

ELECTRIC MOBILITY

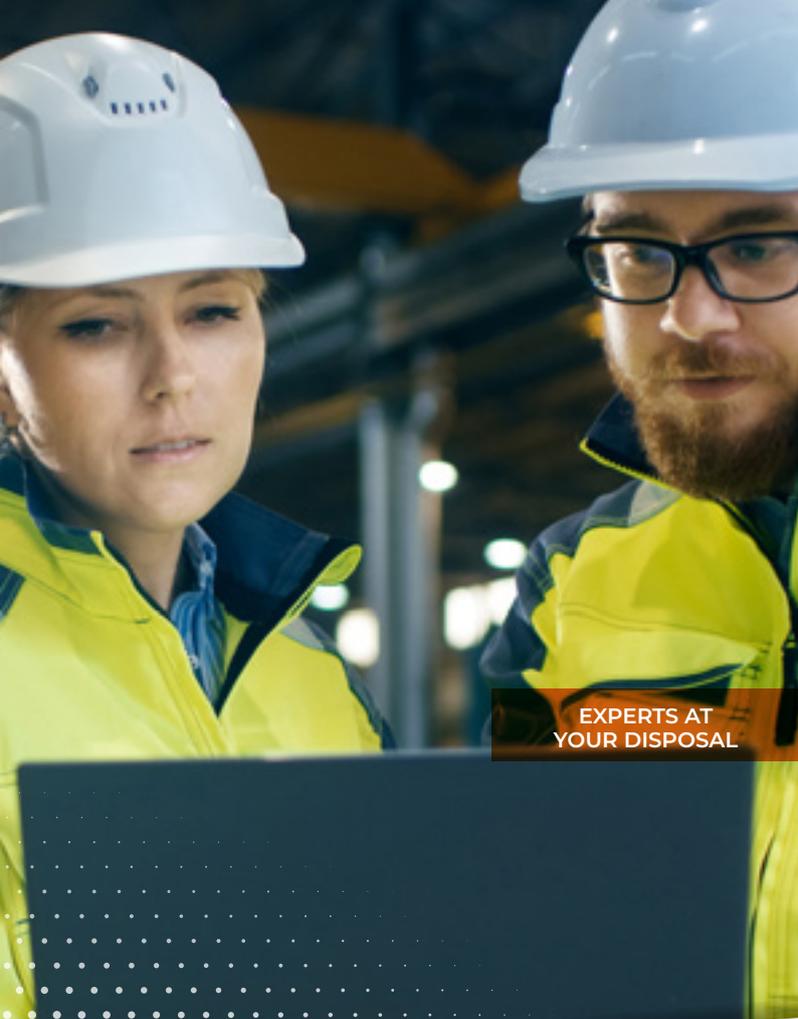
SECURITY & PROTECTION

CATALOGUE 2023



PENTA
ELECTRICAL SAFETY PRODUCTS

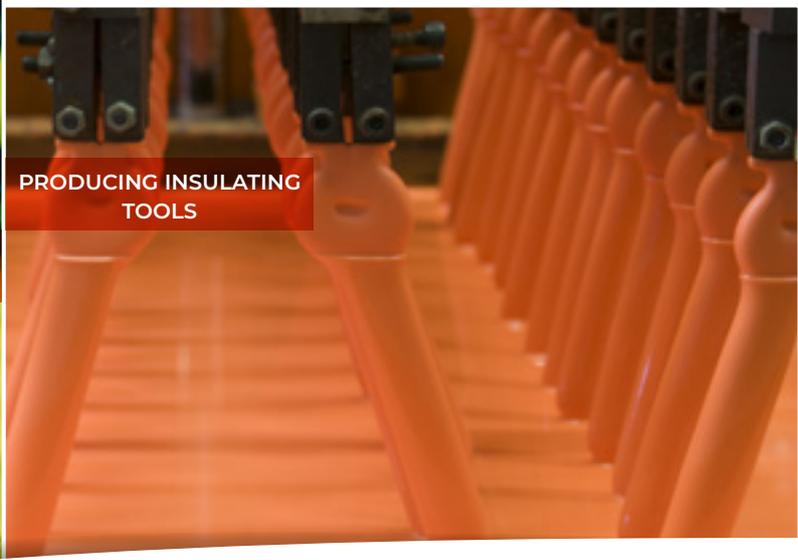
Your life,
Our work.



EXPERTS AT
YOUR DISPOSAL



ONE OF OUR 14 FACTORIES



PRODUCING INSULATING
TOOLS

“ *The future is electric!* ”

EDITORIAL

Across the planet, the number of electric vehicles on the road has exceeded 8 million! Add to that new generation of trucks, buses and other electric equipment, and you will see why batteries are being charged.

Energy that needs to be tamed

But some precautions are indispensable: electricity is invisible, silent and odourless, yet leads to accidents every day!
That is where our expertise comes in.

Why you can trust ESP

- We design and manufacture products, and have mastery over our technology since the 1950s
- We are pioneers of electrical safety, who know the market and operate all over the world

- We have design departments in each plant, to create, develop and research new products
- We draw on a responsive sales team, which is close to customers
- Our vision of after-sales service encompasses delivery, advice and training in our products
- We can offer you regular monitoring and periodic inspections of your products on test benches

Products that have been developed carefully to combine safety and efficiency.

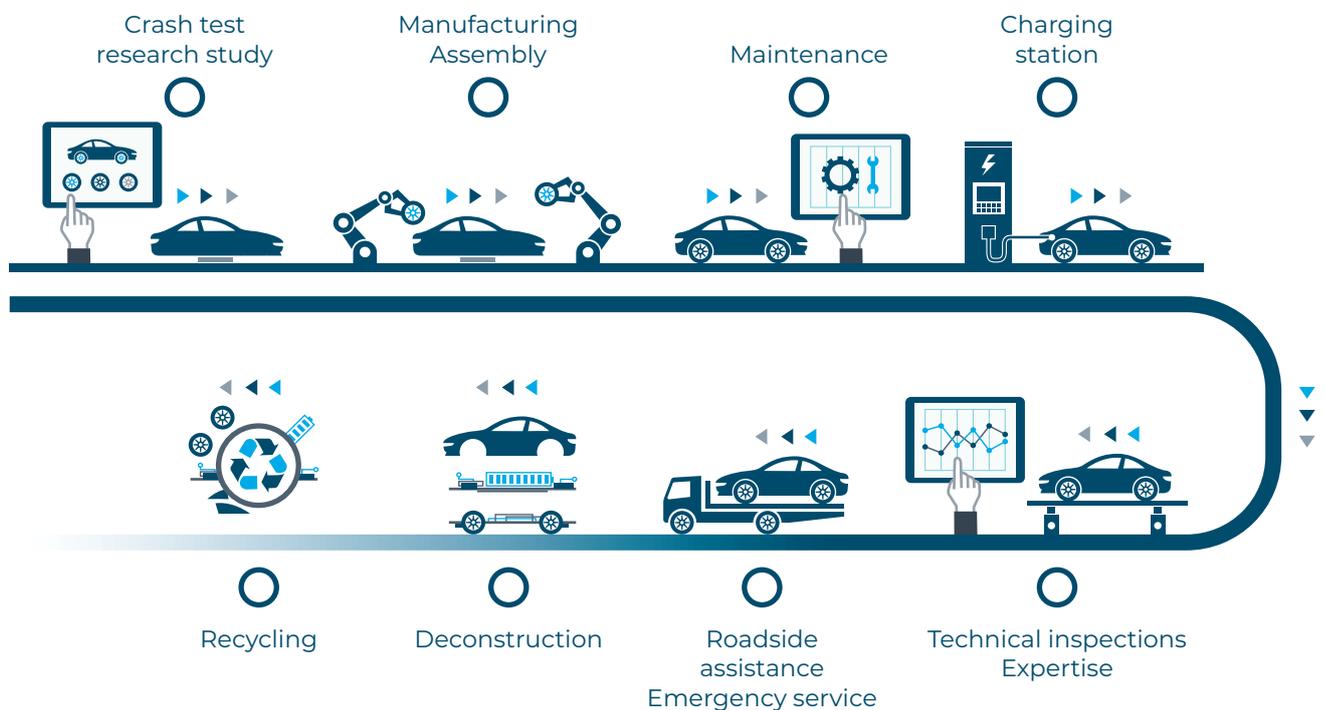
We build solutions for safety and performance



SUPPORTING YOU IN THE CONVERGENCE AND TRANSFORMATION OF YOUR TRADE



OUR RANGE COVERS THE WHOLE LIFE CYCLE OF A VEHICLE



LIMITS FROM WHICH APPROVAL IS REQUIRED:



Approval required:

if **AC** (alternating) voltage above **25V**
if **DC** (direct) voltage above **60V**

⚡ Risk of electric shocks ⚡



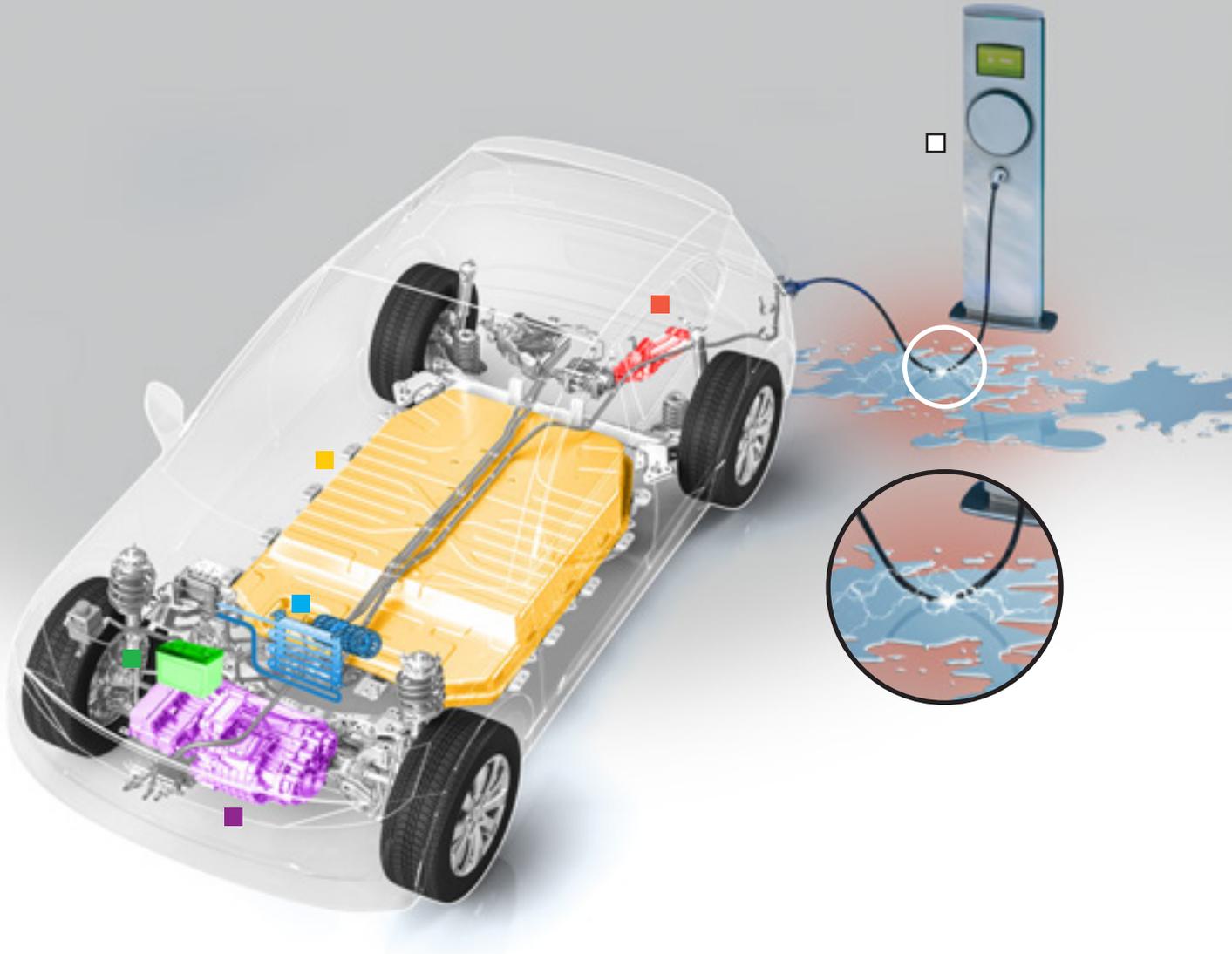
Approval required:

If battery capacity above 180Ah

⚡ Risk of burning due to short circuits ⚡

THE NEED FOR PROTECTION

MANY AND VARIED SOURCES OF VOLTAGE



Drive motor
Voltages above
300VAC

Drive battery
Voltages generally ranging
from 300V to 800VDC

Support battery
Voltage 12VDC

**Systems
for heating
and air-conditioning**
Voltages above 300VAC

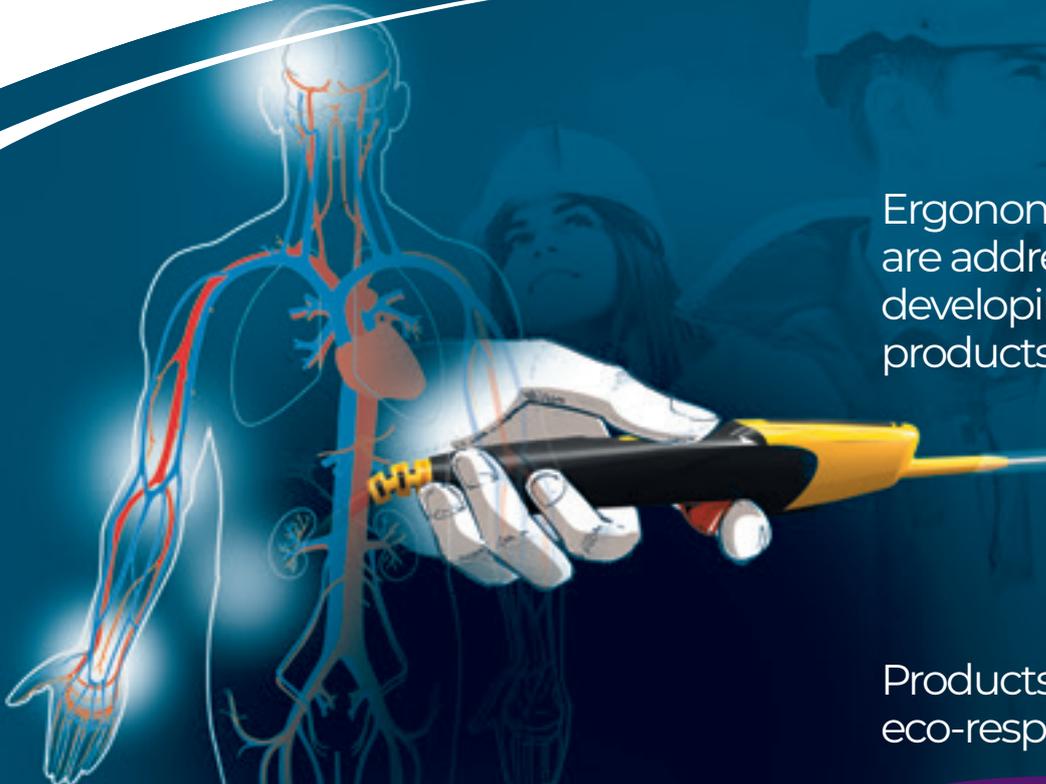
**On-board charger
(or OBC)**
It converts the alternating
current supplied by a
household socket into
240VDC direct current

Charging station
Two types of charge may be supplied by
charging stations:

The vehicle is supplied with AC voltage
(In that case, the OBC of the vehicle
converts AC voltage into DC voltage).

**The vehicle is directly supplied
with DC voltage.**
The power supplied by the station may be
high, significantly reducing the charging
time (these may for instance be useful on
motorway stations)
240V/400V voltages

OUR VALUES AND COMMITMENTS



Ergonomics issues are addressed while developing our products

Products that are eco-responsible



Participation in French and international standardisation activities





PROTECT



SECURE



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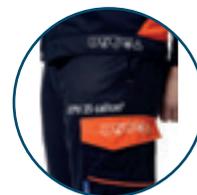
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PPE

PERSONAL
PROTECTIVE EQUIPMENT





**Protective helmet with integrated face shield
TC42ES**

HELMET: EN 397 / EN 50365 1000 V
SHIELD: EN 166 / EN 167 / EN 168 / EN 170
HELMET AND SHIELD: GS-ET-29



Part no	Description	Weight (g)
TC42ESBB	White E Shark helmet with white crash box	728
TC42ESBBL	White E Shark helmet with blue crash box	
TC42ESBJ	White E Shark helmet with yellow crash box	
TC42ESBR	White E Shark helmet with red crash box	
TC42ESBV	White E Shark helmet with green crash box	



Accessories	Description
HOUTC42	Carry bag for helmet
S952SAFE	Head lamp with two LEDs



**Face shield with head band and brow guard
E24**

EN 166 (SYMBOL 8 ELECTRIC ARC RESISTANCE), EN 167, EN 168, EN 170

PROTECTION FOR THE EYES, FACE AND TOP OF THE HEAD FROM SHORT-CIRCUIT ARC FLASHES.



Caution! Eyeglasses do not protect from short-circuit arc flashes



Insulating latex gloves **GLE**

EN 60903 / CEI 60903

 Use with leather over gloves for mechanical protection

Part no	Class	Max usage voltage	Length (cm)	Available sizes	Categories
GLE36 00	00	500 V AC	36	6 to 12	AZC
GLE36 0	0	1 000 V AC	36	6 to 12	AZC

Complete the part number with the required size



Insulating COMPOSITE gloves **GICN**

EN 60903 AND CEI 60903

 Two in one: insulation + mechanical protection

Part no	Class	Max usage voltage	Length (cm)	Available sizes	Categories
GICN36 00	00	500 V AC	36	7-12	RC
GICN-BT/*	0	1 000 V AC	41	7-12	RC

Complete the part number with the required size



ARC-FLASH insulating COMPOSITE gloves **AFG**

EN 60903 AND CEI 60903

 Three in one: insulation + mechanical protection + arc flash

Part no	Class	Max usage voltage	Length (cm)	Available sizes	Categories	IEC 61482-1-2	ARC 4>40 (cal/cm ²) ASTM F2675
AFG36-00	00	500 V AC	36	6-12	RC	Class 2 (0.5s-7kA)	26.3 cal/cm ²
AFG41-0	0	1 000 V AC	41	6-12	RC		71.6 cal/cm ²

Complete the part number with the required size



**Leather outer glove for latex gloves
RGX-SG**

EN 420/EN 388 (WITH MECHANICAL RESISTANCE: ABRASION 2 - CUTTING 1 - TEARING 2 - PIERCING 2)

THESE OFFER MECHANICAL PROTECTION.



Part no	Size
RGX-SGA	A
RGX-SGB	B
RGX-SGC	C
RGX-SGD	D
RGX-SGE	E
RGX-SGF	F
RGX-SGG	G

		Class of latex gloves	
		00	0
Size of latex gloves (GLE)	7	A	A
	8	B	B
	9	B	B
	10	C	C
	11	D	D
	12	E	E



**Glove box
RGX-BGT**

ACCOMMODATES INSULATING GLOVES, LEATHER OUTER GLOVES AND A BOTTLE OF TALC.

MAY BE USED MOUNTED ON A WALL OR AS A CARRY BOX (WITH ITS FOLDING HANDLE).

SPECIFICATIONS

- Dimensions : 50 x 25 x 10 cm





Protective case for insulating gloves **TS10**

SPECIFICATIONS

- Dimensions : 450 x 180 x 70 mm



Cleaner for insulating gloves **RGX-1704**

DEVELOPED SPECIFICALLY FOR CLEANING RUBBER THOROUGHLY AND REMOVING DIRT AND DUST. WIPING WITH MICROFIBRE CLOTH OR SINGLE-USE CLOTH IS RECOMMENDED.

SPECIFICATIONS

- 750 ml spray can



Pneumatic tester for insulating gloves **TV10**

IT IS USED FOR CHECKING THE INTEGRITY OF INSULATING GLOVES BEFORE USE.

SPECIFICATIONS

- Visual inspection by inflation, according to the recommendations of standard 60903 (EN and IEC).



SIZE CORRESPONDENCE

FOR EACH GARMENT, USERS ARE ADVISED TO TAKE APPROPRIATE MEASUREMENTS AND REFER TO THE TABLES TO SELECT THE CORRECT SIZE.

Daily Wear range

TROUSERS

Size to order	XS		S		M		L		XL		XXL		3XL	
EU sizes	36	38	40	42	44	46	48	50	52	54	56	58	60	62
Belt measurement (cm)	68 to 72	73 to 76	77 to 80	81 to 84	85 to 88	89 to 92	93 to 96	97 to 100	101 to 104	105 to 108	109 to 112	113 to 116	117 to 120	121 to 124

JACKETS/SUITS

Size to order	XS		S		M		L		XL		XXL		3XL	
Neck measurement (cm)	35 to 36		37 to 38		39 to 40		41 to 42		43 to 44		45 to 46		47 to 48	
EU sizes	36	38	40	42	44	46	48	50	52	54	56	58	60	62
Belt measurement (cm)	78 to 80	81 to 84	85 to 88	89 to 92	93 to 96	97 to 100	101 to 104	105 to 108	109 to 112	113 to 116	117 to 120	121 to 124	125 to 128	129 to 132

Personalisation



CLOTHING PERSONALISED FOR YOUR IMAGE

In order to reinforce the brand image of your company, we offer several personalisation options.

- Addition of the logo of your company by fire-resistant transfer or embroidery
- Choice of the fabric colour, number of pockets, addition or removal of reflective tape.

PLEASE ENQUIRE FOR MORE INFORMATION ABOUT PERSONALISATION OPTIONS.



IEC 61482-2



EN ISO 11612



EN ISO 11611



EN 1149-5



EN 13034

High collar closed with press studs

Dipped hem and raised back for optimum protection

Adjustable cuffs

Standard and ATPV pictograms visible on the clothing

Knee reinforcements

Arc flash jacket and trousers or suit, class 1, ATPV 12 cal/cm² **AFSIB-12**

EN 13034: 2005/EN 1149-5: 2008/EN ISO 11611: 2007/
EN ISO 11612: 2008/IEC 61482-2: 2009 (CLASS 1 AND
ATPV 12 CAL/CM²)

ATEX ZONE

- Fabric composition: 79% cotton, 20% polyester, 1% antistatic fibre, 300 gr/m²

Part no	Description	Available sizes
AFSIB-VES12	Sibille Safe arc flash jacket, class 1, ATPV 12 cal/cm ²	XS to 3XL
AFSIB-PAN12	Sibille Safe arc flash trousers, class 1, ATPV 12 cal/cm ²	XS to 3XL
AFSIB-COM12	Sibille Safe arc flash suit, class 1, ATPV 12 cal/cm ²	XS to 3XL

Complete the selected part number with the required size.

Textile belt in fire-retardant strapping, 40mm **CTI-25**

CLOSURE/ADJUSTMENT WITH AUTOMATIC PLASTIC LOOP.

SPECIFICATIONS

- Min/max waist size: (79/125) cm

Arc flash jacket and trousers or suit, class 2, ATPV 25 cal/cm² **AFSIB-25**

EN 13034: 2005, EN 1149-5: 2008, EN ISO 11611: 2007,
EN ISO 11612: 2008
IEC 61482-2: 2009 (CLASS 2 AND ATPV 25 CAL/CM²)

ATEX ZONE

- Fabric composition: Two layers: 35% modacrylic, 30% cotton, 14% para-aramid, 20% viscose, 1% antistatic

Part no	Description	Available sizes
AFSIB-VES25	Arc flash jacket, 25 cal/cm ² , class 2	XS to 3XL
AFSIB-PAN25	Arc flash trousers, 25 cal/cm ² , class 2	XS to 3XL
AFSIB-COM25	Arc flash suit, 25 cal/cm ² , class 2	XS to 3XL

Complete the selected part number with the required size.

High collar closed with press studs

Dipped hem and raised back for optimum protection

Orange patches to differentiate class 1 from class 2

Knee reinforcements



Arc flash protection parkas, class 2
AFHV-PARKA AFPRO-PARKA

EN 343 2003+A1 2007/EN 14058 2004 CLASS 2.3/EN ISO 14116
 2008 REVISION 3/EN 11612 2009/EN1149-5: 2008/EN13034 2005+A1
 2009/EN 11611 2007: CLASS 2/EN 61482-1-2:2007 CLASS 2

Ideal for roadside assistance workers

Part no	Description	Colour	Available sizes
AFPRO-PARKA	Arc flash parka, class 2, bad weather and cold	Blue	S to 3XL
AFHV-PARKA	Arc flash parka, class 2, high visibility model	Fluorescent yellow and blue	S to 3XL

Complete the selected part number with the required size.



Arc flash polo shirt, 12 cal/cm² class 1,
flame-retardant and antistatic
AFSIBPOLO-12

EN 13034: 2005, EN 1149-5: 2008, EN ISO 11611: 2007,
 EN ISO 11612: 2008
 IEC 61482-2: 2009 (CLASS 2 AND ATPV 25 CAL/CM²)
 ATEX ZONE

SPECIFICATIONS

- Fabric: Cotton – Modacrylic – Viscose – Antistatic
- Available sizes: S to 3XL (complete the selected part number with the required size).



Safety shoes with insulating soles, up to 20 KV
C99-ISOL

EN ISO 20345:2011

FULLY NON-METALLIC

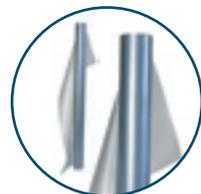
ULTRA-FLEXIBLE ANTI-PERFORATION SOLE.

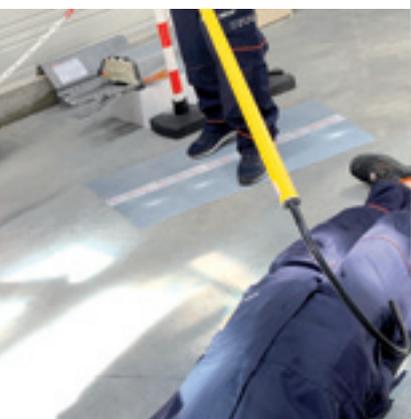
Part no	Description	Sizes
C99B-ISOL	Low safety shoes with insulating soles, up to 20KV	38 to 47
C99H-ISOL	High safety shoes with insulating soles, up to 20KV	38 to 47

Complete the part number with the required size.



TEMPORARY PROTECTION





Insulating mat, class 0 **TTCL0**

IEC 61111: 2009

INSULATES OPERATORS FROM THE FLOOR SO THAT NO ELECTRIC CURRENT FLOWS THROUGH THEM IN CASE OF DIRECT CONTACT OR PACE VOLTAGE.

SPECIFICATIONS

- Maximum usage voltage: 1000 VAC
- Material: Elastomer
- Nominal thickness: 1.5 mm
- Grey colour
- Instructions for use printed on the mat

Part no	Dimensions	Weight
TTCL0 0,6X0,6	0.6 x 0.6 m	0.9 kg
TTCL0 0,6X1	0.6 x 1 m	1.4 kg
TTCL0 1X1	1 x 1 m	2.4 kg
TTCL0 1X10	1 x 10 m	24 kg

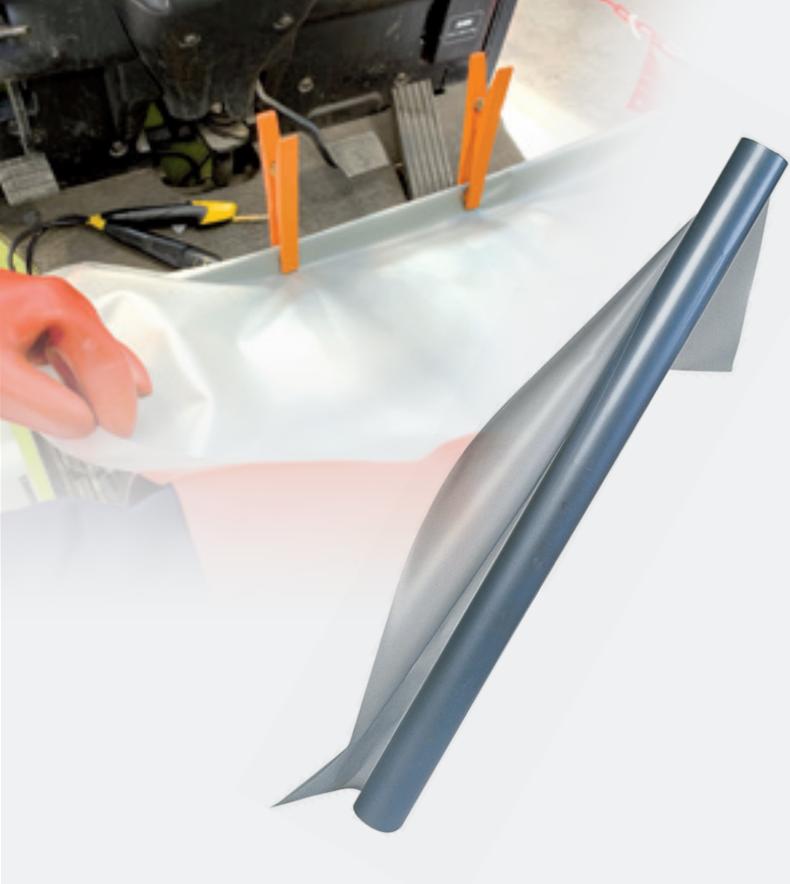


Transport case for insulating mats **HTISAFE**



Transport strap for insulating mats **STISAFE**

ADJUSTABLE, ULTRA LIGHTWEIGHT



Insulating blanket TN05-TN10

IEC 61112 CLASS 0 (1000V)

TEMPORARY INSULATION FOR COVERING INADEQUATELY INSULATED PARTS.

SPECIFICATIONS

Max. usage voltage: 1000 VAC

Part no	Description	Thickness	Length (m)	Width (m)	Weight (kg)
TN05	Insulating blanket, 12.5 m	3/10e	12.5	1.3	0.70
TN10	Insulating blanket, 25 m	3/10e	25	1.3	1.39



Insulating Velcro blanket TN17

ST TST BT 410

INSULATION FOR COVERING CONDUCTIVE PARTS. SEVERAL BLANKETS CAN BE ASSEMBLED TO EACH OTHER.

Part no	Length (m)	Width (m)	Weight (g)
TN17066M	0.66	0.36	60
TN17090M	0.9	0.5	120
TN17120M	1.2	0.8	250



TP60P



TP60PS

Plastic fastening clip TP60P-TP60PS

PLASTIC FASTENING CLIP FOR FIXING TEMPORARY PROTECTIVE BLANKETS ETC.

Part no	Clipping capacity (mm)	Dimensions (mm)
TP60P	25	165 x 18
TP60PS	10	67 x 22



Insulating bag for connector TS20-TS21

Part no	Length (m)	Width (m)
TS20	130	210
TS21	225	305

LV insulating cap for conductor ends TC25 - TC30 - TC35 - TC40 - TC41



Part no	Capacity	Outer diameter (mm)	Max. diameter (mm)	Length (mm)
TC25	3 to 10 mm ²	10	6.5	60
TC30	6 to 35 mm ²	15	11	100
TC35	20 to 70 mm ²	20	15	120
TC40	30 to 100 mm ²	25	20	120
TC41	240 mm ²	35	30	120



SIGNAGE & MARKING





Electric shock first aid poster **S80ALPAS-GB**

POSTER DEPICTING THE PROCEDURE TO APPLY IN RESPONSE TO AN ELECTRICAL INJURY.

PROTECT
ALERT
ASSIST

SPECIFICATIONS

- Poster in screen-printed aluminium, 350 x 500 mm
- 6 holes



Magic Grip electrostatic poster

REPOSITIONABLE (ON SMOOTH AND CLEAN SURFACES)

SPECIFICATIONS

- Each model is sold in sets of 5 in a zipped bag

Part no	Colour	Information	Dimensions (mm)
POSTER - SECURED	Green	System disconnected and locked, secured	300 x 200
POSTER - ACTIVE	Orange	Operating, live, active and electrical hazard	300 x 200
POSTER - DANGER	Red	Live system with fault, danger and electrical	300 x 200





Rectangular electrical no-admission order flag S120E

SPECIFICATIONS

- In fabric with red vinyl coating
- Dimensions: 500 x 350 mm



Banner “Working area boundary - No entry” S85GBC1

SPECIFICATIONS

- Coated fabric banner with two cords in cotton and four eyelets
- Dimensions: 1 x 0.2 m

Triangles warning of electrical hazards - lightning T10 S81A



SPECIFICATIONS

3x Ø 4.5 mm holes with 80 mm centre distance for 100 mm triangles and 180 mm for 200 mm triangles.

Part no	Symbol	Material	Diamètre (mm)
S81AL T10 100	Lightning T10	Aluminium	100
S81 T10 100	Lightning T10	Plastic	100
S81AL T10 200	Lightning T10	Aluminium	200
S81 T10 200	Lightning T10	Plastic	200



The work area must be marked out at least one metre away from the perimeter of the vehicle/equipment or the removed battery.



High-density polyethylene chain **S115**

SPECIFICATIONS

- Supplied in a 25 m bag

Part no	Diameter (mm)	Weight (g)	Colour
S115C8	8	2650	Red and white

Accessories	Description
S115A8	Ø 8 mm split ring, white or red (please specify), which is indispensable for hanging or repairing chains

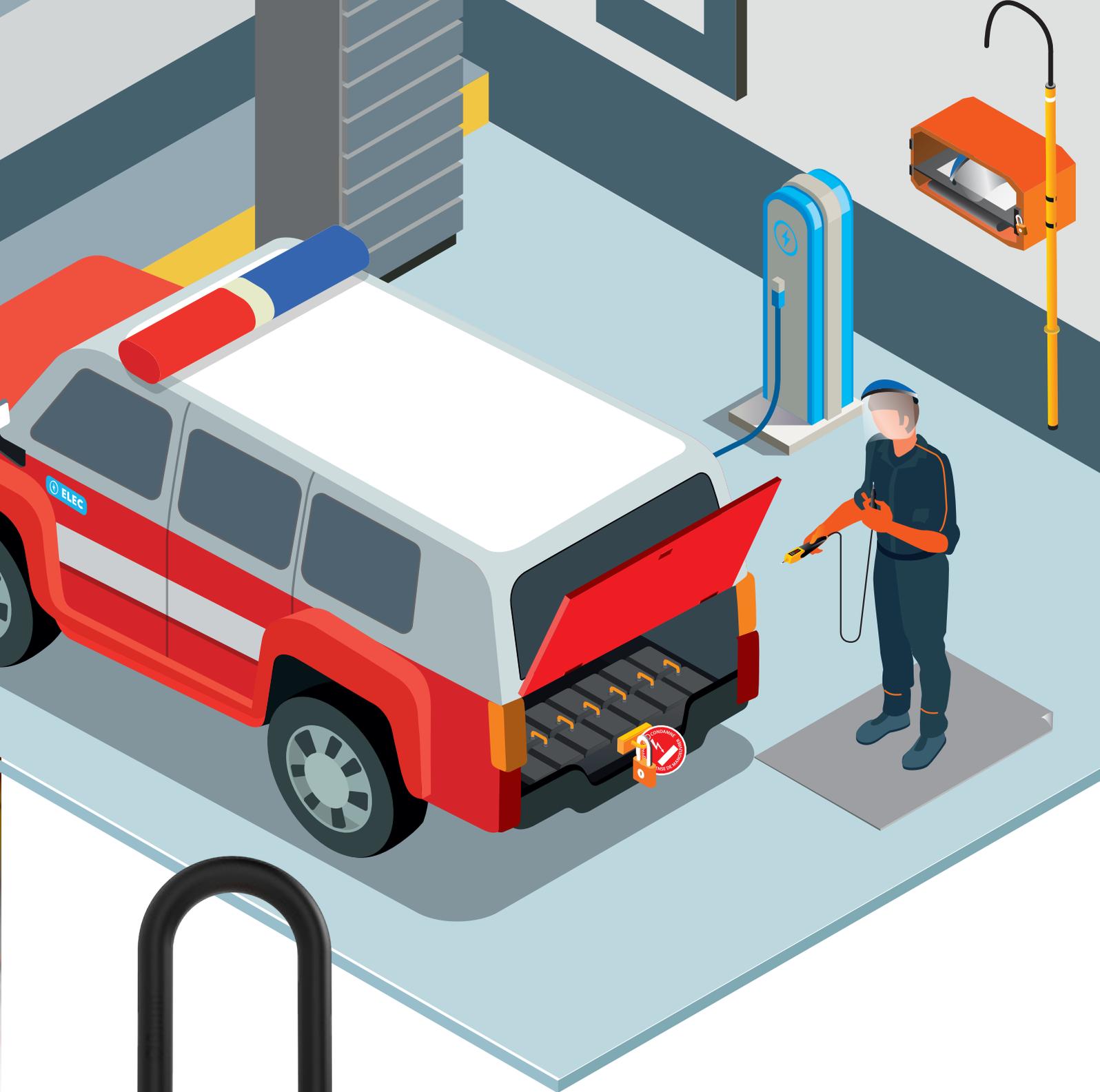


Post with base for plastic chain **S115SPR**

CLEVER FOLDING SYSTEM FOR FUNCTIONAL STORAGE AND 70 % SPACE SAVING AFTER USE.

SPECIFICATIONS

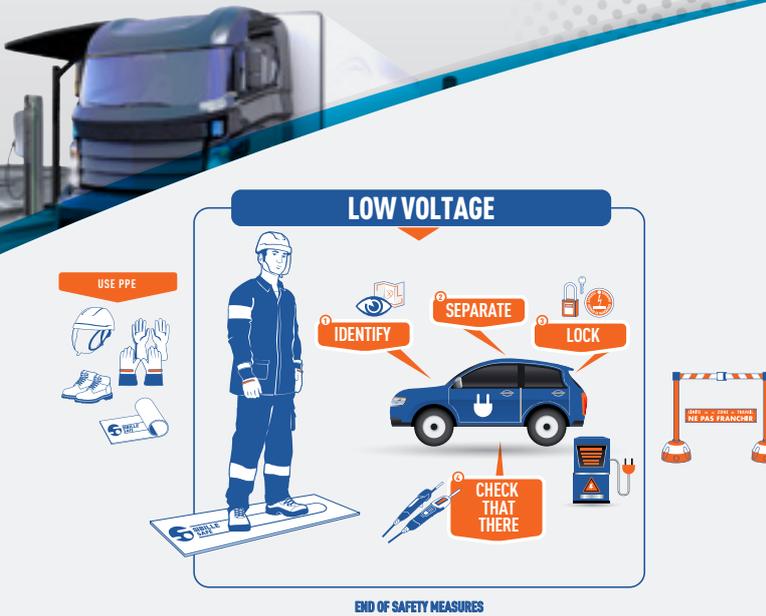
- Post diameter: 50 mm.
- Height: 900 mm.
- Base: 280 x 280 x 70 mm
- Weight of base: 4 kg
- Supply includes the weighted base and the post ready for use



LOCKING OUT



LOCKING OUT



WHAT IS LOCKING OUT?

Locking out consists in making part of the electrical equipment safe beyond doubt, in four steps:

- Identifying the vehicle/equipment
- Separating voltage sources
- Locking open separating components
- Making sure that there is no voltage (voltage detector)



80 mm plastic locking out sticker **S350 GBC11**

Ø 10 MM HOLE ON UPPER PART FOR A PADLOCK.



Locking out bag **SFES453L**

USED FOR LOCKING OUT LARGE ELECTRICAL CONNECTORS.
LOCKABLE BY PADLOCK

SPECIFICATIONS

- Nylon bag
- Dimensions 482 x 165 mm

INTERCHANGEABLE SHACKLES

Adapt your padlock with our interchangeable shackles:

- Metal or composite material
- Diameter: 4.5 or 6 mm
- Height: 38 or 76 mm or Ø 1.4 mm cable for smaller holes plus fins

ULTRA-STRONG COMPOSITE BODY

Non-conductive, resistant to UV rays, hydrocarbons and extreme environments.

Height: 54 mm
Width: 46 mm
Thickness: 21 mm
Weight: 80 g

LOCKING OUT LABEL

- Locking out warning
- Identification of individual responsible
- Rugged label resistant to abrasion and UV rays
- Set of 6 languages

PERSONALISATION AREA

Personalisation area for laser marking (optional).



- Over 1 million key profiles possible
- Captive key system and cylinder with automatic key return
- Colour insert identical to that of the padlock



Locking out padlock, keyed different CS-KD-1

EACH PADLOCK HAS ITS OWN UNIQUE KEY. THAT KEY CAN OPEN ONLY ONE PADLOCK AND NO OTHERS. SUPPLIED WITH A SET OF LOCKING OUT LABELS IN SIX LANGUAGES

Part no	Colour	Shackle material	Inside height of shackle	Shackle diameter
CS-KD-1-M438	Orange	Metal	38 mm	4.5 mm
CS-KD-1-M476		Metal	76 mm	
CS-KD-P438		Composite	38 mm	
CS-KD-1-P476		Composite	76 mm	

LOCKING OUT



A measuring instrument may not be used to make sure that there is no voltage

Voltage detector with IP2X touch tips **TAG780VIFE**

CEI 61243-3

AS PART OF LOCKING OUT, THE TAG780V HELPS MAKE SURE THAT THERE IS NO VOLTAGE.

SPECIFICATIONS

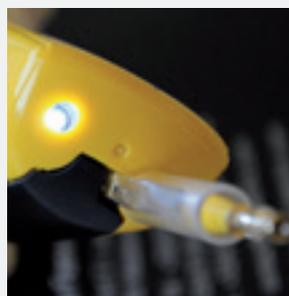
- Double-insulation silicone cord: rugged and ultra flexible (with no memory effect)
- Display up to 1000V
- The sleeve is retracted by a trigger on the back of the device (IP2X versions): this exclusive solution provides control over sleeve retraction and makes the contact area visible.
- IP65
- CAT IV, 1000 V
- Powered by two AAA alkaline cells (1.5 V), included
- Weight: 290 g
- Supplied with carry case



SELF-TEST



FRONT LIGHTING



REMOVABLE ELASTIC CAGES



RETRACTABLE SLEEVE



ERGONOMIC TRIGGER FOR SLEEVE RETRACTION





Set of extension poles
ANT780RS

**LIGHTWEIGHT AND RIGID, FOR USING TAG780
IN HARD-TO-REACH PLACES**

SPECIFICATIONS

- Double vee contact electrodes.
- Storage case.
- 780 mm long



Infrared thermometer
IR THERM-A

SPECIFICATIONS

- Wide temperature range (-50°C to 450°C).
- Short response time (0.15 sec).
- Automatic stopping.
- Trigger lock for continuous operation.
- Dimensions: 146 x 104 x 43 mm
- Weight: 163 g
- Accessories: 9V battery, transport case



1000V insulation tester
SPSFE1377

SPECIFICATIONS

- 1x insulation multimeter
- 1x set of test cables
- 1x crocodile clamp with cable
- 1x adapter for thermocouple
- 1x type K thermocouple
- 6x cells
- 1x wireless USB adapter
- 1x operating manual





Insulating accessory for batteries

EXTRABAT

DEVICE FOR SAFELY INSTALLING AND REMOVING BATTERY CELLS.

SPECIFICATIONS

- Electrical insulation voltage: 1000VAC – 1500VDC
- No conductive part: the extraction part of the device is made of fully insulating composite materials and the lifting eye is fully insulated.
- Battery fastening width: Centre distance adjustable from 45 to 120mm.
- Three pairs of insulating screws: M8, M10 and M12.
- Maximum load limit: 200kg on M8 screws
400kg on M10 screws
500kg on M12 screws
- Dimensions: length 150x136x30
- Weight: 0.3 Kg
- Supplied with case

**UNDER TENSION
OF DEATH**



INSULATED/ INSULATING TOOLS

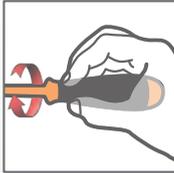
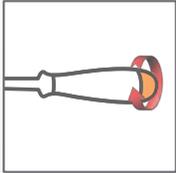


ROTOline Turn

AT LAST, THE SCREWDRIVER THAT HELPS YOU SAVE TIME



ITS ROTATING BALL MAKES INITIAL TIGHTENING EASIER

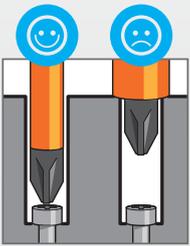


INITIAL TIGHTENING POSITION

The rotating ball of the handle is held in the palm and the fingers control screwdriver rotation.

NB: schematic diagram of screwdriver operation. Depending on the regulations, the use of insulating gloves is mandatory.

SMART DIAMETER SHANK



INSULATED SHANK

IDENTIFICATION RING



Rotoline Turn insulated slotted-tip screwdriver RL2

NF EN 60900/IEC 60900/NF ISO 2380-1/NF ISO 8764-1

Part no	Type of shank	Ø of shank (mm)	Length of shank (mm)
RL2-PH-4X75	Phillips	4	75
RL2-PH-5X100	Phillips	5	100
RL2-PH-6X125	Phillips	6	125
RL2-PL-3X100	Slotted	3	100
RL2-PL-4X120	Slotted	4	120
RL2-PL-8X150	Slotted	8	150
RL2-TX-T27	Torx	T27	-
RL2-TX-T30	Torx	T30	-

Other models available.



Set of six insulated 1000V Rotoline Turn screwdrivers C6RL2

NF EN 60900/ CEI60900

SPECIFICATIONS

For slotted-head screws:

- RL2-PL-3X100
- RL2-PL-4X120
- RL2-PL-6,5X150
- RL2-PL-8X150

For Phillips head screws:

- RL2-PH-5X100
- RL2-PH-6X125



Insulating tools:

- No metal part accessible
- No risk of short circuit
- No risk of damage to the body in the event of a fall
- XL handle (+20mm): force transmission saving ~ +10%/ suitable for female workers



Insulating pliers with long bent nose MC13CE - L / XL

NF EN 60900/IEC 60900

Part no	Cutting capacity	Length (mm)	Weight (g)
MC13CE-L	16 mm ²	215	170
MC13CE-XL	Cu multi-conductor	235	180



Insulating pliers with long straight nose MC11CE - L / XL

NF EN 60900/IEC 60900

Part no	Cutting capacity	Length (mm)	Weight (g)
MC11CE-L	16 mm ²	200	165
MC11CE-XL	Cu multi-conductor	220	175



Hybrid cable cutting pliers MC45I

NF EN 60900/IEC 60900

Part no	Cutting Ø	Cutting capacity	Length (mm)	Weight (g)
MC45I XL	16 mm	25 mm ² Cu 70 mm Al	200	165



Our hardened tools are integral, unlike sleeved tools that can come apart



Insulated all-angle pliers **MS4-185**

NF EN 60900/IEC 60900/NF ISO 5743/NF ISO 5744/NF ISO 5746

SPECIFICATIONS

- Length: 185 mm
- Weight: 320g



Insulated 45° bent snipe nose pliers **MS13-185**

NF EN 60900/IEC 60900/NF ISO 5743/NF ISO 5744/NF ISO 5745

THEY MAKE IT EASY TO BEND ELECTRICAL WIRE

SPECIFICATIONS

- Length: 185 mm
- Weight: 190 g



Insulated straight snipe nose pliers **MS10-170**

NF EN 60900/IEC 60900/NF ISO 5743/NF ISO 5744/NF ISO 5745

THEY MAKE IT EASY TO BEND ELECTRICAL WIRE

SPECIFICATIONS

- Length: 170 mm
- Weight: 175 g



Insulated side cutting pliers **MS5-175**

EN 60900/IEC 60900/ISO 5743/ISO 5744/ISO 5749

SPECIFICATIONS

- Length: 175 mm
- Weight: 280 g



Insulated double slip joint adjustable pliers **MS27-250**

NF EN 60900/IEC 60900/NF ISO 8976/NF ISO 5744

SPECIFICATIONS

- Max opening: 28 mm
- Length: 250 mm
- Weight: 440 g



Insulated cable cutting pliers for remote energy meter **MS30S-165**

NF EN 60900/IEC 60900

FOR CUTTING COPPER AND ALUMINIUM WIRE

MAY ALSO BE USED FOR STRIPPING CABLES WITH A SMALL SECTION.

Part no	Opening	Length (mm)	Steel	Almec	Aluminium	Copper	Weight (g)
MS30S 165	12 mm	165	NO	NO	35 mm ²	16 mm ²	200



Insulated adjustable spanner **MS7**

NF EN 60900/IEC 60900/NF ISO 1711-1/NF ISO 6787

SPECIFICATIONS

- Optimal guaranteed capacity: 24 mm
- Length: 210 mm
- Weight: 300 g

Part no	Optimal guaranteed capacity	Length (mm)	Weight (g)	Length (in)	Toleration
MS7 210	24 mm	210	300	8	± 15 mm
MS7 260	28 mm	260	510	10	± 15 mm

Insulated 6 point ratchet ring spanner **MS41**

NF EN 60900/IEC 60900



Part no	mm)	Weight (g)
MS41 10	10	150
MS41 13	13	190
MS41 16	16	370
MS41 17	17	380
MS41 18	18	400
MS41 19	19	410
MS41 22	22	420

Insulating knife with ceramic blade **IS80C**

NF EN 60900/IEC 60900

KNIFE FOR STRIPPING PLASTIC SLEEVES OF ELECTRICAL WIRES.

SPECIFICATIONS

- Length: 200 mm
- Weight: 60 g





Insulated single open-end spanner MS16

NF EN 60900/IEC 60900/NF ISO 691/NF ISO 1711-1/NF ISO 3318/NF ISO 10102

15° ANGLED HEAD

COMPACT HANDLE THAT

Part no	ADAPTED	Weight (g)
MS16 08	8 mm	20
MS16 09	9 mm	40
MS16 10	10 mm	40
MS16 11	11 mm	40
MS16 12	12 mm	40
MS16 13	13 mm	50
MS16 14	14 mm	70

Other dimensions available;



Insulated 12 point cranked single ring spanner MS21

NF EN 60900/IEC 60900/NF ISO 691/NF ISO 1711-1/NF ISO 3318/NF ISO 10104

THE TOOL IS PROFILED FOR AN EASY GRIP AND OPTIMISED REACH

COMPACT HANDLE THAT IS ADAPTED TO TIGHTENING FORCES

Part no	ADAPTED	Weight (g)
MS21 08	8 mm	60
MS21 09	9 mm	80
MS21 10	10 mm	80
MS21 11	11 mm	95
MS21 12	12 mm	100
MS21 13	13 mm	110
MS21 14	14 mm	130



Insulated 12 point single socket spanner MS20

NF EN 60900/IEC 60900

COMPACT HANDLE THAT IS ADAPTED TO TIGHTENING FORCES

Part no	ADAPTED	Weight (g)
MS20 08	8 mm	50
MS20 09	9 mm	60
MS20 10	10 mm	90
MS20 11	11 mm	95
MS20 12	12 mm	130
MS20 13	13 mm	160
MS20 14	14 mm	170



Insulated 3/8" reversible ratchet handle with mechanical locking **MS85P**

NF EN 60900/IEC 60900/NF ISO 1174-1/NF ISO 3315

SPECIAL MODEL DESIGNED SO THAT SOCKETS AND EXTENSIONS REMAIN IN THE HANDLE DURING USE. SOCKET RELEASED BY DELIBERATELY PUSHING THE PUSH BUTTON.

SPECIFICATIONS

- Length: 215 mm
- Weight: 300 g



3/8" extension with mechanical locking **MS84P - MS84LP**

NF EN 60900/IEC 60900/NF ISO 1174-1/NF ISO 1711-1/NF ISO 3316

THE SOCKET IS RELEASED WHEN THE GREY RING IS PULLED.

Part no	Type	Length (mm)	Weight (g)
MS84P-165	Short extension	165	150
MS84LP	Long extension	265	300



Insulated 3/8" 12 point female socket **MS86**

EN 60900/IEC 60900/ISO 691/ISO 1174-1/ISO 1711-1/ISO 2725-1

Part no	Diameter	Weight (g)
MS86 08	8 mm	35
MS86 09	9 mm	35
MS86 10	10 mm	40
MS86 11	11 mm	40
MS86 12	12 mm	40
MS86 13	13 mm	45
MS86 14	14 mm	45

Other dimensions available; please enquire.



All of our sockets have a small outer diameter to give the best possible reach



Insulated 3/8" 12 point female socket, long series **MS86L**

EN 60900/IEC 60900/ISO 691/ISO 1174-1/ISO 1711-1/ISO 2725-1

MANUAL-USE SOCKETS SUITABLE FOR USE WITH STANDARD OR MECHANICAL LOCKING RATCHET HANDLES.

Part no	Diameter	Weight (g)
MS86L 08	8 mm	50
MS86L 09	9 mm	55
MS86L 10	10 mm	60
MS86L 11	11 mm	70
MS86L 12	12 mm	70
MS86L 13	13 mm	80
MS86L 14	14 mm	90

Other dimensions available; please enquire.



Insulated 3/8" male Torx socket **MS87T**

EN 60900/IEC 60900

Part no	Size	Weight (g)
MS87 T20	T20	55
MS87 T30	T30	65

Other dimensions available; please enquire.



3/8" enlarger for 1/2" sockets **MS91**

EN 60900/IEC 60900/ISO 1174-1/ISO 3316

FOR USING 1/2" SOCKETS WITH A 3/8" SQUARE RATCHET HANDLE

SPECIFICATIONS

- Length: 75 mm
- Weight: 40 g

INSULATED TOOLS



Composition of Junior 3/8" socket sets

Part no	Description	MS89	MS89V01	MS89V02
MS84	3/8" Junior extension, 140 mm	●		
MS85	Insulated 3/8" Junior ratchet handle, 185 mm	●	●	
MS85P	Insulated 3/8" reversible ratchet handle with mechanical locking			●
MS85PC	Insulated 3/8" compact reversible ratchet handle with mechanical locking		●	
MS84P	3/8" short extension with mechanical locking		●	●
MS77 08	Insulated 3/8" 8 mm 6 point female socket	●	●	●
MS77 10	Insulated 3/8" 10 mm 6 point female socket	●	●	●
MS77 12	Insulated 3/8" 12 mm 6 point female socket			
MS77 13	Insulated 3/8" 13 mm 6 point female socket	●	●	●
MS77 14	Insulated 3/8" 14 mm 6 point female socket		●	●
MS77 16	Insulated 3/8" 16 mm 6 point female socket		●	●
MS77 17	Insulated 3/8" 17 mm 6 point female socket		●	●
MS77 18	Insulated 3/8" 18 mm 6 point female socket		●	●
MS77 19	Insulated 3/8" 19 mm 6 point female socket		●	●
MS77 21	Insulated 3/8" 21 mm 6 point female socket		●	●
MS77 22	Insulated 3/8" 22 mm 6 point female socket		●	●
MS77 23	Insulated 3/8" 23 mm 6 point female socket		●	●
MS77L 16	Insulated 3/8" 16 mm long 6 point female socket			
MS77L 17	Insulated 3/8" 17 mm long 6 point female socket			
MS77L 18	Insulated 3/8" 18 mm long 6 point female socket			
MS77L 19	Insulated 3/8" 19 mm long 6 point female socket			
MS77L 21	Insulated 3/8" 21 mm long 6 point female socket			
MS77L 22	Insulated 3/8" 22 mm long 6 point female socket			
MS87 04	Insulated 3/8" 4 mm 6 point male socket		●	●
MS87 05	Insulated 3/8" 5 mm 6 point male socket	●	●	●
MS87 06	Insulated 3/8" 6 mm 6 point male socket		●	●
MS87 08	Insulated 3/8" 8 mm 6 point male socket		●	●

 Compositions can be tailored to your requirements.
Please enquire



MS89V04	MS89V05	MS89V06	MS89V07	MS89V08
●	●	●	●	●
	●		●	
●	●	●		●
	●	●	●	●
●	●	●	●	●
	●	●		
	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
	●	●		
	●	●	●	●
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●	●	●	●	●
●	●	●	●	●



Set of 1/4" radio sockets; 5 tools with handle **MS59S**

NF EN 60900/IEC 60900

This product contains	Description
MS55	Insulated 1/4" reversible ratchet handle
MS56...	Insulated 1/4" 08/10/12 mm 6 point female socket
MS57 05	Insulated 1/4" 5 mm 6 point male socket
MS59SV	Plastic case, 135 x 95 x 32 mm



Insulated 3/8" square torque wrench with mechanical locking - 1000V **MS100NOVM**

NF EN 60900/IEC 60900 - NF EN ISO 6789-1-2017

**TOOL FOR PRECISION TIGHTENING RIGHT-HAND THREADS
WITH TRIPPING AND AUTOMATIC RESET**

Part no	Length (mm)	Torque (Nm)	Weight (g)
MS100NOVM	230	4-20	530



Magnet
end



Insulated handle with flexible rod and magnet end **TFA**

CONSISTS OF A FLEXIBLE ROD WITH A MAGNET END.

**USED FOR PICKING UP SMALL METAL PARTS (SCREWS, NUTS,
WASHERS ETC.) FALLEN IN HARD-TO-REACH PLACES.**

SPECIFICATIONS

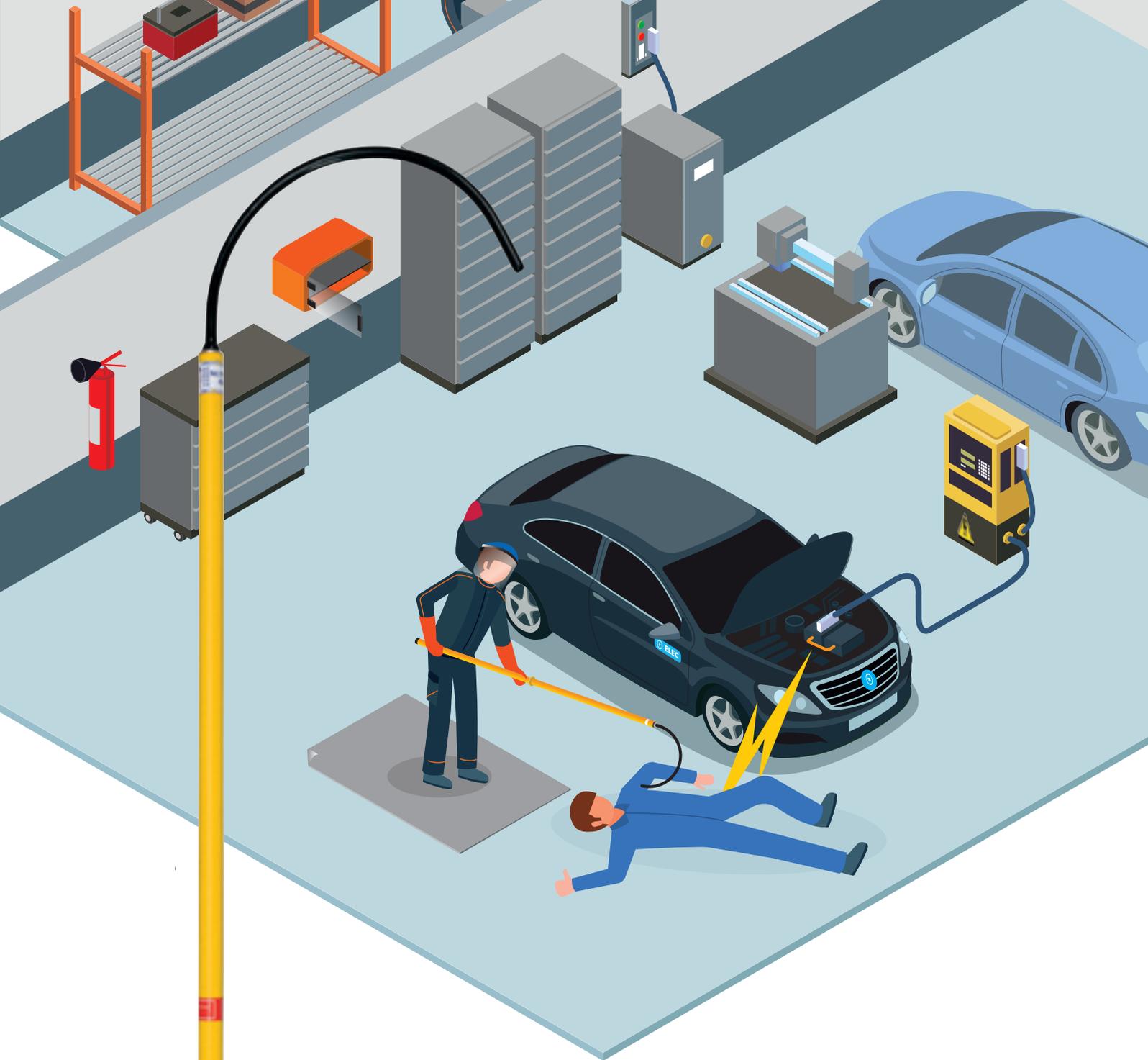
- Total length: 560 mm +/-5
- Weight: 130 g



Insulating lever **TL05**

SPECIFICATIONS

- Length: 190 mm
- Weight: 41 g



EMERGENCY EQUIPMENT





PROCEDURE FOR RESPONDING TO AN ELECTRICAL INJURY

PROTECT



ALERT



ASSIST



Wall-mounted rescue kit PS2-PM-KITVE

KIT RAPIDLY ACCESSIBLE FOR RESCUE OPERATIONS IN THE EVENT OF AN INCIDENT WITH OR NEAR ELECTRICAL EQUIPMENT.

INDOOR OR OUTDOOR USE.

SPECIFICATIONS

- May be fitted with a shelf.
- Dimensions: 790 x 400 x 291 mm
- Boxes with transparent sealed cover (IP54),
- Handle that can be closed with seals or even padlocked with a shackle diameter up to 4,8 mm
- Door sticker with safety instructions

Part no	Description
PS2-PM-KITVE	Wall-mounted rescue kit in sealed box, with equipment and PPE for EV environments
Contains	
E24	Face shield with head band and brow guard for electricians
TTCL0 0,6X1	Insulating mat, class 0, 0,6 X 1 m
TP12EC	Insulating rescue stick
GLE36-0 10	Latex insulating gloves, class 0 size 10
PS2-PM-VE-VIDE	Sealed storage box - small model, alone, with no components, and 1 shelf

Insulating rescue stick TP12EC

NF EN 60900/IEC 60900/NF EN 6789

USED FOR RESCUING AN INJURED WORKER (ELECTRIC SHOCK, ARC FLASH ETC.)

IT IS USED TO PULL THE VICTIM INTO A SAFE AREA



Part no	Description	Usage voltage	Total length without hook (m)	Length of protected part (shaft) (mm)	Weight (kg)
TP12EC	45 kV body stick with hook and no handguard	45 kV	1,47	600	1,35

EMERGENCY EQUIPMENT



Insulating mat, class 0 TTCLO

IEC 61111: 2009

INSULATES OPERATORS FROM THE FLOOR SO THAT NO ELECTRIC CURRENT FLOWS THROUGH THEM IN CASE OF DIRECT CONTACT OR PACE VOLTAGE.

SPECIFICATIONS

- Maximum usage voltage: 1000 VAC
- Material: Elastomer
- Nominal thickness: 1.5 mm
- Grey colour
- Instructions for use printed on the mat

Part no	Dimensions	Weight
TTCLO 0,6X0,6	0.6 x 0.6 m	0.9 kg
TTCLO 0,6X1	0.6 x 1 m	1.4 kg
TTCLO 1X1	1 x 1 m	2.4 kg
TTCLO 1X10	1 x 10 m	24 kg



Glove box RGX-BGT

ACCOMMODATES INSULATING GLOVES, LEATHER OUTER GLOVES AND A BOTTLE OF TALC.

MAY BE USED MOUNTED ON A WALL OR AS A CARRY BOX (WITH ITS FOLDING HANDLE).

SPECIFICATIONS

- Dimensions : 50 x 25 x 10 cm



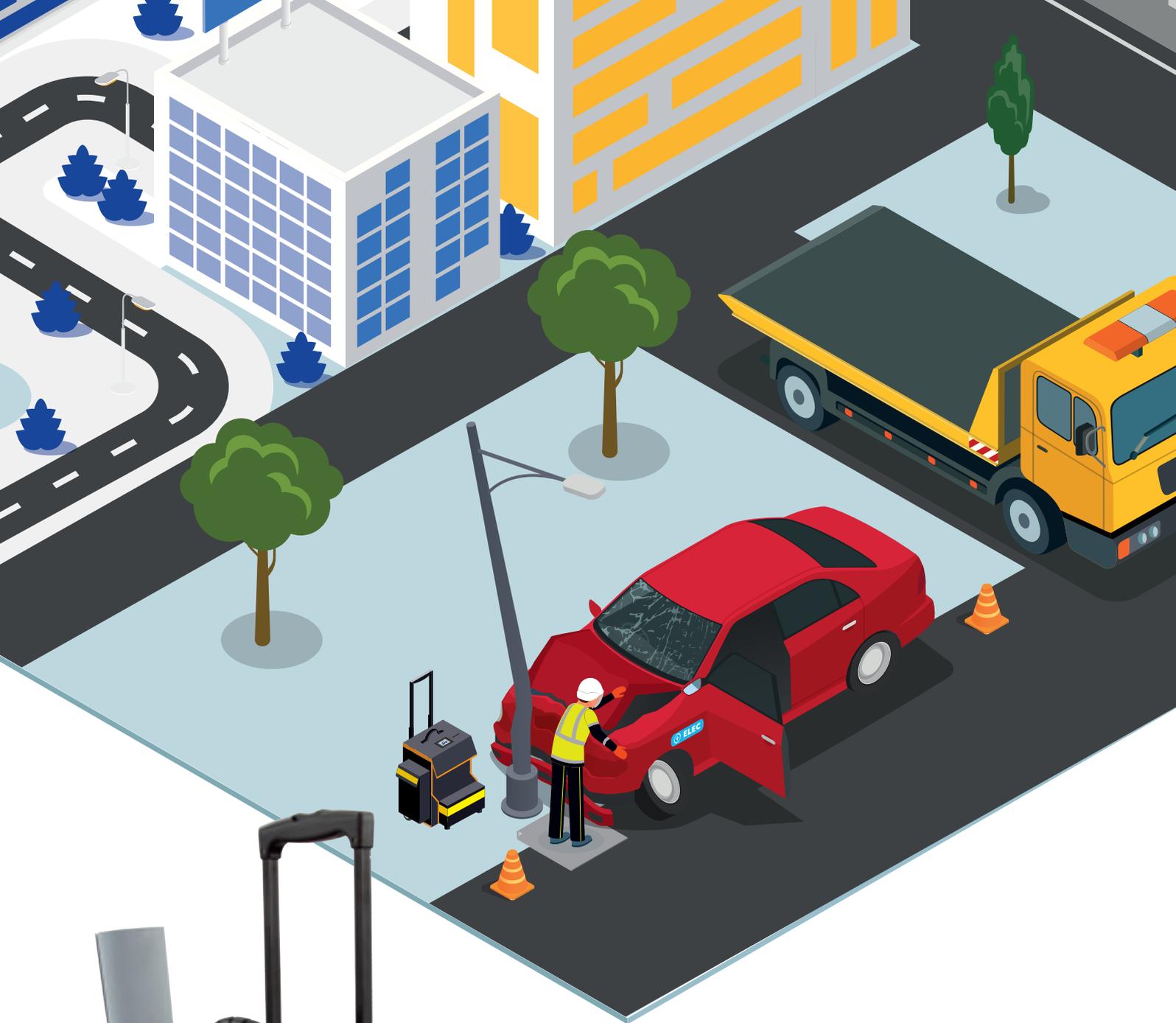
Carbon dioxide (CO²) fire extinguisher, capacity 2 kg E07 2KGS

CERTIFIED UNDER THE EUROPEAN PED PRESSURE EQUIPMENT DIRECTIVE 97/23/EC, THE EUROPEAN MARINE EQUIPMENT DIRECTIVE 96/98/EC AND NF EN3

BECAUSE OF ITS DIELECTRIC PROPERTIES, THIS FIRE EXTINGUISHER IS THE IDEAL EMERGENCY EQUIPMENT FOR ELECTRICAL SYSTEMS IN GENERAL.

SPECIFICATIONS

- Fire classes: 34B
- Carbon dioxide (CO²) fire extinguisher with diffuser
- Usage temperature: -30°C/+60°C.



CASES & CABINET





 Bags for PPE carried by roadside



PPE carry bag, 80L ST-80

SPECIFICATIONS

- Strong fabric structure
- Inner volume 80L
- Dimensions: 750 x 350 x 330 mm
- Weight: 2 kg



Rolling backpack SADT-25

**IDEAL FOR STORING AND CARRYING PPE
(PERSONAL PROTECTIVE EQUIPMENT) AND TOOLS**

SPECIFICATIONS

- Inner volume: 25L
- Storage provided for gloves, mat, helmet and voltage detector
- Dimensions: 560 x 440 x 270 mm



Backpack SAD-25

IDEAL FOR CARRYING AND STORING PPE AND SMALL TOOLS.

SPECIFICATIONS

- Inner volume 25L
- Dimensions: 460 x 230 x 410 mm



Tool box
ART162
PADLOCKABLE

SPECIFICATIONS

- Dimensions: 515 x 287 x 275 mm
- Supplied empty



Rolling tool box
C252NM

SPECIFICATIONS

- Retractable transport handle and castors
- Integrated accessories compartment and handles
- Dimensions: 635 x 450 x 420 mm
- Supplied empty



Plastic box
C272

SPECIFICATIONS

- Dimensions: 512 x 308 x 212 mm
- Weight: 1.8 kg



Equipped with all the equipment for safe working



Tool cabinet **CABINET-FULL**

SPECIFICATIONS

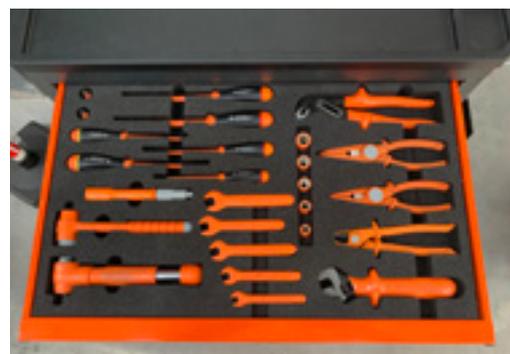
- Five sliding drawers on high-quality runners. Each of them is designed for storing particular equipment: Insulated tools, locking out, voltage detector, temporary protection, PPE, marking and signage.
- Preformed foam in the first drawer for proper tool storage.
- May be locked (lock).
- Side handle for movement.
- Lateral space for posts (bases can be stowed in the last drawer).
- Available in empty version, part no CABINET-E
- Dimensions: 800 x 450 x 950 mm
- Weight: 60 kg

Composition

Part no	Description	Quantity
CABINET-E	Empty cabinet	1

INSULATED TOOLS

MS85P	Insulated 3/8" reversible ratchet handle with mechanical locking	1
MS84P	3/8" short extension with mechanical locking	1
MS86-08	Insulated 3/8" 8 mm 12 point female socket	1
MS86-10	Insulated 3/8" 10 mm 12 point female socket	1
MS86-12	Insulated 3/8" 12 mm 12 point female socket	1
MS86-13	Insulated 3/8" 13 mm 12 point female socket	1
MS86-14	Insulated 3/8" 14 mm 12 point female socket	1
MS100NOVM	Insulated 3/8" square 4-20 Nm torque wrench with mechanical locking - 1000V	1
RL2-PL-3X100	Rotoline Turn 3 x 100 mm insulated slotted-tip screwdr	1
RL2-PL-4X120	Rotoline Turn 4 x 100 mm insulated slotted-tip screwdr	1
RL2-PL-65X150	Rotoline Turn 6.5 x 100 mm insulated slotted-tip screwdr	1
RL2-PL-8X150	Rotoline Turn 8 x 100 mm insulated slotted-tip screwdr	1
RL2-PH-5X100	Rotoline Turn 5 x 100 mm insulated Philips-tip screwdriver, no 1	1
RL2-PH-6X125	Rotoline Turn 6 x 125 mm insulated Philips-tip screwdriver, no 2	1
MC11CE	Insulating composite flat-nose pliers with ceramic blades	1
MC13CE	Insulating composite bent snipe nose pliers with ceramic blades	1
MC45I	Composite cable cutting pliers, 190 mm	1
MS16-08	Insulated 8 mm single open-end spanner	1
MS16-10	Insulated 10 mm single open-end spanner	1
MS16-12	Insulated 12 mm single open-end spanner	1
MS16-13	Insulated 13 mm single open-end spanner	1
MS16-14	Insulated 14 mm single open-end spanner	1
MS87T30	3/8" male socket, Torx T30	1
MS87T20	3/8" male socket, Torx T20	1
MS7-210	Insulated adjustable spanner, 210 mm	1
MS27-250	Insulated double slip joint adjustable pliers	1



LOCKING OUT AND TEMPORARY PROTECTION

TAG780VIFE	LT simple voltage detector, IP2X	1
TL05	Insulating lever	1
CS-KD-1-M438	Orange keyed different padlock, metal shackle, height 38 mm	1
CS-KD-1-M476	Orange keyed different padlock, metal shackle, height 76 mm	1
SFES453L	Locking out bag L	1
S350 GBC11	Plastic tag, marked "Locked out. Do not operate" with lightning symbol	2
TC41	LV insulating cap for conductor ends, 240 mm ²	2
TP60P	Plastic fastening clip	4
TN17066M	Insulating Velcro blanket, 0.66 x 0.36 m	1



PPE

GICN-BT/10	Composite insulating gloves, class 0 size 10	1
RGX-BGT	Glove box	1
E24	Face shield with head band and brow guard for electricians	1
HOUTC42	Cover for shield	1



SIGNAGE AND MARKING

S115C6	High-density polyethylene chain, 25 m Ø 6 mm	1
S115SPPR	Red and white post with base for plastic chain	4
S120E	Vertical flag with shaft	2
S85GBC1	Banner, "Limit of work area - Do not cross", coated fabric, 1 x 0.2 m	2





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ELECTRICAL SAFETY PRODUCTS



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