5			Yes		865		
5040			15.0	2		No		1230	68	6.8
5041			34.5			Yes		1230		
5042	Replacement Strap Only							1.10	N/A	0.2
5018	Chain	355*	15.0	1	27	No	63	865	91	6.3
5019			34.5			Yes		865		
5020			15.0	2		No		1230	68	7.7
5021			34.5			Yes		1230		

\*Chain extension #5031 available for large pole diameters (refer to page D30) Note: Ratchet straps should be inspected prior to use, straps showing signs of deterioration must be removed from service

#### Temporary "V" Cross Arms, Pole Mounted



##### Part No. Various

- Used when changing crossarms
- Easy to install two piece assembly
- Ratchet strap mounting base with arm bolt slots
- Solid fibreglass arms provide maximum strength

Part No.	Description	Max Use $\phi - \phi$ (kV)	Length (mm)	Conductor Holders #	Cond Holder Model (With Insulator)	WLL (kg) per Side	Max Cond OD (mm)	Wt (kg)
5051	Arm & Mounting Base	35	1625	2	A10002	68	27	12.3
5053	Arm & Mounting Base	35	1625	2	A10039	68	67	12.7
5054	Arm & Mounting Base	35	2195	3	A10002	68	27	15.0
5055	Arm & Mounting Base	35	2195	3	A10039	68	67	15.4
Replacement Parts								
A30220	Arm Only	35	1625	-	-	-	-	10.0
A30233	Arm Only	35	2195	-	-	-	-	11.8
A30221	Mounting Assembly	-	-	-	-	-	-	6.4
5042	Strap Only	-	-	-	-	-	-	0.5

### Accessories and Replacement Parts for Arms

#### Part No. Various



Part No.	A10001	A10002	A30008	A10038	A10039
Description	Conductor Holder for 63mm Arms	Conductor Holder with Insulator for 63mm Arms	15kV Insulator Recommended on voltage over 15kV	Conductor Holder Large (67mm OD) Allows Line Hose, No Insulator	Conductor Holder Large (67mm OD) Allows Line Hose with Insulator
Weight (kg)	1.0	1.1	0.5	1.3	1.7

Glove and barrier, pole mounts and boom mounted auxiliary arms and kits available on request.

### Auxiliary Arm Assembly

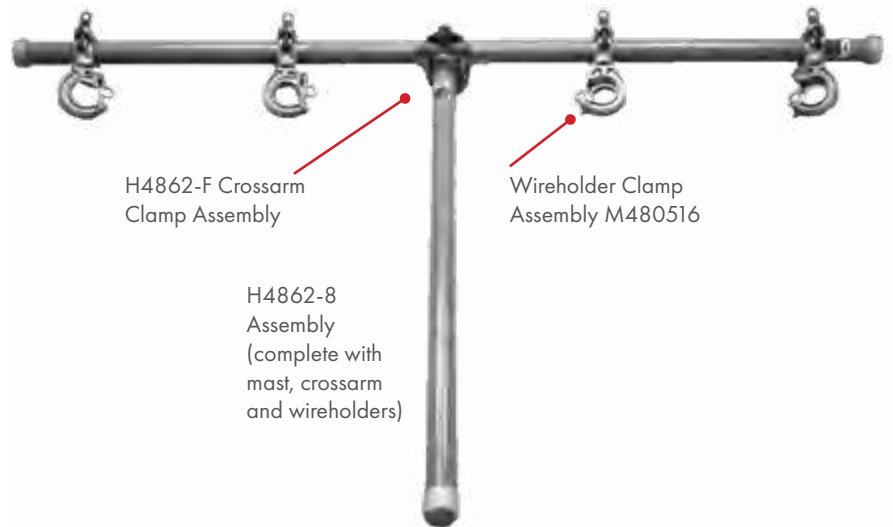
#### Part No. H4862-8

Crossarm, crossarm clamp & wire holders can be used with H4862-51



H4862-51  
Mast and Braces only

(included: crossarm clamps and mast-base swivel fitting)



H4862-F Crossarm  
Clamp Assembly

Wireholder Clamp  
Assembly M480516

H4862-8  
Assembly  
(complete with  
mast, crossarm  
and wireholders)

- This Epxoglas Auxiliary Arm Assembly is used to change crossarms, insulators, or poles on short spans up to and including 15 kV phase-to-phase
- Two M47405W wire tong saddles can be used to mount the mast to the pole (The saddles are not included and must be ordered separately) See next page for further details.
- Two mast pole lengths are available: 1.52m mast provides a lift of 0.76m above the top saddle and the 3.0m mast provides a lift to 1.17m, when the saddles are mounted a recommended 0.46m apart
- The arm has a balanced load rating of 272kg; unbalanced at 68kg
- Each wireholder is rated at 68kg
- Tested per OSHA & ASTM F711

Part No.	Description	Wire Holders		Mast Pole Size (mm)	Crossarm Pole Size (mm)	Wt (kg)
		Qty	Capacity (mm)			
H4862-8	Auxiliary Arm Assembly	4	63	63 x 1200	63 x 1600	18.9
H4862-51	Mast & Braces	Use H4862-8		63 x 3050	Use H4862-8	16.65



## Wire Tongs and Accessories

### Wire Tongs

Part No. Various



- Used to support and move energised conductors
- Foam filled fibreglass, tested to ASTM F711
- Heat treated aluminium and bronze alloy
- Interlocking conductor jaws with acme threads
- Medium head models feature spring loaded latch head

Medium Head				Large Head			
Part No.	Diameter (mm)	Length (m)	Wt (kg)	Part No.	Diameter (mm)	Length (m)	Wt (kg)
5679-8	38	2.7	2.5	5315-8	38	2.7	3.2
5679-10	38	3.3	2.9	5315-10	38	3.3	3.5
5671-8	50	2.7	3.4	5320-8	50	2.7	4.1
5671-10	50	3.3	3.9	5320-10	50	3.3	4.5
5671-12	50	3.9	4.4	5320-12	50	3.9	5.5
5672-10	63	3.3	6.5	5325-10	63	3.3	7.2
5672-12	63	3.9	7.3	5325-12	63	3.9	8.0
5672-14	63	4.5	8.2	5325-14	63	4.5	8.9
5672-16S*	63	5.1	10.1	-	-	-	-
5673-12	75	3.9	9.2	5330-12	75	3.9	9.9
5673-14	75	4.5	10.3	5330-14	75	4.5	11.0

### Butt Swivel Ring

Part No. B-RING

- WLL: 1133kg

- Used for connecting ratchet hoist to a wire tong



### Pole Saddles & Pole Clamps

Part No. Various

- Pole saddle chain tightener spring loaded for easy installation
- Pole clamps with large wingnuts for easy operation



Wire Tong Saddle

Pole Clamp

Wire Tong Saddle			Pole Clamps		
Part No.	Suits (mm)	Wt (kg)	Part No.	Suits (mm)	Wt (kg)
5745-15	38	4.2	5746-15	38	0.8
5745-25	63	4.7	5746-25	63	1.0
5745	Base Only	3.8	5747	Extension Only	0.5



Extension Only



Base Only

Part No.	Description	Wt (kg)
M4740-10W	Pole Saddle and Tightener Only	4
M4740-16W	Pole Saddle, Tightener, Pole Clamp and Extension	5
M4740-18W	Pole Saddle, Tightener, Pole Clamp and Extension	5.2

### Chain Tightener & Extension

Part No. Various

- Chain Tightener  
• WLL: 1133kg



- Chain Extension  
• WLL: 1133kg



Part No.	Description	Wt (kg)	Part No.	Description	Wt (kg)
5030	With 915mm chain & spring loaded take up.	2.5	5031	400mm chain with keeper & safety pin	1.1



### Lever Lifts



Insulated Lever Lift			Lever Lift Double Adaptor		Single/Double Lever Lift		
Used for lifting & supporting heavy conductors. Lever lift allows installation around congested areas. Accepts all wire tongs.			Allows two wire tongs to be used for supporting/lifting conductors with insulated lever lift.		Allows use of single or two wire tongs. Spring loaded chain tightener.		
Part No.	F/G Length (mm)	Wt (kg)	Part No.	Wt (kg)	Part No.	Length (mm)	Wt (kg)
5750-1	300	6.8	5751	0.68	5749	300	5.9
5750-2	610	7.1					
5750-3	915	7.5					

### Cross Arm Saddle

- Slotted base and large operation wing nuts
- Suits 75mm x 75mm & 100 x 100mm cross arms



Cross Arm Saddles		
Part No.	Suits (mm)	Wt (kg)
9723	38	3.1
9724	50	3.2
9725	63	3.4
9722	Base Only	1.60

### Tower Saddles

- Suits Angles
  - 65mm x 65mm
  - 50mm x 150mm
  - 152mm x 152mm



Tower Saddles		
Part No.	Suits (mm)	Wt (kg)
5740-12	38	3.8
5740-13	50	4.0
5740-14	63	4.3
5740-19	75	4.8
12265	Saddle Base Only	3.4

### Bands, Clamps & Stirrups



Wire Tong Band			Wire Tong Blocks Clamp			Wire Tong Stirrup		
Use with rope blocks for lifting or lowering conductors.			Use with rope blocks for controlling conductors and pulling in tension.			Prevents damage to small diameter conductors.		
Part No.	Suits (mm)	Wt (kg)	Part No.	Suits (mm)	Wt (kg)	Part No.	Suits (mm)	Wt (kg)
1829	50	0.8	5748-15	38	1.0	1851	50	1.0
1829-1	63	1.0	5748-16	50	1.2	1851-1	63	1.0
1829-2	75	1.3	5748-17	63	1.4			
			5748-18	75	1.5			

### Rope Snubbing Brackets



Rope Snubbing Bracket		Wire Tong Snub Bracket	
Used for terminating block fall lines to hold blocks in position, with chain tightener. WLL 450kg, 915mm chain		Provides stationary base, also for auxiliary arms, with chain tightener.	
Part No.	Wt (kg)	Part No.	Wt (kg)
M1846	3.4	5900-25	3.1

## Inspection, Cleaning & Maintenance

Live line tools should be visually inspected daily before use for defects such as abrasions, blemishes, burns and surface deterioration. Any defect is cause for rejection as it may impair the dielectric integrity. Rejection does not mean discarding the tool, only removing the tool from service and tagging.

### Common stick defects



Scratched



Sun Damaged



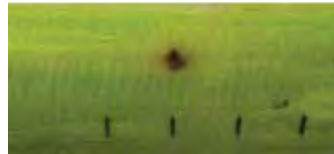
Abrasions



Mistreated



Cracked



Burn



Split



Large Chip

### Hot Sticks and Fibreglass Care & Maintenance

For instruction on how to clean hot sticks, watch our video by scanning or clicking the adjacent QR code.

To download a copy of the "Fibreglass Equipment Inspection, Cleaning & Maintenance PDF" visit the Download page on TEN's website by clicking the below link:

<https://www.tengroup.com.au/catalogues/downloads>

For stripping back heavy contamination and prior to re-waxing, use the Hastings All-Purpose, Safe, non-toxic, biodegradable, PH neutral & non-flammable Cleaning Concentrate (10-195).

Once the surface has been cleaned thoroughly, it is critical to re-wax the stick. The Polywater® Fibreglass Wax and Buff Kit is a simple, easy to use, one application wipe ideal for this purpose.

The lint-free wipe is saturated with fast hazing wax and a soft lint-free towelette is included for buffing the wax to a shine.

This improves the dielectric performance by restoring the water beading properties. Also available is the Polywater (W-16) bottle of wax and Hastings Hot Stick Wax 10-091.

It should be noted, waxing is best done after a thorough stick cleaning. Use of wax products over contaminated surfaces only locks the dirt in.

For spot cleaning the sticks and daily before use, the Polywater® Water Repellent Wipe (Part S-1) that (contains a minimum 60% isopropyl alcohol and silicone) helps clean and restore the water beading properties of the stick.

This will also work to sanitise the stick before and after use if used correctly. Also available for spot cleaning and daily before use is the Hastings (10-188) hot stick wipes containing silicone (note these do not have an alcohol content, these are petroleum based).

After extended periods of use and exposure to the elements your stick surface may require maintenance. Unless the tool is mechanically damaged your stick may be able to be repaired.

Stick repair should only be carried out by professionally trained personnel. Refinishing kits (10-100) and epoxy adhesive (10-097-1) are available.

Never lay your sticks directly on the ground, place them on a ground tarp (TENM705), stick rack (6780) or carry bag.

Always care for your live line tools and equipment by storing them in protective carry bags and/or in a dry area away from rain and light when not in use.

### Boom & Basket Cleaning

For washing booms, use the Polywater® Fibreglass Wash (FGW-640). This replaces the previous (BWC) Boom Wash Concentrate.

For spot cleaning of booms and baskets we recommend the Polywater (B-1) large format towels for cleaning grime, grease and contaminants from the surface.

See the following page for further information.

References: ASTM F711, OSHA, Hastings, Polywater



SCAN or CLICK to watch  
Hot Stick Cleaning &  
Maintenance



### Inspection, Cleaning & Maintenance Products

#### Fibreglass Stick/Tool Rack

Part No.	Description	Wt (kg)
6708	Fibreglass stick tool rack (Pair)	3.73

#### Part No. 6708

- Tool racks made from fibreglass components
- Will accommodate up to 14 hot line sticks/tools
- Support legs collapse for easy storage and transportation

#### Silicone Wiping Cloths - Disposable

- 50 wipes in a heavy duty cardboard dispenser box that can be installed on a wall or post in a convenient location to the line trucks, each are individually packaged
- Leaves a silicone moisture barrier which enables water to bead up. This eliminates the blanket effect when using hot sticks in wet conditions.
- Excellent for daily wiping of your hot sticks prior to use
- Removes contaminants such as dirt, oils, creosote, and other undesirable matter
- Environmentally safe, the used wipes can be disposed of in normal waste containers

Part No.	Description	Pack
10-188	Hot Stick Wipes - box	50
10-188-1	Hot Stick Wipe - individual	1

#### Silicon Treated Wiping Cloth

- Deposits a water repellent film while removing dust and dirt particles from the surface of hot sticks and insulated tool handles
- The 460mm x 460mm cotton cloth is an open-type weave specially selected for removing foreign material from the surface of insulated tools and has bound edges to eliminate fraying which extends the life of the cloth
- The cloth is packaged in a sealed plastic bag with instructions for compliance with OSHA regulations for cleaning and inspection of live line tools
- Regular use of the silicone treated cloth will add to the life and safety of the tools
- For added safety and increased life of live line tools

Part No.	Description	Wt (kg)
10-090	460 x 460mm Silicone Treated Wiping Cloth	0.05

#### Live Working Equipment Wax

#### Part No. 10-091

- High grade carnuba wax formulated for fibreglass application
- Used on booms, buckets, live line tools and equipment
- Provides hard, tack free weather resistant surface
- Applied by hand or machine



Part No.	Unit	Wt (kg)
10-091	Tin	0.4

#### Live Line Tool Wax

- Convenient, wax-saturated, lint-free wipe
- Dual action tandem pack includes dry buffing towel
- Does not remove or adversely affect gel coat
- Superior quality, fast-hazing fibreglass wax
- Easy to apply
- Leaves non-conductive water repellent coating
- Prevents continuous water film on stick in wet weather

Part No.	Description
W-1	Fibreglass wax and buff - individual wipes
W-1-K	Fibreglass wax and buff - Box of 72 x wipes
W-16	470ml bottle fast-hazing fibreglass bulk wax



Individual wipes



W-1



Bulk wax





10-197



10-168



10-195



### All Purpose Cleaner Concentrate

- Excellent cleaner for the following: hot line tools, trucks, buckets, booms, rigid cover up, painted surfaces and aluminum metal, shop machinery, hand cleaner, all plastic surfaces
- Can be applied with a soft cloth, sponge or hand dispenser
- Safe and gives the following benefits: biodegradable, non-toxic, non-alkali, non-acid, non-flammable, gentle to the skin, requires no ventilation
- Concentrate formula mixing ratio is 20 parts water to 1 part concentrate

Part No.	Description	Wt (kg)
10-168	All purpose cleaner concentrate 3.8L bottle	3.6
10-195	All purpose cleaner concentrate 19L Drum	18.2
10-197	6pk Cleaning Kit: 6 x 200ml ready to mix bottles/14 ultra fine non-metallic pads/ 6 adhesive identification bottle labels	1.6

### Powerclean Concentrate

- Powerful degreaser/cleaner detergent
- Ideal for cleaning rubber ground mats

Part No.	Package	Qty	Wt (kg)
RPC15	Drum	15 (L)	16.3

### Boom Cleaner Wipes

- Convenient, pre-saturated, lint-free wipes in two sizes
- Large and durable for maximum surface coverage
- Won't remove or adversely affect gel coat & prevents "build-up" over time
- Powerful cleaner removes grease, dirt, tar, and grime
- Removes road and sea spray salts (salt water is more conductive)
- Water soluble for easy water rinsing
- Designed for one time use and easy disposal
- Meets OSHA Maintenance Reg CFR 29 Part 1910

Part No.	Description	Pack
B-1	Individually saturated 610 x 610mm wipe in sealed foil	1
B-D72	Dispenser with 72 wipes	72



### Boom & Basket Cleaner

- Ideal for washing Fibreglass booms and Baskets
- Mix with water for a mild boom cleaner to spray wipe or pour on surface for easy cleaning

Part No.	Package	Qty (L)	Wt (kg)
FGW-640	Drum	19	16.3

### Hot Stick Cleaner and Water Repellent Wipe

- Convenient, pre-saturated, lint-free wipe
- Dual action - cleans and applies water repellent
- Does not remove or adversely affect gloss coat
- Evaporates quickly
- No "build-up" over time
- Removes grease, dirt, and grime
- Prevents continuous water film on stick in wet weather
- Designed for one time use and easy disposal
- Meets IEEE maintenance recommendations (Std #978)

Part No.	Description	Pack
S-1	Pre-saturated lint-free 600mm <sup>2</sup> wipe in sealed foil (Single Pack)	1
S-1-K	Pre-saturated lint-free 600mm <sup>2</sup> wipe in sealed foil (Box of 144)	144



### Fibreglass Cleaning and Refinishing Kit

#### Part No. 10-171

This kit helps keep your fibreglass sticks in top condition. Visual inspection can identify areas of wear that will require maintenance prior to putting sticks back into service.

**All Purpose Cleaner** - The all purpose cleaner provides a safe non-toxic liquid to aid in removing dirt, grease, metal oxides and other contaminants which accumulate on fibreglass. **Ultra Fine Non-Metallic Abrasive Pads** can be used with the all purpose cleaner to remove stubborn contamination. Note -fibreglass wax may be required after use of cleaner and/or pads to retain surface gloss.

**Clear Epoxy Refinishing Kit** - The two part refinish kit is used to bring the tool surface back to its original finish if normal cleaning is not sufficient

**Silicone Treated Wiping Cloths** - Wiping cloths are used to remove light dust and dirt from stick surfaces. It is also needed after light cleaning of tool with all purpose cleaner to allow moisture to bead up on tool.



### Live Working Tool Epoxy Adhesive

#### Part No. 10-097-1

- Used for live line tool construction and repair
- High viscosity two part adhesive, safety yellow in colour
- High performance, high impact resistance with good flexibility

Part No.	Unit	Qty (L)	Wt (kg)
10-097-1	Tin	1 (500mL each of Part A & Part B)	1.36



### Epoxy Refinishing Kits & Thinners

- Kit provides all the necessary materials with complete instructions for restoring fibreglass hot line tools and aerial lift booms and buckets equal to their original finish
- The epoxy coating provides a hard, tough, moisture resistant high-gloss finish of high dielectric strength and is easily cleaned
- Included in the kit are complete instructions, sandpaper, paint brush, and epoxy solvent
- 8 litres of epoxy coating covers approximately 3 metres of surface
- The coating is a two-part system, available in both white and clear, dries dust free in approximately 1 1/2 hours and cures completely within 24 hours

Part No.	Description	Wt (kg)
10-100	Epoxy Refinishing Kit - contains 475ml of each component (3)	1.8



### Non-Metallic Cleaning Pads

Cleaning pads can be used with the all purpose cleaner to remove stubborn contamination. Note: Fibreglass wax may be required after use of cleaner and/or pads to retain surface gloss.

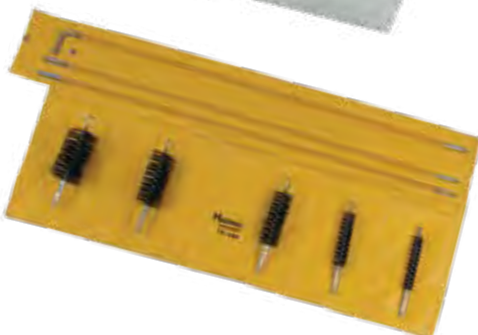
Part No.	Description	Qty
10-170	Box of Ultra Fine Non metallic cleaning pads	20/box
EAGERBEAVER	Non-abrasive cleaning pad for cleaning rubber goods & fibreglass sticks	10/ box



### Hot Stick Cleaning Kit

- Kit provides the brushes and sectional fibreglass rods needed to thoroughly clean the inside of telescoping hot sticks and internal rod shotgun sticks
- Kit includes: (1) Heavy duty vinyl fold up storage case with pockets to store cleaning rods and brushes - additional pockets are provided for storage of other cleaning items, (3) Fibreglass sectional rods each 910mm long, (5) Heavy duty industrial type nylon bristle brushes to accommodate all inside diameters of telescoping tools

Part No.	Description	Wt (kg)
10-337	Complete cleaning kit	1.6









- Rescue Kits & Equipment
- Arc Flash Clothing & Face Shields
- LV Rubber Gloves
- HV Rubber Gloves & Sleeves
- LV & HV Line Covers & Blankets
- Rubber Ground Mats
- Conductive Suits, Gloves, Socks & Boots
- Safety Harnesses, Belts & Lanyards
- Safety & PPE Cleaning Products
- Transformer Containment Bags

**SAFETY & PPE**

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<b>Warning &amp; Phase Markers - Overhead Lines.....</b>	<b>E27</b>	Cleaner - Rubber Goods .....	E38
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		Wash - Solar Panel.....	E40



# Honeywell SALISBURY



Class 0 -  
Dual Colour

Class 00

## Rubber Insulating Gloves & Accessories

### LV Insulating Rubber Gloves - Salisbury

- Insulating gloves for live electrical work
- Single and dual colour gloves available for Class 0
- High dielectric strength, flexible and durable
- Straight style smooth finish gloves
- \*Sizes 7 - 12, including half sizes in 8, 9 & 10
- Natural rubber dipping process provides strength & excellent resistance to tearing in the cuff
- Meets or exceeds ASTM D120 and IEC EN 60903

Part No.	Working Voltage (V) AC/DC	ASTM Class	Sizes	Glove Colour	Length (mm)	ASTM Label Colour
E0011R-*	500 /750	00	7-11	Red	280 (11")	Beige
E014R-*	1000/1500	0	7-12	Red	355 (14")	Red
E014BY-*	1000/1500	0	7-12	Black/Yellow	355 (14")	Red

\*Add size suffix when ordering



### LV Insulating Latex Gloves - 12 Cal Arc Flash Rated

- Arc Flash, 1000V Insulating Latex Gloves
- Protection from an electrical arc flash 12 cal/cm<sup>2</sup>
- No LV outers required due to Composite construction providing mechanical protection
- Soft, supple, durable and ergonomic with high flexibility
- Meets or exceeds IEC EN 60903

40 Cal/cm<sup>2</sup> Class 4 Gloves available upon request. Contact TEN for further information.

Part No.	Working Voltage (V) AC/DC	ASTM Class	Sizes	Glove Colour Outer/Inner	Length (mm)	ASTM Label Colour
CGM-0-*	1000/1500	0	7-12	Orange/Natural	360	Red

\*Add size suffix when ordering



### HV Insulating Rubber Gloves - Class 1

- Meet ASTM D120 and IEC/EN 60903 standards
- Dual coloured gloves, internal/external for easy inspection
- Sizes 8 - 12\*, including half sizes in 9 & 10
- Made from Natural rubber in the USA
- Straight Cuff shown

Part No.	Working Voltage (kV) AC/DC	ASTM Class	Sizes	Standard Glove Colour	Length (mm)	ASTM Label Colour
E114YB-*	7.5/11.25	1	8-12	Yellow/Black	355 (14")	White

\*Add size suffix when ordering



### Glove Dust - Corn Starch

#### Part No. Various

- Powder for use with rubber products
- Absorbs moisture and perspiration, prevents sticking
- Manufactured from Corn Starch



10-4-1QTCS-ES

Part No.	Description	Size (kg)
10-4CS-ES	Glove Dust, 1 x 140g Plastic Container	0.16
10-4-1QTCS-ES	Glove Dust, 1 x 500g Plastic Container	0.5

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**ELECTRIFLEX**



**HV Insulating Rubber Gloves - Class 2-4**

Salisbury's Electriflex™ Gloves are 30% more flexible than any other HV glove ever made and are expertly designed to give linemen the ultimate in comfort and control. Electriflex™ minimises hand fatigue and maximises performance, all while giving you best-in-class protection.

- Meets ASTM D120 and IEC/EN 60903 standards
- ASTM Voltage classes 2, 3 & 4 available
- Two colour Natural rubber gloves
- Sizes 7-12, including half sizes 8, 9 & 10 (See below chart for specific Class Sizes)
- Other cuff lengths and colours available on request



SCAN or CLICK to download LV & HV glove distance requirements

Part No.	Description ELECTRIFLEX LINEMAN GLOVES	Style/Colour	Working Voltage (kV) AC/DC	Length mm (in)
NG216YB-*	CLASS 2 - Sizes*7-12	Straight Cuff Yellow/Black	17/25.5	405 (16")
NG216BCRB-*	CLASS 2 - Sizes*8-12	Bell Cuff Red/Black	17/25.5	405 (16")
NG316YB-*	CLASS 3 - Sizes*7-12	Straight Cuff Yellow/Black	26.5/39.75	405 (16")
NG316BCRB-*	CLASS 3 - Sizes*8-12	Bell Cuff Yellow/Black	26.5/39.75	405 (16")
NG416YB-*	CLASS 4 - Sizes*9-12	Straight Cuff Yellow/Black	36/54	405 (16")
NG416BCRB-*	CLASS 4 - Sizes*9-12	Bell Cuff Red/Black	36/54	405 (16")
NG418YB-*	CLASS 4 - Sizes*7-12	Straight Cuff Yellow/Black	36/54	455 (18")
NG418CRB-*	CLASS 4 - Sizes*9-12	Contour Red/Black	36/54	455 (18")

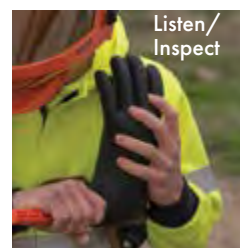


**Rubber Gloves Inflation Tool**

Part No. VT-12



Quickly, easily & effectively test/inspect rubber glove with the glove inflation tool



**Glove Inflator Kit - Salisbury**

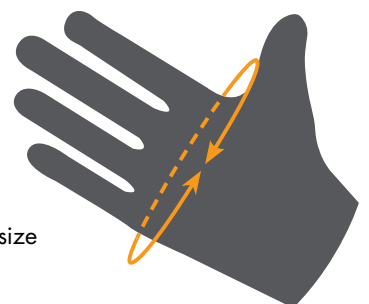
Part No. G99

- Inflate, Test & Inspect Electrical Insulating gloves in the field (Gloves must be inspected before each use)
- Simple, easy-to-use and portable
- The glove is secured to the inflator using a nylon strap and fastened with Velcro. Inflation is accomplished by pumping the bellow of the inflator
- For use on Class 1 to Class 4 Gloves



**Glove Sizing**

- Measure the circumference of the palm of your hand
- Any increment over a full or half size will take you to the next full or half size
- Rubber gloves sizes are manufactured in inch (") sizes
- Allow for cotton inner gloves





Long  
VG-10822



Short  
VG-13820



ARC  
Rated



## Leather Outer Gloves and Cotton Liners

### Cotton Liners - Inners

Separate from gloves, glove liners may be regularly replaced, limiting the bacteriological problems associated with residual moisture due to perspiration

- Ambidextrous cotton under glove Liners.
- 100% cotton
- Reversible - fit either hand
- Stretch comfort fit

Part No.	Brand	Description	Length (mm)	Feature
VG-13820-PK	Voltgard	Short	220	Normal Cuff
VG-10822-PK	Voltgard	Long	300	Extended Cuff

\*Supplied in packs of 12

### LV Gloves - Outers - 8.6 Cal Arc Rated - Youngstown

- Cut Resistant: Level A7 (ANSI/ISEA)
- Puncture Resistant: Level 4 (ANSI/ISEA)
- Arc Rating: 8.6 Cal/cm<sup>2</sup>
- Flame Resistant: Exceeds Industry Standards According to ASTM D6413
- Palm: No Drip No Melt Textured Coating

Part No.	Material	Length (mm)	Sizes Available
YT12-4000-60-*	Nitrile Based	305 (12")	*S, M, L, XL, XXL & 3XL

\*Add size suffix when ordering (e.g. 12-4000-60-M)

### LV Gloves - Outers - 25 Cal Arc Rated - Youngstown

- Puncture Resistant: Level 3 (ANSI/ISEA)
- Arc Rating: 25 Cal/cm<sup>2</sup>
- FR Strap: Woven Webbing with DuPont™ Kevlar®
- FR Fastener: Heat Stabilized Heavy Duty Hardware
- Leather: 0.6-0.9mm Goat Grain

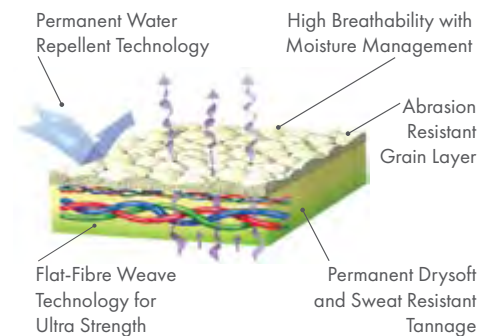
25 CAL  
ARC Rated

Part No.	Material	Length (mm)	Sizes Available
YT16-4100-10-*	Goat	255 (10")	*7, 8-8.5, 9-9.5, 10-10.5, 11 & 12

\*Add size suffix when ordering (e.g. 16-4100-10-9-9.5)

### LV Leather Gloves - Outers - Kangaroo

- Strongest Leather Fibre available
- Flat-Fibre Weave Technology for ultra-strength
- Abrasion resistant
- High Breathability with moisture management
- Permanent water Repellent Technology



Part No.	Material	Length (mm)	Sizes Available
KLP-LV*	Kangaroo	250	*7, 8, 9, 9.5, 10, 10.5, 11

\*Add size suffix when ordering (e.g. KLP-LV-9)





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**LV & HV Leather - Outers - Salisbury**

- Glove protectors offer excellent comfort and protection
- Feature adjustable straps with non-metallic buckles and are stitched with polyester thread for strong seams
- Manufactured from imported goatskin
- All Salisbury Leather Protectors meet ASTM F696 standards
- 355mm (14") available on request (ILPG5S-\*)

Part No.	Voltage	Sizes	Length (mm)
ILPG10A-*	LV	*7-12 Dual Size	254 (10")
ILPG3S-*	HV	*7-12 Dual Size	305 (12")

\*Add size suffix when ordering (e.g. ILP3S-9-9.5)

**HV Leather Outers - Next Generation - Salisbury**

Next Generation Leather Protectors are manufactured from top grade cowhide and goatskin leather. Protectors are crafted using heavy duty 4ply cotton thread and are equipped with a non metallic buckle for a secure fit.

The Next Generation Leather Protector is designed exclusively for the insulated Electriflex™ rubber gloves. These new leather protectors offer utility workers the comfort and dexterity needed to get the job done. The redesigned leather protector was constructed to help amplify the flexibility of the Electriflex™ gloves.

Part No.	Material	Length (mm)	Sizes
NGILP3S-*	Goat (Hand) Cowhide suede (Cuff)	305 (12")	8, 8H, 9, 9H, 10, 10H, 11, 12

\*Add size suffix when ordering (e.g. NGILP3S-9)



**HV Gloves - Outers - 32 Cal Arc Rated - Youngstown**

- Puncture Resistant: Level 5 (ANSI/ISEA)
- Arc Rating: 32 Cal/cm2
- FR Strap: Woven Webbing with DuPont™ Kevlar®
- FR Fastener: Heat Stabilized Heavy Duty Hardware
- Premium Cow Grain
- Cuff Leather: Cow Suede



Part No.	Material	Length (mm)	Sizes Available
YT16-5100-12-*	Leather	305 (12")	*7, 8-8.5, 9-9.5, 10-10.5, 11 & 12

\*Add size suffix when ordering (e.g. 16-5200-12-9-9.5)

**Gloves, Leather - 48 Cal Arc Rated - Youngstown**

- Cut Resistant: Level A3 (ANSI/ISEA)
- Arc Rating: 48 Cal/cm2
- Puncture Resistant: Level 5 (ANSI/ISEA)
- FR Strap: Woven Webbing with DuPont™ Kevlar®
- FR Fastener: Heat Stabilized Heavy Duty Hardware
- Premium Cow grain
- Cuff Leather is cow suede



Part No.	Material	Length (mm)	Sizes Available
YT16-5200-12-*	Leather	305 (12")	*7, 8-8.5, 9-9.5, 10-10.5, 11 & 12

\*Add size suffix when ordering (e.g. YT16-5200-12-9-9.5)

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**Rubber Insulating Sleeves and Accessories**

**Sleeves - Salisbury**

- Prevents arm contact with energised lines - insulates from cuff to shoulder
- Used in conjunction with rubber insulating gloves
- Curved contour arm with reinforced folded cuff
- Buttons and harness are required, sold separately
- Manufactured to ASTM D1051
- Made from Natural Rubber

Size	Length (mm)
Small	610
Regular	673
Large	710

\* Enter Size as S=Small, R=Regular, L=Large

Part No.	ASTM Class	Label Colour	Max Working Voltage (kV)		Proof Test Voltage	
			AC	DC	AC	DC
D2*RY-EC	2	Yellow	17	25.5	20	50
D3*RY-EC	3	Green	26.5	39.75	30	60
D4*RY-EC	4	Orange	36	54	40	70



**Size & Class identification label on sleeves**

**Sleeve Straps - Adjustable**

Quickeeze Sleeve Straps are constructed of all FR-Rated Materials. FR Rated materials have been independently tested.

**Features**

- Arc Tested to ASTM F2621-19 standards: Up to 40 cal/cm<sup>2</sup> - No melt, no drip
- Self-Extinguishing
- Cam-Lock Easily Adjustable buckle
- Single-Piece: No more lost buttons
- Flexible Design
- Unique Oval Buttons: Designed for quick & easy attachment to sleeves
- Lineman Made
- Field tested for durability and longevity

**Straps**

- FR Elastic made of a Nomex® and FR Neoprene blend
- Engineered for flame resistance, heat & thermal shrinkage resistance

**Oval Buttons**

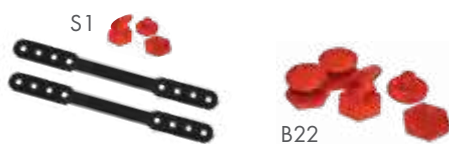
- Made with Flame Retardant ABS
- Tested to pass ignition, melting, or dripping tests

Part No.	Strap width (mm)	Qty per pack	Adjustment (cm)	Weight (g)
HLQE-1000	20	2	21 to 30.5 (end of button)	42.5 per pair

**Buttons & Harness for Sleeves**

- Required when wearing rubber insulating sleeves
- 4 Buttons required for each pair of sleeves
- 1 Harness or 2 straps required for each pair of sleeves

Part No.	Description	Buttons	Weight (g)
B22	Four Screw Type Buttons	4	10
VSH-1	1 x Harness	4	20
S1	2 x Sleeve Straps	4	10



### Insulated Hoses, Blankets, Covers & Accessories

#### Line Hoses - Salisbury



- Designed to cover live line conductors
- Highly visible shields
- Made from Salcor® Type II rubber, stays flexible even in cold weather and will not be damaged by UV rays
- Engineered ribs inside covers grip the serrations on the corresponding line hose, regardless of the angle
- Self-locking lip ensures line hoses and covers do not separate
- Rib Grip® system allow two pieces to easily slip together but resist in coming apart
- Available in plain or interlocking coupler end
- Type II ozone resistant, manufactured to ASTM D1050



RIB GRIP®



Straight Hose



Connector End Hose



Extended Lip Hose

Part No.	Description	Dimensions (mm)	Wt (kg)
OR125-3	Class 2 Straight Hose - 76mm	31 x 915	1.8
OR125-3C	Class 2 Connector End Hose - 76mm		2.0
OR125-45	Class 2 Straight Hose - 114mm	31 x 1370	2.7
OR125-45C	Class 2 Connector End Hose - 114mm		2.9
OR150-3	Class 3 Straight Hose - 76mm	40 x 915	2.3
OR150-3C	Class 3 Connector End Hose - 76mm		2.7
OR150-45	Class 3 Straight Hose - 114mm	40 x 1370	3.2
OR150-45C	Class 3 Connector Hose - 114mm		3.6
SU150-3	Class 4 Straight Hose Extended Lip - 76mm	38 x 915	2.7
SU150-3C	Class 4 Connector End Hose Extended Lip - 76mm		3.2
SU150-45	Class 4 Straight Hose Extended Lip - 114mm	38 x 1370	3.8
SU150-45C	Class 4 Connector End Hose Extended Lip - 114mm		4.1
UC	Class 4 Coupler for Straight Hose	263 x 150	0.9
CC24	Class 2 cut-out cover	610 x 380 x 89	1.8
CC30	Class 4 cut-out cover	750 x 500 x 175	4.5
1186	Class 4 cross-arm cover	140 x 152	2.3



UC - Connector for Extended Lip



CC24 - Cut-out Cover



1186 - Cross-arm Cover

#### Line Hose Spreader

Part No. PTI-EEL

- Spreads line hose for inspection and cleaning
- Set in vice or attach to bench



Part No.	Description	Suits Hose Diameter (mm)	Wt (kg)
PTI-EEL	Rubber line hose spreader	32 – 38	2.3





### Blanket Pegs

Non conductive pegs for clamping blankets and covers

Part No.	Material	Description	Length (mm)	Max Jaw Opening (mm)	Wt (kg)
21	Nylon body, metal spring and soft tip boots	Standard, 2 conductor holes	240	140	0.1
HS21	As above with Hot Stick Rings	Standard, 2 conductor holes	240	140	0.12
BP-1022	Nylon body, metal spring and soft tip boots	Extendable, 2 conductor holes	255 to 300	130	0.25
C-2	Maple Wood with metal spring	Standard	255	200	0.3
CNS3		Slip resistant coating	350	255	0.5
CNS4			375	340	0.7
PEG58100	High tech resin	Irwin quick grip peg	25	25	0.6
PEG58200			50	50	0.7
PEG58300			75	75	0.9

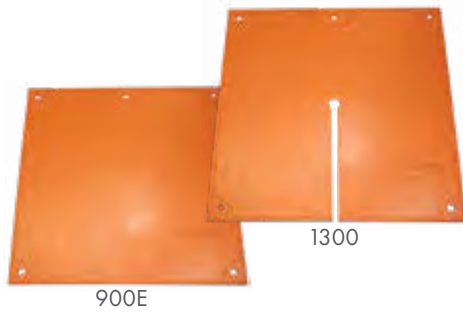
### Conductor and Hard Covers - Chance

- Easy to install/remove with shotgun stick on some models
- Adjustable attachment eye allows angled installation/removal
- Interlocking feature, male and female end
- 2 units wrap together saving storage space
- Guards will not warp or distort
- Manufactured to ASTM F968, tested to ASTM F712
- High visibility bright orange polyethylene
- Insulator and cut out covers also available

Part No.	Cover Type	Applied by	Length (mm)	ASTM Class/ kV	Max Conductor OD (mm)	Wt (kg)
P406-0184	Conductor Cover	G & B	1525 long	3/25	25	1.4
C406-0181GA	Conductor Cover	Shotgun	1525 long	3/25		1.8
C406-0164	Disc Insulators Cover	Shotgun	864 long x 279 wide (2 x 10")	3/25	-	2.3
C406-0504	Cross arm cover	Shotgun	500 long	3/25	-	1.0
C406-0029	Pole Cover	N/A	300 dia. x 600 long	4/36.6	-	2.5
C406-0030	Pole Cover	N/A	300 dia. x 1200 long	4/36.6	-	5.0
C406-0000	Pole Cover	N/A	300 x 1800 long	4/36.6	-	11.2
M4931	Conductor Cover	Shotgun	Shotgun 1525 long	4/36.6	44	4.2
C406-0514GA	Conductor Cover	Shotgun	Shotgun 1525 long	4/36.6	25	2.4
M4933	Cross-arm Cover Shotgun	Shotgun	Shotgun 500 long	4/36.6	-	1.5



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**Blankets, HV Insulating - Salisbury**

- High visibility orange colour
- Manufactured in accordance to ASTM D1048
- Type II SALCOR™ rubber blankets are ozone resistant

Part No.	Dimensions (mm)	Style	Working Voltage (kV)	ASTM Class	Eyelets	Wt (kg)
13	560 x 560	Solid	36	4	28	1.4
900E	900 x 900	Solid	36	4	6	3.6
1300		Slotted	36	4	5	3.2
1302		Slotted w/63mm hole	36	4	28	3.2
1304		Slotted w/114mm hole	36	4	28	3.2

**SIMPLE STRAP™**

**Simple Strap**

**Part No. SP-LD-YLW**

Fastest & easiest way to secure rubber blankets & covers on LV & HV conductors, poles, insulators & switches.

- Dielectrically tested
- UV Stable
- Recyclable & reusable
- Simple Strap is supplied in 30m lengths and easily cut to the size required



**Line Covers - LV & HV Tiger Tail**

**Part No. DB Series**

- Guards or barriers on LV energised lines
- Visual warning markers on power lines
- High visibility
- Tested and stamped to AS4202 - Class 1, ASTM F712 and F968
- Smooth, easy to clean surface
- Made from HDPE, UV stabilised and highly resistant to chemicals
- Snap together, male and female end fitting with elongated hole for securing cable tie



Part No.	Colour	Length (m)	Working Voltage	Rating Ø - Ø (kV) Brush Contact Only	ID (mm)	Wt (kg)
DB-35A	Yellow/Black	2.5	650V	14.6	35	1.3
DB-35ARB-1250	Red/Black	1.25	650V	14.6	35	0.8
DB-35ARB-2500	Red/Black	2.5	650V	14.6	35	1.3
DB35ARB125HV	Red/Black	1.25	14.6 kV	Class 2	35	0.8

**Wide range of Wildlife Mitigation Covers Available - Refer Line Materials Section**

**GREENJACKET®**

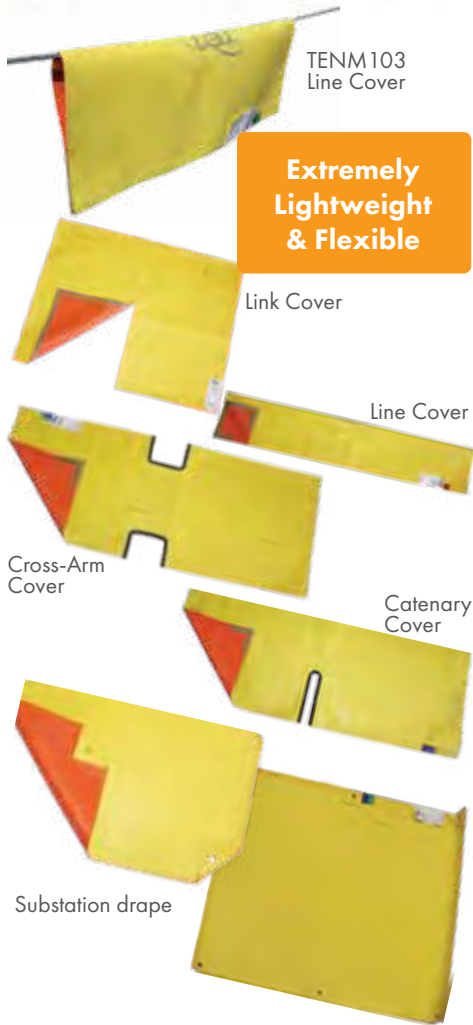


**RELIAGUARD®**



**Honeywell**  
**SALISBURY**





## Rubber Insulating Blankets & Accessories

### LV Insulating Blankets

- Rubber insulating material
- Highly visible yellow and orange
- 2 colours assist in visual damage identification
- Flame resistant, self extinguishing
- Type II - Oil, ozone & UV resistant
- Fabric reinforced, puncture & tear resistant
- Manufactured to ASTM F2320
- Substation drapes have reinforced eyelets
- Line, Link, Cross arm & catenary covers have industrial velcro fastenings
- Working voltage 7.5kV/Class 1



Part No.	Description	Dimensions (mm)
TENM101	Line Cover	1200 x 225 Drop (Velcro)
TENM103	Line Cover	600 x 225 Drop (Velcro)
TENM104	Link Cover	700 x 900 (400 Split)
TENM111	Link Cover	850 x 900 (430 Split)
TENM112	Link Cover	910 x 900 (6 x Eyelets)
TENM102	Cross Arm Cover	1200 x 450 (125W x 100D Cut Out)
TENM105	Substation Drape	900 x 600 (4 x Eyelets)
TENM106	Substation Drape	225 x 315 (4 x Eyelets)
TENM107	Substation Drape	315 x 450 (4 x Eyelets)
TENM108	Substation Drape	450 x 600 (4 x Eyelets)
TENM110	Substation Drape	900 x 1800 (4 x Eyelets)
TENM109	Catenary Cover	1200 x 225 - (30W x 200D Cut Out)

### LV Blankets Cannister/Bag - Zipped PVC

#### Part No. TENM433

- PVC canister red, with internal PVC tubing & web carry handle
- Made from heavy duty PVC (flame retardant, mildew & UV resistant)
- Zipped lid with wide opening

Perfect for storing blankets

Part No.	Dimensions (mm)	Wt (kg)
TENM433	760 (L) x 100 (W)	0.8

### Pole Strap Kit

Designed to firmly hold rubber insulating blankets and cover up equipment on live components and hardware

- 12 Straps with handy riggers pouch and belt clip
- All webbing straps have adjustable heavy-duty quick release buckles
- A MUST for glove and barrier operations
- Easily adjusted for different sized equipment
- Ideal for covering poles, EDOs, disc insulators and more

#### Kit Details

Kit Part No.	QTY	Strap Details		Pouch
		Length (m)	Webbing (mm)	
TENM714	6	1.5	50	Red, Ripstop Canvas
	6	1.2	25	







## Ground Mats - Rubber

### Class 0, 2 & 4 - AS/NZS IEC61111: 2020

Rubber Ground Mats are suitable for indoor & outdoor use and are placed in front of switchboards, switch gear & high voltage equipment in order to create a safe working environment for the operator.

The mat insulates the worker from the ground to avoid electrical shock due to direct contact with potentially live electrical parts or step voltage. The class of mat is determined by the maximum nominal voltage of the network and coloured coded accordingly.

#### Features

- Electrical mat is hard wearing, non-slip
- Anti-fatigue nature
- Manufactured in 10m rolls to avoid joins
- Material Conforms to AS/NZS IEC 61111 requirements
- Every 300mm is marked with class working voltage & AS/NZ standard
- Electrically tested each meter

### CLASS 0

Working Voltage : 1,000V  
 Proof Voltage : 5,000V  
 Withstand Voltage : 10,000V

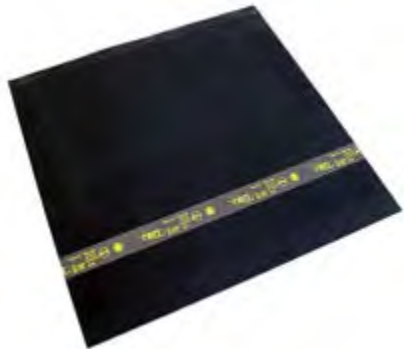
### CLASS 2

Working Voltage : 17,000V  
 Proof Voltage : 20,000V  
 Withstand Voltage : 30,000V

### CLASS 4

Working Voltage : 36,000V  
 Proof Voltage : 40,000V  
 Withstand Voltage : 50,000V

Cut lengths and special sizes available. Please contact TEN for further information.



**CLASS 4**  
 600mm x 600mm  
 12.7mm thick

Part No.	Working Voltage kV (AC/DC)	Material Standard	ASTM Class	Dimensions (m)	Thickness (mm)	Weight (kg)
MAT0-0.6M-ASNZ	1/1.5	AS/NZS IEC61111 :2020	0	0.6 x 0.6	2.2	2.0
MAT0-1MX1M-ASNZ	1/1.5		0	1 x 1	2.2	3.3
MAT0-1MX10M-ASNZ	1/1.5		0	1 x 10	2.2	33
MAT2-1MX1M-ASNZ	17/25.5		2	1 x 1	2.6	3.9
MAT2-1MX10M-ASNZ	17/25.5		2	1 x 10	2.6	39
MAT4-1MX1M-ASNZ	36/54		4	1 x 1	5.2	7.9
MAT4-1MX10M-ASNZ	36/54		4	1 x 10	5.2	79

### Ground Mat - Class 4

Electrical rubber insulating matting utilises material as per the ASTM-D178 standard. The non-conductive rubber mats help protect workers from electrical shocks.

- Leakage, moisture and water proof
- Material Composition: Combination of natural rubber and synthetic polymers.
- Anti-skid Design: Anti-skid textured surface.

Part No.	Working Voltage kV (AC/DC)	Material Standard	ASTM Class	Dimensions (m)	Thickness (mm)	Weight (kg)
MAT4-60X60-D178	36/54	ASTM -D178	4	0.6 x 0.6	12.7	12.0

### Mat and Blanket Roll

- Heavy Duty PVC Roll - Yellow
- Webbing carry handle
- Use for storage of mat or a ground sheet



Perfect for storing mats

Part No.	Dimensions (mm)	Wt (kg)
TENM738	1150 (L) x 1030 (W)	0.8

### 40 Cal, CAT 4 Arc Flash Clothing - NSA

**NSA 40 Cal Arc Flash ArcGuard® Performance  
THE COMFORT REVOLUTION**

**20% UP TO LIGHTER**  
LIGHTEST WEIGHT 40 CAL ARC FLASH PROTECTION at 9.5oz

**48% THINNER**  
GORE® PYRAD® TECHNOLOGY PROVIDES 40 CAL PROTECTION IN A SINGLE LAYER

**56% MORE FLEXIBLE**  
ERGONOMICALLY DESIGNED FOR COMFORT & FREEDOM OF MOVEMENT



Lift Front Hood  
ARC40H



### 40 Cal Arc Flash Hoods

ENESPRO ARCGUARD 40 CAL ARC FLASH LIFT FRONT HOOD



Lift Front Hood with Fans  
ARC40H1



- GORE® PYRAD® technology ArcGuard® Performance 40 cal protection in a single layer
- Ergonomic design for ease of movement and flexibility
- PureView™ face-shield technology features a greater range of visibility
- Vented clear chin expands downwards increasing face shield view
- Lift front shield makes it easy to obtain fresh air while out of the hazard zone
- Indirect air vents for improved ventilation

Part No.	Garment	ARC Rating	Material
ARC40H	Lift front Hood	40 CAL / CAT 4	9.5oz GORE® PYRAD®
ARC40H1	Hood w/fans		
BCFSHIELD	Bag for Hood & Faceshield		Cotton Flannel

NOTE: Fans can be added to new style hoods

### 40 Cal - CAT 4 Arc Flash Kits

GORE® PYRAD® technology delivers 40 cal protection in a single layer. Ergonomic design for ease of movement and flexibility

#### Kit Contents

- Arc Flash ArcGuard™ Lift Front Hood with Pure View™ Face-shield, Hard Hat & Hood Protective Bag
- Arc Flash ArcGuard™ Coat
- Arc Flash ArcGuard™ Bib Overalls
- Back Pack Bag
- Safety Glasses

Part No.	Lift front Hood Style	Rating Cal/cm²	Material
ARC40KITNG-SIZE	Standard	40	Blue GORE® PYRAD®
ARC40KITFANNG-SIZE	With Fans		
ARC40KITNGO-SIZE	Standard	40	Orange GORE® PYRAD®
ARC40KITFANO-SIZE	With Fans		

SIZE - SM = Small, MD = Medium, LG = Large, XL = X Large, 2XL = 2xLarge, 3XL = 3xLarge





**660mm leg zipper  
for ease of  
donning & doffing**

### 40 Cal, CAT 4 Arc Flash Garments

#### 40 Cal, CAT 4 Arc Flash ArcGuard® Performance Jacket

Part No.	Size	Torso ** cm (in")	Sleeve Length mm (in")
ARC40J-SMR	SMALL	86.4 - 94.0 (34 - 37)	87.6 (34.5)
ARC40J-MDR	MEDIUM	96.5 - 104.1 (38 - 41)	90.2 (35.5)
ARC40J-LGR	LARGE	106.7 - 114.3 (42 - 45)	92.7 (36.5)
ARC40J-XLR	EXTRA LARGE	116.8 - 224.5 (46 - 49)	95.25 (37.5)
ARC40J-2XLR	2 EXTRA LARGE	127.0 - 134.6 (50 - 53)	97.8 (38.5)
ARC40J-3XLR	3 EXTRA LARGE	137.2 - 144.8 (54 - 57)	100.3 (39.5)

#### 40 Cal, CAT 4 Arc Flash ArcGuard® Performance Bib

Part No.	Size	Waist ** cm (in")	Inseam mm (in")
ARC40B-SMR	SMALL	86.4 - 94.0 (34 - 37)	81.3 (32)
ARC40B-MDR	MEDIUM	96.5 - 104.1 (38 - 41)	81.3 (32)
ARC40B-LGR	LARGE	106.7 - 114.3 (42 - 45)	81.3 (32)
ARC40B-XLR	EXTRA LARGE	116.8 - 224.5 (46 - 49)	81.3 (32)
ARC40B-2XLR	2 EXTRA LARGE	127.0 - 134.6 (50 - 53)	81.3 (32)
ARC40B-3XLR	3 EXTRA LARGE	137.2 - 144.8 (54 - 57)	81.3 (32)

### 40 Cal, CAT 4 Arc Flash Lab Coat Kits

Gore® PYRAD® technology delivers 40 cal protection in a single layer. Ergonomic design for ease of movement and flexibility

#### Kit Contents

- Arc Flash ArcGuard™ Lift Front Hood with Pure View™ Face-shield with Harad Hat & Hood Protective Bag
- Arc Flash ArcGuard™ Leggings
- Back Pack Bag
- Safety Glasses
- Arc Flash ArcGuard™ Lab Coat



Part No.	Lift front Hood Style	Rating Cal/cm <sup>2</sup>	Material
ARC40KIT-TCNG-SIZE*	Standard	40	Blue GORE® PYRAD®

\*SIZE - LG - Large, XL - Extra Large, 2X - 2 Extra Large (All sizes available on request)

### 40 Cal, CAT 4 Arc Flash ArcGuard® Lab Coat

Part No.	Size	Waist ** cm (in")	Length cm (in")
ARC40J1-L50	LARGE	88.9 - 99.0 (35 - 39)	127 (50)
ARC40J1-XL50	X-LARGE	99.0 - 109.2 (39 - 43)	127 (50)
ARC40J1-2X50	2X-LARGE	109.2 - 116.8 (43 - 46)	127 (50)

All sizes available on request. Contact TEN for further details.

### 40 Cal, CAT 4 Arc Flash ArcGuard® Leggings

Part No.	Size	Calf Size cm (in")	Length cm (in")
ARC40L-L	LARGE	40.6-45.7 (16-18)	45.7 (18)
ARC40L-XL	X-LARGE	45.7-50.8 (18-20)	45.7 (18)
ARC40L-2X	2X-LARGE	50.8-55.9 (20-22)	45.7 (18)

All sizes available on request. Contact TEN for further details.



\*\* Measure the widest part of the Torso, whether that is Chest or Waist

Contact TEN for a full measurement Guide or CLICK or SCAN the QR-CODE for the PDF

If your measurement fall between sizes, it is recommended you select the next size up

If your sizing falls outside the above charts, please submit your measurements, as garments can be specially made

**Please Note:** This is a guide only, where possible physically try the garments on for size







### 12 Cal, CAT 2 Arc Flash Clothing - NSA

#### 12 Cal, CAT 2 Arc Flash Enespro ArcGuard® Coat

- CAT 2
- Fabric: 9oz. Westex® UltraSoft®
- FR hook & loop closure
- Stand up collar for extra coverage
- FR cuffs improve fit with electrical gloves

Part No.	Size	Chest ** cm (in")	Sleeve Length cm (in")
C04UP03-M-32	MEDIUM	101.6 - 111.7 (40 - 44)	90.2 (37)
C04UP03-L-32	LARGE	109.2 - 119.3 (43 - 47)	92.7 (38)
C04UP03-XL-32	EXTRA LARGE	116.8 - 127.0 (46 - 50)	95.25 (39)
C04UP03-2X-32	2 EXTRA LARGE	124.4 - 134.6 (49 - 53)	97.8 (40)

All sizes available on request. Contact TEN for further details.



#### 12 Cal, CAT 2 Arc Flash ArcGuard® Bib Overalls

- Fabric: 9oz. Westex® UltraSoft®
- Quick disconnect and adjustable shoulder straps on bib overalls
- Convenient side pass-through pockets for access to pants pockets
- FR hook & loop calf closure to allow easy donning

Part No.	Size	Chest ** cm (in")	Waist ** cm (in")
C45UP-M-32	MEDIUM	86.3 - 93.9 (34 - 37)	91.4 - 96.5 (36 - 38)
C45UP-L-32	LARGE	93.9 - 101.6 (37 - 40)	99.0 - 104.1 (39 - 41)
C45UP-XL-32	EXTRA LARGE	101.6 - 111.7 (40 - 44)	106.7 - 114.3 (42 - 45)
C45UP-2X-32	2 EXTRA LARGE	111.7 - 121.9 (44 - 48)	116.8 - 124.4 (46 - 49)

All sizes available on request. Contact TEN for further details.



#### 12 Cal, CAT 2 - Arc Flash ArcGuard® Coveralls

- Fabric: 9oz. Westex® UltraSoft®
- Dual Hazard protection against arc flash and flash fire
- Covered two-way zipper front closure for easy entry
- Action back allows for full range of motion
- Elastic waistband on the back to improve mobility, fit & flexibility
- Six pocket design with side pass through
- Leg openings made to fit over work boots
- All metal covered to ensure no contact with skin

Part No.	Size	Chest ** cm (in")	Waist ** cm (in")
C88UP-M-32	MEDIUM	86.3 - 96.5 (34 - 38)	81.2 - 86.3 (32 - 34)
C88UP-L-32	LARGE	96.5 - 106.7 (38 - 42)	86.3 - 96.5 (34 - 38)
C88UP-XL-32	EXTRA LARGE	106.7 - 116.8 (42 - 46)	96.5 - 106.7 (38 - 42)
C88UP-2X-32	2 EXTRA LARGE	116.8 - 227.0 (46 - 50)	106.7 - 116.8 (42 - 46)

All sizes available on request. Contact TEN for further details.



#### 12 Cal, CAT 2 - Arc Flash ArcGuard® Coverall Kit

9 oz Westex® Ultrasoft Single Layer 12 Cal Arc Flash Kit

##### Kit Contents

- Hover series Face-shield & Protective Bag
- Hard Hat
- Arc Flash ArcGuard™ Coveralls
- Balaclava
- Safety Glasses
- Carry Bag

Part No.	Head Protection	Rating Cal/cm <sup>2</sup>	Material
KIT2CV11NGB"SIZE"	Hover style Face shield	12	9oz Westex

\*SIZE - SM - Small, MD - Medium, LG - Large, XL - Extra Large, 2X - 2 Extra Large

(All sizes available on request)



EN123H-SHIELD

## Arc Flash Head protection - NSA

### 12 Cal, CAT 2 Face Shroud, Lift Front

- Fabric: 7.5oz Tecgen CC™
- Lined with FR Control 2.0™ antimicrobial fabric
- Anti-fog and abrasion resistant coating
- Auditory vents for improved sound & communication
- Toric lens to reduce glare
- FR silver & yellow reflective tape
- Hard hat included
- Meets current ASTM F1506 and NFPA 70E standards
- Balaclava not required

Part No.	Description
EN123NTNB01AL	Face Shield CAT 2 - 12cal OptiShield™ Grey
EN123H-SHIELD	Replacement shield for above
BCFSHIELD	Bag for Hood & Faceshield, Cotton Flannel

### 12 & 20 Cal, CAT 2 Face Shield, Hover Series

- Compliance: NFPA-70E ASTM-F2178
- Material: Lightweight Polycarbonate
- Premium Hover series bracket for weight compensation over hard hat (Included)
- Low profile chin cup
- Highly transparent arc flash face shield for greater visibility
- Anti-fog and scratch resistant coating
- Adjustable settings allow the face shield to be secured in various positions

Part No.	Description	Replacement face Shield
H12H THAT	12 cal/cm <sup>2</sup> Hover series Face Shield	H12HT
H20H THAT	20 cal/cm <sup>2</sup> Hover series Face Shield	H20HT

### 16 Cal, CAT 2 & 25 Cal CAT 3 Ultrasoft Balaclava

- Single layer top & bib
- Large face opening
- Durable & heavyweight fabric
- Designed for comfort with flat lock seam when worn under hard hat
- FR fabric will not melt, drip or ignite

Part No.	ATPV Rating	Material
H11RY	16 cal/cm <sup>2</sup> Protection CAT 2	6.5 oz. Westex® UltraSoft® Rib
H25RV	25 cal/cm <sup>2</sup> Protection CAT 3	10.5 oz. Westex® UltraSoft® Rib

### 16 cal, CAT 2 Arc Goggles

- Material: Polycarbonate
- Anti-fog/scratch resistant coating
- PureView Lens
- Silicone frame & strap Nose shield
- Adjustable pivots allow the goggles to be secured

Part No.	Description	Weight (g)
H12GGL	Enespro Arc Goggle 16 cal	140
9700410	Goggle case	200

## Arc Flash Accessories - NSA

### Flashlight Kit fo Lift Front Hoods

- Intrinsically safe light, Class 1 Div 1
- 2 x AAA batteries (included)
- Light stays in place when shield is lifted
- Clips on right or left side

Part No.	Description	Weight (g)
HLITEKIT	60 Lumen Flashlight Kit for Lift Front Hoods	140

### BackPack - Enespro

- Top handle & padded shoulder straps
- Large top zipper opening
- Two side stretch mesh pockets
- Approx. 405 x 305 x 508mm

Part No.	Description	Weight (kg)
AG-BACKPACK	Enespro Basic Backpack	1.0



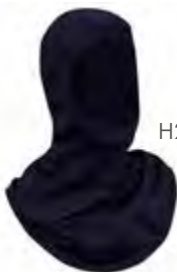
Use with the below Balaclavas



H12HT &amp; H20HT Replacement Shields



H11RY



H25RV





### Arc Flash Clothing 40 Cal - Honeywell

Breakthrough comfort in Salisbury's lightest & most breathable 40cal/cm<sup>2</sup> premium garments

#### A DIFFERENCE YOU REALLY CAN FEEL

##### 40cal/cm<sup>2</sup> Premium range

- Incorporates new GlenRaven GlenGuard outer-shell
- Welspun Spunlace 18, Utextbel K90 Utextbel inner layer
- 11 oz/yd<sup>2</sup>
- 500% and 300% improved breath-ability compared to existing Standard and PLT versions

##### 75-100cal/cm<sup>2</sup> Premium range

- Incorporates new GlenRaven GlenGuard outershell along with Norfab /KTW
- Welspun Spunlace 18, Utextbel K90 Utextbel inner layer
- 75cal 40% lighter and 475 % more breathable
- 100 CAL 16% lighter and 90 % more breathable

No need for Balaclavas



### 40 cal, CAT 4 Prismshield Plus - Lift Front Hood

- PrismShield™ face-shield, transparent chin guard and standard hood deliver visibility, comfort, ventilation and breath-ability
- Double curved lens limits visual distortion and greatly reduces eye strain
- Venting allows usage for longer periods
- Frameless design increases viewing area by over 20%
- Ventilated bracket design allows carbon dioxide and heat to escape as it rises from the body
- Integrated cooling system available for PRO-HOOD
- Hard hat is included
- Light and light adaptor available

Part No.	Rating cal/cm <sup>2</sup>	Standards
LFH40PRG-PP	40 ATPV ratings	Meet current ASTM F2178, ANSI Z87.1 and NFPA 70E standards - E0120 certified

### 40 Cal, CAT 4 Prismshield Plus - Pro-Hood

- Premium Pro-Hood Premium increases comfort by reducing neck strain
- PrismShield™ face-shield
- Lightweight, soft fabric and optimal fit
- Venting allows usage for longer periods
- Exclusive weight balancing frame
- Hard hat fitting hood shape (Hard hat not included)
- Sewn with Nomex® thread
- Integrated cooling system available

Part No.	Rating cal/cm <sup>2</sup>	Standards
FH40PRG-PP	40 ATPV ratings	Meet current ASTM F2178, ANSI Z87.1 and NFPA 70E standards - CE0120 certified

### 40 Cal, CAT 4 Premium Kits - PRO WEAR™ PLUS

Kit Contains

- Arc Flash Coat
- Arc Flash Bib Overalls
- Arc Flash Pro-Hood or Lift Front Hood
- Supplied with PRISM Shield Lens
- Hard Hat
- Bag
- Safety Glasses
- Sizes S - 3XL
- Meets NFPA 70E

Part No.	Rating Cal/cm <sup>2</sup>	Description
SK40PRG *	40	Premium Lightweight Kit with Pro-Hood
SK40PRG *-LF	40	Premium Lightweight Kit with Lift Front hood

S=Small - M=Medium - L=Large - XL=XLarge - 2XL=2x Large - 3XL=3x Large



SK40PRG



### 40 Cal, CAT 4 Lift Front & Pro-Hood Accessories

Full range of Lift Hood accessories available. Contact TEN for further information



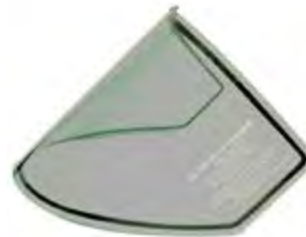
LFH40FSA-PP



SHRD-40PRG-PP



N10R030000



4000-PP



AS12CLIP

Part No.	Accessories for LIFT FRONT HOOD - LFH40PRG-PP
LFH40FSA-PP	Replacement lens for Lift front hood - LFH40PRG-PP
SHRD-40PRG-PP	Replacement Red shroud for Lift front hood - LFH40PRG-PP
N10R030000	Replacement clip Hard Hat for Lift front hood - LFH40PRG-PP
Part No.	Accessories for PRO-HOOD - FH40PRG-PP
4000-PP	Replacement lens for Lift front hood - FH40PRG-PP
AS12CLIP	Replacement Clips (2) for N10 Hard Hat attachments - For all face shields

See page E22 for Task Light Kit and other Accessories

### 40 Cal, CAT 4 Bib Overalls - Premium Lightweight

- SALISBURY Pro-Wear™ Plus Bib-overall
- 40cal/cm<sup>2</sup> ATPV Rating
- Sewn with Nomex® thread
- Integrated heavy duty suspenders
- Extended waist tabs for easy opening
- Relaxed cut for greater mobility
- Reinforced articulated knees for enhanced movement
- 355mm leg slits allow dressing wearing boots
- Elongated gussets for easier more natural movement 762mm inseam



Part No.	Size	Rating cal/cm <sup>2</sup>	Standards
ACB40PRG*	S, M, L, XL, 2XL, 3XL	40* ATPV ratings	Meets current ASTM F1506 & NFPA 70E standards. CE0120 certified.

### 40 Cal, CAT 4 Coat - Premium Lightweight

- SALISBURY Pro-Wear™ Plus Coat
- 40cal/cm<sup>2</sup> ATPV Rating
- Sewn with Nomex® thread
- Nomex® wristlets
- FR hook and loop front closure
- Articulated sleeve for enhanced comfort
- Shortened collar for comfortable neck movement
- Coats are intended to be used with PRO-HOODS



Part No.	Size	Rating cal/cm <sup>2</sup>	Standards
ACC40PRG*	S, M, L, XL, 2XL, 3XL	40* ATPV ratings	Meets current ASTM F1506 & NFPA 70E standards. CE0120 certified.

S=Small - M=Medium - L=Large - XL=XLarge - 2XL=2x Large - 3XL=3x Large

**\*\* Measure the widest part of the Torso, whether that is Chest or Waist**

**Contact TEN for a full measurement Guide**

**If your measurement fall between sizes, it is recommended you select the next size up**

**If your sizing falls outside the above charts, please submit your measurements, as garments can be specially made**

**Please Note: This is a guide only, where possible physically try the garments on for size**

**Honeywell**  
**SALISBURY**



LFH20FSA-PP



SHRD-20PRG-PP



N10R030000



AS12CLIP

**Arc Flash Lift Front Accessories 20 Cal - Honeywell**  
**20 Cal, CAT 2 - Lift Front & Pro-Hood Accessories**

Full range of Lift Hood accessories available. Contact TEN for further information.

Part No.	Accessories for LIFT FRONT HOOD - LFH20PRG-PP
LFH20FSA-PP	Replacement lens for Lift front hood - LFH20PRG-PP
SHRD-20PRG-PP	Replacement Red shroud for Lift front hood - LFH20PRG-PP
AS12CLIP	Replacement Clips (2) for N10 Hard Hat attachments - For all face shields

See page E22 for Task Light Kit and other Accessories

**Arc Flash Clothing 12 Cal - Honeywell**  
**12 Cal, CAT 2 Pro-Wear Plus Kits**

Choose your kit with either BIB-OVERALLS or COVERALLS (See below Table)

**Kit Contains**

- Bib Overalls or Coveralls (see below)
- Face Shield
- Balaclava
- Safety Glasses
- Sizes S - 3XL
- Large Storage Bag



Part No.	Contents	Rating cal/cm <sup>2</sup>	Standards
SK12RG_*-LF-WB-PP	Bib Overalls & above	12 ATPV ratings	ASTM F1506 and NFPA 70E
SKCA12RG_*-LF-WB-PP	Coveralls & Above	12 ATPV ratings	ASTM F1506 and NFPA 70E

\* S=Small - M=Medium - L=Large - XL=XLarge - 2X=2x Large - 3X=3x Large



**12 Cal, CATR 2 - Bib Overalls - Pro-Wear Plus**

- 12 cal/cm<sup>2</sup> ATPV rating
- Integrated heavy duty suspenders
- Relaxed cut for greater mobility
- Adjustable hook and pile waist straps
- Bib front for added protection
- Adjustable gussets on pant cuffs

Part No.	Size	Rating cal/cm <sup>2</sup>	Standards
ACB12RG-*	S, M, L, XL, 2X, 3X	12* ATPV ratings	ASTM F1506 and NFPA 70E

**Honeywell**  
SALISBURY



**12 Cal, CAT 2 - Coat - Pro-Wear Plus**

- 12 cal/cm<sup>2</sup> ATPV rating
- Sewn with Nomex® thread
- Nomex® wristlets
- Expansion back for added comfort
- FR hook & pile storm flap
- Coats are intended to be used with PRO-HOODS

Part No.	Size	Rating cal/cm <sup>2</sup>	Standards
ACCI2RG-*	S, M, L, XL, 2X, 3X	12* ATPV ratings	ASTM F1506 and NFPA 70E



**12 Cal, CAT 2 - Over Pants - Pro-Wear Plus**

- 12 cal/cm<sup>2</sup> ATPV rating
- Sewn with Nomex thread
- Full elastic waistband with FR hook and pile front closure
- 76.2cm inseam
- Hook and pile cuff adjustment

Part No.	Size	Rating cal/cm <sup>2</sup>	Standards
ACPI2RG-*	S, M, L, XL, 2X, 3X	12* ATPV ratings	ASTM F1506 and NFPA 70E



**12 Cal, CAT 2 - Coveralls - Pro-Wear Plus**

- 12 Cal/cm<sup>2</sup> ATPV rating
- Sewn with Nomex® thread
- Full cut with set in sleeves
- FR hook and pile front closure
- Expansion back

Part No.	Size	Rating Cal/cm <sup>2</sup>	Standards
ACCA12RG-*	S, M, L, XL, 2X, 3X	12* ATPV ratings	ASTM F1506 and NFPA 70E

S=Small - M=Medium - L=Large - XL=XLarge - 2X=2x Large - 3X=3x Large

**Arc Flash Gloves - Honeywell**

**12, 20 & 40 Cal PRO WEAR™ Gloves**

- Available in 12 to 100cal/cm<sup>2</sup> ATPV rating
- All gloves are made with arc rated material
- All Arc Flash Gloves are 355mm long
- Sewn with Nomex® thread
- One size fits most

Other ARC Flash Glove styles and sizes available, see below & page E6 & E7



Part No.	Rating Cal/cm <sup>2</sup>	Colour & Material
AFG11	12	Navy Blue Indura Ultra Soft
AFG20	20	Navy Blue Indura Ultra Soft
AFG40	40	Grey Indura Ultra Soft



### Honeywell SALISBURY



AS1200HAT-PP shown with AFHOOD10 (Sold Separately)

## Arc Flash Face Shields & Balaclavas - Honeywell

### 12 & 20 Cal Face Shield & Helmet Protection

- Better visibility and color recognition
- Double curved lens - 190 x 508mm viewing area
- Reduced eye strain
- Increased viewing by over 20%
- Improved transparency - Extra light tint
- 3 times more scratch resistant
- Air vents below the chin
- 1.5mm thick lens
- Hard Hat Included

Part No.	Standards
AS1200HAT-PP	ATPV rating of 12 cal/cm <sup>2</sup> - NFPA 70E PPE CAT: 3
AS2000HAT-PP	ATPV rating of 20 cal/cm <sup>2</sup> - NFPA 70E PPE CAT: 3

For replacement parts see page E20

### 12 & 20 Cal Protective Balaclavas

Salisbury's Arc Flash Rated Hoods (Balaclava) create 360° head and neck protection from arc flash dangers when used with a AS1000 Series Face Shield/Hard Hat/Chin Cup Unit.

**CAUTION** - Arc Flash Hoods (Balaclava) must be worn in combination with a face shield in order to comply with the requirements of NFPA 70E and will protect 360° inside the arc flash boundary.

Part No.	ATPV Rating
AFHOOD10	10 cal/cm <sup>2</sup> Protection
AFHOOD20	20 cal/cm <sup>2</sup> Protection

## Arc Flash Accessories 12-20 Cal - Honeywell

### Face Shield Accessories

Part No.	Description
AS1200-PP	Replacement Faceshield fits AS1200HAT-PP
AS2000-PP	Replacement Faceshield for AS2000HAT-PP
AS12CLIP	Replacement Clips (2) for Hard Hat attachments - For all face shields

AS1200-PP



AS12CLIP

## Task Light Kit - Salisbury

### Part No. FLKIT

- Task light kit attaches to Salisbury Arc Flash Hoods or Helmets.
- Suits AS1200HAT & AS2000HAT page E19 & FH40 & LFH40 page E16

### Kit includes

Part No.	ATPV Rating
ASFL	Attachable Task light (1)
FLCLIP	Attachable Task light clip (1)



**Honeywell**  
SALISBURY

**Face Shield & Safety Glasses - Honeywell**

**Face Shield (not Arc Rates)**

- Extended head and chin protection.
- Comfortable fit with eye-wear or goggles.
- Dielectric design.
- Fully adjustable ratchet headgear.
- Fully adjustable headband.
- Multiple visor tilt positions.

Part No.	Description
1011623	Face shield, Clear, ABS Frame, Polycarbonate AS/NZS 1337.12010

**Safety Glasses**

- Economical and stylish eye protection
- Available in Clear and Grey Anti-fog coating

Part No.	Lense	Material	Wt (g)
1015351AN	Grey with Anti Fog	Polycarbonate	21.6
1015360AN	Clear with Anti Fog	Polycarbonate	21.6

**Storage - Honeywell**

**Cotton Storage Bag for Arc Flash helmets**

Part No.	Description
ASBAG	Cotton canvas storage bag w/ drawstring closure & fleece interior

**Kit Storage Bag**

**Part No. SKBAG**

- Large storage bag for storing Salisbury PRO-WEAR® Plus Arc Flash Clothing, gloves and other accessories
- 610mmL x 380mmH x 305mmD
- High visibility orange

**Kit Storage Back Pack**

**Part No. SKBACKPACK**

- Large storage backpack for storing Salisbury PRO-WEAR® Plus Arc Flash Clothing, gloves and other accessories
- Accessory pockets inside and out
- 460mmH x 360mmW x 200mmD
- High visibility orange

**Gloves, Outer - Arc Rated 48 Cal, CAT 4**

**Gloves, Leather - Arc Rated 48 Cal - Youngstown**

- Cut Resistant: Level A3 (ANSI/ISEA)
- Arc Rating: 48 Cal/cm<sup>2</sup>
- Puncture Resistant: Level 5 (ANSI/ISEA)
- FR Strap: Woven Webbing with DuPont™ Kevlar®
- FR Fastener: Heat Stabilized Heavy Duty Hardware
- Premium Cow grain
- Cuff Leather is cow suede

Other styles gloves and arc ratings available, see page E6 & E7

Part No.	Material	Length (mm)	Sizes Available
YT16-5200-12-*	Leather	305 (12")	*7, 8-8.5, 9-9.5, 10-10.5, 11 & 12

\*Add size suffix when ordering (e.g. YT16-5200-12-9-9.5)

**CAUTION:** Arc Flash Gloves do not provide electrical protection. Must only use when insulating rubber gloves are required. \*Important: NFPA 70E does not have a Hazard Risk Category above 40 cal/cm<sup>2</sup>. Working on levels above 40 cal/cm<sup>2</sup> should be avoided due to the blast hazards caused by arc flash.



**48 CAL**  
**ARC Rated**

ELECTROSTATICS



**Conductive Clothing - Arc rated 11 Cal**

Protection against electromagnetic fields, induced voltage, electric arc.

Intended for use during live work (bare hand work) on AC or DC networks or when working on discharged powerlines where induction may occur.

**Upper layer** provides protection against thermal hazards of an electric arc and ignition caused by spark discharge.

**Highly conductive** band has an electric resistance not more than 1 Ohm and can shunt currents up to 35A without any damage.

**Conductive double-sided** fabric is a unique material which combines two inseparable surfaces: conductive (steel-silver) and insulating (meta aramid-FR viscose). Such a combination ensures maximum protective features and optimum level of comfort during work.

**Clothing Kits - Conductive Arc rated - Electrostatic**

Part No. Various Kits

- Two removable equipotential bonding leads with or without clamps
- ATPV level - 11 cal/cm<sup>2</sup>

Part No.	Clothing Type	Size	Description
ELS-CS-JT-M	Kit	Medium	Conductive Jacket with hood and face mesh, Trousers with bib, Gloves and Socks
ELS-CS-JT-L		Large	
ELS-CS-JT-XL		X-Large	
ELS-CS-JT-XXL		XX-Large	
ELS-CS-JT-XXXL		XXX-Large	



**Radio Frequency (RF) Radiation Protection Clothing**

Part No. Various



**Clothing Kits - Radio Frequency - Euclid**

- Kits available up to 2GHz
- Minimal restrictions for tower climbing
- Pockets designed around fall arrest harness
- Zipper and Velcro closures at ankles and cuffs
- Hood fits over hard hat and has stainless steel screen
- Kit includes laminated field instruction and warning card

Part No.	Size	Chest Measurements (mm)	Kit Description	Wt (kg)
KW-GARD/KIT-M	Medium	Up to 1070	Industrial Coverall and Hood. Elbow Length Gloves and Knee High Socks. In Carry Bag.	2.3
KW-GARD/SET-L	Large	1070 to 1170		
KW-GARD/SET-XL	X-Large	1170 to 1270		
KW-GARD/SET-XXL	XX-Large	1270 to 1370		



## Conductive Boots, Socks and Gloves

### Gloves and Socks - Conductive Arc rated - Electrostatic

**Part No. Various**

- Conductive shielding gloves & socks
- Supplied without clamps
- Electric resistance not more than 30 Ohms
- ATPV level - 10 cal/cm<sup>2</sup>

Part No.	Sizes	Description
ELS-CG-10/12	10 & 12	Arc Rated Conductive Gloves
ELS-CS-41-42/43-44 /45-46	(European) 41-42, 43-44 & 45-46	Arc Rated Conductive Socks
ELS-BL-NC	Replacement bond lead	

### Gloves and Socks - Conductive Arc rated - Euclid

**Part No. Various**

Nomex® and stainless steel fibres blended with cotton to providing long wearing comfort Jersey knit with an elastic rib calf that fits over the pant leg of the suit

- Features
- Clothing creates a soft Faraday cage
- Comfortable and durable
- Supplied with test certificate
- Under 100 Ohms conductivity
- Washer and dryer safe
- Double needle stitching on all seams
- Gloves (Pair)
- One Size Fits All
- Hand Length - Short

Part No.	Size	Description
13-38-811	One Size fits all	Conductive Gloves
28-38-911		Conductive Socks

### Conductive Boots - Royer

**Part No. Various**

LP Royer Boots are world renowned as a leading manufacturer of the highest quality leather conductive boots.

**Features**

- Electrical resistance between 0 and 10,000 Ohms
- Waterproof full-grain leather
- Puncture-resistant steel plate
- CHEVRON vulcanized rubber sole
- ROVAK padded ankle protector to improve climber comfort
- Double conductive calf strap
- Steel protective toecap
- ROVAK dual-rib steel shank
- Canadian-made 10 inch boot
- Leather lining
- Conductive sole

Part No.	Size AU/UK Men	Size AU/UK Women	EUR	Heel to Toe (mm)
408386-7	7	8.5	39.5	250
408386-8	8	9.5	40.5	258
408386-8.5	8.5	10	41.5	262
408386-9	9	10.5	41.5	267
408386-9.5	9.5	11	42.5	271
408386-10	10	11.5	43.5	275
408386-10.5	10.5	12	44.0	279
408386-11	11	12.5	44.5	284
408386-12	12	13.5	46.0	292

**Contact TEN for a LP Royer Boot sizing chart**





## Insulated Gumboots - Class 2

### Part No. 202212-Size

- High-spec, fully waterproof, hand-built, rubber dielectric safety boot.
- Manufactured with specially formulated insulating layers offering electrical protection over the whole boot.
- Yellow upper allows for easier visual identification and in-service inspection.
- Built on the popular Quatro - gives a generous fit while locking the ankle and preventing heel slip.
- EN ISO 20345:2011 - EN 50321-1:2018 - Class 2

Part No.	Size
202212-*	US5-15 - UE38-49 - UK4-14

\*Add size suffix when ordering - Contact TEN for Size chart

## Gaiters - Quagmire Canvas

A must for working in remote locations



- Shin protection provided by the adjustable 50mm velcro front opening gives fantastic fit and easy access
- Cool comfortable 8 oz Corespun canvas
- Canvas upper section stands up well with the top open for ventilation and comfort
- Super hard wearing replaceable underfoot strap
- 1000 denier Kodra boot section with lining
- 3 sizes for optimum fit
- Ideal protection from snake bite

Part No.	Size	Approx. Calf Diameter (cm)* Allow extra room for adjustable 50mm velcro
AHDGS	Small	39
AHDGM	Medium	40
AHDGL	Large	43
AHDGXL	X Large	45

## Hardhat Stabiliser - Safemate™

Safe Mate is a hard hat stabilising accessory for hard hats and welding helmets. Quick to fit and offers additional comfort to the wearer.

- Comfortable silicon rubber grip
- Long lasting, easy to install Unique safety accessory for hard hats and welding helmets
- Greatly reduces the chance of your helmet falling off
- Fits extensive range of hard hats and helmets

Part No.	Size	Suits Helmet Type	Wt (kg)
SM2	2 tab	Twist Knob Adjustable (suits most style helmets)	0.03

## Ear plugs - MAX LITE™ Honeywell

Single-use ear plug including comfort feature. Highest rating SLC80.

Part No.	Description
LPF-1	Uncorded ear plug (200PR Individual PR. Poly Bag)
LPF-LS4	Uncorded ear plug (200PR Refill)



Stops your hardhat slipping



LPF-1

LPF-LS4

### Warning & Phase Markers - Overhead Lines

#### Warning Marker Balls



Part No.	Diameter (mm)	Colour			
		Orange	Red	Yellow	White
AWM-600-O	600	O			
AWM-600-R	600		R		
AWM-600-Y	600			Y	
AWM-600-W	600				W
AWM-300-O	300	O			
AWM-300-R	300		R		
AWM-300-Y	300			Y	
AWM-300-O	300	O			
AWM-200-OW	200	O			W

#### Warning Flags

Insulated & bare lines need to be adequately marked to reduce risk of machinery collision or contact by workers. With the specialist application tool fixed to a hot stick, warning flags can be attached LIVE to powerlines from the ground or a bucket truck.

- Approved to AS/NZ 3891 Part 2
- Available in two clamp sizes



Part No.	Clamp Size (mm)	Flag Colour	Patch Colour
SF17PE1055-*	*S = 6-16 or *L = 10-70	Orange	White
SF17PE1056-*	*S = 6-16 or *L = 10-70	White	Green
SF17PE1057-*	*S = 6-16 or *L = 10-70	Orange	Green

See below for other available markers



Firefly Markers



Quickmarks



Birdmark Afterglow

#### Warning Marker Application & Removal Tool

Application Tool for Flags and Markers

- Fast and effective removal/ application
- Sunrise fitting suits Universal Hotstick

Part No.	Description	Clamp Size (mm)	Colour
SF17PE1025	Combination Tool	6-70	Orange



SF17PE1025

DNOBHOOK



A10-094DNOB



9638

#### DNOB Hook, Applicator, and Tag Clamp

For marking isolated switches, visual warning or a means of tagout.

Part No.	Description
DNOBHOOK	Hook tag, danger, DO NOT OPERATE
A10-094DNOB	Fuse cup, non-conductive, yellow, DNOB applicator
9638	Tagging Card Clamp - Temporary line clamp with spring loaded jaw for use with tagout cards, apply by shotgun



## Rescue Kits & Accessories

### Low Voltage Switchboard

#### Part No. LVRK

TEN's low voltage switchboard rescue kit is used for the safe rescue of victims who suffer electric shock or other injuries when working on LV switchboards in electricity supply and industrial substations.

- Custom kits can be supplied to customer requirements.
- Optional Step and mats available on request.

Complies with the requirements of state energy providers and in accordance AS4836

#### Bag Features

- The kit is supplied in a PVC carry bag with internal divider
- The bag features shoulder strap and quick-open velcro tab for easy access.

Kit Contents	
Part No.	Description
2091907-11	Gloves Pair - 1000V Class "0" Size 11
RK-LVHOOK	Rescue Hook – Insulated PVC glow in the dark
RK-TORCH	Torch LED - Non-Conductive
RK-FIREBLKT	Fire Blanket 1.2m x 1.8m - AS/NZ3504
RK-THERMAL	Thermal Shock Blanket
RK-BANDAGE	Bandage, Multi Trauma Dressing 250 x 750mm
RK-SIGN	Hanging Sign – "Isolate Here In Emergency"
RK-MASK	CPR Mask (CE Approved)
DSRABCD	CPR Wallet card
TENM532	PVC Bag – 'LV Rescue Kit' with divider & shoulder strap
-	Card listing contents and conformity

Kits available to meet individual State and Territory requirements

Contact TEN with your requirements

### High Voltage Switchboard

#### Part No. HVSrk

- Custom kits can be supplied to customer requirements.
- Optional Step and mats available on request.

Kit Contents	
Part No.	Description
NG216YB-11	17kV Class "2" Yellow/Black Size 11
24401	Salisbury 6ft (1.8m) Insulated Rescue Hook
HOOK-HV	Rescue Hook – Insulated Plastic
RK-TORCH	Torch
RK-FIREBLKT	Fire Blanket 1.2m x 1.8m - AS/NZS3504
RK-BANDAGE	Bandage, Multi Trauma Dressing 250 x 750mm
RK-SIGN	Hanging Sign – "Isolate Here In Emergency"
3218	First Aid Quick Reference Guide
TENM527	PVC Bag – 'HV Rescue Kit' with divider & shoulder strap
-	Card listing contents and Next Test Date table





## Pole Top Rescue Kit

**Part No. PTRK**

### Example Components List

- Kit bag - yellow
- Rubber & Outer Gloves & Glove Bag
- Rope
- Knife
- Universal Pliers
- Tool Pouch
- Cutters
- Rescue Belt, Pole strap, Body Belt
- Descent Ring
- Decent Device
- Decent Bag
- Screw Gate Karabiner
- Snap Hook
- Anchor Strap
- Crook
- CPR Card
- Contents Card

**Contact TEN**  
with your  
requirements

Components for each State Kit vary, please check your local regulations to ensure correct components are requested

## Tower Rescue Kit

**Part No. TRRK**

### Example Components List

- Storage backpack yellow
- 65m rope with sewn eye and triplock karabiner
- FDU100 Rescue Descender with triplock karabiner
- 50mm x 1200mm anchor sling
- 25mm x 1200mm round sling
- Rescue knife with extender and 2 alloy triplock karabiner
- Mechanical advantage retrieval system
- Cervical collar (optional)

Components may vary depending on state or territory requirements.

## Rescue Hook - Insulated

**Part No. Various**

- Foam filled fibreglass reinforced handle
- Coated Heat treated hook
- Aluminium Bronze hook

Part No.	Hook Opening (cm)	Dimensions (cm)	Weight (kg)
24401	51	182 x 51 x 3.2	2.27
24403	51	244 x 51 x 3.2	4.54

## Rescue Hooks - High Voltage

- Hook can be removed for storage & transport
- Type Tested to 50kV
- Designed for rescue on Voltages up to 36kV

Part No.	Hook Opening (cm)	Dimensions (cm)	Weight (kg)
HOOK-HV	51	172 x 51 x 3.2	1.6

## Fall Restraint/Anchor Point

- Lightweight anchor point
- Ideal for work from ladders or platforms
- For wood, concrete or steel poles
- Provides isolation from potential electrical hazards
- U-Bolt for lanyard connection

Part No.	UTS (kg)	Fibreglass Shaft (mm)	Nylon Strap length (m)	Wt (kg)
3861	2,265	150	1.1	4.5



HOOK-HV





## Safety Belts, Harnesses & Accessories

### Belt, Rescue - Honeywell

- Belt, body, rescue, polestrap attached, orange, for poletop rescue kit, Honeywell



Part No.	Description	Weight (kg)
M1020261	Rescue Belt, Orange, c/w Elastic Loop	2.0

### Harnesses - Aircore

Tower Worker - Soft Loop Harness suitable for Line Workers on Tower, Ladder, & Pole Top

- Lightweight components to reduce fatigue
- Corrosion-resistant lightweight aluminium hardware
- Quick operating cam buckles on the shoulder straps
- Quick-connect leg and chest buckles
- Aluminium frontal D-ring and rear fall arrest D-ring with fall indicator
- Work positioning side D-rings for working with pole straps
- Equipped w/confined space webbing loops for attachment to spreader frame



Part No.	Size	Weight
M1020227	Small	2.7
M1020228	Medium/Large	
M1020229	X-Large/XX-Large	

### Harness - Tower Worker

- A versatile harness with front and rear connections
- Rear 400mm D-ring extension
- Pelvic d-rings for work positioning and confined space rescue loops
- ErgoArmor™ back shield protects from snap hook and lifeline injury
- Adjustable chest, waist, shoulder and leg straps
- Complies to AS/NZS 1891.1 2007



Part No.	Description	Size	Weight (kg)
TOWER-WORKER	Front & rear fall arrest, ext dorsal, side & CS Loops	Medium	2.9
TOWER-WORKER-L		Large	

### Harness - Revolution

- Approved to AS/NZS 1891.1:2007
- Rear 400mm D-ring extension and frontal fall arrest attachment
- Pelvic D-rings for work positioning and confined space rescue loops
- ErgoArmor™ back shield protects from snap hook and lifeline injury
- Quick adjust, comfortable, durable polyester/DuraFlex™ webbing



Part No.	Description	Size	Weight (kg)
M1020056	Front & rear fall arrest, ext dorsal, side & CS Loops	Medium	3.4
M1020099		Large	

### Harness - Elite.2

- Approved to AS/NZS 1891.1:2007
- Frontal fall arrest D-ring and extended dorsal D-ring
- Work positioning side D-rings for work with pole straps
- Fully adjustable waist, shoulder, leg and buttock straps
- Lumbar and buttock padding offering greater comfort



Part No.	Size	Weight
M1020119	Small	2.9
M1020114	Medium/Large	
M1020117	X-Large	





### Harness - Duraflex Glove & Barrier

- No metal above waist
- Frontal belay loops for frontal fall arrest (must be used together)
- Rear 500mm extended dorsal with soft eye
- All attachment points are clearly labelled and define the application of the attachment
- Manufactured from DuraFlex™ polyester webbing which provides flexibility of movement for the wearer

Part No.	Size	Weight (kg)
M1020008	Medium/Large	1.3

### Controlled Decent Device

The Miller Manual Descent Device is designed for a variety of applications where smooth, controlled descent from an elevated position is required. Kernmantle rope is designed to optimise strength, durability and flexibility while being an economical choice.

16m kernmantle rope with double action hook either end.



Part No.	Description	Weight (kg)
A23M16.0CWDD	Manual Descent Device, 16m Rope, DA Hook	5.5

### Straps - Pole

- For line and pole work, supports a worker atop a pole
- Protection sleeve increases webbing life
- An adjuster alters working length
- Double action hooks at each end with 19mm gate opening



Part No.	136.1S	138.1S	139.1S	1312.1S
Length (m)	1.8	2.4	2.7	3.6
Features	1 x double action 19mm hook (6650) each end			

### Lanyards - Stretchable Energy Absorbing

- Unique stretchable lanyard design that minimises the length of the lanyard preventing tripping or snagging
- Elastic inner core contains the un-extended length of webbing
- All lanyards comply with AS1891.1
- Outer load bearing tubular polyester webbing provides strength and durability
- Integral compact energy absorber, visual indication if a fall has occurred
- "Manyard" style has no energy absorber pack



M1010024



STRETCHSTOP

Part No.	Type	Length (m)	User end	Anchor end (mm)
M1010024	Single Lanyard	2.0	19mm Snap	19 Snap
STRETCHSTOP	Single Lanyard	1.8	19mm Snap Hook	19 Snap Hook
L11SEC1.5	Single Lanyard	1.5	19mm Snap Hook	19 Snap Hook
L11WEC1.5	Single Lanyard	1.5	19mm Snap Hook	19 Snap Hook

### Tie Off Adaptor Webbing

Webbing tie off adaptor, wraps around an anchorage point providing a suitable connection

- 25mm webbing, 1.0mtr in length
- Single person use.



Part No.	Type	Length (m)	Weight (g)
WTO1M	Webbing	1.0	130

### Sling - Anchor - Rescue

- 1.6m anchor strap/sling with dee ring one end, and reversed eye other end
- Protective sleeve prevents wear on webbing from cross-arms etc
- Easy attachment to dee ring by anchorage line or lanyard
- Refer to AS/NZS 1891.4 for information on anchorage strength



Part No.	Size (m)	Description
ME10091.6	1.6	Tie off, dee reversed eye, adaptor - Orange



## Vehicle Ground Mats & Outrigger Pads

### Ground Protection Mats - AlturnaMats

- For temporary road ways and paths
- Distributes weight across soft surfaces
- Protects ground from damage and vehicle bogging
- Link together to create a temporary road
- Carrying hooks sold separately
- Manufactured from recycled material

**Create temporary roadways and safe work paths**

<b>Material</b>	12.5mm thick Recycled Polyethylene
<b>Load (T)</b>	60

Part No.	Description (m)	Wt (kg)
AM-18-09	1.8 (L) x 0.9 (W)	15
AM-24-09	2.4 (L) x 0.9 (W)	29
AM-24-12	2.4 (L) x 1.2 (W)	39
AMHOOKS	Carry Hook	1.7



**A lightweight alternative!**

### Outrigger Pads

- Reduce manual handling risks of heavy wooden dunnage and splinters
- Distribute weight evenly across a large footprint to prevent sinking or slipping into the ground
- Can be used to stabilise crane legs, scaffolding structures, uprights and angled loadings
- Tough and durable polyethylene

Part No.	Size (mm)	Vert Load Capacity (T)	Wt (kg)
PAD-15151	380 (L) x 380 (W) x 20	18	3
PAD-18181	450 (L) x 450 (W) x 25	24.9	5
PAD-24241	600 (L) x 600 (W) x 25	27	9
PAD-24242	600 (L) x 600 (W) x 50	28	17.2
PAD-30301	760 (L) x 760 (W) x 25	36	14.0

## Containment and Pole Setting Bags - ABG

### FLEXTRAY® - ABG

**A flexible spill tray for the easiest, safest way to transport and store oil filled apparatus**

- Lightweight Design For Easy Storage & Setup
- Easily Stored on Truck
- Safely Contain PCB's and Other Contaminants
- Avoid Preventable Spills
- Universal Portable Containment Tray
- Easily Secure Tray To Transformer With Cam Buckles & Webbing
- Recyclable
- Available in 3 Sizes



CLICK or SCAN to watch the FlexTray in action.

**PREVENT OIL SPILLS INTO THE ENVIRONMENT**



Part No.	Folded Size (mm)	Open Size (mm)	Wt (kg)
CT-084	1067 (L) x 559 (W) x 254	2134 (L) x 2134 (W) x 457 (H)	8
CT-096	1143 (L) x 635 (W) x 305	2438 (L) x 2438 (W) x 457 (H)	14.5
CT-108	1219 (L) x 771 (W) x 381	2743 (L) x 2743 (W) x 381 (H)	16





## Transformer Containment Bags

### Bigger & Stronger Safety Orange Transformer Containment Bags

Safely Contain, Lift, Transport & Store all sizes of LEAKING TRANSFORMERS

- Helps to reduce preventable spills that release unwanted oils into the environment
- Easy to store on truck solution for safe transport and storage of faulty transformers
- Reduce costs of transporting large steel containers as well as the cost to clean up leaks



**PREVENT OIL SPILLS INTO THE ENVIRONMENT**



CLICK or SCAN to watch the BOB in action.

### BOB® Replacement Pole-Mounted Transformer Bag (Round)

BOB Part No.	Dimensions (m) (D) x (H)	Capacity (kg)	Old Part No.	Dimensions (m) (D) x (H)	Capacity (kg)
BOB-26	0.66 x 0.76	567	PT-22	0.55 x 0.65	635
BOB-32	0.81 x 0.96	630	PT-30	0.75 x 0.90	860
BOB-42	1.07 x 1.22	907	PT-42	1.00 x 1.20	1020

### BOB® Replacement Pad-Mounted Transformer Bag (Rectangular)

BOB Part No.	Dimensions (m) (D) x (W) x (H)	Capacity (kg)	Old Part No.	Dimensions (m) (D) x (W) x (H)	Capacity (kg)
BOB-48	1.22 x 1.22 x 0.91	1361	PMT-48	1.20 x 1.20 x 0.90	1360
BOB-60	1.52 x 1.52 x 0.91	1814	PMT-60	1.52 x 1.52 x 0.90	1814



## POLESETTER ROCKBAG - ABG

The safest and fastest way to re-set poles and back filling

- 5:1 Safety Factor
- Self-Standing Rugged Design
- Flow Control Discharge Spout
- Quick Fill & Rapid Release
- Top-Lift Safety Rated 5x Capacity
- Compact For Easy Storage
- Reusable & Recyclable



CLICK or SCAN to watch the Polesetter bag in action.



Part No.	Capacity (kg)	Open Size (mm)	Volume (lt)
PS-01	680	610 (D) x 813 (H)	208
PS-02	907	762 (D) x 914 (H)	416



# LADaMAX

**150KG  
RATED AS 1892  
LENGTHS 2.7/3.9m – 5.1/8.5m**

Pole Chain Standard



Heavy Duty  
50 x 6mm Top Iron



## Ladders - Fibreglass

### EXTENSION - LADaMAX

**Part No. Various**

- Designed for power companies
- Rung replacements
- Easy to use
- UV resistant
- Solid foundation
- Safety features
- Lightweight
- Pole chain



**NON-CONDUCTIVE**  
SAFE FOR ELECTRICAL WORK

**UV RESISTANT**  
BUILT FOR HARSH AUSTRALIAN CONDITIONS

Extra Heavy-Duty Clutch



Part No.	Retracted (m)	Extended (m)	WLL (kg)	Width (mm) (Internal)	Width (mm) (External)	Wt (kg)
FXT082	2.7	3.9	150	390	405	17
FXT102	3.3	5.1	150	390	405	20
FXT112	3.9	6.3	150	390	405	25
FXT142	4.5	7.5	150	390	405	28
FXT162	5.1	8.5	150	390	405	31

**150KG RATED  
AS 1892  
LENGTHS 0.61 – 1.74m**

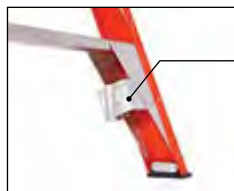


### Standard PLATFORM STEP - LADaMAX

**Part No. Various**

- UV RESISTANT FIBREGLASS
- NON-CONDUCTIVE
- Safest, Failsafe platform
- Stronger full gusset base brace "GUSSET GUTZ"
- Swage-lock step connection 50% stronger
- Strongest plated foot connection
- Lightweight

Fail-Safe PLATFORM



Caster Ready

Part No.	Platform Height (m)	WLL (kg)	Width (mm)	Wt (kg)	Cube (m <sup>2</sup> )
FPS5-2G	0.61	150	580	11	0.21
FPS6-3G	0.88	150	620	12	0.26
FPS7-4G	1.17	150	660	13	0.32
FPS8-5G	1.14	150	700	14	0.39
FPS9-6G	1.74	150	740	15	0.46

**150KG RATED | AS 1892**  
**LENGTHS 1.8/3.0m – 2.4/4.2m**



**Dual Purpose - STEP & STRAIGHT - LADaMAX**

**Part No. Various**

- UV RESISTANT FIBREGLASS - lasts longer and better value
- NON-CONDUCTIVE - safe for electrical work
- Swagelock step connection 50% stronger
- Stronger full gusset base brace
- "GUSSET GUTZ" - More stable tapered rear frame
- Stainless steel connectors
- Strongest plated foot connection
- LIGHTWEIGHT - Strongest, double hollow step treads



Part No.	Step Ladder (m)	Extended (m)	WLL (kg)	Width (mm)	Wt (kg)	Cube (m <sup>3</sup> )
FSE062	1.8	3.0	150	545	10	0.17
FSE072	2.1	3.6	150	585	12	0.21
FSE082	2.4	4.2	150	625	14	0.26



**Powermaster EXTENSION - Branach**

**Part No. Various**

- Lightweight and effortless action to deploy
- Flat D rungs provide safety and comfort to the height worker
- Branach Latch or Conventional Latch available
- Swivel foot maximises grip on uneven ground
- Complies to AS/NZ 1892.3 1996 / ANSI-ASC A14.5-2007
- Full range of accessories including rubber feet, pole strap, lashing options and more
- Step platforms and single ladders also available, contact TEN for the full range



Part No.	Retracted (m)	Extended (m)	WLL (kg)	Wt (kg)
FED 3.0	2.14	3.00	160	15.5
FED 3.4	2.40	3.40	160	18.5
FED 4.0	2.70	4.00	160	15.5
FED 5.2	3.30	5.20	160	18.5
FED 6.4	3.90	6.40	160	21.6
FED 7.6	4.50	7.60	160	27.1
FED 8.8	5.10	8.80	150	31.5
FED 9.4	5.80	9.40	140	35.5
FED 9.8	5.80	9.80	120	35.5

**Non-Slip Ladder Assistance - Ladders Little Helper**

**Part No. LLH**

- Strong yet extremely lightweight
- Helps prevent sideways movement
- Will fit almost all gutters
- Fits 99% of ladders
- Ideal for safely accessing a roof
- Protects against scratching gutters
- Unique two stage pole size to fit multiple size poles

**PROTECT YOURSELF & YOUR WORKERS**



## Cleaning and Maintenance Solutions

Complete Range of Cleaning products and maintenance solutions for the Power Industry



For instruction on how to clean hot sticks, CLICK or SCAN to watch our video.



**Silicon Cloth**



**Solar Panel Wash**



**Boom Wipes**



## SOLUTIONS FOR EVERY SITUATION

**Rubber Goods Cleaner (RBG)**

For Gloves, Sleeves and rubber mats & hoses

**Multipurpose Cleaner/Degreaser (HP)**

Industrial & Maintenance cleaning

**Powerclean (RPC15)**

Powerful degreaser/cleaner detergent

**Boom Wipes (B-1/D72)**

Pre-saturated lint free boom wipes

**Fibreglass Wash (FGW)**

Boom & Bucket Pre-Wash

**All Purpose Cleaner (10-195/168)**

Fibreglass, tools, booms, trucks, coverup equipment, plastics.

Cleaning Kit also available

**Gel Removal Wipe (TC-1)**

SqueeKleen, cleans and fans fibre (Fibre-Optic)

**Fibreglass Wax (W-1/16)**

Wax & Buff kit and Fast hazing wax

**GrimeAway Wipes (HTC)**

Multipurpose Cleaning wipes - Transformer Oil, Cable gels etc.

**Hot Stick Wipes (10-188)**

Cleans and applies water repellent

**Hot Stick Cleaner (S-1)**

Alcohol-based cleaner and water repellent

**Solar Panel Wash (SPW)**

Safe cleaner for Photovoltaic (PV) Panels



## Advice on The Care and Maintenance of Your Equipment

### INSULATED GLOVES & SLEEVES

As a reminder to our Insulating Glove and Sleeve customers and users, the best advice to ensure that these items are clean and maintain their insulating properties is to follow the ASTM guidelines 'In-Service Care of Insulating Gloves and Sleeves' and 'Visual Inspection of Electrical Protective Rubber Products' (ASTM F496 and F1236). Washing with Polywater® Rubber Goods Cleaner (RBG-\*), a specially formulated cleaner for removing GREASE – DIRT – CARBON and other grime is the best way to ensure your gloves and sleeves are spot-cleaned of heavy contaminants. Per the standard, "The gloves and sleeves shall be washed with a mild soap or mild detergent and water. After washing, the gloves and sleeves shall be thoroughly rinsed with water to remove all soap or detergent and dried. Regarding hand sanitizers, it is recommended to use hand sanitizers that are produced with one or more of the following alcohols: Ethanol, n-propanol, or isopropyl alcohol. These three alcohols are not harmful to the gloves or sleeves at room temperature. Hand sanitizers should include alcohol levels above 60% and should not have fragrances or scrubbing beads. Wiping gloves at room temperature with one of the three alcohols is fine as well. For this purpose, the Polywater® S-1 alcohol-based water repellent wipe (this product contains a minimum 60% Isopropyl alcohol) is an ideal option. This advice is for Salisbury rubber goods, and other manufacturers should be consulted for their products. Some latex products may have different cleaning requirements.



### ARC FLASH SHIELDS AND GARMENT RECOMMENDATIONS

Clean and inspect the Honeywell Salisbury Face Shield after every use. Use of mild soap with warm water followed by a pat dry is recommended. Always refer to the user manual for further detailed instructions. Garments and fabric components should be washed regularly using warm water and a mild detergent. The water temperature should be warm but no higher than 70°C. Tumble dry at normal temperature. Always refer to the user manual for further detailed instructions.

Chlorine bleaches such as those containing sodium hypochlorite, oxygen bleaches such as hydrogen peroxide as well as soaps (salts of fatty acids) should not be used to wash the PPE either separately or in detergents as they may affect the protective properties of the PPE. Fabric softener, detergent containing fabric softener, or dryer sheets should not be used during dryer cycles. Use of disinfectants can harm the materials arc protection properties

### HOT STICKS AND FIBREGLASS

Check the Fibreglass section for stick Cleaning, Re-Finishing & Repair products.

For stripping back heavy contamination and prior to re-waxing, use the Hastings All-Purpose, Safe, non-toxic, biodegradable, PH neutral & non-flammable Cleaning Concentrate (Part 10-195). Once the surface has been cleaned thoroughly, it is critical to re-wax the stick. The Polywater® Fibreglass Wax and Buff Kit is a simple, easy to use, one application wipe ideal for this purpose. The lint-free wipe is saturated with fast hazing wax and a soft lint-free towelette is included for buffing the wax to a shine.

This improves the dielectric performance by restoring the water beading properties. Also available is the Polywater (W-16) bottle of wax and Hastings Hot Stick Wax (10-091)

It should be noted, waxing is best done after a thorough stick cleaning. Use of wax products over contaminated surfaces only locks the dirt in. For spot cleaning the sticks and daily before use, the Polywater® Water Repellent Wipe (Part S-1) that (contains a minimum 60% isopropyl alcohol and silicone) helps clean and restore the water beading properties of the stick. This will also work to sanitise the stick before and after use if used correctly. Also available for spot cleaning and daily before use is the Hastings (10-188) hot stick wipes containing silicone (note these do not have an alcohol content, these are petroleum based).



### BOOM & BASKET CLEANING

For washing booms, use the Polywater® Fibreglass Wash (FGW-640). This replaces the previous BWC Boom Wash Concentrate. For spot cleaning of booms and baskets we recommend the Polywater (B-1) large for mat Towels for cleaning grime, grease and contaminants from the surface.



### ELECTRICAL & INDUSTRIAL EQUIPMENT

For a multitude of other surfaces, the Polywater® Multipurpose Cleaner / Degreaser (Part No. HP™) is the ideal solution. It replaces ozone-depleting CFC's, trichloroethane and other carcinogenic chlorinated solvents. Safe for use on: Transformers (Pole & Pad-mount), Switch Gear & Motors, Control Devices, Generators & Fusible Disconnect devices, to name a few. The HP wipes are an all-rounder and available in a 72 wipe (HP-D72) cannister.

**Polywater**  
Solutions at work.



### Cleaner - Rubber Goods

A specially formulated cleaner for removing GREASE – DIRT – CARBON

- No mixing required
- Excellent cleaning power
- Harmless to all elastomers (rubbers)
- Multiple package options
- Environmentally friendly
- Non-toxic and non-corrosive

Rubber Goods cleaner contains no hazardous ingredients and is pH neutral

Part No.	Description
RBG-1	Individual Sachet
RBG-D72	Dispenser of 72 saturated wipes
RBG-35LR	950ml Bottle with sprayer
RBG-128	3.8L Bottle
RBG-640	18.9L Drum



### Powerclean Concentrate 15L

Part No. RPC15

- Powerful degreaser/cleaner detergent
- Ideal for cleaning rubber ground mats, soak goods for best results
- Supplied in 15 Litre Drum
- Weight 16.3kg



### Pre-wash - Boom and Bucket

- Convenient, pre-saturated, lint-free wipes in two sizes
- Large and durable for maximum surface coverage
- Won't remove or adversely affect gel coat & prevents "build-up" over time
- Powerful cleaner removes grease, dirt, tar, and grime from booms and buckets
- Water soluble for easy water rinsing
- Removes road and sea spray salts (salt water is more conductive)

Part No.	Description
B-1	Individual saturated 600mm x 600mm wipe in sealed foil pouch
B-1-K	As above, box of 24
B-D72	Dispenser of 72 saturated wipes 254mm x 305mm



### Cleaner, Concentrate - All Purpose

- Concentrate for fibreglass, tools, booms, trucks, cover-up equipment, plastics
- 20:1 standard concentrate mix ratio (20 parts water: 1 part concentrate)
- Used for removing dirt, grease, metal oxides and other contaminants
- Safe, non-toxic, biodegradable, PH neutral & non-flammable

Part No.	Description	Wt (kg)
10-195	All purpose cleaner concentrate 19L Drum	18.2
10-168	All purpose cleaner concentrate 3.8L bottle	3.6
10-197	6pk Cleaning Kit: 6 x 200ml ready to mix bottles/14 ultra fine non-metallic pads/ 6 adhesive identification bottle labels	1.6



### Cable Cleaning Wipe

- Safe: Excellent alternative to brominated and chlorinated solvents.
- Fast Evaporation: Evaporates quickly and leaves no residue.
- Tested: High dielectric strength of 56kV meets IEEE 1493
- Proven: Approved by medium voltage cable manufacturers.

Part No.	Description	Pack
RP-1	120 x 200mm Pre-moistened wipe	96 case

## Cleaner/Degreaser - Multipurpose

### Part No. HP Series

Polywater® Type HP™ is our most popular electric cleaner for cable splice preparation, cable termination, and electrical apparatus maintenance. HP fits the needs of electrical utilities, line contractors, and medium voltage crews that need to comply with regulatory and safety requirements. Type HP is available in a wide range of bulk and kit packaging options.

- One cleaner for all your Electrical and Communications cleaning needs
- Suitable for cable gels, cable jackets, switchgear, transformers and a host of general degreasing applications
- Harmless to most plastics, including polycarbonate, ABS and polyethylene
- Contains no CFC's, HCFC'S, chlorinated solvents, perchloroethylene, or other ozone-depleting solvents
- No residue, non-conductive, non-corrosive, non-freezing, non-staining to metals



HP-D72



HP-35LF

Part No.	Description	Pack
HP-D72	Multi Purpose Cleaning Wipes	72 Wipes
HP-35LF	Bottle with flip top	950ml

### General degreaser for Electrical and communications cleaning



Presaturated Wipes - eliminating spill hazards and limits vapour exposure.



HTC-D72

## Cleaning Wipes - GrimeAway Multi Purpose

### Part No. HTC-Series

Tough on Dirt, but Field Friendly.

Polywater® Grime-Away™ quickly and effectively removes hydraulic fluids, silicone greases, and adhesives from transformers, vehicles, heavy machinery, tools, and hands for a clean and safe working environment. Its unique water-based formulation is especially safe on skin, unlike most other tool and hand cleaners. Grime-Away is available in a multiple-use, 72-count canister or individual wipes that store easily in tool pouches or lineman bags.

Part No.	Description	Pack
HTC-D72	Dispenser with 72 Pre-moistened wipes*	72 Wipes
HTC-1	Individual Pre-moistened wipes*	144 per case

\*Not suitable for Rubber Goods

## Wax - Fibreglass

- Available in bulk or as a convenient, wax-saturated, lint-free wipe
- Dual action tandem pack includes dry buffing towel
- Suitable for hot sticks, booms and other fibreglass liveline equipment
- Does not remove or adversely affect gel coat
- Leaves non-conductive water repellent coating
- Superior quality, fast-hazing fibreglass wax



W-1



W-16

Part No.	Description
W-1	Fiberglass wax & buff kit containing lint free wipe and soft towel
W-16	470ml bottle, Fast-hazing wax, long lasting finish for fibreglass booms





10-188



10-188-1

### Wipe - Hot Stick Cleaner & Water Repellent

#### Part No. 10-188-1

- Convenient, pre-saturated, lint-free wipe
- Dual action - cleans and applies water repellent
- Does not remove or adversely affect gloss coat
- No "build-up" over time

### Wipes - Hot Stick - 50pk Dispenser

#### Part No. 10-188

- Removes contaminants such as dirt, oils and creosote
- 50 wipes in heavy duty cardboard dispenser that can be installed on a wall
- Leaves a silicone moisture barrier which enables water to bead - eliminating blanket effect when using hot sticks in wet conditions

### Fibreglass Cleaning and Refinishing Kit

See page D35 of the Fibreglass Equipment section for Hasting 10-171 & 10-100



Solutions at work.



### Wipe - Hot Stick Cleaner & Water Repellent

- Convenient, pre-saturated, lint-free wipe
- Dual action - cleans and applies water repellent
- Does not remove or adversely affect gloss coat
- Evaporates quickly
- No "build-up" over time
- Removes grease, dirt, and grime
- Prevents continuous water film on stick in wet weather
- Designed for one time use and easy disposal
- Meets IEEE maintenance recommendations (Std #978)

Part No.	Description	Pack
S-1	Pre-saturated lint-free 600mm wipe in sealed foil	1 Wipe

### Wipes - Gel Removal

SqueeKleen cleans and fans fibre in two wipes, saving time and money. No follow up with alcohol is required to clean and separate fibres before splicing. It reduces chemical odors and keeps vapor concentrations to a minimum in splice trailers and vaults to ensure a safe environment.

- Effective Cleaner: cleans cable filling gel and flooding compounds.
- Cleans IBP Flooding Compound: Good for cleaning coax cable.
- Fast Gel Cleaner: only two wipes and the fiber squeaks and fans.
- No Residue: Nothing left to require a secondary alcohol wipe.
- Industry Tested: Approved by users and manufacturers.

Part No.	Description	Pack
TC-1	144 Wipes	1 Wipe

### Wash - Solar Panel

An Effective, Safe, and Economical Cleaner for Photovoltaic (PV) Panel Installations

- Industry Approved cleaner  
Polywater SPW is approved by major PV panel manufacturers.
- Increased PV performance output  
It is scientifically proven that clean PV panels produce more power - cleaner panels = bigger savings
- Environmentally friendly  
Does not contain solvents - no VOC's - non-flammable  
Phosphate-free - Chlorine-free
- More efficient cleaning  
Polywater SPW effectively reduces the need for excessive rinsing
- Safer to use  
Polywater SPW is pH neutral - non-caustic and non-alkaline  
Will not affect aluminum rails or racking like common detergents
- Economic to use  
Does not require deionized or purified water rinse. Saves time and materials

Part No.	Description	Pack (Lt)
SPW-128	Polywater Solar Panel Wash	3.8









- LV & HV Voltage Detectors & Testers
- HV Ammeters
- Phase Rotation & Multi Meters
- Insulation & Ground Testers
- Equipment Specific Testers
- Markers & Tracers
- Cable Height & Diameter Gauges
- Dynamometers

## TESTING & MEASUREMENT



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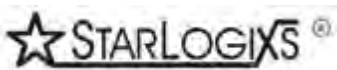


### Test & Measure Equipment

#### Testing, Usage, Care & Storage

- Test equipment should be used only by trained and qualified operators
- Familiarise yourself with the operating instructions/manual and be sure you understand the warnings
- Ensure your equipment is always within its calibration test period
- Before use, inspect devices for signs of deterioration, damage or contamination and ensure functionality
- Store your test equipment in a protective case when not in use
- Keep equipment clean at all times

Consult local network providers for specifications on approved devices, safe operating procedures & instructions before using any tester on their network.



#### Voltage Detectors and Testers

##### LiveTester Proximity Detector - Starlogixs

Part No. LT-220

The LT-220 non-contact voltage detector identifies energised or de-energised conductors.

LiveTester is a technological breakthrough in non-contact voltage detectors. By utilizing state-of-the-art electronic circuitry, StarLogixs has developed a completely new design in voltage detection equipment.

Static Discriminator technology exclusive in LiveTester provides more reliable detection on low voltage ranges, and now means no more false alarms. This makes LiveTester the first non-contact voltage detector suitable for line work and detecting pole leakage.

This is due to the unique circuitry that allows it to ignore electric fields not generated by a mains source such as powerlines.

- Patented ferro electric detector
- Electronic touch-pad
- Self test function tests internal circuitry and audio visual features
- Auto power off
- Operator feedback - both audible and visual
- Low battery indication
- Water resistant IP 65 and impact resistant
- Universal & shotgun adapter
- 3 x "C" size batteries required
- Optional kit with canvas protective storage/carry bag

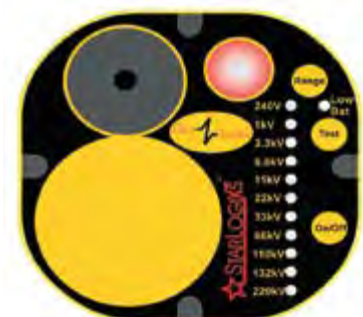


Optional bag  
Part No. TENM445

Part No.	LT-220	LT-220-K	LT-220-H
Description	Tester Only	Tester with bag	Replacement Battery Compartment/Handle
Test Range (kV)	240V - 220kV @ 5kHz		
Warning Signals	Audible and visual indicators		



LT220 Detection Face



Electronic touch-pad includes 11 range settings from 240V to 220kV

**Static Discriminator  
Ignores electric fields not  
generated by a mains source  
such as Powerlines**

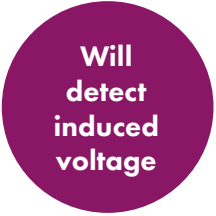


### Digital Voltage Indicator Kit - HDE

#### Part No. DVI-500T-50-K02

The DVI-500T indicates voltage from 0.1kV – 9.9kV and from 10kV - 500kV with no range selector switch or settings required.

- For use on system voltages up to 800kV (reads up to 500kV phase to earth)
- Large LED display indicates the phase to earth voltage level
- Display is easy to read in all lighting conditions
- Voltage readout allows the user to distinguish between nominal and induced voltages
- Audible indication when voltage is detected
- Measure elbow test points with the DVI-500T
- Built-in self test to verify proper operation
- Compact, rugged and lightweight polycarbonate housing



**Designed for Transmission and Distribution Networks in both Overhead and Underground**

<b>Operating Voltage Range</b>	0-500kV phase to earth (0.1kV – 9.9kV and 10kV to 500kV) @50 & 60 Hz
<b>Dimensions (mm)</b>	Housing: 110 (H) x 180 (W) x 110 (D)
<b>Weight (kg)</b>	0.62 with small overhead probe
<b>LED Height (mm)</b>	38
<b>Accuracy</b>	Typical overhead line accuracy in compact overhead three phase configuration +/- 10%, other applications up to +/-25%
<b>Power Supply</b>	Field replaceable 9-volt battery
<b>Battery Life</b>	Up to 100 readings

#### Kit Includes

Part No.	DVI-500T-K02
DVI-500T	Voltage Indicator up to 500kV
PT-DVI	Proof Tester for Digital Voltage Indicators
IEP-DVI-5	Underground Bushing Probe, 15, 25 & 35 kV Class
HP-DVI-2	Overhead Hook Probe, 50mm Diameter Opening
HP-DVI-6	Overhead Hook Probe, 150mm Diameter Opening
CS-DVI-5	Rugged Plastic Case for DVI-500



DVI-500T-K02 Kit Shown

### Digital Voltmeter/Phaser 5v to 40kV - HDE

The DVM-80 is a compact, high accuracy dual stick voltmeter and phasing set with capacitive test point mode. The DVM-80 measures voltage from 5V up to 40kV and up to 80kV with a pair of optional add-on resistors. The two-stick design can be used in both overhead and underground applications. The DVM-80 units incorporate Phase Accurate Technology, which makes all voltage readings, accurate and repeatable to within 1%.

- Peak Hold mode
- Triple auto ranging 3.5 digit display - reads in kilovolts from 5 Volts to 80kV
- Highly accurate, within 1% of the reading
- Auto shut-off
- Back-lit display for easy reading
- Powered by a standard 9V battery
- Add-On Resistors for testing up to 80kV (Part No. R-80)
- Measures AC and DC voltages

Part No.	Description	Range	Weight (kg)
DVM-80	Digital Voltmeter & Phasing set	5V to 40kV	4.5
DVM-80UVK		5V to 80kV (with add-on resistors)	6

### Proof Tester AC/DC Voltmeters & Phasers - HDE

Recommended for use with the DVM-80UVM Voltmeter

Part No.	Description	Range	Weight (kg)
PT-5000B	Proof Tester	AC & DC	0.5







### Voltage Detector Lookout 6 Pack Kit - HDE

Part No. LO-06

- Visual and audible warning indicates the location of energized fields in a green-yellow-red sequence
- Warns of high voltage electric fields using WAVI technology - Work Area Voltage Indication
- Detectors communicate with each other
- Battery life of up to 500 hours in monitor mode and up to 8 hours in Alert mode
- Remotely control detectors through the LOOKOUT mobile app (Contact TEN for further information on the App)
- Durable water resistant housing

#### Ordering Information

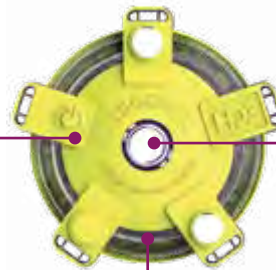
Part No.	Description
LO-06	LOOKOUT 6-Pack Kit

Part No.	Kit Contains
LO-01	6 x LOOKOUT Voltage Detector
LOC-01	LOOKOUT Charger
LO-BGS	LOOKOUT Kit Bag



### Ideal for Excavators & Dump Trucks in the Construction Industry

Senses the presence of electric field surrounding a nearby energised conductor



Spinning red lights and an audible alert indicates an electric field and nearby energised conductor

MESH NETWORK: When one LOOKOUT Detector senses a nearby energised conductor, all detectors in the network to begin alerting

CLICK or SCAN QR-Code for LOOKOUT overview



### Proving Unit for Multi Meters and Voltage Detectors

The PU400 Proving Unit provide a safe and reliable means of checking the correct functioning of Multimeters and Voltage Indicators (VIs) before and after use. Additionally they have the capability of checking the operation of Non-Contact voltage detectors.

The battery powered proving unit and incorporated is a unique and logical safety function - the test voltage generated is at 50Hz to synthesize a genuine test at AC mains supply frequency - so it will always read correct using the AC range of your Tester or Multimeter.

#### Features

- Testing of multimeters, voltage indicators, contact & non-contact (VIs)
- Intelligent voltage ramp
- Generates from 50-690V with a true AC waveform output
- Non-contact voltage indicator test feature
- Meets standards ILVD: BSEN 61010-1 (2010), EMC: 61326-1 (2006)

Part No.	PU400
Output Voltage (V)	50 - 690 in five steps: 50, 100, 230, 400, 690
Power Supply	6 x AA Batteries
Output Frequency (Hz)	50 Pseudo Sine Wave
Max Output Power (W)	10
Weight (kg)	0.35
Dimensions (mm)	130W x 68H x 48D





**Detects stray voltage on public assets**



**Includes Holster & Integrated Self Tester**

### Stray Voltage Detector 5 to 600V - HDE

**Part No. LV-5-K01**

The HDE LV-5 Detector picks up stray voltage as low as 5 volts on any electrically conductive surface such as street light poles, meter boxes, pole steps, manhole covers and conductive cable sheaths. Ideal for asset inspectors, underground crews, telecommunications installers and council workers operating near electrical infrastructure.

This LV-5 has a large robust grip, bright LED indicator for enhanced daylight visibility and a self tester built into the holster to quickly test the detector on a known voltage source before and after use. The Detector operates by holding it with a bare or gloved hand and directly contacting the metal tip of the Detector to the potentially energised source.

The holster also includes an integrated tester that supplies a low voltage AC signal for testing the LV-5 before and after use.

#### Features

- Low threshold voltage sensing design picks up voltages from 5 VAC to 600 VAC with direct contact and proximity above 600 VAC at a distance
- Ultra bright, long-lasting red LED indicates when voltage is present
- Detector is always on, ready to use, and operates on two AA alkaline batteries (batteries not included)
- Rugged Utility-grade design for harsh environments
- IEC CAT IV Rated

<b>Part No.</b>	LV-5-K01 (Includes: Belt clip holster & integrated Self Tester)	
<b>Dimensions (mm)</b>	267 (L) x 97 (H) x 58 (D)	
<b>Weight (g)</b>	570	
<b>Batteries (not included)</b>	<b>LV-5 Detector</b>	2 x AA Alkaline or Lithium-Ion
	<b>Self Tester</b>	1 x 9V Alkaline or Lithium-Ion
<b>Accessories</b>	LV-EH - Extension Handle / LV-GS - Earth Shield	

### Voltage Probe 50 to 600V - HDE

**Part No. VP-1-K01**

The VP-1 is designed for general purpose voltage detection with direct contact on LV and for use in detecting HV in underground cables on unshielded portions over the cable insulation.

- Tests exposed metallic surfaces and conductors for the presence of voltage
- Tests unshielded HV cable insulation
- Ideal for testing airfield (airport) lighting fittings
- Tests HV joint and termination test points for the presence of voltage
- Simple indication of voltage – flashing red light and beeper
- Compact, lightweight and easy-to-use
- No on/off switch – always on
- Super bright LED indicator

#### Ordering Information

Part No.	Description
<b>VP-1-K01</b>	Kit includes VP-1, PT-VP and B-35 carrying bag.
<b>VP-1</b>	Voltage Probe
Accessories	
<b>PT-VP</b>	Proof Tests VP-1 Voltage Probe
<b>B-35</b>	Padded, zippered

Part No.	VP-1 - Voltage Probe
<b>Operating Voltage</b>	50 - 600V hand held 600V - 21kV line to ground using appropriate insulating equipment
<b>Power Supply</b>	2 x AA field replaceable batteries
<b>Output Frequency (Hz)</b>	50
<b>Weight (kg)/Length (mm)</b>	0.27/254



VP-1-K01 Kit Shown

### Non-Contact Voltage Test Pencils

#### Part No. Various

Use to detect the presence of voltage at outlets, lighting fixtures, circuit breakers, wires, and cables or to find a break in a wire.

- Bright LED and audible alarm if voltage is present
- ON/OFF switch and Auto OFF for longer battery life
- Convenient pen size fits into pocket or tool pouch
- Replaceable AAA batteries (Included)
- Full circuit self test

**Safe, Non-contact voltage detection**



GT-13



NCVT-3P



NCVT-4IR



Laser Pointer



NCVT-6

Part No.	GT-13	NCVT-3P*	NCVT-4IR	NCVT-6
Description	Non-Contact Voltage Detector with built-in Flashlight	Non-Contact Dual Range Voltage Detector with built-in Flashlight	Non-Contact Voltage Detector with built-in Infrared Thermometer (-30 to 250°C)	Non-Contact Voltage Detector with built-in Distance Measuring (20m)
VAC (V)	50-1000	Range 1: 70-1000 Range 2: 12-1000	12-1000	12-1000
Display Type	LED	-	Back-lit LCD Screen	Reverse Contrast
IP Rating	-	IP67	IP54	IP40
Measurement Category	Cat IV 1000 V rated	Cat IV 1000 V rated CE	Cat IV 1000 V rated CE	Cat IV 1000 V rated CE

\*NCVT-3 single range voltage detector also available - Contact TEN



Pouch (included)

### Mini SWER and Pole Voltage Tester

#### Part No. MW-SWER-POLE

Universal pocket-sized voltage tester designed for testing power poles of all heights or situations that require a manual variation in voltage distance detection.

Voltage Sensing Range		Hand Held 20volts - 10mm / Hand Held AC 50m - 500kV
Alerts	Visual	High Intensity LED
	Audio	Electromagnetic piezo - 85 dB @ 10cm
Dimensions (mm)		125.5H x 66W x 24D
Weight (kg)		0.12
IP Rating		IP 40
Power Supply		Field replaceable 9-volt alkaline battery
Accessories		Nylon Belt Carry Pouch (Included)

### Insulation and Continuity Tester

#### Insulation Resistance & AC/DC Voltage Tester - Klein

- Voltage Tester tests insulation resistance up to 4000MΩ @ 125, 250, 500 and 1000V DC
- Measures up to 1000V AC/DC, resistance and continuity
- Megohmmeter with test and lock buttons for simple insulation testing
- Warning alarm and high voltage icon for detection of voltage
- CAT III 1000V safety rating, as required by AS 5732:2022-4.4.10



Part No.	Safety Category	Dimensions (mm LxWxH)	Battery	Weight
ET600	CAT III 1000V	210.5 x 91.2 x 58.9	6 x AA (included)	0.6kg
Kit Includes	Owner's Manual, Case, Right Angle Test Leads, Heavy-duty Alligator Test Leads			

#### Insulation and Continuity Tester - Kyoritsu

##### Part No. 3132A

The Kyoritsu 3132A is a small and lightweight analogue insulation and continuity tester. With an AC voltage range of 600V, the unit is capable of testing insulation resistances using test voltages up to 1000V. A 1mA rated test current can be utilised at minimum resistance, as well as a 200mA measuring current on continuity testing.

##### Key Features

- 1 mA rated test current at the minimum resistance.
- 200mA short circuit current on continuity testing.
- Designed to meet IEC 61010-1 and IEC 61557 safety standard.
- Automatic discharge of circuit capacitance (automatically discharged after test).
- Live circuit warning buzzer and neon lamp.
- AC voltmeter with linear, easy-to-read scale



#### Cable Core Identifier

##### Part No. CCI-09

Coremaster identifies correct cable cores in underground or multi-core cables

- Only for use on de-energised cables
- LED indication, refer below for status displayed
- Easy to use and clear indication
- Diode set protects unit from insulation testers
- Colour coded fused leads: red, white and blue
- Continuous re-test as leads are swapped
- Auto power off with low battery indication
- Self test function
- Supplied in carry bag



##### Status Displayed

- 1) Phased
- 2) Swap A/B
- 3) Swap B/C
- 4) Swap A/C
- 5) Rotate ABC
- 6) Rotate CBA
- 7) Earth/Short Circuit
- 8) Low Battery

Part No.	Description	Wt (kg)
CCI-09	Cable Core Identifier (inc. diodes, leads & bag)	0.6
DIODESET-CC109	Replacement diode set	0.1





TSG-3 Test Probes



TC-20 Case

### Digital Multimeter - Greenlee

#### Part No. DM-820A

- True RMS for superior accuracy
- Measures voltage, current, resistance, capacitance and frequency
- Tests continuity and diodes
- Back-lit LCD with dual 10,000 count displays
- Data hold
- Beep jack warns when test leads are incorrectly inserted in current measurement terminals
- Automatic and manual range selection
- Relative offset mode to see changes in measurements
- Use optional USB Interface DMSC-9U for direct-to-PC logging
- Crest capture (Peak hold) plus recording of Max, Min, Max-Min Average
- Two voltage detection modes - Non-contact or using a single test lead
- One temperature measurement using a type K thermocouple
- Conductance measurement

Part No.	DM-820A
Amperage Measurement	600, 6000 $\mu$ A; 60, 600mA; 6, 10A
Voltage Measurement	60, 600 mV; 9.999, 99.99, 999.9 V
Resistance Measurement	600 $\Omega$ ; 6, 60, 600 k $\Omega$ ; 6, 60 M $\Omega$
Battery	(1) 9 V
Capacitance	60, 600nF; 6, 60, 600 $\mu$ F; 6, 25 mF
Conductance	99.99 nS
Display	Back-lit LCD With Dual 10,000 Count
Frequency Measurement	15Hz- 50kHz Sine Wave, 5Hz - 1MHz Logic Level Square Wave
Includes	(1) 9V Battery, Test Leads, Protective Boot, Carrying Case
Measurement Category	CAT IV, 1000 V
Standard	CAT IV, C/UL US Listed, TRUE RMS, CE Listed



### Digital Multimeter - Klein

#### Part No. MM720

- Multimeter with automatic ranging true root mean square (TRMS) technology for increased accuracy
- Tester measures up to 1000V AC/DC voltage, 10A AC/DC current and 60M $\Omega$  resistance plus temperature, capacitance, frequency, duty-cycle, test diodes and continuity
- Low Impedance (LoZ) mode for identifying and eliminating ghost or stray voltages
- CAT IV 600V Safety Rating
- Built to withstand a 2m drop
- For use in environments such as residential, business and light-industrial locations
- Low battery indicator
- Easily accessible battery and fuse replacement compartment
- Includes carrying pouch, test leads, alligator clips, thermocouple with adapter and batteries

Part No.	MM720
Current	10A AC & DC
Voltage	1000V AC & DC
Resistance	60 M $\Omega$
Battery	2 x AAA
Capacitance	6000 $\mu$ F
Frequency	1 - 500KHz
Display	LCD 6,000 Count
Ingress Protection	IP42
Standard	CAT IV 600 V - CAT III 1000V - CE - UKCA
Weight (kg)	0.41



## Clamp Meters - Greenlee

### Part No. CM-VariouS

- Also measures DC voltage, resistance, capacitance and frequency
- Tests continuity and diodes
- Back-light & relative mode for added versatility
- AmpTip™ increases accuracy on small wires and low current
- Two voltage detection modes - non-contact or using a single test lead
- Recording of Maximum, Minimum, and Average readings

### CM-1360 Features

- AC voltage measurement with digital low pass filter for accurate readings on variable frequency drives

### CM-1560 Features

- AC and AC+DC voltage measurements with digital low pass filter for accurate readings on variable frequency drives
- Peak-RMS measures motor in rush current
- Crest (peak hold) feature captures current or voltage peaks as short as 5 milliseconds

Part No.	CM-1560	CM-1360
Specification	Measures AC+DC current	Measures AC current
Amperage Measurement	60, 600, 1000 Amps AC	
Display	LCD, 6000 Count	
Includes	Voltage: 50/60Hz Current: 40 to 400Hz	
Jaw Opening (mm)	51	
Measurement Category	CAT-III 1000V, CAT-IV 600V	
Resistance Measurement	600, 6k, 60k Ohms	
Standard	CAT IV, C/US UL Listed, CE	
Voltage Measurement	600, 1000 Volts AC/DC	

## Loadtesters

### Loadtester - Cat IV 600V

#### Part No. LT240A15

The Loadtester is used as an electrical load on kWh power metres when testing to ensure the correct operation and functionality of the metres.

The Loadtester incorporates fused probes with silicon leads and is housed in a compact body. It is protected by an automatic thermal cut-out switch.

#### Specification

- Voltage: 240 – 250V max. 1Ø
- Load: 1100W – 4.5amp.
- Safety Rating: Cat IV 600V – Cat III 1000V.
- Compliant to: AS: 61010.1: 2003.
- Leads: Silicon with internal white wear indicator layer.
- Internal Fusing: 7amp.
- Test Probes: Cat III 1000V.
- Motor: 1100W with thermal cut-out.
- Cable Grommet: TPE 90A Shore.
- Body: PC-ABS Fire Retardant – spark finish.

### Loadtester - Starlogixs

#### Part No. SL-X-LB1800

- 1800W Load Bank
- The load bank has two settings with the following electrical specifications:
- Low Setting (1) = measured 3.7 AMP draw at 250VAC (925W)
- High Setting (2) = measured 7.1 AMP draw at 250VAC (1775W)
- The free probe of the load bank has an 8 amp ceramic protection fuse fitted inside



## Phase Sequencing and Rotation Indicators

### Phase Rotation Meter - Contact

#### Part No. PR3

Our Phase Rotation Meters have been designed to offer the highest Safety Rating CATIV 600V. TEN offers both contact and non-contact versions. Our Phase Rotation Meters are designed for Use with Utility workers, ASP Service providers, Industrial, Commercial and General Electricians.



#### Features

- Two functions in one unit: open phase and phase rotation and sequence.
- Lamps let you determine at-a-glance if phase is open
- Fused Test Leads for Safety
- Probes and alligator clips included
- Large size alligator clips for easy clipping onto switch-boards terminals
- Instruction manual and Soft Pouch Included
- CAT IV 600V Safety Rating
- Checks a wide range of 3-phase power sources.

### Phase Rotation Meter - Non Contact

#### Part No. PR3NC

#### Features

- The PR3NC is a Non-Contact phase detector with flashing LEDs and a beeping buzzer to show the detection of AC 3-phase sequence.
- Two functions in one unit : open phase and phase sequence detection.
- CAT IV 600V
- Convenient brightness switch to make the indication visible in dim areas or sunlight.
- Back cover magnets which attach the instrument to the distribution panel offer easy measurement.
- 3-Phase AC 75 to 1000V is fitted for detection.
- Detect frequency range is from 45 to 65Hz.
- Available with a 2m test lead - Part No. PR3NC-2M



### Phase Rotation Meter - Non Contact

#### Part No. HPST-Series

#### Features

- Non-metallic contact clips for AC70-1000V installations
- Magnetic back to safely secure the instrument on a panel & work handsfree
- Intermittent beeps signal positive phase
- Continuous tone signals reverse phase
- Low battery & power LED indicator's
- Auto shut off if no activity is detected after power is turned ON for 5 minutes



Part No.	Description	Includes	Weight
HPST-NC	Phase Sequence Tester	1 m Leads	1.0
HPST-HFPOBBB		Short Probes	1.1
HPST-HFPO.5BBB		Fused Probes	1.2



### INTERNALLY FUSED

## Supply Connection Tester - StarLogixs

Part No. SCT16-415-K

The SCT16-415 performs a test and measures volts and impedance in relation to the connected Active, Neutral and reference Earth to determine a safe or unsafe connection at the customers premises.

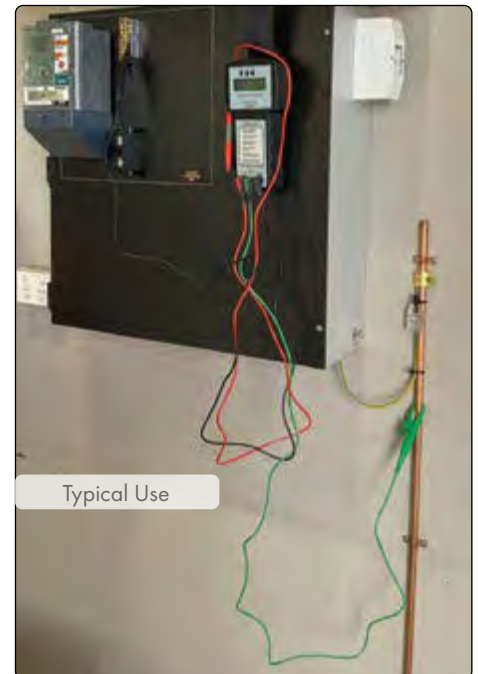
Performs a test between Active & Neutral and Earth & Neutral, and displays PASS (Green LED/one beep) or FAIL (Red light/two beeps) followed by the Voltage and/or Resistance results.

### Features

- Simple Operation (No Batteries Required)
- Rapid Test Time (2 full 50Hz cycles)
- Heavy Duty Load Bank Resistors
- Back-lit LCD display for poor ambient lighting conditions
- Bright LED's & Audible PASS/FAIL alarm
- Ergonomic Case
- Lead Set Cat IV 600V w/ Crocodile Clips and Probes
- Withstands exposure to 415V
- Internally fused 10A
- Enclosure sealing to IP65
- Design meets Cat IV 600V IEC/AS61010
- Designed & Manufactured in Australia



Backlit LCD Display



Typical Use



Supplied with complete set of high quality Cat IV connector cables



Ladder web strap supplied with in-built strong magnet



Input Frequency (Hz)	50 nominal
Test Duty Cycle	Measurements can be repeated every 20 seconds
Operating Temperature Range (°C)	-10 to 55
Maximum Relativity Humidity	80% max, non-condensing
Dimensions (mm)	210 (H) x 110 (W) @ display head 80 (W) @ body
Tester Weight (without leads) (g)	465

## Earth Testers

### Digital Earth Tester - Megger

**Part No. DET3TD**

Earth testing instrument from Megger offers a unique solution to your earth rod testing needs. The complete kit of instrument, test leads, stakes, batteries and calibration certificate are delivered in a tough polypropylene carry case.

**Features**

- IP54 rated
- 2 and 3 point testing
- Selectable 25 V or 50 V output
- Complete with lead and stake kit
- Simple one button operation
- Hard wearing carry case
- Delivered with calibration certificate

### Digital 3 Wire Earth Tester

**Part No. T2720**

**Features**

- Earth resistance tester for two or three electrodes
- 3½ digit 1999 count LCD
- Measures earth voltage to 200V
- Includes electrodes, long leads and simple push button operation
- Spare lead set: AL36RYGKIT



### Earth Clamp Resistance Tester - Greenlee

**Part No. CMGRT-100A**

Measure the earthing circuit performance without disrupting services. Fast and accurate "Stakeless method" to measure earth resistance. Includes customizable audio tone and visual alarms with three user defined settings for impedance, voltage and current.

**Features**

- Accessories included: molded carrying case, 4 x AA Batteries and calibration verification loop
- Non-contact voltage indication alerts the operator if voltage is present by an audible tone while displaying a "V"
- Earth circuit remains in service during testing
- Safety Category: CAT IV, 600V
- Memory stores up to 300 measurements
- Auto off after 5 min
- 35mm OD Cable capacity



SCAN or CLICK for instruction video



### Earth Clamp Resistance Tester - Megger

**Part No. DET24C**

The Clamp induces a test current into earth systems and measure earth resistance in multi ground installations without needing to disconnect the ground.

**Features**

- Accessories included: molded carrying case, 4 x AA Batteries & calibration check
- Bluetooth® stored test results transfer to PC
- Auto off after 5 min
- Measures ground resistance from 0.05 Ω to 1500 Ω
- Measures true RMS ground leakage current from 0.5 mA rms to 35 A rms
- Earth Circuit remains in service during testing
- Safety Category: CAT IV, 600V
- 37mmOD cable & 50mm Earth strap capacity
- Advanced memory functionality with download





### Digital Microhmeters

#### OHMSTICK-PLUS - Sensorlink

**Part No. 8-082XTPLUS**

The Ohmstik Plus takes accurate current and micro-ohm measurements from conductors, connectors, splices, and switching devices when placed directly on the energized asset.

The Ohmstik Plus is used to evaluate line splices, bolted terminals, taps, jumpers, and substation bus bars. Additionally, switches, fused disconnects, and normally open switches that have been open for long periods, may be measured just after closing.

- Reduce connector failure rates
- Measure and evaluate connections on transmission and distribution conductors
- Verify resistance on closed switch contacts
- Check taps and jumpers for connection reliability
- Evaluate aging of connections



Part No.	8-082XTPLUS	Carry case, fused & adjustable probe, angle adapter	
	8-084	Wide Jaw Ohmstik, carrying case	
Sensor Opening (mm)		63.5 (8-082XTPLUS)	98.5 (8-084)
Weight (kg)		1.10 (8-082XTPLUS)	1.81 (8-084)
Frequency, 50Hz		47-53	
Measurements		Nine reading sets	
Range of Operation	Voltage Phase to Phase	90VAC - 500kV	
	True RMS Amps	1-1400 A	
	Micro-Ohms	5-2500 $\mu\Omega$	
Resolution	Amps 0.9-99.9A	0.1A	
	Amps 100-1400 A	1A	
	Micro- $\Omega$ 1-999	1 $\mu\Omega$	
	Micro- $\Omega$ 1000-2500	1.0 $\mu\Omega$	
Accuracy	Current	$\pm 1\%$ , $\pm 1A$	
	Micro- $\Omega$ Absolute	$\pm 2\%$ , $\pm 2 \mu\Omega$	
	Micro- $\Omega$ Repeatability	$\pm 1\%$ , $\pm 2 \mu\Omega$	
Battery		9V Alkaline or Lithium	

#### Insulation Resistance Tester - Megger

**Part No. MIT1025-AU**

For diagnostic testing and maintenance of high voltage electrical equipment

CAT IV rated, 10 kV, insulation resistance testers with a full suite of test modes, including a ramp test plus advanced memory functions with recall to screen, RTC for time/date stamp of results, and USB cable interface to PC/PowerDB



MIT1025-AU

#### Digital Microhmeter - Megger

**With Lith-Ion Battery**

**Part No. DLRO10HD**

The Megger Ductor™ DLRO10HD brings new standards to low resistance measurement. A fully automatic instrument, selecting the most suitable test current, up to 10A DC to measure resistance from 0.1  $\mu\Omega$  to 2000 $\Omega$  on one of seven ranges.

The DLRO10HD is built in a strong, lightweight case that is equally at home in the field or in the laboratory. Light enough to be worn around the neck and small enough to be taken into areas which were previously too small to access. DLRO10 uses a large, bright 4-1/2-digit LED display.



DLRO10





### Digital Microhmmeter - Sonel

#### Part No. MMR-640

The MMR-640 meter is designed to measure very low resistance of resistive objects. This product is made to be used in power plants, railways and maintenance companies to measure resistance of breakers, contacts, earthing conductors, equipotential bondings, welded and soldered connections and bolted connections.

- Measurement of very low resistance
- High immunity to disturbances
- Large touchscreen
- Automatic measurement mode
- Auto-ranging



IP67

### Loop Impedance Meter

#### Part No. WMGBMZC304

- Short circuit loop measurement
  - Short circuit loop impedance measurement in networks with nominal voltage: 220/380V, 230/400V, 240/415V, with frequency 45...65Hz
  - Short circuit loop impedance measurement with 15mA current, without triggering RCD
- Low voltage resistance measurement of protective circuits and junctions
  - Measurement of resistance with  $\pm 200$ mA current,
  - Calibration of test leads – possibility of using any length of test leads
  - Low current resistance measurement with acoustic signaling
- Rapid check for the correct connection of PE wire using touch electrode. Measurement of mains voltage and frequency.
- Power supply from LR6 batteries or NiMH accumulators (option)
- The device meets the requirements of IEC 61557 standard



ETL20SS

ETL20SSL

### Earth Trailing Lead Reels

#### 20m - Independent Earth Trailing Lead

Developed with Australian utilities the Earth Reel has a 1000V insulated handle covering a strong stainless steel rod to eliminate a requirement in some regions to cover the spike. The tapered auger assists with easy driving into the variety of soil densities encountered in the field. Incorporated into the earth reel is a custom brass bushing running the full width of the reel, this runs smoothly on the stainless steel shaft ensuring continuous reliable continuity.

- Green flexible 1.0mm Cable 0.6/1kV
- Adjustable drag system w/out tools
- Option for direct connection via 4mm
- stackable Banana plug
- Brass Bushing for extra Low Resistance Connectivity

Part No.	Stake Length	Stake Type	Lead Length (m)	Weight
ETL20SS	225	Spike	20	1.1
ETL20SSL	645	Spike	20	1.2



#### 50m - Earth Trailing Lead Reel

##### Part No. ETL50

The 50M Earth Trailing Lead is a high quality portable cable reel supplied with 50 metres of flexible cable 1.5mm 30/0.25. Earth Trailing Lead Connects directly to most brands of test equipment. Equipped with one alligator clip and two 4mm banana plugs. It is also supplied with a temporary independent earth stake. The cable is calibrated and resistance is marked on the Trailing Lead. **The Earth Trailing Lead is also available in 100M Version.**



## High Voltage Ammeters

### HV Ammeter - HDE

**Part No. HVA-2000H**

The HVA-2000H is a high voltage digital ammeter designed for taking AC current measurements up to 2000 amps. The HVA can be used on system voltages up to 500kV. The large, bright LED display allows real time monitoring of current from the longest of telescoping hot-sticks in all lighting conditions. The unit will store the last 4 readings.

#### Features

- Measures AC current, 25-500Hz
- Use in overhead and underground applications
- Take spot-load checks with ease
- Verify phases are balanced
- Read the measurement in real time from the large digit display
- Display is easy to read in bright or dark conditions
- Auto shutoff with low battery function
- Stores the last four current readings
- Small and lightweight, easy to manage on an extension hot-stick - 0.82 kg
- Dual hot-stick connections – universal spline and shotgun stick
- Use on conductors up to 70mm
- Accuracy 1% of reading
- Includes rugged plastic carry case



**Quickly take readings on conductors up to 500kV (phase to phase)**

### Ampstik Plus - Sensorlink

**Part No. Various**

The Ampstik+ provides reliable measurements, giving line personnel the confidence to make immediate decisions while working and troubleshooting in the field.

The unit measures in every electric utility setting with a linear current sensor to accurately measure 1A to 5000A, while in voltage environments up to 500kV.

The opening of the amp sensor is electronically closed, while external currents are electronically rejected.

This design enables the user to measure an individual conductor within close proximity to adjacent conductors without interference errors.

#### Features

- Sample and hold four amp readings
- Open CT rejects stray magnetic fields
- Open Jaw for Easy slip on and off the conductor
- No position sensitivity
- Back-lit LCD for low-light environments
- Overhead and underground use



8-024PLUS Wide Jaw shown on Pad-mounted Transformer

Resolution
1-99.9Amps - 0.1A
100-1999Amps - 1A
2000-5000Amps - 0.01kA

Part No.	8-024 PLUS	8-020XT PLUS
Description	Wide Jaw Ampstik+	Ampstik+
IP Rating	IP67	
Voltage (kV)	0-500	
Current Amps (A)	0-5000	
Jaw Opening (mm)	100	63.5

Accuracy (%)	± 1%, ± 2 counts	
Frequency (Hz)	47-53	
Stores Readings	4	
Display (Digit)	3.5	
Housing	Fire Resistant & Waterproof Polycarbonate	
Attachment	Universal Stick Fitting	
Battery	9V Included	
Carry Case	Sold separately	
Weight (kg)	1.18	0.79

### Electric Haul Truck Discharge Kits

#### Volt Meter & Discharge Kit AC System DC Link Capacitor

Part No. RCDC1KAU-KM-KIT

Used to safely drain capacitive charge after a circuit has been de-energised

Detector used to properly measure the AC system DC link voltage before performing any work on any high voltage components, and to provide a discharge procedure for the AC system DC link capacitors in the case of failure of the built-in discharge circuits



### Customisable kits to suit your electric vehicle

#### Sample Kit Includes:

- Universal Digital Voltmeter with Second Probe
- 3.65m Coiled Interconnecting Cable
- 2 x Brass Cup Probe Tips
- 1 set Discharge Probes
- 2 x 600mm Extension Sticks
- 2 x 600mm Universal Sticks
- 2 x Hand Guards
- Class 1 Insulating Gloves
- Leather Outer Gloves
- Cotton Inner Gloves
- Carry Case



### CHANCE®

### Equipment Specific Testers

#### Leakage Current Monitor - Chance

Part No. C407-0025

To alert utility line-workers of over current conditions on devices such as insulated ladders and EWP booms, the Chance Sentinel sounds an alarm if leakage current reaches a pre-set level.

- Audible warning eliminates the need to watch the actual current level that is continuously displayed on the digital LCD screen
- Simple operating steps printed on the inside lid panel, and a detailed instruction sheet is included
- Kit includes one coaxial cable and battery, two jumpers, and three hose clamps for connections to two or three rail ladders
- Brackets on box secure to earthed structure up to 15.8mm thick, such as a transmission tower



### RIDGID

#### SeekTech Utility Locator - RIDGID

Part No. SR-20

The SeekTech locator is a lightweight, rugged receiver that locates and provides information for faster more accurate locations of underground utilities.

#### Features

- Target line and guidance arrows quickly identify distortion.
- Trace any frequency from 10Hz to 35kHz.
- Proximity signal and signal strength help work through difficult locates.



Part No.	Description	Includes	Weight
SR-20	SeekTech Line Locator	Locator and carry case	1.8
SR-20-KIT	SeekTech Line Locator kit	SR-20 - above Line Locator ST-305 Transmitter 72963 - Inductive signal clamp	3.7



### Insulator Tester

#### Part No. HV-IT-40

- Used for field insulator assessment up to 40kV
- Measures voltage across live insulator string which enables quick and accurate identification of faulty insulators
- Digital display
- Universal attachment
- Rugged design with ABS moulded case



Part No.	Measurement Range (kV)	Accuracy (%)	Temperature Conditions (°)	Temperature Dependence (%)	Dimensions (mm)	Battery	Wt (kg)
HV-IT-40	0 – 40 DC Resolution 100V 0 -28 RMS (Factory Calibrated for RMS setting)	± 5 (50-60Hz)	Test = 20 ± 3 Working = -5 to 50 @ 0 to 80% Relative Humidity Storage = -20 to 70 @ 0 to 90% Relative Humidity	Typical = 0.05 of reading/ °C Max = 0.1 of reading/ °C	Without Probe = 360 x 230 x 150 Carry Case = 450 x 370 x 250	1 x 9V	Unit = 1.3 Carry Case = 3.6



### Transformer Tester - TILT II - HDE

#### Part No. TL-MAN-N

- Quick and easy check for opens or shorts on transformers before energizing
- Provides clear indications of open circuits, short connections and confirmation that the test results are OK
- Tests overhead, pad-mount and other distribution transformers
- Tests the primary and secondary sides of de-energized transformers without disconnecting
- Helps prevent line workers from installing a fuse on a shorted transformer



### Transformer Tester - ClearTest - HDE

#### Part No. CT-300

The ClearTest™ Transformer Tester provides quick and easy tests of de-energised power distribution system transformers. Single push button that provides a clear indication of open circuits, short circuits, including shorted turns or shorted windings and confirmation that the test results are OK.

It briefly energises the transformer and takes a snapshot of the transformer condition by measuring the voltage, current and power factor of the test signal.

ClearTest looks both inside and outside the transformer

- Finds internal transformer defects before energising
- One tester for all transformer types
- Test the LV & HV sides of de-energised transformers without disconnecting
- Tests all connections from transformer to meter
- Improve SAIDI statistics by quickly testing and getting the transformer back in service
- Built-in self test
- Prevents line workers from installing a fuse on a shorted transformer
- Quickly verifies the LV connections are not shorted
- Powered by two 9V batteries
- Audible alarm confirms successful test
- A magnet is included to hold the ClearTest in place while testing





### Battery Powered Hot Stick Tester - Hastings

**Part No. 7707**

Utilising a 2,500 volt output, the meter is calibrated to indicate the leakage values that would be present if 75KV were applied to a 300mm section of the fibreglass for the wet test and 100KV per foot for the dry test.

#### Features

- Battery or USB operation
- Push Button switch for wet or dry tests and a dual range scale which gives the operator leakage current values in micro amps
- Portable and lightweight for easy use
- Meets OHSA 1910.269
- The tester is designed to protect the operator by enabling in-field pre-start stick tests
- The tester comes complete with a padded carrying case and instructions.
- A test bar is also provided to ensure the tester is working properly



**Battery Powered**

Test Bar

Protective carry case

Part No.	USB Charging Cord Part No.	Operating Temperature	Battery Life	Charging time	Dimensions (mm)	Wt (kg)
7707	A30431	0-40 (°C)	6 Hrs	1.5 Hrs	195 (H) x 100 (W) x 94	2.4



### Rope Tester, Liveline - HDE

**Part No. RT-10**

The Rope Tester is designed to test live line ropes for dielectric integrity in the field. Ropes a diameter ranging from 13mm to 38mm can be tested.

#### PORTABLE - DURABLE - EASY TO USE

#### Features

- Continuously test any length of rope
- Conductive condition is displayed by red (bad) LED's
- Powered by 2 x 9VDC replaceable batteries
- Audible buzzer sounds if defective sections of rope is found
- Small, portable and easy-to-use
- Magnetic Mounts at rear

**The manufacturer recommends that ropes be tested as close to the time of use as possible**

**Test ropes 13 - 38mm for dielectric integrity**

Variations in humidity over time make it possible for the same rope to test good at one time and bad at another time.



Mounting Magnets on the Rear of the RT-10 Rope Tester

Part No.	Rope Capacity (mm)	Nominal Output	Battery	Current Threshold "Bad Rope" Indication	Dimensions (mm)	Wt (kg)
RT-10	13 - 38	10(VDC)	2 x 9VDC Lithium-Ion	15µA	195 (H) x 100 (W) x 94 (D)	0.91



### POLUX 5

## Power Pole Testing Equipment - POLUX 5

Part No. POLUX-5

### Wood Pole Condition Assessment

With more than 5 million timber power poles in service in Australia, managing the life of these assets and controlling capital expenditure is a top priority for any distribution utility. For many years, reliable data from fast, non-destructive hardwood pole testing has been the holy grail for asset managers. TEN is excited to be working with Concept Bois Technology (CBT) on their 5th generation Polux non-destructive pole testing technology here in Australia. Polux5™ is a lightweight, handheld testing unit that ascertains the wood density profile with moisture content to evaluate the current state of timber degradation. Backed by many years of data collection and the PICUS software platform for in-field data collection, the asset management benefits and productivity gains are extensive.

### POLUX 5 Process

POLUX 5 is set on the pole thanks to a screw. The energy is recorded during the whole screwing process. The angle of the device on the pole is stored.

Once the device is set on the pole, the measuring pins are automatically driven within the pole and record both the penetration force and the energy required. Moisture content is stored when the measuring pins are fully within the wood.



**Measures wood Density to ascertain a residual strength reading in MPa**

### In-field Data Collection

Picus software is entirely designed for Polux and any other data collection including GPS, visual inspection, pictures, Datamatrix etc.

**Contact TEN for further information on the POLUX System**



SCAN or CLICK to view Timber Pole Density Testing

Dimensions (mm)	394 x 160 x 82
Weight (kg)	2.8
Battery	18V Li-Ion
Wireless	Bluetooth
Inclinometer	Integrated





## Go-Pro™ Camera Stick Mounting Accessories

### Part No. Various

Modeled after the HASTINGS Tel-O-Pole series, this specially engineered hot stick allows for a Go-Pro™ Action Camera to be mounted and utilized for quick, easy, and safe inspection of and around energised lines, transformers, insulators, poles, buildings, bridges and other assets. Utility workers can use the camera to wirelessly stream and record live picture and video to the ground with any iPhone, tablet or android device compatible with the Go-Pro Application. The hot stick may even allow inspections to be completed without the use of a bucket truck, lift, or climbing gear.

### Features

- Lightweight
- Fibreglass Stick Tested at 100kV volts per 300mm
- Camera Assembly Tested up to 40kV volts
- Extended 9.15m / Retracted 1.6m
- The camera mount adapter can be used in any position & is included with the R-30-G stick
- The Clamp Claw Mount\* clamps to any hot stick
- Camera Light\* can be used on Camera Mounting Insulated Stick or the Clamp Claw Mount
- Smart Phone Mount\* has adjustable strap to fit on most hot sticks.

\* Sold Separately



Clamp Claw  
Go-Pro Mount  
A30414



Go-Pro Camera Mount  
R-30-G



Go-Pro with 5455-10-GOPRO  
Rising Sun attachment



Smart Phone Mount - A30413



5455-10-GOPRO



10-150  
Camera Light



### Ordering Information

Part No.	Description	Wt (kg)
R-30-G	Camera Mounting Insulated Hot Stick	1.80
A30413	Smart Phone Mount	0.11
A30414	Clamp Claw Mount	0.22
10-150	Camera Light	0.11
C-35	Canvas Stick Bag	0.26
5455-10-GOPRO	Rising sun attachment connects direct to camera	0.67

Go-Pro Action Camera and phone not included

## Rotary Angle Meter - Dual Scales

### Part No. SLANT100

Rotating dual-scale/angle meter is for fast measuring, setting or replicating of pitch or angles

- Fast & Reliable
- Rotate Thumb Screw until Vial is Level
- Also available in Magnetic Version





### Digital Cable Height Meter - Suparule

The Suparule Conductor Height Meter is a handheld meter for measurement of sag, height, and CTG clearance for overhead conductors and cables. The Suparule Cable Height Meter utilises ultrasonic signals to determine the height of overhead cables up to 23m.

#### Features

- Measures up to 23m
- Easy to use with LCD Display, one man, one button operation
- Long life battery capable of 50,000 measurements
- Auto power off after 3 minutes
- Inherently safe: No physical connection to cables or wires required to obtain measurement
- Extremely Accurate: measures to accuracy of 0.5%
- Compact size: Its lightweight and hand-held portability allows easy transport and multiple measurements
- Maintenance-free: proven reliability in the field, no adjustments required
- 9v Battery Included

**Contact TEN for further Suparule models & option**

#### Ordering Information

Part No.	Description
S600E	Cable Height Meter - 6 Wires Up to 23m Includes: Cable Height Meter & Rubber Boot & Holster



### Conductor Diameter Gauges

#### Conductor Diameter Sliding Gauge - TEN

HDPE slide gauge quickly & easily identify conductor OD

- Designed for Australian AL, CU & ACSR conductors
- Measure Live Conductors
- For conductors 4.0 - 30mm Ø
- Fits universal sunrise fitting

**Reduce Incorrect Conductor Identification**



Part No.	Dimensions (mm)	Wt (kg)
CG-430-AU	104 x 287 x 10	0.26

#### Conductor Diameter Gauge - AL, CU & ACSR - TEN

##### Part No. Various

Quickly & easily identify common overhead electrical distribution conductor or wire sizes in AL, CU & ACSR. Markings include conductor name, stranding and overall diameter.

- Hole in base for use with a shotgun stick and hanging storage
- Imperial and metric sizes included
- Precision machined from lightweight aluminium alloy



Part No.	Conductor Range	Dimensions (mm)	Wt (kg)
CG-EQL-ALCU	Copper 7/.064 - 4.87mm to 19/2.75 - 13.8mm Aluminium Locust - 7/.093 - 7.08mm to Taurus - 19/4.75 - 23.80mm	257 (L) x 91 (W) x 14 (D)	0.75
CG-EQL-ACSR	ACSR Quince - 5.25mm to Wolf - 18.13mm	209 (L) x 91 (W) x 14 (D)	0.65



Quick Check "T" shown testing tower guy with phone APP

## Dynamometers

### Tension Meter - Quick-Check "T" - Dillon

The Dillon Quick Check-T Tension Meter quickly measures tension in cable tower guy wires, overhead lines and road barrier cables. It reduces time on the job site by not having to change sheaves.

- Custom mobile app
- Automatic report generation
- Calibration check rod
- Supplied with HD Case



Part No.	AWT05-100370	QC-T
No. of Calibrations	16 Tower guy + Test Rod	1 x Test Rod
Calibrations (") Up to 20	(1x7) 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 (1x19) 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1	1 only, for test rod. Specify wire sizes
Capacities (kN/kg)	45 /4500 in Kilogram force & Newtons Units	
Wire sizes mm (")	4.75 to 25.4 (3/16 to 1)	
Weight (kg)	5	

### Digital Dynamometers - EDJunior - Dillon

#### Part No. EDJ Series

- Easy to read wide angle 26mm Back-lit LCD with max hold feature
- Soft key interface with programmable functions
- 7:1 safety factor for all capacities

**EDX & EDJ  
IP55**

Part No.	Capacity (T) (0.2% Accuracy)	Increments (kgf)	Dimensions (LxWxDmm)	Wt (kg) with Shackles
EDJR-1T	1	1	312 x 127 x 52	1.8
EDJR-2T	2	2	269 x 127 x 75	3.9
EDJR-5T	5	5	289 x 135 x 102	6.5

Other sizes available. Contact TEN for further information

### Digital Dynamometers - EDXtreme - Dillon

- High-resolution dot-matrix back-lit LCD display offers large 26mm numbers
- All units include calibration certificate, manual and batteries
- Radio or Hardwire Communication (RS-232 or RS-485)
- Include Remote Configuration, Data Acquisition & Single Point Monitoring of Multiple Units.

Part No.	Capacity (T)	Increments (kgf)	Dimensions (mm)	Wt (kg) Shackles
EDX-1T*	1	1	269 x 127	3.9
EDX-2T*	2	2	269 x 127	3.9
EDX-5T*	5	5	289 x 135	6.0
EDX-10T*	10	10	291 x 133	17.0
<b>Communicator II - (Includes case &amp; batteries)</b>			241 x 127	2.0

\* EDX-Models are supplied Radio Ready and include Rated Shackles

### Digital Dynamometers - EDXtreme Blue - Dillon

The EDXtreme Blue is the latest Dillon dynamometer, allowing for wireless use through a Bluetooth® connection with an Android or iOS device.

- 7:1 factor of safety
- Superior strength and corrosion resistance
- Environmental Rating: IP68
- Accuracy: 0.1% of capacity up to EDX-10T

Part No.	Capacity (T)	Increments (kgf)	Dimensions (mm)	Wt (kg) Shackles
EDXB-1T*	1	1	406 x 178	4.3
EDXB-2T*	2	2	406 x 178	4.4
EDXB-5T*	5	5	406 x 178	5.6
EDXB-10T*	10	10	553 x 279	16

\* EDX Blue - Models are supplied with Rated Shackles



EDJ & EDX Supplied with ABS plastic carry case



Communicator II



**EDX-Blue  
IP68**



Bluetooth® connection with an Android or iOS device





### Mechanical Dynamometers - Nagaki (NGK)

NGK Dynamometers are lightweight, compact and plated to resist corrosion. All models feature a large face dial for easy reading of measurements.

- Made in Japan from Japanese components
- Precise measurement of tension and loads
- Kilogram/force (kN) dial display
- Accuracy  $\pm 3\%$
- Supplied with In-Service Date sticker



AS-30 Model

Leather Case (Included)

Part No.	Capacity (kN/T)	Graduation (Gauge Increments) (N)	Attachments	Dimensions (mm)			Wt (kg)
				A	B	C	
AS-3	3/0.3	50	Eye-Clevis	110	65	16	0.7
AS-10L	10/1	200	Eye-Eye**	135	65	28	1.2
AS-20L	20/2	500	Eye-Eye**	135	65	28	1.6
AS-30	30/3	500	Eye-Eye	150	80	28	2.0
AS-50	50/5	1000	Eye-Eye	260	95	28	3.0
AS-100	100/10	2000	Eye-Eye	360	100	38	7.2

\*\* 1 & 2 Tonne versions also available with Eye-Clevis attachments. Use Part No's AS-10 & AS-20

### Mechanical Dynamometers - Dillon

It is used for such diverse jobs as suspended weighing, mounting cables for bridges, adjusting tension on guy wires, tensioning conductor.

- Accuracy  $\pm 0.5\%$  of full range
- Max hold feature
- Accurate readings from varying sight lines with fog and scratch resistant dial
- All units include calibration certificate, manual & In-Service Date sticker
- 250mm dial size as special order



Part No.	Capacity (T)	Kg Division	Ultimate Safety Factor
125mm Dial			
30006-0134	0.5	5	5:1
30006-0159	1.0	10	5:1
30006-0126	2.0	20	5:1
30006-0167	4.0	25	5:1

### Digital Bluetooth Dynamometers - BlueMax

BluemaxUSA dynamometers, the smallest, lightest & most reliable dynamometers. High viewable accuracy - Reliable wireless communication. View on your mobile device. Long life wireless rechargeable battery offering up to 20,000 hrs operation.

- Material: Titanium Ti6Al4V
- Battery: Lithium Polymer
- Accuracy:  $\pm 1\%$  at full scale
- Environmental Rating: IP67
- Communications: Bluetooth LE - BLE broadcasting or direct GAT connection up to 100m
- Supplied with hard case



2T unit size comparison to mobile phone

Part No.	Capacity (t)	Range (kg)	Dimensions (mm)	Weight (g)
2000SL	1	In increments of 0.5kg from 25kg	97 x 52 x 17	160
4400SL	2		97 x 52 x 17	160
11000SL	5		120 x 66 x 19	210
22000SL	10		140 x 73 x 28	360



- PED's (Portable Earthing Devices)
- Earth Sets & Sticks
- LV & HV Temporary Disconnect Switches, Bonds & Clamps
- LV & HV Bonds & Jumpers
- Equipotential Mats
- Earth Rod Drivers
- Stringing (Rolling) Earths

## **EARTHING, JUMPERS & SWITCHES**



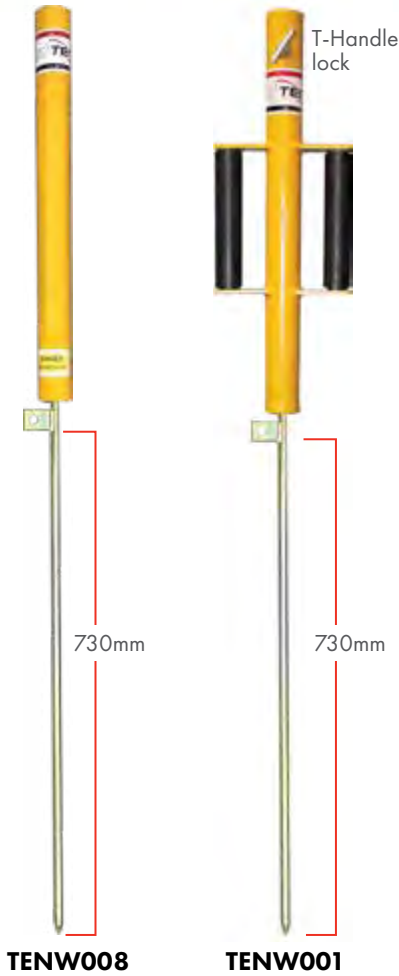


**NOTES**

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## Temporary Earth Stake - TEN

Hand drive the Earth stake for temporary earthing applications.

### Features

- Slide hammer drive
- T-Handle lock screw secures sliding shaft for safety, transport and storage (TENW001)
- Non-slip rubber hand grips (TENW001)
- 16mm Stainless steel rod
- Heavy duty top bash cap
- Chiseled tip for easy driving
- Drive rod at a safe working height, minimise risk of back injury
- No pinch points - internal hammer design
- 730mm to attachment point

Earth attachment



Earth clamp attachment



Part No.	Length OAL Extended/Retracted (mm)	Attachment Point (mm)	Rod OD (mm)	Wt (kg)
TENW001	1820 / 1340	730	16	6
TENW008				5



## Earth Rod Drivers - iTOOLco

### Part No. Various

Safely drive 9.5mm, 12.7mm, 14mm, 16mm and 19mm Earth rods into the ground in under a minute with iTOOLco's Ground Rod Dawg™. Once the rod is driven down far enough the tool can be used to hammer from top to finish the driving.

### Features

- Hardened tool steel construction for long life
- Multiple size rods can be driven
- SDS Max driver bit for positive connection and secure driving of rods



Drive the rod down to a comfortable height



Then complete the driving by hammering from the top

Part No.	Description	Earth Rod Size (mm)	Driver shaft
GRD01	Earth Rod Driver	12.7 to 19	SDS Max
GRDXL34		19	Demo Hammer
GRDXL01		25	





### HV Switch Assemblies

**STEP 1**

Select Your Switch Type (tick to select)

\*Jumpers, Bonders and Clamp Assemblies are for "TEMPORARY USE ONLY" and should not be left exposed for extended periods in outdoor conditions

- All switches labelled with rating, part number and serial number

	<input type="checkbox"/>		<input type="checkbox"/>
<b>ALTD06200R</b>		<b>ALTD06200RL</b>	
600A, 38kV, 200 BIL, 66kN, with hooks - CHANCE		600A, 38kV, 200 BIL, 66kN, with load break arc chute & hooks - CHANCE	



AL-2TON-GRIP-L






The NGK 2T Locking Grip (AL-2TON-GRIP-L) is ideal for holding conductor tension whilst installing Temporary switches  
See Pulling & Hauling Section for full details

**STEP 2**

Select Your Cable

(tick to select)

Replacement Arc Chute Assembly  
Part No. E816-0228P

				
<b>1kV (LV) Dbl Ins Orange/White</b>	<b>1kV (LV) Clear</b>	<b>15kV (HV) Orange</b>	<b>25kV (HV) Orange</b>	<b>35kV (HV) Orange</b>
35mm <sup>2</sup> - 172A <input type="checkbox"/>	1/0 - 250A <input type="checkbox"/>	1/0 - 250A <input type="checkbox"/>	1/0 - 250A <input type="checkbox"/>	1/0 - 250A <input type="checkbox"/>
50mm <sup>2</sup> - 217A <input type="checkbox"/>	2/0 - 300A <input type="checkbox"/>	4/0 - 400A <input type="checkbox"/>	2/0 - 300A <input type="checkbox"/>	
70mm <sup>2</sup> - 273A <input type="checkbox"/>	4/0 - 400A <input type="checkbox"/>			
95mm <sup>2</sup> - 329A <input type="checkbox"/>				

Contact TEN if you require an AMP Rating not listed

Choose a standard length of cable or custom length

1 metre  2 metre  3 metre  Specify Custom Length  metres








Please Note: Some cable sizes may incur a minimum order length - Please contact TEN for further information



**STEP 3**

Available Clamps

(tick to select)

Due to metric and AWG cable types, not all combinations of cable and clamps are available, TEN will advise at time of request

						
<b>BPL12</b>	<b>USC12-H19</b>	<b>C600-0197</b>	<b>10476</b>	<b>11190-A</b>	<b>13768</b>	<b>2270</b>
5-19mm, screwdriver handle, M12 hole	5-19mm, 19mm hex nut drive, M12 hole	Duckbill, snap-on, 4-38mm, 400A, threaded ferrule, CHANCE	Duckbill, snap-on, 4-30mm, 400A, threaded ferrule, HASTINGS	Screw type handle, serrated jaw, 3-32mm, 400A, bolted ferrule, HASTINGS	Gloving, clear, 4-25mm, 400A continuous, threaded ferrule, HASTINGS	Gloving, pair, Orange, 4-32mm, 400A continuous, threaded ferrule, Salcor SALISBURY
Includes Lugs			Includes Ferrules			

	
<b>TENA511</b>	<b>TENA512</b>
Jaw to Eye style (J-E), Welded to ratchet podger, Folding handle	Jaw to Jaw style (J-J), Welded to ratchet podger, Folding handle

CLICK or SCAN the QR Code to download a copy of this form



**STEP 4**

Email this form to [sales@tengroup.com.au](mailto:sales@tengroup.com.au)

## CONTENTS

### MV & LV Jumpers and Bonders

#### Customise Your Jumper Assemblies

TEN custom assembles a range of common Jumpers, Bonders & Switches

**STEP 1** Select Your Jumper/Bonder Type (tick to select)



**STEP 2** Select Your Cable (tick to select)

<b>1kV (LV) Dbl Ins Orange/White</b>
35mm <sup>2</sup> - 172A <input type="checkbox"/>
50mm <sup>2</sup> - 217A <input type="checkbox"/>
70mm <sup>2</sup> - 273A <input type="checkbox"/>
95mm <sup>2</sup> - 329A <input type="checkbox"/>

<b>1kV (LV) Clear</b>
1/0 - 250A <input type="checkbox"/>
2/0 - 300A <input type="checkbox"/>
4/0 - 400A <input type="checkbox"/>

<b>15kV (HV) Orange</b>
1/0 - 250A <input type="checkbox"/>
4/0 - 400A <input type="checkbox"/>

<b>25kV (HV) Orange</b>
1/0 - 250A <input type="checkbox"/>
2/0 - 300A <input type="checkbox"/>

<b>35kV (HV) Orange</b>
1/0 - 250A <input type="checkbox"/>

Contact TEN if you require an AMP Rating not listed

#### Choose a standard length of cable or custom length

1 metre  2 metre  3 metre  Specify Custom Length  metres

Please Note: Some cable sizes may incur a minimum order length - Please contact TEN for further information

**STEP 3** Available Clamps (tick to select)

<b>BPL12</b>	<b>USC12-H19</b>	<b>C600-0197</b>	<b>10476</b>	<b>11190-A</b>	<b>13768</b>	<b>2270</b>
5-19mm, screwdriver handle, M12 hole	5-19mm, 19mm hex nut drive, M12 hole	Duckbill, snap-on, 4-33mm, 400A, threaded ferrule, CHANCE	Duckbill, snap-on, 4-30mm, 400A, threaded ferrule, HASTINGS	Screw type handle, serrated jaw, 3-32mm, 400A, bolted ferrule, HASTINGS	Gloving, clear, 4-25mm, 400A continuous, threaded ferrule, HASTINGS	Gloving, pair, Orange, 4-32mm, 400A continuous, threaded ferrule, Salcor SALISBURY
Includes Lugs		Includes Ferrules				

\*Jumpers, Bonders and Clamp Assemblies are for "TEMPORARY USE ONLY" and should not be left exposed for extended periods in outdoor conditions

#### Notes

**STEP 4** Email this form to [sales@tengroup.com.au](mailto:sales@tengroup.com.au)



SCAN or CLICK to download a copy of this order form

### LV Jumpers and Bonders

#### Common LV Jumper Assemblies



- Double Insulated LV (0.6/1kV) Cable
- Highly flexible Class 6
- Lugged ends
- 5-19mm Screwdriver Handle Clamps
- 2m length Standard
- Custom lengths on request



Part No.	Cable Type	Description
TENA915	35mm <sup>2</sup> Orange Double Insulated	Jumper, LV, 1kV, 172A, 2.0m leads, 2 x 5-19mm Screwdriver handle clamp
TENA302	50mm <sup>2</sup> Orange Double Insulated	Jumper, LV, 1kV, 217A, 2.0m leads, 2 x 5-19mm Screwdriver handle clamp
TENA305	70mm <sup>2</sup> Orange Double Insulated	Jumper, LV, 1kV, 273A, 2.0m leads, 2 x 5-19mm Screwdriver handle clamp

#### Common LV Bonder Assemblies



- Double Insulated LV (0.6/1kV) Cable
- Highly flexible Class 6
- Lugged ends
- 4 or 5 x 5-19mm Screwdriver Handle Clamps
- Custom lengths on request



Part No.	Cable Type	Description
TENA701	35mm <sup>2</sup> Orange Double Insulated	Bonder, LV, 1kV, 172A, 1.5m leads, 5 x 5mm-19mm Screwdriver handle clamps
TENA702	70mm <sup>2</sup> Orange Double Insulated	Bonder, LV, 1kV, 270A, 1.5m leads, 4 x 5mm-19mm Screwdriver handle clamps
TENA703	70mm <sup>2</sup> Orange Double Insulated	Bonder, LV, 1kV, 270A, 1.5m leads, 5 x 5mm-19mm Screwdriver handle clamps

\*Jumpers, Bonders and Clamp Assemblies are for "TEMPORARY USE ONLY" and should not be left exposed for extended periods in outdoor conditions

#### Also Available

**HV Switch Assemblies**





### Jumpers Insulated/Protected - 15-69kV



- 15kV rated cable is encapsulated in a 44mm OD fiberglass tube. The fiberglass tube gives additional insulation and mechanical protection for jumpering switch gear, reclosers and cutting in double dead-ends.
- Cable can be removed for inspection and replacement
- Fibreglass hanger brackets allow clamps to be secured for installation and removal of jumper
- Can be installed on wire sizes from 3mm diameter up to and including 32mm diameter
- Ratings - 69kV rating applies to area on fibreglass tube between red bands which are from ends of the tube. 15kV ratings apply outside the red bands. Ratings apply for accidental brush contact only
- Other cable and Tube lengths available. Contact TEN for further information

Part No.	Description	Size AWG (Amps)	Wt (kg)
6752-3	4.26m Cable - 1.8m Tube	2/0 (300)	13.6
6752-7	4.87m Cable - 2.4m Tube	2/0 (300)	14.5

\*See Reference Section for further information on AWG



### Jumper Holders - Insulated

- Provides a safety point when line-workers install and remove energised jumpers
- Can be use as a jumper extension
- Allows line-worker greater control with all jumpering requirements
- Can be installed with all standard shotgun sticks or rubber gloves



Part No.	Fibreglass Dia & Length (mm)	Hanger Bar Dia (mm)	Description	Weight (kg)
S1600-7	32 x 380	12.7	Chance Insulated jumper holder Fibreglass shaft & metal hanger bar	1.0
3477	32 x 305	12.7	Hastings Insulated jumper holder Fibreglass shaft & hanger bar	0.87
3478	32 x 610	12.7	Hastings Insulated jumper holder Fibreglass shaft & hanger bar	1.2

### Earth Lifting Tool - Hastings

#### Part No. 13763

- Easily lift and lower heavy substation earths with this handy tool
- Reduces manual handling risks
- The earth lifting tool is supplied with a large opening coated "C" hook that has a universal sunrise end fitting
- Comes complete with hand-line block, adjustable block clamp and 15m of 9.5mm polypropylene rope
- The hook and block clamp are mounted on an 2.4m fibreglass pole with a male splice on the bottom end to allow additional lengths of extensions to be added as required.

**Reduced Manual Handling Issues**

### In-line Disconnect Switch Temporary LV

**Folding Handle Ratchet Podger**

**Part No. TENA103**

- Used for Temporary LV switching
- Enclosed switch
- Double Insulation LV 95mm<sup>2</sup> Cable 1kV
- Max Current 300Amps
- 300mm Isolating link
- Turnbuckle with folding handle ratchet podger
- Sold in sets



Max Voltage (V)	1000
Cable	95mm <sup>2</sup> Copper with clear insulation & clear heat-shrink over lugs
Cable Current (amps)	300 Continuous
Lead Length (mm)	750 each
Switch	Fully enclosed LV
Clamp Range (mm)	3 - 31.75

## ALSO AVAILABLE

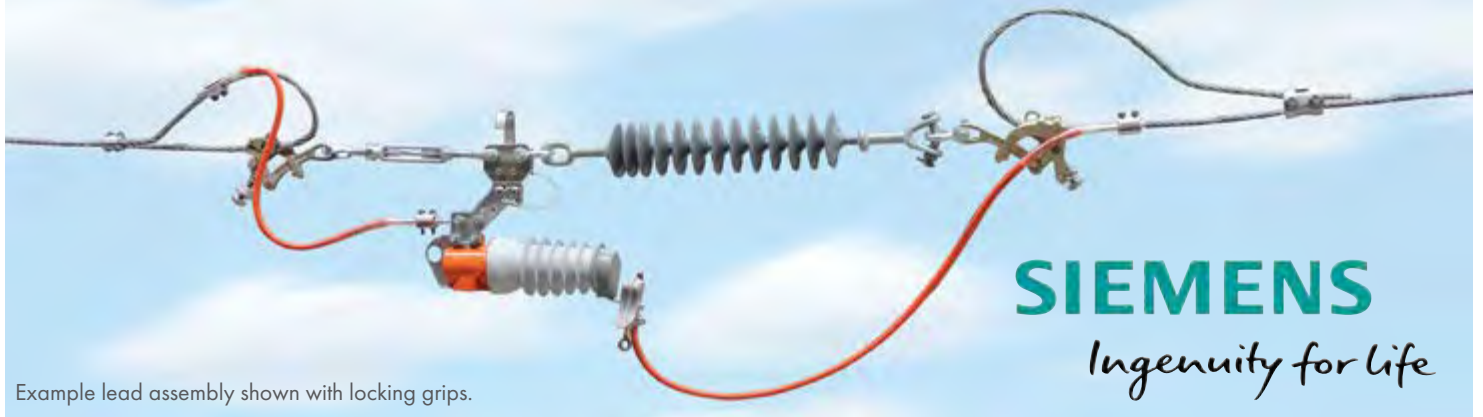
Complete range of substation clamps. Contact TEN for further information



### Portable Switch Unit (PSU) - Siemens

- All switches labelled with rating, part number and serial number
- Lugs or Threaded Ferrules clamp/cable dependent

**CUSTOM lead and clamp assemblies built to your specifications available**



**SIEMENS**  
*Ingenuity for life*

Example lead assembly shown with locking grips.

### Siemens Portable Switch for Temporary Isolation

#### Part No. 3AX1350-5A-1F

Whilst traditional in-line tension disconnects provide line crews with a way to temporarily isolate a line at non-designated switching locations, however, the lack of a ganged switching capability creates operational inefficiencies due to:

- Restrictions in load breaking capability.
- Restrictions in load pickup.
- The risk of ferro-resonance due to single phase switching operations.
- The additional time to isolate upstream devices prior to operating the in-line disconnect.

Therefore, it is common that a switching sheet may require an additional 20 or more items to remove load or to provide precautionary isolation prior to breaking bridges or opening the in-line disconnect.

Siemens has addressed all these problems by adapting the switching unit of the proven Fusesaver circuit breaker into a pre-configured 3-phase synchronous portable switch kit. The switch units are suitable for in-line tension mounting for simple installation and visible isolation.

#### Key User Benefits

- Self powered from on board battery.
- No configuration required.
- Reduced day to day operating cost as switching crews can operate from an EWP or ground.
- Reduced potential for operator error during switching procedures with simple one button operation.
- Complete self contained carry case.
- Access live data from the line using the Siemens Connect PC application

#### Standards

The Siemens Portable Switch is based on the Fusesaver Circuit Breaker that has been type tested to the applicable requirements of IEC 62271-100.

#### Kit Details - Part No. 3AX1350-5A-1F

Description	Quantity
Portable Switch Unit	3
Communications Module	6
Charger for Comm Module	3
Line Clamp Assembly	3
PC Antenna Kit	1
Rugged Case	1
Communications Module Attachment Tool	1

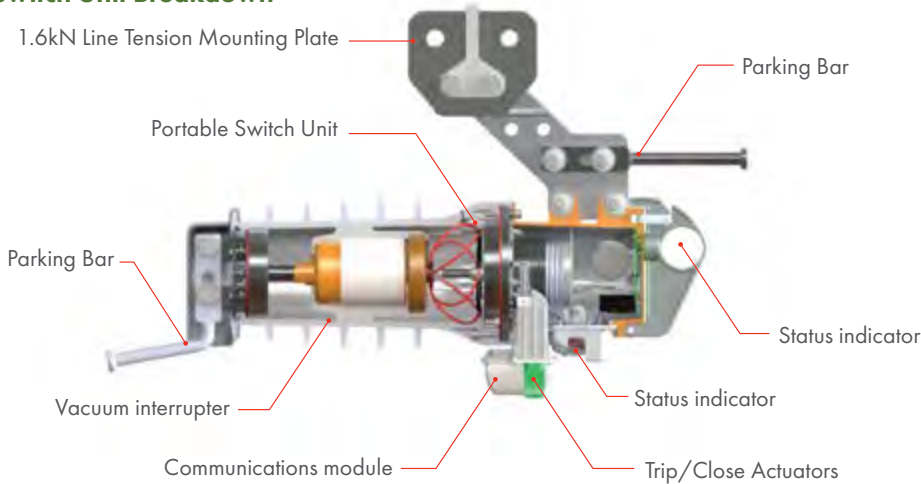
Lead and hardware assembly sold separately. See over.

Rated Voltage (kV)	27
Rated Impulse Withstand Voltage of Portable Switch Unit (kV)	125
Rated power frequency withstand voltage dry (kV)	60
Rated Continuous Current (A)	400
Rated Short Circuit Breaking Current (kA/s)	6.3 @ 0.5
Rated short time current (kA/s)	6.3 @ 0.5
Rated Mechanical Operations	2,000
Working Load Limit (WLL) (kg)	1,600



## Siemens Portable Switch for Temporary Isolation - Cont.

### Switch Unit Breakdown



CLICK or SCAN to see the Siemens Portable Switch video made in conjunction with UK Power Networks.

**CUSTOM Jumpers, Hardware & Hanging Assemblies built to your specifications by TEN**



### Accessories



Utilise the Nagaki (NGK) 2 ton double locking grips to secure the conductor during installation.



Quick pin bracket for fast and easy installation.



Leads available with stalk, clamp, ferrule or lug.

### Order Guide

Item	Kit Part No.	Component Part No.	Description	QTY
1	3AX1350-5A-1F	-	Portable Switch Unit	3
		3AX1350-1E	Communications Module	6
		3AX1350-1F	Charger for Comm Module	3
		3AX1350-3A	Line Clamp Assembly	3
		3AX1350-1C	PC Antenna Kit	1
		-	Rugged Case	1
		3AX1350-1G	Communications Module Attachment Tool	1

#### Additional Components

	Part No. e.g.	Description	QTY
2	TENK960 (Victoria Spec)*	Line Tension Hanging Assembly	3
3	Made to order*	Jumper Assemblies	6
4	TENA949	Quick Pin Bracket	3
5	AL-2TON-GRIP-L AL-MIDDLE-GRIP-L	Nagaki Grip 5 - 20mm Nagaki Grip 5 - 25mm	6

\*Contact TEN for options on jumpers, hardware & hanging assemblies sold separately.



See Storage Section for further information

## Portable Earthing Devices (PED) - Overview

Commonly known as “Earth-sets, Earth-sticks, Earthing Devices, Portable Earthing Devices or PED’s”. These devices attach temporarily to de-energised conductors or contact points and a known earth.

PED’s are safety devices that are type tested and manufactured to withstand the maximum fault current for the specific portion of the network being worked on in the event that

the conductor or contact point becomes energised.

PED’s are designed so that they provide enough time, usually several milliseconds to carry fault current long enough for a circuit breaker or fuse to interrupt the flow of current. Consult your local network or asset owner for applicable legislative requirements.

**Order by completing the adjacent PED sheet**

## Storage, Care & Maintenance of PED’s

### Storage

To prolong the life of your PED’s they should be:

- Neatly coiled in a protective carry bag
- Stored in a dedicated area away from sharp or heavy objects
- Stored in a cool dry area

### Care & Maintenance

PED’s should be visually inspected and cleaned with a suitable cleaning product before each use. Ensure that bolted connections are still tight, clamps are operating correctly and that there is no damage to cable or joints.

Remove from service and tag accordingly any PED with visual defects such as:

- Cuts
- Badly mashed or flattened cable
- Cracked or broken ferrules and clamps
- Exposed or broken strands
- Extensively damaged sheath material



SCAN or CLICK to download a copy of the PED order form

- Swollen jacket or soft spots indicating internal corrosion
- PED’s should never be modified under any circumstance without the consent of the manufacturer.
- Components and assembly methods used are fault current type tested, so exact manufacturer specifications must be used at all times.

**NOTE:** PED’s are intended to carry fault current once. After being subjected to fault current they should be removed from service and destroyed.

References: IEC 61230, ASTM F855



**Polywater**  
Solutions at work.

## Cleaner - Rubber Goods

**A specially formulated cleaner for removing GREASE – DIRT – CARBON**

- No mixing required
- Excellent cleaning power
- Harmless to all elastomers (rubbers)
- Multiple package options
- Environmentally friendly
- Non-toxic and non-corrosive



**Rubber Goods cleaner contains no hazardous ingredients and is pH neutral**

Part No.	Description
RBG-1	Individual Sachet
RBG-D72	Dispenser of 72 saturated wipes
RBG-35LR	950ml Bottle with sprayer
RBG-128	3.8L Bottle
RBG-640	18.9L Drum

### ORDER FORM - Portable Earthing Device

All details are required for quotation, please enter data where requested or circle sections

#### Network Properties - Enter Value

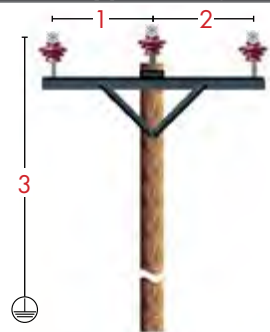
Maximum Fault Current (kA)      /0.5 Sec  
Indicate kA rating

Maximum Voltage (kV)   
For stick length purposes

#### PED Assembly Type

PED Configuration						
Description	3 Phase with separate down-lead	3 Phase with centre attached down-lead	3 Phase trifurcating plate with attached down-lead	Down-lead only, Single	3 Phase linked down-lead	2 Phase, Jumper earth

#### Cable Type & Length Required



Type of Cable Aluminium  Copper

1. Phase to Phase      2. Phase to Phase      3. Phase to Ground

Length of Cable (m)

Please remember to nominate slightly longer cable length than what is required to allow the earth clamp to be easily secured, but do not to add excess, as this can cause cable to flick out with force and cause injury to workers under unexpected fault condition.

#### Phase/Conductor Clamps to suit (Enter a value)

Circular (mm)

Min OD	<input type="text"/>
Max OD	<input type="text"/>

Flat Busbar (mm)

Min OD	<input type="text"/>
Max OD	<input type="text"/>

Fixed Ball Joint OD of Ball (mm)

20	25
Other	<input type="text"/>

#### Phase/Conductor Clamp Fitting

Snap On  Shotgun Screw Up  Bayonet Screw Up  Fixed Stick \*  "T" Handle   
 1Reference Chart over      HEX Screw Up  Taplin Screw Up  \*Stick Length (m)       Handle

#### Downlead/Earth Tail Clamp

Circular (mm)

Min OD	<input type="text"/>
Max OD	<input type="text"/>

Flat Busbar (mm)

Min OD	<input type="text"/>
Max OD	<input type="text"/>

Fixed Ball Joint OD of Ball (mm)

20	25
Other	<input type="text"/>

#### Downlead/Earth Tail Fitting

Snap On  Shotgun Screw Up  Bayonet Screw Up  Fixed Stick \*  "T" Handle   
 1Reference Chart over      HEX Screw Up  Taplin Screw Up  \*Stick Length (m)       Handle

#### Customer Contact Details

Name: \_\_\_\_\_ Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone No.: \_\_\_\_\_ Email: \_\_\_\_\_

#### PED Protective Bag

Advise your specs or TEN can recommend a suitable bag

Carry Bag



Please email this form to [sales@tengroup.com.au](mailto:sales@tengroup.com.au)



## CONTENTS

### ORDER FORM - Reference Chart

#### Phase Clamps: *Please Note: Other clamps available*

	Rated to <b>25kA</b> /0.5 sec Suitable for - Circular - 3 to 33mm - Snap-On		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular & Flat - 5 to 40mm		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular & Flat - 5 to 40mm		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular & Flat - 5 to 40mm
<b>MT-613-3</b>		<b>MT-815-E*</b>		<b>MT-815-EH*</b>		<b>MT-815-S*</b>	
	Rated to <b>10kA</b> /0.5 sec Suitable for - Circular - 10 to 30mm - Snap-On		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular - 16 to 85mm		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular & Ball - 5 to 40mm		Rated to <b>45kA</b> /0.5 sec Suitable for - Circular - 12 to 48mm - Snap-On
<b>MT-612</b>		<b>MT-736-085</b>		<b>MT-1921-E*</b>		<b>MT-701</b>	

Choose the end fitting by changing the \*PREFIX on the Part No., as indicated above - **C** = Hex - **E** = Bayonet - **S** = Shotgun - **EH** = Handle

#### Earth Clamps: *Please Note: Other clamps available*

	Rated to <b>16kA</b> /0.5 sec Suitable for - Circular & Flat - 0 to 25mm		Rated to <b>30kA</b> /0.5 sec Suitable for - Circular & Flat - 0 to 35mm		Rated to <b>25kA</b> /0.5 sec Suitable for - Flat - 0 to 13mm		Rated to <b>25kA</b> /0.5 sec Suitable for - Circular & Flat - 0 to 25mm - Lockable
<b>MT-840/1</b>		<b>MT-843</b>		<b>MT-847</b>		<b>MT-870</b>	

#### Fixed Points:

<b>MT-39511</b>	<b>MT-3951</b>	<b>MT-3950/35</b>

25mmOD Ball - M12 Threaded hole or rod - 24mm Hex base

#### Brass Stubs:

	Rating kA /0.5 sec	Bolt Size	Stub OD (mm)	Stub Length (mm)
M12/22 BRS STUB	25	M12	22	60
M12/25 BRS STUB	25	M12	25	60
M16/22 BRS STUB	45	M16	22	60
M16/25 BRS STUB	45	M16	25	60

Fixed Earthing

Earthing Stubs

Temporary Earth Rod Driver

#### PED Application Accessories:

<b>CRA-C</b>	<b>HEX</b>	<b>CRA-K</b>	<b>SUNRISE</b>	<b>MT-630-K</b>	<b>SUNRISE</b>	<b>SANDBAG-ACC</b>	<b>LANYARD12M</b>

#### Stick Accessories:

Stick/s	Min Height	Max Height	Ask TEN to recommend a Kit	
Stick Type	Universal	Shotgun	Bayonet	Hex
Adaptors	Shotgun	Bayonet	Snap On	Line Clamp

### Equipotential Earth Mats

#### Part No. Various

The Kri-Tech Bond Mat System is designed and high voltage tested to protect workers who come in contact or have the potential for electrical contact.

- Establishes temporary equipotential zone during energised and de-energised work practices
- Prevents workers from being exposed to hazardous differences in electrical potential
- Portable, versatile and lightweight
- Non-slip black matting also available - ideal for use in wet environments
- Manufactured from high amperage tinned copper braid sewn into grid pattern onto vinyl/polyester fabric

Suitable for a wide range of applications including:

- Making cable terminations on transformers and in cubicles
- Opening or closing overhead air breaks
- Working on control boxes of regulators, reclosers, capacitors, pad mounted switches
- Stringing Operations



Operate Switches Safely

Part No.	Size (m)	Colour	Description
KTMNS5-5-1.5NT-A	1.5 x 1.5	Black (Non-slip)	Earth, mat, equipotential, 1.5m lead term to Screwdriver Clamp, Kri-Tech
KTM5-5-1.5NT-A	1.5 x 1.5	Orange	Earth, mat, equipotential, 1.5m lead term to Screwdriver clamp, Kri-Tech
KTM1010-2X1NT-A	3.0 x 3.0	Orange	Earth, mat, equipotential, 2 x 1m leads term to Screwdriver clamp, Kri-Tech

Non-terminated options available on request  
Custom Sizes & Options available



Black Non-Slip Mat



See Storage Section for further information



**Contact TEN for information on the range of custom Stringing Machine Earthing solutions**



Allows joint to pass through



MTR052 - Lead Included



## Earths - Stringing (Rolling)

- Consider Conductor OD & Fault Current Rating
- Earth Leads available on request
- Ideal for stringing and re-conductoring

Part No.	Description	Conductor OD (mm)	Downlead	Fault Rating (kA/sec)	Manufacturer
MTR052	Stringing Earth	Max 70	6m x 50mm <sup>2</sup> CU	10/0.4	Tesmec
9738	Stringing Earth	4.1 to 28.5	*Sold separately	19.1/.05	Hastings
78000	Stringing Earth	3 to 41	*Sold separately	25/0.5	Salisbury
A78000	Stringing Earth with 2 earth studs	3 to 41	*Sold separately	25/0.5	Salisbury

\*Contact TEN for your earth lead requirements



A78000  
\*Lead not Included



9738  
\*Lead not Included

## Discharge Kits

### Discharge Stick - Hastings

- Safely drains capacitive charge after a circuit has been de-energised
- Safely drains static discharge
- Insulating stick with hand-guard and rubber end cap
- Stainless steel hook
- Earth lead included
- Supplied with or without clamp
- Stick tested to ASTM F-711
- Discharge limiting resistor sold separately
- Earth cable is copper with yellow neoprene jacket
- LCM 12H/12 Clamp used

Shown with Limiting Resistor (6753)



Part No.	Stick Length/OD (mm)	Hook Opening/OD (mm)	Lead Length (mm)
A1004-CLCM	600/32	34.9/6.35	1.8
A1006-CLCM			3.0
A1008-CLCM			6.0
Part No.	Description	Rating	
6753	Discharge Limiting Resistor	10kV, 10MegOhm	

## Volt Meter & Discharge Kit AC System DC Link Capacitor

- Used to safely detect and drain capacitive charge after a circuit has been de-energised
- Detector used to properly measure the AC system DC link voltage before performing any work on any high voltage components, and to provide a discharge procedure for the AC system DC link capacitors in the case of failure of the built-in discharge circuits.

### Customisable kits to suit your electric vehicle

#### Example Kit Includes:

- DVM-80UVM - Universal Digital Voltmeter with Second Probe
- 3.65m Coiled Interconnecting Cable
- 2 x Brass Cup Probe Tips
- 1 set Discharge Probes
- 2 x 600mm Extension Sticks
- 2 x 600mm Universal Sticks
- 2 x Hand Guards
- Class 1 Insulating Gloves
- Leather Outer Gloves
- Cotton Inner Gloves
- Carry Case









- Ratchet Spanners & Podgers
- Hand & Battery Style Ratchet Cutters
- Cable Preparation & Stripping Tools
- Deep & Tubular Impact Sockets
- Temporary Earth Stake & Earth Rod Driver
- Conductor Scratch/Cleaning Brushes
- Conductor Diameter Gauges
- 1000v Insulated Tools



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Require tools and equipment for a new truck?  
TEN can customise a kit to suit Line-workers, apprentices and crew requirements



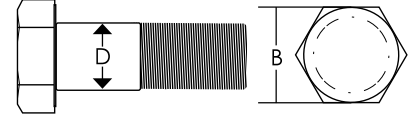
**FOUR sizes in ONE**

## Ratchet Wrenches and Podgers

### 4 Way Ratchet Wrench - NGK

**Part No. BY-3**

- Four sizes in one
- Plastic ergonomic non-slip handle with grips



D	10mm	12mm	16mm	20mm
B	17mm	19mm	24mm	30mm

### 2 Way IPC Ratchet Wrench

**Part No. RS1317-Series**

Reversible ratchet spanner.

The 6 point hex is ideal for 1.5 - 240mm<sup>2</sup> IPC's

- Ideal for IPC's
- Straight Plastic Handle
- Available with long or short handle
- Forward and reverse ratchet mechanism

Part No.	Handle	Size OAL (mm)	Hex
RS1317-6SH	Short Handle	13 & 17 210	6pt
RS1317-6LH	Long Handle	13 & 17 250	6pt
RS1317	No Handle	13 & 17	6pt



**Suits IPC's**

Spanner Ratchet 13 & 17mm Reversible 6 Point Hex Suits IPC's 1.5 - 240mm<sup>2</sup> with short handle or long handle

**Short or Long Handle**

### 2 Way Ratchet Podgers

**Part No. RRP-Series**

The R-series Podgers from TEN are precisely machined, heat treated and zinc plated. Each podger ratchet consists of two drive socket heads of different sizes within a heavy duty 32 tooth ratchet mechanism. Dual head ratchets allow speed and efficiency on the job.

- Reversible with continuous taper
- 12pt Hex - refer table below
- 13 - 24mm available with plastic handle
- Forward and reverse ratchet mechanism
- 2 sizes of double hexagonal sockets per tool

**12pt HEX**

Part No. (no handle)	Part No. (with handle)	Size (mm)	Hex
RRP1317	RRP1317-H	13 & 17	12pt
RRP1719	RRP1719-H	17 & 19	12pt
RRP1824	RRP1824-H	18 & 24	12pt
	RPH1824	18 & 24 (Folding Handle)	12pt
RRP1921	RRP1921-H	19 & 21	12pt
RRP1924	RRP1924-H	19 & 24	12pt
RRP2124	RRP2124-H	21 & 24	12pt
RRP2427	RRP2427-H	24 & 27	12pt
RRP2430	RRP2430-H	24 & 30	12pt
RRP3032	RRP3032-H	30 & 32	12pt
RRP3036	RRP3036-H	30 & 36	12pt
RRP3236	RRP3236-H	32 & 36	12pt
RRP38BS16	RRP38B16-H	3/8" BS/16mm	12pt

### Single Ratchet Podger

**Part No. RRP36/H**

**12pt HEX**

Part No. (no handle)	Part No. (with handle)	Size (mm)	Hex	Length (mm)
RRP36	RRP36-H	36	12pt	450



Handle Version

Lanyard can be threaded through anchor hole for added safety





### JennyTools



9009

### KLEIN TOOLS



63607



RC-32ACSR

### Klauke® A Textron Company



K1062



K683T

### RELIABLE EQUIPMENT



## Hand Ratchet Cutters - ACSR - Steel - Cu - Al

### Part No. Various

- Suitable for Cutting ACSR - Steel - Copper - Aluminium (See table below)
- From 15mm to 52mm (See table below for cutting capacity of each tool)
- Patented two-step ratchet mechanism requires fewer strokes per cut
- Quick-release lever opens blades easily in every cutting position
- Handle locks in closed position for storage and transportation
- Full ratcheting cycle and release in all cutting positions
- Ergonomic handles design to maximise cutting leverage

**Breaking blades?  
Solution - RC-32ACSR  
AL/CU/ACSR/ST  
CUTTERS**

## ACSR - Steel - Guy Cable Cutters

Part No.	Cable Dimensions Max Diameter (mm)			Length OAL (mm)	Tool Wt (kg)
	Cu	Al	ACSR / St / Guy		
9009	15	18	ACSR - 15 / Steel - 5	267	0.5
63607	18	22	ACSR - 17 / Steel - 10	260	0.7
RC-32ACSR	32	32	ACSR - 20 / Steel - 5	254	0.7

## Copper - Aluminium Cable Cutters

Part No.	Cable Dimensions Max Diameter (mm)			Length OAL (mm)	Tool Wt (kg)
	Cu	Al	ACSR / St / Guy		
K1062	52	52	-	280	0.7
K683T	32	32	-	260	0.7

## Ratcheting Cable Cutter - Reliable

### Part No. REL-R-HC

- Jaw keeper prevents the jaws from spreading while under heavy load
- Shear-cut blades
- Ratchet and chain increase cutting pressure as handles open and close
- Moderate pressure opens & closes handles.
- Mechanical advantage over manual cutters

### Part No. REL-R-SC

- Cut Copper & Aluminum cable up to 50mm, including rubber or lead covered cable
- Heavy duty jaw and ratchet design provides mechanical advantage over manual cutters
- Does not cut steel

Part No.	Cable Dimensions Max Diameter (mm)			Length OAL (mm)	Tool Wt (kg)
	Cu	Al	ACSR		
REL-R-HC	30	30	30	736	4.5
REL-R-SC	50	50	-	736	4.4

**Klauke®**

### Battery Ratchet Cutters - ACSR - Steel - Cu - Al 55mm Ratchet Cutter, ACSR/AL/CU - Klauke

Battery Operated Ratchet Cutters, designed for cutting a variety of OH Conductors & UG cables, including CU, AL & ACSR.



#### Features

- Ergonomically designed
- One handed operation
- LED light to illuminate work area
- Forward & Reverse switch
- Versatile Makita platform



#### Order Information

Part No. ACSR	Part No. AL/CU	Description
ESST55AP-AL	ESU55AP-AL	Tool skin & canvas bag
ESST55AP-AL-K	ESU55AP-AL-K	Tool, 2 x 3.0Ah* Makita batteries, charger and canvas bag

#### Technical Data

Part No.	Head Style	Cuts	Jaw opening (mm)	Capacity (mm)			Dimensions (mm) (L x W x H)	Wt (kg) Inc. Battery
				CU	AL	ACSR		
ESST55AP-AL	Ratchet	ACSR	55	-	-	OLIVE*	391 x 110 x 186	3.6
ESU55AP-AL	Ratchet	AL / CU		29	33	-	388 x 110 x 198	3.4

\* \*OLIVE Conductor stranding 54/7/3.50

### 50 & 65mm Ratchet style Cutters - AL/CU

Battery Operated Ratchet Cutters, designed for cutting a variety of OH & UG Conductors, including CU & AL



#### Part No. RCB-50Y

- Scissor Style Head
- Ideal for Confined spaces
- Max Cut 630mm<sup>2</sup>
- 50mm Jaw opening



#### Part No. RCB-65N

- 65mm Jaw opening
- Max 1000mm<sup>2</sup>
- Ideal for larger UG cables
- Forward & Reverse mechanism



#### Order Information

Part No.		Description
RCB-50Y-0	RCB-65N-0	Tool skin & case
RCB-50Y-K	RCB-65N-K	Tool, 2 x 3.0Ah* Makita batteries, charger & case

\*See page C37 for battery and charger information

#### Technical Data

Part No.	Head Style	Cuts	Jaw opening (mm)	Capacity (mm)			Dimensions (mm) (L x W x H)	Wt (kg) Inc. Battery
				CU	AL	ACSR		
RCB-50Y	Scissor Ratchet	AL / CU	50	33	33	-	160 x 110 x 370	4.4
RCB-65N	Ratchet	AL / CU	65	41.5	41.5	-	175 x 110 x 320	3.5

## Cable & Side Cutters

### Cable Cutter - AL/CU - Klein

**Part No. 63035**

- Maximum cutting capacity 22mm Aluminium & Copper
- 425mm Length

### Cable Cutter - AL/CU - Klein

**Part No. 63050**

- Maximum cutting capacity 12mm Aluminium & Copper
- High-leverage design for exceptional cutting capability
- Hot-riveted joint ensures smooth action and no handle wobble
- 241 mm Length

### Parrot Beak Cable Cutter AL/CU

**Part No. 0890CSJ**

- Special alloy hardened blades
- Comfort grips
- High-leverage jaws with shear-cut blades

### 1000V Side Cutters

**Part No. 5428HV**

- 1000V Diagonal cutter
- Length 200mm
- Electronically Induction Hardened Cutting Edges

## Pliers

### Universal Cutting Pliers

**Part No. 3800CTV**

- Premium quality forged alloy steel for toughness and durability
- Precise jaw gap for wire work with cross hatch jaws for positive grip
- Serrated pipe grip
- Extended and hardened cutting jaw for use with flat multi-core cabling
- Built in crimper for use on 1.5mm<sup>2</sup> to 6mm<sup>2</sup> solderless connectors
- Length 200mm

### Universal Cutting Plier - 1000V

**Part No. 3800CHV**

- 1000V Universal Plier with crimper
- Length 200mm

### Long Nose Pliers - 1000V

**Part No. 6547HV**

- Precise Jaw for wire work
- Cross hatch jaws for positive grip

### Bolt cutters - Power Pivot

### Bolt Cutters - Crescent

- High-leverage jaws with shear-cut blades
- PowerPivot™ Technology



Part No.	Length (mm)	Tool Wt (kg)
0090MCP	460	2.2
0190MCP	600	2.5

See Insulated Tool section for 1000V Insulated Bolt Cutter



## Various Line-worker Tools

### Adjustable Wrenches - Shifter

#### Part No. AC2-Series

- Wide capacity jaw allows each tool to work with more fastener sizes
- Tension spring stabilises jaw and knurl adjusts easily
- Wider handle on sizes provides more comfort & less stress on the hand
- Alloy steel and heat treated and plated finish resists rust and corrosion

Part No.	AC26VS	AC28VS	AC210VS	AC212VS	AC215VS	AC218VS
Size (mm)	150	200	250	300	380	460
Size (Inches)	6	8	10	12	15	18

### Line Tap Spanners

#### Part No. HLTS Series

- Designed for tightening Brass Line Taps or Split Bolt Clamps



Part No.	Description	Weight (kg)
HLTS-5	*Spanner for brass Line Taps & IPC's (5 way)	0.25
HLTS-2	**Spanner for brass Line Taps & IPC's (2 way)	0.15
HLTBS-6	Grips Line Tap Spanner Base (6 way)	0.20

\* Suitable for B22, B24, B25, B26 & B28

\*\* Suitable for B26 & B28

### Hand Crimping Tools for tubular lugs

#### Part No. HRC-0506C

- Ratchet hand Crimpers
- Capacity 0.5mm<sup>2</sup> to 6mm<sup>2</sup> - RED/YELLOW/BLUE
- 230mm Long

### Hand Crimping Tools for tubular lugs

#### Part No. Various

- With revolving dies
- Simple and safe: Exact cross-section assignment thanks to permanent marking on the dies

Part No.	Description	Length (mm)	Weight (kg)
HX-50N	Hex Hand Crimping tool 6 - 50 mm <sup>2</sup>	390	1.3
HX-120N	Hex Hand Crimping tool 6 - 120 mm <sup>2</sup>	627	3.6

### Hand Ratchet Crimper - 14mm OD

#### Part No. MP-10-SIMPI

- 9mm "W" captive die, for pre-insulated service sleeves

### Ruler - 1m 4-Fold

#### Part No. LFSSI

- Sturdy folding rules available with Square Edge.
- Clear metric & imperial markings



### ABC Tools & Test Kit

#### Wedge Separation Tool ABC 4 x 95mm<sup>2</sup>

**Part No. ST-31**

- Core separation wedge
- Suitable for LVABC up to and including 4 x 95mm<sup>2</sup>
- Supplied with interconnecting rope



#### Core Separation Wedge ABC 4 x 95mm<sup>2</sup>

**Part No. PMR87**

- Core separation wedge
- Suitable for LVABC up to and including 4 x 95mm<sup>2</sup>
- Hex nut style head suits the 2 way IPC ratchet wrench for turning
- Sold individually



#### Insulated Cable Test Point

**Part No. PP1514**

- Re-usable insulated cable test point
- Suitable for cable ranges up to 150mm<sup>2</sup>
- Sold individually



#### LV/ABC Tool & Test Kit

**Part No. TENK013**

Part No.	Description	Quantity
PP1514	Insulated Cable test point	4
RRP1317-6LH	Ratchet Podger Wrench 13 & 17mm	1
ST-31	Core Separation Tool - Corded	1pr
PMR87	Wedge Separators	2
TENM514	ABC Kit Storage Bag	1



**Polywater**  
Solutions at work.



**IDEAL for cleaning dirt & grime from your hand tools**

HTC-D72

### Cleaning Wipes - GrimeAway Multi Purpose

**Part No. HTC-Series**

**Tough on Dirt, but Field Friendly**

Polywater® Grime-Away™ quickly and effectively removes hydraulic fluids, silicone greases, and adhesives from transformers, vehicles, heavy machinery, tools, and hands for a clean and safe working environment. Its unique water-based formulation is especially safe on skin, unlike most other tool and hand cleaners. Grime-Away is available in a multiple-use, 72-count canister or individual wipes that store easily in tool pouches or lineman bags.

Part No.	Description	Pack
HTC-D72	Dispenser with 72 Pre-moistened wipes*	72 Wipes

\*Not suitable for Rubber Goods

# HAND TOOLS

## CONTENTS



### Adaptor - 7/16" Hex to 1/2" Square Drive

**Part No. TEN-716-12**

- 7/16" hex shaft adaptor for 1/2" square drive sockets
- Convert your 7/16" utility impact wrench to a 1/2" drive for your impact sockets
- Designed for high torque Impact wrenches
- Superior wear resistance and durability for utility grade use
- Made from high strength, shock proof steel

### Chuck, Quick Change 7/16" Female to 1/2" Female

**Part No. 2403**

- Super Heavy Duty 7/16" (1/2" Square Drive) Quick-Change Chuck.
- Three ball bearing system to firmly secure you auger bits and adapters.
- Designed to be used with high torque 1/2" square drive impact wrenches.



### Special Drive Sockets

#### "J" Hook Driver - Slot Socket PLUS

**Part No. SS-2**



Multi-Use Eye Bolt Type Clamp and Wing Nut Applications



Suits Off-Set & Centred J-Hooks

#### Features

- High Visibility ID Band
- Impact Rated
- Improved Fit on Large J Hooks (Off-Set & Centre)
- Earthing Clamps
- Hot Line Clamps
- Cross-Arm Hardware
- Stringing Block
- Temporary Arm Insulators



1/2" Drive



### D-Bolt Socket - 450mm Long

**Part No. TENA517**

- Use with cordless drills



Part No.	Description	Length (mm)	Weight (kg)
TENA517	Socket for Pillar Box D-Bolts	450	0.50

### 1/2" Drive Socket Sets

#### Deep Impact Socket Set - 26 & 29 Piece Kits

**Part No. 658272601** - 26 Piece 1/2" Drive, 12-Point Deep Impact Socket Set

Includes: 10 to 36mm (excluding 31mm) stored in a Blow Mould Case.

**Part No. 84935N** - 29 Piece 1/2" Drive, 6-Point Deep Impact Socket Set

Includes: 8 to 36mm stored in a Blow Mould Case.

Part No.	Description	Type
658272601	26 piece Socket Set - Deep Impact	12 Point
84935N	29 piece Socket Set - Deep Impact	6 Point







### Extra Deep Tube Socket Set - 7 Piece Kit

**Part No. 605290701**

7 Piece 1/2" Drive, 6-Point "TUBE" Deep Impact Socket Set

Includes: 19, 21, 24, 27, 30, 32 and 36mm @ 250mm Long stored in a Blow Mould Case

Part No.	Size (mm)	D2 (mm)	D1 (mm)	L2 (mm)	L (mm)	Hole Clearance (d)
60529018	18	28	28	13	250	14
60529019	19*	28	28	13	250	14
60529021	21*	28	31	13	250	16
60529024	24*	28	35	15	250	18
60529027	27*	32	38.5	17	250	22
60529030	30*	32	42	17	250	22
60529032	32*	34	44	19	250	24
60529036	36*	36	49	19	250	26



\* Sizes included in set



## METRINCH



The Metrinch 6 wall drive system means that one tool set is all you need to service your equipment, whether it's made in Germany, the USA or Australia.

### METRINCH Socket Set - 15 Piece Kit

**Part No. MET-2450**

**Get More Use Out of Fewer Tools**

Metrinch means fewer tools and easier selection as each tool can be used for both metric and inch, plus damaged nuts and bolts. This eliminates switching back and forth from imperial to metric.

**Unique Patented Design**

The 4-point grip design enables Metrinch sockets and spanners to fit multiple sizes and damaged or rounded nuts.

**More Torque, Less Wear**

By exerting pressure through the walls, Metrinch grips more securely than conventional sockets.

**Non Slip Hold**

No more cut hands, banged up knuckles and elbows due to wrench slippage.

**Quality**

All Metrinch tools are forged from high grade chrome vanadium steel for lifetime use.

**Unique 6 Wall Drive System**  
This 15 Piece socket set equals a 42 piece conventional set



#### Individual sizes available

Fit	1/2" Drive	
Metric (mm)	30	32
SAE/AF (Inch)	1 3/16	1 1/4
Length (mm)	86	

\*All sizes available individually

#### Included sizes in Socket Set\*

Fit	1/2" Drive							
Metric (mm)	11	12	13	14	15	16	17	18
SAE/AF (Inch)	7/16	15/32	1/2	9/16	19/32	5/8	11/16	23/32
Length (mm)	80							

Fit	1/2" Drive						
Metric (mm)	19	20	21	22	23	24	25
SAE/AF (Inch)	3/4	25/32	13/16	7/8	29/32	15/16	1
Length (mm)	80			86			



BAND-IT® 201 Stainless Steel band



Ear-Lokt Buckle



Band-it Tool 001



Ball-Lokt Stainless Steel Tie



Ball-Lokt Tie Tool

## Banding System - Stainless Steel

### BAND-IT® Banding System

#### Part No. Various

BAND-IT® 201 Stainless Steel Bands

The BAND-IT® type 201 Stainless steel non-magnetic band is the preferred option in all general use banding applications, offering high tensile strength and good resistance to oxidation and weathering. Available in a variety of widths and thicknesses.

In addition, EASYSCALE – imprinted measurements on the band, help determine band length and eliminate costly waste. Packaged in a standard box or a durable plastic tote for easy dispensing.

Part No.	Width (mm)	Thickness (mm)	Weight per roll (kg)
<b>BAND-IT® S-Steel band (30.5m Roll)</b>			
C202	6.35	0.51	0.9
C203	9.53	0.64	1.5
C204	12.70	0.76	2.4
C205	15.88	0.76	3.0
C206	19.05	0.76	3.6
<b>BAND-IT® S-Steel Buckles (100 per pack)</b>			
C252	6.35		0.1
C253	9.53		0.3
C254	12.70		0.8
C255	15.88		0.9
C256	19.05		1.5
<b>Tool for BAND-IT® Band &amp; Buckles</b>			
001	6 - 20		2.0

### Ball-Lokt™ Banding System

For applications ranging from identification tagging to bundling cables, Ball-Lokt™ Ties in 316 stainless steel, provide a longer life than nylon ties, especially in extreme climates.

Easy dispensing.

Self-locking design installation by hand or with the KS 652 tool, to assure uniform tension and clean tail cut-off for safe handling.

Ideal for conductor wire grip application

Part No.	Width (mm)	Length (mm)	Weight per pack (kg)
<b>Ball-Lokt™ S-Steel Ties (100 per pack)</b>			
KT6U046-200	4.6	200	0.25
KT6U046-350	4.6	350	0.4
KT6U046-500	4.6	500	0.5
KT6U078-200*	7.8	200	0.5
KT6U078-350	7.8	350	0.75
KT6U078-500	7.8	500	0.9
<b>Tool for Ball-Lokt™ Ties</b>			
KS652-TOOL*	Tensioner & Cutter		0.6

\*Banding Tool & Band-Lokt Ties for Wire Grip fitting

#### Self-Locking Application

1. As the stainless steel band is inserted into the buckle, the internal locking ball rolls freely

2. During tensioning, the band wedges onto the buckle locking tightly between the buckle and the band



### Conductor Scratch & Cleaning Brushes

#### Scratch Brush - "Dog-bone and FlatRound" - Madi

- Designed to encourage linemen to brush with a more convenient and ergonomic design making it more convenient than ever before
- Replaceable brush inserts make a cost effective solution
- Suitable for use up to 45mm conductor
- Made from Non-conductive materials
- Minimise open neutrals and bad connections by brushing conductors properly

##### Part No. DBWB-1

- Dog-bone design, colour and marking for copper one end and aluminium the other

##### Part No. FRWB-1

- Designed for both flat and round connection such as palms
- Replaceable brush inserts suitable for both flat and round ends

Part No.	Description	Wt (kg)
DBWB-1	Dog-bone Scratch Brush (includes one set of inserts)	0.25
FRWB-1	Flat Round Scratch Brush (includes one set of inserts)	0.25
LWB-1	Replacement Wire Brush for DBWB-1/ FRWB-1	0.1

#### Scratch Brush and Safety Knife - Madi

##### Part No. BB-2S

- Integrated wire brush for cleaning conductors to make better connections
- Replaceable brush inserts make a cost effective solution
- Suitable for use up to 25mm conductor
- Blunt Tipped fold-away blade for added safety
- Stainless steel blade for maximum durability and sharpness

Part No.	Description	Wt (kg)
BB-2S	Fold-away Safety Knife and Round Scratch Brush	0.23
WB-1	Replacement Wire Brush for BB-2S	0.1

#### Conductor Scratch Brushes

##### Part No. SB-3 & SB-4

- Used for preparing the surface of conductor prior to applying a connector/splice
- Tough stainless steel bristles resist rust
- Copper or aluminium available - use only on specified conductor to prevent cross contamination

Part No.	Colour	Conductor Type	Wt (kg)
SB-3	White	Aluminium	0.1
SB-4	Black	Copper	0.1

#### Stick Scratch Brushes - Hastings

##### Part No. Various

Replaceable  
Brushes  
(10-179)



Part No.	10-178	10-180	10-179
Description	Complete "V" Brush unit with Handle for Gloved Hands, Shotgun Ring, Replaceable Brushes (10-179)	Complete "V" Brush unit with Universal Head Attachment, Replaceable Brushes	Pack of 10 Replacement Brushes
Material	Thermoplastic Handle & S/S Bristles	Al Alloy Body & Stainless Steel Bristles	Stainless Steel Bristles





Unique Quick Connect Adapter

For fast bushing changes.

Part No. 40110

SCAN or CLICK to see the stripper in action



2x2 Body w/ bushings



4x4 Body w/ bushings



## Cable Preparation Tools

### Drill Driven Cable Stripper - Utility Tool

#### Part No. WS68-3-8 Power Driven Cable End Stripper

The Utility Tool LV Cable Strippers are a fast, safe and economical stripping tool with interchangeable square cut bushings for a wide range of common Australian LV cables. Easily setup with your chosen bushing, the tool can be quickly attached to your cordless driver for effortless cable stripping.

#### Benefits

- Increases safety by eliminating use of traditional knives, reducing the risk of cuts or lacerations
- Easily attaches to power drill for safe & efficient cable stripping
- Adjustable strip lengths from 15.9mm to 63.6mm
- Increases splice & union reliability with accurate strips every time
- Use with bushings specifically designed to suit 16-150mm<sup>2</sup> Australian conductor
- For Low Voltage Applications
- Evenly Strips Insulation
- The optional WS68 Snaps patent-pending Quick Connect Adapter makes changing bushings faster & more efficient - even with gloves only

#### Unique Australian Bushing Part No's



Part No.	Square Cut Bushings
	LV ABC
RB-100	10mm <sup>2</sup> Al XLPE OH
RB-101	16mm <sup>2</sup> Al XLPE OH
RB-200	25mm <sup>2</sup> Al XLPE OH
RB-201	35mm <sup>2</sup> Al XLPE OH
RB-300	50mm <sup>2</sup> Al XLPE OH
RB-301	70mm <sup>2</sup> Al XLPE OH
RB-400	95mm <sup>2</sup> Al XLPE OH
RB-401	120mm <sup>2</sup> Al XLPE OH
RB-500	150mm <sup>2</sup> Al XLPE OH
Part No.	Underground
RB-102	16mm <sup>2</sup> Cu XLPE/PVC LV UG (Olex)
RB-202	35mm <sup>2</sup> Cu XLPE/PVC LV UG (Olex)
RB-302	50mm <sup>2</sup> Cu XLPE/PVC LV UG (Olex)
CB6667	Bushing spare blade

### Contact TEN for information on the full range of available bushings

### 2 and 4 Way Cable Stripper - LV ABC - Utility Tool

The Utility Tool LV Cable Strippers are a fast, safe and economical stripping tool with interchangeable square cut bushings for a wide range of common Australian LV cables. Available in a 2 bushing body or 4 bushing body, these are easily setup with your go to bushings.

- Safer than ripping tools/strippers with a guarded cutting blade
- Fast and simple to use
- Precise stripping with no conductor damage
- Suitable for XLPE, PVC and EPR insulations
- Commonly used for ABC and SDI cables
- Made in the USA

See above table for available Bushings

Part No.	Description
36101H	Stripper, cable, body only, 2x2, includes allen keys, Ripley
36001H	Stripper, cable, body only, 4x4, includes allen keys, Ripley
40110	Adapter, snap on to suit 2x2 and 4x4 strippers for quick bushing change, Ripley

### ABC Strippers

#### Part No. ABC-STRIPPER

- Removes tough insulation from low voltage aerial cables

Part No.	For	Suits Cable (mm <sup>2</sup> )	Spare Blade #	Wt (kg)
ABC-STRIPPER-95	ABC	95	ABC-STRIPPER-B	0.1
ABC-STRIPPER-150	ABC	150	ABC-STRIPPER-B	0.1



### Outer Sheath Stripper - Ratcheting - Ripley

#### Part No. US14-7000

Ratcheting outer sheath cable slitter removes the outer sheath from HV and LV cables. The US14 easily performs ring cuts and slit mid-spans on ducts and heavy-duty cables.

- Equipped with safe, recessed blade to prevent potential injury & blade damage
- Compatible with high fiber count fiber optic cables
- Micro-adjustable blade depth adjusts up to (5 mm) to avoid underlying cable damage



Part No.	Description	Min Cable	Spare Blade #	Wt (g)
US14-7000	Ratcheting Slitter	25	US14-7500	180

### Outer Sheath Ripper Stripper

#### Part No. HRIPS

- For safe removal of outer sheaths
- Reversible blade has blunt mushroom head which stops damage to inner core

Part No.	Suits Cable	Spare Blade #	Wt (kg)
HRIPS	LV & HV	HRIPS-B	0.2

### Outer Sheath Stripping Tool

- Adjustable cutting-depth by thumb wheel
- Circular and longitudinal cutting
- Replacement blade in the handle

Part No.	Strip Range (mm)
R3840	8 to 28
AM2	25 to 36

### Outer Sheath Stripper

#### Part No. IBST50400

- Used for removal of core insulation
- Removes insulation up to 5.5mm
- Cable range from 12 - 38mm (50 - 400mm<sup>2</sup>)
- Long life blade - Spare Blade Part No. IBST5024B



Spare Blade  
Part No. IBST5024B

### Cable Sheath & Insulation Stripper

#### Part No. 1542-2CL-1

- Tool with Wedge Blade installed, spare straight blade
- 45mm max cable diameter
- Precise blade depth adjustment to 12mm
- Removes PE, XLPE, EPR and other insulation types from HV power cable
- Spare Blade Part No. 1562





**UtilityTool®**

A RIPLEY® BRAND



SCAN or CLICK for more information

**Perfect for Mid-Span & End Stripping on CCT, Hendrix, Spacer Wire & Tree Wire Cables**



Removable Handle



SCAN or CLICK for more information

**Quickly adjusts and clamps on to cable diameters from 7.6mm to 35mm**



SCAN or CLICK for more information



## Adjustable Outer Sheath and Insulation Stripper

**Part No. US01-7000**

The industry's most versatile, reliable and accurate adjustable tool for mid-span and end stripping on HV and LV utility cables.

### Features

- Easily strip mid-span double insulations in one go for direct connection via PG or Wedge Style connector, or strip outer sheath only for insulated piercing connectors (IPC's)
- Eliminates the need for traditional stripping knives, reducing the risk of cuts or lacerations
- Heavy duty tool easily removes jacket & various types of insulation materials
- Patent-pending, self-aligning design maintains optimum blade position to produce precise cuts for reliable splices & connections
- Well-balanced tool has low friction parts & ergonomic handles to reduce effort & potential strain from repetitive stripping functions
- Spare blades also available: (US01-7500)

### Compatibility

Cable Type		HV and LV Utility Cables
Cable Size (mm)		12.7 to 63.5
Compatible Materials	Jacket	URD, PE, PVC, Copper Tape Shield, LC Shield, Flat Strap
	Insulation	XLPE, PE, EPR
Cable Access		Mid Span & End Strip
Blade Adjustability	Angle	Yes
	Depth (mm)	Yes (1.5 to 10.6)
Removable Handles		Yes

## Adjustable Outer Sheath and Insulation Stripper

**Part No. US07-7000**

US07 Adjustable Cable Stripper that quickly and easily end strips or midspan strips cable insulation with no conductor damage on 7.6mm to 35mm OD cables. The tool utilizes a size adjustment clamping system to swiftly adjust and lock onto the insulation.

### Features

- Equipped with safe, recessed blade to prevent potential injury & blade damage
- Easily adjusts with detent actuated knob & fine adjustment knob to match
- Insulation thickness for fast stripping without conductor damage
- Durable bronze bushings provides longevity
- Spare blades also available: (US07-7500)



### Compatibility

Cable Type	HV and LV Utility Cables
Cable Size (mm)	7.6 to 35
Materials Jacket	URD, PE, PVC
Cable Access	Mid Span & End Strip
Blade Depth (mm)	Adjustable (1.15 to 3.2)

## Outer Sheath & Insulation Strippers

- Large knobs for opening/closing jaws and offsetting tool
- Locknut on opening/closing knob for maintaining position
- Blade direction lever and knurled cutting depth knob
- Directional markings on body
- Stainless steel and aluminium alloy construction

Part No.	Cable OD	Cutting Depth	Suits Jackets	Retract Stop	Spare Blade
POLY	7 - 33mm	12mm	All (XLPE/EPR/PVC/PE)	20-110mm	LAME-POLY-L





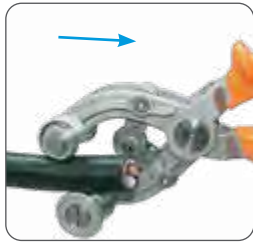
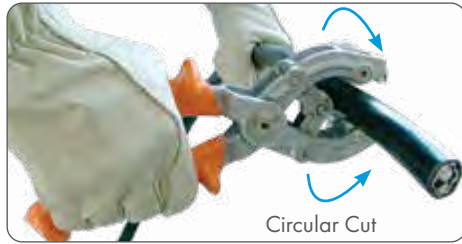
### Plier Style Outer Sheath Strippers

Plier type Sheath strippers, for circular & longitudinal cutting with end ripping claw blades

- 1000V Insulated and Non-insulated models available
- Plier type strippers, circular/longitudinal cut with end ripping blade
- Replaceable cutting blades (available in kits)
- 3 or 4 x Circular cutting blades, 1 x Lengthwise cutting blade and 2 x Claw blades
- Ideal for stripping Sector or deformed cable
- Lead Sheath stripper available



Replaceable Cutting Wheels & Claw Blades  
SCAN or CLICK QR-Code for ordering guide



Part No.	Insulated	Circular Cut Depth (mm)	Lengthwise Cut Depth (mm)	Capacity (mm)	Wt (kg)
PAD12-16A	No	1.2	1.6	10-45 OD	0.75
PAD16-20A	No	1.6	2	10-45 OD	0.75
PAD30-30A	No	3	3	10-45 OD	0.77
PAD32-34A	No	3.2	3.4	10-45 OD	0.77
PAD40-40A	No	4	4	10-45 OD	0.77
PBT IS 12 16 A	1000V	1.2	1.6	10-45OD	0.6
PBT30-30A	1000V	3	3	10-45 OD	1.3
PBT40-40A	1000V	4	4	10-45 OD	1.3
PBT20-20B	1000V	2	2	20-45 OD	1.3

Other sizes and blade combinations available



SCAN/CLICK for a copy of the PAD/PBT ordering Guide



PBT Model  
Insulated 1000V EN60-900



PAD Model  
Non-insulated model, black sheathed



PBT IS Model  
Fully Insulated 1000V EN60-900

### Semi-Con, Outer Sheath and Insulation Stripper

#### Part No. POLY Series

Strips Semi-Con, Outer Sheath and Insulation with one tool

- 3 Strippers in one
- 25mm<sup>2</sup> to 630mm<sup>2</sup> Capacity
- Suitable for a wide range of material e.g. (XLPE/EPR)
- 12mm Cutting Depth



SCAN or CLICK for more information



Part No.	Semi-Con Type	Cable Dia (mm)	Cutting Depth (mm)	Replace Blade (Sheath & Ins)	Replace Blade (Semi-Con)
POLY-SCNP	Non-Peelable	7 to 33	0 to 12	LAME-POLY-L	LAME-OUT-SCNP
POLY-SCP	Peelable			LAME-POLY-L	LAME-OUT-SCP-CH



SCAN or CLICK for more information



### Chamfer Tool - Insulation

#### Part No. US-10 Series

Insulation Chamfering Tool utilizes a size adjustment clamping system to quickly and easily adjust and lock onto the insulation.

- Performs a angle bevels with a factory-set chamfer depth of 1.9 mm
- Adjustable from 0 mm to 3.81 mm
- Equipped with safe, recessed blade to prevent potential injury & blade damage

SCAN or  
CLICK for  
more  
information



Part No.	Tool Type/ Application	Cable Insulation Capacity (mm)	Replacement Blade
US10-7000	30° Bevel Edger	14 - 60	US10-7500
US10-7001	45° Bevel Edger	14 - 60	US10-7501



### Chamfer Tool - Insulation

#### Part No. CHANFREIN-DT

- Chamfers a 30° angle bevelled edge on the insulation
- Hard Aluminium Clamps
- Stainless Steel fittings



Part No.	Tool Type/ Application	Cable Capacity (mm)	Replacement Blade
CHANFREIN-DT	30° Bevel Edger	9 - 33	LAME-CHANFREIN-DT



**UtilityTool**  
A RIPLEY® BRAND

### Paper Lead Setting / Stripping Pliers

#### Part No. SP-1355

- Stripping or Setting Pliers for paper lead cable
- Capacity 13 to 55mm
- 210mm long



### Semi-Con Scorer - Peelable

#### Part No. SCS

Compact & user-friendly tool scores semi-con on HV cables without damaging the insulation

- Eliminates the need for traditional stripping knives, reducing the risk of cuts or lacerations
- Performs longitudinal & spiral cuts on cable diameters ranging from 8 to 51 mm
- Precise & easily adjustable blade depths from 0 to 4 mm in increments of 0.05 mm
- Adjustable blade pitch accommodates various cable diameters

Part No.	Cable Dia (mm)	Blade Depth (mm)	Replacement Blade
SCS	8 to 51	0 to 4	43645



### Semi-Con Scorer - Peelable

#### Part No. BC-UTT23521 / 2

- Scores Semi Conductive Screen on HV cables
- Screen simply peels away
- Choose blade depth

Part No.	Depth of scoring (mm)
BC-UTT23521	0.4
BC-UTT23522	0.6







KN3920

## Safety Knives

### Safety Knife -TEN

**Part No. KN3920**

- Safety Blade with Protective sheath
- Ergonomic Design with Over Molded blade
- Finger Guard for Maximum Safety
- Easily replace blade in-field
- 1000V Insulated

Part No.	Description	Replacement Blade	Wt (kg)
KN3920	1000V Insulated Fixed Blade safety knife	BLADE-KN3920	0.1

See page H25 for more 1000V Insulated Knives

### One Flip Safety Knife - Madi

**Part No. PTOLK-3B**

- High grade Stainless-Steel Blunted Tip Blade
- Blade Locks Open and Closed
- Push button to open & close – Enables quick one-handed operation with gloves on
- Reversible Belt Clip



### LOCKBACK Blunted Tip Knife - Madi

**Part No. LB-3B**

- High grade Stainless-Steel Blunt Tip Blade
- Blade Locks Open
- Push Thumb Stud To Open & Push LOCKBACK To Close – Enables Quick One-Handed Opening and Secure Closing with Gloves On
- Reversible Belt Clip



### Fixed Blunted Blade Skinning Knife - Madi

**Part No. FBSK-3B**

- High grade Stainless-Steel Blunted Angled Blade Design for Maximum Sharpness
- Blade and Snap Ring are Molded for Superior Strength with Nonconductive Material
- Ergonomic Design with Over Mold for Secure Grip
- Finger Guard for Maximum Safety
- Supplied with a Protective Sheath

### Safety Knife and Scratch Brush - Madi

**Part No. BB-2S**

- Integrated wire brush for cleaning conductors to make better connections
- Replaceable brush inserts make a cost effective solution
- Suitable for use up to 25mm conductor
- Blunt Tipped fold-away blade for added safety
- Stainless steel blade for maximum durability and sharpness

Part No.	Description	Replacement Brush	Wt (kg)
BB-2S	Fold-away Safety Knife & Round Scratch Brush	WB-1	0.23

### Cable Skinning Knife - Klein

**Part No. 1570-3**

- 75mm Hook Blade
- Notched Blade for scraping

### Safety "V" Style Knife

**Part No. KNIFE082**

- Twin Blade with Blade cover
- Strong Durable high impact body
- Unique design prevents injury

**Suitable for Pole Top  
Rescue Kits**



PTOLK-3B

Push Button



LB-3B

Push Release



FBSK-3B



BB-2S



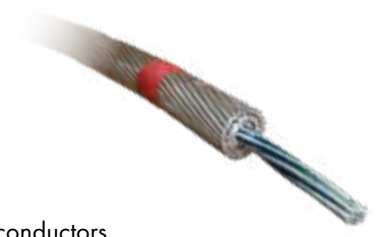


### Aluminium Trimmer for ACSR - TEN

The Trimmer quickly and accurately removes the aluminium stranding from around the steel core of ACSR conductors in preparation for crimping the steel inner strand.

#### Features

- Made of an aluminium alloy
- Lightweight and durable
- Operates like a Tube Cutter
- Carry Case stores 11 bushings
- Standard Bushing sizes available (Sold separately)
- Bushings can be made to suit a wide range of ACSR conductors



Bushing Holder

Bushing

Part No.	Kit Contains	Bushings to suit Conductor/Part No.	Replacement Cutting Wheel #
PSC-1	Tool, bushing holder, 1 x extra cutting wheel, and a plastic case that holds up to 11 bushings.	Cherry Grape Lemon Lychee Lime Mango Orange Olive Pawpaw	TE54270
TE****	Bushing for use with PSC-1, *conductor to be specified		-

\*Other size bushings available on request

**PSC-2 Trimmer and Bushings available for larger size ACSR conductors  
Please contact TEN for further information**

### Conductor Diameter Gauges

#### Conductor Diameter Sliding Gauge - TEN

**Part No. CG-430-AU**

HDPE slide gauge quickly & easily identify conductor OD

**Reduce Incorrect Conductor Identification**

- Designed for Australian AL, CU & ACSR conductors
- Measure Live Conductors
- For conductors 4.0 - 30mm Ø
- Fits universal sunrise fitting



Part No.	Dimensions (mm)	Weight (kg)
CG-430-AU	104 (W) x 287 (L) x 10 (D)	0.26

#### Conductor Diameter Gauge - AL, CU & ACSR - TEN

**Part No. CG-EQL Series**

Quickly & easily identify common overhead electrical distribution conductor or wire sizes in AL, CU & ACSR. Markings include conductor name, stranding and overall diameter.

- Hole in base for use with a shotgun stick and hanging storage
- Imperial and metric sizes included
- Precision machined from lightweight aluminium alloy



Part No.	Conductor Range	Dimensions (mm)	Wt (g)
CG-EQL-ALCU	Copper 7/.064 – 4.87mm to 19/2.75 – 13.8mm Aluminium Locust – 7/.093 – 7.08mm to Taurus – 19/4.75 – 23.80mm	257 (W) x 91 (L) x 14 (D)	750
CG-EQL-ACSR	ACSR Quince – 5.25mm to Wolf – 18.13mm	209 (W) x 91 (L) x 14 (D)	650

### Temporary Earth Stakes - TEN

Hand drive the Earth stake for temporary earthing applications.

#### Features

- Slide hammer drive
- T-Handle lock screw secures sliding shaft for safety, transport and storage (TENW001)
- Non-slip rubber hand grips (TENW001)
- 16mm Stainless steel rod
- Heavy duty top bash cap
- Chiseled tip for easy driving
- Drive rod at a safe working height, minimise risk of back injury
- No pinch points - internal hammer design
- 730mm to attachment point

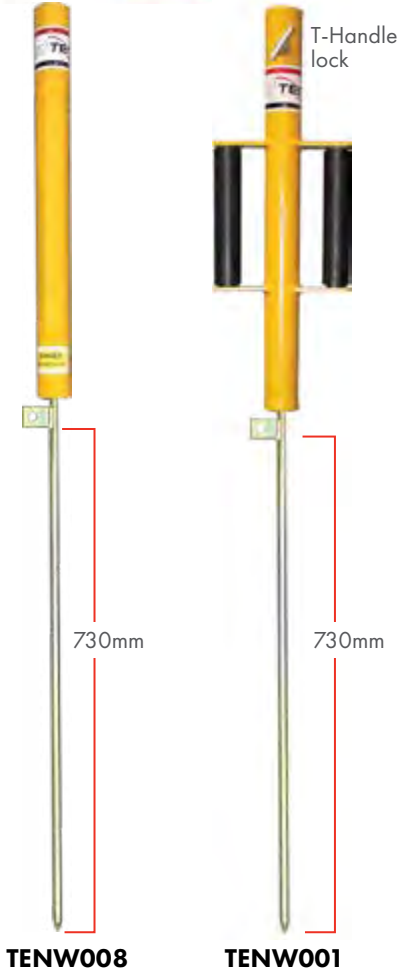
Earth attachment



Earth clamp attachment



Part No.	Length OAL Extended/Retracted (mm)	Attachment Point (mm)	Rod OD (mm)	Wt (kg)
TENW001	1820 / 1340	730	16	6
TENW008				5



### Earth Rod Drivers - iTOOLco

#### Part No. Various

Safely drive 9.5mm, 12.7mm, 14mm, 16mm and 19mm Earth rods into the ground in under a minute with iTOOLco's Ground Rod Dawg™. Once the rod is driven down far enough the tool can be used to hammer from top to finish the driving.

#### Features

- Hardened tool steel construction for long life
- Multiple size rods can be driven
- SDS Max driver bit for positive connection and secure driving of rods



Drive the rod down to a comfortable height



Then complete the driving by hammering from the top

Part No.	Description	Earth Rod Size (mm)	Driver shaft
GRD01	Earth Rod Driver	12.7 to 19	SDS Max
GRDXL34		19	Demo Hammer
GRDXL01		25	





## QUALITY INSULATED HAND TOOLS

Derancourt hand tools are manufactured for working near live parts or potentially live parts with ratings up to 1000VAC and 1500VDC.

### PUT SAFETY IN YOUR HANDS

Derancourt is a world class manufacturer of quality electrician and power utility worker 1000V Insulated Hand Tools. Stringent manufacturing standards, quality assurance and extensive testing ensures the highest level of quality – translating to better safety outcomes.

Derancourt tools are manufactured in accordance with IEC/EN60900 and undergo rigorous testing to ensure full compliance to these standards. Every Derancourt tool is inspected and are batch identified for easy traceability, so you can be sure your using the safest tool for the job at hand.



Insulated hand tools are classified into three categories:

**Insulated Hand Tools:** Hand tools made of conductive material(s) fully or partially covered by insulating material.

**Insulating Hand Tools:** Hand tools made totally or essentially from insulating material(s) except for inserts made from conductive materials used for reinforcement, but with no exposed conductive point.

**Hybrid Hand Tools:** Hand tools made from insulating material(s) with exposed conductive parts at the working head (e-g cutting edges) (some non-exposed conductive part can be used for reinforcement).

This is an important distinction when risk assessing and implementing controls for electrical hazards in the work area.

### Coating

The coatings of DERANCOURT insulated tools consists of two layers:

1. Rigid internal layer, white or red and highly dielectric.
2. Soft orange or red outer layer, protecting the inner layer from impacts and improving comfort during use.

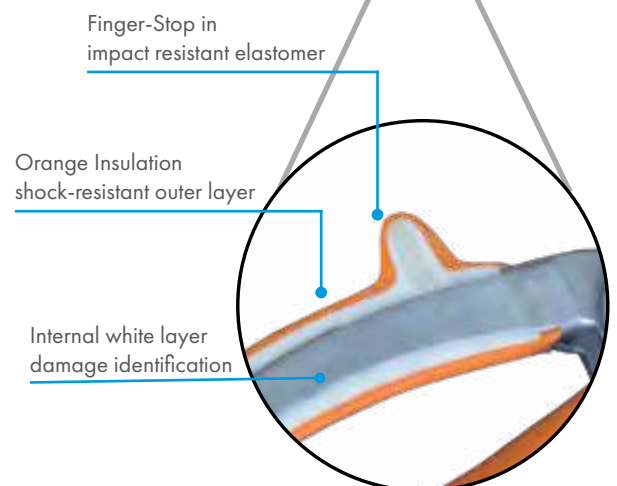
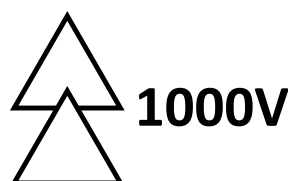
This also acts as a visual inspection. If the white or red can be seen under the top layer, then the tools electrical properties have been compromised and the tool should be removed from service. Smart design such as finger stops on the pliers made from an elastomer material reduces the effect of impacts and preserves the insulating coating

### Quality Assurance and Testing

Hybrid, insulating and insulated hand tools must satisfy the tests of the IEC EN 60900 standard.

Derancourt extensively test their products to meet and exceed this standard

- Dimensional control
- Impact tests
- Dielectric test
- Penetration test
- Adherence test
- Flame non-propagation test
- Mechanical tests
- Marking resistance test



The extensive testing and quality manufacturing processes is the assurance you are safer with Derancourt.





## 1000V INSULATED HAND TOOLS - Derancourt

### Multi-grip and Pliers

#### Multi-grip Pliers

**Part No. Various**

- Sectored multi-grip pliers - double grooves
- Burnished finish

Part No.	Length (mm)	Opening (mm)	Wt (kg)
D301-310	310	42	0.7
D5	245	36	0.4

#### Long Nose Pliers - Fully Insulated

**Part No. Various**

- Long straight-nose half-round pliers
- Fully insulated pliers to limit any risk of short-circuits
- Straight serrated jaws, half-round
- Induction hardened, diagonal cutting edges

Part No.	Length (mm)	Wt (kg)
D22D-160I*	165	0.2
D22D-200I*	205	0.3

\*Fully Insulated

#### Combination Pliers

**Part No. Various**

- Combination pliers fully insulated to jaws
- Fully insulated pliers to limit any risk of short-circuits
- Flat end grip with cutter jaw
- Rectangular gripping area, straight serration with tube grip
- Induction hardened, diagonal cutting edges

Part No.	Length (mm)	Wt (kg)
D1-180	185	0.3
D1-180I*	185	0.3
D1-200I*	205	0.4

\*Fully Insulated

### Cutters

#### Diagonal Cutters

**Part No. D3-Series**

- Electrician's diagonal cutting pliers
- Diagonal cutters for mild steel wire, cutting edge with axial cut
- Insulated & Fully Insulated

Part No.	Length (mm)	Wt (kg)
D3-180	185	0.4
D3-180I*	185	0.4

\*Fully Insulated

#### Cable Cutters

**Part No. D180-210**

- Precision Cable Cutter

Part No.	Length (mm)	Wt (kg)
D180-210	210	0.4

**Part No. D18-220**

- High Strength Cable Cutter
- Max 20mm CU/AL

Part No.	Length (mm)	Wt (kg)
D18-220	220	0.4



KT471

KT501

## Ratchet Cutters

### ACSR, AL and CU

#### Part No. K Series

Part No.	Jaw	Length (mm)	Cuts		Wt (kg)
			ACSR (mm)	AL/CU (mm)	
KT471	Closed	265	-	45	0.8
KT501	Closed	230	17 (11 mm Steel)	22	1.3
KTF361	Open	320	-	36	1.3



KTF361

## Parrot Beak Cutters - Large

### AL, CU and Steel

#### Part No. C Series

Part No.	Length (mm)	Cuts OD (mm)	Wt (kg)
C16	660	Cu/Al 20, Soft St 16, Hard St 10	2.8
C600	600	Cu/Al 35	2.1



C16



C600



## Bolt Cutters

#### Part No. D60 Series

- Efficient and easy to handle

Part No.	Length (mm)	Steel Cutting Capacity (mm)	Wt (kg)
D60N0	480	8 Dia. (60kg/ mm <sup>2</sup> ) - 6 Dia. (140 kg/ mm <sup>2</sup> )	1.9
D60N1	645	10 Dia. (60kg/ mm <sup>2</sup> ) - 8 Dia. (140 kg/ mm <sup>2</sup> )	2.9
D60N2	770	13 Dia. (60kg/ mm <sup>2</sup> ) - 9 Dia. (140 kg/ mm <sup>2</sup> )	4.6
D60N3	940	14 Dia. (60kg/ mm <sup>2</sup> ) - 10 Dia. (140 kg/ mm <sup>2</sup> )	6.7

**Klauke**<sup>®</sup>

## 1000V Insulated Battery Powered Cutters - Klauke



ES20ISM

20mm Cutter

ESM25ISM

25mm Cutter

ES32ISM

32mm Cutter

ESM50ISM

50mm Cutter

Cuts  
Cu, Al  
& ACSR

Cuts  
Cu & Al

Refer Hydraulic Section for more information on 1000V Insulated Battery Cutters



## Knives & Hacksaw

### Knives

- 1000V insulated - conforms to CEI 900 and NF EN 60900
- Treated steel blade
- Excellent cutting quality - stays sharp
- Guiding "V" for longitudinal cut
- Insulation with injected rigid insulating material
- Bi-material handle (for ease of use and good grip)



#### Part No. CL-IS

- Insulated Knife with Curved blade

Part No.	Includes	Length (mm)	Blade Length (mm)	Wt (kg)
CL-IS-E	Belt Pouch	168	42	0.85
CL-IS-C	Blade Cap	168	42	0.85

#### Part No. D1001-IS

- Insulated Knife with Curved blade and protective Blade Cap

Part No.	Length (mm)	Blade Length (mm)	Wt (kg)
D1001-IS-C	190	64	0.75

#### Part No. C1-IS

- Insulated Knife with straight blade and protective Blade Cap

Part No.	Length (mm)	Blade Length (mm)	Wt (kg)
C1-IS-C	182	56	0.75

### Hacksaw

#### Part No. D72-IS

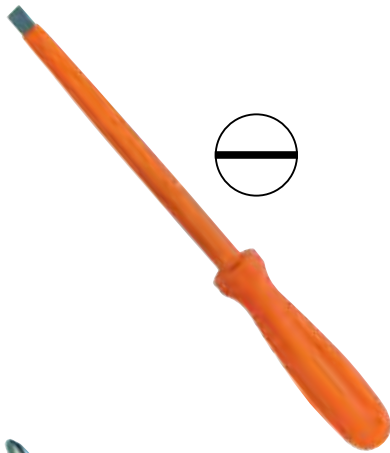
- Light frame made of reinforced insulating material.
- Ergonomic bi-material handle for optimal grip.
- Quick release device for the blade with retractable tensioner.
- Hand stop at the front of the mount.

Part No.	Length (mm)	Blade Length (mm)	Wt (kg)
D72-IS	440 (L) x 160 (H)	300	0.5

**For 1000V Stripping Tools**  
Refer page H17







**Ergonomic, Soft Touch  
Screwdrivers Available**



## Screwdrivers

### Flat Blade

#### Part No. Various

- 1000V insulated - conforms to CEI 900, NF EN 60900
- ISO 2380:D23/TB, ISO 8764:CRU
- Vanadium chrome steel

Part No.	Shaft Length (mm)	Width (mm)	Wt (kg)
TB-2.5X50B	50	2.5	0.20
TB-3.5X100	100	3.5	0.45
TB-4X100B	100	4.0	0.50
TB-5.5X150	150	5.5	0.90
TB-6.5X150	150	6.5	0.12
TB-8X150	150	8.0	0.16
TB-10X150	150	10	0.22
TB-12X200	200	12	0.35

### Phillips Head

#### Part No. Various

Part No.	Shaft Length (mm)	Width (mm)	Wt (kg)
CRU-3X100	100	3	0.45
CRU-4X75	75	4	0.50
CRU-5X100	100	5	0.75
CRU-6X100	100	6	0.95
CRU-6X125	125	6	0.11
CRU-8X150	150	8	0.16
CRU-10X200	200	10	0.27



## Shifters and Spanners

### Shifters (Standard Insulated & Fully Insulated)

#### Part No. D19 Series

- 1000V insulated - conforms to CEI 900, NF EN 60900 & ISO 6787
- Invisible slip joint
- Chrome vanadium steel, easy jaw roller

Part No.	Type	Length (mm)	Opening (mm)	Wt (kg)
D19-110	Insulated	120	13	0.1
D19-150	Insulated	160	20	0.2
D19-200	Insulated	210	24	0.3
D19-250	Insulated	260	28	0.5
D19-300	Insulated	310	34	0.8
D19-375	Insulated	385	43	1.5
D19-200I*	Fully Insulated	215	27	0.5
D19-250I*	Fully Insulated	265	32	0.6
D19-300I*	Fully Insulated	315	36	1.0

\* Fully Insulated



### Offset Ring

#### Part No. D13 Series

- Single head. Made from forged steel, vanadium chrome steel.
- Easier to remove embedded nuts angled 12 point fine heads.
- Chamfer makes it easier to position



Part No.	Length (mm)	Size (mm)	Wt (kg)
D13-10	175	10	0.90
D13-11	175	11	0.95
D13-12	190	12	0.12
D13-13	190	13	0.13
D13-14	200	14	0.15
D13-15	200	15	0.15
D13-16	215	16	0.18
D13-17	215	17	0.19
D13-18	230	18	0.23
D13-19	230	19	0.23

### Straight Ring

#### Part No. D12 Series

- Single Head 12 points



Part No.	Length (mm)	Size (mm)	Wt (kg)
D12-10	120	10	0.35
D12-11	120	11	0.40
D12-12	130	12	0.50
D12-13	130	13	0.60
D12-14	130	14	0.65
D12-15	130	15	0.70
D12-16	150	16	0.90
D12-17	150	17	0.11
D12-18	165	18	0.12
D12-19	170	19	0.14
D12-21	180	21	0.17

**Straight Ratchet Ring Spanners (D70-Series) also available - Contact TEN for further information**

### Single Open Ended

#### Part No. D14 Series

- Single open-end wrench



Part No.	Length (mm)	Size (mm)	Wt (kg)
D14-10	110	10	0.35
D14-11	110	11	0.34
D14-12	125	12	0.50
D14-13	135	13	0.55
D14-14	145	14	0.70
D14-15	145	15	0.75
D14-16	155	16	0.10
D14-17	155	17	0.10
D14-18	160	18	0.14
D14-19	165	19	0.14
D14-21	180	21	0.20



CD8-60-12



CD8-60R-12  
(Reversible)



## Wrenches

### Reversible Ratchet Wrenches - 1/2" & 3/8" Drive

#### Part No. C Series

- Equipped with a mechanical locking device to hold the socket in place
- Highly resistant insulating materials.
- Bi-material non-slip handle with "soft" touch for a good grip.
- Large button for reversing the direction of rotation.

Part No.	Length (mm)	Drive	Wt (kg)
C200IVM	213	3/8"	0.43
C250IVM	262	1/2"	0.63

### Torque Wrenches - 1/2" Drive - 8-60Nm

#### Part No. CD8 Series

- For precision tightening
- Automatic release and reset
- Graduated adjustment
- 8-60Nm - Accuracy 4%
- Torque adjuster locked during use
- Supplied with serial number and verification certificate

Part No.	Length (mm)	Drive	Wt (kg)
CD8-60-12	310	1/2"	1.0
CD8-60R-12	310	1/2"	1.0

### Torque Wrenches - 3/8" Drive - 4-20Nm

#### Part No. CD4-20

- Insulated torque wrench. 4-20 Nm.
- Graduated adjustment
- Torque adjuster locked during use
- Supplied with serial number and verification certificate

Part No.	Length (mm)	Drive	Wt (kg)
CD4-20	230	3/8"	0.9

### Torque Wrenches - 3/8" Drive - 8-60Nm

#### Part No. CD8-60-3.8

- Insulated torque wrench. 8-60 Nm.
- Graduated adjustment
- Torque adjuster locked during use
- Supplied with serial number and verification certificate

Part No.	Length (mm)	Drive	Wt (kg)
CD8-60R-3.8	310	3/8"	1.0

### T-Handle Wrench - 1/2" Drive

#### Part No. T250

- Accepts 1/2" Drive Sockets
- 3/8" also available

Part No.	Length (mm)	"T" Handle (mm)	Wt (kg)
T250	300	205 (L)	0.6





## Socket Extensions

### 125mm & 250mm Long

#### Part No. C250 Series

- Vanadium chrome steel
- 1/2" square drive

Part No.	Length (mm)	Wt (kg)
R250-125	125	0.2
R250-250	250	0.4

## Sockets 3/8" and 1/2" Drive

#### Part No. Various

### Socket - 1/2" Drive - 12 Point



Part No.	Size (mm)	Length (mm)	Wt (kg)
D250-12P-8	8	55	0.60
D250-12P-10	10	55	0.60
D250-12P-11	11	55	0.60
D250-12P-13	13	55	0.65
D250-12P-16	16	55	0.75
D250-12P-17	17	55	0.80
D250-12P-18	18	60	0.90
D250-12P-19	19	60	0.90

### Socket - 1/2" Drive - 6 Point



Part No.	Size (mm)	Length (mm)	Wt (kg)
D250-6P-13	13	55	0.65
D250-6P-16	16	55	0.75
D250-6P-17	17	55	0.80
D250-6P-18	18	59	0.85
D250-6P-19	19	60	0.90

### Socket - 1/2" Drive - 12 Point Long



Part No.	Size (mm)	Length (mm)	Wt (kg)
DL250-12P-13	13	91	0.15
DL250-12P-16	16	91	0.17
DL250-12P-17	17	91	0.17
DL250-12P-18	18	91	0.18
DL250-12P-19	19	91	0.19

Other sizes available. Contact TEN for further information.

#### Also available



### Sockets - 3/8" Drive - 6 and 12 Point

D200-6P/12P	DL200-6P/12P
3/8" insulated 6 & 12-point socket, From 7 to 24mm	3/8" insulated 6 & 12-point long socket From 7 to 24mm (91mm Long)

Also available in 1/2" Square Drive - Contact TEN for further information



M200 & M250

### Socket - Hex Head - M200 (3/8") & M250 (1/2")

Part No.	Size (mm)	Length (mm)	Wt (kg)
<b>3/8" Drive</b>			
M200-4	4	OAL 60	0.11
M200-5	4	OAL 60	0.12
<b>1/2" Drive</b>			
M250-4	4	15 Hex Length	0.075
M250-5	5		0.075
M250-6	6		0.080
M250-7	7		0.085
M250-8	8		0.085
M250-9	9		0.090
M250-10	10		0.095



### Socket - Offset - 17 & 19mm

#### Part No. D11 Series

- Single head, hexagonal 12 points
- Made from forged vanadium chrome steel.
- Deep, resistant socket,
- Strong handle to allow for powerful tightening

Part No.	Length (mm)	Size (mm)	Wt (kg)
D11-17	185	17	0.29
D11-19	195	19	0.43



### Socket - Fixed - T handle Wrench

#### Part No. D55 Series

- Entire tube in the shape of a hexagon socket screw key
- Heat treated steel

Part No.	Length (mm)	Size (mm)	Wt (kg)
D55-13-300	300	13	0.43
D55-18-300	300	18	0.70
D55-19-300	300	19	0.75
D55-19-400	400	19	0.90
D55-20-400	400	20	0.13

Also available



### Sockets - Radio and T-Handle

D21 - Radio Wrench	D15 - T-Handle Socket
Radio Wrench Heat treated steel Entire tube in the shape of a hexagonal socket screw key.	T-Handled socket wrench (short). Heat treated steel Entire tube in the shape of a hexagonal socket screw wrench.

Other sizes and styles available. Contact TEN for further information.



## Allen Keys

### Allen Keys - T-Handle

#### Part No. T62 Series

Part No.	Size (mm)	Length (mm)	Wt (kg)
T62-120-5	5	120	0.10
T62-175-3	3	175	0.17
T62-175-4	4	175	0.17
T62-175-5	5	175	0.05
T62-180-6	6	180	0.20
T62-95-4	4	95	0.10

### Allen Keys - Curved, Connector & Screwdriver Handle

D62 - Curved Allen Key	D62DJEUI - Curved Allen Key set	D62C - Short Hex	CMD - Straight Allen Key
Curved Allen key Vanadium chrome steel OAL 120mm, handle 80mm	Kit of 8 Allen Keys on ring Sizes 1.5, 2, 2.5, 3, 4, 5, 6 & 8	Short hex connector Vanadium chrome steel	Vanadium chrome steel Screwdriver style handle

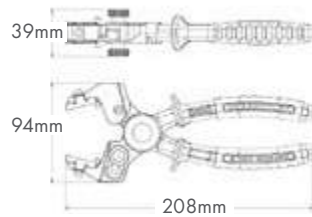
Contact TEN for available styles and sizes.

## Fuse Extraction Tool

### Part No. DA30IS

- For safe removal of Metal clad service fuses (handbag connections)
- High Mechanical Strength
- Size adjustable Jaws

Part No.	Length (mm)	Jaw Opening (mm)	Wt (kg)
DA30IS	300	20 to 94	0.18



Socket Sets, Tool Kits & storage solutions available. Contact TEN for more information.









- EWP Tool Trays & Aprons
- Tool Buckets/Bags
- Tool Pouches & Belts
- Fibreglass Stick Bags
- Tools & PPE Equipment Belts
- Glove & Sleeve Bags
- Soil Mats
- Storage Cases
- Tool & Test Equipment Storage

## **STORAGE SOLUTIONS**





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### Tool Buckets - Canvas - TEN

#### Tool Buckets

##### Part No. TENM201

- "Traditional" tool bucket, white
- 2 open, external pockets with bound edges
- Made from durable loomstate canvas and reinforced webbing
- Heavy Duty PVC base
- Rope handle, fixed one end and stainless steel hook the other

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM201	2 External	300 Ø x 350 (H)	1.0

##### Part No. TENM203

- "Classic" tool bucket, red
- 2 open, external pockets with bound edges
- Made from durable loomstate canvas and reinforced webbing
- Heavy Duty PVC base
- Rope handle, fixed one end and stainless steel hook the other

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM203	2 External	280 Ø x 350 (H)	1.0

##### Part No. TENM204

- "Traditional" tool bucket, white
- 2 open, internal PVC lined pockets
- Made from durable loomstate canvas and reinforced webbing
- PVC external/marine grade masonite internal base
- Rope handle, fixed one end and stainless steel snap hook the other

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM204	2 Internal	300 Ø x 350 (H)	1.0

##### Part No. TENM209

- "Classic" tool bucket, red
- Made from heavy duty tear stop canvas and PVC
- Rope handle, fixed one end and stainless steel snap hook the other
- 4 open, external pockets

Part No.	Pockets (mm)	Dimensions (mm)	Wt (kg)
TENM209	4 External 160 (H) x 140 (W) x 60 (D)	200 Ø x 300 H	0.7

##### Part No. TENM207

- "Classic" tool bucket, red
- 2 open, external PVC pockets with bound edges
- Made from durable tear stop canvas and PVC
- 2 Rope handles, fixed one end and stainless steel snap hook the other
- 2 rope handles make it ideal for hauling, can be hung while detaching the hauling line

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM207	2 External	280 Ø x 350 (H)	1.0

##### Part No. TENM212

- Oval shaped tool bucket, green
- Made from durable tear stop canvas
- 2 x Webbing shoulder strap with stainless steel snap hooks both ends
- Plastic base insert

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM212	1 Internal	360 (L) x 240 (W) x 400 (H)	1.0



### Tool Buckets - cont.

#### Part No. TENM206

- Oval shaped tool bucket, red
- 14 internal pockets and 9 external pockets (1 large with velcro flap)
- Made from durable tear stop canvas and webbing
- Detachable webbing shoulder strap and 2 x stainless steel gate hooks

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM206	14 Internal, 9 External (1 Large)	400m (L) x 240 (W) x 260 (H)	1.3



#### Part No. TENM210

- Oval shaped tool bucket, red
- Rope handle, fixed one end and stainless steel snap hook the other
- Made from durable tear stop canvas
- Plastic base insert
- Reinforced webbing bucket hook loops

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM210	7 Internal, 8 External	380 (L) x 200 (W) x 260 (H)	0.8



#### Part No. TENM205

- "Classic" mini tool bucket, red
- Made from heavy duty tear stop canvas and reinforced webbing
- Rope handle, fixed one end and stainless steel snap hook the other
- Stainless steel snap hook attached to bucket, can be used as riggers or belt bucket
- Plastic insert base

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM205	Nil	140 Ø x 320 (H)	1.0



#### Part No. TENM208

- Extra long tool bucket, red
- Ideal for long tools, armour rods & dead-ends
- 2 open, external PVC pockets with bound edges
- Made from durable tear stop canvas and PVC
- 1 Rope handle, fixed one end and stainless steel snap hook the other

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM208	2 External	300 Ø x 900 (H)	2.0



#### Part No. TENM213

- Tool bucket, red
- Ideal for armour rods, dead-ends, line hoses and conductor covers
- Made from durable tear stop canvas
- Rope handle, fixed one end and stainless steel snap hook the other
- PVC base with bound edging

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TENM213	Nil	300 Dia. x 1250 (H)	2.0kg



### Desk-Top Organiser Mini Tool Buckets

#### Part No. TEN-MINIBKT

- Ideal desktop organiser
- Ask for one free with your next order
- Not for field use

Part No.	Pockets	Dimensions (mm)	Wt (kg)
TEN-MINIBKT	5 External Pen Pockets	130 Ø x 150 (H)	0.3





### Bucket (EWP) Tool Aprons - TEN

#### Tool Apron - Universal

##### Part No. Various

- Made from heavy duty tear stop canvas
- Multiple pockets for drill bits, sockets, nuts, bolts, and hand tools
- Double stitched pockets for durability and strength
- Triple stitched binding
- Variety of sizes
- Pocket with drip holes
- Versatile three configurations - Standard straight, "L" shape and "U" shape
- Bound edges for added strength



TENM418 complete Kit



TENM418 Apron shown attached inside the Bucket



Conduit/Rope shown applied to liner (Included in TENM418)



TENM443



TENM529

Part No.	Application	Nut & Screw*	Dimensions (mm)
TENM446	Suits bracket, screws & nuts (sold separately) application to EWP Bucket*	5	550 (W) x 800 (H)
TENM443	Suits bracket, screws & nuts (sold separately) application to EWP Bucket*	10	1100 (W) x 980 (H)
TENM529	Suits Bracket, screws & nuts (sold separately) application to EWP Bucket*	5	1100 (W) x 920 (H)
TENM418	8m Rope and 1m Conduit (included) application to EWP Bucket	NA	1100 (W) x 980 (H)
TENM419	Rain cover to suit universal bucket apron TENM418	NA	1100 (W) x 990 (H)

\* See below for ATA brackets & screws

#### Custom Apron Brackets

##### Part No. ATA-BRACKET-S or L

- Formed plastic EWP bucket brackets for TEN's EWP Bucket Aprons (above)



SCAN OR CLICK to Download EWP Bracket Measurement Order Form

Part No.	Suits Apron	Width (mm)	Folds	Customer to Specify
ATA-BRACKET-S	TENM446	550	3	Dimensions of bracket folds
ATA-BRACKET-L	TENM443	1100	3	Dimensions of bracket folds

#### Bracket Nut & Screw

##### Part No. TP-NUT & TP-SCREW

- Nylon Nuts & Screws for use with bucket aprons (above)

Part No.	Description
TP-NUT	Nylon nut for use on bucket brackets (sold individually)
TP-SCREW	Nylon screw for use on brackets (sold individually)

See pages I17, I18 & I19 for additional PVC & Plastic Bucket Storage solutions



### Bucket (EWP) Storage - Line Work Bucket Products

#### Bucket Tool Organiser - Tool Apron

**Part No. TA-1017B**

Maintain a safe, organised and efficient EWP work area with this hard wearing tool apron.

**Features**

- Supplied with two 75mm Bucket Hooks\*
- Accepts up to 19mm OD Bucket Hooks
- Removable Heavy Duty Support Rod
- 13 Hand Tool Pockets
- 3 Loops for Lowell Wrench, Large Crescent Wrench, and Hammer
- Industrial 150mm Magnet Strip
- 4 D-Rings for Tool Tethers
- Triple Stitched for Max Durability
- Knife Sheath - 3.5mm Leather
- 2 PVC-Reinforced Augur Bit Holders
- 2 Large Compartments (216 x 95 x 100mm)
- Brass Rivets for Extra Strength
- Water Drainage holes



Part No.	Description	Dimensions (mm)	Weight (kg)
TA-1017B	Tool Apron	216 x 95 x 100	2.25

\*Other hook options available Sold separately See page 113

#### Bucket Tool Organiser - The Big Rack

**Part No. TBR-1007**

Maintain a safe, organised and efficient EWP work area with this durable, strong & hard wearing tool organiser.

**Features**

- Increase safety & efficiency
- Manufactured from durable polypropylene
- UV stable
- Includes 2 x 75mm Bucket Hooks\*
- Accepts up to 19mm OD Bucket Hooks
- 5 HOOKS - working load limit of 29kg per hook (total 145kg)
- 2 LOOPS - for quick access to hammers, podgers or socket adaptors



Part No.	Dimensions (mm)			Weight (kg)
	Rack	Rack Hook	Loop	
TBR-1007	495 x 114 x 17.5	51 Long	44.5 ID	1.52

\*Other hook options available Sold separately See page 113

#### Bucket Tool Organiser - Socket Pocket

**Part No. SP-1015**

Stores all the tools required for pole dressing. Tools accessible with gloved hands. Central magnetic face allows quick access to any small parts.

**Features**

- Fits 6 sockets, including the your nut runner
- Made from the same proprietary polymer as The Big Rack
- Supplied with 1 x 75mm HD Bucket Hook
- Accepts up to 16mm OD Bucket Hooks
- 2 Tool supports
- 6 Magnetic Socket Holders
- 2 Auger Bit Holders
- 1 Large Built-In Hook for Impact Gun
- 8 Industrial Magnets on Faceplate for quick access to small parts
- UV stable



Part No.	Description	Dimensions (mm)	Weight (kg)
SP-1015	Tool organiser, Socket Pocket	457 x 230 x 150	1.5

\*Other hook options available Sold separately See page 113



# KLEIN TOOLS

## Bucket Tool Storage - S-Hook Module - Klein



Tool Apron Storage Modules.

Customise your workspace, just like other professionals customise their office space.

Combine modules from the Klein Bucket Work Centre range to suit your requirements.

Select from the following modules:

- Tool Apron
- Hard Tool Storage
- Utility Bar
- Socket Storage
- Auger Bit Storage
- Magnetic Tool Board



### Tool Apron - Bucket Work Centre

**Part No. BC502S**

#### Features

- 12 compartments to accommodate a wide variety of Line workers tools
- Rare-earth magnets to hold hardware and small tools
- Double-stitched hammer loop and knife pouch
- 3 straps to hang additional tools
- Made with heavy-duty, UV-resistant plastic, to stand up to tough working conditions
- Cut-resistant knife pocket
- Bonus buckle for extra storage
- Requires 2 hooks for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (kg)
BC502S	Bucket (EWP) Work Centre	216 x 95 x 100	1.5



### Hard Tool Storage Module

**Part No. BC501S**

#### Features

- 18 compartments to accommodate a wide variety of Line workers tools
- 2 Rare-earth magnets to hold hardware and small tools
- Flexible retainers hold tools in place
- Made with heavy-duty, UV-resistant plastic
- Requires 2 hooks for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (kg)
BC501S	Bucket (EWP) Work Centre	216 x 95 x 100	1.8





### Bucket Utility Bar

**Part No. BC508S**

#### Features

- 254mm long bar allows tools to slide in and out with ease
- Dimensions 254 x 84 x 95 mm
- Holds line workers tools including hammers, hoists, ropes and long handled tools
- Made with impact resistant nylon to stand up to tough working conditions
- Not a tether point
- Not for fall arrest
- Not for dropped object prevention
- Requires 2 hooks for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (g)
BC508S	Bucket (EWP) UUtility Bar	254 x 84 x 95	330



### Socket Storage

**Part No. BC509S**

#### Features

- 6 slots to store commonly used impact socket sizes
- Dimensions 89 x 56 x 386 mm
- Fits a range of socket sizes from 3/8" to 1-1/8" (9mm to 28.5mm)
- Magnetic slots to keep sockets in place during transit
- Sockets are stored from smallest to largest to quickly identify the right size needed for the job
- Made with impact resistant nylon to stand up to tough working conditions
- Requires 1 hook for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (g)
BC509S	Socket Storage	98 x 56 x 386	454



### Auger Storage

**Part No. BC507S**

#### Features

- 2 slots to store 12", 18", or 24" long auger bits
- Dimensions 104 x 56 x 536 mm
- Aluminum spacer slides into one slot to store a 12" auger bit in the 18" holder or store an 18" long auger bit in the 24" bit holder (Cat. No. BC507i)
- Module will not melt with hot auger bits, or dull tips of auger bits
- Made with impact resistant nylon to stand up to tough working conditions
- Requires 1 hook for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (g)
BC507S	Auger Storage	104 x 56 x 536	644



### Magnetic Tool Board

**Part No. BC504S**

#### Features

- Rare-earth magnetic plates hold hand tools, sockets, bits and small parts
- Strong enough to hold line worker's pliers
- Dimensions 90 x 50 x 221 mm
- Made with impact resistant nylon to stand up to tough working conditions
- Requires 1 hook for mounting on bucket lip (sold separately)

Part No.	Description	Dimensions (mm)	Weight (g)
BC504S	Magnetic tool storage	90 x 50 x 221	302



TENM307



TENM308

TENM310



## Stick Bags - PVC - TEN

### Singular Stick Bags

#### Part No. Various

- Heavy Duty PVC stick bag (flame retardant, mildew & UV resistant)
- Opening loops at top and side velcro wide opening make it easy to open and access stick Lockable/Reinforced eyelet at top of bags (TENM307 zip opening)
- Single external accessories pocket with velcro closing
- Webbing carry handles
- Bound edges
- Suit Telescopic, Universal & Shotgun Sticks

Part No.	Colour	Fits Stick Length (m)	Suits Stick Part Numbers	Opening Style	Wt (kg)
TENM308	Red	0.7	HV-208	Velcro top only	1.0
TENM309	Red	1.5	HV-212 tele-stick 1.2m Shotgun (8104), 300 Dia. Stick (5467-4/5547-4)	Opening loops at top and side velcro wide opening	1.2
TENM301	Red	1.8	8106, HV216 to HV240, MV-25 to MV-40, M-50, SM-30, 81-706	Full length zip for easy stick access Lockable zip	1.4
TENM307	Blue				
TENM310	Red	2.4	8108, 81-708	Opening loops at top and side velcro wide opening	1.6

### Sectional Stick Bags

#### Part No. Various

- Heavy duty PVC carry bag (flame retardant, mildew & UV resistant)
- Accessory pockets with easy open tab tops
- Bound edges
- Top flap folds over stick & accessory ends for protection
- Webbing carry handles
- Bag can be folded in half and secured with press studs for ease of carrying

Part No.	Colour	Fits Stick Length (m)	Sticks	Accessory Pockets	Wt (kg)
TENM302	Red	1.2	4	4	1.5
TENM305	Red	1.2	4	5	2.2
TENM316	Blue	1.2	4	4	1.5
TENM319	Blue	1.2	4	5	2.2
TENM312	Blue	1.2	6	4	1.9
TENM304	Red	1.8	2	1	1.0
TENM306	Red	1.8	3	4	1.5
TENM313	Blue	1.8	4	4	1.8
TENM315	Red	1.8	4	5	2.0
TENM320	Blue	1.8	4	5	2.0

**Customised Stick & Shotgun kits available - contact TEN**

### Shotgun Stick Bag

#### Part No. TENM311

- PVC Shotgun Stick carry bag, red
- 8 accessory pockets - Some clear PVC pockets for quick identification of contents
- Labelled pockets for copper and aluminium scratch brushes
- Bag can be folded in half and secured with press studs for ease of carrying
- Reinforced eyelets at top of bag
- Webbing carry handles
- Bound edges

Part No.	Stick Length (m)	Accessory Pockets	Wt (kg)
TENM311	1 x 1.8 & 1 x 0.6	8	1.8



### Glove & Sleeve Bag - Canvas - TEN

#### Glove Bag - 1 Pocket

**Part No. TENM408**

- Loomstate canvas glove bag, white
- Bound edges
- Velcro flaps and s/steel snap hook to clip to belt
- Tapered shape

Part No.	Dimensions (mm)	Wt (kg)
TENM408	460 (L) x 200 (W) x 100 (D)	0.5

#### Glove Bag - 1 Pocket

**Part No. TENM436**

- Heavy duty PVC glove bag, red
- Velcro securing top with pull loops
- Flame retardant, mildew & UV resistant
- Bound edges

Part No.	Dimensions (mm)	Wt (kg)
TENM436	500 (L) x 250 (D)	0.2

#### Glove Bag - 2 Pocket

**Part No. TENM460**

- Canvas glove bag, white
- Bound edges
- 2 Pocket for HV & LV Gloves and Outers
- Press-Stud flaps and s/steel snap hook to clip to belt

Part No.	Dimensions (mm)	Wt (kg)
TENM460	470 (L) x 230 (W) x 210 (D)	0.7

#### Glove Bag - 3 Pocket

**Part No. TENM409**

- Loomstate canvas glove bag, white
- Bound edges
- 3 pockets: for rubber insulating gloves, protective outers and cotton inner gloves
- Velcro flap and s/steel snap hook to clip to belt
- Supplied with identification tag (key tag)

Part No.	Dimensions (mm)	Wt (kg)
TENM409	360 (L) x 170 (W) x 220 (D)	1.3

#### Glove & Sleeve Bag - 2 Pocket

**Part No. TENM410**

- Loomstate canvas glove bag, white
- Tapered shape
- Bound edges
- Velcro flap and s/steel snap hook to clip to belt

Part No.	Dimensions (mm)	Wt (kg)
TENM410	640 (L) x 200 (W) x 100 (D)	0.7

#### Glove & Sleeve Bag - 3 Pocket

**Part No. TENM411**

- Loomstate canvas glove bag, white
- Tapered shape
- 3 pockets - for rubber gloves, sleeves, protective outer and cotton inner gloves
- Velcro flap and s/steel snap hook to clip to belt
- Bound edges

Part No.	Dimensions (mm)	Wt (kg)
TENM411	700 (L) x 220 (W) x 360 (D)	1.3







## Bucket (EWP) Tool Aprons, Holders & Trays

### Bucket Impact Wrench Holders - Reliable

#### Part No. REL-IH

- Non conductive
- Top bracket can be moved for left or right handed operation, in or outside bucket
- Securing strap
- Holds drill with auger still in chuck
- Suits common industry impact wrenches

Part No.	Suit Bucket Lips (mm)	Wt (kg)
REL-IH	38 – 76	3.0



05-831 & 05-833



### Impact Wrench Holders - Hastings

#### Part No. 05-8 Series

- Non conductive
- Top bracket can be moved for left or right handed operation, in or outside bucket
- Velcro securing strap
- Holds drill auger still in chuck
- Includes auger holder on side (2 augers max) (05-831 & 05-833)

Part No.	Suit Bucket Lips (mm)	Suits Drills	Wt (kg)
05-831	Maximum 50 wide	Common industry impact wrenches	2.3
05-833	Maximum 100 wide		2.3
05-832	Maximum 50 wide		1.1
05-834	Maximum 100 wide		1.2
Part No.	Description		Wt (kg)
P19157	"L" Bracket to suit 05-831		0.5
P19189	"L" Bracket to suit 05-833		0.5



05-832 & 05-834

### Saw Holder / Hydraulic Chain Saw - Fibreglass - Hastings

#### Part No. 05-9 Series

- Non conductive
- Provides safe and convenient storage on bucket, preventing accidental damage
- Accommodates up to 915mm saw bar length

Part No.	Mounting	Wt (kg)
05-909-1	Inside Bucket	4.5
05-910-1	Outside Bucket	5.0



### Tool Trays - Hastings

- Non conductive
- Inside/Outside options available
- Provides safe and convenient storage on bucket



05-955



05-951



05-918-1

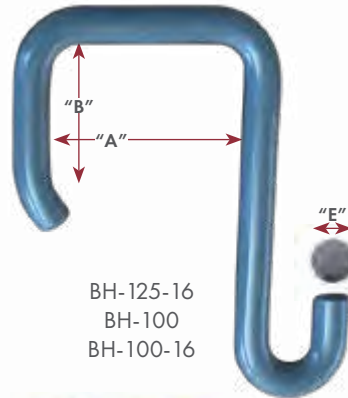
Part No.	Dimensions (mm)	Mounting in Bucket	Wt (kg)
05-919-1	610 (D) x 160 (W) x 430 (L)	Outside by Adjacent Hooks	7.7
05-951	190 (D) x 150 (W) x 355 (L)	Outside - Adjustable Bracket	3.6
05-955	190 (D) x 150 (W) x 510 (L)	Outside - Adjustable Bracket	4.6
05-918-1	190 (D) x 150 (W) x 355 (L)	Outside/Inside by below hooks	1.7



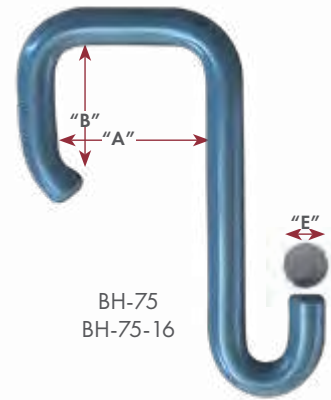
### Bucket (EWP) Storage Hooks

Specifically designed Hooks for storing and hanging tools and equipment in your Bucket (EWP)

- A variety of designs and sizes to suit your bucket, (EWP) tools and equipment
- Manufactured from Durable NON-Conductive material.
- Supplied in PAIRS



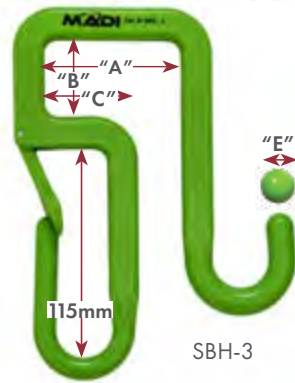
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BH-100  
BH-100-16



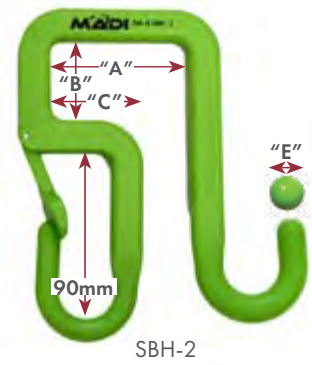
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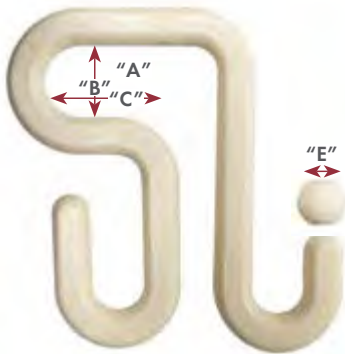
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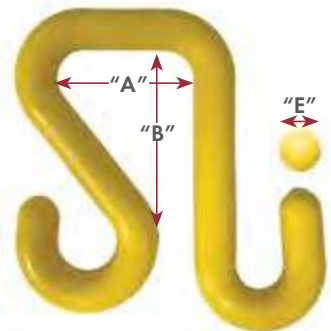
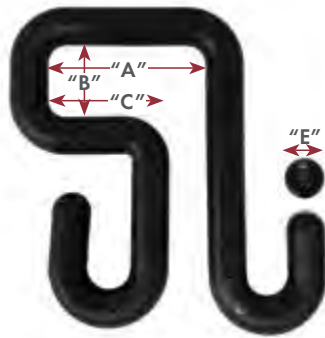
SBH-3



SBH-2



05-947



Part No.	Description	"A" mm	"B" mm	"C" mm	"OAL" mm	"E" mm	WLL (kg)
BH-125-16	PVC Bucket Hook - TEN	125	120	-	170	16	20
BH-100	PVC Bucket Hook - TEN	100	75	-	170	19	
BH-100-16	PVC Bucket Hook - TEN	100	75	-	170	16	20
BH-75	PVC Bucket Hook - TEN	75	55	-	170	19	
BH-75-16	PVC Bucket Hook - TEN	75	55	-	170	16	20
05-947	Polymer Bucket Hook - Hastings	80	33	62	158	18	30
5144LG2	Lockable Polymer Bucket Hook - Klein	60	60	-	200	16	18
5144LG3	Lockable Polymer Bucket Hook - Klein	68	75	-	215	16	18
SBH-2	Polymer Bucket Hook w/safety latch - MAD1	75	40	50	180	16	60
SBH-3	Polymer Bucket Hook w/safety latch- MAD1	75	40	50	210	16	60
LWBP-1005	Polymer Bucket Hook - LWBP	74	34	65	148	18	45
10-118	Polymer Bucket Hook - Hastings	61	75	-	141	18	30



### PPE and Equipment Bags - TEN

#### Equipment Bag - PVC

##### Part No. Various

- Heavy Duty PVC Welded Equipment Bag, designed to carry PPE
- Made from flame retardant, mildew & UV resistant PVC
- High frequency welded seams provide water resistance
- Internally reinforced base corners
- Velcro waterfall flap over heavy duty double lock easy slide zip
- Webbing handles & bound edges
- Double lock easy slide zip
- Plastic base insert

**Water Resistant  
Ultrasonic  
Welded Seams**



TENM508



TENM510

Part No.	Colour	Dimensions (mm)	Features	Wt (kg)
TENM508	Dark Blue	550 (L) x 330 (W) x 330 (H)	Detachable Shoulder Strap	1.5
TENM510	Blue	740 (L) x 360 (W) x 330 (H)	Shoulder strap	2.0
TENM516	Blue	740 (L) x 360 (W) x 330 (H)	Web Handles	2.5

#### Equipment Bag - Barrel, PVC "Essential Line-worker"

##### Part No. TENM504

- Heavy Duty PVC Equipment bags, red (flame retardant, mildew & UV resistant)
- Weatherstrip over heavy duty double lock easy slide zip
- Webbing handles
- Clear ID pocket on bag exterior
- Designed to carry PPE

Part No.	Colour	Dimensions (mm)	Wt (kg)
TENM504	Blue	650 (L) x 380 (OD)	0.7
TENM512	Red	650 (L) x 380 (OD)	0.7
TENM513	Red	820 (L) x 380 (OD)	0.9



#### Equipment Bag - Barrel, Canvas

##### Part No. Various

- Canvas Equipment bags, red
- Made from durable tear stop canvas (UV & mould resistant)
- Designed to carry PPE
- Weatherstrip over heavy duty double lock easy slide zip
- Webbing handles
- Clear ID pocket on bag exterior

Part No.	Dimensions (mm)	Wt (kg)
TENM518	650 (W) x 380 (OD)	0.7
TENM506	800 (L) x 380 (OD)	1.0



#### Equipment Bag - PVC

##### Part No. TENM407

- Made from strong, lightweight 600gsm, tear proof PVC, orange
- Velcro waterfall flap over heavy duty double lock easy slide zip
- 6 adjustable internal pockets (velcro)
- Ideal for storing general test equipment
- Clear internal document pocket (in lid)
- Clear external identity pocket
- Webbing shoulder strap & bound edges



Part No.	Dimensions (mm)	Wt (kg)
TENM407	440 (L) x 330 (H) x 230 (W)	1.5





### Tool and Equipment Storage - TEN

#### Riggers Pouch

**Part No. TENM402**

- Suits riggers, pole or tower workers
- Made from red durable tear stop canvas (UV & mould resistant)
- Fold back top flap sticks down with velcro to stay in place
- Bound edges
- Large side release buckle for harness or belt
- 2 pockets (1 large and 1 small) plus 2 external tool slots on sides
- Webbing straps have heavy-duty quick release buckles

Part No.	Dimensions (mm)	Wt (kg)
TENM402	180 (L) x 300 (H) x 70 (W)	0.2

#### Tester Pouch

**Part No. TENM445**

- Canvas pouch
- Made from durable tear stop canvas
- Pouch designed for LT-220 Live-tester
- Fold over velcro flap and webbing pull loops to easily open
- Webbing edges



Part No.	Dimensions (mm)	Wt (kg)
TENM445	430 (H) x 200 (W)	0.2

#### Equipment Pouch

**Part No. TENM417**

- Made from strong, lightweight 600gsm, tear proof PVC, orange
- Large zipped opening
- Webbed loops
- Clear face panel to easily view contents
- Reinforced base

Part No.	Dimensions (mm)	Wt (kg)
TENM417	290 (H) x 165 (W) x 85 (D)	0.7

#### Hoist Bag

**Part No. Various**

- Quality canvas carry bag
- Designed to protect hoists with handles attached
- Webbing handle & heavy duty zips
- Made from durable tear stop canvas

Part No.	Length (mm)	Wt (kg)
TENM426	740	0.5
TENM403	900	0.5
TENM420	1135	0.8

#### Spray Can & Rope Insulator Bag

**Part No. TENM461**

- PVC carry bag, red
- Designed for 10-115 Spray can holder & 4010 Rope Insulator (shown - not included)
- 2 x pockets
- Fold over velcro strips for easy access
- Webbing carry handles
- Bound edges

Part No.	Dimensions (mm)	Wt (kg)
TENM416	900 (L) x 420 (W)	0.7





Tools not included

### Emergency Cutting Kit Bag

#### Part No. TENM413

- PVC carry bag, red
- Designed for 4186 Emergency Wire Cutter & 4010 Rope Insulator (shown with kit)
- Clear PVC pockets for quick identification of contents
- 3 x Accessory pockets
- Fold over flap at top of bag closes with press studs
- Webbing carry handles
- Bound edges

Part No.	Dimensions (mm)	Wt (kg)
TENM413	1200 (L) x 420 (W)	0.7



Tester not included

### Glove Tester Bag

#### Part No. TENM739

- Made from strong, tear-stop PVC, orange
- Suits G99 Salisbury Glove tester
- Secure Velcro closure
- Reinforced Base

Part No.	Dimensions (mm)	Wt (kg)
TENM739	430 (L) x 270 (W)	0.2

TENM525



Kit Contents not included

Low Voltage Rescue Kit shown (LVRK)

### Rescue Kit Bags

#### Part No. Various

- Heavy Duty PVC
- Safety Yellow
- Printed Bold "LV or HV RESCUE KIT"
- Shoulder Strap
- TENM521 Pole Top Rescue Kit Bag is Water Resistant with Welded Seams\*



TENM521 \*

Part No.	Kit	Length (mm)	Wt (kg)
TENM521 *	Pole Top	410 (L) x 430 (H) x 190 (W)	0.8
TENM525	LV Rescue	460 (L) x 260 (H) x 120 (W)	0.5
TENM527	HV Rescue	460 (L) x 260 (H) x 120 (W)	0.5

Refer Safety Section for a full range of Rescue Kits



### Equipment Bag - Small

#### Part No. TENM514

- PVC mini tool bag, red
- Ideal for a range of ABC tools
- Made from heavy duty PVC
- Fold over velcro lid
- Bound edges for durability
- Webbing handles

Part No.	Dimensions (mm)	Wt (kg)
TENM514	270 (L) x 100 (H) x 100 (W)	0.8

### Equipment Bag - Large

#### Part No. TENM511

- Made from strong, lightweight 600gsm, tear proof PVC, orange
- 3 Internal document pocket, 3 external box pockets
- Movable compartment walls (velcro)
- Fold over velcro flap
- Webbing handle & bound edges
- Reinforced Base



Part No.	Dimensions (mm)	Wt (kg)
TENM511	490 (L) x 290 (H) x 130 (W)	1.0





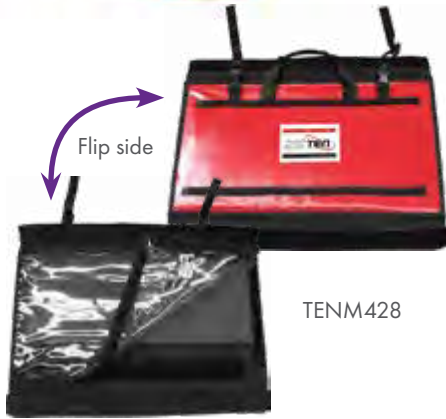
### 1000v Insulated Tool Pouches - Modular

#### Part No. Various

- PVC tool panel, red
- Designed for insulated tools
- Made from heavy duty PVC
- Flame retardant, mildew & UV resistant
- Clear protective flap over tools with velcro seal
- Webbing handles & bound edges
- External zipper facility to attach hacksaw pocket (TENM431)
- Elasticised pockets to separate and protect tools
- Velcro joining edges to connect various tool panels together for convenience



See Hand Tool Section for a full range of 1000v Insulated Tools



TENM428



TENM429



TENM430

Part No.	Used for	Pockets	Dimensions (mm)	Wt (kg)
TENM428	Spanner or small tools	14	350 (H) x 640 (W)	1.0
TENM429	Spanner or miscellaneous tools	15	350 (H) x 640 (W)	1.0
TENM430	Sockets or miscellaneous tools	10	350 (H) x 640 (W)	1.0
TENM432	Screwdrivers	15	350 (H) x 640 (W)	1.0
TENM431	Hacksaw pocket with velcro flap and zip facility	1	200 (H) x 600 (W)	0.6



TENM431

Easy Zip Connection  
Hacksaw not included



TENM432

### Tool Case with Divider

#### Part No. TENM435

- PVC Tool case, red
- Designed for insulated tools
- Made from heavy duty PVC (flame retardant, mildew & UV resistant)
- Rigid bag walls
- Easy slide zip opens bag to lay flat
- Padded storage divider in centre of bag to separate and protect tools
- 20 elasticised tool pockets 100mm deep
- Velcro strap to secure tools in place on one side (as shown in image)
- Webbing handles & bound edges



Part No.	Dimensions (mm)	Wt (kg)
TENM435	500 (L) x 100 (W) x 400 (H)	0.8

### Discharge Kit Bag

#### Part No. TENM439

- PVC carry bag, red
- Ideal for discharge stick
- Made from heavy duty PVC (flame retardant, mildew & UV resistant)
- Tapered shape
- External clear PVC identification pocket
- 3 internal pockets
- Full zipped opening length of bag with easy slide double lock zipper
- Large webbing handles, easy shoulder style carry
- Webbing carry handles & hanging handle
- Bound edges



Part No.	Dimensions (mm)	Wt (kg)
TENM439	1050 (L) x 250 (W) x 200 (H)	1.2





Jumpers not included

### Equipment / Jumper Bag

#### Part No. TENM515

- PVC carry bag
- Ideal for LV jumpers with handles
- Fold over velcro flap and webbing handle
- Webbing edges
- Bound Edges

Part No.	Jumper Handles (mm)	Dimensions (mm)	Wt (kg)
TENM515	450	470 (L) x 300 (W) x 100 (D)	0.5

### Portable Earth Device (PED) Bag

#### Part No. Various

- PVC carry bag - Various colours
- Ideal for Portable Earthing Devices (PED)
- Made from heavy duty PVC (flame retardant, mildew & UV resistant)
- Velcro flap
- Large webbing handles, easy shoulder style carry
- With or without dividers
- Webbing handles & bound edges

Part No.	Colour	Dimensions (L)x(W)x(H) (mm)	Wt (kg)
TENM423	Orange	400 (L) x 280 (W) x 370 (H) (2 Dividers)	0.6
TENM424	Red	600 (L) x 160 (W) x 600 (H) (1 Divider)	1.2
TENM440	Red	600 (L) x 150 (W) x 600 (H) (1 Divider)	1.2
TENM515	Red	470 (L) x 100 (W) x 300 (H)	0.5
TENM607	Yellow	600 (L) x 150 (W) x 600 (H) (2 Dividers)	1.2
TENM447	Blue	4 Pocket Stick Earth + 1 External pocket	2.2
TENM628	Orange	Earth Stick bag 3.0m (L) x 0.35m	3.0

### Temp Cross-arm Storage Bag

#### Part No. TENM710

- Suits Wagner 2.5m square temporary cross-arm
- Made from durable tear stop canvas with reinforced edges
- Webbing carry handles, reinforced stitched on both ends of bag
- Fold over corner velcro flaps
- 3 reinforced adjustable webbing straps for closing bag
- Bag easily unwraps to access Cross-arm

Part No.	Dimensions (mm)	Wt (kg)
TENM710	2640 (L) x 170 (W) x 100 (H)	6.0

### Document Storage Bag

#### Part No. TENM706

- Excellent for manuals and daily operational check lists attached to equipment
- Made from heavy duty red PVC (flame retardant, mildew & UV resistant)
- 1 internal pocket protected by outer covering of PVC
- Large easy slide zipped opening on internal pocket
- Velcro securing flap
- 4 eyelets & adhesive velcro back mount (hook & loop)
- Bound edges

**Ideal for Indoor & Outdoor applications**

Part No.	Dimensions (mm)	Wt (kg)
TENM706	520 (L) x 370 (W)	0.4
TENM734	450 (L) x 660 (W)	0.6



TENM424



TENM447





### LV Blanket Zipped Canister

**Part No. TENM433**

- PVC canister red, with internal PVC tubing
- Made from heavy duty PVC (flame retardant, mildew & UV resistant)
- Zipped lid with wide opening
- Webbing carry handle



Part No.	Dimensions (mm)	Wt (kg)
TENM433	760 (L) x 100 (OD)	0.8



### Mat and Blanket Mat Roll

**Part No. TENM738**

- Heavy Duty PVC Roll - Yellow
- Webbing carry handle
- Use for storage of Ground Mat or a ground sheet

Part No.	Dimensions (mm)	Wt (kg)
TENM738	1150 (L) x 1030 (W)	0.8



### Straps - TEN

#### Shoulder Strap - Battery Tool

**Part No. TENM703**

- High quality durable black webbing
- Stainless steel clip
- Adjustable length



Part No.	Dimensions (mm)	Wt (kg)
TENM703	2000 length strap	0.3

#### Pole Strap Kit

**Part No. TENM714**

- Designed to firmly hold rubber insulating blankets and cover up equipment on live components and hardware
- 12 Straps with handy riggers pouch with belt clip
- All webbing straps have heavy-duty quick release buckles
- Easily adjusted for different sized equipment
- Ideal for covering poles, EDOs, disc insulators and more
- A MUST for all glove and barrier operations



Included in Each Kit		
QTY	Strap Length (m)	Webbing (mm)
6	1.5	50
6	1.2	25



### Ground Tarp & Soil Mats

#### Ground Tarp & Soil Mat - PVC - TEN

##### Part No. TENM711

- Ground Tarps designed for covering the ground around the power pole base
- PVC with reinforced edging
- Soil Mats designed for piling dirt on to keep walkways and underground work areas clean and tidy
- Custom designs, shapes and sizes available upon request
- Loops rated for Hand lifting only. Do not lift with soil



Part No.	Dimensions (m)	Wt (kg)
TENM711	2 (L) x 2 (W)	0.4

#### Dirt Tarps - Slingco

Slingco's range of heavy-duty, re-usable dirt tarps have been created with safety in mind. Keeping workers out of awkward, injury-prone positions is better for their long-term health and the company's bottom line. Dirt tarps have become a must-have product at utility construction sites.

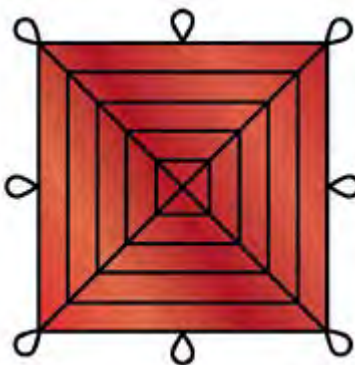
You can find Slingco Dirt Tarps being used at pole change-outs, transformer terminations, as well as underground gas, telephone, and other underground utility applications.

The Dirt Tarp has the ability to move crushed rock, sand, dirt, wet cement, dig spoils, and other contaminated soil.

- Heavy-duty webbing and lifting loops
- Double stitched for reinforcement and durability
- Simply clean, dry, store, and re-use!
- Compact enough to store on truck when folded



### Time saved filling holes, moving materials and cleaning up



**1.** Collect the waste on a flat surface (Black Webbing Face Down)



**2.** Gather Tarp Loops for easy lifting



**3.** Release loops for simple disposal

Part No.	Size (m)	WLL (kg)	Dirt/Gravel (m <sup>3</sup> )
ZLD10792	1.8 x 1.8	1814	0.2
ZLD10793	2.1 x 2.1	1814	0.3
ZLD10016	2.4 x 2.4	2268	0.4
ZLD10015	3.0 x 3.0	2268	0.6



### Hard Storage Cases



#### Die Box - Steel - TEN

**Part No. K12-CASE-MB**

- Heavy duty steel
- Powder coated
- 18 compartments ideal for dies
- Clasps and carry handle

Part No.	Dimensions (mm)	Wt (kg)
K12-CASE-MB	340 (L) x 175 (W) x 55 (H)	2.0

See Hydraulic section for complete range of 6 & 12T Dies

### Available Compression Dies



6T Dies



12T Dies



12T "C" Crimp Dies



12T Sector Crimp Dies



25T Dies



45T Dies



60T Dies



100T Dies

**6 & 12T Dies available - see C9 through C13 in the Hydraulic Tool Section  
Compression Dies up to 200T also available**



#### Ampact Tool Case

**Part No. 737520**

- Quality Blow-Mould Plastic case
- Cut-out foam insert to hold tools in place
- Holds Tool, small/large head + take off clips
- Manual included



Ampact Tool not included

Part No.	Dimensions (mm)	Wt (kg)
737520	450 (L) x 300 (H) x 100 (W)	0.5





- 
- Hydraulic Pullers, Tensioners, Puller/Tensioners & Winches
  - Fixed Joints, Swivels, Grip & Socks
  - Reel Winders, Drum Elevators & Stands
  - Reels, Anti-Twist Steel & Dyneema Ropes
  - OPGW Installation Equipment
  - Stringing Rollers & Blocks
  - Balancing Headboards
  - Conductor Chairs & Cars
  - Suspension Ladders & Working Platforms

## **TRANSMISSION STRINGING**



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## Tesmec Generation 4.0 machines with the Digital Human Interface



# TESMEC

**PT2451 - 100kN Digital Puller Tensioner**

### Digital Human Interface (HMI)

The digital HMI (Human Machine Interface) is a significant innovation on the 4.0 stringing machine. The control panel is drastically simplified.

The innovative graphic display shows all the information, including diesel engine parameters, machine performance, and diagnostic output.

This digital technology eliminates most of the instruments and devices installed on the previous control panel.

The remote operates up to a distance of 100m from the machine in line of site. It can also be connected by cable, both options give the operator full control of the machine in a position that offers a better overview of the worksite.

**Note:**

Pullers equipped with reel-winders feature automatic back-pull control for optimal performance and simple operation.



Full Function Remote Control



### Diagnostic Features

- Maintenance interval scheduling, with countdown and alerts.
- Machine alerts display errors with detailed description.
- Alerts recording option for authorised service inspection.
- Automatic self-diagnosis at machine start.

### Efficiency

- Automatic diesel engine rpm setting maximises stringing speed and offers better oil cooling and fuel savings.
- Automatic oil cooling according to oil viscosity.
- Reduce operator errors and maximise uptime.
- Analog Circular chart displays operating parameters and machine limits.
- Automatic cutting pressure device, to avoid any possible overload on the machine.

### Re.M. (Remote Monitoring System) - ALL270

Remote monitoring package for main performance and diagnostic parameters, including alarms and a GPS localization, available on request.

### Integrated Recorder

Integrated pull recorder stores the operational data. Downloadable using a simple USB flash drive. Printer also available as an option.



## Digital Stringing Machines Main Features



### Configuration

Full package in the standard version configuration.

The standard machine includes a complete package of devices:

- Integrated pull recorder.
- Radio remote control.
- Conductor clamp.
- Low range gearbox (50 kN range).

Range of available options include: preheating device for extra cold ambient temperatures, road transportation package, electronic connection of modular machines, remote diagnosis package and low range solution (100 kN range and higher).



### Power Unit

Diesel engine: Stage 4, tier 4f and Stage 5

Each machine is also available with engine equivalent to the previous Stage emission level for markets where ultra high grade fuel is not available.

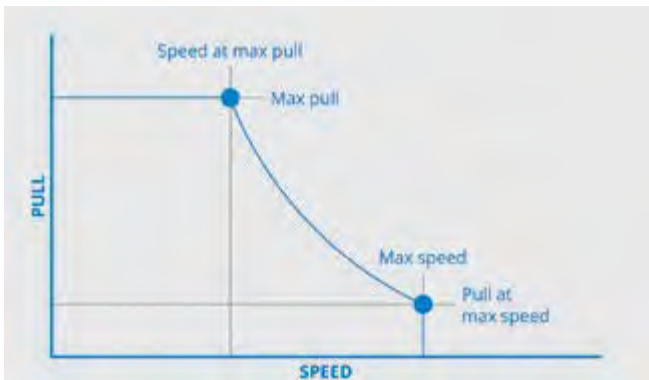
Integral cover of the whole power unit and modularity in single components.

### Integral Cover

The integral cover of the whole power unit grants:

- Best protection of all the installed components.
- Reduction of noise emission.

Modular design and standardized components reduces spare parts and simplifies maintenance.



### Performance

#### Operating pull vs speed

Unique hydraulic circuit for stepless speed variation. Automatic management of the diesel engine for highest possible operating speed depending on work conditions.



### Mobility

#### Two travel configurations

The machine layout allows the installation of rigid or road axles configurations.

Road axle with EU type approved is available.

### Re.M (REMOTE MONITORING SYSTEM)

All you need to use Tesmec Re.M is an Internet connection and a browser!

The interface will give you all the machine information (engine parameters, pressures and temperatures), included the geofencing (GPS coordinates).

The remote monitoring system, RE.M, acquires, analyzes and manages information from our pullers, tensioners and puller-tensioners.

This system allows a fleet management time saving of 25%.

All the information is forwarded to a cloud platform through a data connection and is available using an Internet connection and browser.

The remote access option is the easiest way to check machine data. In case of failure, service technicians can obtain the situation analy before they reach the job-site reducing problem resolution and next step timing.



#### Daily Control Of All Machines

Data collected by RE.M allow a reduction of data processing errors and a daily fleet control through:

- Statistics of machine use
- Monitoring of operating parameters such as temperature, pressure of hydraulic system and working hours
- Monitoring machine status
- Monitoring of productivity

#### Proactive Maintenance Management

- Automatic acquisition of engine hours.
- Reduction of time dedicated to finding equipment for maintenance.
- Monitoring of machine status in order to prevent failure and to reduce downtime.

#### Geofencing

With RE.M you can define virtual fences that allow monitoring of machines' position on job-sites and whenever a machine is leaving a geofenced area the system sends a text message and/or an email that can help tracking and recovering the machine; reducing theft related costs.

#### Reliable Technical Assistance

Thanks to electronic error notification, RE.M simplifies problem resolution process, reducing troubleshooting and allowing speed and focused technical assistance with the possibility of problem resolution by remote.

#### System Availability

RE.M is available on all the digital stringing machines. Following customer authorisation, the system will be activated and data access will be possible through a customer private account. During machine warranty period, Tesmec S.p.A. can access and use all the data transmitted by RE.M for problems resolution or for maintenance. On request, the system can be installed on existing machines.

TEN Hire (SRT) offers 24/7 back-up repair and trouble shooting service. Maintenance and Repairs can be carried out on-site or at the TEN Hire facility.

See TEN Hire & SRT information at the end of the Transmission Stringing section.



## Digital Hydraulic Pullers - TESMEC

### 100kN Digital Puller Part No. PL1450



MAX PULL

100kN



MAX SPEED

4.5km/h



ROPE DIAMETER

21 mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Automatic reel winder
- Integrated covers

**100kN**  
**MAX PULL**

Performance	
Max pull (kN)	100
Speed at Max pull (km/hr)	2.0
Max speed (km/hr)	4.5
Pull at Max speed (kN)	45

Characteristics	
Bull-wheel diameter (mm)	525
Bull-wheel material	STEEL
Max rope diameter (mm)	21
Weight (without rope) (kg)	4600
Number of grooves	9
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	105 (140hp)
Cooling System	Water
Electrical System	24V

Configuration
Automatic reel winder. On board automatic reel winder with level wind, for reel mod. BOF010 and BOF020. Reel shaft AXR001.

Available Options	
ALL037	Preheating device up to -30°C
ALL089	Electronic connection and synchronization between machines
ALL111	Swivel guide rope roller
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription
ALL280	Automatic grease pump
AXR001	Extra shaft

**Ideal for Green Field Construction**



7" COLOUR DISPLAY



RADIO REMOTE CONTROL



## 160kN Digital Puller

Part No. PL1700



MAX PULL

160kN



MAX SPEED

4.5km/h



ROPE DIAMETER

28mm

- Tesmec Digital HMI 178mm (7") Colour Display. Radio Remote Control. Data Recorder
- Automatic reel winder
- Integrated covers

**160kN**  
MAX PULL



Performance	
Max pull (kN)	160
Speed at max pull (km/hr)	2.8
Max speed (km/hr)	4.5
Pull at max speed (kN)	105

Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Characteristics	
Bull-wheel diameter (mm)	700
Bull-wheel material	STEEL
Max rope diameter (mm)	28
Weight (without rope) (kg)	7500
Number of grooves	10
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	210 (281hp)
Cooling System	Water
Electrical System	24V

Configuration	
Automatic reel winder. On board automatic reel winder with level wind, for reel mod. BOF020 and BOF030. Reel shaft AXR002.	

Available Options	
ALL037	Preheating device up to -30°C
ALL089	Electronic connection and synchronization between machines
ALL111	Swivel guide rope roller
ALL261	External printer
ALL280	Automatic grease pump
AXR002	Extra shaft
ALL010	Hydraulic power pack to control a separate reel winder
ALL022	Hydraulic quick connectors to control a separate reel winder instead of the built-in one

**Ideal for Green Field Construction**



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

## 180kN Digital Puller

Part No. PL1750



MAX  
PULL

180kN



MAX  
SPEED

4.5km/h



ROPE  
DIAMETER

28mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Automatic reel winder
- Integrated covers

**180kN**  
MAX PULL



Performance	
Max pull (kN)	180
Speed at max pull (km/hr)	2.5
Max speed (km/hr)	4.5
Pull at max speed (kN)	105

Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

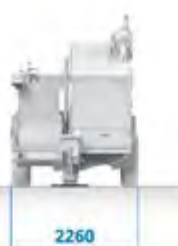
Characteristics	
Bull-wheel diameter (mm)	700
Bull-wheel material	STEEL
Max rope diameter (mm)	28
Weight (without rope) (kg)	7500
Number of grooves	10
Suitable for	1 rope
Layout	Single

Engine	
Diesel (kW)	210 (281 hp)
Cooling System	Water
Electrical System	24V

Configuration	
Automatic reel winder. On board automatic reel winder with level wind, for reel mod. BOF020 and BOF030. Reel shaft AXR002.	

Available Options	
ALL037	Preheating device up to -30°C
ALL089	Electronic connection and synchronization between machines
ALL111	Swivel guide rope roller
ALL261	External printer
ALL280	Automatic grease pump
AXR002	Extra shaft
ALL010	Hydraulic power pack to control a separate reel winder
ALL022	Hydraulic quick connectors to control a separate reel winder instead of the built-in one

**Ideal for Green Field Construction**



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

## Digital Hydraulic Tensioners - TESMEC

### 80kN Digital Tensioner

Part No. TN2350



**MAX TENSION**  
2 x 40kN



**MAX SPEED**  
5km/h



**CONDUCTOR DIAMETER**  
42mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Automatic reel winder
- Integrated covers

**80kN  
MAX PULL**

Performance	
Max tension (kN)	2 x 40/ 1 x 80
Speed at max tension (km/hr)	3
Max speed (km/hr)	5
Max pull back (kN)	2 x 40/ 1 x 80

Hydraulic Transmission	
Half closed hydraulic circuit with tension presetting system.	

Characteristics	
Bull-wheel diameter (mm)	1500
Bull-wheel material	NYLON
Max conductor diameter (mm)	42
Max rope diameter (mm)	21
Weight (without rope) (kg)	7000
Number of grooves	12
Suitable for	2 conductors
Layout	Twin

Engine	
Diesel (kW)	55.4 (140hp)
Cooling System	Water
Electrical System	12V

Configuration	
Tesmec digital HMI. Lockable sound proof integrated covers. Rope clamp for reel change. Negative self-acting hydraulic brake. Rigid axle 30 km/h. Earthing connection point. Hydraulic front stabilizers. Power pack to control 2 reel stands or 2 reel-winders.	
Gearbox with 3 operating positions on 1 circuit:	
<ul style="list-style-type: none"> <li>• Neutral position (with free bull-wheels for conductor loading and unloading).</li> <li>• Low tension position (1 to 7 kN).</li> <li>• Nominal tension position.</li> </ul>	

Available Options	
ALL005	Hydraulic power for compressor
ALL037	Preheating device up to -30°C.
ALL089	Electronic connection and synchronization between machines.
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription.
ALL280	Automatic grease pump

**Ideal for Green Field Construction**





### 140kN Digital Tensioner

Part No. TN2600



MAX TENSION

2 x 70kN



MAX SPEED

5km/h



CONDUCTOR DIAMETER

51 mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Rope clamp
- Integrated covers

**140kN**  
**MAX PULL**

Performance	
Max tension (kN)	2 x 70/ 1 x 140
Speed at Max tension (km/hr)	3
Max speed (km/hr)	5
Pull at Max speed (kN)	2 x 70/ 1 x 140

Hydraulic Transmission	
Half closed hydraulic circuit with tension presetting system.	

Characteristics	
Bull-wheel diameter (mm)	1800
Bull-wheel material	NYLON
Max conductor diameter (mm)	51
Max rope diameter (mm)	25
Weight (without rope) (kg)	10000
Number of grooves	12
Suitable for	2 conductor
Layout	Twin

Engine	
Diesel (kW)	55.4 (140hp)
Cooling System	Water
Electrical System	12V

Configuration	
Tesmec digital HMI.	
Lockable sound proof integrated covers.	
Rope clamp for reel change.	
Negative self-acting hydraulic brake.	
Rigid axle 30 km/h.	
Earthing connection point.	
Hydraulic front stabilizers.	
Power pack to control 2 reel stands or 2 reel-winders.	

Available Options	
ALL005	Hydraulic power for compressor
ALL037	Preheating device up to -30°C
ALL087	Low tension device
ALL089	Electronic connection and synchronization between machines.
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription
ALL280	Automatic grease pump.

**Ideal for Green Field Construction**



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

## Digital Hydraulic Puller Tensioners - TESMEC

### 50kN Digital Puller Tensioner

Part No. PT1250



MAX TENSION

50kN



MAX SPEED

5km/h



CONDUCTOR DIAMETER

42mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Available for road use
- Integrated covers

**50kN  
MAX PULL**

Performance	
Max pull (kN)	50
Speed at Max pull (km/hr)	1.5
Max speed (km/hr)	5
Pull at Max speed (kN)	12

Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Characteristics	
Bull-wheel diameter (mm)	1500
Bull-wheel material	NYLON
Max conductor diameter (mm)	42
Max rope diameter (mm)	16
Weight (without rope) (kg)	3450
Number of grooves	6
Suitable for	1 rope/ conductor
Layout	Single

Engine	
Diesel (kW)	55.4 (74hp)
Cooling System	Water
Electrical System	12V

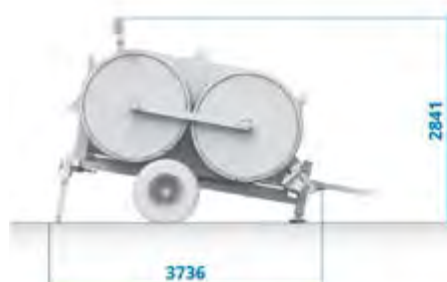
Configuration	
Tescmec digital HMI. Lockable sound proof integrated covers. Rope clamp for reel change. Negative self-acting hydraulic brake. Rigid axle 30 km/h. Earthing connection point. Hydraulic front stabilizers.	

Power pack to control 1 reel stand or 1 reel-winder.

- Gearbox with 3 operating positions on 1 circuit:
- Neutral position (with free bull-wheels for conductor loading and unloading).
  - Low tension position:
    - 2 to 12kN as tensioner
    - 0 to 7kN as puller
  - Nominal tension position.

Available Options	
ALL005	Hydraulic power for compressor
ALL037	Preheating device up to -30°C.
ALL080	Special kit for 2 conductors up to Ø 31mm.
ALL089	Electronic connection and synchronization between machines.
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription.
ALL280	Automatic grease pump

**Perfect for Construction and Reconductoring**



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

### 100kN Digital Puller Tensioner

Part No. PT2451



MAX TENSION

2 x 50kN



MAX SPEED

5km/h



CONDUCTOR DIAMETER

42mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control.  
Data Recorder
- Rope clamp
- Integrated covers

**100kN**  
**MAX PULL**

Performance	
Max pull (kN)	2 x 50/ 1 x 100
Speed at Max pull (km/hr)	2
Max speed (km/hr)	5
Pull at Max speed (kN)	2 x 20

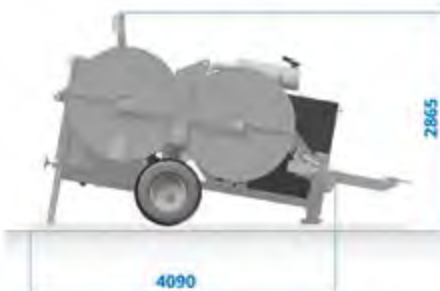
Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Characteristics	
Bull-wheel diameter (mm)	1500
Bull-wheel material	NYLON
Max conductor diameter (mm)	42
Max rope diameter (mm)	21
Weight (without rope) (kg)	7300
Number of grooves	12
Suitable for	2 conductors
Layout	Twin

Engine	
Diesel (kW)	105 (140hp)
Cooling System	Water
Electrical System	24V

Configuration	
<p>Tesmec digital HMI. Automatic reel winder. Lockable sound proof integrated covers. Rope clamp for reel change. Negative self-acting hydraulic brake. Rigid axle 30 km/h. Earthing connection point. Hydraulic front stabilizers. Power pack to control 2 reel stands or 2 reel-winders.</p> <p>Gearbox with 3 operating positions on 1 circuit:</p> <ul style="list-style-type: none"> <li>• Neutral position (with free bull-wheels for conductor loading and unloading).</li> <li>• Low tension position: <ul style="list-style-type: none"> <li>- 4 to 17kN as tensioner</li> <li>- 0 to 17kN as puller</li> </ul> </li> <li>• Nominal tension position.</li> </ul>	

Available Options	
ALL005	Hydraulic power for compressor
ALL037	Preheating device up to -30°C
ALL089	Electronic connection and synchronization between machines
ALL216	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription
ALL280	Automatic grease pump.



7" COLOUR DISPLAY



RADIO REMOTE CONTROL



## 140kN/160kN Digital Puller Tensioners



Part No. PT2600

**140kN**  
MAX PULL/TEN



MAX TENSION

2 x 70kN



MAX SPEED

5km/h



CONDUCTOR DIAMETER

51 mm

Part No. PT2601

**160kN**  
MAX PULL/TEN



MAX TENSION

2 x 80kN



MAX SPEED

5km/h



CONDUCTOR DIAMETER

51 mm

- Tesmec Digital HMI  
178mm (7") Colour Display.  
Radio Remote Control  
Data Recorder
- Available for road use
- Integrated covers

Performance		
Max pull/tension (kN)	PT2600	2 x 70/ 1 x 140
	PT2601	2 x 80/ 1 x 160
Speed at Max pull/tension (km/hr)	PT2600	2
	PT2601	1.5
Max speed (km/hr)	PT2600	5
	PT2601	
Pull at Max speed (kN)	PT2600	2 x 25
	PT2601	2 x 45

Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Engine	
Diesel (kW)	129 (173hp)
Cooling System	Water
Electrical System	24V

Characteristics		
Bull-wheel diameter (mm)	1800	
Bull-wheel material	NYLON	
Max conductor diameter (mm)	51	
Max rope diameter (mm)	PT2600	25
	PT2601	28
Weight (without rope) (kg)	PT2600	11000
	PT2601	11750
Number of grooves	12	
Suitable for	2 ropes/ conductors	
Layout	Twin	

Available Options	
ALL005	Hydraulic power for compressor
ALL037	Preheating device up to -30°C.
ALL087	Low tension device
ALL089	Electronic connection and synchronization between machines.
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization including 3-year subscription.
ALL280	Automatic grease pump

Configuration	
Tesmec digital HMI.	
Automatic reel winder.	
Lockable sound proof integrated covers.	
Rope clamp for reel change.	
Negative self-acting hydraulic brake.	
Rigid axle 30 km/h.	
Earthing connection point.	
Hydraulic front stabilizers.	
Power pack to control 2 reel stands or 2 reel winders.	



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

**Digital Tensioner - Helicopter stringing - TESMEC**

**30kN Hydraulic Tensioner**

Part No. TN1216/CVR827



TN1216



CVR827



MAX TENSION  
**30kN**



MAX SPEED  
**25km/h**



CONDUCTOR DIAMETER  
**51mm**

**Three Stages Of Safety**

Machine has inbuilt safety features, a must when helicopter stringing. The machine can deal with the three safety scenarios

1. Hydraulic Failure
2. Engine Failure
3. Electronics Failure



The only Tesmec machine designed for HELICOPTER stringing, with a Stringing speed up to 25km per hour

Performance	
Max tension (kN)	30
Intermittent speed(km/hr)	25
Max speed at pullback (km/hr)	1
Max pull back (kN)	45

**Hydraulic Transmission**  
Hydraulic open circuit that provides very sensitive tensioning control and negligible deviations of tension in case of speed change.

Characteristics	
Bull-wheel diameter (mm)	1800
Bull-wheel material	NYLON
Max conductor diameter (mm)	51
Weight of power unit (kg)	800
Weight of working unit (kg)	3200
Total with fluid (kg)	4600
Number of grooves	6
Suitable for	1 ropes
Layout	Single

- Tesmec Digital HMI
- 178mm (7") Colour Display.
- Radio Remote Control
- Data Recorder
- Detachable in two parts
- Designed to work joined with CVR827
- Integrated covers

Engine	
Diesel (kW)	48kw (65hp)
Emission level	tier4i/ Stage IIIA
Cooling System	Water
Electrical System	24V

**Configuration**  
Negative self-acting hydraulic brake.  
Control instruments for hydraulic system and Diesel engine.  
Rigid axle 30 km/h.  
Hydraulic power pack to control a reel stand with hydraulic motor.  
Earthing connection point.  
Radio control.



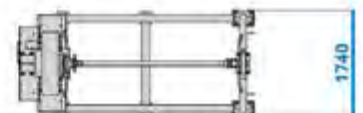
7" COLOUR DISPLAY



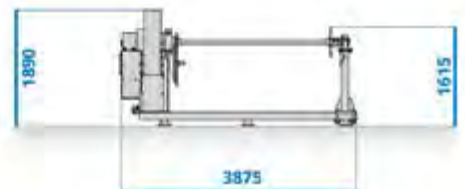
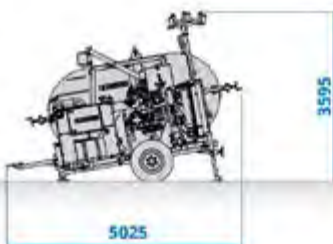
RADIO REMOTE CONTROL

CVR827 Performance	
Max Tension @ 2500mm External Reel Dia. (kN)	1.3
Max Tensioning Speed (km/h)	25
Max Recovering Speed (km/h)	1.5
Max Tension in emergency mode @ 1500mm average reel Dia. (kN)	5
Reel Dimension and Weight	
External diameter (mm)	From 600 - 2500
Width (mm)	From 570 - 2400
Total Weight (kg)	7500

Available Options	
ALL037	Preheating device for use up to -30°C.
ALL071	Hydraulic rope clamp for reel change operations



CVR827



## Continuous Line Pullers - TESMEC

### 50kN Continuous Line Puller Part No. CLP500

The new Continuous Line Puller (CLP500), gives an effective solution for handling and recycling old conductors during reconductoring with minimal interruption to the project. The CLP eliminates the need for placing old conductor on reels by effectively cutting the used conductor into small manageable pieces that are easy to transport and ready to recycle.



**MAX PULL**  
50kN



**MAX SPEED**  
3km/h



**ROPE DIAMETER**  
16mm

### Cutting Capacity



**M.S. JOINT DIAMETER**  
60mm



**CONDUCTOR DIAMETER**  
40mm



- Tesmec Digital HMI  
178mm (7") Colour Display  
Radio Remote Control  
Data Recorder
- Integrated covers

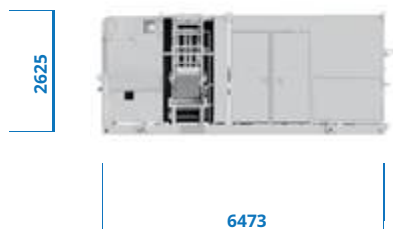
Performance	
Max pull (kN)	50
Speed at Max pull (km/hr)	1.5
Max speed (km/hr)	3
Pull at Max speed (kN)	30
Characteristics	
Conductor diameter (mm)	40
Max midspan joint diameter (mm)	60
Max rope diameter (mm)	16
Weight (without rope) (kg)	13000
Storage capacity (m)	350
Suitable for	ACSR conductor
Layout	Single

Engine	
Diesel (kW)	160 (215hp)
Cooling System	Water
Electrical System	24V
Cutting Module	
Max speed (km/hr)	3
Pull at Max speed (kN)	17kN
Suitable for	ACSR conductor
Max conductor diameter (mm)	40
Max midspan joint diameter (mm)	60
The module can be integrated with the magnetic sorting of aluminium and steel (ALL700/ALL750)	

Configuration	
Motorised Conveyors	
<ul style="list-style-type: none"> <li>• Hydraulic driven conveyor</li> <li>• Hydraulic conveyor deployment</li> </ul>	

Auxiliary Winch	
Max pulling force (kN)	50
Speed at max pull (km/hr)	2.5
Max rope diameter	16
Storage capacity (m)	350

Available Options	
ALL261	External printer
21035851	Trailer with stabiliser legs
ALL700	Motorised magnetic separation pulley embedded in the cutting module evacuation belt
ALL750	Additional motorised magnetic sorting belt



7" COLOUR DISPLAY



RADIO REMOTE CONTROL



### 50kN Continuous Line Puller

Part No. CLP501

The new Continuous Line Puller (CLP501), gives an effective solution for handling and recycling old conductors during reconductoring with minimal interruption to the project



**MAX PULL**  
50kN



**MAX SPEED**  
3km/h



**ROPE DIAMETER**  
16mm



- Tesmec Digital HMI  
178mm (7") Colour Display  
Radio Remote Control  
Data Recorder
- Integrated covers

Auxiliary Winch	
Max pulling force (kN)	50
Speed at max pull (km/hr)	2.5
Max rope diameter	16
Storage capacity (m)	350

Performance	
Max pull (kN)	50
Speed at Max pull (km/hr)	2.5
Max speed (km/hr)	3
Pull at Max speed (kN)	30

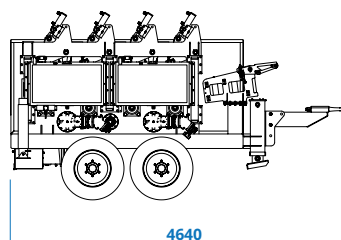
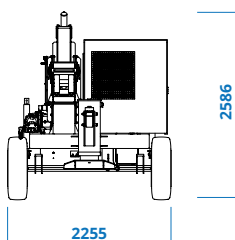
Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Characteristics	
Conductor diameter (mm)	25-40
Max midspan joint diameter (mm)	60
Max rope diameter (mm)	16
Weight (without rope) (kg)	7000
Storage capacity (m)	350
Suitable for	1 conductor
Layout	Single

Engine	
Diesel (kW)	81 (110hp)
Cooling System	Water
Electrical System	12V

Configuration	
Tescmec digital HMI.	
Integrated pull and speed recorder.	
Full electronic management.	
Manual and automatic use.	
Rigid axle 30 km/h.	
Hydraulic front stabilizers.	
Power pack to control 1 reel stand with hydraulic head or 1 reel winder.	
Lockable sound proof integrated covers.	

Available Options	
ALL037	Preheating device up to -30°C.
ALL073	Self anchoring system
ALL118	Hook loader system
ALL080	Special sector for GW/OPGW from 10mm to 25mm
ALL089	Electronic connection and synchronization between machines.
ALL261	External printer
ALL270	Remote Diagnostic system with GPS localization
ALL280	Automatic grease pump
ALL225	Auxiliary winch



7" COLOUR DISPLAY



RADIO REMOTE CONTROL

## Equipment Winches - TESMEC

### 30kN Drum Winches

Part No. AMC402



MAX PULL

30kN



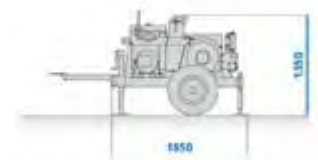
MAX SPEED

5km/h



ROPE DIAMETER

14mm



**Ideal for lifting equipment and Transmission hardware**

Drum Specifications		
Part No.	AMC402	AMC501
External OD (mm)	530	700
Internal OD (mm)	355	457
Width (mm)	700	700
Rope OD (mm)	14	18
Rope Capacity (m)	400	400
Weight (kg)	1000	1600

Engine (AMC402)	
Diesel (kW)	25 (34hp)
Cooling System	Water
Electrical System	12V

### 50kN Drum Winches

Part No. AMC501



MAX PULL

50kN



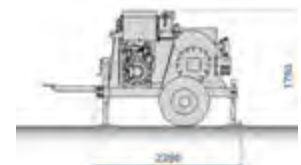
MAX SPEED

6km/h



ROPE DIAMETER

18mm



Performance*		
Part No.	AMC402	AMC501
Max pull (kN)	30	50
Speed at max pull (km/hr)	1.5	1.3
Max speed (km/hr)	5	6
Pull at max speed (kN)	8.5	10.5

Configuration	
•	Drum with automatic level wind.
•	Negative self-acting hydraulic brake.
•	Hydraulic dynamometer with set-point and automatic control of maximum pull.

Engine (AMC501)	
Diesel (kW)	34 (46hp)
Cooling System	Water
Electrical System	12V

Available Options AMC402/501	
ALL102	Pulling rope locking device when capstan is used (compulsory for Australian market)
ALL107	Capstan for lifting operations

### Hydraulic Pullers - TESMEC

#### 15kN Hydraulic Puller

**Part No. ARS200**

The ARS200 Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of heat treated steel.



MAX PULL

15kN



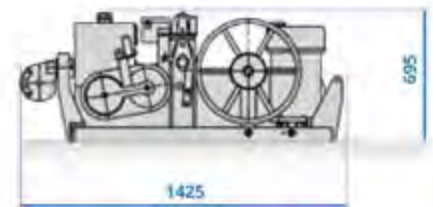
MAX SPEED

0.7km/h



ROPE DIAMETER

8mm



Performance	
Max pull (kN)	15
Speed at max pull (km/hr)	0.7
Max speed (km/hr)	3.6
Pull at max speed (kN)	4
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	

Configuration
<ul style="list-style-type: none"> <li>Negative self-acting hydraulic brake</li> <li>Hydraulic dynamometer with set-point and automatic control of maximum pull</li> <li>On board reel winder with automatic level wind and special reel BOF370 for 500m of 8mm rope</li> </ul>

Characteristics	
Bull Wheel dia (mm)	200
Max rope dia (mm)	8.0
Weight (without rope) (kg)	500
Engine	
Petrol (kW)	13 (18hp)
Cooling System	Air
Electrical System (V)	12

#### 30kN Hydraulic Puller

**Part No. PL1150**

The PL1150 Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel.



MAX PULL

35kN



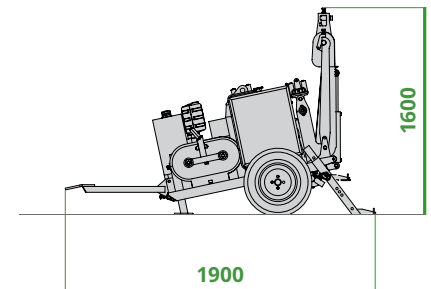
MAX SPEED

3.6km/h



ROPE DIAMETER

13mm



Performance	
Max pull (kN)	30
Speed at max. pull (km/hr)	1
Max speed (km/hr)	3.2
Pull at max. speed (kN)	10
Hydraulic Transmission	
Closed hydraulic with pull pre-setting system that automatically adjust pulling speed.	

Configuration
<ul style="list-style-type: none"> <li>New Digital HMI 127mm (5") display</li> <li>Negative self-acting hydraulic brake</li> <li>On board automatic reel winder</li> <li>Pull recorder &amp; Digital meter counter</li> </ul>

Characteristics	
Bull Wheel dia. (mm)	350
Max. rope dia. (mm)	13
Mass (without rope) (kg)	980
Engine	
Diesel (kW)	19 (26hp)
Cooling System	Water
Electrical System (V)	12



### TESMEC



### 35kN Hydraulic Puller

#### Part No. ARS403

The ARS403 Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel.

Characteristics	
Bull Wheel dia (mm)	325
Max rope dia (mm)	13
Weight (without rope) (kg)	980
Engine	
Diesel (kW)	25 (34hp)
Cooling System	Water
Electrical System (V)	12

Configuration	
<ul style="list-style-type: none"> <li>Negative self-acting hydraulic brake</li> <li>Hydraulic dynamometer with set-point and automatic control of maximum pull</li> <li>On board reel winder with automatic level wind suitable for standard reel BOF010 and BOF020 (AXR001 included)</li> </ul>	



MAX PULL  
35kN



MAX SPEED  
3.6km/h



ROPE DIAMETER  
13mm

Performance	
Max pull (kN)	35
Speed at max pull (km/hr)	1.2
Max speed (km/hr)	3.6
Pull at max speed (kN)	12
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	

Ideal for Overhead & Underground Projects

### 240 kN Hydraulic Puller

#### Part No. ARS802

The ARS802 Hydraulic Puller is suitable to string one rope. The bull wheel grooves are made of wear proof thermally treated steel. The machine is completely electronically controlled

Configuration	
<ul style="list-style-type: none"> <li>Negative self-acting hydraulic brake</li> <li>Hydraulic dynamometer with set-point and automatic control of maximum pull</li> <li>On board reel winder with automatic level wind suitable for standard reel BOF020 and BOF030 (AXR002 included)</li> </ul>	



MAX PULL  
240kN



MAX SPEED  
4.5km/h



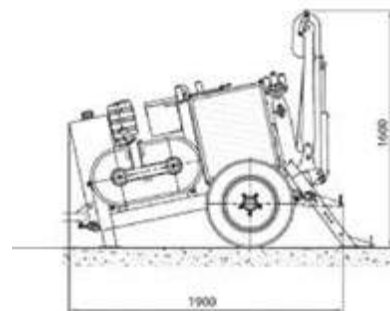
ROPE DIAMETER  
32mm



Performance	
Max pull (kN)	240
Speed at max pull (km/hr)	2.5
Max speed (km/hr)	4.5
Pull at max speed (kN)	130
Hydraulic Transmission	
Closed hydraulic circuit for stepless speed variation in both rotating directions	

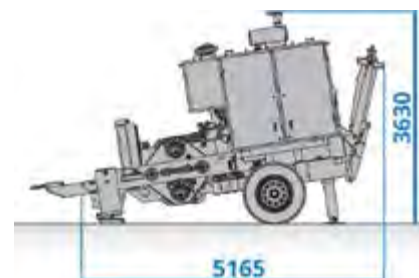


Trailer mounting and Mine spec. options available. Contact TENG for further information



Characteristics	
Bull-wheel diameter (mm)	800
Max rope dia (mm)	32
Weight (kg)	10000
Suitable for	1 rope
Layout	Single
Diesel	280kW

Engine	
Diesel (kW)	280 (375hp)
Cooling System	Water
Electrical System (V)	24



## Reel Winders, Drum Elevators and Stands - TESMEC

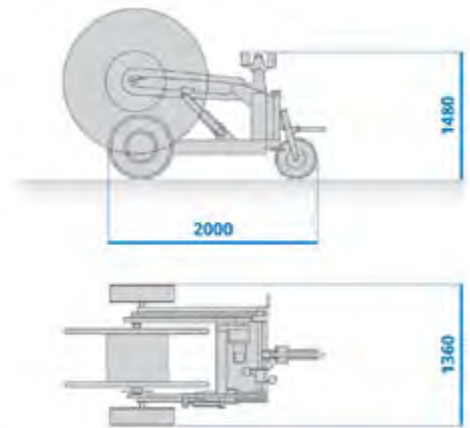
### Reel Winders

**Part No. RVA001**



- Operates on any Tesmec machine with hydraulic outlets
- Compact design and easy to handle
- Automatic level wind.
- Negative self-acting hydraulic brake
- Hydraulic jacks powered by the same hydraulic source.
- Rigid semiaxles for manual towing

Suits standard reels mod.  
BOF010, BOF020, BOC040 and BOC050.  
Extra shaft AXR001 is included.



Performance	
Capacity (kN)	20
Torque (kNm)	1
Rotating speed (rpm)	50
Weight (kg)	525

Kit of Connecting Hoses	
TUT001	Length 7m
TUT002	Length 10m
TUT003	Length 15m

### Cradle Reel Elevators

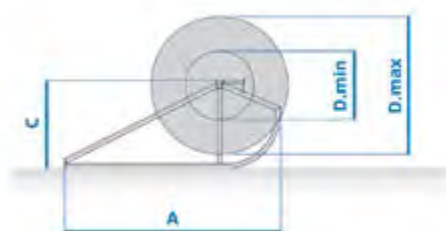
**Part No. CVC002**

- Detachable frame
- Light design



Available Options	
CDF007	Disk brake device for model CVC002 (Max torque 1.3kN-m).

Part No.	Dimensions (mm)			Reel Part No.	Capacity (kN)	Wt (kg)
	A	B	C			
CVC002	2200	900	910	BOF010	20	58
				BOF020		



## Hydraulic Drum Elevators - Heavy Duty

### CVI Series

- Operates on any Tesmec machine with hydraulic outlets
- Compact design and easy to handle



Drum Elevator (CVI609) shown with axle for steel drum (CDT063)



Part No.	Dimensions (mm)								Capacity (kN)	Wt (kg)
	A	B min	B max	C min	C max	D	E min	E max		
CVI609	2140	800	1500	580	1340	640	1200	2500	80	285
CVI600	2140	800	1500	580	1340	640	1200	2500	80	305
CVI810	2500	800	1850	720	1725	740	1500	3200	100	550

Configuration for CVI609	Configuration for CVI600	Configuration for CVI810
*No Brake	One manual disk brake CDF012 (max torque 1.0kN-m)	One manual disk brake CDF059 (max torque 2.3kN-m)

Typical Available Options for CVI609		Typical Available Options for CVI600		Typical Available Options for CVI810	
<b>CDT063</b>	Supports with self-locking fixing wedges for wooden conductor drums. Max reel hole diameter = 125 mm.	<b>CDT063</b>	Supports with self-locking fixing wedges for wooden conductor drums. Max reel hole diameter = 125 mm.	<b>CDT***</b>	Supports with self-locking fixing wedges for wooden conductor drums.
<b>TIH001</b>	Fast assembling hydraulic motor for control of the drum winding and unwinding.	<b>TIH001</b>	Fast assembling hydraulic motor for control of the drum winding and unwinding.	<b>TIH007</b>	Fast assembling hydraulic motor for control of the drum winding and unwinding.
<b>TUT002</b>	Kit of connecting hoses. Length 10m, weight 15 Kg.	<b>TUT002</b>	Kit of connecting hoses. Length 10m, weight 15 Kg.	<b>TUT002</b>	Kit of connecting hoses. Length 10m, weight 15 Kg.

## Drum Stand

### Part No. CVR624

- Ready to use
- Suitable for different reel dimensions
- One manual disk brake CDF012 (Max torque 1kN-m)
- Refer page J23 for hydraulic Hoses (TUT002)



Typical Available Options for CVR624	
<b>CDR124</b>	Support with fixed wedges for wooden conductor drums.
<b>CDT123</b>	Special driver with fixed wedges for steel reels conductor.
<b>CDA125</b>	Adapter for steel rope standard reels.
<b>TIH001</b>	Easily assembled hydraulic motor for drum winding

Part No.	Dimensions (mm)						Capacity (kN)	Wt (kg)
	A	B max	B min	C	D	E		
<b>CVR624</b>	2750	1700	1400	1580	2170	2840	70	365

## Heavy Duty Drum Stand

### Part No. CVR824

Integrated hydraulic motor. Hydraulic transmission powered by existing machines. Universal drive shaft. Incorporated disk brake for emergency breaking in case of absence of hydraulic power. (Max Torque 2.3kN-m) Simple drive transmission engagement by means of slide shaft. Rollers supported shaft.

Part No.	Dimensions (mm)						Capacity (kN)	Wt (kg)
	A	B max	B min	C	D	E		
<b>CVR824</b>	2000	1650	-	1618	3057	3000	120	930



Other sizes & lengths available  
- Contact TEN for further  
information



## Standard Reel Adaptor

### Part No. CDA078/079

- Adaptor for steel rope standard reel (BOF330, BOC 310, BOC320)



### Part No. CDA060

- Adaptor for steel rope standard reel (BOF010-BOF020-BOF030-BOC040-BOC050) (only for CVI810)

### Part No. CDA004

- Adaptor for steel rope standard reel (BOF010-BOF020-BOF030-BOC040-BOC050) (only for CVI600)

## Drum Supports

### Part No. CDT063

- Reel hole diameter 82 to 125mm (only for CVI600)
- Special driver with fixed wedges for steel conductor reels

Part No.	Reel Width (mm)		Guide arm Hole Dia (mm)	Spindle Dia (mm)
CDT063	1500 min	1650 max	33	80

(Reel drawing is required)



## Hydraulic Hose Set

### Part No. TUT Series

Part No.	Length (m)	Wt (kg)
TUT001	7	11
TUT002	10	15
TUT003	15	23



## Hydraulic Motor - Reel Winder

### Part No. TIH Series

Fast assembling hydraulic motor for control of the drum winding and unwinding.

Part No.	Max Torque (kNm)	Max Rotation (rpm)	Wt (kg)
TIH001	1.8	45	76
TIH002	1.8	45	78
TIH006	2.3	32	78
TIH007	2.3	37	78
TIH010	5	30	120
TIH013	2.4	35	500

## Auto Rope Leveler

### Part No. CDD005

Special automatic level wind for steel conductor reels on demand.

- Automatic level wind for standard steel rope reels (BOF010-BOF020-BOC040-BOC050) (only for CVI600)

## Hydraulic Pressure Relief Kit

### Part No. TUK054

Kit to remove residual hydraulic pressure on hoses.



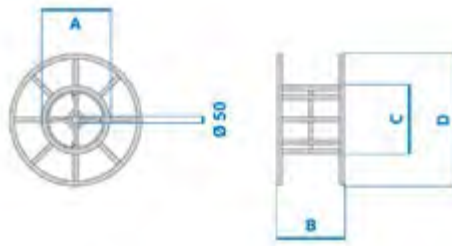
## Reels - TESMEC

### Standard Fixed Reels

#### BOF Series



BOF



- World wide standard design
- Welded steel with protective coating

### Cross Support

#### BOS360



BOS360

- Two cross arms included
- Weight with bolts: 2.6 Kg



Part No.	Dimensions (mm)				Wt (kg)
	A	B	C	D	
BOF010	420	560	570	1100	53
BOF020	420	560	570	1400	73
BOF030	420	560	570	1900	135
BOF330	420	1560	1010	2200	1200

ROPE (mm)	Reel Max Capacity for anti-twisting braided rope (m)			
	Part No.			
	BOF010	BOF020	BOF030	BOF330
6	6300	10000	22200	76000
8	3900	7100	13700	47000
9	3200	5900	11500	39200
11	2300	4300	8400	28800
13	1600	2850	5600	19400
15	1150	2000	4100	14550
16	1030	1900	3700	12400
18	800	1400	2800	9750
19	780	1400	2800	9300
21	-	1050	2150	7100
22	-	950	1900	6400
23	-	860	1750	6000
25	-	750	1550	5100
26	-	700	1400	4700
28	-	600	1150	4000
31	-	430	850	3100

### Detachable Reels

#### Part No. BOC Series

- World wide standard design
- Welded steel with protective coating



BOC



BOC040, BOC050  
& BOC310 ONLY



Cross Support  
BOS360

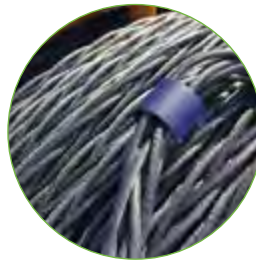
Part No.	Dimensions (mm)				Wt (kg)
	A	B	C	D	
BOC040	420	560	590	1100	75
BOC050	420	560	590	1400	86
BOC310	420	890	626	1900	210
BOF320	420	1310	605	2050	250

ROPE (mm)	Reel Max Capacity for anti-twisting Steel braided rope (m)			
	Part No.			
	BOC040	BOC050	BOC310	BOC320
6	5600	10900	36000	63000
8	3500	6700	22200	38500
9	2850	5580	18200	32600
11	2150	4100	13300	23800
13	1400	2750	9000	16100
15	1100	2050	6800	11700
16	950	1750	6000	10600
18	700	1350	4500	7800
19	700	1300	4300	7800
21	-	1000	3400	6000
22	-	850	3000	5200
23	-	800	2800	4800
25	-	750	2400	4200
26	-	650	2100	3900
28	-	550	1900	3300
31	-	420	1450	2500

### Ropes

#### Anti Twisting Steel Braided Rope Standard - TESMEC

#### Part No. FUA Series



- High flexibility
- Complete stability to rotation
- Strands with individual galvanized elementary wires

Part No.	Working Load (kN) *	Nominal Dia (mm)	Indicative Lubricated Linear Wt (kg/m)	Minimum Breaking Load (kN) *	Standard length (m) **
FUA006	7.6	6	0.114	22.9	1800-3600
FUA008	14.2	8	0.22	42.6	1600
FUA611	25	11	0.359	75	1100
FUA613	35	13	0.502	105	800-1600
FUA615	50	15	0.712	150	900-1800
FUA618	75	18	1.072	225	1200
FUA621	100	21	1.429	300	900
FUA623	120	23	1.718	360	800
FUA625	140	25	2.004	420	700
FUA628	180	28	2.572	540	600

\* This value is related to rope with spliced eyes and for stringing operation

\*\* The rope is also available in different lengths and in continuous sections up to 7000m



### Double Braided Hauling Rope - Hampidjan

Part No. Various



- Manufactured in Australia with a braided polyester cover over a braided Polyester core
- Ideal for use as winch and tow lines and for pulling cable

#### Characteristics

- High strength
- High UV resistance
- Splicable
- Flexible

#### Applications

- Winch lines
- Tow lines
- Rigging lines
- Pulling and stringing line

Part No.	OD (mm)	Wt per 100m (kg)	Max Break Force (T)
DBPR-12	12	11.10	3.49
DBPR-14	14	13.90	4.36
DBPR-16	16	18.25	5.75
DBPR-18	18	22.20	6.98
DBPR-20	20	27.30	8.59
DBPR-22	22	33.30	10.48
DBPR-24	24	41.60	13.10
DBPR-26	26	46.30	14.56

Specify the length requested in metres

### Robus Dyneema Rope - Hampidjan

Part No. Various



ROBUS rope is an ultra-high strength, low cost solution that meets the need for light but strong ropes in cost driven environment. Prima rope is stronger than steel in the same diameter. ROBUS ropes are made from HMPE fibre produced by DSM Dyneema.

#### Characteristics

- Extremely high strength
- Lightweight
- Abrasion resistant
- Low stretch
- Neutral buoyancy
- Splicable
- Flexible

#### Applications

- Alternate to wire rope
- Winch lines
- Tow lines
- Rigging lines
- Utility line

Part No.	OD (mm)	Wt per metre (g)	Max Break Force (T)
29081035	6	23.29	4.0
29081040	8	38.81	6.7
29081050	10	54.34	10.7
29081061	12	93.15	16.0
29081070	14	103.25	18.7
29081080	16	137.67	24.9

Specify the length requested in metres



1000m AVAILABLE OF H-53-010-1000 ONLY

More sizes available Contact TEN

Available with Polyester Jacket on Request

### Polypropylene Rope 3 Strand - Hampidjan

Part No. Various



- Higher breaking strength
- Abrasion resistance
- Excellent shock absorption
- Better grip
- Minimal elongation
- Durable and ultraviolet stabilized
- Excellent shape retention
- Strength: wet/dry 100%
- Floats/sinks: Floats
- Elongation: Moderate
- Water absorption: None
- Chemical Resistance
  - Acids: Excellent
  - Alkalis: Excellent
  - Oil/Gas: Very Good

Part No.	OD (mm)	Wt per 100m (kg) 250m Standard (Coil)	Max Break Force (T)
PPR-12	12	7.0	2.84
PPR-14	14	9.0	3.91
PPR-16	16	12.0	4.90
PPR-18	18	15.0	5.50
PPR-20	20	18.0	7.52
PPR-22	22	22.0	8.45
PPR-24	24	26.0	10.20
PPR-26	26	31.0	11.87

Specify the length requested in metres

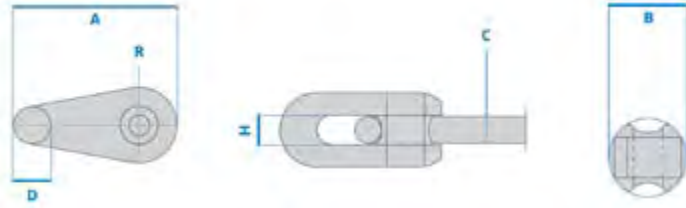
**Fixed Joints, Swivels, Grips and Socks**

**Fixed Joint - TESMEC**

Part No. GFT Series



- Highly tensile forged galvanised steel
- Compact shape for bull wheel grooves



Part No.	Dimensions (mm)						Working Load (kN)	Wt (kg)
	A	B	C max	D	H	R		
GFT001	59	28	10	15	11	11	23	0.3
GFT010	74	40	13	19.5	14	15	37	0.33
GFT020	91	48	16	20	19	18	53	0.53
GFT030	102	54	18	22	19	20	73	0.75
GFT040	121	60	24	27	26	22	120	1.03
GFT050	174	75	28	42	30	32	250	3.03
GFT060	183	81	32	42	34	34.5	250	3.4

**Swivel Joint - TESMEC**

Part No. GGT Series



Part No.	Dimensions (mm)			Working Load (kN)	Wt (kg)
	A	B	C max		
GGT001	106	28	10	23	0.3
GGT010	143	40	13	37	0.93
GGT020	184	54	18	73	2.15
GGT030	234	60	24	120	3.4
GGT040	322	77	28	250	8.2
GGT180	336	81	32	250	8.7
GGT260	403	104	38	330	19.5

### TESMEC

## Heavy Duty Large Eye Conductor Socks - TESMEC

### Part No. GCT Series

- Ideal for Transmission overhead work
- Suitable for Transmission & Distribution AL, CU & ST
- Colour coded plastic bands at ferrule to identify range and capacity
- Steel wires with protective finish and alloy ferrule
- Long mesh length provides additional gripping surface area
- Protective shoulders - protects the sock from sharp edges on the conductor during stringing
- Flexible & Reusable



Part No.	Suitable Swivel	Conductor OD Ø (mm)	Colour	UTS (kN)	Mesh Length (mm)	Wt (kg)
GCT001	GGT001	8 - 17	Yellow	35	1100	0.7
GCT010	GGT010	17 - 29	Red	85	1360	1.3
GCT020	GGT020	29 - 38	Green	130	1470	2.1
GCT030	GGT020, GGT030	38 - 50	Black	180	1820	2.7

## Heavy Duty Conductor Double Head Sock - TESMEC

### Part No. GCT



Scan or Click to View or Download Grip Inspection Selection & Application

Part No.	Conductor OD Ø (mm)	Colour	UTS (kN)	OAL (mm)	Wt (kg)
GCT500	8 - 17	Yellow	35	2680	1.15
GCT510	17 - 29	Red	85	3240	2.3
GCT520	29 - 38	Green	130	3540	3.6
GCT530	38 - 50	Black	180	4240	4.8



## Radial Locking Clamps - TESMEC

### Part No. MOS



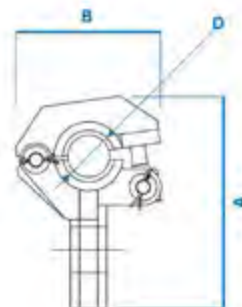
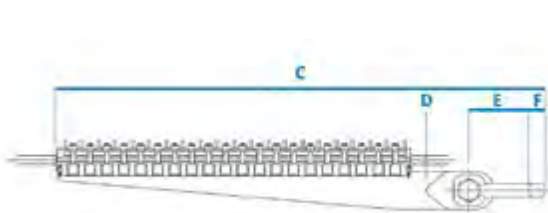
- Designed for long period anchorage
- Safe, with no damage to conductors

The radial locking clamp can be used whenever a conductor or a rope made of aluminium, aluminium/steel, copper or steel has to be stretched.

The body is made of high-strength steel. It is made up of a series of hinged elements, which can be locked by nuts. The interchangeable jaws are made of aluminium.

A special hook is provided at one end. The galvanisation treatment on the surface protects from oxidation.

Number of Eyebolts	Standard Diameter Range (mm)						C	E	F	WLL Max (kN)	Wt Min (kg)	Wt Max (kg)			
	20-30		30-40		40-56										
	Dimensions (mm)														
Part No.	A	B	A	B	A	B									
4	MOS700	158	143	MOS701	169	143	MOS702	178	158	605	75	26	40	18	19
6	MOS710	158	143	MOS711	169	143	MOS712	178	158	735	93	26	60	25	28
8	MOS720	158	143	MOS721	169	143	MOS722	178	158	852	93	26	80	30	33
10	MOS730	158	143	MOS731	169	143	MOS732	178	158	995	93	32	100	39	41
12	MOS740	158	143	MOS741	169	143	MOS742	178	158	1100	93	32	120	41	43
14	MOS750	158	143	MOS751	169	143	MOS752	178	158	1210	93	35	140	43	47
15	MOS753	158	143	MOS754	169	143	MOS755	178	158	1285	93	35	150	55	61
16	MOS760	158	143	MOS761	169	143	MOS762	178	158	1360	93	45	160	67	75
18	MOS770	158	143	MOS771	169	143	MOS772	178	158	1510	93	45	180	79	89
20	MOS780	158	143	MOS781	169	143	MOS782	178	158	1670	93	45	200	92	104



D = conductor diameter to be specified

Different jaws out of the standard diameter range are available upon request

# RIGANTI

## Grips - Riganti

### Part No. Various

Riganti's self-gripping comealongs are available for aluminium, ACSR, steel earth-wire, anti-twisting rope, copper and OPGW conductors.

Made of high tensile alloy steel, hot forged, heat-treated, precision machined and zinc-plated with a complete range of interchangeable liners. This means working at lower costs on conductors of different materials and diameters only by changing the liners.

The liners are available in aluminium for aluminium or aluminium/steel conductors and bronze for copper conductors, steel anti-twisting rope and steel earth-wire.

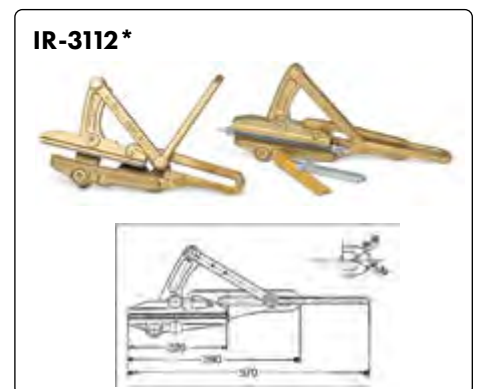
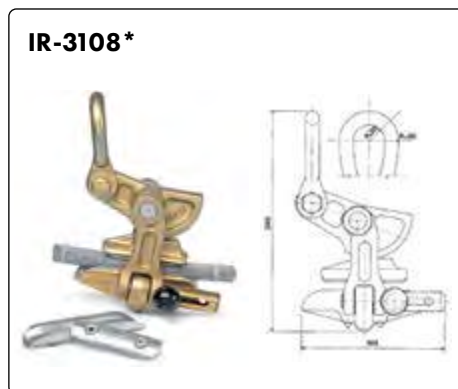
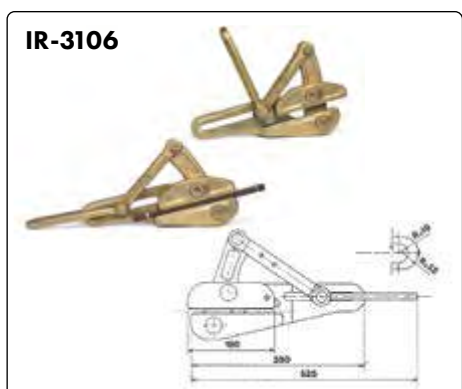
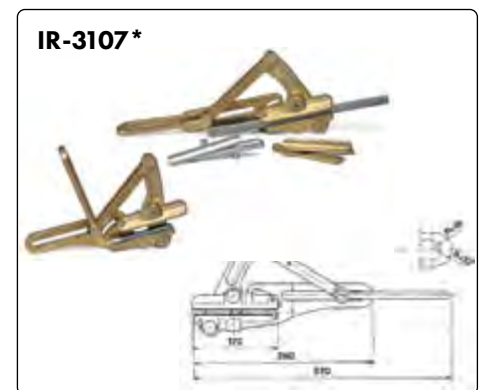
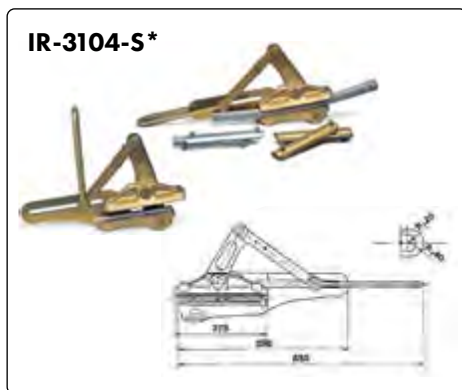
For OPGW conductor the lower liner is made of Adiprene, whereas the upper liner is made of aluminium.

All Riganti self-gripping clamps comply with European safety standard CE. Special clamps with exact diameters available on request with or without liners.



Part No	Working Load Limit (kN)	Min Breaking Load (kN)	Interchangeable Liners	Al, ACSR & Cu		Steel, Earth wire		Anti-twist Steel Rope		Wt (kg)
				Min	Max	Min	Max	Min	Max	
				(mm)		(mm)		(mm)		
IR-3109	19.6	49	×	2.5	15	2.5	15	2.5	15	1.5
IR-3111 *	21.2	64	✓	7	16	7	13	7	13	2.5
IR-3108 *	39.5	110	✓	Lifting suspension conductors 7 - 38mm						5.5
IR-3106	50	125	×	7.5	18	7.5	18	7.5	18	7
IR-3107 *	49	180	✓	6	23	6	16	6	16	7
IR-3112 *	49	180	✓	OPGW 6 - 23mm						7
IR-3105-S *	88	275	✓	8	35.2	8	22	8	24	13.5
IR-3104-S *	117	310	✓	10	45	10	34	8	28	17

\* Exact size required for manufacture of liners



### RIGANTI



IR-3112 Liners



IR-3105 Liners

#### Liners for IR3104-S

Min (mm)	Max (mm)	Al Part No.	Cu Part No.
10.0	10.5	G4A100F	G4B100F
10.5	12.0	G4A105F	G4B105F
12.0	13.5	G4A120F	G4B120F
13.5	15	G4A135F	G4B135F
15.0	16.5	G4A150F	G4B150F
16.5	18	G4A165F	G4B165F
18.0	19.5	G4A180F	G4B180F
19.5	21.0	G4A195F	G4B195F
21.0	22.5	G4A210F	G4B210F
22.5	24.0	G4A225F	G4B225F
24.0	25.5	G4A240F	G4B240F
25.5	27.0	G4A255F	G4B255F
27.0	28.5	G4A270F	G4B270F
28.5	30	G4A285F	G4B285F
30.0	31.5	G4A300F	G4B300F
31.5	33.0	G4A315F	G4B315F
33.0	34.5	G4A330F	G4B330F
34.5	36.0	G4A345F	G4B345F
36.0	37.5	G4A360F	G4B360F
37.5	39.0	G4A375F	G4B375F
39.0	40.5	G4A390F	G4B390F
40.5	45.0	Specify Diameter	

AL & CU Liners check range above.

Liners for wires below require exact diameter:  
For steel & earth wires 10.0 - 34.0mm  
For anti-twist steel rope 8.0 - 28.0mm

#### Liners for OPGW IR3112

Lower liner made of Adiprene and upper liner made of Aluminium.

\*Specify exact OPGW diameter between **6.0 - 23.0mm**

Part No. **IR3112L\*\*.\*OP**  
e.g. **IR3112L11.3OP**

NOTE: IR3112 with 15.8mm AL to AL Liners (IR311215.8AL) is suitable for CCSX62 Amokabel

#### Liners - Riganti

#### Liners for IR3105-S

Min (mm)	Max (mm)	Al Part No.	Cu Part No.
8.0	9.0	G5A080F	G5B080F
9.0	10.5	G5A090F	G5B105F
10.5	12.0	G5A105F	G5B105F
12.0	13.5	G5A120F	G5B120F
13.5	15.0	G5A135F	G5B135F
15.0	16.5	G5A150F	G5B150F
16.5	18.0	G5A165F	G5B165F
18.0	19.5	G5A180F	G5B180F
19.5	21.0	G5A195F	G5B195F
21.0	22.5	G5A210F	G5B210F
22.5	24.0	G5A225F	G5B225F
24.0	25.5	G5A240F	G5B240F
25.5	27.0	G5A255F	G5B255F
27.0	28.5	G5A270F	G5B270F
28.5	30.0	G5A285F	G5B285F
30.0	31.5	G5A300F	G5B300F
31.5	35.2	Specify Diameter	

AL & CU Liners check range above.

Liners for wires below require exact diameter:  
For steel & earth wires 8.0 - 22.0mm  
For anti-twist steel rope 8.0 - 24.0mm

#### Liners for IR3107

Min (mm)	Max (mm)	Al Part No.	Cu Part No.
6.0		G7A060F	G7B060F
6.5	8.0	G7A065F	G7B065F
8.0	9.5	G7A080F	G7B080F
9.5	11.0	G7A095F	G7B095F
11.0	12.5	G7A110F	G7B110F
12.5	14.0	G7A125F	G7B125F
14.0	15.5	G7A140F	G7B140F
15.5	17.0	G7A155F	G7B155F
17.0	18.5	G7A170F	G7B170F
18.5	20.0	G7A185F	G7B185F
20.0	21.5	G7A200F	G7B200F
21.5	23.0	G7A215F	G7B215F

AL & CU Liners check range above.

Liners for wires below require exact diameter:  
For steel & earth wires 6.0 - 16.0mm  
For anti-twist steel rope 6.0 - 16.0mm

#### Liners for IR3111

Min (mm)	Max (mm)	Al Part No.	Cu Part No.
7.0	8.5	G1A070F	G1B070F
8.5	10.0	G1A085F	G1B085F
10.0	11.5	G1A110F	G1B110F
11.5	13.0	G1A115F	G1B111F
13.0	14.5	G1A130F	G1B130F
14.5	16.0	G1A145F	G1B145F

Liners supplied on request with exact diameter:

For round steel wires 7.0 - 13.0mm

For square steel wires 7.0 - 13.0mm

#### Liners for IR3108

Min (mm)	Max (mm)	Al Part No.
7.0	11.0	G8A070F
9.0	12.0	G8A090F
12.0	16.0	G8A120F
15.0	23.0	G8A150F
22.0	36.0	G8A220F
30.0	38.0	G8A300F



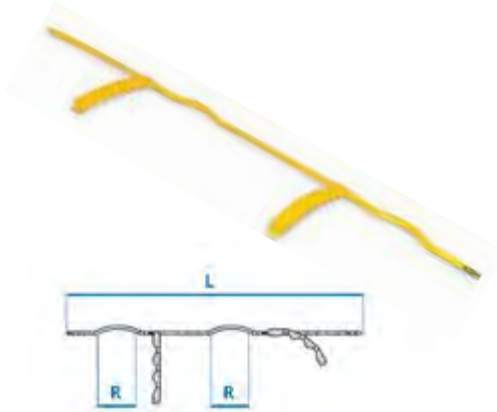
## OPGW Installation - TESMEC

### Optical Earth Wire Anti-Torque Devices

#### Part No. RFF Series

- Shaped for smooth operations
- Swivel included

Part No.	Dimensions (mm)		Working Load (kN)	Wt (kg)	For Pulleys (mm)
	L	R			
RFF001	3900	350	10	60	400
					500
					650
RFF010	4300	500	10	63	800
					1000



### Pulling Clamp For Fibre Optic

#### Part No. MOF470

- Rigid design avoids fibre damage
- Interchangeable and machined jaws



Performance	
Working load (kN)	10

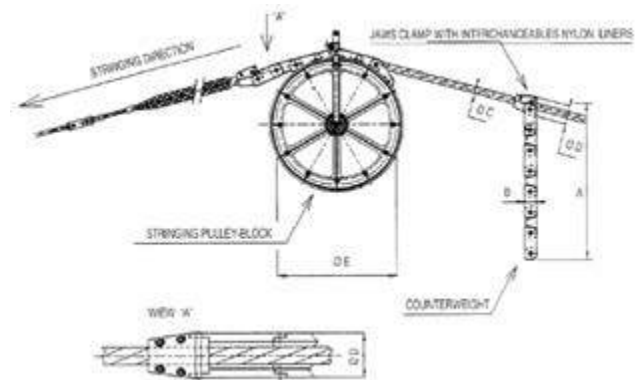
Characteristics	
Diameter range	6 to 23
Weight (kg)	4
Material	Hot forged steel

Configuration
Aluminium interchangeable jaws part number GTRXXX: conductor diameter to be specified on order.

### Counterweight Device for stringing OPGW Cables

#### Part No. CO60 Series

- Non Rotating
- Supplied with interchangeable Liners



Part No.	Dimensions (mm)				Cable C (mm)	Quantity (* ) per set
	D OD (mm)	A (mm)	B (mm)	Wt (kg)		
CO60-9	60	990	30	8	10 - 17	2
CO60-12	60	1320	30	10.5	17- 23	2

\* Supplied with interchangeable liners - Nominate OPGW OD



**Ideal for Standard Conductor**

**Traction Machine**

**Part No. TMT020**

The traction machine is ideal for reconducting both conductor and OPGW over road, rail, energised infrastructure & mountainous terrain as this method provides lower risk and better access.

- Highest traction force available
- Can be pulled back if machine stops
- Up to 1000m range with 2 remotes
- Vulcanised wheels
- Each motor supplied with 24V Lithium-Ion battery
- Lightweight

Performance	
Max traction speed (m/min)	10
Max traction force (kg)	110
Max slope (°)	20

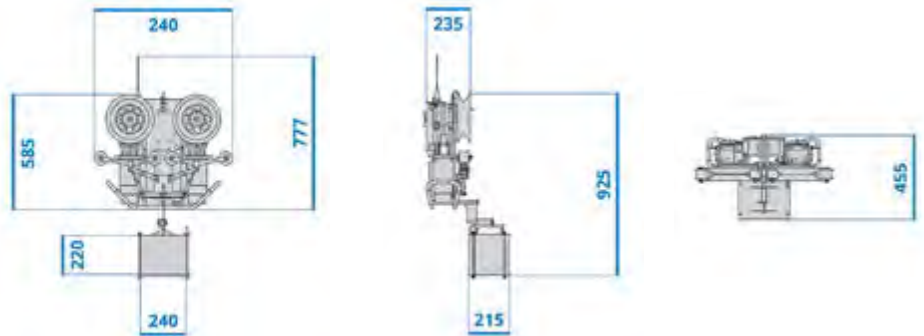
Characteristics	
Weight (kg)	55
Robot weight (kg)	40
Battery weight (kg)	15
Two electrical motors	24V
Conductors diameter range (mm)	10 to 46 mm
Material	Aluminium alloy
It can cross mid-span joint up to CH=60	

Remote Control	
Two compact radio remote control units with double push-button transmission. Device operative range up to 1000 (m).	

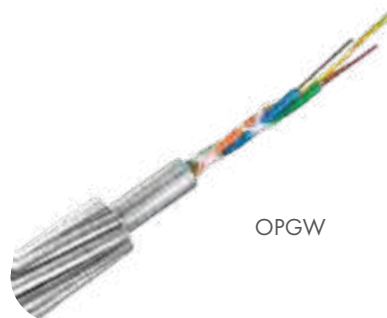
Available Options	
ALL304	Extra battery



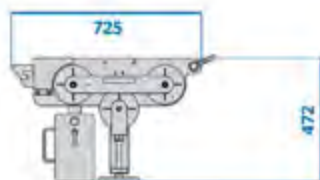
Rear View



Remote Control



OPGW



**Recovery Device**

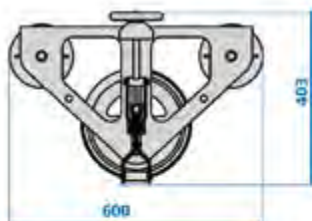
**Part No. TMR030**

- Automatic locking system
- Drag the traction machine to finish the span

Characteristics	
Max weight (kg)	40
Wheel material	Nylon
Detachable ballasts for easy lifting	

### Braking Device

Part No. ABR058

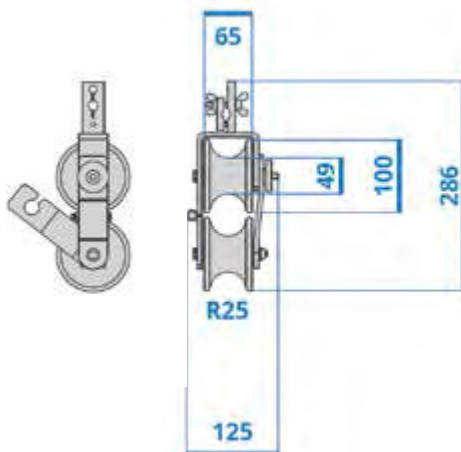


- Light and compact
- Allows the final recovery of the cradle Blocks

Performance	
Working load (kN)	1.5
Characteristics	
Weight (kg)	4.5
Conductor dia. range (mm)	10-30
Wheels material	Nylon
Frame material	Aluminium

### OPGW Cradle Blocks

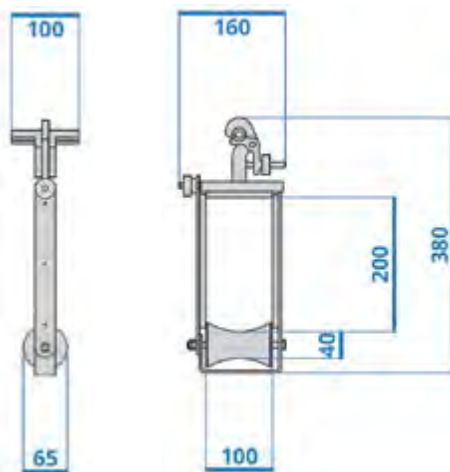
Part No. ABR053



- Light and easy
- Adjustable for different diameters

Performance	
Working load (kN)	1
Characteristics	
Weight (kg)	1.4
Rollers material	Nylon
Frame material	Aluminium

Part No. ABR045



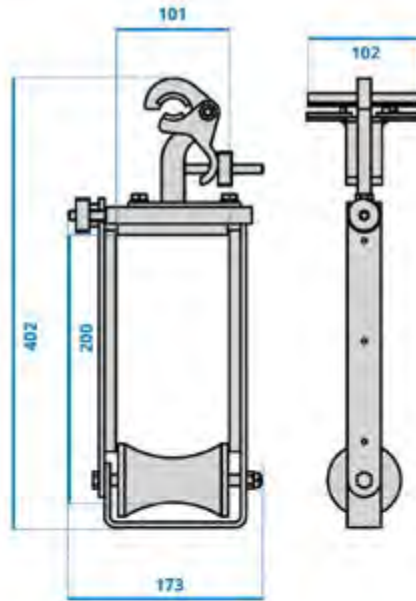
- Suitable also on midspan joints
- Allows the final recovery of the cradles

Performance	
Working load (kN)	2
Characteristics	
Weight (kg)	2
Rollers material	Nylon
Frame material	Galvanized steel
Internal surface covered by nylon plates	



### OPGW Cradle Blocks

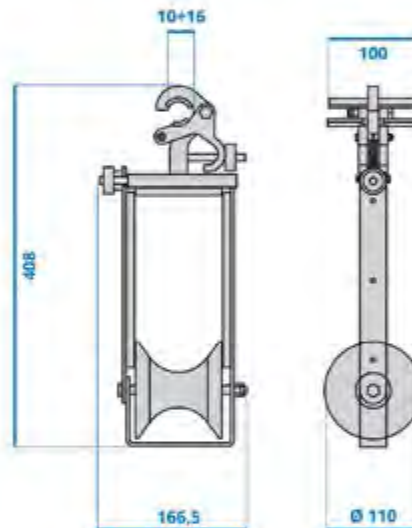
Part No. ABR064



- Suitable also on midspan joints
- Adjustable for different diameters

Performance	
Working load (kN)	2
Characteristics	
Weight (kg)	1.9
Rollers material	Nylon
Frame material	Aluminium - connection made of steel
Internal surface covered by nylon plates	

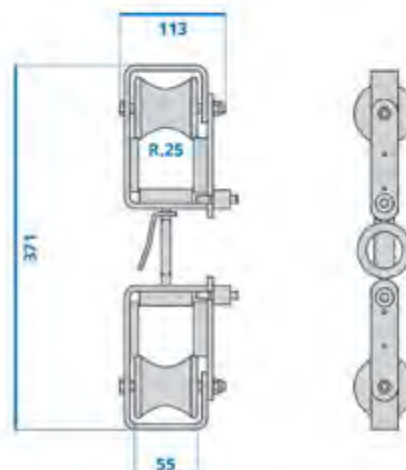
Part No. ABR059



- Counterweight for easy rotation
- Quick open/close system

Performance	
Working load (kN)	2
Characteristics	
Weight (kg)	2
Rollers material	Nylon
Frame material	Galvanized steel
Internal surface covered by nylon plates	

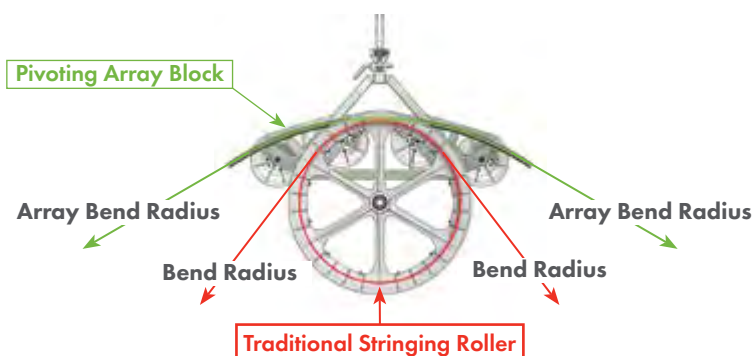
Part No. ABR021



- Earth wire Earthed during the operations
- Quick locking system for guide rope

Performance	
Working load (kN)	2
Characteristics	
Weight (kg)	1.8
Rollers material	Nylon
Frame material	Galvanized steel
Internal surface covered by nylon plates	

## Stringing Rollers/Blocks and Pivoting Array Blocks



### Pivoting Array Blocks - TESMEC

Array blocks are used for conductors with large bending radius.

- **Lightweight - Dimension:**  
Vertical dimension is less than half of the height of a standard pulley
- **Easy Handling & Transportation:**  
The compact design allows easy handling and prevents damaging during the transportation
- Refer page J46 for detailed information



- **No diameter limitation:**  
Double pivoting frame allows it to move according to the line geometry by adjusting up to horizontal position, for an infinite bending radius
- **Special Sectors:**  
Manufactured with anti wear material, tested and released in cooperation with Milan Politecnico
- **Integrated Earthing Device:**  
Earthing device (if requested) is integrated into the frame, to prevent any possible impact or damaging during transport
- **Matchable with Standard Block:**  
Groove 68 mm and groove 95 mm as per standard pulley are both available
- **Fully Compatible:**  
Headboards, swivels, ropes, cover joints and all other equipment used for standard pulleys are fully compatible with array blocks
- **High Center of Gravity:**  
Easier positioning at angles due to the centre



### Stringing Blocks

With more than 60 years of job-site use and thanks to a deep knowledge of job-site needs, Tesmec offers:

- Top quality at a competitive price
- Tailor made solutions
- 5 different materials and types for lining
- Available tandem and for helicopter stringing version on every standard model



### Earthing devices

#### Safety certified

In accordance with IEC TR 61328, Tesmec Earthing Devices are suitable for fault currents, lightning strikes and induced voltage rated at 20A for 20 cycles.

Several tests certified earthing devices properties. Available for drain current in equipotential system and for induced current.

Aluminium sectors with bearing conductive grease are also available as a special solution.



### Universal Stringing Roller - SPP

#### Part No. SPP-1A

- Suitable for distribution, ABC and some transmission applications
- Aluminium sheave
- Lightweight high strength heat treated aluminium
- Versatile attachment fittings include side and bottom tags and top ball socket fitting
- Side gate latch can be locked open
- Sheave is profile machined permitting precise sagging of conductor
- High quality permanently lubricated high temperature precision bearings



#### Part No. SPP-1A-DI

- Same Specifications as SPP-1A
- Ductile Iron sheave (SPP-1A-DI)
- Ideal for Pulling Steel conductor (e.g. 3/12 Steel) or steel catenary

Refer Pulling & Hauling section for Crossarm and Insulator brackets

Part No.	Sheave Material	Maximum Conductor OD (mm)	WLL (kg)	Weight (kg)	Bottom of Groove Diameter (mm)	Overall Height (mm)	Overall Width (mm)
SPP-1A	Aluminium	50	1130	4	110	370	205
SPP-1A-DI	Ductile Iron	50	1130	5	110	370	205



### Single Convertible Roller/Block - SPP

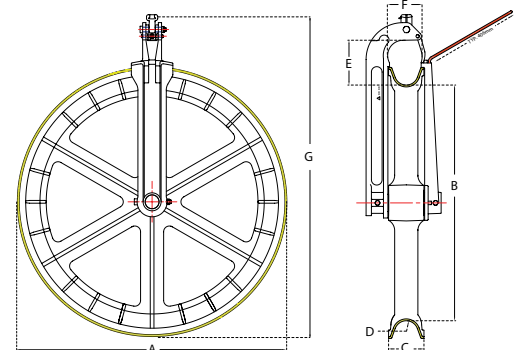
#### Part No. SPP-1B Series

- Extra large contoured throat for swivels, grips and splices
- Precision Earth bearings reduce pulling loads for accurate sagging
- Secured pins
- Durable and fully corrosion protected
- Urethane lined
- Socket fitting standard
- Helicopter Arm attachments available as an optional extra Part No. HELIHORN



400mm Helicopter Arm  
Part No. HELIHORN

Other sizes available on request



- C = Groove Width
- D = Bottom of Groove Diameter

Part No.	Dimensions (mm)							Wt (kg)	WLL* (kg)
	Sheave				Throat		Frame		
	A	B	C	D	E	F	G		
SPP-1B-355-UL	420	355	60	18.5	89	76	600	11.8	2700
SPP-1B-460-UL	560	460	83	20.3	140	83	760	23.0	3650
SPP-1B-610-UL	710	610	90	22.9	152	85	940	31.5	4330
SPP-1B-710-UL	810	710	91	24.0	152	110	1030	36.4	6750

\* Working Load Limit (WLL) based on 3:1 Ultimate Tensile Strength



## Nylon Stringing Rollers/Blocks - TESMEC

Pulleys are assembled with generation high tensile nylon wheels.

This material combines in the best way lightness, performance and price.

Groove is shaped in conformity to IEC 61328 regulation for worldwide market.

All wheels are mounted on ball bearing and they are fully interchangeable.

Frame is made of galvanized steel. Frame and wheel can be easily detached for maintenance and reconfiguration.

No gap between wheels for safe handling, reducing size and weight.



### Single Nylon Stringing Blocks

Part No. CAS Series

C = Groove Width

D = Bottom of Groove Diameter

Part No.	Dimensions (mm)									Working Load (kN)	Wt (kg)
	A	B	C	D	E	F	G	H	I		
CAS528	16	24	83	560	935	248	660	210	240	40	40
CAS702	16	33	83	710	1275	408	822	228	240	40	63

### Two or Three Bundled Conductor Nylon Stringing Block

Part No. CAT Series

C = Groove Width

D = Bottom of Groove Diameter

Part No.	Dimensions (mm)										Working Load (kN)	Wt (kg)
	A	B	C	D	E	F	G	H	I	L		
CAT526	24	24	83	560	990	285	660	418	240	103	60	73
CAT700	32	33	88	710	1325	445	822	456	240	114	60	125

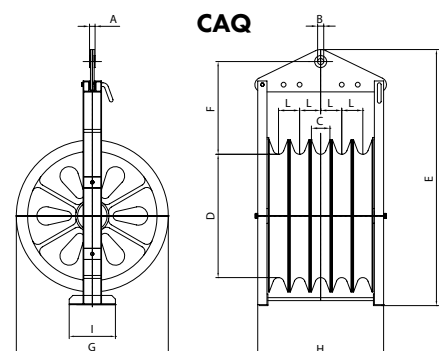
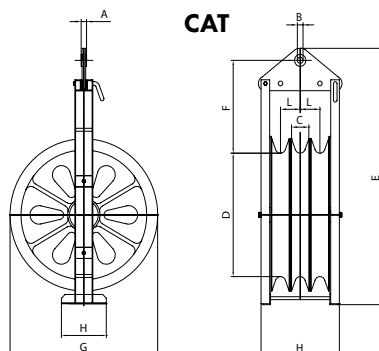
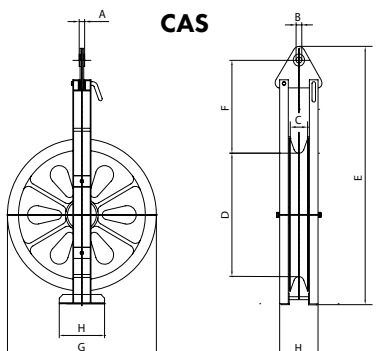
### Four or Five Bundled Conductors Nylon Stringing Blocks

Part No. CAQ Series

C = Groove Width

D = Bottom of Groove Diameter

Part No.	Dimensions (mm)										Working Load (kN)	Wt (kg)
	A	B	C	D	E	F	G	H	I	L		
CAQ527	30	33	83	560	1175	445	660	628	250	103	60	162
CAQ701	32	33	88	710	1380	445	822	684	250	114	60	187



2, 3, 4 & 5 Bundle Head Boards for Nylon Rollers available. Contact TEN for further information

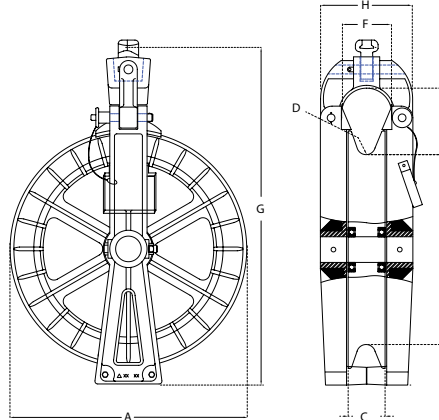
## Stringing Roller/Block - SPP

### Single Full Frame Roller/Block - SPP

#### Part No. SPP-1D Series

- Extra large contoured throat for smooth passage of swivels, grips and splices
- Quick release detent pin for ease of operation, which exposes the entire sheave
- Precision Earth bearings reduce pulling loads for accurate sagging
- Secured pins
- Durable and fully corrosion protected
- Urethane lined
- Socket fitting standard

### Optional Earthing Device - SPP



Available with Earthing Device  
Add Suffix "ED" to the Part No.

Part No	Dimensions (mm)								Wt (kg)	WLL* (kg)
	Sheave			Throat		Frame				
	A	B	C	D	E	F	G	H		
SPP-1D-355-UL	420	355	61	18.0	109	80	610	154	14.8	4050
SPP-1D-460-UL	560	460	82	20.5	142	104	775	197	27.0	5400
SPP-1D-610-UL	710	610	90	22.0	147	109	927	208	33.0	5400
SPP-1D-710-UL	810	710	91	25.4	147	109	1028	208	39.0	6750
SPP-1D-770-UL	870	770	90	27.5	142	109	1082	208	44.0	6750

\* Working Load Limit (WLL) based on 3:1 Ultimate Tensile Strength



## Fittings - Ball Clevis - SPP

### Ball Clevis Socket Fittings

#### Part No. Various

- Suitable for SPP-1A / 1B / 1D
- 70kN WLL

Part No	BC-70	BEL-70	BHL-70	BYC-120
Description	Ball Clevis	Oval Eye Ball	Safety Hook	Y Ball Clevis
Weight (kg)	0.55	0.4	0.55	0.85

## Stringing Rollers/Blocks - TESMEC

### Single Stringing Roller/Block

Part No. CAS Series

Neoprene



Nylatron



Aluminium



The CAS wheel is made of aluminium alloy mounted on ball bearings.

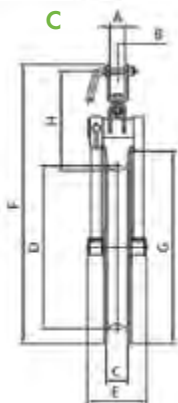
The groove is lined with a neoprene ring or by wear-proof interchangeable nylatron or aluminium sectors.

The frame is made of galvanized steel.

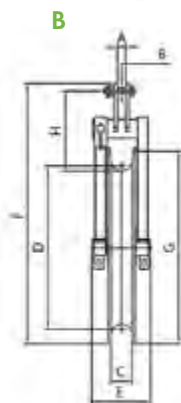
Three types of connections available: fixed (B), swivel-type (C), and hook with safety lock (D).

Earthing device or complete conductive sheaves available upon request.

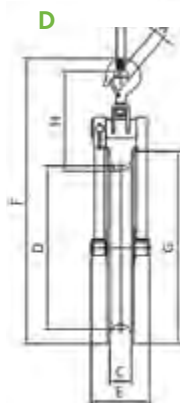
C



B



D



CCA Anti-fleeting devices available upon request.  
See page J45

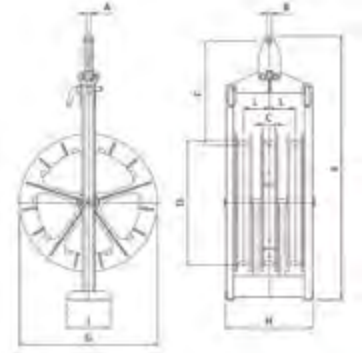
Part No.			Type of Connection	Dimensions (mm)								Working Load (kN)	Wt (kg)
Roller Groove Lining				A	B	C	D	E	F	G	H		
Neoprene	Nylatron	Aluminium											
-	CAS200	CAS207	C	26	16	50	250	145	482	330	175	27	7
-	CAS201	CAS208	D	25	19	50	250	145	490	330	175	27	7
CAS300	CAS301	CAS308	B	26	18	54	350	150	595	440	200	23	11
CAS302	CAS303	CAS309	C	35	18	54	350	150	640	440	225	23	12
CAS304	CAS305	CAS310	D	31	30	54	350	150	630	440	235	23	12
CAS600	CAS601	CAS632	B	26	20	68	650	186	996	775	260	33	28
CAS602	CAS603	CAS638	C	40	20	68	650	186	1052	775	315	33	29
CAS604	CAS605	CAS639	D	32	33	68	650	186	1087	775	330	33	30
CAS606	CAS607	CAS644	B	26	20	95	650	218	1010	775	275	40	32
CAS608	CAS609	CAS645	C	40	20	95	650	218	1062	775	330	40	33
CAS610	CAS611	CAS646	D	32	33	95	650	218	1097	775	345	40	34
CAS800	CAS801	CAS843	B	26	20	68	800	186	1101	880	260	40	32
CAS802	CAS803	CAS835	C	40	20	68	800	186	1157	880	315	40	33
CAS804	CAS805	CAS836	D	32	33	68	800	186	1192	880	330	40	34
CAS806	CAS807	CAS857	B	26	20	95	800	218	1125	893	275	40	38
CAS808	CAS809	CAS852	C	40	20	95	800	218	1180	893	330	40	39
CAS810	CAS811	CAS858	D	32	33	95	800	218	1215	893	345	40	40
-	CAS002	CAS012	B	26	20	95	1000	218	1335	1100	275	40	49
-	CAS004	CAS013	C	40	20	95	1000	218	1387	1100	330	40	50
-	CAS006	CAS014	D	32	33	95	1000	218	1422	1100	345	40	51
-	CAS027	-	B	25	24	130	1200	310	1824	1393	500	90	110
-	CAS034	-	B	25	24	130	1500	310	2124	1670	500	90	155



### Two or Three Bundled Conductor Stringing Blocks

#### Part No. CAT Series

- The wheels are made of aluminium alloy
- The lateral wheels are mounted on ball bearings with grooves lined with neoprene ring
- The central wheel is mounted on double-row ball bearings with grooves made up of wear-proof interchangeable nylatron sectors
- The frame is made of galvanized steel
- Blocks are supplied with fixed connection.
- Earthing device or complete conductive sheaves are available upon request.

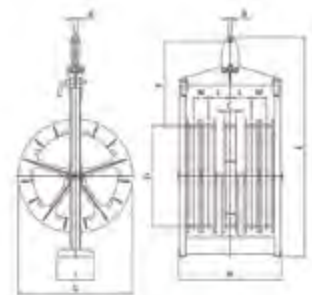


Part No.			Dimensions (mm)										Working Load (kN)	Wt (kg)
Nylon/Neoprene	Nylon	Aluminium	A	B	C	D	E	F	G	H	I	L		
CAT612	CAT648	CAT622	25	24	68	650	1430	580	775	500	250	145	50	110
CAT613	CAT676	CAT654	25	24	95	650	1430	580	775	572	250	175	70	130
CAT812	CAT912	CAT894	25	24	68	800	1530	580	880	500	250	145	70	125
CAT813	CAT848	CAT874	25	24	95	800	1540	580	893	572	250	175	70	160
-	CAT007	-	25	24	95	1000	1740	580	1100	572	250	175	70	198
-	CAT029	-	25	24	133	1200	2060	580	1393	722	250	222	90	270
-	CAT035	-	25	24	133	1500	2330	580	1670	722	250	222	90	320



### Four & Five Bundled Conductor Stringing Blocks

#### Part No. CAQ Series



Part No.			Dimensions (mm)										Working Load (kN)	Wt (kg)	
Nylon/Neoprene	Nylon	Aluminium	A	B	C	D	E	F	G	H	I	L			M
CAQ614	CAQ666	CAQ623	25	24	68	650	1440	595	775	700	250	145	100	50	148
CAQ615	CAQ667	CAQ656	25	24	95	650	1440	595	775	826	250	175	130	70	190
CAQ814	CAQ818	CAQ856	25	24	68	800	1540	595	880	700	250	145	100	70	180
CAQ815	CAQ881	CAQ827	25	24	95	800	1540	595	893	826	250	175	130	70	225
-	CAQ008	-	25	24	95	1000	1750	595	1100	826	250	175	130	70	270
-	CAQ030	-	25	24	133	1200	2115	595	1393	1081	250	222	177	90	320
-	CAQ036	-	25	24	133	1500	2383	595	1670	1081	250	222	177	90	405

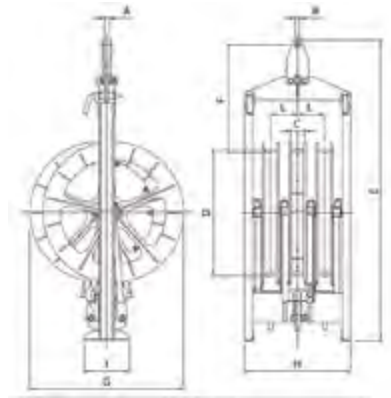
\*Central sheave nylatron - lateral sheaves nylatron IEEE



## Detachable Two or Three Bundled Stringing Block

### Part No. CST Series

- The block are ideal for stringing two or three bundled conductors.
- The pulleys are made up of a special galvanized steel frame and three single pulleys
- The single pulleys can be used separately
- The wheels are made of aluminium alloy mounted on ball bearings
- The lateral wheels have the groove lined with a neoprene ring
- The central wheel has the groove made up of wear-proof interchangeable nylatron sectors
- The pulleys are supplied with fixed connection



Part No.		Dimensions (mm)										Working Load (kN)	Wt (kg)
Nylon/Neoprene	Nylon	A	B	C	D	E	F	G	H	I	L		
CST600	CST604	25	24	68	650	1563	600	846	580	250	148	40	151
CST601	-	25	24	95	650	1667	600	846	671	250	178	60	166
CST800 CST807*	-	25	24	68	800	1758	600	951	580	250	148	60	166
CST801	CST808	25	24	95	800	1758	600	964	671	250	178	60	190
-	CST001	25	24	95	1000	1995	600	1171	671	250	178	67	228

\*All neoprene lining

## Helicopter Stringing Block

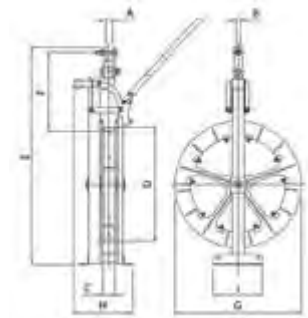
### Part No. CES Series

Ideal for stringing a pilot rope by helicopter

The pilot rope is automatically positioned in the (central) wheel. Special guides ensure the correct positioning of the rope during stringing operations.



- The wheels are made of aluminium alloy mounted on ball bearings
- The lateral wheels have the groove lined with a neoprene ring
- The central wheel has the groove made up of wear-proof interchangeable nylatron sectors
- The frame is made of galvanized steel
- The pulleys are supplied with fixed connection
- Earthing device or complete conductive sheaves are available upon request



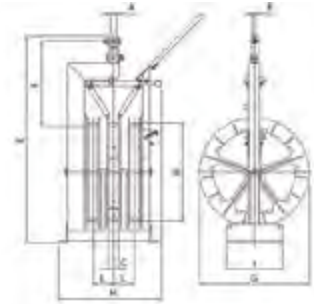
Part No.			Dimensions (mm)									Working Load (kN)	Wt (kg)
Nylon/Neoprene	Nylon	Aluminium	A	B	C	D	E	F	G	H	I		
CES604	CES600	-	41	20	68	650	1345	490	775	362	300	40	62
-	CES601	CES618	41	20	95	650	1345	500	775	376	300	40	68
-	CES800 CES811 * CAT875 *	-	41	20	68	800	1440	480	880	362	300	40	68
-	CES801 CES831 *	-	41	20	95	800	1460	500	893	376	300	40	74
-	CES001	-	41	20	95	100	1665	500	-	376	300	67	93
-	CES005	-	41	24	133	1200	2005	558	-	462	600	90	180
-	CES008	-	41	24	133	1500	2310	570	-	462	600	90	215

\*All sheaves with IEEE sectors

### Helicopter Stringing Block

#### Part No. CET Series

- The wheels are made of aluminium alloy mounted on ball bearings
- The lateral wheels have the groove lined with a neoprene ring
- The central wheel has the groove made up of wear-proof interchangeable nylatron sectors
- The frame is made of galvanized steel
- The pulleys are supplied with fixed connection
- Earthing device or complete conductive sheaves are available upon request



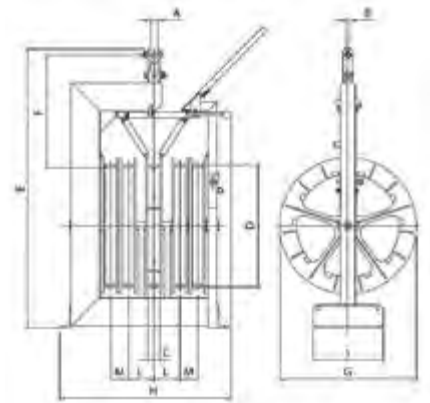
Part No.			Dimensions (mm)										Working Load (kN)	Wt (kg)
Nylon/Neoprene	Nylon	Aluminium	A	B	C	D	E	F	G	H	I	L		
CET602	CET610*	-	41	20	68	650	1345	605	775	730	400	145	60	142
CET603	-	CET608	41	20	95	650	1430	610	775	810	400	175	60	164
CET802	CET821 CET807*	CET829	41	20	68	800	1582	610	880	730	400	145	60	158
CET803	CET820 CET812*	CET806	41	20	95	800	1582	610	893	810	400	175	60	179
-	CET002	-	41	20	95	1000	1805	629	1100	830	400	175	67	235
-	CET006	-	41	20	133	1200	2100	640	1393	1005	500	222	90	315
-	CET009	-	41	20	133	1500	2405	640	1670	1005	500	222	90	362

\*All sheaves with IEEE sectors

### Helicopter Stringing Block

#### Part No. CEQ Series

- The wheels are made of aluminium alloy mounted on ball bearings
- The lateral wheels have the groove lined with a neoprene ring
- The central wheel has the groove made up of wear-proof interchangeable nylatron sectors
- The frame is made of galvanized steel
- The pulleys are supplied with fixed connection
- Earthing device or complete conductive sheaves are available upon request



Part No.			Dimensions (mm)											Working Load (kN)	Wt (kg)
Nylon/Neoprene	Nylon	Aluminium	A	B	C	D	E	F	G	H	I	L	M		
CEQ609	CEQ614**		41	20	68	650	1580	641	775	906	400	145	100	60	228
CEQ612	-		41	20	95	650	1625	670	775	1130	400	175	130	60	258
CEQ808	CEQ813**	CEQ818	41	20	68	800	1750	670	880	910	400	145	100	60	250
CEQ809	CEQ819**		41	20	95	800	1750	647	893	1130	400	175	130	60	280
-	CEQ003		41	20	95	1000	1945	670	1100	1130	400	175	130	67	360

\*\*Central nylatron - lateral nylatron IEEE



## Tandem Stringing Roller/Blocks

### Part No. CAM Series



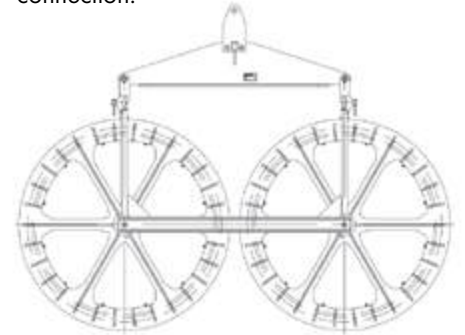
The blocks are ideal for stringing single, two or three bundled conductors.

The pulleys are made up of a special galvanized steel frame and three single pulleys. The single pulleys can be used separately. The wheels are made of aluminium alloy mounted on ball bearings.

The lateral wheels have the groove lined with a neoprene ring.

The central wheel has the groove made up of wear-proof interchangeable nylatron sectors.

The pulleys are supplied with fixed connection.



Part No.	Based On	Wheel Ø (mm)	Groove (mm)	Working Load (kN)	Wt (kg)
CAM210	CAS200	250	50	33	25
CAM618	CAS602	650	68	60	72
CAM631	CAT613	650	95	60	290
CAM636	CAT612	650	68	70	270
CAM640	CAS607	650	95	60	87
CAM662	CAS601	650	68	60	91
CAM665	CAS606	650	95	60	98
CAM669	CAS608	650	95	60	100
CAM849	CAS802	800	68	60	92
CAM892	CAS801	800	68	60	89
CAM896	CAS807	800	95	60	118
CAM907	CAE906	800	95	100	632
CAM015	CAS002	1000	95	60	135
CAM023	CAS024	1000	95	60	166
CAM028	CAS027	1200	130	90	250
CAM031	CAS027	1000	95	90	175
CAM032	-	1200	130	120	312
CAM042	CAE041	1000	95	80	835
CEM619	CES600	650	68	60	239
CEM827	CET8XX	800	95	80	415
CEM828	CES801	800	95	80	205
CEM830	CET829	800	68	80	404

## Earthing Devices for Stringing Blocks - TESMEC

### Part No. CCA Series

Earthing devices can be supplied on single, bundle and helicopter wheels manufactured by Tesmec.

Earthing devices complies with IEC TR 61328 REV.3 requirement 20 kA for 20 cycles.



Nylon Stringing Blocks		
Stringing Blocks Part No.	Dia 560	Dia 700
CAS	MTX140	MTX143
CAT	MTX138	MTX141
CAQ	MTX139	MTX142



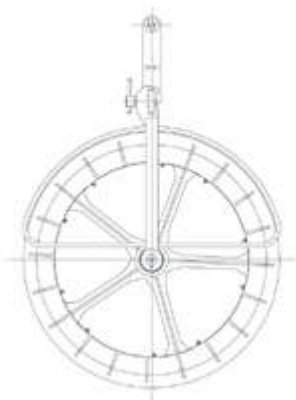
Aluminium Stringing Blocks						
Stringing Blocks Part No.	Dia 400-500	Dia 650		Dia 800		Dia 1000
		68 Narrow Groove	95 Wide Groove	68 Narrow Groove	95 Wide Groove	95 Wide Groove
CAS	MTX120	MTX079	MTX079	MTX079	MTX079	MTX081
CAT	-	MTX101	MTX122	MTX129	MTX102	MTX103
CAQ	-	MTX104	MTX105	MTX130	MTX131	MTX106
CES	-	MTX090	MTX090	MTX090	MTX090	MTX089
CET	-	MTX107	MTX108	MTX134	MTX135	MTX109
CEQ	-	MTX110	MTX111	MTX132	MTX133	MTX112

## Anti-fleeting Devices - TESMEC



Bundled Stringing Blocks

### Part No. CCA Series



Single Stringing Blocks	
Included	For D=
CCA300	250
CCA600	350
CCA400	650
CCA400	400
CCA500	500
CCA800	800
CCA000	1000
CCA001	1200
CCA009	1500

Bundle Stringing Blocks	
Included	For D=
CCA601	250
CCA801	350
CCA007	650
CCA400	400
CCA400	500
CCA500	800

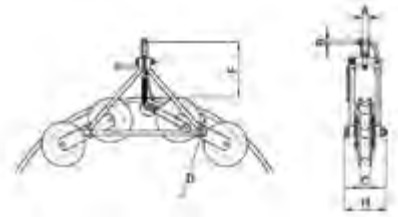
### TESMEC

## Pivoting Array Blocks - TESMEC

### Single Conductor Pivoting Array Blocks

#### Part No. RUS

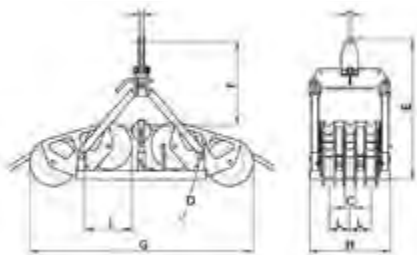
- Lightweight & compact
- No diameter limitation
- Easy handling & transportation



Part No.		Dimensions (mm)									Working Load (kN)	Wt (kg)
Fibreglass	Aluminium	A	B	C	D	E	F	G	H	I		
RUS005	RUS026	40	20	68	1600	810	393	1350	295	305	40	42
RUS007	RUS027	40	20	68	1820	800	367	1470	295	305	40	48

### Two or Three Bundled Conductors Pivoting Array Blocks

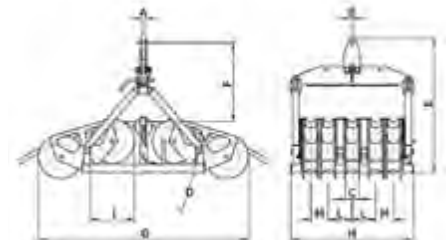
#### Part No. RUT



Part No.		Dimensions (mm)										Working Load (kN)	Wt (kg)
Cast Iron + Fibreglass	Cast Iron + Aluminium	A	B	C	D	E	F	G	H	I	L		
RUT013	RUT014	25	24	68	3120	1035	580	1495	560	305	145	60	183
RUT015	RUT016	25	24	95	3260	1035	580	1600	640	326	175	60	200

### Four or Five Conductors Pivoting Array Blocks

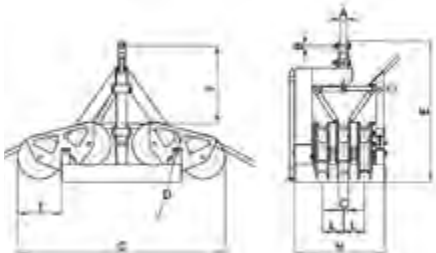
#### Part No. RUQ



Part No.		Dimensions (mm)											Working Load (kN)	Wt (kg)
Cast Iron + Fibreglass	Cast Iron + Aluminium	A	B	C	D	E	F	G	H	I	L	M		
RUQ005	RUQ026	25	24	68	3120	1035	580	1495	760	305	145	100	60	255
RUQ007	RUQ027	25	24	95	3260	1035	580	1600	900	326	175	130	60	280

### Two or Three Conductors Pivoting Array Helicopter Blocks

#### Part No. RET



Part No.		Dimensions (mm)										Working Load (kN)	Wt (kg)
Cast Iron + Fibreglass	Cast Iron + Aluminium	A	B	C	D	E	F	G	H	I	L		
RET002	RET003	40	21	68	3390	980	540	1445	665	305	145	60	196
RET004	RET005	40	21	95	3530	980	540	1550	745	326	175	60	215



### TESMEC

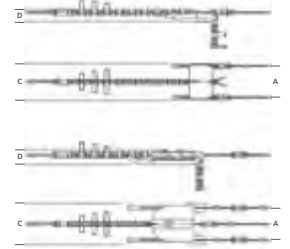


Special models with different characteristics are available on request

## Head Boards - TESMEC

Designed to connect a pulling rope, (24mm Max) with 2 or 3 bundled conductors.

The equipment includes the necessary rope lengths and swivels. Quantity and models are indicated in the following tables.



### 2 or 3 Conductors Fixed Head Boards

#### Part No. RFB-RFT Series

Part No.	Dimensions (mm)			Working Load (kN)	Wt (kg)	For Stringing Blocks		Swivel Joints		Steel Rope Section Ø 18mm	Phase Type
	A	C	D			Standard	Helicopter	GGT020	GGT030		
RFB020	292	335	144	93	98	CAT506 CAT612 CAT812 CST500 CST600 CST800	CET602 CET802	2	1	2 x 3.5m	2 Conductors
RFB370	292	335	144	120	100			3	1	3 x 3.5m	3 Conductors
RFT030	292	335	144	93	104						
RFT380	292	335	144	120	107						
RFB040	348	390	144	93	100	CAT613 CAT813 CAT007 CST601 CST801 CST001	CET603 CET803 CET002	2	$\frac{1}{1 \times \text{GGT040}}$	2 x 3.5m	2 Conductors
RFB390	348	390	144	150	103			3	$\frac{1}{1 \times \text{GGT040}}$	3 x 3.5m	3 Conductors
RFT050	348	390	144	93	107						
RFT400	348	390	144	150	110						

Contact TEN for Head Boards for Nylon Rollers

### 2, 3 or 4 Conductors Balancing Head Boards

#### Part No. RBB-RBT Series

Part No.	Dimensions (mm)			Working Load (kN)	Wt (kg)	For Stringing Blocks		Swivel Joints		Steel Rope Section Ø 18mm	Phase Type
	A	C	D			Standard	Helicopter	GGT020	GGT030		
RBB001	292	365	160	93	135	CAT506 CAT612 CAT812 CST500 CST600 CST800	CET602 CET802	2	1	1 x 30m	2 Conductors
RBB580	292	365	160	120	140			3	1	1 x 30m 1 x 15m	3 Conductors Balancing 1-3
RBT010	292	365	160	93	157			3	1	1 x 30m 1 x 15m	3 Conductors Balancing 1-2
RBT590	292	365	160	120	162						
RBT260	292	365	160	93	157						
RBT680	292	365	160	120	162						
RBB020	348	415	176	93	143	CAT613 CAT813 CAT007 CST601 CST801 CST001	CET603 CET803 CET002	2	$\frac{1}{1 \times \text{GGT040}}$	1 x 30m	2 Conductors
RBB690	348	415	176	150	148			3	$\frac{1}{1 \times \text{GGT040}}$	1 x 30m 1 x 15m	3 Conductors Balancing 1-3
RBT030	348	415	176	93	165			3	$\frac{1}{1 \times \text{GGT040}}$	1 x 30m 1 x 15m	3 Conductors Balancing 1-2
RBT560	348	415	176	150	170						
RBT140	348	415	176	93	165						
RBT700	348	415	176	150	170						



#### Part No. RBQ Series

Designed to connect a pulling rope, (28mm Max) with 4 bundled conductors.



Part No.	Dimensions (mm)				Working Load (kN)	Wt (kg)	For Stringing Blocks		Swivel Joints		Steel Rope Section Ø 18mm
	A	B	C	D			Standard	Helicopter	GGT020	GGT030	
RBQ710	100	292	540	150	120	193	CAQ614 CAQ814	CEQ609 CEQ808	4	1	2 x 30m
RBQ720	130	340	648	160	150	208	CAQ615 CAQ815	CEQ612 CEQ809	4	$\frac{1}{1 \times \text{GGT040}}$	2 x 30m
RBQ080	130	340	650	175	250	230	CAQ008	CEQ003			

Additional Fixed & Balancing Head Boards to suit a wide range of 4 & 5 bundle rollers available. Contact TEN for further information

### TESMEC

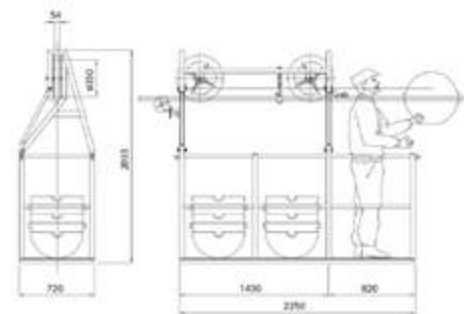


## Conductor Chairs & Cars

### Conductor Cars For Single Conductor Lines - TESMEC

#### Part No. CRS320

This conductor car is manufactured of light aluminium alloy and allows one person to cross or to inspect single conductor lines. Complete with two aluminium neoprene lined, metre counter and stationary brake.



Capacity (kg)	150
Weight (kg)	75

### HIATCO



### Conductor Spacer Chair – Hiatco

#### Part No. HSSC-Series

For transporting line-workers to carry out maintenance & repair on conductors mid-span. The standard spacer chair frame is manufactured from lightweight aluminium alloy 6082T6 using standard box and circular sections as well as non-slip flooring.

#### Features

- Lightweight aluminium cage
- Hand brake with lock feature
- 4 harness anchor points
- 250kg WLL (Proof load 375kg)
- Test cert supplied
- Battery powered option\*

Part No	WLL (kg)	Dimensions Including Support Arms (mm)			Wt (kg)
		Width	Depth	Height	
HSSC-P*	250	1360	630	1530	80
HSSC	250	1360	630	1530	60

### TESMEC



Special models are available upon request, including motorised.

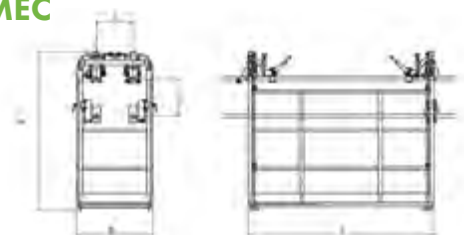
### Inspection Conductor Car - TESMEC

#### Part No. CRQ530

- Two detachable brakes
- Metre counter
- Earthing roller
- Safety rope

Aluminium alloy conductor cars suitable for construction and inspection of bundled line that allow two workers to work on two or four bundled conductors line.

Conductor car is able to pass over spacers



Configuration with only two axles leave more space for operators and line equipment. Conductor cars are equipped with brakes, safety rope and metre counter.

Part No.	Dimensions (mm)				Capacity (kN)	Wt (kg)
	B	H	L	I		
CRQ530	818	1650	2000	400	250	90

Special models are available upon request, including motorised  
Contact TEN for further information

### HIATCO



## Aluminium Structures

### Working Platforms – Hiatco

#### Part No. HWP Series

Utilised for Line-workers to gain access on towers to carryout maintenance & repair on conductors and tower hardware.

#### Features

- All box sections, angles & plates of the platform are built from structural aluminium 6082T6
- Variety of lengths and configurations available, including folding and telescopic ends
- Specially extruded aluminium non-slip flooring & toe-board
- Fall arrest support brackets and safety wire
- Load test certificate supplied for each platform

Platform Length (m)			Centre Section qty Length & (WLL)	End Section qty Length & (WLL)	Telescopic Section Length & (WLL)	Weight of Safety Wires & Brackets (kg)	Total Weight (kg)
Total	Extended	Retracted					
6.0	Fixed	Fixed	1 x 6.0m (200kg)	Not Required	Not Required	10	210
7.0	Fixed	Fixed	2 x 3.5m (75kg)	NA	NA	c/w centre stirrups	150
9.0	Folding ends		1 x 6.0m (150kg)	Not Required	2 x 1.5m (35kg)	NA	220
12.0	Fixed	Fixed	1 x 1.5m (60kg)	2 x 5.0m (170kg)	Not Required	20	420
16.0	Fixed	Fixed	1 x 6.0m (200kg)	2 x 5.0m (170kg)	Not Required	25	565
16.0	15.5	10.3	1 x 3.1m (145kg)	2 x 3.5m (125kg)	2 x 3.8m (80kg)	25	580
19.0	18.5	12.9	1 x 6.0m (200kg)	2 x 3.5m (125kg)	2 x 3.8m (80kg)	30	635
21.0	20.3	14.1	1 x 6.0m (200kg)	2 x 4.0m (140kg)	2 x 4.2m (80kg)	30	670

### TESMEC



## Working Platforms - TESMEC

#### Part No. PLL Series

The working platforms have trapezoidal section and are made of aluminium alloy. For modular use, the platforms extra sling and anti-fall barrier kit are required for each specific length.

All the platforms are provided with single side anti fall barrier. Special working platforms are available upon request.

- Detachable wide range
- Several frame options available

Available Options	
PYB001	Special track For hydraulic press trolley
PYC002	Hydraulic press trolley
PYDXXX	Double side anti-fall barrier

Part No.	Total Length (m)	Lateral Section Length (m)	Central Section Length (m)	Intermediate Section Lengths (m)	Working Load at the two ends (kg)	Wt (kg)
PLL004	7	3.5+3.5	-	-	300	65
PLL302	8	4+4	-	-	300	75
PLL308	9	4.5+ 4.5	-	-	300	85
PLL306	10	5+5	-	-	300	95
PLL303	11	5.5 +5.5	-	-	300	105
PLL311	12	6+6	-	-	300	107
PLL300	12	3.5+3.5	5	-	300	110
PLL600	16	3.5+3.5	5	2+2	300	150
PLL901	18	4.5+ 4.5	4.5+4.5	-	300	180
PLL909	20	5+5	5+5	-	300	190
PLL900	22	5.5 +5.5	5.5+5.5	-	300	200
PLL905	24	6+6	6+6	-	300	228
PLL907	26	5+5+5+5	6	-	300	240



## Anchoring Ladders - TESMEC

### Part No. SCA Series

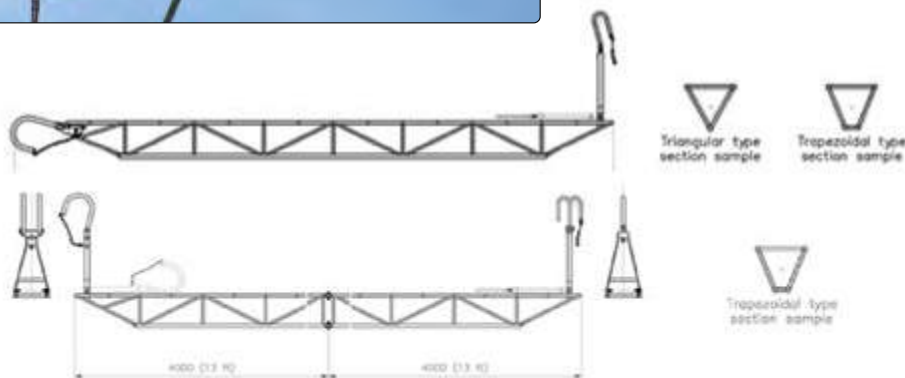


Specifically designed for anchoring works.

The ladders are made of light aluminium alloy, with anti-slippery rungs and with galvanized steel suspension hooks.

The ladders are supplied with a supplementary swivel hook to be located on the conductor, which allows the ladder to be used in horizontal position. The ladders are available with triangular or trapezoidal section.

- Lightweight platform
- Easy to handle
- Replacement sections available



Part No.	Length (m)	Section Length (m)	Working Load (kg)	Linear Wt (kg/m)	Section
SCA700	4	4	150	4	Triangular
SCA800	6	6	150	4	Triangular
SCA801	6	4+2	150	4	Triangular
SCA900	8	4+4	150	4	Triangular
SCA400	3.5	3.5	300	4.7	Trapezoidal
SCA401	4.5	4.5	300	4.7	Trapezoidal
SCA500	6.5	4.5+2	300	4.7	Trapezoidal
SCA600	8	4+4	300	4.7	Trapezoidal



SDG010



SDG009



SDG018



SDG025



SDG019

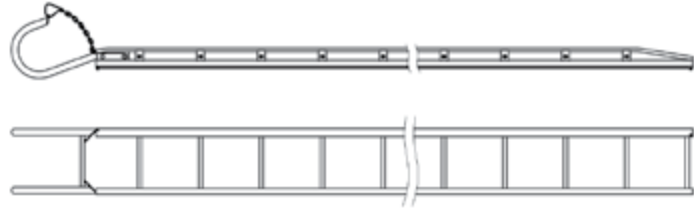
Part No.	Special Models and Lengths Available on request
SDG010	Standard swivel hook conductor side
SDG009	Standard swivel hook with roller (conductor side)
SDG018	Swivel suspension hook (tower side)
SDG025	Double swivel suspension hook (tower side)
SDG019	Double hook swivel (conductor side)

### Suspension Ladders - TESMEC

#### Part No. SCS Series

Specifically designed for suspension works. The ladder is made of light aluminium alloy, fitted with anti-slippery rungs, with a special track for the anti-fall device and with a galvanized steel supporting hook.

- PPE system
- Modular and lightweight
- SCS LADDERS WITH SDA ANTI-FALL DEVICE Comply with 89/686/CEE



Part No.	Length (m)	Section Length (m)	Working Load (kg)	Linear Wt (kg/m)	Anti-fall Device (model not incl.)
SCS100	3.5	3.5	300	3.8	SDA021
SCS200	4.5	4.5	300	3.8	SDA021
SCS306	5	5	300	3.8	SDA021
SCS300	6	6	300	3.8	SDA021
SCS301	6	4+2	300	3.8	SDA021
SCS302	8	4+4	300	3.8	SDA021



### Double Swivel Ladder Hook - TESMEC

#### Part No. SDG015

Special models with different lengths are available upon request.

Available Options	
SDG015	360° Double swivel hook

Ladder hooks swivel 360° for maneuvering into difficult spots

### Anti-Fall Devices - TESMEC

#### Part No. SDA Series

Personal protective devices to prevent the operator falling. The device is self-guided and self-locking, running on a special rigid track, constructed of light aluminium alloy. Supplied with a polyamide mini energy-absorber and safety spring catch to connect it to the safety harness.

It allows the proper movement of the operator along the ladder and at the same time protecting them from falling. End stroke devices are provided in order to avoid that the anti-fall device running from the anchoring track.

- Zero snagging with self guiding and locking
- Energy Absorber
- Harness Safety spring catch
- Comply with 89/686/CEE

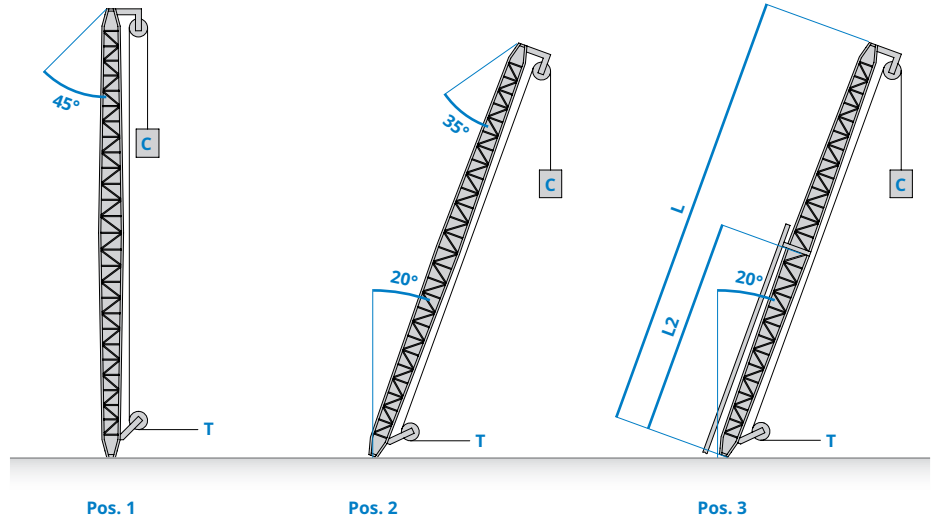


Special Models with Different Lengths Available on request			
Part No.	Working Load (m)	Nylon Rope Length (mm)	Wt (kg)
SDA021	100	300	1
SDA022	100	300	1

## Aluminium Derricks - TESMEC

### Part No. FAL Series

- Light design
- Swivel head and base
- Special models can be designed on demand



Part No.	"L" Total Length (m)	"L2" Section Lengths (m)	Max lifting load (kN)			Wt (kg)	Snatch blocks (not included)		Anchoring Ropes (n° 4 for each)
			Pos. 1 0°	Pos. 2 20°	Pos. 3 20°		Upper service snatch blocks	Upper service snatch blocks	
FAL001	8	4+4	6,5	5	1,5	40	CZA101	CZA101	ALT046
FAL010	12	4+4+4	6,5	5	1,5	65	CZA010	CZA101	ALT047
FAL020	8	4+4	10	8	2	45	CZA010	CZA101	ALT046
FAL030	10	4+2+4	10	8	2	60	CZA010	CZA101	ALT046
FAL040	12	4+4+4	10	8	2	70	CZA010	CZA101	ALT047
FAL050	8	3+2+3	12,5	10	2,5	50	CZA030	CZA101	ALT046
FAL060	12	4+4+4	12,5	10	2,5	80	CZA030	CZA101	ALT047
FAL070	16	5+6+5	12,5	10	2,5	110	CZA030	CZA101	ALT048
FAL080	12	4+4+4	19	15	3,5	100	CZA140	CZA030	ALT043
FAL090	16	5+6+4	19	15	3,5	130	CZA140	CZA030	ALT044
FAL100	18	6+6+6	19	15	3,5	180	CZA140	CZA030	ALT045
FAL110	20	5+5+5+5	19	15	3,5	200	CZA140	CZA030	ALT045
FAL120	12	4+4+4	25	20	4	120	CZA140	CZA030	ALT156
FAL130	16	4+4+4+4	25	20	4	160	CZA140	CZA030	ALT147
FAL140	20	5+5+5+5	25	20	4	220	CZA140	CZA030	ALT015
FAL150	12	6+6	31	25	5	150	CZA380	CZA140	ALT156
FAL160	16	5+6+5	31	25	5	200	CZA380	CZA140	ALT147
FAL170	18	6+6+6	31	25	5	230	CZA380	CZA140	ALT015
FAL180	20	5+5+5+5	31	25	5	250	CZA380	CZA140	ALT015
FAL190	16	5+6+5	50	40	8	300	CZA350	CZA340	ALT155
FAL200	18	6+6+6	50	40	8	330	CZA350	CZA340	ALT155
FAL210	22	5+6+6+5	50	40	8	400	CZA350	CZA340	ALT017

Standard derricks with external rope passage, available on request with internal rope passage.



**Support Structure - TESMEC**

**Part No. PIL Series**

Light aluminium alloy supporting structure for erection of barriers and netting for the protection of roads, railways, channels and line crossings.

- Modular
- Light and strong

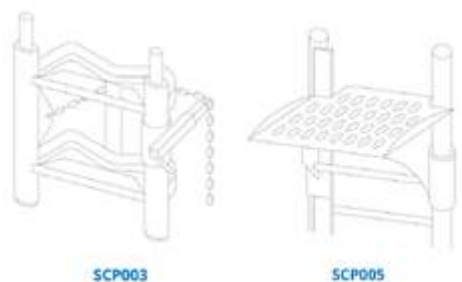


Part No.	Length (mm)	Section	Capacity (kN)	Mass (kg)
PIL100	2000	Triangular	10	7.5
PIL101	4000	Triangular	10	14
PIL500	2000	Square	10	9.5
PIL501	4000	Square	10	18.5

**Options**

Description	FOR SQUARE SECTION	FOR TRIANGLE SECTION
Swivel light aluminium alloy head with pulley diameter 650mm	PXT001	PXT002
Steel head designed to carry wooden beams suitable crossing operations	PXT003	PXT004
Steel base	PXB005	PXB006

### TESMEC



### Monopole Ladders - TESMEC

#### Part No. SCP Series

Specifically designed for climbing circular or polygonal section poles. Standard lengths can be assembled to create the total length required. The ladder is made of light aluminium alloy, provided with anti-slip rungs and with special tracks for the anti-fall device.

- Perfect fit
- Sliding system

The ladder can be composed using the following elements:

Several standard sections:

- Quantity according to the total required height (SCP001)
- One self-supporting base for fixing the ladder to the pole without additional ground support (SCP003)

OR

- One self-supporting base section for fixing the ladder to the pole without additional ground support (SCP004)
- One terminal section, complete with anti-fall device, to be connected to any of the rungs of the last standard section, in order to adjust the final ladder length (SCP002)



#### Part No. SDA022

Anti-Fall device sold separately  
See page J51 for details



Part No.	Description	Section Length (m)	WLL (kg)	Wt (kg)	Anti-Fall Device
SCP001	Standard section	2.5	100	6.6	SDA022 (not included)
SCP002	Terminal section	2.5	100	7	SDA022 (not included)
SCP003	Self-supporting base	-	100	5	-
SCP004	Self supporting base section	2.5	100	7	Use one of the standard section
SCP005	Working platform	-	100	1.2	-

### TESMEC



### Support for working platform - TESMEC

#### Part No. ABS061

This equipment which is a support structure to connect a working platform onto the tower. It is provided with a self-support base and doesn't require anchoring devices on tower. It can be placed in every position on the tower. The device is designed to self adapt to the tower shape. It can support the weight of three operators.

Characteristics	
Working Load (kg)	500
Tower Dia. Range (mm)	450÷1700



### Horizontal Ladder - TESMEC

#### Part No. SCA407

It's a device used to offer an easy passage from tower to the end of the tower's arms. It is provided with universal hook and a stabilizing system. The ladder is made of light aluminum alloy and can be detached in two section 3 + 1.5m

Characteristics	
Working Load (kg)	400
Length (m)	4.5 (3+1.5)

### Transmission Overhead PPE, Tools & Accessories

#### Conductor Lifter Hook

**Part No. DNS22-771**

Each unit is tagged showing the safe working load, proof-test date, and an identifying serial number.  
2,954kg (6,500 lb) safe working load.



#### Rescue Kit - Tower

**Part No. TRRK**

##### Example Components List

- Storage backpack yellow
- 65m rope with sewn eye and tripllock karabiner
- FDU100 Rescue Descender with tripllock karabiner
- 50mm x 1200mm anchor sling
- 25mm x 1200mm round sling
- Rescue knife with extender and 2 alloy tripllock karabiner
- Mechanical advantage retrieval system
- Cervical collar (optional)

Components may vary depending on state or territory requirements.



Contact TEN with your Rescue Kit requirements

#### Wire Rope Slings 3.0T

**Part No. Various**

##### Superflex Steel Slings

- Supplied tested with NATA certificate
- Aluminium Ferrules
- 5:1 Safety Factor

Part No.	WLL (T)	Sling Length (m)
Four - 5-1	3.0	1.0
Four - 1.5	3.0	1.5
Five - 0-1	4.1	1.0
Five - 0-1.5	4.1	1.5
Five - 0-4	4.1	4.0
Five - 0-8	4.1	8.0

#### Soft Round Slings

**Part No. Various**

- Variable load bearing point for more even wear
- Ideal for choke lifting cylindrical objects
- Lifts smooth objects with out damage
- Lightweight and soft
- Reduced manual handling injuries
- High strength to weight ratio
- Load bearing fibres protected by the outer sleeve
- Tuff Tag webbing reinforced encapsulated compliance labels

Colour Code	Part No.	WLL (T)	Max Length (m)	Min Length (m)
Purple	E1000	1	60	0.5
Green	E2000	2	60	0.5
Yellow	E3000	3	60	0.5
Grey	E4000	4	60	1.0
Red	E5000	5	60	1.0
Brown	E6000	6	60	1.0
Blue	E8000	8	60	1.0

- Wide choice of lifting modes
- Certified to AS.4497





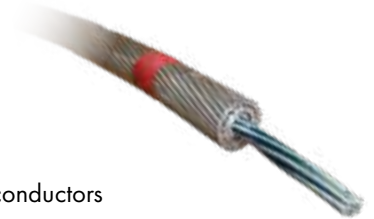
### ACSR Strippers

#### Part No. PSC-1

The Trimmer quickly and accurately removes the aluminium stranding from around the steel core of ACSR conductors in preparation for crimping the steel inner strand.

#### Features

- Made of an aluminium alloy
- Lightweight and durable
- Operates like a Tube Cutter
- Carry Case stores 11 bushings
- Standard Bushing sizes available (Sold separately)
- Bushings can be made to suit a wide range of ACSR conductors



Bushing Holder



Bushing

Part No.	Kit Contains	Bushings to suit	Replacement Cutting Wheel #
PSC-1	Tool, bushing holder, (1) extra cutting wheel, and a plastic case that holds up to 11 bushings.	Cherry Grape Lemon Lychee Lime Mango Orange	TE54270
TE****	Bushing for use with PSC-1, *conductor to be specified	Olive Pawpaw	-

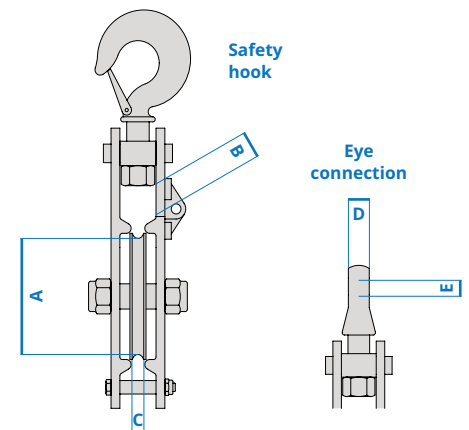
\*Other size bushings available on request

**PSC-2 Trimmer and Bushings available for larger size ACSR conductors**  
Please contact TEN for further information

### Steel Service Snatch Blocks - TESMEC

#### Part No. CZA

- Wheels mounted on ball bearings
- Special models can be designed on demand



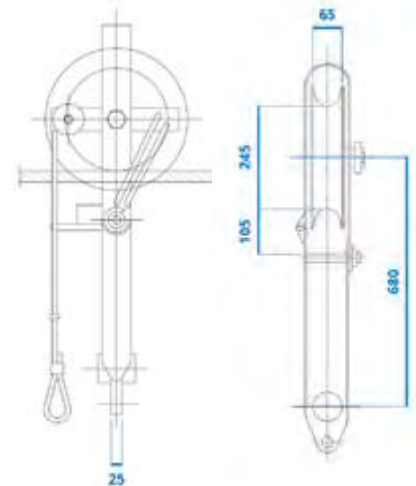
Steel Service Snatch Blocks Mod. CZA

Swivel Connection (Closed)	Dimensions (mm)					Working Load (kN)	Weight (kg)	
	A	B	C	D	E		Safety hook connection	Eye Connection
CZA370	108	40	15	20	17	17	5	4.9
CZA033	138	40	15	27	21	21	8	8.5
CZA141	185	55	30	30	26	26	12	12

### Anti-Lifting Automatic Release Pulley - TESMEC

#### Part No. CAA

The anti-lifting automatic release pulley is a special device that prevents the pulling rope lifting with respect to the theoretical line, specifically in case of towers with considerable height differences. It is equipped with an automatic release system to facilitate recovery operations. The wheel is made of galvanized steel and mounted on ball bearings; the pulley frame is made of galvanized steel.

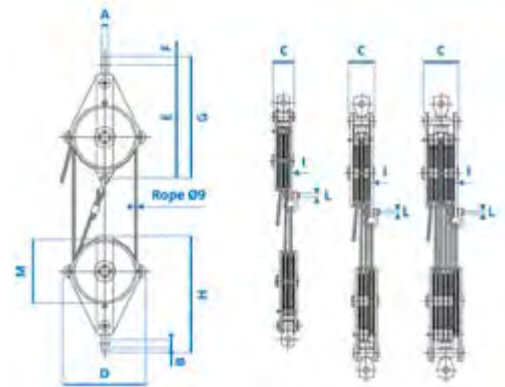


<b>Working Load (kN)</b>	27
<b>Weight (kg)</b>	20

### Lifting Tackles

#### Part No. TAP Series

- The lifting tackles are suitable For Ø 9mm steel ropes
- The wheels are mounted on ball bearings
- The frame is made of galvanized steel
- Rope and swivel joint not included



Part No.	Working Load (m)											Pulling Force/ Lifting Load	Working Load (kN)	Wt (kg)
	A	B	C	D	E	F	G	H	I	L	M			
TAP001	22	20	67	242	333	20	353	331	8	10.5	180	1:4	30	17
TAP010	22	23	85	294	380	28	408	386	10	16	180	1:6	50	27
TAP020	22	26	120	294	405	35	440	415	10	10.5	180	1:10	80	42

Suitable rope FUZ009 (diameter 9mm). Suitable swivel GGT001

### Hand Line Blocks

#### Part No. Various



- Hand rope blocks used for hauling and lifting
- Made of high strength aluminum alloy
- Side gate opening with detent pin
- High strength steel rotating swivel hook with safety latch
- Free running sheaves with shielded bearings

Part No.	Max Rope Ø (mm)	Sheave Size (mm)	Wt (kg)	WLL (kg)
SPP-HLB	14	75	1.4	560
AHB-4	22	100	2.8	1130

### TESMEC

#### Zoom Sag Scope - TESMEC

Part No. TGP001

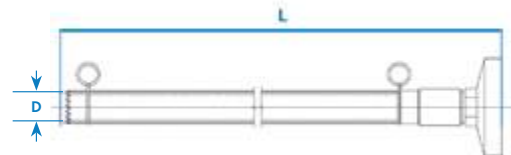
- Suitable for accurate conductor sag measurements.
- Equipped with a special anchoring support for steel tower.



#### Thermometers - TESMEC

Part No. TET060

The thermometers are made of an aluminium bulb reproducing the conductor's surface.



Part No.	Length (m)	Wt (indicative) (kg)
TET060	0.49	0.6 to 1.0

Diameter "d" of the conductor to be specified

#### Cover Joints - TESMEC

Part No. PG Series

The cover joints are specifically designed to protect the mid span joint, made at the "tensioner station", during conductor stringing operations.

The cover joints consist of two shells made of galvanized steel with shaped ends to house the rubber noses, which protect the mid span joint during the passage over the pulleys. The shells are coupled together by socket screws and the rubber noses are clipped together by belts.

Following data to be specified

- 1) Joint length after compression
- 2) Conductor diameter
- 3) The hexagon dimension of mid span joint after compression

Part No.	Length (m)	CH max (mm)	Max Dia (mm)	L Max (STD) ** (mm)	Working Load * (at the edges) (kN)
PGC	For pulley with 54 mm groove	28	18	600	2.5 to 5.0
PGS	For pulley with 68 mm groove	37	25	1000	4 to 6.5
PGM	For pulley with 68 mm groove	48	31.5	1050	2.0 to 5.0
PGL	For pulley with 95 mm groove	56	47	1300	Max 6.5
PGX	For pulley with 130 mm groove	82	54	2000	5.0

\* Changes with length \*\* different lengths are available upon request

Refer Hydraulic Section for  
Tesmec 100T Press  
Part No. PRT510





### EPZ - (Equipotential Zone)

#### Rolling / Running Earths

##### Part No. Various

- Consider Conductor OD & Fault Current Rating
- Earth Leads available on request
- Ideal for stringing and re-conductoring



9738  
\*Lead not Included



MTR052  
Lead Included



A78000  
\*Lead not Included

Part No.	Description	Conductor OD (mm)	Download	Fault Rating (kA/sec)	Manufacturer
MTR052	Stringing Earth	Max 70	6m x 50mm <sup>2</sup> CU	10/0.4	Tesmec
9738	Stringing Earth	4.1 to 28.5	*Sold separately	19.1/.05	Hastings
78000	Stringing Earth	3 to 41		25/0.5	Salisbury
A78000	Stringing Earth with 2 earth studs	3 to 41		25/0.5	Salisbury

\*Contact TEN for your earth lead requirements

### Equipotential Earth Mats - Kri-Tech

##### Part No. Various

The Kri-Tech Bond Mat System is designed and high voltage tested to protect workers who come in contact or have the potential for electrical contact.

- Establishes temporary equipotential zone during energised and de-energised work practices
- Portable, versatile and lightweight
- Prevents workers from being exposed to hazardous differences in electrical potential
- Non-slip black matting also available - ideal for use in wet environments

- Manufactured from high amperage tinned copper braid sewn into grid pattern onto vinyl/polyester fabric
- Suitable for a wide range of applications including:
- Making cable terminations on transformers and in cubicles
- Opening or closing overhead air breaks
- Working on control boxes of regulators, reclosers, capacitors, pad mounted switches
- Stringing Operations



Black Non-Slip Mat

Part No.	Size (m)	Colour	Description
KTMNS5-5-1.5NT-A	1.5 x 1.5	Black (Non-slip)	Earth, mat, equipotential, 1.5m lead term to Screwdriver Clamp, Kri-Tech
KTM5-5-1.5NT-A	1.5 x 1.5	Orange	Earth, mat, equipotential, 1.5m lead term to Screwdriver clamp, Kri-Tech
KTM1010-2X1NT-A	3.0 x 3.0	Orange	Earth, mat, equipotential, 2 x 1m leads term to Screwdriver clamp, Kri-Tech

Custom Sizes & Non-terminated Options available on request

Range of Stringing Earths (PEDs) available - Refer to Earthing, Jumpers and Switches section for further information



Refer Storage Section for further information on Storage Bag options

#### Custom Stringing Machine Layouts Available





### PEDs - Portable Earthing Devices

Commonly known as "Earth-sets, Earth-sticks, Earthing Devices, Portable Earthing Devices or PED's". These devices attach temporarily to de-energised conductors or contact points and a known earth.

PED's are safety devices that are type tested and manufactured to withstand the maximum fault current for the specific portion of the network being worked on in the event that the conductor or contact point becomes energised.

PED's are designed so that they provide enough time, usually several milliseconds to carry fault current long enough for a circuit breaker or fuse to interrupt the flow of current. Consult your local network or asset owner for applicable legislative requirements.



SCAN or CLICK the QR-Code to download the PED order form

### Stick Kits - Hastings

#### Shotgun Stick Kit

##### Part No. 81-544

Hastings Shotgun sticks offer:

- Precision cast slide gives complete control and extra firm grip
- Full open side hook offers unobstructed view
- Hanger hook moulded into head
- Foam filled fibreglass main shaft
- Tested to ASTM F711 & OSHA
- Fixed shotguns tested to IEC 60855
- Solid fibreglass operating rod with guide
- Non-conductive polycarbonate head
- Customised versions available
- Hook release trigger shielded to avoid accidental operation
- Complete selection of fixed or sectional shogun kits available
- Complete range of adaptors and accessories and cleaning products



Refer to Fibreglass Equipment section for further information for a range of insulated sticks, kits & adaptors



Part No.	Length of Sections (mm)	No of Sections	Operating Lengths (m)	Description	Wt (kg)
81-544	1200	4	1.5 - 2.7 - 3.9 - 5.2	Sectional shotgun stick package complete with base, head, intermediate sections and carry case	7.1

#### Sectional Stick Kit

##### Part No. TENK010

- Customised stick kits made to customer specification or specific utility industry kits
- Below examples of Transmission Services kit



Component Part No.	Item Description	Qty in Kit
552-4	Stick Sectional Base 1.2m, 32mm OD	1
546-4	Stick Sectional Extension 1.2m, 32mm OD	3
A10012	Adaptor Male Universal Head 32mm	1
A30002	Hand Guard to Suit 32mm	1
AD06	AL Adaptor, 32mm Male Button to Female bayonet	1
RAWW176	Hand Cleaning Towelette - Disposable	5
10-188-1	Disposable Silicon Cleaning Wipe	5
10-090	Silicon Wiping Cloth	2
TENM302	Bag Sectional Kit, 4 x 1.2m & Acc Pock	1



## Conductor Triple Line Lifters - LineWise

The phase lifters are an insulated crane attachment used to support up to three energised lines. The Triple Line Lifter replaces the need for temporary structures and tag lines while giving positive control of the live lines.

### Features

- Hydraulic articulation, extension & retraction
- Quick Attach Insulators & Wire Holders
- Insulators lab tested
- Vertical and horizontal construction
- High Strength Steel fabrication
- Holding valves on all cylinders
- Manual override control valve
- Handheld Radio Remote Control
- Installed at Earth level
- Supplied with transportation storage skid and compartments for insulators, wire holders and pins

### Triple Line Lifter - Max 1770kg

#### Part No. TLL-1300

The Triple Line Lifter 1300 is an insulated crane attachment used to support up to 3 energised lines. The TLL-1300 has a maximum capacity of 590kg per phase with a total capacity of 1770kg.

- For Transmission voltage from 66 to 220kV
- Conductor spacing: 1.98 –4.42m
- Unit weight: 1340kgs
- Mounted in skid: 1680kgs

Voltage (kV)	Conductors	Phase spacing Max (mm)	Phase spacing Min (mm)	Capacity per phase / total (kg)
66	3	8939 Outside-Outside	3962 Outside-Outside	590/1770
110	3			590/1770
132	3	4420 Centre - Outside	1981 Centre - Outside	544/1633
220	3			Consult

### Triple Line Lifter - Max 3408kg

#### Part No. TLL-2500

The Triple Line Lifter 2500 is an insulated crane attachment used to support up to 3 energised lines. The TLL-2500 has a max capacity of 1136kg per phase with a total capacity of 3408kg.

- For Transmission voltage from 110 to 330kV
- Conductor spacing: 3.05 –7.3m
- Unit weight: 2730kgs
- Mounted in skid: 3410kgs



Handheld Remote

Voltage (kV)	Conductors	Phase spacing Max (mm)	Phase spacing Min (mm)	Capacity per phase / total (kg)
110	3	14630 Outside-Outside	6096 Outside-Outside	1136/3408
132	3			1136/3408
220	3	7315 Centre - Outside	3048 Centre - Outside	1136/3408
330	2			2270



Vertical and horizontal configurations



TLL-1300 Packed for transport



Vertical and horizontal configurations



TLL-1300 Packed for transport





- Transmission & Distribution Line Hardware
- Power Anchors & Anchor Installation Equipment
- Insulators
- CPI Wedge Connectors
- Genics Test & Treat
- Genics Fire Mesh
- Clampstar Connector Corrector
- Pole Life Systems
- Polywater Products
- Reliaguard Equipment & Conductor Covers

**LINE MATERIALS**



**NOTES**

A large area of horizontal dotted lines for taking notes.

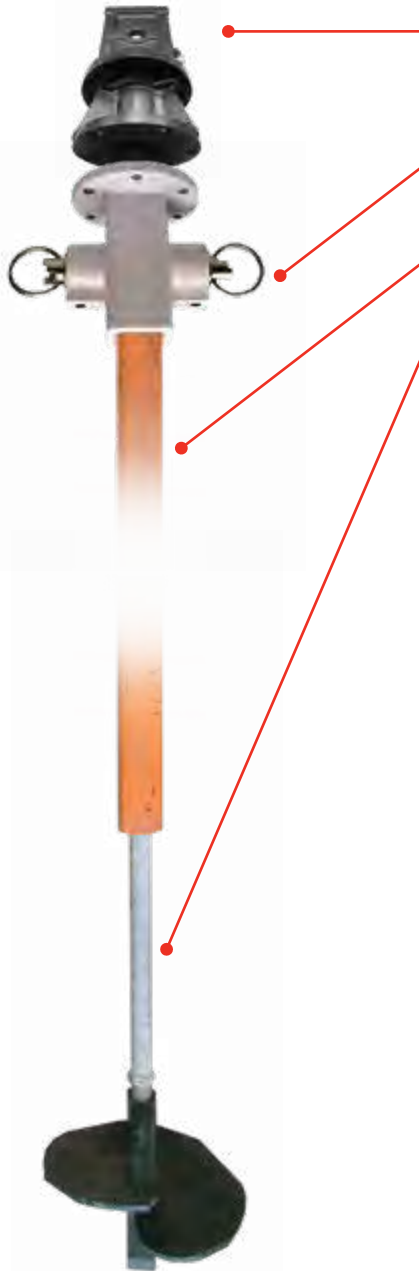


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## Power Driven Anchors and Installation Equipment

### Anatomy of a Utility Power Driven Anchor



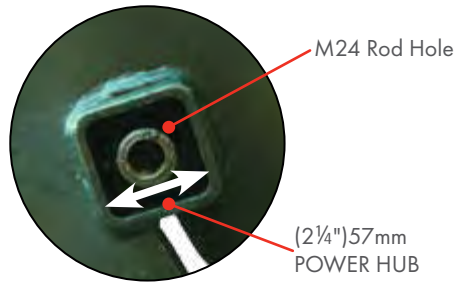
**Kelly Bar Adapter** engages the entire installation assembly to the torque motor output shaft of the Lifter Borer's driving equipment (typically 75mm x 75mm in Australia)  
A torque limiting device can be installed between the Kelly Bar Adapter and Locking Dog assembly to monitor and control maximum torque values to prevent anchor failure

**Locking dog assembly** is bolted to the Kelly bar adapter. A pair of spring loaded dogs secure the Drive End Assembly and Anchor Rod

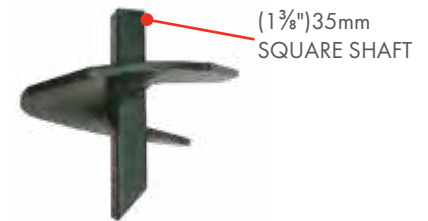
**Drive End Assembly/Torque Tube** engages the anchor hub & drives the anchor into the ground, either internally or externally depending on the anchor type

**Anchor Rod** connects the anchor to the eye and stay-wire, it is installed from within the drive end assembly.

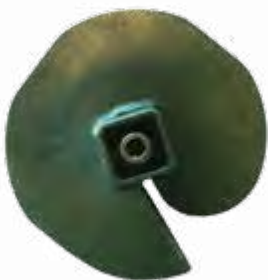
### There are two common anchor types used in Australian Utilities



**Drive End/  
Torque Tube seats internally**  
These anchors have a 13,558Nm  
Ultimate Torque Capacity  
Designed for Tough Terrain e.g. Rocky  
Ground

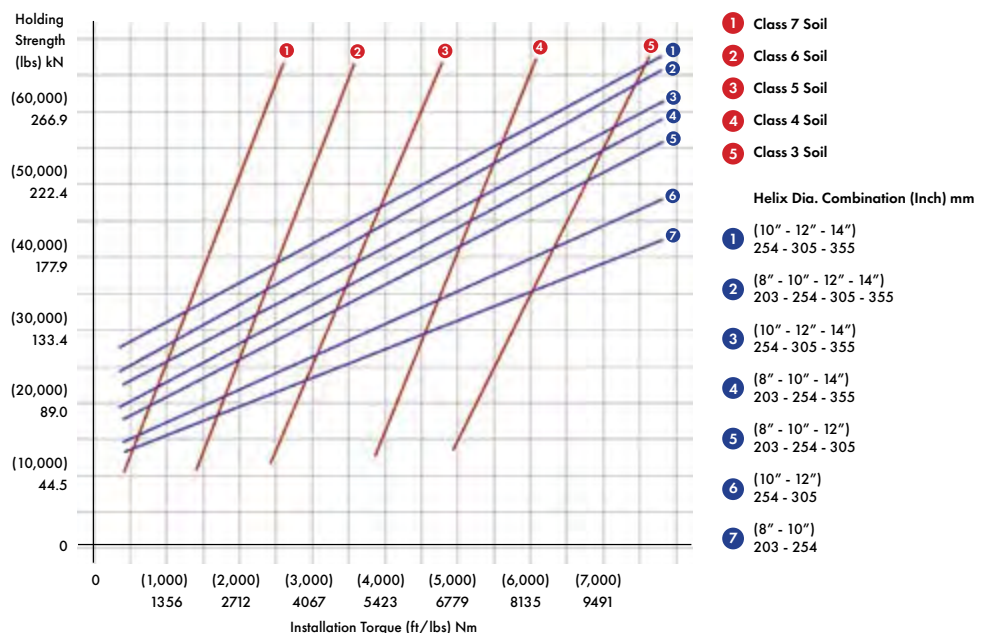


**Drive End/  
Torque Tube seats externally**  
These anchors have an 8,135Nm  
Ultimate Torque Capacity  
Designed for Normal Ground  
Conditions



Flute Size

### Holding Capacity for Multiple - Helix Power Shaft Anchors



### Anchor Rods, Eye nuts and Couplers

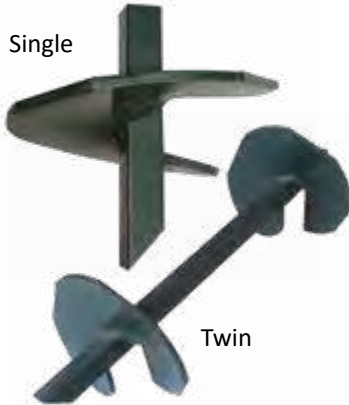


Part No.	Description/Type	OAL (mm)	Thread	Wt (kg)
AR-242140-GS	Anchor Rod with M24 Threaded Ends	2140	M24	7.0
ENT-24	Single Thimble Eye Nut for M24 Anchor Rods	115	M24	0.8
D-354	Coupler, 102kN UTS	51	M24	0.2

Stainless Steel Rods and longer rods also available



### Square Shaft - Anchors 35mm (1 3/8")



Part No.	Type	UTS Torque (Nm)	Helix Size (mm)	Thread	External Hub (mm)	Wt (kg)
D-104-6-M24	Single	8135	250	M24	35	5.9
D-114-6-M24			300			7.3
D-44-2-6-M24	Twin		100			7.7
D-104-2-6-M24L			250			15.9
D-114-2-6-M24			300			16.8
D-134-2-6-M24			355			20.3

### Power Hub - Heavy Duty Anchors 57mm (2 1/4")



Part No.	Type	UTS Torque (Nm)	Helix Size (mm)	Helix Thickness (mm)	Thread	Internal Hub (mm)	Wt (kg)
TD225-64M24	Single	13558	150	9.5	M24	57	3.7
TD225-84M24			200	9.5			5.1
TD225-104M24			250	9.5			6.4
TDH225-114M24			300	12.7			9.8
TDH225-134M24			355	12.7			12.2

### Swamp Anchors 38mm (1 1/2")

Used in soft ground areas where additional helices are required



Part No.	UTS Torque (Nm)	Length (m)	Helix Size (mm)	External Hub (mm)	Wt (kg)
D-6634	7457	1.0	250 & 300	38	21.8
D-6636		1.7	200, 250 & 300		29.5
D-6625-U	8100	2.13	Extension Shaft		25.8
D6602US		0.43	Single Guy Attachment		4.2
D6606US		0.43	Triple Guy Attachment	4.2	

### Anchor Installation Tools



Slingco Part No.	Chance Part No.	Description	Details
SAE14309	C303-0075	Kelly Bar Adapter	Suit 75mm x 75mm Drive - 6 hole configuration
SAE10425	C303-0069HD	Locking Dog Assembly	For 133mm 5/4" Bolt Circle - 6 hole configuration
SAE09639	C102-1583	Drive End Wrench (Standard)	2.1m OAL, Used for both 35mm (1 3/8") Square Shaft & 57mm (2 1/4") Socket Power Hub Anchors
SAE08666	C303-1064	Drive End Wrench (Hybrid)	2.1m OAL, Used for both 38mm (1 1/2") Square Shaft Swamp Anchors & 63mm (2 1/2") Socket Power Hub Anchors





## Distribution and Transmission Line Hardware

### Helixon Helical Fittings

- Dead Ends
- Armour Rods
- Splices
- Top Ties
- Guy Guards
- Guy Locks

### Vibration Control

- Spiral Dampers
- Stockbridge Vibration Dampers
- Spacer Dampers
- Spreader Rods

### Strain & Suspension Clamps

- Suspension clamps
- Pivot Suspension Clamps
- Helixon Suspension Clamps
- Cast Iron Clamps
- Strain Clamps

### Fabricated Fittings

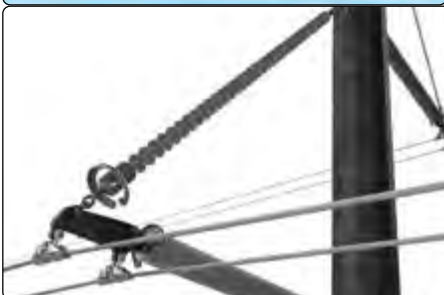
- Shackle Straps
- Cross Arm Braces
- Saglinks
- Yoke Plates
- Link Plates
- Guy Thimbles
- Eye Bolts
- Pole Steps
- Pins and Hooks

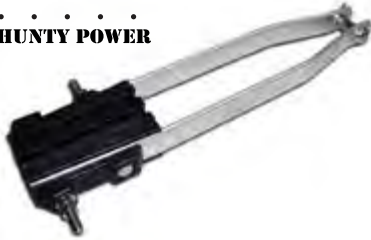
### Line Hardware

- Insulator Fittings
- PG Clamps
- Split Bolts
- Compression Dead-ends
- Compression Mid-span joints
- Compression Non-Tension
- High Temperature Fittings

### Insulators

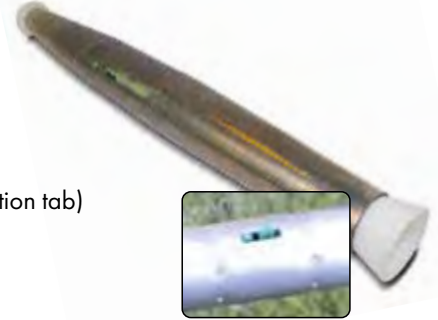
- Glass Disc Insulators
- Polymer Suspension
- Porcelain Line Post
- Polymer Line Post
- Porcelain Pin Type
- Porcelain Disc
- Porcelain Strain
- Porcelain Pin Type
- Polymer Distribution
- Porcelain Station Post





### Insulated Systems

- LV ABC Bolted Clamps
- LV ABC Hardware
- Installation Tools
- HV ABC Bundle Restraints
- HV ABC Suspension Assemblies
- HV ABC Brackets, Hooks and Clamps
- HV ABC Installation Rollers



### Automatics

- Automatic Deadends
- Automatic Splices (Pop-up insertion verification tab)

### Tower and Pole Steps

#### Tower Step - BuckBolt with Anchor Point

- Safe method for climbing towers
- Available in 16mm (5/8"), 19mm (3/4") 22mm (7/8") & 25mm (1")
- BuckBolt & Flanges are a 2,270kg rated Anchor point
- Optional Left & Right hand Flange
- Designed for Steel Tower

#### Pole Step - Removable

- "Non Slip" Step
- Captured Safety Pin
- Easy to Install 25mm Expansion Anchor Bolt
- Designed for Steel and Composite poles

### Anchor Rod Pulling Eye - SPP

#### Anchor Rod Pulling Eye

##### Part No: SPP-PE1

- Designed to assist in tensioning guy wires
- Offset eye for 3 tonne hook or shackle, allows easy dead end attachment
- Adjustable wedge allows for maximum rod diameter
- Body and wedge made from ductile iron with high strength bolt
- WLL 5:1 - 26kN
- Breaking Load 133kN
- Suits Anchor Rods 13mm - 32mm Diameter
- Weight 2.3kg





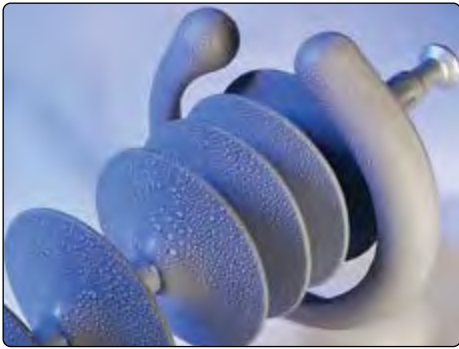


## Insulators

### Polymer Insulators - MacLean Power Systems

#### Why Partner with MacLean?

With a proven track record of excellence, commitment to innovation, and a dedication to meeting the unique demands of the modern market, partnering with Maclean for the supply of polymer insulators is a strategic choice that promises a multitude of benefits. As industries continue to shift towards more sustainable and efficient solutions, polymer insulators have gained immense prominence due to their exceptional electrical performance, durability, and environmental advantages. At Maclean, they've harnessed years of expertise to craft polymer insulators that not only meet but exceed industry standards. Their relentless focus on research and development ensures that their products are at the forefront of technological advancements, offering you cutting-edge solutions that can enhance the reliability and efficiency of your operations.



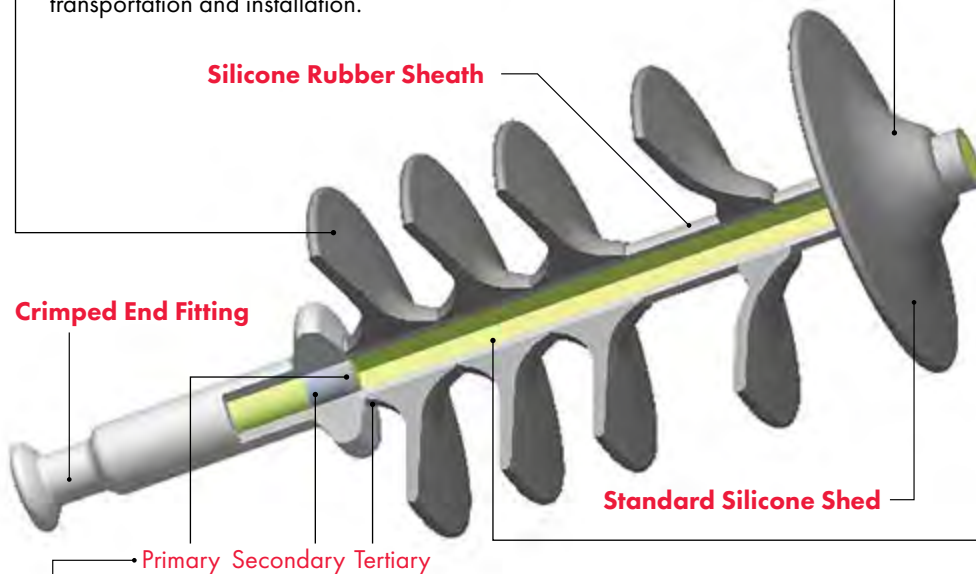
**MADE IN THE USA**

#### Stacked Shed

The MPS Stacked Shed configuration offers inherent protection against material aging in critical areas of the sheath and resists the resultant material erosion when installed in highly contaminated environments (resistance to Water Droplet Corona). In addition, stacked shed profiles enhance the ability of the insulator to resist mechanical damage in these most critical areas during transportation and installation.

#### Silicone Rubber

MPS uses a Silicone formulation that has been unchanged since the early 80's. The Si-O molecular bonds (inorganic backbone of Silicone) are very stable and have bond strengths higher than sunlight, making the silicone resistant to UV degradation. In addition to providing protection against the effects of ultraviolet radiation, electrical aging, and corona effect, silicone exhibits hydrophobic properties; which provide excellent recovery characteristics to control leakage currents in highly polluted or coastal environments.



The MPS silicone rubber formation has consistently outperformed other silicone formulations in its hydrophobicity, its hydrophobicity recovery rate, and enhanced electrical properties in contaminated environments.

#### P-S-T End Fitting Seal

**The P-S-T sealing system is a triple seal design with built-in redundancies.**

- Primary Seal** - rubber sheath compressed into chamfer of end fitting.
- Secondary seal** - RTV silicone applied to core / end fitting interface.
- Tertiary seal** - final external RTV seal applied to sheath / end fitting interface.

#### CR E-Glass Core

MPS uses "Boron Free" Corrosion Resistant E-Glass on all its insulators for its High Electrical Integrity & High Resistance to acid corrosion. The boron free formulation of the fiberglass core makes it resistant to nitric acid attacks and stress corrosion. There has never been a brittle fracture of a CR E-glass Insulator in over 30 years of use.

The P-S-T system has clearly shown its superiority to withstand moisture penetration.

#### Dual Manufacturing Processes

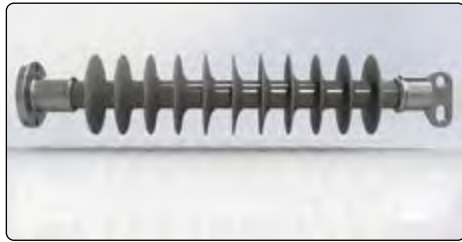
MPS offers suspension insulators made using two unique manufacturing processes, Molded and Modular, to meet the various needs of the transmission market. Both designs use the same features and materials; MPS Silicone, PST Seal, CR E-Glass, Stacked Sheds, & Smart Fit Corona Rings.





### Polymer Insulator Order System - MacLean Power Systems

#### Line Post Insulators



Line Post Insulator Ordering System							
H2	90	10	045	V	X	SS	022
SML	Tower SF	Line EF	Rubber Length	Leakage	Corona Ring	Shed Pattern	Shed Count

H=Horiz.  
V=Vert.  
0=1.5"  
1=2.0"  
2=2.5"  
3=3.0"  
4=3.5"  
7=1.75"

1\_=Flat Base  
3\_=3" Bolt Circle  
4\_=Stud Base  
5\_=5" Bolt Circle  
6\_=Swivel Base  
7\_=7" Bolt Circle  
8\_=Anchor  
9\_=Gain Base  
X0\_=No EF

1\_=Drop Tongue  
2\_=Trunion  
3\_=3" Bolt Circle  
5\_=5" Bolt Circle  
6\_=Vert. Trunion  
7\_=F-Neck  
C\_=Ext. Drop Tongue  
D\_=Double Trunion  
E\_=High Str. Bracket  
F\_=Vert. RAM Bracket  
H\_=Horiz. RAM Bracket  
X0\_=No EF

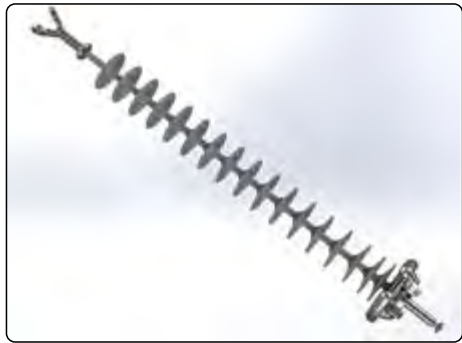
Linear Distance  
EF to EF

V=Variable  
M=Molded

Tower Line  
X= None None  
A= None 6"  
B= None 12"  
C= None 17"  
E= None 12"

V=Variable Leakage Modular/Extruded MFG  
M=Molded Leakage Injection Molded MFG

SS=Standard  
AL=Standard Alt.  
XG=Shed Profile  
XH=Shed Profile  
XV=Shed Profile



#### Suspension Insulators

Suspension Insulator Ordering System							
S1	40	80	045	V	X	SS	022
SML	Tower SF	Line EF	Rubber Length	Leakage	Corona Ring	Shed Pattern	Shed Count

S1=25K  
S5=30K  
S6=36K  
S2=50K  
S4=80K

4\_=Y-Clevis  
5\_=Tongue  
6\_=Clevis  
7\_=Socket  
8\_=Ball  
9\_=Oval Eye  
XX=None

Linear Distance  
from End Fitting  
to End Fitting

V=Variable  
M=Molded

Tower Line  
X= None None  
A= None 6"  
B= None 12"  
C= None 17"  
E= None 12"

V=Variable Leakage Modular/Extruded MFG  
M=Molded Leakage Injection Molded MFG

SS = Standard  
6S = Standard EHV1  
9S = Standard EHV2  
5S = Standard UHV  
AL = Standard Alt.  
6L = Std. Alt. EHV1  
9L = Std. Alt. EHV2  
5L = Std. Alt. UHV  
AM = Maximum Alt.  
A6 = Max. Alt. EHV1  
A9 = Max. Alt. EHV2  
A5 = Max. Alt. UHV  
TS = Triple Alt.  
T6 = Triple Alt. EHV1  
T9 = Triple Alt. EHV2  
T5 = Triple Alt. UHV



#### Braced Post Insulators

Braced Post Insulator Ordering System								
B2	90	1	057	B	1	1	068	MX
LP OD	Tower SF	Line EF	Section Length	Hardware Type	Brace SML	Brace EF	Height	Custom #

B1=2.0"  
B2=2.5"  
B3=3.0"  
B4=3.5"

10=Flat Base Upswept  
11=Flat Base 0 Deg.  
1C=Flat Base Fixed  
50=5" BC  
6\_=Swivel Base  
80=Anchor only  
90=Gain Base Upswept  
91=Gain Base 0 Deg.

1=Drop Tongue  
5=5" Bolt Circle  
C=Ext. Drop Tongue  
E=High Strength Bracket  
F=Vert. RAM Bracket  
H=Horiz. RAM Bracket

Pole to Conductor CL

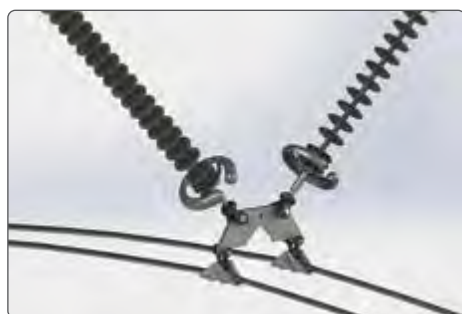
V=Basic Hdw  
M=Turnbuckle  
P=Adj. Plate  
X=None

1=25-27k  
5=30k  
6=36k  
2=50k

1=Eye/Eye  
2=Y/Ball  
3=Eye/Ball  
4=Y/Eye  
5=Y/Y  
6=Sock/Ball

Base to Vang Distance

V=Variable  
M=Molded



#### V-String Assemblies

A "V-String" is basically an assembly including the above Suspension Insulators, and a yoke plate.

Contact TEN with your specification and we will suggest the appropriate assembly.



### Quality Toughened Glass Disc Insulators - LaGranja

LaGranja glass discs provide the most cost effective transmission insulation technology when considering safety, reliability and resilience.

#### Features and Benefits

- Glass shells undergoing three thermal shock cycles followed by a soak test
- Automation incorporated with cap and pin assembly and using alumina cement - hot cured
- Cap flocking (polyamide fibres) incorporated in caps reducing Corona and RIV
- Approvals for use with the most demanding utilities in the world
- Almost 90 years of manufacturing, headquartered in Spain

#### Standard profile insulators

These are the most common and most frequently used insulators for lines in low pollution environments, where they perform well due to their small, well-spaced ribs and a creepage distance which exceeds the requirements of the IEC 60305 and ANSI C29.2 standards.

#### Anti-pollution or Anti-fog profile insulators

We offer two different shapes which are recommended for areas with medium to heavy pollution. Their longer creepage distance, which exceeds the requirements of the IEC 60305 standard, is achieved due to deeper ribs and reduces the effects of pollution without increasing the length of the string.

#### Aerodynamic profile insulators

Due to their completely flat dielectric profile, this type of insulator is highly recommended for desert areas because the absence of ribs helps to reduce the accumulation of residues, particularly on the inner surface of the dielectric. At the same time, its shape permits regular and constant airflow which enables the wind to perform a self-cleaning process.

These can also be used in areas of critical industrial or mixed pollution (desert and industrial pollution).

#### Ordering Information

Capacity (kN)	STANDARD	ANTI POLLUTION	OPEN PROFILE
	Part No.	Part No.	Part No.
70	E-70-127 E-70Z-146*	E-70PPZ-146*	E-70D-146
120	E-120Z-146*	E-120PPZ-146*	E-120D-127 E-120D-146
160	E-160Z-146* E-160Z-170*	E-160PZ-146* E-160PZ-170*	E-160D-146 E-160GD-146
210	E-210Z-170*	E-210PZ-170*	E-210GD-170
240	E-240Z-170*	E-240PZ-170*	-
300	E-300-195	E-300P-195	-

\*Z = Anti-corrosion zinc sleeve collar on pin



**Factory Applied RTV Silicone Coating**

Silicone-coated insulators offer an excellent alternative which guarantees optimum performance for high voltage overhead lines in areas with heavy pollution. They minimise leaking currents and thereby reduce operation and maintenance costs. The product used to coat the insulators is Room Temperature Vulcanization (RTV) silicone which contains mineral fillers embedded in the silicone itself. SILGLASS® insulators are made using Si-COAT® RTV Silicone HVIC Technologies by CSL Silicones Inc.

This silicone increases the hydrophobic nature of the insulator's surface, with a Lotus leaf effect, thereby improving its performance in polluted areas. Furthermore, the fillers absorb the energy of any possible electric arcs and serve to protect the integrity of the coating. Silicone-coated insulators are an economical solution because they eliminate the need to regularly clean glass insulators whilst still maintaining the mechanical reliability that glass suspension insulators have demonstrated over the years.

Industrial application: pre-coated insulators:

The inherent characteristics of an industrial process and the quality and process controls done in LGI exceed far beyond the most demanding requirements of the RTV silicone application guide. The industrial application allows to obtain even and homogeneous coating thickness, minimizing waste of material and ensuring an excellent adherence to the glass surface. This translates into a long service life.

Silicone-coated insulators are the result of bringing together high quality insulator technology and high performance silicone, combined by the most advanced application technology. It has the heritage of mechanical reliability together with excellent performance against pollution.

This is a fantastic solution being used the more and more on a large scale in the world's main Transport and Distribution Networks.



High solids content RTV Silicone "Si-COAT 570 hs", with optimally-sized alumina trihydrate (ATH) particle including good tracking and erosion resistance & excellent hydrophobicity

- Combines toughened glass with hydrophobic properties of polymers
- Available fully coated or undercoated shell
- Suitable in severely polluted areas where washing was previously required

**Ordering Information**

Capacity (kN)	STANDARD	ANTI POLLUTION
	Part No.	Part No.
120	E-120Z-146_SIL*	E-120PPZ-146_SIL*
160	E-160Z-146_SIL* E-160Z-170_SIL*	E-160PZ-146_SIL* E-160PZ-170_SIL*
210	E-210Z-170_SIL*	E-210PZ-170_SIL*

\* Z = Anti-corrosion zinc sleeve collar on pin



**SHIPPING - SPECIAL CARE IS TAKEN**

Insulators are packed in short strings inside wooden crates which are custom-made for each model. The crates also have a plastic strap or band to guarantee stability and easy handling. LGI has a reinforced packing system that provides additional protection appropriate for their surface treatment.

Special care is taken during the transport and storage of these products.



**iTOOLco**

GRD01

12.7mm-16mm

16mm-19mm

9.5mm-12.7mm

GRDXL34  
GRDXL01

19mm  
(GRDXL34)

25mm  
(GRDXL01)

Demo Hammer  
Hex

## Earth Rod Drivers - iTOOLco

### Part No. Various

Safely drive 9.5mm, 12.7mm, 14mm, 16mm and 19mm Earth rods into the ground in under a minute with iTOOLco's Ground Rod Dawg™. Once the rod is driven down far enough the tool can be used to hammer from top to finish the driving.

### Features

- Hardened tool steel construction for long life
- Multiple size rods can be driven
- SDS Max driver bit for positive connection and secure driving of rods

**Never drive earth rods from a ladder again**



Drive the rod down to a comfortable height



Then complete the driving by hammering from the top

Part No.	Description	Earth Rod Size (mm)	Driver shaft
GRD01	Earth Rod Driver	12.7 to 19	SDS Max
GRDXL34		19	Demo Hammer
GRDXL01		25	



**Reduce Incorrect Conductor Identification**



## Conductor Diameter Gauges - TEN

### Conductor Diameter Slide Gauge - AL, CU & ACSR

#### Part No. CG-430-AU

- HDPE slide gauge quickly & easily identify conductor OD
- Designed for Australian AL, CU & ACSR conductors
- Measure Live Conductors
- For conductors 4.0 - 30mm Ø
- Fits universal sunrise fitting

Part No.	Dimensions (mm)	Wt (kg)
CG-430-AU	287 (L) x 104 (W) x 10 (D)	0.26

### Conductor Diameter Gauge - AL, CU & ACSR

#### Part No. CG-EQL-Series

Quickly & easily identify common overhead electrical distribution conductor or wire sizes in AL, CU & ACSR. Markings include conductor name, stranding and overall Diameter.

- Hole in base for use with a shotgun stick and hanging storage
- Imperial and metric sizes included
- Precision machined from lightweight aluminium alloy

Part No.	Conductor Range	Dimensions (mm)	Wt (kg)
CG-EQL-ALCU	Copper 7/.064 - 4.87mm to 19/2.75 - 13.8mm	257 (L) x 91 (W) x 14 (D)	0.75
	Aluminium Locust - 7/.093 - 7.08mm to Taurus - 19/4.75 - 23.80mm		
CG-EQL-ACSR	ACSR Quince - 5.25mm to Wolf - 18.13mm	209 (L) x 91 (W) x 14 (D)	0.65

### Conductor Brushes and Cleaning

#### Scratch Brush - "Dog-bone and Flat Round" - Madi

- Designed to encourage linemen to brush with a more convenient and ergonomic design making it more convenient than ever before
- Replaceable brush inserts make a cost effective solution
- Suitable for use up to 45mm conductor
- Made from Non-conductive materials
- Minimise open neutrals and bad connections by brushing conductors properly

##### Part No. DBWB-1

- Dog-bone design, colour and marking for copper one end and aluminium the other

##### Part No. FRWB-1

- Designed for both flat and round connection such as palms
- Replaceable brush inserts suitable for both flat and round ends



DBWB-1



FRWB-1



BB-2S

Part No.	Description	Wt (kg)
DBWB-1	Dog-bone Scratch Brush (includes one set of inserts)	0.25
FRWB-1	Flat Round Scratch Brush (includes one set of inserts)	0.25
LWB-1	Replacement Wire Brush for DBWB-1	0.10

#### Scratch Brush and Safety Knife - Madi

##### Part No. BB-2S

- Integrated wire brush for cleaning conductors to make better connections
- Replaceable brush inserts make a cost effective solution
- Suitable for use up to 25mm conductor
- Blunt Tipped fold-away blade for added safety
- Stainless steel blade for maximum durability and sharpness

Part No.	Description	Wt (kg)
BB-2S	Fold-away Safety Knife and Round Scratch Brush	0.23
WB-1	Replacement Wire Brush for BB-2S	0.10

#### Conductor Scratch Brushes

##### Part No. SB-3 & SB-4

- Used for preparing the surface of conductor prior to applying a connector/splice
- Tough stainless steel bristles resist rust
- Copper or aluminium available - use only on specified conductor to prevent cross contamination

Part No.	Colour	Conductor Type	Wt (kg)
SB-3	White	Aluminium	0.10
SB-4	Black	Copper	0.10

#### Stick Scratch Brushes - Hastings

##### Part No. Various



Part No.	10-178	10-180	10-179
Description	Complete "V" Brush unit with Handle for Gloved Hands, Shotgun Ring, Replaceable Brushes (10-179)	Complete "V" Brush unit with Universal Head Attachment, Replaceable Brushes	Pack of 10 Replacement Brushes
Material	Thermoplastic Handle & S/S Bristles	Al Alloy Body & S/S Bristles	S/S Bristles



### Connectors - CPI

#### Wedge Clamps

Wedge Clamp Connectors consist of a spring "C"-Body and wedge combined with a "shear-head" bolt offering a high performance permanent connection that is low resistance, durable and easy to install.

**Replaces fired on connectors**

#### Maintains low resistance connections at all times

The spring body of the connector will flex and maintain a constant force as thermal cycling causes conductors expand and contract.

#### Simple and safe installation

During installation, when proper spring tension is achieved, the shear head bolt will break off giving the installer a positive indication of a correctly completed connection. No special tooling required.



Aluminium with Bail

- Can be installed liveline with hot-sticks
- Al-Al, Cu-Cu and Bi-Metal (Al-Cu) available
- For use in all applications including critical high load areas and on overloaded circuits
- May be used in highly corrosive environments including salt laden areas to connect copper conductors
- High-conductivity grit type corrosion inhibitor is factory applied for long life
- Removable and reusable with no damage to conductor
- Remains permanently locked through fault current or power surges
- Meets or exceeds the current carrying capacity of the conductors being connected
- Complies with AS/NZS 1154



**Also available from Connector Products Inc**

#### HTC SERIES HOTLINE TAP CONNECTOR



#### HTC SERIES HOTLINE PAD CONNECTOR



#### OPGW BOLTED DEAD END FIBRE OPTIC



#### OPGW DOWN LEAD CLAMPS FIBRE OPTIC



#### EARTH GRID CONNECTOR



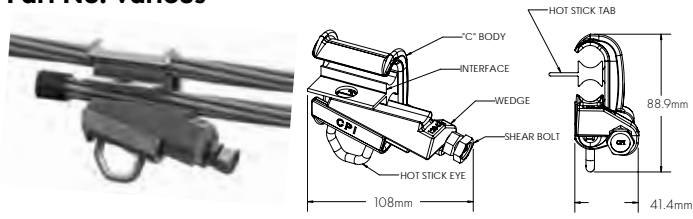
#### RUNNING RAIL CONNECTOR





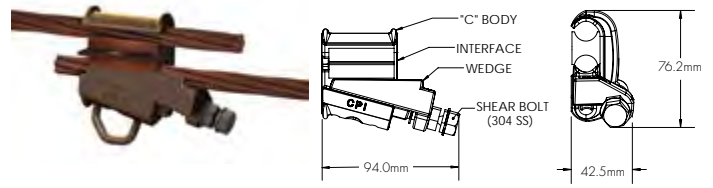
### Shear Bolt Wedge Clamp Tap Connector

Part No. Various

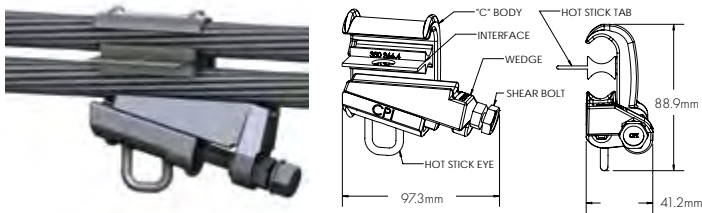


Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
4 Series AL Tap Connector	4.11 to 14.57	4.11 to 14.57

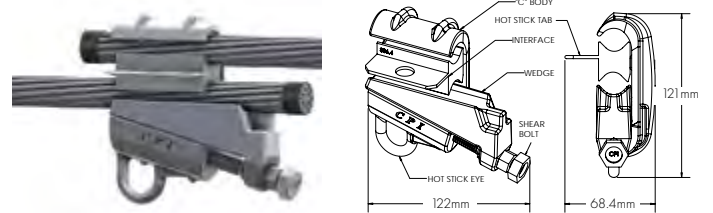
Available with Hot Stick Eyes



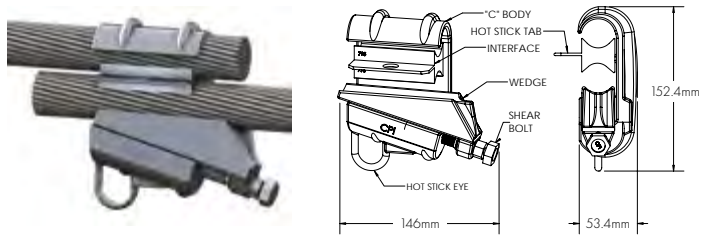
Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
4 Series CU Tap Connector	5.89 to 13.46	4.11 to 13.46



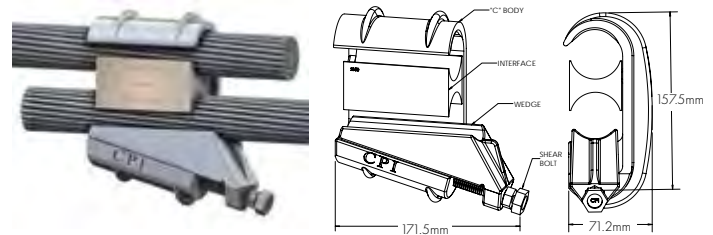
Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
350 Series AL Tap Connector	14.56 to 17.37	4.11 to 17.37



Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
336 Series AL Tap Connector	16.91 to 24.20	4.11 to 24.20



Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
795 Series AL Tap Connector	24.71 to 33.02	4.11 to 33.02




Description	Main Conductor Range (mm)	Tap Conductor Range (mm)
1272 Series CU Tap Connector	34.16 to 46.32	8.02 to 46.32

Contact TEN for customised Conductor Charts for your network and Crossover to Ampacts


### Connectors and Splices

#### Stirrups




Part No.	Range (mm)	Feature
102011	4.11 - 7.42	550amp bail rating
102010	7.42 - 10.11	
102009	10.52 - 13.26	
264124	12.75 - 14.56	
336915-1	14.88 - 18.39	

#### Piggy Back Clamp




Part No.	Range (mm)	Feature
6002248	5.2 - 28.0	Shotgun Ring

#### Automatic Splices



Part No.	Range (mm)	Feature
S750	6.35 - 8.02	Lock Wedges
S1000	7.41 - 10.51	
S2000	11.78 - 14.88	
S3000	15.46 - 18.87	
S4000	18.87 - 21.79	

#### Earth Grid Connectors



Part No.	Main Range (mm)	Tap Range (mm)
900102	Stranded 13.26-14.61 Rod 14.12 (5/8)	Stranded 9.35-10.64
	Rod 12 (1/2)	Stranded 10.64
900103	Stranded 9.35- 0.64	Stranded 9.35-10.64
	Stranded 13.26 Rod 12 (1/2) - 14.12 (5/8)	Stranded 7.42



## OPGW Joint Enclosure - Tykoflex

The T240 Joint Closure is part of a modular system of lockable closures made of acid proof stainless steel. The main benefits of the system are superior flexibility, easy handling, and tightness against overpressure as well as vacuum. The closures are designed for use in demanding environments. Together with desiccator the closure remains free of humidity even under extreme conditions.

The closure is suitable for use above ground attached to high voltage towers, poles, walls or other support structures. The Tykoflex closure can be tailored to almost any required configuration. It is designed to provide water and pressure-tight environmental protection for optical fibres and optical fibre splices for all cable designs. The closure is therefore suitable for ground installations in manholes, tunnel systems and sewage lines.

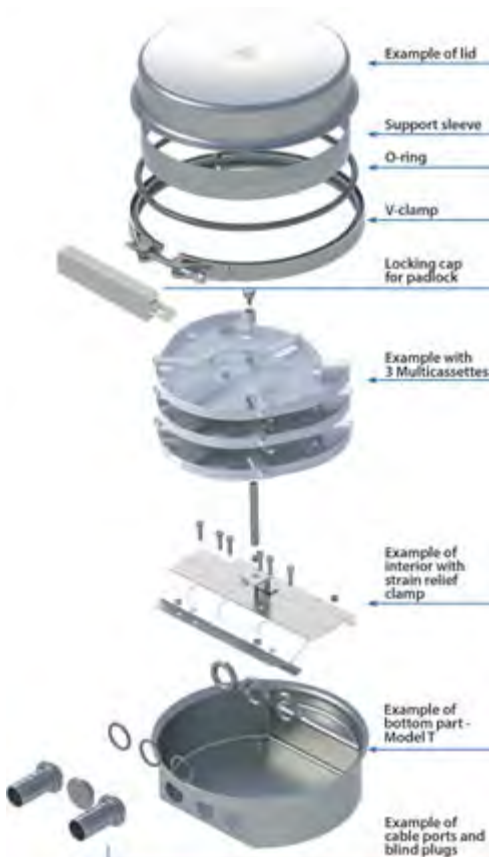
### Joint Closure

#### Part No. T240

- IP69/K Rated
- 316L Acid Proof stainless steel closure
- Modular design with few parts
- Splicing in Multicassette fibre organizers
- V-clamp and EPDM rubber O-ring sealing
- Rugged design
- Quick and easy installation
- High fibre count capacity
- Suitable for use in harsh environments
- Lockable with optional locking cap and padlock



**For more information or a quote on your OPGW project contact TEN with your cable specifications**





### Asset Life Extension - ALE

Utility grids face a host of asset management challenges as a result of the environment in which they operate. The question is always how we can mitigate the impact of these environmental conditions or events, be they planned or unplanned.

Themes arise from these issues including Network Resilience, System Hardening and Asset Life Extension. All have a particular narrative and commonality among utilities, and all are intertwined in the operation of a utility system.

TEN continues to lead and innovate this space working with global manufacturers on technologies that allow utilities to integrate these proven systems and solutions into their asset management framework. These products can be broadly considered as:

- System Hardening – Polywater duct sealants, Reliaguard & Greenjacket wildlife protection, Genics wood preservative and fire barriers
- Network Resilience – Polywater lubricants, La Granja Insulators and Tykoflex OPGW Enclosures
- Asset Life Extension – Leak repair for oil filled and SF6 Equipment, Induron corrosion protection and Clampstar connector correctors Pole Life Systems & LWS Pole Enforcer



**GREENJACKET®**  
WILDLIFE COVERS



**Clamp Star**  
THE CONNECTOR CORRECTOR  
CONNECTOR CORRECTOR



**Polywater®**  
Solutions at work.  
CONNECTOR CORRECTOR



**Pole Life systems**  
WOOD POLE PRESERVATION



**genics**  
Whenever Wood is Used™  
FIRE MESH



**RELIAGUARD®**  
WILDLIFE COVERS



**LWS**  
LAMINATED WOOD SYSTEMS  
POLE ENFORCER



**genics**  
Whenever Wood is Used™  
COBRA RODS



**INDURON**  
PROTECTIVE COATINGS  
PROTECTIVE COATINGS





## Clampstar

### Connector Corrector

ClampStar® is an Engineered Electrical & Mechanical Shunt also known as a Connector Corrector that is intended to correct and reinforce the deteriorated electrical and mechanical performance of hot, aged or degraded midspan joints and other connectors, clamps and fittings.

A popular use of ClampStar® is to increase the performance rating of existing midspan joints and other connectors, clamps and fittings for the purpose of increasing line ampacity that may be presently limited by current connections.

ClampStar® eliminates risk and prevents catastrophic connector failures before they happen, and are installed in just minutes.

#### Distribution class

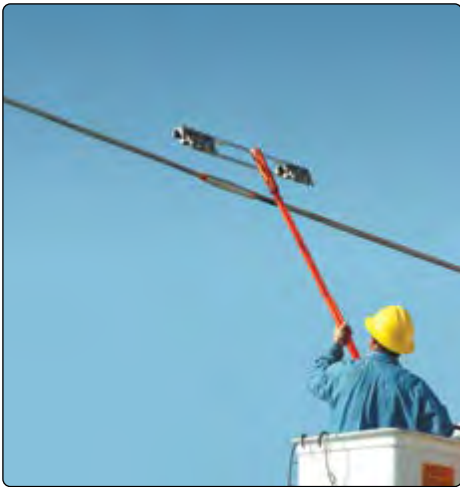
Available in both standard and light configuration. Light is suitable for slack strung and lightly tension spans. Can be supplied with nickel plated keepers for copper conductors.

#### Transmission class

Available in standard, heavy and full tension configurations. Designed with an integral fastening assembly containing a specially designed, captive keeper assemblage that provides a high conductivity path and incorporates flat and Belleville washers to maintain compressive force regardless of temperature induced contraction and expansion. Integrated corona shield means no extra items required to complete your installation.

**Failing connectors are repaired with NO power interruption**

Install by:



ClampStar Connector  
Corrector selection matrix  
SCAN or CLICK  
the QR-Code



### ClampStar® provides great benefit to the utility:

- Lightweight design installs in less than 10 minutes!
- Permanent installation for damaged conductors, deadends, midspan joints & suspension clamps on Aluminium, ACSR & Copper conductors, OPGW, Overhead Earth or Shield Wires.
- Easily installs over existing connectors or suspension points
- No additional rigging equipment required such as special mechanical grips, Come-Alongs, jumpers or cutters
- Can be installed with hot stick or barehand methods
- Available for copper, ACSR and all aluminium stranded conductors

SCAN or CLICK  
QR-Code for a variety  
of ClampsStar  
instalation videos



**Connector Correctors are available for all common conductors and applications. Bespoke designs available, contact TEN with your connector challenge**



### ClampStar Applications

#### Failing Mid-Span Joints

##### Part No. CSR Series

- Failing midspan joints are repaired with NO power interruption and splice replacement is no longer necessary
- The electrical and mechanical integrity is restored to the joint and ampacity is increased
- The units are pre-shipped with a proprietary high performing inhibitor ensuring the best possible connection at the interface
- The units are simply placed over the damaged midspan joint and the shear off bolts tightened with a battery impact drill or podger



#### Damage at Suspension Clamps

##### Part No. CSS Series

- ClampStar® provides an elegant, economical and easily installed solution for restoring the electrical and mechanical integrity of conductor damage at the suspension clamp, without the need for costly re-stringing
- Safe-T-Link Tether assemblies are available for suspension clamp applications requiring additional mechanical support where the tensile strengths of the conductor have been compromised.



#### Failing Dead-Ends

##### Part No. CSS Series

- The ClampStar® dead end assemblies can be installed from a helicopter or basket, working live, in as little 15-30 minutes
- The restoration of mechanical integrity is accomplished with the Safe-T-Link tether. The purpose of the tether is to "arrest" any possible elongation of the original deadend
- Deadend solutions can be custom designed to meet your construction



#### Conductor Repair

##### Part No. CRU Series

- Classic Connectors ClampStar® Repair Units are a cost effective and time efficient solution to repairing damaged conductors including OPGW outer strands damaged by lightning strikes
- Installation takes less than 10 minutes and units can be installed without power disruption barehand or by hot stick.
- The units are simply placed over the damaged section of conductor/OPGW and the shear off bolts tightened with a battery impact drill or podger.



#### Body Snatcher Gripper Tool

##### Part No. CS-BSGT

Utilised to hold the ClampStar body in place during installation. Installed on each end of the body of the ClampStar® Repair Units for Live Line installation.

- Constructed of Lightweight Aluminium
- Fitted with Universal Sunrise head. Suits all major Live Line stick manufactures



CLICK or SCAN the QR-Code to watch the application video





### Test and Treat - Genics

Genics TEST & TREAT address each of the mould and decay degradation issues facing your wood pole network. Cobra Rods, CuB Liquid, Cobra Wrap and Cobra Cap are just some of the products in the range. If we look at combining these products for protecting and treating affected areas, this system maximises efficacy and extends the life of wood pole assets.



#### Cobra Rods

- Internal Co-Biocidal Diffusible Rod for remedial and preventative treatment of timber utility poles and other wood structures
- Boron and Copper complex, raw ingredients fused into an amorphous glass rod
- Product is hydrophilic and will seek out moisture
- Suitable for treatment of Basidiomycetes (Brown and White rots) and Ascomycetes (soft rot fungi)
- Safe chemical profile requiring minimal PPE
- Contact TEN for information on load rate calculators for prevention and remedial treatment



#### Cobra Wrap

- External Pole wrap with hydrophobic pads that are immersed in Copper Naphthenate (CuNap) solution
- Acts as a physical barrier to the soil and provides the elemental treatment of copper to the face of the pole impeding soft rot
- Long lasting plastic wrap with rechargeable pads, offering a long lasting, low cost external treatment solution
- Available option: Tough wearing tape applied in exposed areas to provide protection for the wrap against power garden tools



#### CuB Liquid

- Copper-borate water based liquid preservative made from the glass rod
- Contains no harmful VOC's
- Shock treatment designed to be applied to poles exhibiting active rot
- Ideal for dry environments where very little moisture content is available for rod activation
- Ideal for above ground applications
- Available option: CuB liquid applicator
- Use in combination with Cobra Rods for effective remedial treatment



#### Cobra Cap

- Protection against rot at the pole top
- Includes 2 x Cobra rods for treatment
- Easy to install
- Easy to replace treatment when required
- Hard durable long lasting plastic





**Fire Mesh - Genics**

Genics fire mesh is a protective barrier designed to protect wood structures from burning and minimise scorching!



**Fire Mesh**

**Part No. 53076**

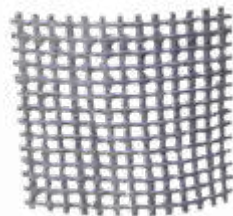
- Made up of an intumescent grid that is coated with a durable double layered intumescent polymer
- Fire mesh is breathable and allows the pole to maintain its homeostatic state
- The fibreglass mesh substrate is extremely light weight and durable and can be applied to new poles before transport
- Favourable environmental and safety profile, animal safe, there is no leaching of chemicals and it is safe to handle
- Heavily tested to the proposed ASTM Wood Pole Fire Test Standard
- Accelerated weathering testing to determine UV performance
- Intertek tested and listed
- Work practice available (included with all purchases) for easy installation
- In stock at TEN



Durable for Pre-wrapping prior to transport

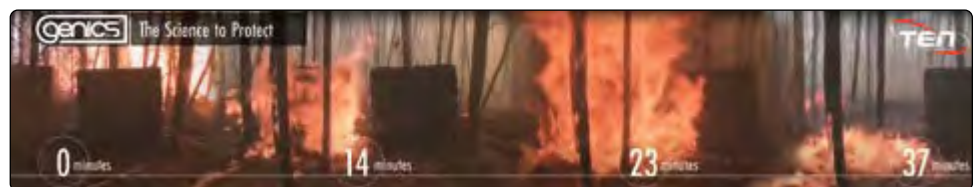


Fire Mesh Roll



Fire Mesh Patch

Part No.	Description	Size
53076	Fire Mesh Roll	0.9 x 15m
52170	Fire Mesh Patch	15 x 15cm



**For a detailed presentation on how fire mesh can prevent pole and power loss in a bushfire event, contact TEN**

**PREVENT FIRE DAMAGE AND KEEP ALL OF YOUR WOOD ASSETS PROTECTED WITH FIRE MESH PATENTED FIRE PROTECTION SYSTEM**





## Pole Life Systems

### Strong, Lightweight Material

Pole Life Systems are specifically designed for pole top restoration creating "pole prosthetics", the first asset life extension products for the industry. Pole Life Systems is a lightweight, non-conductive, fire retardant, low cost and structurally sound system that reinforces wood pole tops.

#### Features and Benefits

- Poly Fibre Resin Composite (PFRC) material that is strong, lightweight and durable with integrated UV protection, fire retardancy and immunity to rot, corrosion and insects.
- Integral fabric surfacing veil
- Resin-rich barrier
- High performing compressive strength of 2,273kg
- Long-term weather and UV resistance
- Retention of properties for decades
- Protection from surface erosion and abrasion vs. painted coatings

### Insulator Support

- Reinforces and supports horizontal mounted insulators
- Use in conjunction with Vertical support or stand alone
- Simple to install

### Cross Arm Reinforcement

- Simple and extremely sturdy crossarm pole top support system
- Provides structural reinforcement to degraded wood poles with cross-arms
- Suits timber, steel or fibreglass cross arms
- Flanges to support the cross arm
- Custom applications also available

### Cross Arm Extension

- Bracket lifts the cross arm from the original height, up to 450mm higher
- Perfect for Conductor-to-Ground (CTG) and Conductor-to-Structure (CTS) issues
- The CA50 provides a new vertical height clearance without needing to change the pole

### Pole Top Reinforcement - Vertical

- Easily installed system that lowers the structural attachment point in all decayed pole tops
- Maintains conductors in their current position
- Can be used for any wood pole damage caused by deterioration, cracking or storm damage
- Two sizes cover LV and HV poles
- Installed for a fraction of the cost of pole replacement
- System requires Insulator supports and backing plate
- Also available for pole top pin reinforcement
- Custom applications also available

Pole Life Systems have over 40 years of construction and utility engineering design experience and hold 11 patents on pole restoration solutions.

Contact TEN for more information on the Pole Life System range.



Insulator Support



Pole Top Reinforcement - Vertical



Cross Arm Reinforcement



Cross Arm Extension

**Addressing CTG and CTS issues**

Part No.	Description	Dimensions L x W (mm)	Material	Average Tensile Strength Exceeds (MPa)	Average Flexural Strength Exceeds (MPa)	Weight (kg)
CA26	Cross-Arm Extension	660 x 432	Composite	579	979	10.0
IS20	Insulator support Bracket, composite, 508mm, PLS	509 x 127				1.0
VR30	Pole Top reinforcement, vertical	762 x 140				3.0
VR48	Pole Top reinforcement, vertical	1219 x 140				4.9
CPF5	Channel plate, flat, suit new hardware		Gal Steel	-	-	0.3
CPR5	Channel plate, recessed, suit existing hardware	76 x 127		-	-	0.34



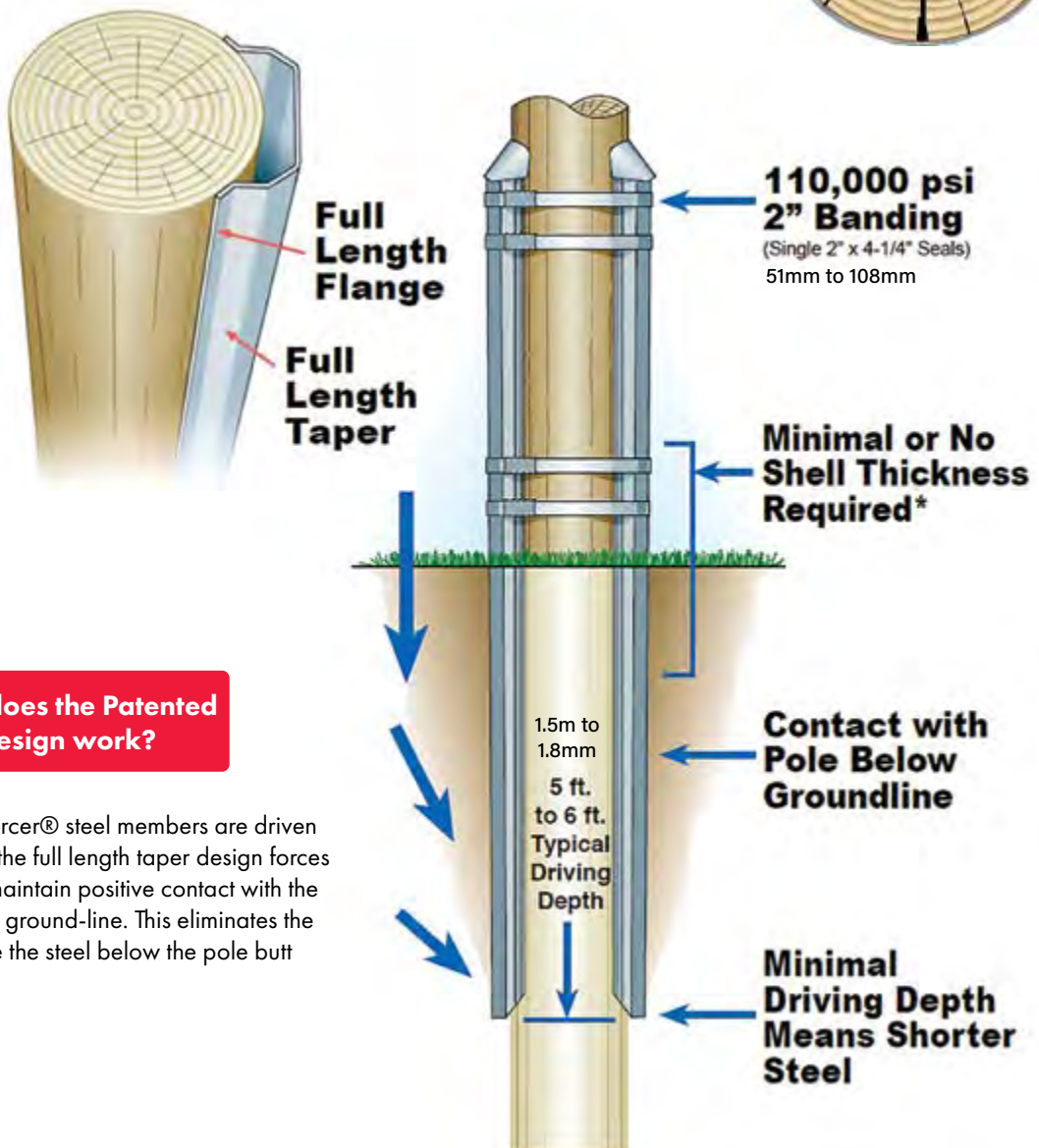
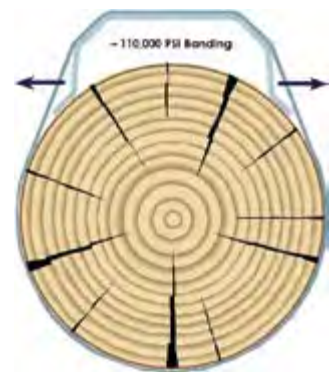
## Laminated Wood Systems

### Pole Enforcer by LWS

The patented PoleEnforcer® proves that **“all steel is NOT created equal”**

The PoleEnforcer’s patented design ensures positive contact with the pole below the ground-line - thus bridging the decayed area and transferring the load to the pole butt - that is TRUE POLE REINFORCEMENT. Other reinforcement systems in the market can be considered “pole stubs” and not true reinforcement systems.

- The full length flange increases load bearing surface and eliminates “knife edge” contact with the pole
- Steel Unit acts as a “spring” once bands are installed following the expansion and contraction of the wood
- Contained tension keeps the bands/unit secure even if pole diameter changes.



#### How does the Patented design work?

As the PoleEnforcer® steel members are driven into the ground, the full length taper design forces the flanges to maintain positive contact with the pole below the ground-line. This eliminates the need to drive the steel below the pole butt



# GREENJACKET®



## Greenjacket power outage protection



### How We Work

When we set out to create an innovative solution to preventing animal outages, we knew the product was only part of the puzzle. We also needed to create a process that would allow us to assess needs, identify risks and create a complete engineered solution for preventing animal outages.

### Understanding Your Needs

#### Step 1. Budgetary Assessment

Our needs assessment begins even before a site visit, with a thorough review of site/single line drawings, customer photos, and historical station data. With this information in hand, we can assess which equipment is vulnerable to animal or bird contact. We can also inform you right away whether Greenjacket will meet your needs and create a preliminary budget. This takes approximately 2 weeks to complete depending on the size of the station and coverage required.



#### Step 2. On-Site Assessment/Desktop evaluation based on diagram and photos

We then send our expert assessors to undertake a comprehensive site inspection to finalize what level of coverage you require. We then use our patent-pending 3D Photogrammetry process to retrieve accurate measurements of your equipment and create a detailed Site Protection Plan and quote. The entire assessment process – from site inspection to the creation of a Site Protection Plan – takes, on average, two weeks to complete.



### Building Your Greenjacket Solution

#### Step 3. Design and Manufacturing

Once you've agreed to proceed, we get to work manufacturing your Greenjacket covers. Utilizing the images taken with our 3D Photogrammetry process, we use 3D CAD software to create design and shop drawings that can be used to build custom molds. We utilize a patented fabrication process and a high-performance polyurethane material that allows for flexible strength and durability. All Greenjacket covers are built to withstand a variety of weather conditions and to be UV resistant. On average, orders are processed, manufactured and delivered in four to six weeks, although rush orders are possible.



### Getting Your Solution in Place

#### Step 4. Installation

When the custom Greenjacket covers are ready, they are shipped directly to your site with easy-to-follow instructions. We will work with you to provide training and tools to your installation crew and provide supervision of the installation. Or, we will conduct the entire installation with our crew while adhering to your site access, supervision, and work method guidelines. The choice is yours.

Our patent-pending "hot" installation tools make Greenjacket easy to install, even on energized equipment. We provide you with information on how to operate and maintain your Greenjacket covers, so you get the most from your investment. Greenjacket keeps all equipment and cover dimensions on file, so that we can fill future orders and respond quickly to requests. We also offer a comprehensive warranty that ensures you get peace of mind with your protection from animal-caused outages.

\*The information given above is representative data obtained from tests commissioned by Greenjacket. Although the data is, to Greenjacket's knowledge, reliable, Greenjacket cannot assume any liability relate to the data provided, or to decisions made based on the data provided.

### Product Specifications

Greenjacket protective covers are manufactured of a polyurethane flexible material with high dielectric strength and durability. Typical specifications are as follows\*:

**Colour:**

Green Standard



**Test Properties:**

<b>Tensile Strength</b>	ASTM D-412	2000 psi (13.8MPa)
<b>Elongation at Break</b>		75%
<b>Tear Strength</b>	ASTM D-1004	270 pLi (47N/mm)
<b>Taber Abrasion</b>		<2 mg loss, 1000 cycles CS-17 wheel, 1 kg load
<b>Hardness</b>		44 shore D, 97 shore A
<b>Dielectric Strength</b>	ASTM D-149	609 V/mil (product is a minimum of 100 mils thick, with ideal thickness of 125 mils)

**Properties After 1000 hr. Accelerated Weathering:**

<b>Tensile Strength</b>	ASTM D-412	1400psi (9.6 MPa)
<b>Elongation at Break</b>		60%
<b>Dielectric Strength</b>	ASTM D-149	Unchanged after 1000 hours of accelerated weathering

**Temperature Stability:**

<b>Maximum Recommended Service Temperature for Continuous Use:</b>	125°C (260°F)
<b>Maximum Service Temperature for Short-Duration Temperature Elevation (a few minutes):</b>	200°C (390°F)
<b>Melting Point:</b>	205°C (400°F)

**UV Rating:**

Test samples were placed in an ultraviolet light aging chamber per the requirements of ASTM D-4329. In typical conditions, a rating of 25 years longevity was determined.

**FR Testing:**

Greenjacket is classified V-0 as per the criteria laid out in IEC 60695-11-10 Test Method B.

**Why Greenjacket is Unique**

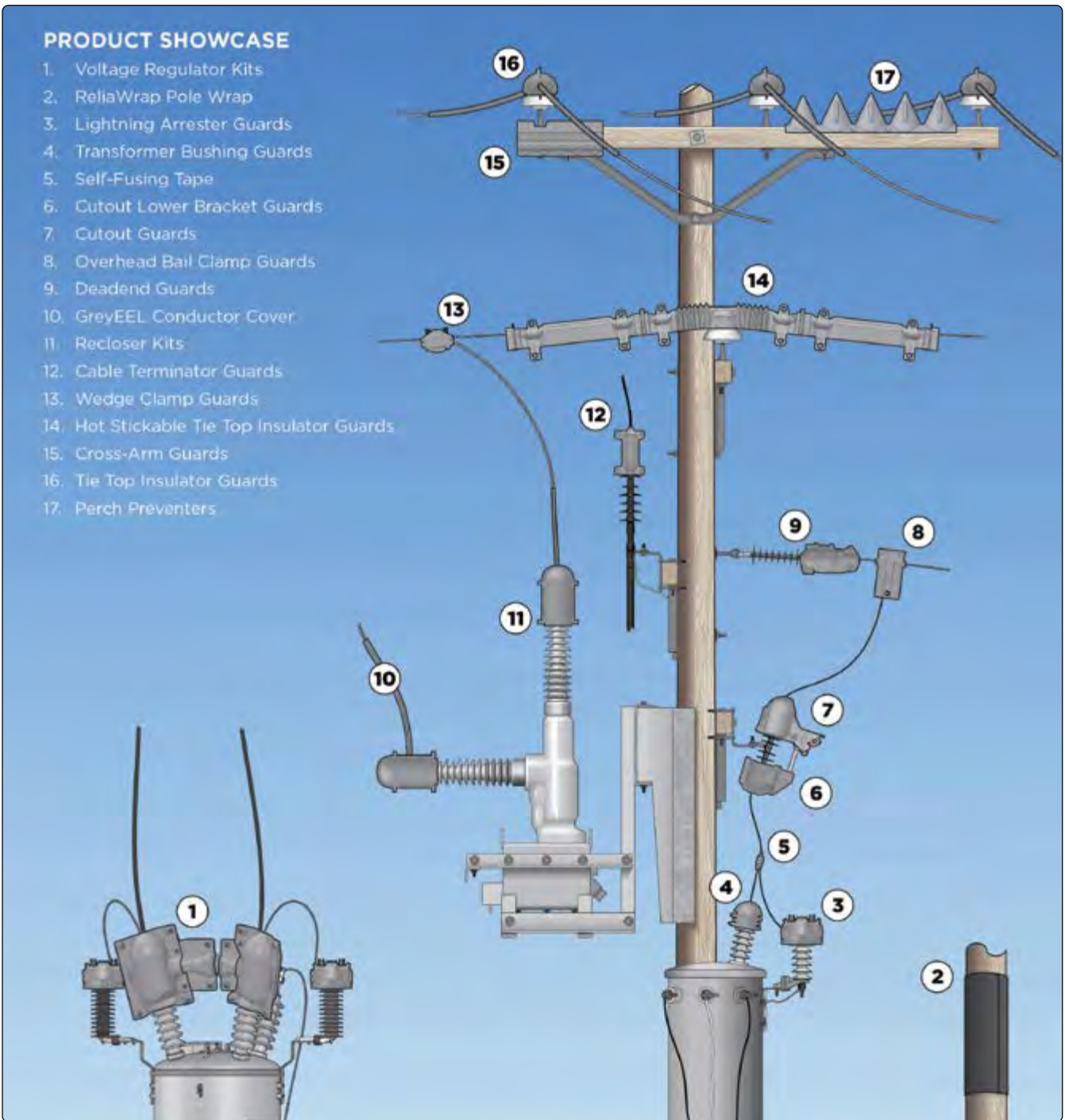
1. It is the only industry comprehensive product line designed for energized installation.
2. It is custom designed to precisely fit each piece of equipment – “It Fits”
3. It is offered as part of a service where site plans are made to identify what exactly is needed for coverage.

\*The information given above is representative data obtained from tests commissioned by Greenjacket. Although the data is, to Greenjacket’s knowledge, reliable, Greenjacket cannot assume any liability relate to the data provided, or to decisions made based on the data provided.



#### PRODUCT SHOWCASE

1. Voltage Regulator-Kits
2. ReliaWrap Pole Wrap
3. Lightning Arrester Guards
4. Transformer Bushing Guards
5. Self-Fusing Tape
6. Cutout Lower Bracket Guards
7. Cutout Guards
8. Overhead Bail Clamp Guards
9. Deadend Guards
10. GreyEEL Conductor Cover
11. Recloser Kits
12. Cable Terminator Guards
13. Wedge Clamp Guards
14. Hot Stickable Tie Top Insulator Guards
15. Cross-Arm Guards
16. Tie Top Insulator Guards
17. Perch Preventers



#### Lightning Arrester Guard

Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
LA-13002	Lightning Arrester - Multi Port	120.6	127	58.4	24



### Bushing Guards - Small

- Manufactured with a superior closure design to ensure the bushing covers stay where they are installed
- Covers can accommodate conductor exiting at various angles
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard



Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
BC-14991	#4 Bushing Guard w/loop latch	114.8	111.8	45.7	24
BC-16003	#5 Bushing Guard - small base 45.7mm	142.2	127		
BC-16005	#5 Bushing Guard - mesh - small base 45.7mm				
BC-15010	#5 Bushing Guard - solid 57.2mm base				
BC-15008	#5 Bushing Guard - mesh - 57.2mm base				
BC-15997	#5 Bushing Guard - solid - 71.1mm base				
BC-15999	#5 Bushing Guard - mesh - 71.1mm base	381	210	88.9	6
BC-15028	#7 Bushing Guard				
BC-15030	#7 Mesh Bushing Guard				

### Bushing Guards - Medium

- Secure closure and latch designs ensure guards stay in place. Push pins for extra security are standard
- Accommodates conductors exiting at various angles
- Hot stick installation option available
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard



Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
BC-14992	#4 Solid Bushing Guard w/loop latch	264.2	111.8	48.3	24
BC-16006	#5 Bushing Guard - small base	205.7	127	45.7	
BC-16008	#5 Bushing Guard - mesh - small base				
BC-15011	#5 Bushing Guard - 57.2mm base				
BC-15013	#5 Bushing Guard - mesh - 57.2mm base				
BC-16201	#5 Bushing Guard - solid - 71.1mm base				
BC-16203	#5 Bushing Guard - mesh - 71.1mm base	299.7	177.8	63.5	24
BC-15021	#7 Bushing Guard				
BC-15023	#7 Mesh Bushing Guard	452.1	203.2	88.9	6
BC-15031	#8 Bushing Guard				
BC-15033	#8 Mesh Bushing Guard				
BC-15041	#10 Bushing Guard	502.9	266.7	116.8	
BC-15043	#10 Mesh Bushing Guard				

### Universal Regulator Kit

- Adjustable design to accommodate a wide variety of shunt arresters and connection angles
- Overlapping design to ensure there are no gaps in coverage
- One box solution - all parts needed to protect one single phase regulator



Part No.	Description	Height (mm)	Width (mm)	Depth (mm)	Pack size (MOQ)
RK-11101K	Universal Regulator Kit	330.2	254	177.8	1



### Voltage Regulator Kit - Siemens & Cooper

- Reliaguard Regulator Guards have an overlapping design to ensure there are no gaps in coverage
- Reliaguard® Regulator Guards offer complete coverage of energized components including series arresters and brackets, bushing terminals, and wire connectors
- Designed for Siemens & Cooper
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification the highest rating for the UL 94 test standard

Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
RK-11021K	Voltage Regulator Kits - Siemens S400 <sup>1</sup>	259	196.9	66.8	1
RK-11023K	Voltage Regulator Kits - Siemens Retro <sup>1</sup>				
RK-11001K	Voltage Regulator Kits - Cooper C400 <sup>3</sup>	304.8	160	69.9	1
RK-11002K	Voltage Regulator Kits - Cooper C500 <sup>2</sup>	368.3	247.7	88.9	1

<sup>1</sup> Regulator Kits include (2) Bushings and (2) 4ft pieces of 0.75" GreyEEL conductor cover and (1) EEL Slider tool S400 - (2016-Current and 187-374 kVa) S400 Retro - (before 2016 and 219-489 Amp) C400 - (50-400 Amp)

<sup>2</sup> Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulator - 500 Amp)

<sup>3</sup> Regulator Kit includes 2 bushing covers and 2 arrester bracket covers; fits Cooper Regulators - 50 Amp to 400 Amp)

NOTE: Arrester bracket variations are possible, please contact TEN for further information.



### Perch Preventer

- Discourages both perching and nesting
- Can be extended to any lengths
- Can be mounted to many different types of surfaces
- Made from Reliatanium – IEEE 1656, FR, UV Stable
- Excellent Electrical Properties
- Stackable for easy storage

Part No.	Description	Height (mm)	Width (mm)	Depth (mm)	Pack size (MOQ)
PP-10010	Perch Preventer	180.3	831.8	190.5	6



### K-Line Clamp Top Insulator Guard

- The Reliaguard Clamp-Top Insulator Guard accommodates the K-Line Insulator
- When used with conductor cover the Reliaguard K-line Clamp-Top Insulator Guard provides complete coverage
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard

Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
PI-12002	K-Line Clamp Top Insulator Guard	177.8	136.4	47.8	12



### Cable Terminator Guards

- Reliaguard Terminator Guards can accommodate a wide variety of conductor diameters
- Complete coverage of the bolted connection and compression cable connector
- Manufactured from a proprietary material known as Reliatanium™



- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard

Part No.	Description	Height (mm)	Dia. (mm)	Base Port (mm)	Pack size (MOQ)
TC-14030	Terminator XL	549.1	156.5	66.8	12
TC-14101	Terminator 90 Degree Guard	176.8	80.3	38.1	





### Tie Top Insulator Guards

- Designed to remain securely in place without compromising an insulator's BIL rating
- Accommodate a wide range of wire sizes and configurations
- Guards can be adapted to fit various insulator neck types for volume orders
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard

Part No.	Description	Height (mm)	Dia. (mm)	Additional Dimension (mm)	Pack size (MOQ)
PI-12001	Tie Top Insulator Guard - K - 4.003*	82.5	146	101.6	12
PI-12003	Tie Top Insulator Guard - C - 2.253*			57.15	
PI-12004	Tie Top Insulator Guard - F - 2.873*			72.90	
PI-12005	Tie Top Insulator Guard - J - 3.503*			88.90	



### Cross Arm Guard

- Cross Arm Guards effectively enclose steel cross arms and are designed to ensure long-term retention
- The push fasteners included with each guard provide a reliable method of protecting guards from being inadvertently opened and dislodged
- Manufactured from a proprietary material known as Reliatanium™
- Reliatanium achieves a V-0 flammability classification, the highest rating for the UL 94 test standard

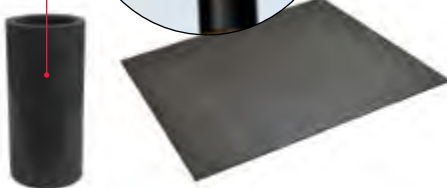
Part No.	Description	Height (mm)	Width (mm)	Length (mm)	Pack size (MOQ)
BB-30520-S	Cross arm 3x3	76.2	127	508	12
BB-50520-S	Cross arm 5x5	127			



### Reliawrap™ Premium Grade Pole Wrap

- ReliaWrap is fastened with nails or screws
- ReliaWrap will not rip or tear
- Packaged in 12 pre-cut sheets of 36"x36" and 36"x48" or 30"x100' rolls

Part No.	Description
RW-30100	ReliaWrap - 762 x 2540mm
RW-36036	ReliaWrap - 914.4 x 914.4mm
RW-36048	ReliaWrap - 914.4 x 1219.2mm



### Pipe Bus and Angle Bus Guards

- Pipe Bus and Angle Bus Guards are available in multiple lengths and dimensions
- Guards are clamshell design for easy opening by hand
- Easy coupling of mated connections
- Push through pins are provided to easily install the
- Pipe Bus and Angle Bus Guards by hand
- Retention of the guard once applied is a critical design feature to be considered

Part No.	Description	Dia. (mm)	Length (mm)	Pack size (MOQ)
BB-20045-R	Pipe Bus Guard - 50.8mm	50.8	1143	6
BB-25045-R	Pipe Bus Guard - 63.5mm	63.5		
BB-40045-R	Pipe Bus Guard - 101.6mm	101.6		
BB-45045-R	Pipe Bus Guard - 114.3mm	114.3		
SS-10001	T-Shape Bus Guard	190.5	558.8	
SS-20001	L-Shape Bus Guard	177.8	355.6	
BB-35045-L	L Angle Bus Guard - 88.9mm	88.9	1308.1	





### RELIAGUARD®



### Protection Disc

- ReliGuard® Protection Discs are designed to stay in place. Retention of the cover once applied is a critical design feature to be considered.
- Protection discs are a 2-piece adjustable size product
- Easy to install, the Protection Disc is supplied with push through pins to secure the disc for the required diameter of the center opening
- Fits a wide range of insulators

Part No.	Description	Outside Dia. (mm)	Inside Dia. (mm)	Width (mm)	Pack size (MOQ)
PD-0415F	Protection Disc - 101.6mm ID Max - 381mm OD Flat	558.8	63.5-101.6	3.2	12
PD-0522F	Protection Disc - 127mm ID Max - 558mm OD Flat	406.4	63.5-127		



### Wildlife Hot Stick Disc

- Simple, one-step energized installation or removal
- No assembly required, reusable
- Easily field trimmed to suit a wide range of insulator/bushing diameters



Part No.	Description	Outside Dia. (mm)	Inside Dia. (mm)	Width (mm)	Pack size (MOQ)
PD-0624	Wildlife Hot Stick Disc - 609.6mm	609.6	63.5-152.4	12.7	8
PD-0620	Wildlife Hot Stick Disc - 508mm	508			
PD-0616	Wildlife Hot Stick Disc - 406.4mm	406.4			12

## Honeywell SALISBURY



### Wildlife Conductor Cover

#### Stinger Covers - Salisbury

##### Part No. Various

Stinger Covers protect against phase to phase and phase to earth wildlife contacts. The stinger cover can be installed over wire without the need to disconnect the lead wire from the bushing. Available in three diameters, it is easily cut in the field to the needed length.

Stinger covers are track resistant and made from Ozone and UV resistant SALCOR® elastomer in a grey color. The covers are proven to provide years of reliable service either independently or when used with bushing covers.



Part No.	Material	I.D. (mm)	Total Length (m)	Quantity	Flashover Test (kV)		Wt (kg)
					Phase to Earth	Phase to Phase	
58-100SC	EPDM	15.9	30.5	1 x 30.5m	12.5	22	20.5
34-25SC		19.05	15.0	2 x 7.5m	14.9	26	10.0
34-12SC-ES		19.05	14.8	4 x 3.7m	14.9	26	10.0
38-50SC-ES		9.5	15.3	1 x 15.3m	10.5	18	4.3
34-25SCS-ES	Silicon	19.5	25	1 x 25m	20	35	7.0

Other sizes in EPDM and Silicon available. Contact TEN for further information.



### 'GreyEEL' - Reliaguard

#### Prevent animal and bird related outages

Protecting conductors is an essential component in conjunction with effective guards to prevent animal and bird caused outages. Reliaguard's GreyEEL Conductor Cover helps prevent contacts by eliminating gaps in coverage. The product's improved protection is achieved with a significantly overlapped seam design and material memory technology that supports exceptional closure performance.

- Silicone rubber tubing that is highly flexible and makes application easy
- Will not burn or drip
- Does not require further de-rating of conductors as it has been proven to aid in dissipating heat from cables rather than trapping it once applied.

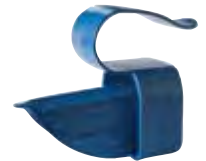
Part No.	Conductor Size Range (mm)	Length (m per box)	EEL Slider
EEL-02503750-50-Y	5.1 - 9.4	15	Included with Grey EEL Not sold separately
EEL-03750500-50-Y	9.5 - 12.6		
EEL-05000750-50-Y	12.7 - 18.9		
EEL-07501000-50-Y	19 - 25.4		
EEL-10001250-50-Y	25.5 - 32.9		
EEL-12501500-50-Y	33 - 36.8	7.5	Included with Grey EEL Not sold separately
EEL-15001750-25-Y	38.1 - 44.4		
EEL-17502000-25-Y	45.7 - 50.8		



SCAN or CLICK the QR Code to download a copy of their catalogue

#### The EEL Slider

- With the EEL Slider™, GreyEEL™ Conductor Cover slides onto conductors easily in a matter of seconds
- No fumbling around trying to pry conductor covers open or closing it back together
- The EEL Slider is made from a dielectric material



Included with Grey EEL  
Not sold separately

### Polywater® Solutions at work.



### Pole Repair

#### UPR Pole Repair - Polywater

##### Part No. UPR Series

Polywater® UPR™ Utility Pole Repair makes it easy to repair pole damage such as decay and splits. The two-part formula is mixed quickly and injected into the hole through the 250mm mixing nozzle.

The UPR™ Pole Repair resin and hardener were specially formulated to expand in the pole cavity rather than to just fill. Because UPR™ Pole Repair expands in the hole, it easily fills irregularly shaped cavities for solid integration with the wood. This creates superior adhesion to the wood grain compared to non-expanding products. The exothermic reaction creates an environment that reduces the presence of bacteria.

- EXPANDS - Completely fills irregularly shaped cavities
- ADHERES - Solidly integrates with surrounding wood
- QUICK - Two-part formula mixes in nozzle when applied

UPR™ Pole Repair comes in two types.

1. "PR" is a liquid formula that flows around wood block fillers to save material.
2. "NF" is a quick-gelling version that will not leak or drip out of wood cracks or holes.

Part No.	Kit Includes
UPR-PRKIT12	12 - 250-ml UPR™ Pole Repair cartridges, 16 mixing nozzles, 18 green-treated wood blocks, 1 roll of stretch wrap, 4 pair of gloves, Instructions
UPR-NFKIT12	12 - 250-m UPR™ "NO FLOW" Pole Repair cartridges, 18 mixing nozzles, 1 roll of stretch wrap, 3 pair of gloves, Instructions
TOOL-250	High Ratio Caulking Gun





## Conduit / Duct Sealant Systems

### AFT Sealant System - Polywater

Polywater® AFT closed-cell sealant provides 3.0m of water-blocking performance in electrical and telecommunication environments. The two-part, closed-cell AFT Sealant is durable and easy to install. AFT has excellent adhesion to a variety of conduits. AFT seals conduits with quicker installation and higher performance compared to duct putty or single-part insulating hardware store foams. The two-part aerosol foam seals any size void and cures without exposure to air. AFT expands and cures to a rigid, closed-cell structure in minutes.

AFT creates an airtight, watertight seal. AFT can be used to seal service entrances, conduit, innerducts, inverters and combiners for solar installations, and riser poles for the electrical grid. AFT protects against insects, rodents, moisture, dust, and gases. The package is reusable, and the fire-retardant seal is self-extinguishing.

#### Polywater™ AFT Features

- Quick Installation: 2-minute application time or less.
- Multiple-Use Can: Creates numerous seals in all types of ducts.
- Reliable: Holds 10 feet of continuous water head pressure.
- Durable: Withstands cold temperature applications.
- Removable: Product can easily be removed to replace cable.

**Cable Compatibility:** AFT two-part foam sealant is compatible with common cable jacket materials. It does not change physical or electrical properties of cable, based on tensile/elongation and volume resistivity testing. The cured foam is an inert solid that does not affect cable components.

**Approvals:** AFT is a UL recognised component and passed UL94 with a Class HBF fire retardant rating.

**Cure Rate:** AFT two-part foam sealant can be used at temperatures down to 7°C (45°F). At lower temperatures the reaction slows, but the sealant will completely foam and cure with time. AFT foam expands two times its volume as it is dispensed. Full expansion is complete in under 2 minutes at 21°C (70°F). It will take 3 to 5 minutes to be tack free. During this time do not move cables or touch foam.

**For sealing conduits and risers from moisture, gases and vermin**



To Watch the AFT Application Video  
SCAN or CLICK the QR-Code

Part No.	Description
AFT-16	1 x 16oz (473ml) can - 2 actuators per
AFT-16P4	4 x 16oz (473ml) can - 2 actuators per
AFT-SAE10	10 pack of actuators with STANDARD extension tube
AFT-FAE10	10 pack of actuators with FLEXIBLE extension tube





To Watch the FST Application Video SCAN or CLICK the QR-Code



## FST Sealing System - Polywater

FST™ Duct Seal is a “closed cell foam”, with high density properties, this keeps water, acids, greases, gases, insects and rodents out of the conduit.

The foam has good wetting and adhesion to metals, plastics, and concrete.

### Features

- FST Duct Sealant™ has 98% closed-cell content for increased strength and resiliency
- FST Duct Sealant™ resists 6.7m of water-head pressure
- FST Duct Sealant™ is compatible with cable and duct materials
- FST Duct Sealant™ is chemically resistant to gasoline, oils, dilute acids and bases, and most unsaturated hydrocarbons
- Prevents the passage of gas; does not sag; will not dry out; and is re-alterable
- Quick: Foam expands and cures quickly even when water is present
- Multi-Use: Packages are resealable

## FST-250KIT1 Duct Sealant - Polywater

### Part No. FST-250KIT1

FST™ Quick setting Duct Sealant in a 2 part 250ml field ready cartridge kit.

Recommended for conduits 50 to 200mm

Part No.	Kit Includes
FST-250KIT1	1 x 240g two-part Foam Sealant caulking tube style with resealing cap 3 x Mixing nozzles, 4 x 600m Foam damming strips 1 x Position rod, 1 x Pre-treating wipe, Instruction Sheet



## FSTBP™ Duct Sealant Burst Pack - Polywater

### Part No. FSTBP-200KIT1

FSTBP Duct Sealant comes in an easy to use, self-dispensing burst pack.

Ideal for the protection of conduits 125mm to 200mm.

Part No.	Kit Includes
FSTBP-200KIT1	1 x FSTBP-200KIT1-200 Burst Pack 1x Pair of gloves, 1 x Sanding cloth 4 x Foam Strips, 1 x Prep. Wipes, 1 x Instructions

## FST MINI Duct Sealant - Polywater

### Part No. Various

### Effectively Seals Small Conduits and Inner-ducts

Polywater® FST™ MINI is 50ml field ready kit.

Recommended for small conduits 20 to 50mm.



Mixing Nozzle

Part No.	Description
FST-MINI	1 x 50ml FST Cartridge, 2 x Mixing Nozzles, 6 x Foam Discs 1x Pair of gloves, 1 x Instructions
TOOL-50-11	Application Tool

## Transformer Leak Repair - Polywater

### PowerPatch™ Leak Repair Kit

#### Part No. EPCT Series

The PowerPatch® Sealant is provided in a kit containing the surface preparation and patching materials necessary to repair leaks in oil filled transformers, SF6 Gas, sealing lead-sheathed cables, potheads and other oil-filled electrical equipment.

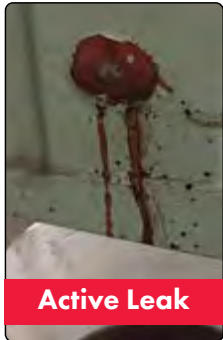


Part No. EPCT-KIT1 + TOOL-50-11

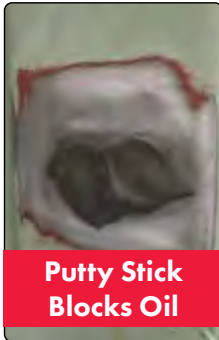
#### Features

- **Quick plugging action** - A fast-cure putty that stops oil
- **Permanent seal** - A 2-part paste overcoat forms a permanent seal
- **Durable** - Finished seal is impervious to water, oil and weather
- **Fast** - System can plug and seal active leaks in minutes
- **Saves money** - Faster than welding. Transformer may stay in service
- **Simple** - Eliminates "bagging" or removal from field and unexpected outages
- **Convenient** - Kit contains all materials needed to fix leak while in the field

#### Repair active leaks



Active Leak



Putty Stick Blocks Oil



Application Tool: TOOL-50-11



Repaired Leak

**Non-conductive with a dielectric strength of 43kV (ASTM D149)**



Part No. EPCT-250KIT1

Part No.	Kit Includes
EPCT-KIT1	2 x PowerPatch® 2-Part 50ml Cartridges with 4 static mixers 2 x Putty sticks, 8 x Type TR™ cleaning and preparation wipes 1 x 600mm sandpaper strip, 4 x application sticks, and instructions
EPCT-KIT1-G	Kit As Above (EPCT-KIT1) + Application Gun (TOOL-50-11)
TOOL-50-11	Application Gun only. Suits Powerpatch EPCT-KIT1 and Mini FST
EPCT-250KIT1 (Large Format)	1 x PowerPatch® 2-Part 250ml Cartridge with 3 x static mixers 2 x Putty sticks, 8 x Type TR™ cleaning and preparation wipes 1 x 600mm sandpaper strip, 3 x application sticks, 1 x instruction sheet
EPCT-250KITB12 (Large Format)	12 x PowerPatch® 2-Part 250ml Cartridge with 12 x static mixers 24 x Nitrile Gloves, 1 x 600mm sandpaper strip 12 x application sticks, 1 x instruction sheet

#### SIMPLE TO APPLY

Use the PowerPatch® System's putty stick to block oil and SF6 leaks.

Then make a permanent patch with the fast cure, 2-part paste overcoat. Ensure optimal mix and performance with pre-measured packaging. It is non-conductive and has a dielectric strength of 43KV (ASTM D149).

Fixes leaks fast. At 21 °C, the putty and sealant harden in about 10 minutes.

The finished patch is resistant to transformer oil and SF6 and has held oil pressures in excess of 100 psi. Product is able to be stored and reused multiple times please refer to the SDS for shelf life information. Preparation is extremely important, and the kit provides everything needed to do the job, although in instances of excessive oil leakage or dirt accumulation, separate scrubbing rags such as Grime-Away™ Cleaning Wipes are helpful.

Contact TEN for advice on your leaking equipment

**Ideal for: Transformers  
SF6 Gas Equipment  
Oil-filled equipment  
Potheads (UG-HO)**



Also suitable for use with battery powered caulking guns



## Cleaning wipes - Polywater

### Silicon Treated Wiping Cloth

- Deposits a water repellent film while removing dust and dirt particles from the surface of hot sticks and insulated tool handles
- The 460mm x 460mm cotton cloth is an open-type weave specially selected for removing foreign material from the surface of insulated tools and has bound edges to eliminate fraying which extends the life of the cloth
- The cloth is packaged in a sealed plastic bag with instructions for compliance with OSHA regulations for cleaning and inspection of live line tools
- Regular use of the silicone treated cloth will add to the life and safety of the tools
- For added safety and increased life of live line tools

Part No.	Description	Wt (kg)
10-090	460 x 460mm Silicone Treated Wiping Cloth	0.05

### Boom Cleaner Wipes

- Convenient, pre-saturated, lint-free wipes in two sizes
- Large and durable for maximum surface coverage
- Won't remove or adversely affect gel coat & prevents "build-up" over time
- Powerful cleaner removes grease, dirt, tar, and grime
- Removes road and sea spray salts (salt water is more conductive)
- Water soluble for easy water rinsing
- Designed for one time use and easy disposal
- Meets OSHA Maintenance Reg CFR 29 Part 1910

Part No.	Description	Pack
B-1	Individually saturated 610 x 610mm wipe in sealed foil	1
B-D72	Dispenser with 72 wipes	72

### Hot Stick Cleaner and Water Repellent Wipe

- Convenient, pre-saturated, lint-free wipe
- Dual action - cleans and applies water repellent
- Does not remove or adversely affect gloss coat
- Evaporates quickly
- No "build-up" over time
- Removes grease, dirt, and grime
- Prevents continuous water film on stick in wet weather
- Designed for one time use and easy disposal
- Meets IEEE maintenance recommendations (Std #978)

Part No.	Description	Pack
S-1	Pre-saturated lint-free 600mm <sup>2</sup> wipe in sealed foil (Single Pack)	1
S-1-K	Pre-saturated lint-free 600mm <sup>2</sup> wipe in sealed foil (Box of 144)	144

### Silicone Wiping Cloths - Disposable

- 50 wipes in a heavy duty cardboard dispenser box that can be installed on a wall or post in a convenient location to the line trucks, each are individually packaged
- Leaves a silicone moisture barrier which enables water to bead up. This eliminates the blanket effect when using hot sticks in wet conditions.
- Excellent for daily wiping of your hot sticks prior to use
- Removes contaminants such as dirt, oils, creosote, and other undesirable matter
- Environmentally safe, the used wipes can be disposed of in normal waste containers

Part No.	Description	Pack
10-188	Hot Stick Wipes - box	50
10-188-1	Hot Stick Wipe - individual	1









- Arc-Flash Categories
- Arc-Flash Care/User & Sizing Guide
- ABC & CCT Specifications
- AAC, AAAC, ACSR, SC/GZ, SC/AC & HD/CU Specifications
- American Wire Gauge Cross Reference
- Conductor Cross-Sectional Area Reference Guide
- Common Metric/Imperial Conversions
- IP Rating Chart
- PVC Conduit/Pipe Specification Guide



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## Arc Flash

### Arc Flash PPE Categories

#### NFPA 70E Protective Clothing & Personal Protective Equipment (PPE)

For more detailed information or other options, refer to NFPA 70E 2018 for Electrical Safety in the Workplace.

\*PPE requirements applicable to all categories are: Hard Hat, Safety Glasses, Hearing Protection (ear canal inserts) & Leather Footwear

PPE Category	cal/cm <sup>2</sup>	PPE
<b>0</b>	<b>&lt;1.2</b>	Untreated natural fibre
		Shirt (long sleeve)
		Pants (long)
		Safety Glasses & Hearing Protection
		Leather & Voltage-rated gloves (as needed)
<b>1</b>	<b>4 Minimum</b>	Arc-rated long sleeve shirt
		Arc-rated pants or coverall
		Arc-rated face shield with hard hat
		Safety Glasses & Hearing Protection
		Leather & Voltage-rated gloves (as needed)
<b>2</b>	<b>8 Minimum</b>	Arc-rated long sleeve shirt & pants/overall
		Arc-rated rain wear (as needed)
		Arc-rated face shield & balaclava/suit & hard hat
		Safety Glasses & Hearing Protection
		Leather & Arc-rated gloves (as needed)
<b>3</b>	<b>25 Minimum</b>	Arc-rated long sleeve shirt & pants/overall
		Arc-rated rain wear (as needed)
		Arc-rated flash hood
		Safety Glasses & Hearing Protection
		Leather & Arc-rated gloves (as needed)
<b>4</b>	<b>40 Minimum</b>	Arc-rated long sleeve shirt & pants/overall
		Arc-rated rain wear (as needed)
		Arc-rated flash hood
		Safety Glasses & Hearing Protection
		Leather & Arc-rated gloves (as needed)
		Leather footwear

Reference: [www.safetychoice.com.au](http://www.safetychoice.com.au)

See Safety & PPE Section for TEN's range of Arc-Flash Garments



## Arc Flash PPE User, Care & Maintenance Guide

### Safety

- Garment must be fully fastened before entering the live working environment.
- Unrated or melting under layers should not be worn.
- It is the user's responsibility to read and understand all warnings prior to use of each product.
- A full arc flash suit requires additional suitable protective equipment, which includes protective footwear & arc rated insulated gloves.

### Training

- Arc flash risk assessments are required to determine incident energy, proper training of hazards and application should follow.
- Users should also be trained on care and use of arc flash PPE including but not limited to: Inspection, Laundering, Donning/DoFFing & Storage

### Usage

- Garments have been designed oversized to fit as outerwear.
- When worn as a complete suit with all closures fastened, the jacket collar should cover the neck, the jacket sleeves should come to the wrists, and gloves should be worn over sleeves.
- Jacket should be worn over pants or bibs, jacket hem should overlap the waist of the bottoms, pant legs should come down to the ankles.
- When worn with a hood or face shield and balaclava, the hood or balaclava should drape over the shoulders covering the collar of the jacket.

### Care & Maintenance

- It is recommended to wash garments prior to wearing.
- User must follow all care and maintenance instructions on the interior label of the garment. (See Launder labels and warning below)
- In order to perform its protective function, an Arc-Flash garment must be maintained in its original condition.
- Garments with rips, tears and abrasion to the fabric cannot be worn and must be removed from service, as they pose a potential safety risk.

### Garment Launder Instruction Labels

#### Jacket, Bib Overalls & Hood

**Important:**

- DO NOT use chlorine bleach or detergents containing bleach
- DO NOT use hydrogen peroxide
- DO NOT use fabric softeners or starch

**Wash/Laundering Instructions:**

- Dry Cleanable
- Machine wash warm (Max. 74°C/165°F)
- Detergent only

\*Wash according to the instructions above to remove any contaminants in order to maintain fabric performance when garment becomes soiled with dirt, greases, oils, etc.\*

\*If contaminants cannot be removed after laundering, it is best to discontinue use of the garment.\*

#### Balaclavas/ Knit Hoods

**Important:**

- DO NOT use chlorine bleach or detergents containing bleach
- DO NOT use hydrogen peroxide
- DO NOT use fabric softeners

**Wash/Laundering Instructions:**

- Dry Cleanable
- Turn garment inside out prior to laundering
- Machine wash warm (Max. 50°C / 120°F)
- Tumble dry warm

\*Wash according to the instructions above to remove any contaminants in order to maintain fabric performance when garment becomes soiled with dirt, greases, oils, etc.\*

\*If contaminants cannot be removed after laundering, it is best to discontinue use of the garment.\*

#### Face-shields, Goggles & Glasses

**Important:**

- DO NOT use ammonia based cleaners
- DO NOT use any abrasives or polishes
- NEVER use if cracked or broken

**Wash/Laundering Instructions:**

- Remove from hood if applicable
- Wash with warm soapy water - Mild soap only
- Rinse thoroughly - Pat dry with a soft cloth

\*Always transport and store your faceshield, goggles, and glasses in a soft cloth bag to minimize wear & tear\*

\*Wash according to the instructions above to remove any contaminants in order to maintain fabric performance when garment becomes soiled with dirt, greases, oils, etc.\*

\*If contaminants cannot be removed after laundering, it is best to discontinue use of garment.\*

### Visual Inspections

#### Garments

Check for any holes, rips, tears or other damage to fabric. Remove from service if garments are damaged

Test closure systems like zippers, hook and loop, buckles, etc for dirt & wear.



#### Face-Shields

Check for significant scratches, cracks, etc.



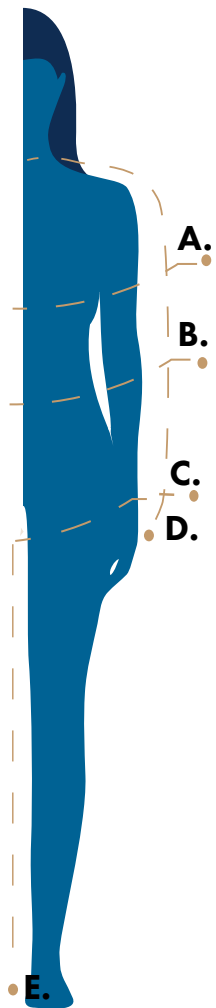
Remove from service if shields are damaged



Warnings

- Warnings on the proper use of arc flash apparel are indicated on the inner garmented warning label.
- Each garment contains the following warnings:
- This garment is flame resistant and constructed from flame resistant fabric and components.  
The user of this garment should read and understand all warnings printed on the reverse side of this label prior to using this product.
- This garment is not intended for fire protection, fire entry, structural or wildlands firefighting activities and provides no personal protection from chemical exposures. Remove at once if fouled with flammable material. To prevent the generation of potentially hazardous static electricity, do not don or remove in a hazardous area.
- DO NOT use this garment if it is torn, abraded or altered from its original condition.  
DO NOT use this garment unless it has been properly inspected and maintained by your employer.
- The user assumes all risks associated with the use of this product. The manufacturer is not liable for any loss, injury or death arising out of the use of this product.
- Failure to comply with these warnings may result in SERIOUS INJURY or DEATH

Measurement Guide



**A. BUST**

Measure loosely around the fullest part of your bust. Keep the measuring tape as horizontal as possible.

**B. WAIST**

**For pants:** Measure around your waist where you would like your pants waistband to sit.

**For tops & full body garments:** Measure the fullest part of your waist.

**C. HIP**

Measure loosely around the fullest part of your hips. Keep the measuring tape as horizontal as possible.

**D. SLEEVE**

To measure your sleeve, start from the center of the back of your neck, over to your shoulder, down past your elbow, and to your wrist.

**E. INSIDE LEG**

Use a pair of pants similar to the style you are ordering, which fit to your liking, Measure along the inseam from the crotch to the hem

**A. NECK**

Measure around the base of the neck, where your collar typically lies. Measure from one button hole to the center of the button on the opposite side.

**B. CHEST**

Measure around the fullest part of your chest. The best way to assess this is to start just under your armpit.

**C. WAIST**

**For pants:** Measure around your waist where you would like your pants waistband to sit.

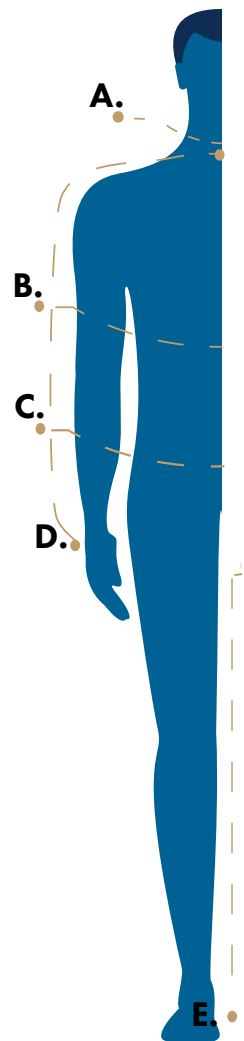
**For tops & full body garments:** Measure the fullest part of your waist.

**D. SLEEVE**

To measure your sleeve, start from the center of the back of your neck, over to your shoulder, down past your elbow, and to your wrist.

**E. INSIDE LEG**

Use a pair of pants similar to the style you are ordering, which fit to your liking, Measure along the inseam from the crotch to the hem



Available 40cal Garments

Arc Flash PPE KITS



Arc Flash Bibs & Jackets



Arc Flash Hoods



## Conductor References

### ABC - Aerial Bundled Conductor

Cross-Sectional Area (mm <sup>2</sup> )	Nominal Conductor OD (mm)	Average Insulation Thickness (mm)	Nominal Dia. over Insulation (mm)	Nominal Dia. Over Laid-Up Cores (mm)	Approx. Mass (kg/km)	Minimum Bending Radius - Installed (mm)		Min. Breaking Load of Cable (kN)	Rec. Tension	
						Core	Cable		Highest Everyday Tension (kN)	Max Working Tension (kN)
2 CORE										
16	4.7	1.3	7.4	14.8	130	30	90	4.4	0.79	1.23
25	5.9	1.3	8.6	17.2	190	35	100	7.0	1.26	1.96
35	6.9	1.3	9.6	19.3	250	60	120	9.8	1.76	2.74
50	8.1	1.5	11.2	22.3	340	65	130	14.0	2.52	3.92
95	11.4	1.7	14.9	29.8	640	90	270	26.6	4.79	7.45
3 CORE										
25	5.9	1.3	8.6	18.5	290	35	110	10.5	1.89	2.94
35	6.9	1.3	9.6	20.8	370	60	120	14.7	2.65	4.12
50	8.1	1.5	11.2	24.1	510	65	140	21.0	3.78	5.88
4 CORE										
16	4.7	1.3	7.4	17.8	270	30	110	8.8	1.58	2.46
25	5.9	1.3	8.6	20.8	390	35	120	14.0	2.52	3.92
35	6.9	1.3	9.6	23.2	500	60	140	19.6	3.53	5.49
50	8.1	1.5	11.2	27.0	670	65	160	28.0	5.04	7.84
70	9.7	1.5	12.8	30.8	930	75	280	39.2	7.06	11.00
95	11.4	1.7	14.9	36.0	1280	90	320	53.2	9.58	14.90
120	12.8	1.7	16.3	39.3	1570	100	350	67.2	12.10	18.80
150	14.2	1.7	17.7	42.8	1890	110	390	84.0	15.10	23.50

### CCT - Covered Conductor Thick

Nominal Conductor Area (mm <sup>2</sup> )	No. & Nominal X of Wires (No./mm)	Nominal Conductor (mm)	Average Insulation Thickness (mm)	Nominal Dia. Over Insulation (mm)	Approx. Mass (kg/km)	Minimum Bending Radius - Installed (mm)	Min. Breaking Load of Cable (kN)	Rec. Tension	
								Highest Everyday Tension (kN)	Max Working Tension (kN)
6.35/11kV									
40	7/2.75	8.4	3.4	15.8	260	240	9.9	1.49	4.96
80	7/3.75	11.4	3.4	18.8	400	280	17.6	2.64	8.80
120	7/4.75	14.5	3.4	21.9	580	330	27.1	4.07	13.60
180	19/3.50	17.7	3.4	25.0	790	380	41.7	6.26	20.90
240	19/4.01	20.2	3.4	27.7	1000	420	52.3	7.85	26.20
17.7/22kV									
80	7/3.75	11.4	5.5	23.0	530	350	17.5	2.64	8.80
120	7/4.75	14.5	5.5	26.1	720	390	27.1	4.07	13.60
180	19/3.50	17.7	5.5	29.2	960	440	41.7	6.26	20.90

**AAC - All Aluminium Conductor - Australian Standard**

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>GEMINI</b>	7/1.75	5.25	3.01	46.1
<b>JUPITER</b>	7/2.25	6.75	4.76	75.9
<b>LEO</b>	7/2.50	7.50	5.7	94.3
<b>LIBRA</b>	7/3.00	9.00	7.9	135
<b>MARS</b>	7/3.75	11.30	11.8	211
<b>MERCURY</b>	7/4.50	13.50	16.9	304
<b>MOON</b>	7/4.75	14.30	18.9	339
<b>NEPTUNE</b>	19/3.25	16.30	24.7	433
<b>PLUTO</b>	19/3.75	18.80	31.9	576
<b>SATURN</b>	37/3.00	21.00	42.2	721
<b>TAURUS</b>	19/4.75	23.80	51.3	924
<b>TRITON</b>	37/3.75	26.30	62.2	1120
<b>URANUS</b>	61/3.25	29.30	75.2	1400
<b>URSULA</b>	61/3.50	31.50	87.3	1620
<b>VENUS</b>	61/3.75	33.80	97.2	1890
<b>VIRGO</b>	91/4.50	49.50	207	4010

**AAC - All Aluminium Conductor - New Zealand Standard**

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>NAMU</b>	7/2.11	6.33	4.1	70
<b>POKO</b>	7/2.36	7.08	5.1	80
<b>KUTU</b>	7/3.00	9.00	7.9	140
<b>RANGO</b>	7/3.66	10.98	11.7	200
<b>WEKE</b>	7/4.72	14.61	18.5	340
<b>WETA</b>	19/3.35	16.75	26.2	460
<b>MATA</b>	19/3.86	19.30	33.8	610



**AAAC 1120 - All Aluminium Alloy Conductor**

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>ARGON</b>	7/1.75	5.25	4.0	46.10
<b>BORON</b>	7/2.25	6.75	6.61	75.9
<b>CHLORINE</b>	7/2.50	7.50	8.1	94.3
<b>CHROMIUM</b>	7/2.75	8.25	9.9	113
<b>FLUORINE</b>	7/3.00	9.00	11.8	135
<b>HELIUM</b>	7/3.75	11.25	17.6	211
<b>HYDROGEN</b>	7/4.50	13.50	24.3	304
<b>IODINE</b>	7/4.75	14.25	27.1	339
<b>KRYPTON</b>	19/3.25	16.25	37.4	433
<b>LUTETIUM</b>	19/3.50	17.50	41.7	503
<b>NEON</b>	19/3.75	18.75	47.8	576
<b>NITROGEN</b>	37/3.00	21.00	62.2	721
<b>NOBELIUM</b>	37/3.25	22.75	72.8	845
<b>OXYGEN</b>	19/4.75	23.75	73.6	924
<b>PHOSPHOROUS</b>	37/3.75	26.25	93.1	1120
<b>SELENIUM</b>	61/3.25	29.25	114	1400
<b>SILICON</b>	61/3.50	31.50	127	1620
<b>SULPHUR</b>	61/3.75	33.75	145	1860
<b>XENON</b>	91/4.5	49.50	300	4000

**AAAC - All Aluminium Alloy Conductor**

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>AGATE</b>	7/1.75	5.25	4.71	46.1
<b>AMETHYST</b>	7/2.25	6.75	7.78	75.9
<b>DIAMOND</b>	7/2.50	7.50	9.6	94.3
<b>DOLOMITE</b>	7/2.75	8.25	11.6	113
<b>EMERALD</b>	7/3.00	9.00	13.9	135
<b>GARNET</b>	7/3.75	11.25	21.7	211
<b>JADE</b>	7/4.50	13.50	31.2	304
<b>JASPER</b>	7/4.75	14.25	34.8	339
<b>OPAL</b>	19/3.25	16.25	44.2	433
<b>PATRONITE</b>	19/3.50	17.50	51.3	503
<b>PEARL</b>	19/3.75	18.75	58.8	576
<b>RUBY</b>	37/3.00	21.00	73.5	721
<b>RUTHENIUM</b>	37/3.25	22.75	86.1	845
<b>RUTILE</b>	19/4.75	23.75	94.4	924
<b>SAPPHIRE</b>	37/3.75	26.25	115	1120
<b>SPINEL</b>	61/3.25	29.25	135	1400
<b>TANTALUM</b>	61/3.50	31.50	156	1620
<b>TOPAZ</b>	61/3.75	33.75	179	1860
<b>ZIRCON</b>	91/4.50	49.50	384	4000

Whilst every attempt is made to ensure the accuracy of these tables, they should not be relied upon. They are provided to assist with tool and equipment selection.

**ACSR/AC - AL Conductor (AL Clad) Steel Reinforced**

Conductor Name	Reference Strands/Core/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>ANGLING</b>	6/1/2.50	7.50	10.6	113
<b>ARCHERY</b>	6/1/3.00	9.00	15.1	163
<b>BASEBALL</b>	6/1/3.75	11.25	22.3	254
<b>BOWLS</b>	6/7/4.75	14.25	32.7	385
<b>CRICKET</b>	30/7/2.50	17.50	64.4	636
<b>DARTS</b>	30/7/3.00	21.00	91.6	913
<b>DICE</b>	30/7/3.25	22.75	106	1070
<b>DIVING</b>	30/7/3.50	24.50	122	1240
<b>GOLF</b>	54/7/3.00	27.00	120	1380
<b>GYMNASTICS</b>	54/7/3.25	29.25	139	1620
<b>HURDLES</b>	54/7/3.50	31.50	159	1880
<b>LACROSSE</b>	54/19/3.75	33.75	180	2150
<b>RUGBY</b>	54/19/4.75	42.75	287	3450
<b>Extra High Strength</b>				
<b>SKATING</b>	3/4/1.75	5.25	12.3	83.5
<b>SOCCER</b>	3/4/2.50	7.50	24.9	170
<b>SWIMMING</b>	4/3/3.00	9.00	28.8	217
<b>TENNIS</b>	4/3/3.75	11.25	42.8	339

**ACSR/GZ - AL Conductor (Gal) Steel Reinforced**

Conductor Name	Reference Strands/Core/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>ALMOND</b>	6/1/2.50	7.50	10.5	119
<b>APPLE</b>	6/1/3.00	9.00	14.9	171
<b>BANANA</b>	6/1/3.75	11.25	22.7	268
<b>CHERRY</b>	6/4.75 + 7/1.60	14.25	33.4	402
<b>GRAPE</b>	30/7/2.50	17.50	63.5	677
<b>LEMON</b>	30/7/3.00	21.00	90.4	973
<b>LYCHEE</b>	30/7/3.25	22.75	105	1140
<b>LIME</b>	30/7/3.50	24.50	122	1320
<b>MANGO</b>	54/7/3.00	27.00	119	1400
<b>ORANGE</b>	54/7/3.25	29.25	137	1600
<b>OLIVE</b>	54/7/3.50	31.50	159	1960
<b>PAWPAW</b>	54/3.75 + 19/2.25	33.75	178	2240
<b>PEACH</b>	54/4.75 + 19/2.85	42.75	284	3600
<b>Extra High Strength</b>				
<b>QUINCE</b>	3/4/1.75	5.25	12.7	95.9
<b>RAISIN</b>	3/4/2.5	7.50	24.4	193
<b>SULTANA</b>	4/3/3.00	9.00	28.3	242
<b>WALNUT</b>	4/3/3.75	11.25	43.9	379

## ACSR/AZ - AL Conductor (Aluminised) Steel Reinforced

Conductor Name	Reference Strands/Core/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>BARLEY</b>	6/1/2.50	7.50	10.2	118
<b>BEAN</b>	6/1/3.00	9.00	14.5	170
<b>CABBAGE</b>	6/1/3.75	11.25	21.4	265
<b>CARROT</b>	6/7/4.75	14.25	32.0	399
<b>CORN</b>	30/7/2.50	17.50	61.6	675
<b>GARLIC</b>	30/7/3.00	21.00	87.2	973
<b>MILLET</b>	30/7/3.50	24.50	116	1320
<b>OATS</b>	54/7/3.00	27.00	115	1440
<b>ONION</b>	54/7/3.25	29.25	132	1690
<b>PARSNIP</b>	54/7/3.50	31.50	153	1960
<b>POTATO</b>	54/19/3.75	33.75	177	2250
<b>RICE</b>	54/19/4.75	42.75	277	3600

## HDC - Hard Drawn Copper

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>7/1.00</b>	7/1.00	3.00	2.3	49.3
<b>7/1.25</b>	7/1.25	3.75	3.6	76.9
<b>7/0.064</b>	7/1.63	4.88	4.9	-
<b>7/1.75</b>	7/1.75	5.25	6.9	151
<b>7/2.00</b>	7/2.00	6.00	8.9	197
<b>7/0.083</b>	7/2.11	6.30	6.2	-
<b>19/0.064</b>	19/1.63	8.13	8.1	-
<b>7/2.75</b>	7/2.75	8.25	16.2	375
<b>19/1.75</b>	19/1.75	8.75	18.3	413
<b>19/2.00</b>	19/2.00	10.00	23.6	538
<b>7/3.50</b>	7/3.50	10.50	25.4	607
<b>19/0.083</b>	19/2.11	10.50	25.4	-
<b>7/3.75</b>	7/3.75	11.25	28.8	696
<b>37/1.75</b>	37/1.75	12.25	35.6	806
<b>19/0.101</b>	19/2.56	12.80	-	-
<b>19/2.75</b>	19/2.75	13.75	43.1	1020
<b>37/0.083</b>	37/2.11	14.80	-	-
<b>19/3.00</b>	19/3.00	15.00	50.8	1210
<b>37/2.50</b>	37/2.50	17.50	70.3	1640
<b>37/2.75</b>	37/2.75	19.25	83.9	1990
<b>37/3.00</b>	37/3.00	21.00	98.9	2370
<b>61/2.75</b>	61/2.75	24.75	138	3290

Whilst every attempt is made to ensure the accuracy of these tables, they should not be relied upon. They are provided to assist with tool and equipment selection.



### SC/GZ - Steel Conductor/ Galvanised

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>3/2.00</b>	3/2.00	4.31	11.7	74
<b>7/16 (1.625)</b>	7/1.63	4.88	-	-
<b>3/12 (2.64)</b>	3/2.64	5.28	-	-
<b>3/2.75</b>	3/2.75	5.93	22.2	140
<b>7/2.00</b>	7/2.00	6.00	26.0	173
<b>7/.083 (2.108)</b>	7/2.11	6.32	-	-
<b>7/12 (2.64)</b>	7/2.64	7.92	-	-
<b>7/2.75</b>	7/2.75	8.25	49.0	328
<b>7/3.25</b>	7/3.25	9.75	91.3	458
<b>19/2.00</b>	19/2.00	10.00	70.5	473
<b>3/5 (5.38)</b>	3/5.38	10.77	-	-
<b>7/3.75</b>	7/3.75	11.25	92.6	609
<b>19/2.75</b>	19/2.75	13.75	133	894
<b>7/4.8</b>	7/4.80	14.40	-	-
<b>19/3.25</b>	19/3.25	16.25	186	1250

### SC/AC - Steel Conductor/Aluminium Clad

Conductor Name	Reference Strands/Wire Diameter (mm)	Overall Diameter (mm)	Nominated Minimum Breaking Load (kN)	Nominated Mass kg per km (kg)
<b>3/2.75</b>	3/2.75	5.93	22.7	118
<b>3/3.00</b>	3/3.00	6.50	27.0	141
<b>7/2.59</b>	7/2.59	7.77	47.8	292
<b>3/3.75</b>	3/3.75	8.08	40.0	220
<b>3/3.25</b>	3/3.25	8.25	31.6	165
<b>7/2.75</b>	7/2.75	8.25	50.1	277
<b>7/3.00</b>	7/3.00	9.00	59.7	330
<b>7/3.25</b>	7/3.25	9.75	69.9	387
<b>7/3.75</b>	7/3.75	11.25	86.9	515
<b>7/4.25</b>	7/4.25	12.75	105	662
<b>19/2.75</b>	19/2.75	13.75	136	755
<b>19/3.00</b>	19/3.00	15.00	162	899
<b>19/3.25</b>	19/3.25	16.25	189	1060
<b>19/3.75</b>	19/3.75	18.75	240	1410
<b>19/4.25</b>	19/4.25	21.25	289	1800

Whilst every attempt is made to ensure the accuracy of these tables, they should not be relied upon. They are provided to assist with tool and equipment selection.

## Conductor Cross Reference

### American Wire Gauge Conductor Cross-Sectional Area

AWG (and "Aught"*/0 Equiv)	MCM or kcmil	CIRCULAR MILS	Cross Section (mm <sup>2</sup> )	Cross Section (In <sup>2</sup> )	Dia. SOLID (mm)	Dia. SOLID (inch)	Dia. Stranded (mm Approx. Max.)	Dia. Stranded (inch Approx. Max.)
2	66	66361	33.6281	0.0521	6.54	0.258	7.42	0.292
1	84	83680	42.4042	0.0657	7.35	0.289	8.43	0.332
1 /0	106	105518	53.4705	0.0829	8.25	0.325	9.47	0.373
2 /0	133	133056	67.4249	0.1045	9.27	0.365	10.64	0.419
3 /0	168	167780	85.0210	0.1318	10.40	0.410	11.96	0.471
4 /0	212	211566	107.209	0.1662	11.68	0.460	13.41	0.528
4.7 /0	250	250000	126.677	0.1963	12.70	0.500	14.60	0.575
5.5 /0	300	300000	152.012	0.2356	13.91	0.548	16.00	0.630
6.2 /0	350	350000	177.348	0.2749	15.03	0.592	17.30	0.681
6.7 /0	400	400000	202.683	0.3142	16.06	0.632	18.49	0.728
7.3 /0	450	450000	228.018	0.3534	17.04	0.671		
7.7 /0	500	500000	253.354	0.3927	17.96	0.707	30.67	0.814
8.5 /0	600	600000	304.025	0.4712	19.67	0.775	22.68	0.893
9.2 /0	700	700000	354.695	0.5498	21.25	0.837	24.48	0.964
9.5 /0	750	750000	380.031	0.5890	22.00	0.866	25.37	0.999
9.7 /0	800	800000	405.366	0.6283	22.72	0.894	26.21	1.032
10.2 /0	900	900000	456.037	0.7069	24.10	0.949		
10.7 /0	1000	1000000	506.708	0.7854	25.40	1.000	29.29	1.153
11.7 /0	1250	1250000	633.384	0.9817	28.40	1.118	32.74	1.289
12.4 /0	1500	1500000	760.061	1.1781	31.11	1.225	35.89	1.413
13.1 /0	1750	1750000	886.738	1.3744	33.60	1.323		
13.7 /0	2000	2000000	1013.415	1.5708	35.91	1.414	41.45	1.632

### Conductor Cross-Sectional Area

Nominal. Cross Sectional Area (mm <sup>2</sup> )	Conductor O.D.		Nominal. Cross Sectional Area (mm <sup>2</sup> )	Conductor O.D.	
	mm	Inch		mm	Inch
0.5	0.80	0.031	95	12.60	0.496
1.0	1.13	0.044	120	14.21	0.559
1.5	1.38	0.054	150	15.75	0.620
2.5	2.01	0.079	185	17.64	0.694
4	2.55	0.100	240	20.25	0.797
6	3.12	0.122	300	22.68	0.892
10	4.05	0.159	400	25.65	1.009
16	5.10	0.200	500	28.80	1.133
25	6.75	0.265	630	32.76	1.289
35	7.65	0.301	800	37.05	1.458
50	8.90	0.350	1000	41.60	1.637
70	10.70	0.421			

## Common Conversions Table

### Metric to Imperial Conversions Table

Type	Convert From	Symbol	Multiply By	Convert To	Symbol
Length	millimetres	mm	0.03937	inches	in
	centimetres	cm	0.3937	inches	in
	metres	m	3.3	feet	ft
	metres	m	1.1	yards	yd
	kilometres	km	0.6	miles	mi
	inches	in	2.54	centimetres	cm
	feet	ft	30.48	centimetres	cm
	yard	yd	0.9	metres	m
	miles	mi	1.6	kilometres	km
Area	square centimetres	cm <sup>2</sup>	0.16	square inches	in <sup>2</sup>
	square metres	m <sup>2</sup>	1.2	square yards	yd <sup>2</sup>
	square kilometres	km <sup>2</sup>	0.4	square miles	mi <sup>2</sup>
	hectares (10,000 m <sup>2</sup> )	ha <sup>2</sup>	2.5	acres	ac
	square inches	in <sup>2</sup>	6.5	sq. centimetres	cm <sup>2</sup>
	square feet	ft <sup>2</sup>	0.09	square metres	m <sup>2</sup>
	square yard	yd <sup>2</sup>	0.8	square metres	m <sup>2</sup>
Weight	grams	g	0.035	ounce	oz
	kilograms	kg	2.2046	pounds	lb
	tonnes (1,000 kg)	t	1.1	short tons	ton
	ounces	oz	28.3495	grams	g
	pounds	lb	0.45	kilograms	kg
Volume	millilitres	ml	0.03	fluid ounces	fl oz
	litres	l	2.1	pints	pt
	litres	l	1.06	quarts	qt
	litres	l	0.26	gallons	gal
	cubic metres	m <sup>3</sup>	35.314	cubic feet	ft <sup>3</sup>
	cubic metres	m <sup>3</sup>	1.3	cubic yards	yd <sup>3</sup>
	teaspoons	tsp	5	millimetres	ml
	tablespoons	tbsp	15	millimetres	ml
	fluid ounces	fl oz	30	millimetres	ml
	cups	c	0.24	litres	l
	pints	pt	0.47	litres	l
	quarts	qt	0.95	litres	l
	gallons	gal	3.8	litres	l
	cubic feet	ft <sup>3</sup>	0.03	cubic metres	m <sup>3</sup>
cubic yards	yd <sup>3</sup>	0.76	cubic metres	m <sup>3</sup>	
Pressure	mega pascal	MPa	10	barometric	bar
	pounds per square inch	PSI	0.07	barometric	bar
Force	kilogram force	kgf	9.8	newtons	N
Temperature	fahrenheit	°F	-32 then x 5/9	celsius	°C
	celsius	°C	Divide by 5/9 then +32	fahrenheit	°F



### Fractions - Decimal - mm Conversion Chart

Fractions	Decimal	Millimetres	Fractions	Decimal	Millimetres	Fractions	Decimal	Millimetres
1/64	0.0156	0.3969	11/32	0.3438	8.7313	43/64	0.6719	17.0656
1/32	0.0313	0.7938	23/64	0.3594	9.1281	11/16	0.6875	17.4625
3/64	0.0469	1.1906	3/8	0.3750	9.5250	45/64	0.7031	17.8594
1/16	0.0625	1.5875	25/64	0.3906	9.9219	23/32	0.7188	18.2563
5/64	0.0781	1.9844	13/32	0.4063	10.3188	47/64	0.7344	18.6531
3/32	0.0938	2.3813	27/64	0.4219	10.7156	3/4	0.7500	19.0500
7/64	0.1094	2.7781	7/16	0.4375	11.1125	49/64	0.7656	19.4469
1/8	0.1250	3.1750	29/64	0.4531	11.5094	25/32	0.7813	19.8438
9/64	0.1406	3.5719	15/32	0.4688	11.9063	51/64	0.7969	20.2406
5/32	0.1563	3.9688	31/64	0.4844	12.3031	13/16	0.8125	20.6375
11/64	0.1719	4.3656	1/2	0.5000	12.7000	53/64	0.8281	21.0344
3/16	0.1875	4.7625	33/64	0.5156	13.0969	27/32	0.8438	21.4313
13/64	0.2031	5.1594	17/32	0.5313	13.4938	55/64	0.8594	21.8281
7/32	0.2188	5.5563	35/64	0.5469	13.8906	7/8	0.8750	22.2250
15/64	0.2344	5.9531	9/16	0.5625	14.2875	57/64	0.8906	22.6219
1/4	0.2500	6.3500	37/64	0.5781	14.6844	29/32	0.9063	23.0188
17/64	0.2656	6.7469	19/32	0.5938	15.0813	59/64	0.9219	23.4156
9/32	0.2813	7.1438	39/64	0.6094	15.4781	15/16	0.9375	23.8125
19/64	0.2969	7.5406	5/8	0.6250	15.8750	61/64	0.9531	24.2094
5/16	0.3125	7.9375	41/64	0.6406	16.2719	31/32	0.9688	24.6063
21/64	0.3281	8.3344	21/32	0.6563	16.6688	63/64	0.9844	25.0031
						<b>1</b>	1.0000	25.4000

### Metric Units and Conversions

Abbreviations	Means	Multiply Unit By	OR
p	pico	.000000000001	10 <sup>-12</sup>
n	nano	.000000001	10 <sup>-9</sup>
μ	micro	.000001	10 <sup>-6</sup>
m	milli	.001	10 <sup>-3</sup>
.	Unit	1	10 <sup>0</sup>
k	kilo	1,000	10 <sup>3</sup>
M	mega	1,000,000	10 <sup>6</sup>
G	giga	1,000,000,000	10 <sup>9</sup>

## Electrical & Communication Conduit Specification

### PVC Conduit/Pipe Specification Chart

Nominal Conduit Size (mm)	Conduit Type	Conduit OD (mm)	Conduit Wall Thickness (min)	Conduit ID (min)
16	16mm MD Power	16.00	1.75	12.50
20	20mm HD Power	20.00	2.45	15.10
20	20mm NBN Comms	26.75	1.70	23.35
25	25mm HD Power	25.00	2.65	19.70
25	25mm Comms (Austel)	25.00	1.85	21.30
32	32mm HD Power	32.00	2.85	26.30
32	32mm Comms (Austel)	32.00	2.30	27.40
40	40mm HD Power	40.00	3.25	33.50
50	50mm HD Power	50.00	3.65	42.70
63	63mm HD Power	63.00	4.20	54.60
63	63mm (Iplex Coil Ref)	63.30	5.00	55.30
80	80mm HD Power	80.00	4.95	70.10
100	100mm HD Power	114.2	6.30	101.6
100	100mm NBN Comms	114.2	5.50	103.2
125	125mm HD Power	140.0	7.65	124.7
150	150mm HD Power	160.0	8.80	142.4
200	200mm HD Power	225.0	9.20	206.6

### Common Australian Voltage Levels

#### Network Voltage Levels - 415V to 500kV

Phase to Phase or Line Voltage	Phase to Earth or Phase Voltage	UNIT	Voltage Value	USAGE
415	240	Volts (V)	Low Voltage (LV)	Customer Installations (historical)
400	230	Volts (V)	Low Voltage (LV)	Customer Installations (converting to align with European standard)
11	6.4	kiloVolts (kV)	High Voltage (HV)	Urban & Rural HV Distribution
22	12.7	kiloVolts (kV)	High Voltage (HV)	
22	12.7	kiloVolts (kV)	High Voltage (HV)	Rural SWER (Single Wire Earth Return)
33	19.1	kiloVolts (kV)	High Voltage (HV)	Rural SWER (Single Wire Earth Return)
33	19.1	kiloVolts (kV)	High Voltage (HV)	Sub-Transmission of High Voltages over middle distances
66	38.1	kiloVolts (kV)	High Voltage (HV)	
110	63.5	kiloVolts (kV)	High Voltage (HV)	
132	76.2	kiloVolts (kV)	High Voltage (HV)	
220	127.0	kiloVolts (kV)	Extra High Voltage (EHV)	Transmission of High Voltages over long distances
275	158.8	kiloVolts (kV)	Extra High Voltage (EHV)	
330	190.5	kiloVolts (kV)	Extra High Voltage (EHV)	
500	288.7	kiloVolts (kV)	Extra High Voltage (EHV)	

# IP (Ingress Protection) Ratings Guide

## IP (Ingress Protection) against Dust, Solid objects & Water



PROTECTION AGAINST	No protection 0	Vertical water drip 1	Tilted water drip 2	Spray water 3	Splash water 4	Jet water 5	Strong Jet of water 6	Temporary immersion 7	Lasting immersion 8	Close, powerful, high temp water jet 9
	IP00	IP01	IP02	IP03	IP04	IP05	IP06	IP07	IP07	
 Solid object ≥50mm	IP10	IP11	IP12	IP13	IP14	IP15	IP16	IP17	IP18	
 Solid object ≥12mm	IP20	IP21	IP22	IP23	IP24	IP25	IP26	IP27	IP28	
 Solid object ≥2.5mm	IP30	IP31	IP32	IP33	IP34	IP35	IP36	IP37	IP38	
 Solid object ≥1mm	IP40	IP41	IP42	IP43	IP44	IP45	IP46	IP47	IP48	
 Dust protected	IP50	IP51	IP52	IP53	IP54	IP55	IP56	IP57	IP58	
 Dust proof	IP60	IP61	IP62	IP63	IP64	IP65	IP66	IP67		IP69K

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