

12. Safety Material



● HARNESS + BELT



Characteristics

- Dorsal tied with stainless D eyelet
- Adjustable strap on the legs and shoulder area, four adjustment points
- Adaptable to belt
- EN361 and EN 358 Standards

Description	Reference
Harness 1 dorsal and thoracic mooring	HT-22
Harness 1 dorsal mooring	HT-31
Harness 1 dorsal and 2 thoracic mooring	HT-42
Harness for assembly of electrical lines	HT-
Belt with 2 D lateral mooring - M	Electra
Belt with 2 D lateral mooring - L	CE01-M

● SLINGS



Characteristics

- Positioning EN358 sling
- Restriction EN354 Drisse sling
- EN355 sling with Absorber
- Adjustable sling rope
- Nylon rope 11mm / 12mm diameter

Description	Reference
Restriction driss sling	LD11-2-10-10
Positioning sling	LD 11-10-10
Positioning sling with sleeve	LCM 04-4-M40
Reduction positioning sling	LCR 12-2-10-10
Simple rope sling with absorber	LCA 12-2-10-10
Double rope sling with absorber	LCAD 12-2-10-10
Simple rope sling with constraint	LC 12-2-10-10
Double rope sling with constraint	LCF 12-2-10-10-10

● BOOTS AND SHOES



Characteristics

- Steel toe
- Steel toe and insole
- Anti-static
- Colors: black and brown
- Sizes: 37-46

Reference
BOTA S1P
SAPATO S1P

● RAINCOATS

Characteristics

- Waterproof suit, in polyurethane, nylon or PVC, composed of jacket with hood and closed pants
- Varios sizes
- Various Colors



Description	Reference
polyurethane raincoat	POLI
nylon raincoat	NIAGARA
PVC raincoat	PVC-POL

● VEST

Characteristics

- Signaling vest in orange or yellow with reflective strips. EN471



Reference
COLETE

● MULTI-POCKET VEST

Characteristics

- Can be personalized with embroidery or printing upon minimum quantities.



Reference
COLETE MULTI

● PARKA



Characteristics

- High visibility Parka in GBTEX (polyester polyurethane)
- Reflective bands
- Colors: orange / blue or yellow / blue

Reference

Prk423027/423028

● T-SHIRTS



Characteristics

- 160g, 100% Cotton
- Round neck
- Can be personalized with stamping upon quantity

Reference

T-160

● HELMET



Characteristics

- Electrician helmet with integrated facial protection visor
- Protection against electric arc
- Anti-impact effective protection (crash-box)
- Different colors for the crash-box
- Conforms to EN397, EN50365, EN166 and EN170 standards

Description

Helmet with visor

Reference

E-SHARK

● VISOR



Characteristics

- Universal protection visor for helmets

Description

anti polycarbonate visor

Reference

WISEI. UV

● MECHANICAL PROTECTION GLOVES

Designation	Reference
Siliconized crute pipe glove no. 8	TG47
Siliconized crute pipe glove no. 9	TG40
Siliconized crute pipe glove no. 10	TG45
Siliconized crute pipe glove no. 11	TG48



● MECHANICAL PROTECTION GLOVES

Designation	Reference
Skin glove chief type no.9	Luva-9
Skin glove chief type no.10	Luva-10
Skin glove chief type no.9	Croute-9
Skin glove chief type no.10	Croute-10



● ELECTRICAL PROTECTION GLOVES

Characteristics

- Latex electrical protective glove CEI-903 standard

Class	Useful voltage (Kv)	Test voltage (Kv)	Size	Thickness (mm)	Reference
00	0,5	2,5	8	0,6	TG 41
00	0,5	2,5	9	0,6	TG 42
00	0,5	2,5	10	0,6	TG 43
00	0,5	2,5	11	0,6	TG 44
0	1	5	8	1	TG 31
0	1	5	9	1	TG 30
0	1	5	10	1	TG 35
0	1	5	11	1	TG 32
1	7,5	10	8	1,6	TG 61
1	7,5	10	9	1,6	TG 62
1	7,5	10	10	1,6	TG 63
1	7,5	10	11	1,6	TG 64
2	17	20	8	2,2	TG 38
2	17	20	9	2,2	TG 36
2	17	20	10	2,2	TG 37
2	17	20	11	2,2	TG 39
3	26,5	30	9	2,6	TG 22
3	26,5	30	10	2,6	TG 23
3	26,5	30	11	2,6	TG 24
4	36	40	10	3,4	TG 51
4	36	40	11	3,4	TG 52



● VERTICAL SIGNS



Characteristics

- Several types of signs available: "roadworks", "Closer track", etc.

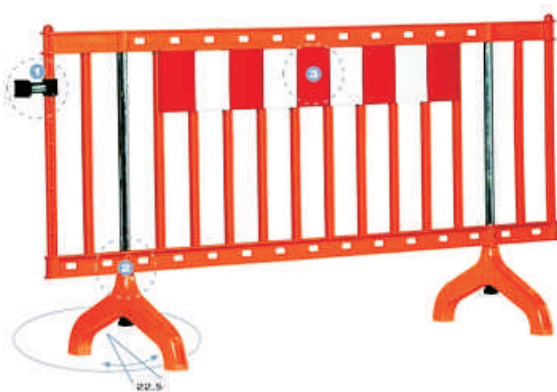
● TEMPORARY TRAFFIC LIGHTS



Characteristics

- Set of two

● POLYETHYLENE BARRIERS



Characteristics

- Constructed of high density polyethylene to ensure maximum strength.
- Lightweight and easy to install.
- Dimensions: 2,17m long x 1,10m high
- Other types available on request

● INSULATING MATS

Characteristics

- Rugs for electrical insulation in high voltage work
- Dimensions: 100x60 or other



Class	Sizes (mts)	Thickness (mm)	Voltage (Kv)	Class	Reference
3	1x0,6	3	26,5	CL-3	TT05
4	1x0,6	4	36,0	CL-4	TT04-06

● INSULATED TOOLS

● REVERSIBLE RATCHET WRENCH



Size	Description	Lenght (mm)	Reference
1/4	Ratchet wrench for 1/4" key box	105	MS55
"	Ratchet wrench for 3/8" key box	190	MS85
3/8		215	MS85P
"	Ratchet wrench for 1/2" key box	255	MS65
		268	MS65P

● EXTENSIONS



Size	Description	Lenght (mm)	Reference
1/4	Extension for key box	116	MS54
"	1/4"	166	MS54L
		140	MS84
3/8	Extension for key box	264	MS84L
"	3/8"	144	MS71
		264	MS71L

● INSULATED TOOLS

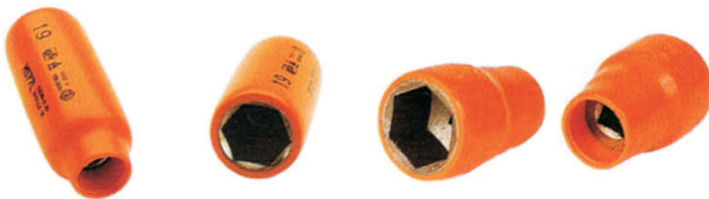
● MALE AND FEMALE BOX KEY, 6 SIDES, 1/4"



Type	Size metric syst.	Reference
Male	3	MS57
Male	4	MS57
Male	5	MS57
Male	6	MS57
Male	7	MS57

Type	Size metric syst.	Reference
Female	4	MS56
Female	5	MS56
Female	6	MS56
Female	7	MS56
Female	8	MS56
Female	9	MS56
Female	10	MS56
Female	11	MS56
Female	12	MS56
Female	13	MS56
Female	14	MS56

● FEMALE BOX KEY, 6 SIDES, 3/8"



Type	Size metric syst.	Reference
Female	6	MS77
Female	7	MS77
Female	8	MS77
Female	9	MS77
Female	10	MS77
Female	11	MS77
Female	12	MS77
Female	13	MS77
Female	14	MS77
Female	15	MS77
Female	16	MS77
Female	17	MS77
Female	18	MS77
Female	19	MS77
Female	20	MS77
Female	21	MS77
Female	22	MS77
Female	23	MS77
Female	24	MS77

Type	Size metric syst.	Reference
Female	8	MS77L
Female	9	MS77L
Female	10	MS77L
Female	11	MS77L
Female	12	MS77L
Female	13	MS77L
Female	14	MS77L
Female	16	MS77L
Female	17	MS77L
Female	18	MS77L
Female	19	MS77L
Female	21	MS77L
Female	22	MS77L
Female	24	MS77L

● INSULATED TOOLS

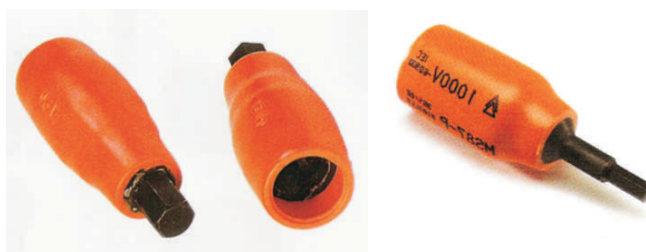
● FEMALE BOX KEY, 12 SIDES, 3/8"



Type	Size metric syst.	Reference
Female	8	MS86
Female	9	MS86
Female	10	MS86
Female	11	MS86
Female	12	MS86
Female	13	MS86
Female	14	MS86
Female	15	MS86
Female	16	MS86
Female	17	MS86
Female	18	MS86
Female	19	MS86
Female	20	MS86
Female	21	MS86
Female	22	MS86
Female	23	MS86
Female	24	MS86

Type	Size metric syst.	Reference
Female	8	MS86L
Female	9	MS86L
Female	10	MS86L
Female	11	MS86L
Female	12	MS86L
Female	13	MS86L
Female	14	MS86L
Female	16	MS86L
Female	17	MS86L
Female	18	MS86L
Female	19	MS86L
Female	21	MS86L
Female	22	MS86L

● MALE BOX KEY, 6 SIDES, 3/8"



Type	Size metric syst.	Reference
Male	3	MS87
Male	4	MS87
Male	5	MS87
Male	6	MS87
Male	7	MS87
Male	8	MS87
Male	9	MS87
Male	10	MS87

Type	Size metric syst.	Reference
Male	3	MS87P
Male	4	MS87P
Male	5	MS87P
Male	6	MS87P
Male	7	MS87P
Male	8	MS87P
Male	10	MS87P

● INSULATED TOOLS

● FEMALE BOX KEY, 12 SIDES, 1/2"



Type	Size Metric syst.	Reference
Female	12	MS66L
Female	13	MS66L
Female	14	MS66L
Female	16	MS66L
Female	17	MS66L
Female	18	MS66L
Female	19	MS66L
Female	21	MS66L
Female	22	MS66L
Female	23	MS66L
Female	24	MS66L
Female	26	MS66L
Female	27	MS66L
Female	28	MS66L
Female	29	MS66L
Female	30	MS66L
Female	32	MS66L

Type	Size Metric syst.	Reference
Female	8	MS66
Female	9	MS66
Female	10	MS66
Female	11	MS66
Female	12	MS66
Female	13	MS66
Female	14	MS66
Female	15	MS66
Female	16	MS66
Female	17	MS66
Female	18	MS66
Female	19	MS66
Female	20	MS66
Female	21	MS66
Female	22	MS66
Female	23	MS66
Female	24	MS66
Female	25	MS66
Female	26	MS66
Female	27	MS66
Female	28	MS66
Female	29	MS66
Female	30	MS66
Female	32	MS66

● MALE BOX KEY, 6 SIDES, 1/2"



Type	Size Metric syst.	Reference
Male	6	MS67
Male	8	MS67
Male	10	MS67
Male	11	MS67
Male	12	MS67
Male	14	MS67
Male	17	MS67
Male	19	MS67

● INSULATED TOOLS

● SET KEY BOX



No. of parts	Size	Components	Reference
5	1/4	MS55 + MS56-8/10/12 + MS57-5	MS59S
19	"	MS55 + MS54L + MS56-4 A 14 + MS57-3 A 7 + MS58	MS59C
17	1/4	MS65 + MS71 + MS70 + MS56-6/7 + MS66-8 A 17/19/21/22/23	MS69S
32	"	MS65 + MS71 + MS72S + MS66-8 A 32 + MS67-8/10/12/14/17	MS69C
18	1/2	MS85 + MS86-8 A 23 + MS84	MS89C
19	"	MS72J + MS84 + MS85 + MS77L-10 + MS87-4/5/7 + MS77-6 A 14/17/19/21	MS89DRB
11	1/2	MS100MN1+MS72J+MS84+MS87-6+MS77L-10/13/14/16 A 19	MS100D

● TORQUE WRENCHES AND OTHER



Type	Designation	Strenght thightness (Nm)	Width (mm)	Reference
3/8	Reversível	8-54	315	MS100RN1
"	Reversível	4-20	235	MS100N0
3/8	Não reversível	8-54	315	MS100N1 3/8
"	Não reversível	8-54	315	MS100N1 1/2
3/8	Não reversível	30-150	450	MS100N2



Type	Designation	Width (mm)	Reference
1/4"	Alongador com cabo	270	MS58
1/2"-	Redutor 1/2" para 1/4"	76	MS70
1/4"	Chave macho em T	130	MS72J
3/8"	Chave macho em T	310	MS72S

● INSULATED TOOLS

● INSULATED FRENCH WRENCH



Designation	Aperture	Reference
Insulated cable	13	MS7-115
	19	MS7-160
	24	MS7-210
	28	MS7-260
	34	MS7-310
	43	MS7-385
Fully isolated	24	MS7SC-215
	28	MS7SC-265
	34	MS7SC-315

● INSULATED WRENCH



Size metric syst.	Reference	Size metric syst.	Reference
5	MS16	21	MS16
5,5	MS16	22	MS16
6	MS16	23	MS16
7	MS16	24	MS16
8	MS16	25	MS16
9	MS16	26	MS16
10	MS16	27	MS16
11	MS16	28	MS16
12	MS16	29	MS16
13	MS16	30	MS16
14	MS16	31	MS16
15	MS16	32	MS16
16	MS16	33	MS16
17	MS16	34	MS16
18	MS16	35	MS16
19	MS16	36	MS16
20	MS16	37	MS16

● CROSSHEAD INSULATED WRENCH



Size - metric system	Reference
6/8/10/12	IS39-6x8x10
7/9/11/13	IS39-7x9x11
8/10/12/14	IS39-8x10x12
8/10/13/17	IS39-8x10x13
14/17/19/2	IS39-14x17x19

- INSULATED TOOLS

- TELESCOPIC ELBOW INSULATED SCREWDRIVER



Size Metric syst.	Reference
6	MS21
7	MS21
8	MS21
9	MS21
10	MS21
11	MS21
12	MS21
13	MS21
14	MS21
15	MS21
16	MS21
17	MS21
18	MS21
19	MS21

Size Metric syst.	Reference
20	MS21
21	MS21
22	MS21
23	MS21
24	MS21
25	MS21
26	MS21
27	MS21
28	MS21
29	MS21
30	MS21
32	MS21

- "T" HEX SCREWDRIVER



Size Metric syst.	Length (mm)	Reference
10	305	MS19
11	305	MS19
12	305	MS19
13	305	MS19
14	305	MS19
16	305	MS19
17	305	MS19
19	305	MS19
21	305	MS19
22	305	MS19
23	305	MS19
24	305	MS19

Size Metric syst.	Length (mm)	Reference
6	135	MS34
8	135	MS34
10	135	MS34
11	135	MS34
12	135	MS34
13	135	MS34
14	135	MS34
16	135	MS34
17	135	MS34
18	135	MS34

● INSULATED TOOLS

● PHILLIPS SCREWDRIVER



Reference
IC18 - 4x75
IC18 - 4x150
IC18 - 5x100
IC18 - 6x125
IC18 - 8x150
IC18 - 10x200

● SCREWDRIVERS



Reference
IS18 - 2x70
IS18 - 3x100
IS18 - 4x120
IS18 - 5,5x100
IS18 - 5,5x150
IS18 - 6,5x40
IS18 - 6,5x150
IS18 - 8x150
IS18 - 8x200
IS18 - 10x150
IS18 - 10x250
IS18 - 12x200

● POZIDRIVE SCREWDRIVERS



Reference
IP18 - 4x75
IP18 - 4x150
IP18 - 5x40
IP18 - 5x100
IP18 - 6x40
IP18 - 6x125
IP18 - 8x150
IP18 - 10x200

● INSULATED TOOLS

● PLIERS FOR CUTTING CABLES

Aperture (mm)	Length (mm)	Reference
14	160	MS30S - 160
19	230	MS30
20	195	MS45 - 195
24	230	MS45 - 230



● INSULATED KNIVES WITH POUCH

Description	Reference
Straight insulated knife with pouch	IS78
Curved insulated knife with pouch	IS79



● INSULATED SAWS

Description	Length (mm)	Reference
Insulated saw	450	IS22
Small insulated saw	263	MS22J



● INSULATED SCISSORS

Description	Reference
Insulated Scissors	MS2E



● LOW VOLTAGE DETECTORS

● VOLTAGE DETECTOR (BT) - TAG 700



Characteristics

- Voltage usage: 12v to 690v
- Verification of the absence of tension
- Phase sequence (green LED)
- AC/DC Discrimination and phase / neutral (red LED)
- Control of continuity (orange LED)
- Sound and light indication
- Supplied with pouch

Detector type	Voltage (v)	Reference
Voltage	12 to 620	TAG 700

● NO VOLTAGE DETECTOR (BT) - TAG 150



Characteristics

- Voltage usage: 50v to 380v
- Tension level indicator with LEDs and buzzer
- Discrimination of neutral phase
- Phase sequencer
- Operation without batteries

Detector type	Voltage (v)	Reference
Voltage (BT)	50 to 380	TAG 150

● HIGH VOLTAGE DETECTORS

● NO VOLTAGE DETECTOR - TAG 200



Characteristics

- Voltage detector, NFC 18311 standard
- Power usage: 5kv to 75kv
- Electronic detector of absence of tension (HTA)
- Voltage presence indicator with red LED and buzzer
- No voltage indicator with green LED
- Powered by a 9-volt alkaline battery
- Supplied in a metal box or bag

Detector type	Voltage (kv)	Reference
Voltage (HTA)	5 to 75	TAG 200

● HIGH VOLTAGE DETECTORS

● ELECTRONIC ABSENCE OF VOLTAGE DETECTOR - TAG 2000

Characteristics

- Voltage Detector, CEI 61243-1 standard
- Voltage usage: 3kv to 90kv 50Hz
- Indicator of voltage presence with three red LEDs and buzzer
- Indication of absence of voltage with green LED
- Powered by 9-volt alkaline batteries
- Supplied with box and 32715V adapter for APV rod



Detector type	Voltage (kv)	Reference
Voltage (HTA)	3 to 90	TAG 2000

● ABSENCE OF VOLTAGE ELECTRONIC DETECTOR (HTB) - TAG 300

Characteristics

- Voltage Detector, NFC 18311 standard
- Voltage usage: up to 400kv
- Indicator of voltage presence with three red LEDs and buzzer
- Indication of absence of voltage and proper functioning with green LED
- Powered by a 9-volt alkaline battery
- Supplied with metal box



Detector type	Voltage (kv)	Reference
Voltage (HTB)	Up to 400	TAG 300

● HIGH VOLTAGE DETECTORS

● PHASE COMPLIANCE DETECTOR (HF) - TAG 5000



Characteristics

- Phase compliance detector (HF), CEI standard 61481
- Power usage: 4kv the 230kv
- Consisting of two detectors, a transmitter (gray) and a receiver (Blue)
- The transmitter detects the presence of voltage through a sound and light signal, measures the phase and transmits to the receiver
- The detector measures the phase angle and indicates compliance phase through sound and light
- Powered by an alkaline 9 volt battery

Detector type	Voltage (v)	Reference
Phase compliance	4 a 230	TAG 5000

● RESCUE RODS



Characteristics

- Use indoors to rescue electrocuted, at PT work or in 1st, 2nd or 3rd class cells.

Voltage usage (kv)	Weight (kg)	Lenght (Mts)	Reference
63	1,40	1,47	TP12 EC12
90	1,70	1,97	TP12 EC2

● TELESCOPIC MANEUVER RODS (TR)

Characteristics

- Fiber glass with two or three elements
- Withstand voltage 100KV / 30cm
- Usage in voltage detectors, put to earth and maneuver disconnectors
- Can be supplied with universal socket (U) or hexagonal (APV)

Indoor use				Outdoor use	Weight (kg)	Reference
Retracted		Stretched		Stretched		
1,10m	36kv	2,00m	90kv	72,5kv	1,2	TR275
1,75m	72kv	3,20m	225kv	123kv	1,5	TR2225
2,15m	110kv	4,00m	300kv	123kv	2,2	TR2245
2,65m	150kv	5,00m	330kv	170kv	3,0	TR2330
1,65m	63kv	4,50m	150kv	-	3,0	TR3450
1,85m	90kv	5,00m	250kv	-	4,0	TR3500
2,50m	110kv	6,00m	300kv	-	5,0	TR3600



● JOINING INSULATING RODS (PXV)

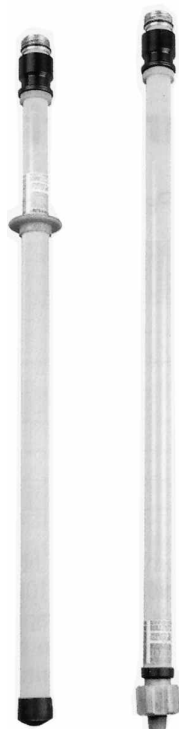
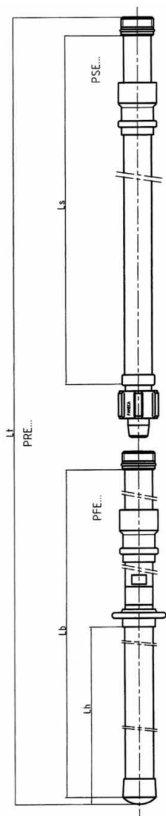
Characteristics

- 32mm Tube, IEC 60855
- Features identical to TR, but through pluggable screw 32
- Can be supplied with universal socket (U), hexagonal (APV) or bayonet (B)

Length (m)	No. of elements	Weight (kg)	Reference
2,00	2	1,50	PXV2200
3,00	2	2,10	PXV2300
4,00	2	2,60	PXV2400
6,00	2	4,10	PXV2600
3,00	3	2,15	PXV3300
4,50	3	2,90	PXV3450
6,00	3	4,30	PXV3600



● SPECIAL RODS FOR HIGH AND VERY HIGH VOLTAGE (PRE)



Characteristics

- 39mm Tube, ICE / IEC 60855
- Features identical to TR and PXV sticks but dockable with a 46 screw

Total	Length Lh	(mt) Ls	Weight (kg)	Reference
2 elements				
2,00	0,70	1,00	2,30	PRE2-200
3,00	1,00	1,50	3,00	PRE2-300
4,00	1,50	2,00	3,80	PRE2-400
3 elements				
3,00	0,70	2x1,00	3,40	PRE3-300
4,50	1,00	2x1,50	4,50	PRE3-450
6,00	1,50	2x2,00	5,70	PRE3-600
Extensions				
1,00				PSE100
1,50				PSE150
2,00				PSE200
2,50				PSE250

● GROUNDING AND SHORT CIRCUIT EQUIPMENT

● EY322-2 (TD 23-16) & EY322-25 (TD 23-25)



Characteristics

Grounding and short circuit set comprising:

- 3 MT330 tweezers
- 1 MT3 circular tweezer carrier
- 1 bobbin with 16m of cable, 16mm² copper and grounding clip
- 1 2m telescopic pole, TR 276 APV
- 1 ground electrode with 1m
- 1 metal box
- 1 canvas bag

Note: EY322-25 has 25m of 16mm² copper cable

Spacing between clamps	Cable between clamps	Cable grounding	ICC	Ø conductor mm	Reference
2,75mts	35mm ²	16mm ² (16mts)	8kA 1S	3 a 20	EY 322-2 (TD 23-1)
2,75mts	35mm ²	16mm ² (25mts)	8kA 1S	3 a 20	EY 322-25 (TD 23-25)