

Electric Vehicle Safety Equipment

Safety Equipment for carrying out work on electric vehicles including maintenance, repair, modification, disposal and accident recovery

Electric vehicles (EVs) typically operate at much higher voltages than other battery-powered industrial equipment such as golf carts, forklifts and elevating work platforms (EWPs). As such they can create several unique hazards. This is particularly the case with heavy vehicles such as freight trucks, mining equipment and buses which may operate at higher voltages than passenger vehicle.

TEN has put together a range of Electric Vehicle (EV) safety and maintenance equipment, guided by the requirements of the Australian Standard AS 5732:2015 Electric vehicle operations – Maintenance and repair

Create a personalised kit including a carry bag to suit components or purchase items individually



Electric Vehicle Safety Clothing Arc-Flash Overalls - 12 Cal

Honeywell
SALISBURY

- The SALISBURY Pro-Wear® 12 cal/cm² coverall is made from a 9oz FR cotton material, sewn with Nomex® thread
- 2-ply Nomex® wristlets
- FR hook and pile closures

- Full cut pattern with set-in sleeves for better fit
- Expansion back eases in wear and movement

Part No.	Size	Rating Cal/cm ²	Standards
ACCA11BL-*	M, L, XL, 2XL, 3XL	12	Meets ASTM F1506 & NFPA 70E



Face Shield & Helmet Protection - 12 cal

- 190 x 510mm viewing area
- 15mm thick

Part No.	Specifications	Wt (kg)
AS1200HAT-SPL	ATPV rating 12cal/cm ² Arc Flash Protection Prismshield Face Shield with Hard hat	2.7



Arc Flash Goggles - 12 cal

High Performance Arc Flash Goggles with nose shield, designed for Arc Flash Protection. Must be worn with rated protective Hood (balaclava)

Part No.	Specification/Standards	Wt (g)
510-ARC-SN-12	ATPV rating 12cal/cm ² / ANSI Z87.1, ASTM F2178	205



Hood, Protective (Balaclava) - 20 Cal

Salisbury's Arc Flash Rated Hoods (Balaclava) create 360° head and neck protection from arc flash dangers when used with a AS1200 Series Face Shield/Hard Hat.

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	Wt (g)
AFHOOD20	20 cal/cm ² Protection	227

Rubber Glove Accessories



Glove Cleaner

A specially formulated cleaner for removing GREASE – DIRT – CARBON

- Harmless to rubber
- Environmentally friendly
- Non-toxic & non-corrosive

Part No.	Description
RBG-D72	Dispenser of 72 saturated wipes



Glove Dust/Talc

Powder for use with rubber gloves

- Absorbs moisture and perspiration
- Manufactured from Corn Starch

Part No.	Description	Size (g)
10-4CS-ES	Talc Dispenser	0.14
10-4-4QT-ES	Talc refill pack	4.5



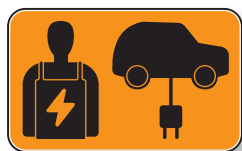
Glove Inflator Test Kit

Inflate, Test & Inspect Electrical Insulating gloves in the field (Gloves must be inspected before each use - AS5732:2015)

Simple, easy-to-use and portable

Part No. G99





Electric Vehicle Safety Clothing (cont.)

1000V Insulating Latex Gloves - 12 Cal Arc Flash Rated

Insulating Gloves protect from electrical current, and are worn any time work is performed on equipment with a high voltage electrical source. (In reference to AS5732:2015-1.4 Definitions & Acronyms. - High Voltage (HV) is a voltage that exceeds 50VAC or 120VDC)

- Protection from an electrical arc flash 12 cal/cm²
- Soft, supple, durable and ergonomic with high flexibility

Part No.	Working Voltage (V)	ASTM Class	Sizes	Glove Colour Outer/Inner	Length (mm)	ASTM Label Colour
CGM-0-*	1000	0	7-12	Orange/Natural	360	Red

*Add size suffix when ordering

Cotton Liners - Inners

Cotton Liners are worn under the insulating glove for warmth in cold weather and to absorb perspiration in hot weather and to ensure easy removal of the insulating gloves. Glove liners should be regularly replaced, limiting the bacteriological problems associated with residual moisture due to perspiration

- 100% cotton
- Reversible - fit either hand
- Stretch comfort fit



Part No.	Pack QTY	Description	Length (mm)	Feature
VG-13820-PK	12 pair	Short	220	Normal Cuff
VG-10822-PK	12 pair	Long	300	Extended Cuff

Leather Outers Gloves - Salisbury

Protective outer gloves worn over insulating gloves to prevent mechanical damage

- Glove protectors offer excellent comfort and protection
- Feature adjustable straps with non-metallic buckles
- Manufactured from imported goatskin

Honeywell
SALISBURY

Part No.	Sizes	Length (mm)
ILPG 10A-*	7-7.5, 8-8.5, 9-9.5, 10-10.5, 11-11.5, 12-12.5, Dual Size	250

*Add size suffix when ordering. e.g. ILPG 10A-9-9.5

Electric Vehicle Safety Matting & Drapes

Rubber Mats - Class 0 - 1000V

The mat insulates the operator from the ground to avoid electrical shock due to direct contact with potentially live electrical parts

Features

- Mats are hard wearing, non-slip and easily cleaned using a mild detergent
- Anti-fatigue nature, comforting feet while standing for prolonged periods
- Electrically tested & marked every 300mm with class working voltage & AS/NZ standard
- 10m lengths can be cut to size

Part No.	Standard	Dimensions	Thickness	Weight
MAT0-1MX10M-ASNZ	AS/NZS IEC61111:2020	1m x 10m	2.2mm	33kg
MAT0-1MX1M-ASNZ		1m x 1m		3.3kg

Rubber Drapes - Class 1 - 650V

The drape insulates the operator from metal vehicle parts to avoid electrical shock due to direct contact with potentially live electrical parts

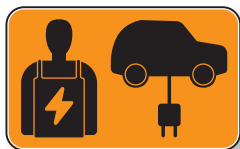
- 2 colours assist in visual damage identification
- Sized to customers requirement. Fastener include - Stud, Velcro & Magnet
- Flame, Type II - Oil resistant
- Fabric reinforced, puncture & tear resistant
- Manufactured to ASTM F2320

ASTM Class 0

Working Voltage: 1 kVAC-1.5kVDC
Proof Voltage: 5kV
Withstand Voltage: 10kV



Rolls of insulating material available upon request.



Electric Vehicle Safety Equipment Storage

Glove Bag - 1 Pocket

For the storage of Insulating Gloves, to keep their natural shape.

Insulating gloves should not be stored folded or compressed

Insulating gloves shall be stored in a bag, box or container designed for and used exclusively for them (AS5732:2015 - 4.2.2.2)

- Velcro flaps and s/steel snap hook to clip to belt
- Tapered shape with bound edges



S/Steel snap hook

Part No.	Dimensions (mm)	Wt (kg)
TENM408	460 (L) x 200 (W) x 100 (D)	0.5

Mat or Drape Storage Roll

- Heavy Duty PVC Roll - Yellow
- Webbing carry handle
- Use for storage of round mats or vehicle drapes

**Perfect
for storing
mats**

Part No.	Dimensions (mm)	Wt (kg)
MATBAG	1135 (L) x 1050 (W)	0.8

Cotton Storage Bag for Arc Flash helmets

**Honeywell
SALISBURY**

EV PPE should be kept in dedicated protective storage

Part No.	Description
ASBAG	Cotton canvas storage bag w/ drawstring closure & fleece interior

EV Safety Equipment Bags - PVC

Contact TEN to select a protective carry bag to accommodate your kit components

EV PPE should be kept in dedicated protective storage

- Made from strong, lightweight 600gsm, tear proof PVC
- TENM521 Velcro waterfall flap over heavy duty double lock easy slide zip
- TENM521 Clear internal document pocket (in lid) & clear external identity pocket
- Webbing shoulder strap
- Can be mark with description or your company logo

Part No.	Colour	Length (mm)	Wt (kg)
TENM407	Safety Orange	440 (L) x 330 (H) x 230 (W)	1.5
TENM521	Safety Yellow	410 (L) x 430 (H) x 190 (W)	0.8
TENM525	Safety Yellow	460 (L) x 260 (H) x 120 (W)	0.5

Electric Vehicle Rescue Kits

EV Rescue Kit

TEN's EV rescue kit is used for the safe rescue of victims who suffer electric shock or other injuries when working on Electric Vehicles.

EV Rescue kit includes:

Insulated Gloves, Pair - 1000V Class "0" Size 11
Rescue Hook - Insulated PVC
Torch
Fire Blanket 1.2m x 1.8m
Thermal Shock Blanket

Bandage, Multi-Trauma Dressing 250 x 750mm
CPR Mask
CPR Wallet Card
Yellow PVC bag with dividers & shoulder strap
Card listing contents and "Next Test Date"



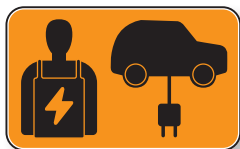
TENM407



TENM525



EV Rescue Kits can be customised to customer specifications



Electric Vehicle Test Equipment

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 5732:2015-4.4.10



Part No.	Safety Category	Dimensions	Battery	Weight
ET600	CAT III 1000V	210.5mmL x 91.2mmW x 58.9mmH	6 x AA	0.6kg

EV Capacitor Discharge Stick - Hastings

Safely drains capacitive charge after a circuit has been de-energised

- Insulating stick with hand-guard and rubber end cap
- Stainless steel hook
- Earth lead included
- Supplied with or without clamp

Available for EV's not fitted with an active discharge circuit

Part No.	Stick Length/OD	Hook Opening/OD	Lead Length	Wt
A1004-CLCM	600/32mm	34.9/6.35mm	1.2mm	1.2kg

Klauke®
Insulated Tools
provide a
safer option

Electric Vehicle 1000V Insulated Tools

1000V Insulated Battery Powered Cutters - Klauke

Cutting of live high voltage cables may be required when isolating a circuit on an EV

- 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



MEETS
IEC 60900

- 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.



ES20ISM

20mm Cutter

Cuts
Cu, Al
& ACSR



ESM25ISM

25mm Cutter

Klauke®
NEXT
GENERATION



ES32ISM

32mm Cutter

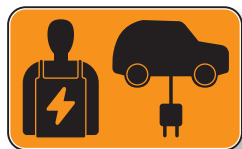
Cuts
Cu & Al



ESM50ISM

50mm Cutter

Contact TEN for further information or data sheets on the above 1000V insulated battery tools



Electric Vehicle 1000V Insulated Tools (cont.)



**MEETS
IEC 60900**



Long Nose Pliers

- Long straight & bent nose half-round pliers
- Fully insulated pliers to limit any risk of short-circuits
- Induction hardened, diagonal cutting edges



Part No.	Style	Length (mm)	Wt (g)
D22C-200I	Bent	205	245
D22D-200I	Straight	205	270

Cutters

- 1000V Insulated
- Hardened cutting edge for clean cuts
- Insulated to limit any risk of short-circuits



Part No.	Style	Length (mm)	Wt (g)
D3-180I	Diagonal	185	400
D18-220	Cocky Beak	220	400

Shifters

- 1000V insulated
- Invisible slip joint
- Chrome vanadium steel, easy jaw roller



Part No.	Length (mm)	Opening (mm)	Wt (g)
D19-200	210	24	310
D19-250	260	28	510
D19-300	310	34	770

Single Open Ended

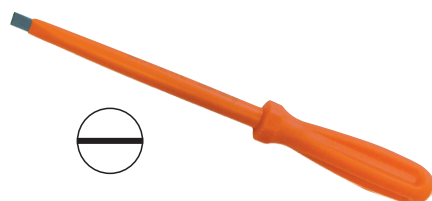
- Single open-end wrench
- Made from forged steel, vanadium chrome steel.
- Chamfer makes it easier to position



Part No.	Length (mm)	Size (mm)	Wt (g)
D14-10	110	10	35
D14-11	110	11	40
D14-12	125	12	50

Flat Blade

- 1000V insulated - conforms to CEI 900, NF EN 60900
- ISO 2380:D23/TB
- Vanadium chrome steel



Part No.	Shaft Length (mm)	Width (mm)	Wt (g)
TB-6.5X150	150	6.5	115
TB-8X150	150	8.0	155

Phillips Head

- 1000V insulated - conforms to CEI 900, NF EN 60900
- ISO 8764:CRU
- Vanadium chrome steel



Part No.	Shaft Length (mm)	Width (mm)	Wt (g)
CRU-6X125	125	6	110
CRU-8X150	150	8	155

**A wide range of additional 1000V Insulated tools are available.
Contact TEN for further information.**



Electric Vehicle 1000V Insulated Tools (cont.)



**MEETS
IEC 60900**



Reversible Ratchet Wrenches - 1/2" Drive

- Highly resistant insulating materials
- Precision tightening
- Reversible



Available in 3/8" Drive



Torque Wrench
8-60Nm

Part No.	Length (mm)	Style	Wt (g)
C2501VM	262	1/2" Drive Standard	630
CD8-60R-12	310	1/2" Drive Torque	1000

Socket Extension 1/2" Drive

- Vanadium chrome steel
- 1/2" square drive



Available in 3/8" Drive

Part No.	Length (mm)	Wt (g)
R250-125	125	200
R250-250	250	400

Deep Socket - 1/2" Drive - 12 Point

- Vanadium chrome steel
- 1/2" square drive
- Long Socket



**Customise
your own set
in 3/8" or 1/2"
Drive**

Available in 3/8" Drive

Part No.	Size (mm)	Length (mm)	Wt (g)
DL250-12P-10	10	91	130
DL250-12P-12	12	91	150
DL250-12P-13	13	91	150
DL250-12P-14	14	91	155

Hex Allen Key - 1/2" Drive

- Vanadium chrome steel
- 1/2" square drive
- 15mm Hex length



Available in 3/8" Drive

Part No.	Size (mm)	Hex Length (mm)	Wt (g)
M250-4	4	15	75
M250-5	5	15	75
M250-6	6	15	80
M250-8	8	15	85

Curved Knife

- Treated steel curved blade
- Excellent cutting quality - stays sharp.



Sheath (ETUID1001)

Part No.	Length (mm)	Blade Length (mm)	Wt (kg)
D1001	200	60	0.15

Insulated Battery Terminal Brush

- Replaceable Stainless Steel brush (BC50)
- Suitable for Live use



Replacement Brush



Part No.	Size (mm)	Length (mm)	Wt (g)
BCB50	60(OD)	115	365

**Personalised kits available including socket & screwdriver sets & storage solutions.
Contact TEN for further information.**

